

WALKER SERVICE MANUAL

Detailed Instructions for
Servicing Walker Mowers

Model MT, MTL, MTEFI and MTLEFI

Model MD

Model MC

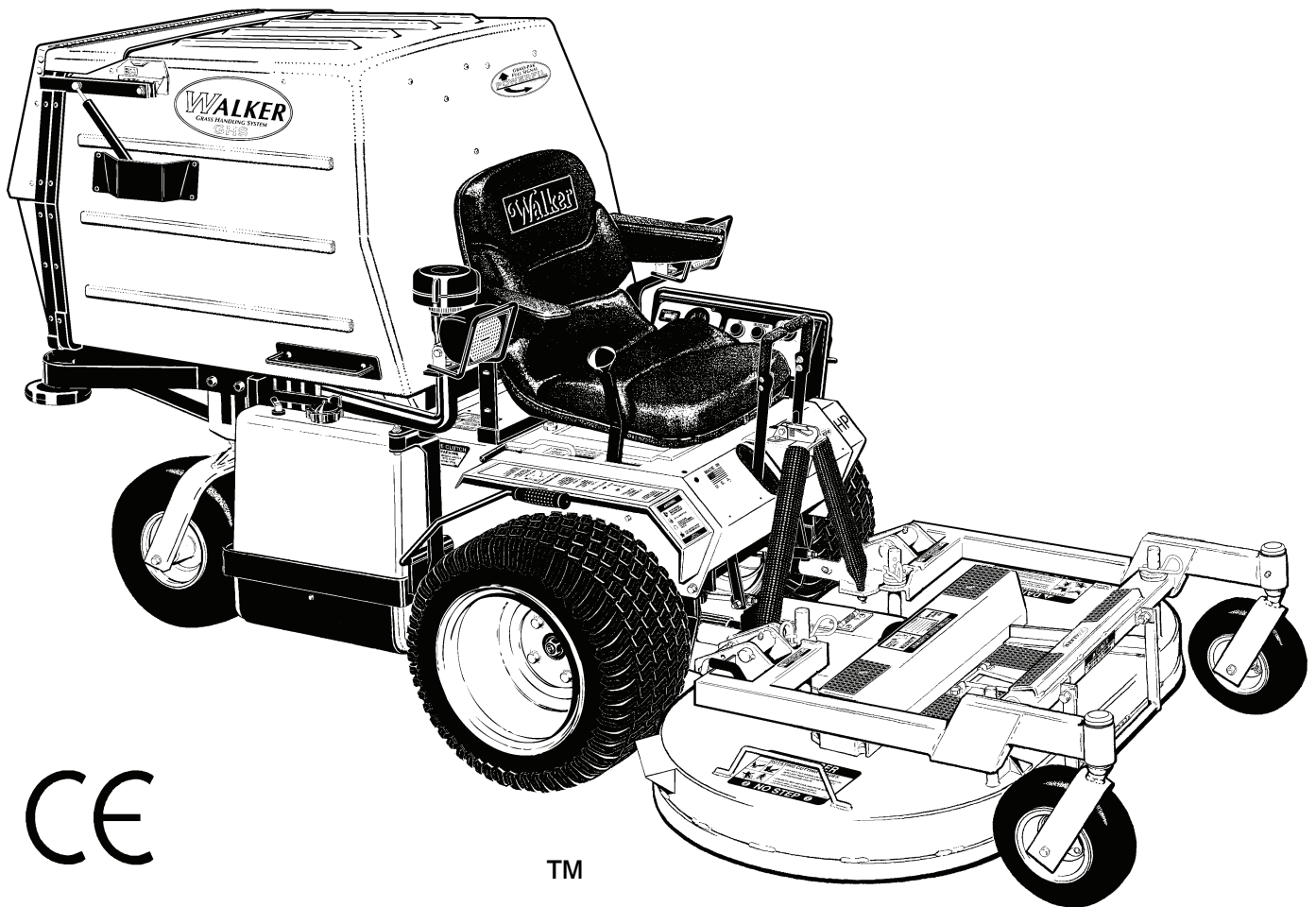
Model MS

Model MW15

Model MB

Decks

Implements



CE

TM

Please Read and Save These Instructions

For Safety, Read All Safety and Operation
Instructions Prior to Operating Machine

Effective Date: 07-01-06

P/N 9000-30



Foreword

Dear Walker Servicing Professional,

This manual is provided as a resource for you to not only repair but also maintain Walker mowers, decks and implements. Your service capability as a Walker dealer is valuable to the strength and vitality of our program—many customers base their purchases on the type of dealer service they receive.

I would encourage you to use this manual in conjunction with the engine service manuals you may have. I would also encourage you to “stay close” to the Walker Service Site (service.walkermfg.com), because we have found it to be the easiest way to keep our dealers up to date with current information and product changes. This manual is also indexed on the service site and can be useful for you in that manner as well. Please also know that this is a “live and working” document that will continue to be updated as the product changes and needed changes within the document are identified. Updates will be posted immediately on the service site and the printed document will be updated with each printing.

Whatever way you decide to source the information in this document, please understand that many of the procedures and adjustments in this book are critical to the optimal and safe performance of the mower. If anything in this manual is confusing or hard to understand, please call our service department, at (970) 221-5614, for clarification before repairing or servicing the mower.

This manual does not replace the owner’s manual included with each mower or the customer’s obligation to properly and safely operate any piece of Walker equipment.

Specifications given are based on the latest information available at the time this manual was produced.

Walker Manufacturing Company is continually striving to improve the design and performance of its products. We reserve the right to make changes in specifications and design without thereby incurring any obligation relative to previously manufactured products

Sincerely,
WALKER MANUFACTURING COMPANY

Bob Walker, President

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July 2006

INTRODUCTION

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INTRODUCTION

GLOSSARY OF TERMS - ALL MODELS AND IMPLEMENTS

There are many terms that are either unique to this equipment or that are used as acronyms. The following terms and their definitions will help while using this manual:

- **DECK** is the mowing attachment mounted on the front of the tractor which includes the carrier frame, deck housing, blade drive gearboxes, and cutter blades.
- **ELECTRONIC CONTROL UNIT (ECU)** controls engine functions such as spark timing, fuel/air ratio, etc.
- **FORWARD SPEED CONTROL (FSC)** controls the maximum forward speed of the tractor; functioning as a cruise control.
- **GRASS HANDLING SYSTEM (GHS®)** collects mowed material and deposits it in the catcher.
- **GRASS-PAK® SWITCH** is mounted on the grass delivery spout (in the catcher) and activates the "full" signal horn when the grass catcher is full.
- **GROUND DRIVE** refers to the dual hydrostatic transmissions or transaxles which drive the main wheels.
- **HYDROSTATIC TRANSMISSION** transmits and controls power from the ground drive belt to the main drive wheel.
- **IMPLEMENT** refers to the Perfaerator, dozer blade, rotary broom, two-stage snowblower, and debris blower.
- **LEFT HAND (LH)** refers to the left-hand side of the tractor when the operator is facing forward from the operator position.
- **NEUTRAL LOCKOUT** releases the hydrostatic transaxles to permit freewheeling the tractor.
- **PISTOL GRIPS** steer the tractor by controlling the dual hydrostatic transaxles.
- **POWER TAKE-OFF (PTO)** transmits engine power to run the cutter blades and GHS blower.
- **POWERFIL®** spreads the mowed material throughout the interior of the grass catcher by an oscillating delivery spout.
- **RIGHT HAND (RH)** refers to the right-hand side of the tractor when the operator is facing forward from the operator position.
- **SIDE DISCHARGE (SD)** mows but does not collect the mowed material.
- **STEERING LEVERS** steer the tractor by controlling the dual hydrostatic transmissions or transaxles.
- **TRACTOR** is the prime mover, including the engine, drive train, and controls to operate the mower.
- **TRANSAXLE** transmits and controls power from the ground drive belt to the main drive wheel.
- **TRANSAXLE LOCKOUT RODS** release the transaxles to permit freewheeling the tractor.
- **TRANSMISSION LOCKOUT** releases the hydrostatic transmissions to permit freewheeling the tractor.

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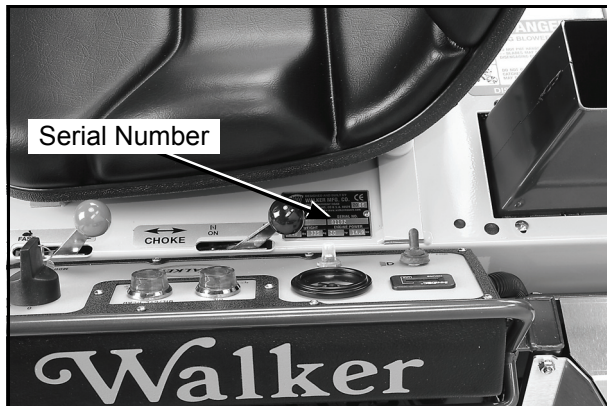
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GENERAL INFORMATION

IDENTIFYING NUMBER LOCATIONS

Model MS, MB, MC, MD, MT

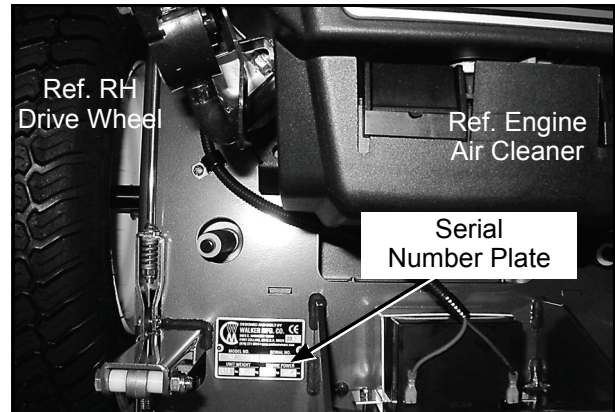
The tractor serial number plate is affixed to the tractor body just below the left rear corner of the seat. The mower deck serial number plate is affixed alongside the angle iron framing on the LH side of the LH mower blade drive.



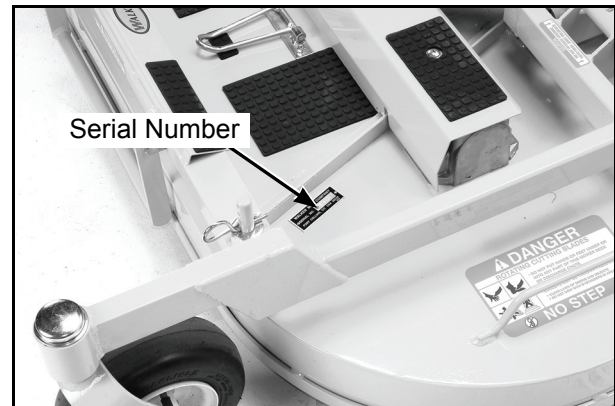
**Tractor Serial Number Location
(Model MT shown)**

Model MW

The mower serial number is affixed to RH side of the inside of the unit housing. Model and serial numbers are helpful when obtaining replacement parts and maintenance assistance.



**Tractor Serial Number Location - Model MW
(Top View of Tractor)**



**Mower Deck Serial Number Location
(DGHS48 Deck shown)**

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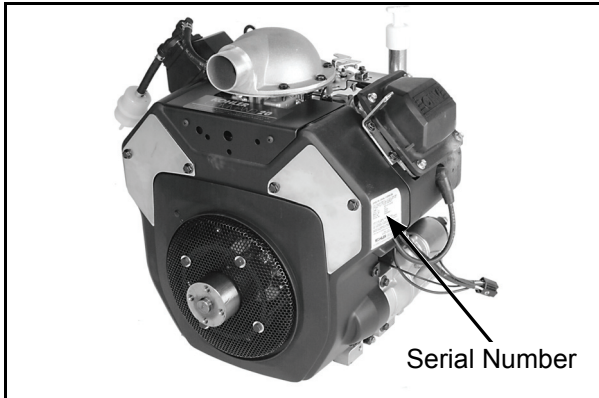
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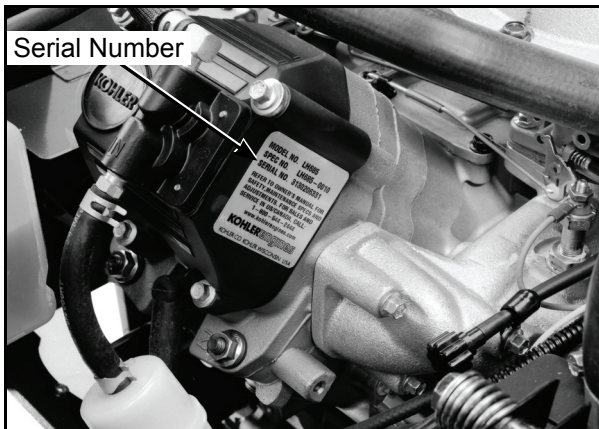
ENGINE SERIAL NUMBER LOCATION

Model MC, MT, MTL, MTEFI, MTLEFI

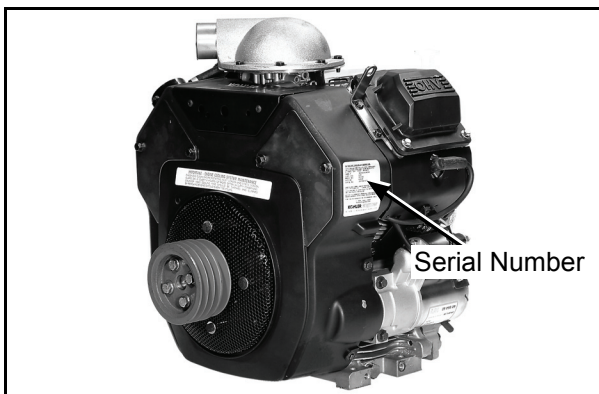
Refer to the engine manual for the location of the engine serial number. For the mower model(s) covered by this manual, an engine manual is available from Kohler covering the Kohler engines.



Engine Serial Number Location - Model MT, MTEFI



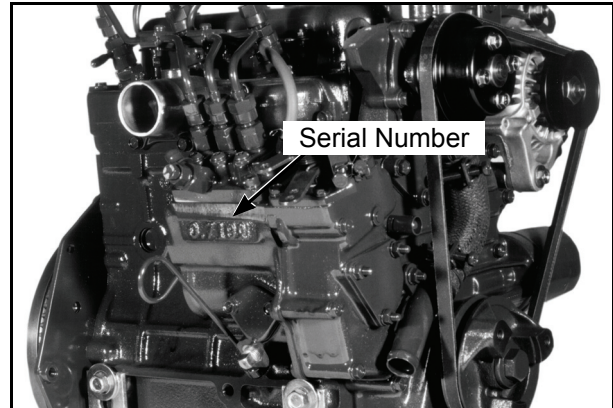
Engine Serial Number Location -
Model MTL, MTLEFI



Engine Serial Number Location (MC)

Model MD

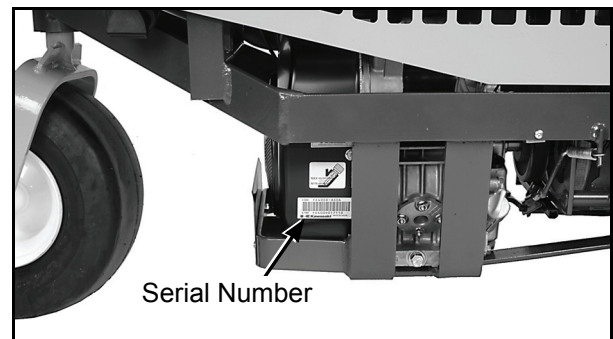
Refer to the engine manual for the location of the engine serial number. For the mower model covered by this manual, an engine manual is available from Kubota covering the Kubota D722 diesel engine (liquid cooled).



Engine Serial Number Location (MD)

Model MS

The Kawasaki engine model, type, and code numbers are located on the starter side of the engine shroud. For the mower model covered by this manual, an engine manual is available from Kawasaki to cover the Kawasaki FE400.



Engine Serial Number Location (MS)
(view from right side of tractor)

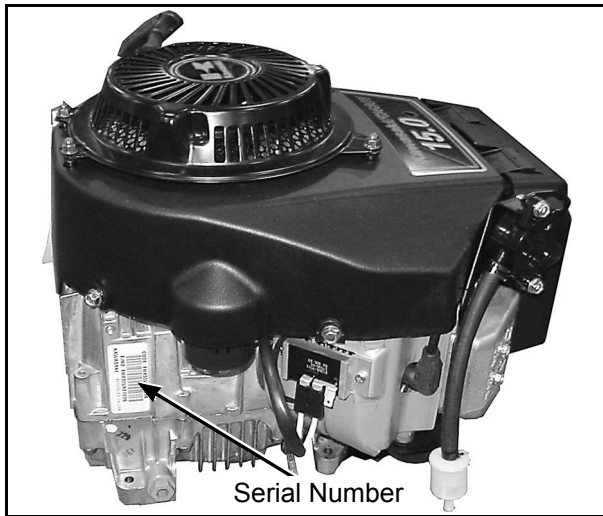
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Model MW

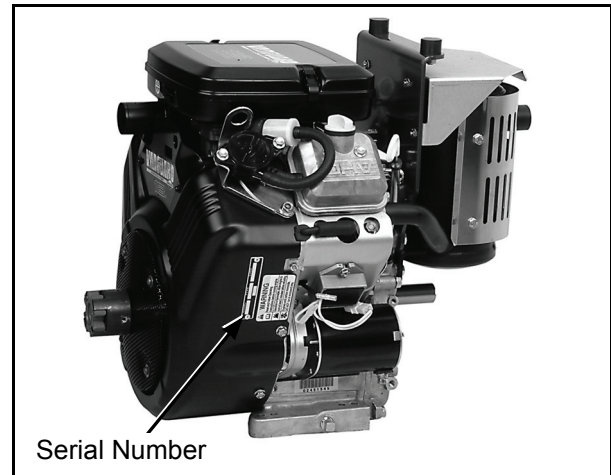
The Kawasaki engine model, type, and code numbers are located on the side of the engine opposite the recoil starter handle (on the aluminum housing). For the mower model covered by this manual, an engine manual is available from Kawasaki to cover the Kawasaki FH430V.



Engine Serial Number Location (MW)

Model MB

The Briggs & Stratton engine model, type, and code numbers are located on the left hand of the engine shroud. For the mower model covered by this manual, an engine manual is available from Briggs & Stratton to cover this engine.



Engine Serial Number Location (MB)

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PRODUCT REGISTRATION

Product registration is available online. Go to www.service.walkermfg.com/registration/register.py to fill out registration information.

DEALER SUPPORT SITE

A Resource For Walker Dealers

[Technical Support](#)
 [Marketing Support](#)
 [Product Registration](#)
 [Stolen Equipment](#)
 [User Administration](#)

Registration Link

<p>Walker SERIAL # SEARCH</p> <p>Look up serial numbers on tractors, decks and implements and see all the information Walker has, including warranty work and affected bulletins</p>	<p>Walker PARTS BROWSER</p> <p>An easy way to look up, search and see a picture of Walker Parts. You can also see where a part is used</p>	<p>Walker PHOTO GALLERY</p> <p>Full access to the Walker Mowers Online Photo Gallery - useful for downloading photos and logos</p>	<p>Walker MARKETING TOOLS</p> <p>An easy way to view all of the marketing tools available to Walker Dealers</p>	<p>Walker INTERNET AD POLICY</p> <p>Become familiar with the Walker Manufacturing Internet Advertising Policy for dealers</p>	<p>WalkerWare WALKER WARE T-SHIRT PROGRAM</p> <p>A great, inexpensive Walker Ware program that will get your dealership noticed</p>
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Product Registration Link

MANUFACTURER INFORMATION

Service manuals are available for each of these components from their respective manufacturers as follows:

Briggs & Stratton Engine	Briggs & Stratton 800-233-3723 (24-hour hotline in USA & Canada) www.briggsandstratton.com	Transaxle	Hydro-Gear 1411 South Hamilton Street Sullivan, IL 61951
Kawasaki Engines	Kawasaki Motors Corp. P.O. Box 888285 Grand Rapids, MI 49588-8285 www.kawpower.com	Hydrostatic Transmissions	Eaton Corporation 15151 Highway 5 Eden Prairie, MN 55344
Kohler Engines	Kohler Company Kohler, WI 53044 800-544-2444 www.kohlerengines.com	Gearboxes (Deck)	Tecumseh Power Co. 1555 South Jackson Street Salem, IN 47167 812-883-3575
Kubota Engines	Kubota Engine America Corp. 505 Schelter Road Lincolnshire, IL 60069		

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SPECIFICATIONS

MODEL

ENGINE

Manufacturer/Model

MT	Kohler Command CH20, 2 Cyl., Gasoline (Air Cooled)
MTL25	Kohler Aegis™ LH685, 2 Cyl., Gasoline (Liquid Cooled)
MTEFI	Kohler Command Pro® CH26, 2 Cyl., Gasoline (Air Cooled), Electronic Fuel Injection (EFI)
MTL31	Kohler Aegis LH730, 2 Cyl., Gasoline (Liquid Cooled), Electronic Fuel Injection (EFI)
MD	Kubota D722, 3 Cyl., Diesel (Liquid Cooled)
MC	Kohler Command CH18, 2 Cyl., Gasoline (Air-Cooled)
MS	Kawasaki, FE 350D, 1 Cyl. OHV (Air-Cooled)
MW	Kawasaki, FH430V, OHV, 2 Cyl. V-Twin (Air-Cooled)
MB	Briggs and Stratton Vanguard, 2 Cyl. OHV (Air-Cooled)

Displacement

MT	38.1 cu. in. (624 cc)
MTL25	41.1 cu. in. (674 cc)
MTEFI	44.0 cu. in. (725 cc)
MTL31	45.6 cu. in. (748 cc)
MD	44.0 cu. in. (722 cc)
MC	38.0 cu. in. (624 cc)
MS	24.5 cu. in. (401 cc)
MW	26.3 cu. in. (431 cc)
MB	34.7 cu. in. (570 cc)

HP (@ 3600 RPM)

MT	20.0
MTL25	25.0
MTEFI	26.0
MTL31	31.0
MD	20.9
MC, MB	18.0
MS	13.0
MW	15

Max. RPM (No Load)

MT, MTEFI, MTL25/31, MC	3750
MD	3800
MS, MW	4000
MB	3600 ± 100

Governed RPM

MT, MTEFI, MTL, MD, MC, MS, MW	3600
MB	3600 ± 100

Max. Torque [ft-lb (N· m) @ RPM]

MT	32 (44.0) @ 2500
MTL25	40.1 (54.4) @ 2200
MTEFI	41.6 (56.4) @ 2700
MTL31	47.7 (64.7) @ 2400
MD	34 (46.1) @ 2600
MC	30 (41) @ 2500
MS	19.5 (26.4) @ 2500
MW	23.6 (32 N· m) @ 2400
MB	29.5 (40.5) @ 2400

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Idle RPM	
MT, MTL, MTEFI, MC	1200 ± 75
MD	1000 ± 50
MS	1300
MW	1500
MB	1750
Spark Plug Type	
MT, MTEFI, MC	Champion® RC12YC
MTL, MB	Champion® RC14YC
MD	N/A
MS	NGK BPR5ES
MW	Champion® RCJ8Y
Spark Plug Gap	
MT, MTL, MTEFI, MC, MS, MW, MB	.030 in. (.76 mm)
MD	N/A
Crankcase Capacity	
MT, MTEFI	2.1 qts (2.0 liters)
MTL, MC	2 qts (1.9 liters)
MD	3.1 qts (2.9 liters)
MS	1.35 qts (1.3 liters)
MW	1.8 qts (1.7 liters)
MB	1.5 qts (1.4 liters)
Crankcase Lubricant	
MT, MTL, MTEFI, MC	API SG, SH, SJ or higher Grade Oil Only with 10W-30 Viscosity above 0° F (-18° C), or 5W-20 or 5W-30 Viscosity below 32° F (0° C)
MD	API CC/CD/CE Grade Oil Only with 10W-30 Viscosity or 30W above 77° F (25° C) Only
MS, MW	API SC/SD/SE/SF/SG/SH Grade Oil Only with 10W-30/10W-40 Viscosity or 40W Above 68° F (20° C) Only
MB	SF/SG/SH/SJ or Higher Grade Oil Only with 30W Viscosity Above 40° F (4° C)
Oil Filter	
MT, MTL, MTEFI	12 050 01 S
MD	15841-32439
MC	28-050-01
MS	49065-2057
MW	49065-2078
MB	492932
Coolant (MTL, MD Only)	50/50 Pre-Mix Anti-freeze/ water
Cooling Fan (MTL, MD Only)	Electric radiator cooling fan with reversible self-cleaning action
Fuel Tank Capacity	
MT, MTL, MTEFI, MD	5 Gallons (19.0 liters)
MC, MW, MB	3 Gallons (11.4 liters)
MS	1.7 Gallons (6.4 liters)
Fuel	
MT, MTL, MTEFI, MC, MS, MW	Regular Grade Unleaded Gasoline (87 Octane)
MD	Diesel Fuel 2-D
MB	Automotive Grade Unleaded Gasoline (85 Octane)
Cooling System Capacity	
MT, MTEFI, MC, MS, MW, MB	Air Cooled
MTL, MD	Liquid Cooled 1.25 Gallons (4.73 liters)

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ELECTRICAL SYSTEM

Battery	
MT, MC	12 Volt, 35 AH, 295 CCA
MD, MTL, MTEFI	12 Volt, 41AH, 340 CCA (Interstate U1-SP40)
MS	12 Volt, 230 CCA (Interstate SP-30)
MW	12-Volt, Interstate PC1250
MB	12 Volt, 220 CCA (Interstate PC12/80)
Charging System	
MT, MTL, MTEFI, MC, MS, MB	Flywheel Alternator
MD	Automotive Type Alternator
MW	12.5 Amp Alternator
Charging Output	
MT, MC, MW	15 Amp DC (Regulated)
MTL, MTEFI	25 Amp DC (Regulated)
MD	12.5 Amp DC (Regulated)
MS	13 Amp DC (Regulated)
MB	16 Amp DC (Regulated)
System Polarity	
All Models	Negative Ground
Ignition	
MT, MTL, MTEFI, MC	Electronic Capacitive Discharge
MD	Diesel with Glow Plugs
MS	Transistorized Electronic Magneto
MW	Electronic Magneto
MB	Magnetron [®] Electronic
Starter	
MT, MTL, MTEFI, MD, MC	12 Volt Electric Ring-Gear Type, Solenoid Shift
MS, MB	12 Volt Electric Key and Solenoid Operated
MW	Recoil Starter
Interlock Switch	
MT, MTL, MTEFI, MD, MC, MS, MB	Ignition Lockout by Seat Switch, Transmission Neutral and Blade Clutch
MW	Ignition Lockout by Operator Presence Lever, Transmission Neutral and Blade Clutch
Circuit Breaker	
MT, MTL25, MTEFI, MC	Auto Reset (30A)
MD, MTL31	Auto Reset (40A)
MS	Replaceable Fuse (20A)
MW	Manual Reset (10A)
MB	Manual Reset (15A)

TRANSMISSION

Manufacturer/Model	
MT, MTL, MTEFI, MD, MC, MS	Dual Hydrostatic, Eaton Model 7, Each Wheel Independently Driven
MB, MW	Dual, Independent Hydro-Gear Integrated Transaxles
Steering	
MT, MTL, MTEFI, MD, MC, MS, MB	Hand Lever Control / Individual Wheel
MW	Handle Pistol Grips / Individual Wheel

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Forward Speed Control MT, MTL, MTEFI, MD, MC, MS, MB MW	Precision Friction Lock Lever, Cruise Control, with Neutral-Park Position Variable Speed Controlled by Rocker Switch Near RH Thumb, with Neutral Park Setting
Service Brake MT, MTL, MTEFI, MD, MC, MS MW, MB	Dynamic Braking through Hydrostatic Transmission Mechanical Lockout for each Transmission (Single Lever Control)
Parking Brake MT, MTL, MTEFI, MD, MC, MS MW, MB	Mechanical Pin Lock in Transmission Gear Mechanical Cog Lock on Transmission Gear
Neutral All Models	Transmission Release by Manual Dump Valve
Final Drive MT, MTL, MTEFI, MD, MC, MS MW, MB	Gear Drive Axle Direct Drive Axle from Transaxle
Transmission Fluid	
Factory Service MT, MTL, MTEFI, MD, MC, MS MW MB	Mobil 1 Synthetic Motor Oil (15W-50) 20W50 Multi-Viscosity Motor Oil 20W50 Multi-Viscosity Motor Oil (Minimum SL Grade Oil)
Alternate Transmission Fluid MT, MTL, MTEFI, MD, MC, MS MW, MB	SAE 30W Straight Viscosity Motor Oil 20W50 Synthetic Motor Oil
Transmission Fluid Capacity MT, MTL, MTEFI, MD, MC, MS MW, MB	1 qt (1 liter) 79 fl oz (2336 ml)
Transmission Cooling All Models	Cooling Fan Mounted on Drive Pulley
Ground Travel Speed	
Forward m.p.h. (km/h) MT, MTEFI MTL MD, MC, MS, MW MB	0-5 (0-8) Infinitely Variable* 0-7 (0-11) Infinitely Variable 0-5 (0-8) Infinitely Variable 0-8 (0-13) Infinitely Variable
Reverse m.p.h. (km/h) MT, MTEFI, MD, MC, MS MTL MW MB	0-5 (0-8) Infinitely Variable 0-7 (0-11) Infinitely Variable 0-2 (0-3) Infinitely Variable 0-8 (0-13) Infinitely Variable

BLADE DRIVE

PTO Shaft MT, MTL, MTEFI, MD, MC, MW MS, MB	Quick Disconnect Spline Shaft with Two High-Speed U-Joints Sliding Spline Shaft with Two (2) High-Speed U-Joints
Blade Spindle All Models	Each Blade (2) Mounts Direct on Peerless Right Angle Gearbox with Tee Gearbox in Center Connected to PTO Shaft (Complete Geared Drive, Peerless Model 1000 Gearboxes)

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Blade Drive Clutch and Brake MT, MTL, MTEFI, MD, MC, MW	Manual Belt Tightener Clutch and Band Brake (Stops Blades within Five (5) Seconds of Disengagement)
MS	Manual Belt Tightener Clutch and Scrubber Brake (Stops Blades within Five (5) Seconds of Disengagement)
MB	12V Electrical (Electromagnetic Clutch and Brake) Switch Operated [Stops Blades within Five (5) Seconds of Disengagement]
Max. Blade Speed [22 in. (56 cm) Blade] @ 3600 RPM Engine MT, MTL, MTEFI, MC, MS, MB	2900 RPM [16700 FPM (5090 m/min)]
Max. Blade Speed [25 in. (64 cm) Blade] @ 3600 RPM Engine MD	2900 RPM [16700 FPM (5090 m/min)]
MW	2400 RPM [15700 FPM (4785 m/min)] (48" Deck)

TIRE SIZE

Deck Caster Wheel 36, 42, 48, 56 52, 62, 74	8 x 3.00-4 Pneumatic (4-Ply) 11 x 4.00-5 Pneumatic
Deck Caster Wheel (Optional) 36, 42, 48, 56	8 x 3.00-4 Foamed Rubber
Drive MT, MTL, MTEFI, MD MC MS MW, MB	18 x 9.50-8 (4-Ply) 18 x 8.50-8 (4-Ply Low-Profile) 18 x 6.50-8 (4-Ply) 18 x 8.50-10 (4-Ply Low-Profile)
Drive (Optional Narrow Tire) MT, MTL, MTEFI, MD, MW, MB MC MS	N/A 18 x 6.50-8 (4-Ply) 18 x 8.50-8 (4-Ply)
Drive (Optional Wide Tire) MT, MTL, MTEFI, MD MS	18 x 9.50-8 (4-Ply) 18 x 8.50-8 (4-Ply)
Rear MC, MS, MB MW	13 x 6.50-6 (4-Ply) 8 x 3.00-4 Pneumatic (4-Ply)
Rear (Dual) MT, MTL, MTEFI, MD	13 x 5.00-6 (4-Ply)
Rear Wheel (Optional) MW	8.25 x 2.75 Foamed Rubber

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TIRE PRESSURE

Deck Caster Wheel All Models	20 PSI (137 kPa)
Drive All Models	15 PSI (103 kPa)
Rear All Models	20 PSI (137 kPa)

DIMENSIONS (Tractor and Mower) (**MT, MTEFI, MTL, MD)

Length

MT, MTL, MTEFI, MD	91 in. (231 cm)
MW	80 in. (203 cm)
MB	82 in. (208 cm)

36 in. (91 cm) GHS Model MC, MS	87 in. (221 cm)
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42 in. (107 cm) GHS Model MC, MS	89 in. (226 cm)
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Width

MT, MTL, MTEFI, MD	49 in. (124 cm)
MW	48-3/4 in. (124 cm)

36 in. (91 cm) SD Model (with Deflector) MC, MS, MB	41-3/4 in. (106 cm)
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42 in. (107 cm) SD Model (with Deflector) MC, MS, MB	47-3/4 in. (121 cm)
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48 in. (122 cm) SD Model (with Deflector) MB	53-3/4 in. (137 cm)
--	---------------------

56 in. (142 cm) SD Model (with Deflector) MB	61-3/4 in. (157 cm)
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36 in. (91 cm) GHS Model MC, MS	37 in. (94 cm)
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42 in. (107 cm) GHS Model MC, MS	43 in. (109 cm)
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Height

MT, MTL, MTEFI, MD	44 in. (112 cm)
MW	44-3/4 in. (114 cm)
MB	39 in. (99 cm)

SD Model MC, MS	37-1/2 in. (95 cm)
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GHS Model MC, MS	44-1/2 in. (112 cm)
---------------------	---------------------

Wheel Base (Tractor) MT, MTL, MTEFI, MD, MC, MS	42-1/4 in. (107 cm)
MW	22 in. (56 cm)
MB	38-1/2 in. (98 cm)

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Tread Width (Tractor) Standard Tires MC, MS	28-1/4 in. (72 cm)
Tread Width (Tractor) MT, MTL, MTEFI, MD, MB MW	29-3/4 in. (76 cm) 29-1/4 in. (74 cm)
Optional Tires MC, MS	29-3/4 in. (76 cm)

MOWER DECK

Width of Cut SD/GHS MT, MTL, MTEFI, MD MC, MS MW MB	42 or 48 in. (107 or 122 cm) 36 or 42 in. (91 or 107 cm) 36-, 42-, 48-, 52-, or 56-in. (91, 107, 122, 132, or 142 cm) 36-, 42-, 48-, or 56-in. (91, 107, 122 or 142 cm)
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Cutting Height All Models	1 to 4 in. (3 to 10 cm)
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Height Adjustment All Models	7 Positions - 1/2 in. (1 cm) Increment Hitch Pins Installed in Multi-Position Deck Support
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Blade Size

36 in. (91 cm) SD Model MT, MTL, MTEFI, MD, MW MC, MS, MB	N/A 20 in. (51 cm) Two (2) Clockwise-Rotating Blades with a 4 in. (10 cm) Center Overlap
42 in. (107 cm) SD Model All Models	22 in. (56 cm) Two (2) Clockwise-Rotating Blades with a 2 in. (5 cm) Center Overlap
48 in. (122 cm) SD Model MT, MTL, MTEFI, MD, MC, MS MW MB	N/A 48 in. (122 cm) 25 in. (64 cm) 2 in. (5 cm) Center Overlap (Two Blades, CW Rotation) 25 in. (64 cm) Two (2) Clockwise-Rotating Blades with a 2 in. (5 cm) Center Overlap
56 in. (142 cm) SD Model MB Only	20 in. (51 cm) Three (3) Clockwise-Rotating Blades with a 2 in. (5 cm) Center Overlap
36 in. (91 cm) GHS Model MT, MTL, MTEFI, MD, MW, MB MC, MS	N/A 20 in. (51 cm) Two (2) Counter-Rotating Blades with a 4 in. (10 cm) Center Overlap
42 in. (107 cm) GHS Model MT, MTL, MTEFI, MD, MW, MB MC, MS	N/A 22 in. (56 cm) Two (2) Counter-Rotating Blades with a 2 in. (5 cm) Center Overlap
48 in. (122 cm) GHS MT, MTL, MTEFI, MD MC, MS, MW, MB	25 in. (64 cm) 2 in. (5 cm) Center Overlap (Two Blades, Counter Rotate) N/A

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Deck Suspension
All Models

Torsion-Flex Frame with Caster Wheels and
Counterweight Springs

CURB WEIGHT (Approximate)

SD Tractor Only

MT, MTEFI	660 lb (299 kg)
MTL	705 lb (320 kg)
MD	760 lb (345 kg)
MC	645 lb (293 kg)
MS	490 lb (224 kg)
MW, MB	N/A

GHS Tractor Only

MT, MTEFI	785 lb (356 kg)
MTL	845 lb (383 kg)
MD	850 lb (386 kg)
MC	735 lb (334 kg)
MS	565 lb (256 kg)
MW, MB	N/A

Tractor Only

MW***	370 lb (168 kg)
MB	564 lb (256 kg)

SD Tractor and 36 in. SD Deck

MT, MTL, MTEFI, MD, MW	N/A
MC	775 lb (352 kg)
MS	635 lb (288 kg)
MB	709 lb (322 kg)

SD Tractor and 42 in. SD Deck

MT, MTL, MTEFI, MD, MW	N/A
MC	810 lb (368 kg)
MS	670 lb (304 kg)
MB	744 lb (337 kg)

SD Tractor and 48 in. SD Deck

MT, MTL, MTEFI, MD, MC, MS, MW	N/A
MB	769 lb (349 kg)

GHS Tractor and 36 in. GHS Deck

MT, MTL, MTEFI, MD, MB, MW	N/A
MC	860 lb (390 kg)
MS	715 lb (324 kg)

GHS Tractor and 42 in. GHS Deck

MT, MTL, MTEFI, MD, MW, MB	N/A
MC	895 lb (406 kg)
MS	735 lb (340 kg)

Tractor and Mower

MT**, MTEFI**	990 lb (449 kg)
MTL**	1050 lb (476 kg)
MD**	1020 lb (463 kg)
MC, MS, MW, MB	N/A

Tractor and Deck MW Only***

520 lb (236 kg)

Walker

SERVICE INSTRUCTIONS

July 2006

DRIVE BELTS

Engine PTO		
MT, MTL, MTEFI, MC	Walker P/N 8230	
MD	Walker P/N 7230	
MS	Walker P/N 5230-2	Gates BX30
MW	Walker P/N 9230	
MB	Walker P/N 4230	
Jackshaft Drive		
MT, MTL, MTEFI	Gates 3VX375 (or Walker P/N 6250)	
MD	Gates 3VX355 (P/N 6231)	
MC	Gates 3VX385 (or Walker P/N 6251-1)	
MS, MW, MB	N/A	
Ground Drive, Micro-V		
MT, MTL, MTEFI, MD, MC	Walker P/N 7248	
MS, MW, MB	N/A	
Ground Drive		
MT, MTL, MTEFI, MD, MC	N/A	
MS	Walker P/N 5232	Gates 6847
MW	Walker P/N 9248	
MB	Walker P/N 4248	
Blower (GHS Model)		
MT, MTL, MTEFI, MD, MC	Gates 3VX280 (or Walker P/N 7234-1)	
MS, MW, MB	N/A	
PTO Drive SD Model		
MS Only	Walker P/N 5234-1	Gates 6935
PTO Drive GHS Model		
MS Only	Walker P/N 5234-2	Gates 6944

GHS SYSTEM (Optional)

Blower	
MT, MTL, MTEFI, MD, MC	4 x 10 x 1/4 in. (10 x 25 x 1 cm) Three-Blade Paddle Wheel (Driven by Mower Engine)
MS	3 1/2 x 9 x 1/4 in. (9 x 23 x 1 cm) Three-Blade Paddle Wheel (Driven by Mower Engine)
MW, MB	N/A
Blower Brake	
MT, MTL, MTEFI, MD, MC	Band Brake (Works in Combination with PTO Clutch, Stops Blower within Five (5) Seconds of PTO Disengagement)
MS	Belt Scrubber Brake (Works in Combination with PTO Clutch, Stops Blower within Five (5) Seconds of PTO Disengagement)
MW, MB	N/A
Max. Blower Speed	
MT, MTL, MTEFI, MD, MC, MS	3600 RPM
MW, MB	N/A
Grass Catcher Capacity	
MT, MTL, MTEFI, MD	65 Gallons (246 liters)/7.0 Bushels
MC, MS	63 Gallons (238 liters)/6.7 Bushels
MW, MB	N/A
Optional Grass Catcher Capacity	
MT, MTL, MTEFI, MD, MC ^A	89 Gallons (392 liters)/ 9.5 Bushels
MS, MW, MB	N/A

Walker

SERVICE INSTRUCTIONS

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Full Signal (Grass-Pak[®] Switch)
MT, MTL, MTEFI, MD, MC, MS

MW, MB

Oscillating Vane Switch Mounted on Grass Delivery Spout
Triggers Horn Signal
N/A

Powerfil[®]

MT, MTL, MTEFI, MD, MC, MS

MW, MB

Oscillating Delivery Spout Driven by 12 Volt Electric Gearmotor
Spreads Material throughout Interior of Catcher @ 25 Cycles/
Minute
N/A

SEAT

MT, MTL, MTEFI, MD, MC, MS,
MW
MB

Contour-Molded, with Nylon Backed Vinyl Cover and Integral
N/A
Foam Cushion

FRAME/BODY CONSTRUCTION

Frame

MT, MTL, MTEFI, MD, MC, MS
MW, MB

All Welded Unitized Steel Chassis
N/A

Body

MT, MTL, MTEFI, MD, MC, MS
MW, MB

14 Gauge Steel
N/A

Frame/Body

MT, MTL, MTEFI, MD, MC, MS
MW, MB

N/A
3/16 Plate Steel

Deck

All Models

11 Gauge Steel

GHS Catcher and Chutes

MT, MTL, MTEFI, MD, MC, MS
MW, MB

Molded Cross-Linked Polyethylene (UV Stabilized)
N/A

* 6.5 m.p.h. with Optional Speed-Up Kit

**Dimensions and weight shown are for 48 in. (122 cm) GHS Model (typical).

Dimensions for Tractor and Mower with 42 in. (107 cm) deck are:

Length = 88 in. (224 cm)

Width = 43 in. (110 cm)

For SD Models, subtract 7 in. (18 cm) from the height.

Deck weight for 48 in. (122 cm) Tilt-Up deck = 205 lb (93 kg). Deck sizes range from 42 to 74 in.

(107 to 157 cm), with corresponding deck weights ranging from 170 to 400 lb (77 to 136 kg).

Optional (9.5 Bushel) Grass Catcher adds approx. 5 lb (2 kg) and 5 in. (13 cm) in Height

*** Dimensions and weight shown are for 48 in. (122 cm) SD Deck (Typical)

△Optional (9.5 Bushel) Grass Catcher adds approx. 5 lb (2 kg) and 5 in. (13 cm) in Height

NOTE: The manufacturer reserves the right to make changes in specifications shown herein at any time without notice or obligation.

Walker

SERVICE INSTRUCTIONS

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SECTION 1

Set-Up

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SERVICE INSTRUCTIONS

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SET-UP

Tractor Set up

Tire Installation (Tractor)

Model MS, MC, MD, MT, MTL, MTEFI

- Install the drive tires using the eight (8) lug bolts that are supplied with the owner's packet of materials. Bolts are torqued to 75 to 85 ft-lb.

Model MW, MB

- Install the drive tires using the eight (8) lug nuts that are supplied with the owner's packet of materials.

All Models

- Check and adjust the inflation of the tires. The tire inflation recommendations are:

Drive = 15 PSI (103 kPa)
Rear = 20 PSI (137 kPa)

Battery Service

Model MT, MTL, MTEFI

CAUTION

Important Battery Service, Installation, and Changing Tips for MTEFI:

- Do not allow the battery cables to touch opposing terminals. When connecting battery cables attach the positive (+) cable to positive (+) battery terminal first, followed by negative (-) cable to negative (-) battery terminal.
- Never start the engine when the cables are loose or poorly connected to the battery terminals.
- Never disconnect battery while engine is running.
- Never use a quick battery charger to start the engine.
- Never "jump start" the engine using another source. Electricity fluctuations can damage the ECU (Electronic Control Unit) on EFI Models.
- Do not charge battery with key switch "on."
- Always disconnect negative (-) battery cable lead before charging battery, unplug harness from ECU on EFI Models, before performing any welding on equipment.

Model MD, MT, MTL, MTEFI

Raise front mower body up for battery access. Check the battery for electrolyte level and charge. The electrolyte level should be at the bottom of the vent wells [1/4 to 1/2 in. (6 to 13 mm) above plates]. If the specific gravity is less than 1.225, the battery needs charging. If the battery has been shipped dry, or is wet but needs service, refer to the following instructions.

Model MS, MC

Tilt mower body up (lift on rear of body) for battery access. Check the battery for electrolyte level and charge. The electrolyte level should be at the bottom of the vent wells [1/4 to 1/2 in. (6 to 13 mm) above plates]. If the specific gravity is less than 1.225, the battery needs charging. If the battery has been shipped dry, or is wet but needs service, refer to the following instructions.

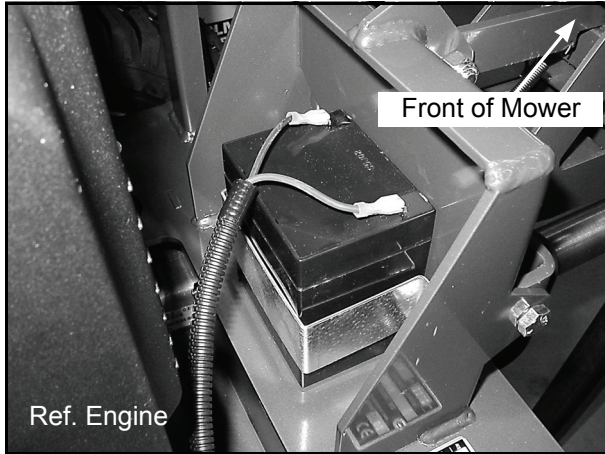
Walker

SERVICE INSTRUCTIONS

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Model MW, MB

The battery is a completely sealed, non-serviceable battery.



Battery Location - Model MW

All Models

IMPORTANT: Make sure battery is securely mounted in the frame. A loose battery may cause damage to the case resulting in acid leakage and severe damage to the machine. A hazard may be created by damage to critical working parts and safety systems.

Wet Battery Service - MS, MC, MD, MT, MTL, MTEFI

If the battery has been shipped wet, but the electrolyte level is low or the battery needs to be charged then:

1. Fill each battery cell with drinking water to the bottom of the vent wells.
2. Charge battery. Refer to *Battery Charging* in this section.

Dry Battery Service - MS, MC, MD, MT, MTL, MTEFI

DANGER

Activating a battery can be dangerous. **DO NOT** attempt to activate the battery unless you are experienced in battery service work. The following activation and charging instructions are provided for use by a trained battery technician.

DANGER

Battery electrolyte is a poisonous and corrosive sulfuric acid solution.

- Avoid spillage and contact with skin, eyes, and clothing - causes severe burns.
- To prevent accidents, wear safety goggles and rubber gloves when working with electrolyte.
- Neutralize acid spills with baking soda and water solution.

To fill (activate) battery with electrolyte (if battery has been shipped dry):

1. Remove the battery hold down bar, disconnect the battery cables and lift the battery out of the tray.

IMPORTANT: Battery must be removed from the mower before filling with electrolyte.

IMPORTANT: Obtain and use only battery grade sulfuric acid electrolyte with a 1.265 specific gravity to activate the battery. **DO NOT** use water or any other liquid during initial activation.

2. Remove the filler caps and carefully fill each cell until the electrolyte is just above the plates.
3. After the battery is filled with electrolyte, replace the filler caps and charge the battery. Refer to *Battery Charging*.

Walker

SERVICE INSTRUCTIONS

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Battery Charging - MS, MC, MD, MT, MTL, MTEFI

Battery Charging - Model MW, MB

 **DANGER**

BATTERIES PRODUCE EXPLOSIVE GASES

- Charge the battery in a well-ventilated area, so that gases produced while charging can dissipate.
- Keep sparks, flames, and smoking materials away from the battery at all times.
- Make sure the battery cap vents are open after the battery is filled with acid (check manifold vent on each cap).
- Make sure the battery charger is unplugged before connecting or disconnecting cables to the battery.

IMPORTANT: On MTEFI and MTLEFI models, always disconnect the negative (-) battery terminal before charging. Failure to do so can result in damage to the ECU.

1. Charge the battery at 15 amps for 10 minutes. **DO NOT** exceed 20 amps maximum recommended charging rate. Charge until specific gravity is at least 1.250. Total charging time should not exceed one (1) hour.
2. After charging the battery, adjust the electrolyte level to the bottom of the vent wells [1/4 to 1/2 in. (6 to 13 mm) above the plates].

IMPORTANT: **DO NOT** overfill the battery. Electrolyte will overflow through the vented caps onto parts of the machine and **WILL** result in severe corrosion.

3. Install battery.

 **DANGER**

BATTERIES PRODUCE EXPLOSIVE GASES

- Charge the battery in a well-ventilated area, so that gases produced while charging can dissipate.
- Keep sparks, flames, and smoking materials away from the battery at all times.
- Make sure the battery charger is unplugged before connecting or disconnecting cables to the battery.

Limit initial charging current to 1000mA. Charge until battery voltage (under charge) reaches 14.40 to 14.70 volts at 68°F (20°C). Hold at 14.40 to 14.70 volts until current drops to approximately 50mA. Battery is fully charged under these conditions, and charger should be disconnected.

NOTE: Due to the self-discharge characteristics of this type of battery, it is imperative that it be charged after 6-9 months of storage, otherwise permanent loss of capacity might occur as a result of sulfation.

Battery Installation - All Models

IMPORTANT: Make sure battery is securely mounted in the frame. A loose battery may cause damage to the case resulting in acid leakage and severe damage to the machine. A hazard may be created by damage to critical working parts and safety systems.

Install the battery in the mower as shown in **Battery Installation** photo. Connect the positive (+) first and then the negative (-) cables to the proper battery terminal (**red cable and boot connects to the Positive (+) terminal**). Slide the rubber boot up and over the battery post, making sure it covers the post completely **to prevent an electrical short**.

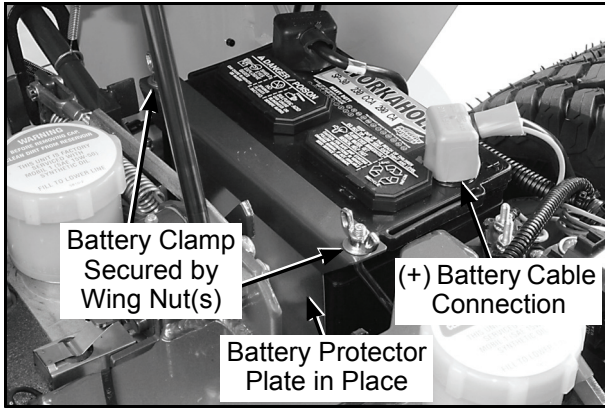
 **WARNING**

Make sure the battery cap vents are open. Improper venting of the battery COULD cause a battery explosion.

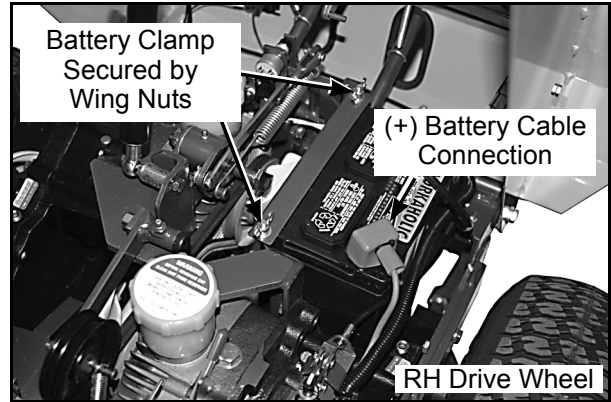
Walker

SERVICE INSTRUCTIONS

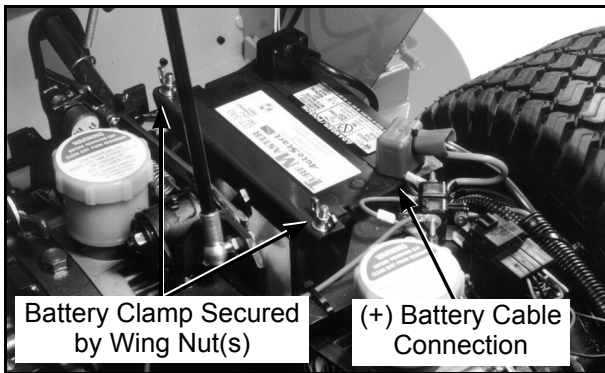
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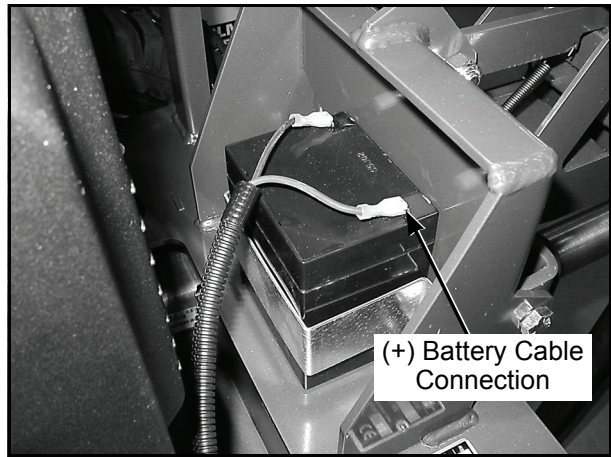
Battery Installation - Model MT, MTL, MTEFI



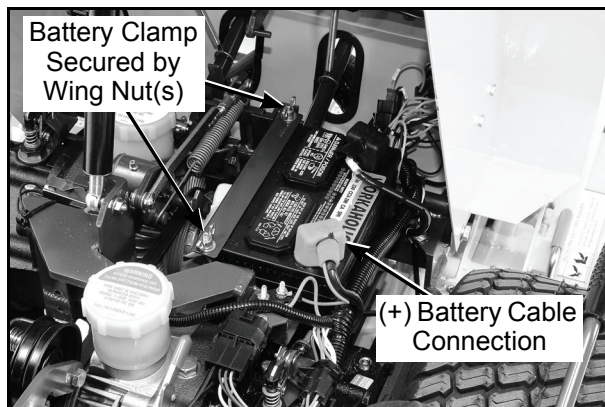
Battery Installation - Model MS



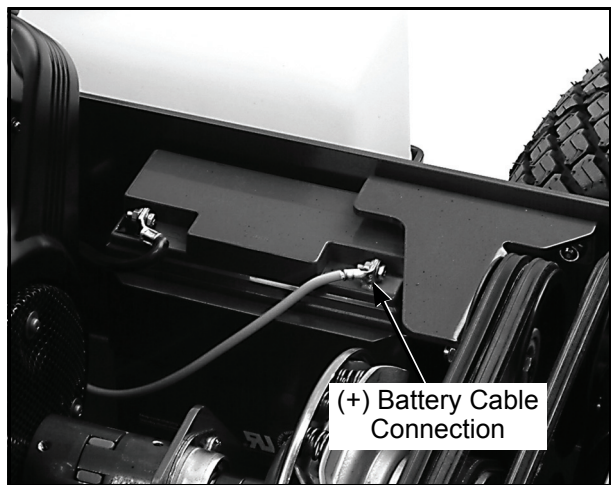
Battery Installation - Model MD



Battery Installation - Model MW



Battery Installation - Model MC



Battery Installation - Model MB

Walker

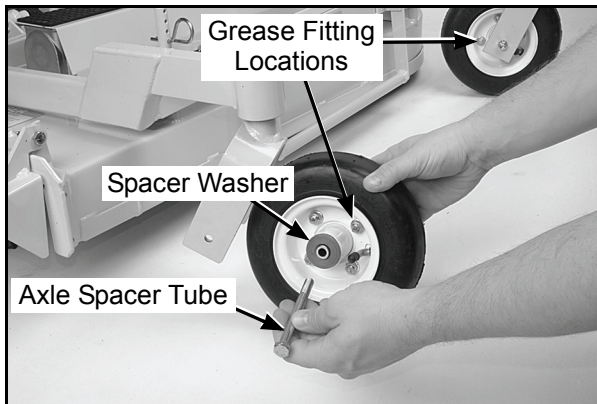
SERVICE INSTRUCTIONS

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Mower Deck Assembly

Deck Caster Wheels Installation - All Models

1. Remove the bolt, nut, axle spacer tube, and spacer washers from each deck caster wheel fork.
2. Fit the axle spacer tube through the wheel hub, position the spacer washer on each side of the hub (if used), and fit the assembly into the wheel fork.
3. Insert the 3/8-16 x 4-1/2 in. bolt through the wheel fork with the bolt head to the outside and install the 3/8-16 in. Keps nut.
4. Tighten the bolt and nut until the axle spacer tube bottoms against the inside of the wheel fork (will not turn) while the wheel and spacer washers (if used) spin freely without binding.



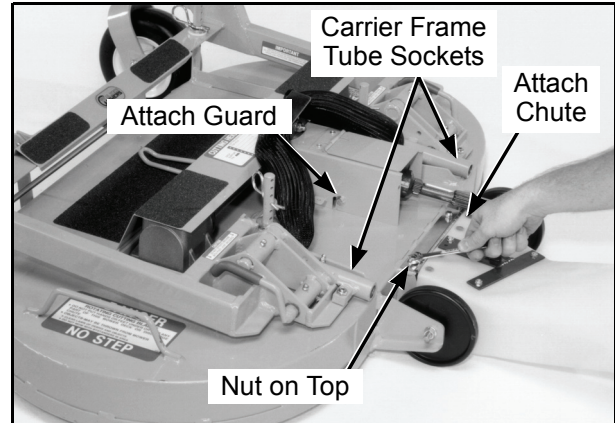
Deck Caster Wheel Installation

5. Grease the caster wheel bearings and caster pivot bearings - one grease fitting for each wheel and each pivot.

Deck Discharge Chute Installation

(GHS Rear Discharge Models Only) - Model MS, MC, MD, MT, MTL, MTEFI

Mount the discharge chute hinge on top of the deck discharge opening using the 1/4-20 x 1/2 in. socket button head bolt and 1/4-20 ESNA nut. Position the bolt with the head inside of the chute and the nut on the outside. Attach spring for tilt-up action from chute to bracket on deck.



Discharge Chute and PTO Shaft Guard Installation on Rear Discharge Deck

Deck Discharge Shield Installation

(Side Discharge Models Only) - All Models

Attach the deck side discharge shield by positioning the shield hinge lug in **front** of the deck mount and fastening with two 3/8-16 x 1-1/4 in. bolts, 3/8-16 ESNA nuts, and 3/8 in. wave spring washers. The wave washers fit between the two hinging surfaces. Tighten the nuts until the shield moves freely but is not loose.

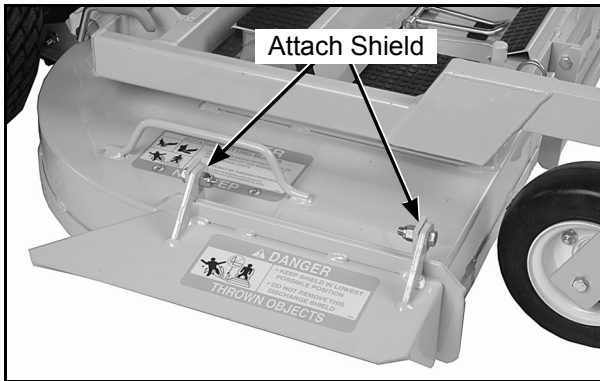
WARNING

DO NOT operate the machine without the grass deflector shield attached and in the lowest possible position.

Walker

SERVICE INSTRUCTIONS

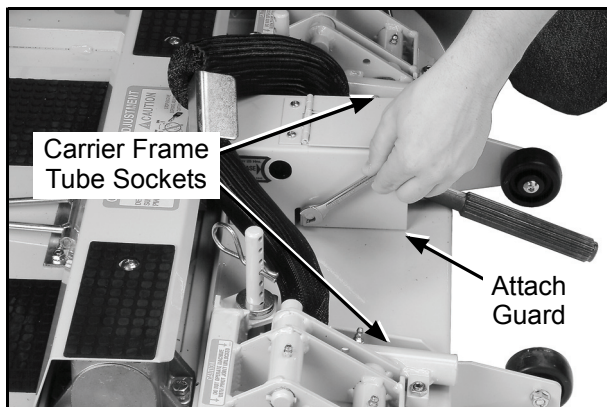
July 2006



**Discharge Shield Installation
on Side Discharge Deck**

PTO Shaft Guard Installation - All Models

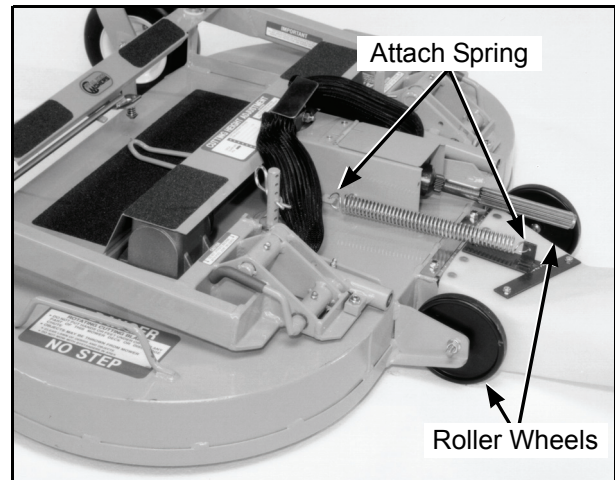
Position the shaft guard as shown and mount with two 1/4-20 x 1/2 in. bolts.



PTO Shaft Guard Installation

Tilt-Up Roller Wheel Installation - Model MS, MB (after S/N 2006-81428), MC, MD, MT, MTL, MTEFI

Mount the two (2) tilt-up roller wheels on the brackets on the rear skirt of the deck housing using the P/N 8490 axle bolt, 3/8 in. wave spring washer and 3/8-16 in. Whiz locknut. Tighten the axle bolt until the wheel rolls freely, but is not loose.

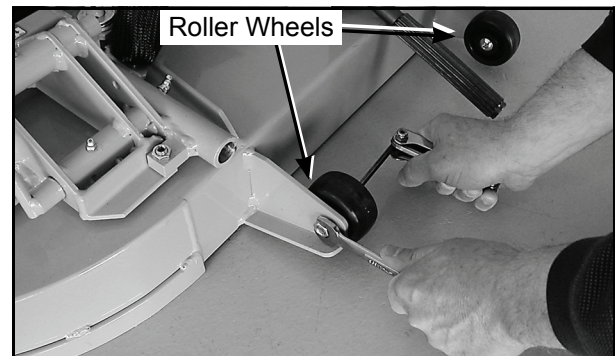


**Tilt-Up Spring and Roller Wheel
Installation on Rear Discharge Deck**

Tilt-Up Roller Wheel Installation - Model MW, MB (prior to S/N 2006-81428)

NOTE: A 2-1/2" diameter tilt-up roller wheel (P/N 9772) is required.

Mount the two (2) tilt-up roller wheels on the brackets on the rear skirt of the deck housing using the P/N 8490 axle bolt, 3/8 in. wave spring washer and 3/8-16 in. Whiz locknut. Tighten the axle bolt until the wheel rolls freely, but is not loose.



Tilt-Up Roller Wheel Installation - Model MW

Walker

SERVICE INSTRUCTIONS

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Mower Deck Installation on Tractor

Deck Installation - Model MC, MD, MT, MTL, MTEFI

1. Lightly grease each deck support arm (2) on the tractor. Refer to **Mower Deck Installation** photo for location of deck support arm.
2. Engage the deck carrier frame tube sockets on the tractor support arms (refer to **Discharge Chute and PTO Shaft Guard Installation** photo for socket location). Slide the deck onto the support arms: all the way if SD equipped model, approximately 3 in. (76 mm) if GHS equipped model.

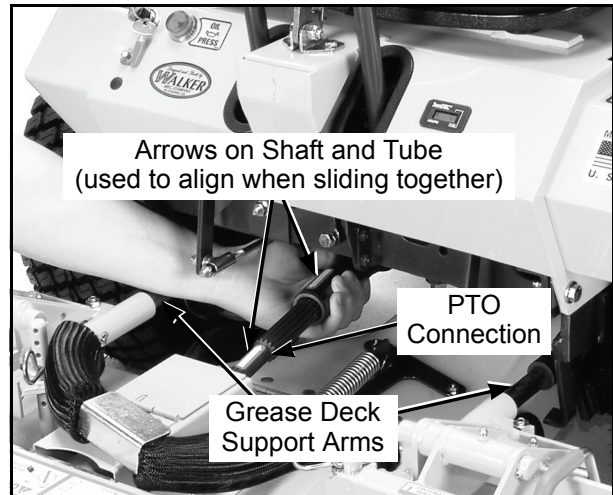
NOTE: When installing the DSD52 (or DSD62 - MT, MTL, MTEFI, MD) Mower deck, make sure to retract the dolly wheel after mounting the deck on the tractor.

3. If the deck is rear discharge (GHS equipped model), the rear discharge chute will need to be **aligned** and connected to the blower inlet during the last 2 in. (51 mm) of slide action on the support arms.

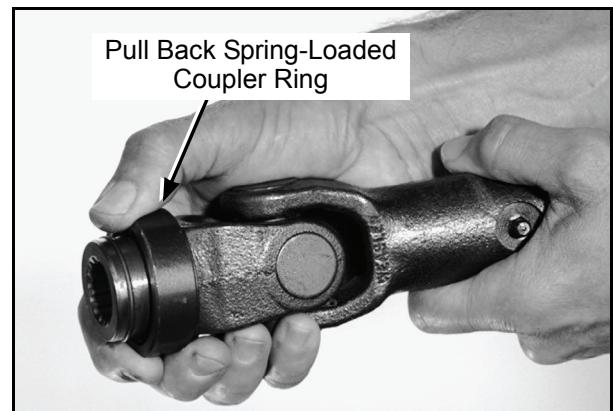
NOTE: Raising the mower body may be helpful in fitting and guiding the deck chute into the blower.

4. Install the hitch pin through the hole on the end of each support arm to lock the deck in place (refer to **Deck Counterweight Spring Installation** photo). Two (2) hitch pins are included in the owner's packet of materials.
5. Connect the mower deck PTO drive shaft assembly to the tractor with the splined quick disconnect coupler. This coupler simplifies shaft alignment and installation.
 - a. Use the arrows on the shaft and tube to align and slide the PTO quick coupler onto the deck splined shaft.
 - b. Reaching under the tractor, pull the ring back on the coupler, slide onto the spline shaft on the tractor, and release the ring.

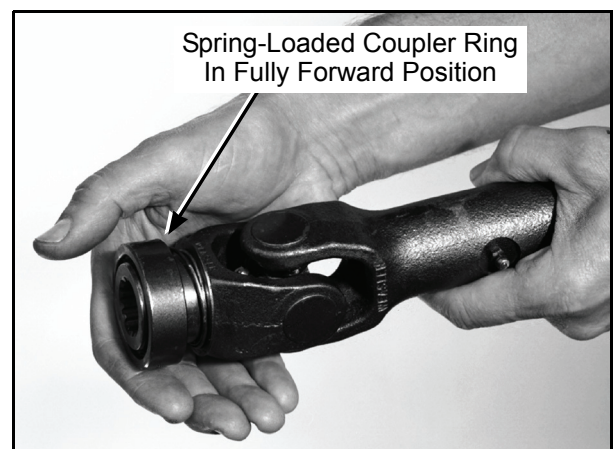
IMPORTANT: To prevent damage to the mower, make sure the PTO shaft assembly is securely locked on the tractor, with the locking balls fully seated in the groove and the ring in the full forward position (refer to the **Coupler Ring "Locked" Position** photo). After installation, pull on the shaft to check for security.



**Mower Deck Installation
(PTO Shaft Connection)**



Installing PTO Quick Coupler

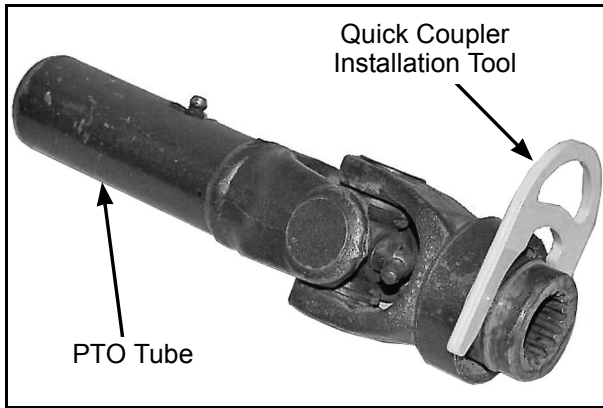


Coupler Ring "Locked" Position

Walker

SERVICE INSTRUCTIONS

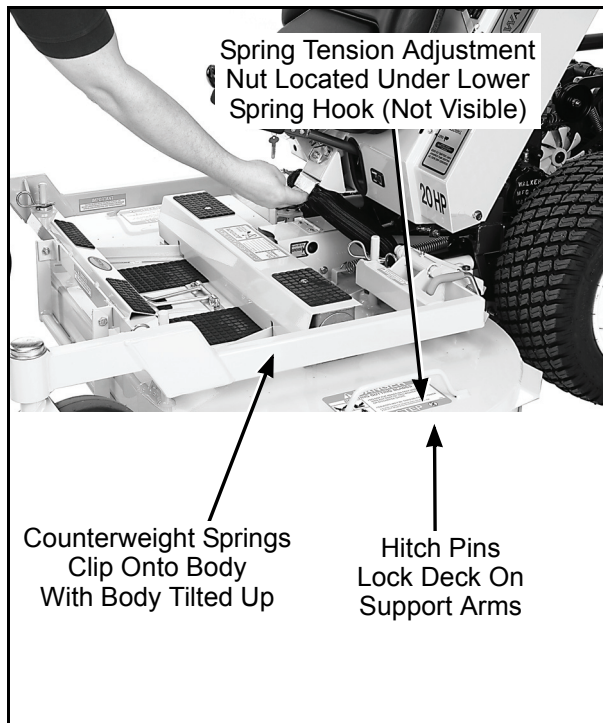
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Quick Coupler Installation Tool

Model MC, MD, MT, MTL, MTEFI

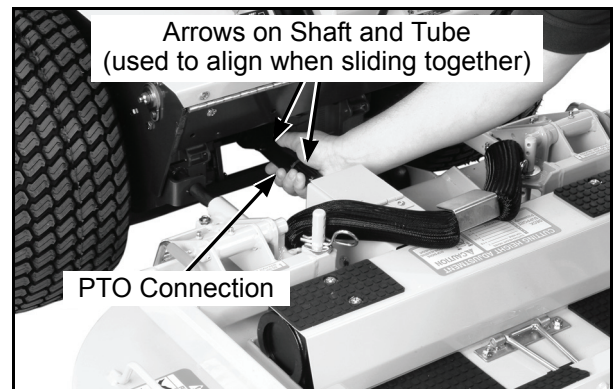
6. Raise the mower body (instead of lifting the front of deck) and clip the counterweight springs to the receptacle on front of body. Lower the body to tension the springs. (Refer to **Deck Counterweight Spring Installation Photo**.)
7. With the counterweight springs connected, the weight on the deck caster wheels should be 15 to 25 lb (6.8 to 11.3 kg). Check this weight by lifting on the front of the deck carrier frame. If required, the spring tension can be adjusted by tightening or loosening the elastic stop nuts located underneath the lower spring hook. Refer to **Deck Counterweight Spring Installation** photo.



Deck Counterweight Spring Installation

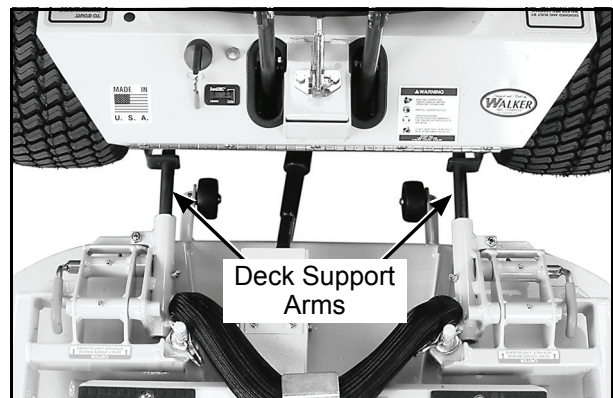
Deck Installation - Model MS, MB

1. Lightly grease each deck support arm (2) on the tractor. Refer to **Mower Deck Installation** photo for location of deck support arm.
2. Engage the deck carrier frame tube sockets on the tractor support arms (refer to **PTO Shaft Guard Installation** photo for socket location). Slide the deck onto the support arms approximately 3 in. (76 mm).
3. Align and connect the splined PTO shaft and socket halves, as shown in **PTO Shaft Connection** photo. The PTO shaft has a pilot end to ease alignment of shaft; fit shaft end into socket and rotate shaft until the splines line up as indicated by arrows, then slide together.



PTO Shaft Connection

4. Install the hitch pin through the hole on the end of each support arm to lock the deck in place (refer to **Deck Counterweight Spring Installation** photo). Two (2) hitch pins are included in the owner's packet of materials.

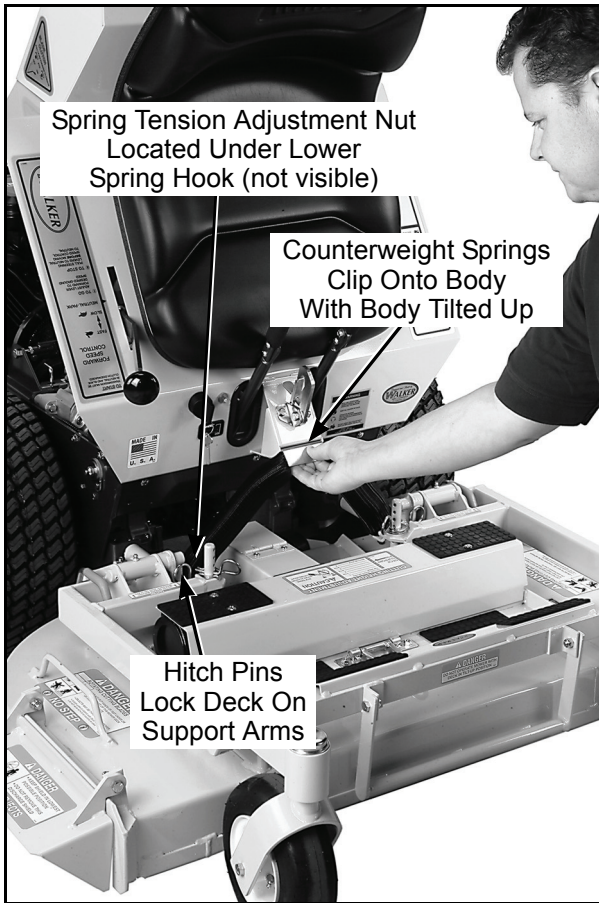


Mower Deck Installation

Walker

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Deck Counterweight Spring Installation

5. Raise mower body (instead of lifting the front of deck) and clip the counterweight springs to the receptacle on front of body. Lower the body to tension the springs. (Refer to **Deck Counterweight Spring Installation** photo.)
6. With the counterweight springs connected, the weight on the deck caster wheels should be 15 to 25 lb (6.8 to 11.3 kg). Check this weight by lifting on the front of the deck carrier frame. If required, the spring tension can be adjusted by tightening or loosening the elastic stop nuts located underneath the lower spring hook. Refer to **Deck Counterweight Spring Installation** photo.

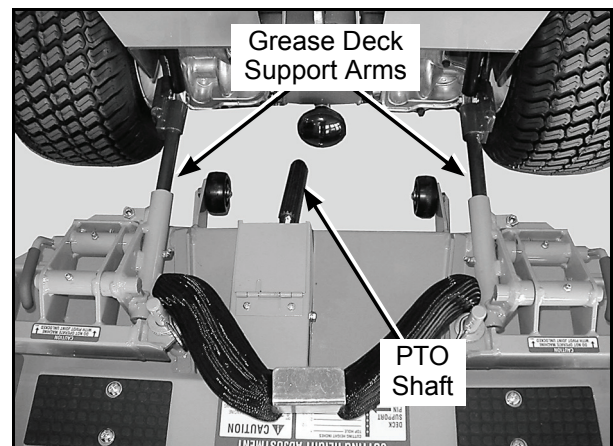
Deck Installation - Model MW

1. Lightly grease each deck support arm (2) on the tractor. Refer to **Mower Deck Installation** photo for location of deck support arm.
2. Engage the deck carrier frame tube sockets on the tractor support arms. Slide the deck onto the support arms.

NOTE: When installing the DSD52 Mower deck, make sure to retract the dolly wheel after mounting the deck on the tractor.

3. Install the hitch pin through the hole on the end of each support arm to lock the deck in place (refer to **Counterweight Spring Receptacle Assembly** photos). Two (2) hitch pins are included in the owner's packet of materials.
4. Connect the mower deck PTO drive shaft assembly to the tractor with the splined quick disconnect coupler. This coupler simplifies shaft alignment and installation.
 - a. Use the arrows on the shaft and tube to align and slide the PTO quick coupler onto the deck splined shaft.
 - b. Reaching under the tractor, pull the ring back on the coupler, slide onto the spline shaft on the tractor, and release the ring.

IMPORTANT: To prevent damage to the mower, make sure the PTO shaft assembly is securely locked on the tractor, with the locking balls fully seated in the groove and the ring in the full forward position (refer to the **Coupler Ring "Locked" Position** photo). After installation, pull on the shaft to check for security.

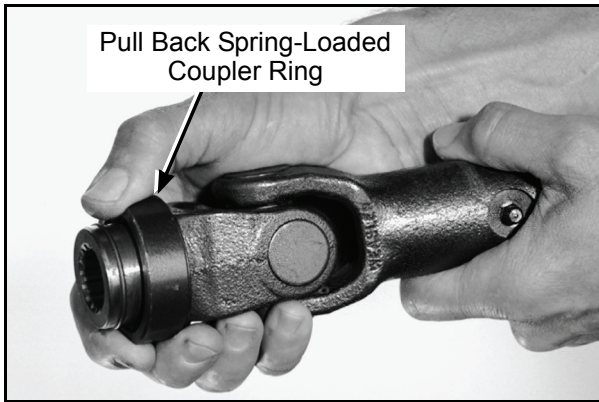


Mower Deck Installation (PTO Shaft Connection)

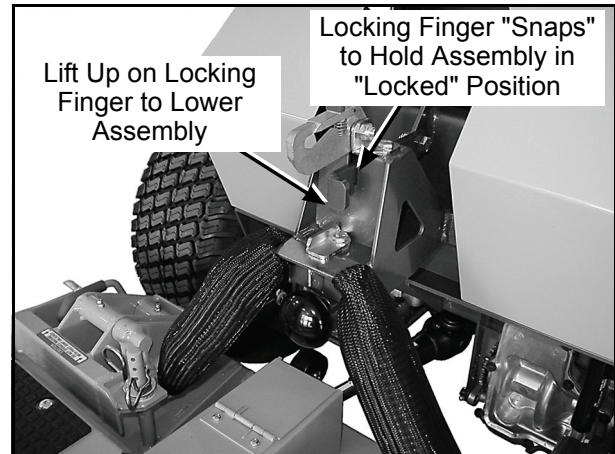
Walker

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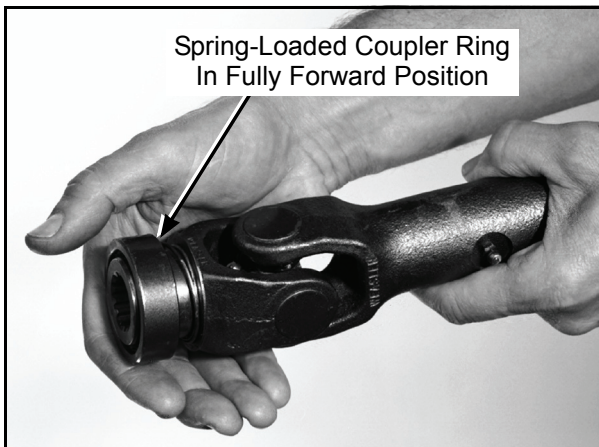
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Installing PTO Quick Coupler

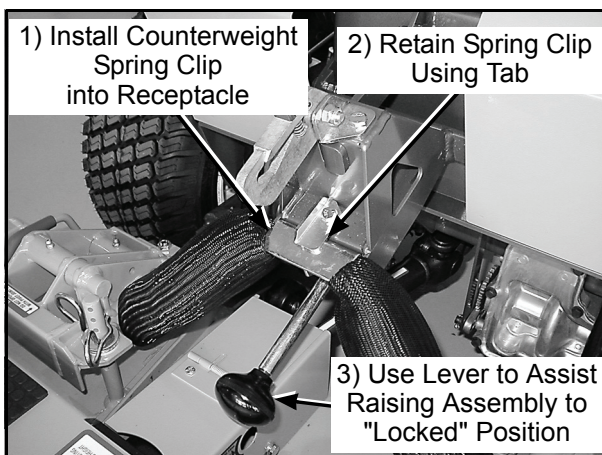


Counterweight Spring Receptacle Assembly in "Locked" Position



Coupler Ring "Locked" Position

5. Pull out counterweight spring receptacle assist handle and lift up on locking finger slightly to unlock the receptacle assembly. Lower this assembly toward the deck and attach the counterweight springs to the receptacle. Raise the assist handle until the assembly locks into the raised position to tension the springs.



Counterweight Spring Receptacle Assembly in "Unlocked" Position

Walker

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Deck Leveling - All Models

1. Position mower on a smooth, level surface. Set the cutting height to the highest position - 4 in. (102 mm) - for easy access under the deck to measure blade height.

NOTE: A block of wood cut **4 in. (102 mm)** high is a convenient gauge to measure blade height above ground during the leveling process.

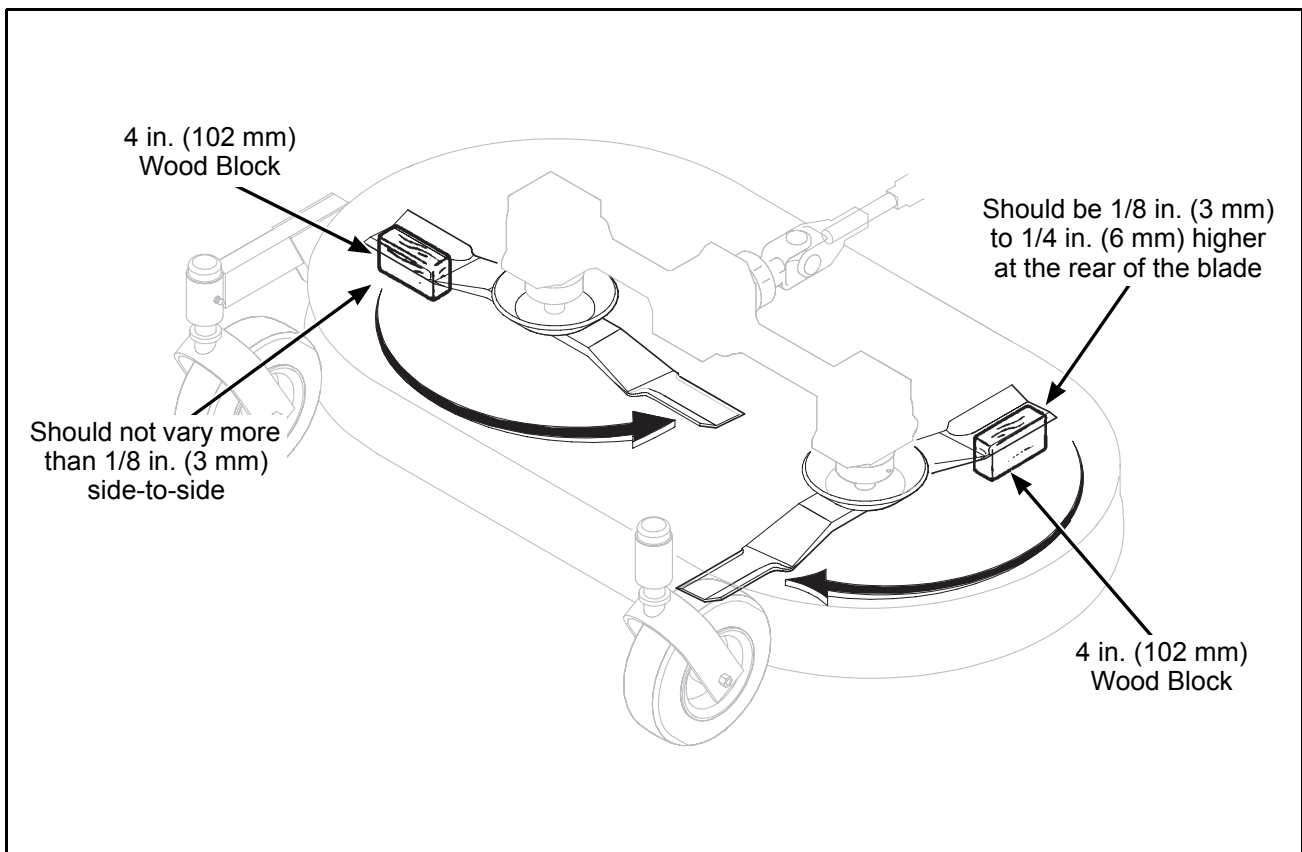


WARNING

The machine must be shut off during this procedure.

2. Check the side-to-side level. **Rotate each blade sideways** and measure the distance from blade tip to ground on each side. If measurements vary more than 1/8 in. (3 mm), add a washer shim under the deck support pins on the low side to level the deck.
3. Check the front-to-rear level. **Rotate the blades to point forward.** Measure the distance from blade tip to ground on the front and rear. The rear of the blade should be 1/8 to 1/4 in. (3 to 6 mm) higher than the front of the blade; shim the rear (or front) deck support pins equally to achieve **at least 1/8 in. (3 mm)** difference.

NOTE: The mower deck and support frame are jig welded; within normal tolerances, very little, if any, shimming should be required to level the deck. Tire pressure will influence the levelness of the deck. Check the tire pressure as a possible cause of the deck not being level.



Deck Leveling

Walker

SERVICE INSTRUCTIONS

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PREOPERATING FLUID LEVELS

Tractor Fluid Levels

	MT	MTL	MTEFI	MTLEFI	MC	MD	MS	MW	MB
Engine Crankcase Oil Level	10W-30 Approximately 1.85 quarts (1.75 liters) Always check the level with the dipstick before adding more oil.					10W-30 3.1 quarts (2.9 liters)	10W-30 2.7 pints (1.3 liters)	10W-30 1.8 quarts (1.7 liters)	10W-30 1.5 quarts (1.4 liters)
Hydrostatic Transmission Oil Level	Mobil 1 (15W50) Synthetic Oil 1 quart (1 liter) * NOTE: Mobil 1 (20W50) Synthetic Oil can be used if (15W50) is not available.							N/A	
Gear Axle Oil Level	SAE 80W-90 (API GL-5) Oil level should touch bottom thread of fill hole							N/A	
Hydrostatic Transaxle Oil Level (MB, MW)	N/A							20W50 Motor Oil API of SL or greater 79 fl. oz. (2.34 liter)	
PTO Gearbox Oil Level	SAE E.P. (Extreme Pressure) 80W-90 7 to 8 fl. oz. (21 to 24 cl)					SAE E.P. (Extreme Pressure) 80W-90 5 fl. oz. (15 cl)		N/A	
Radiator Coolant Level	N/A	50/50 Pre-Mix Antifreeze and water 1.25 Gallons (4.73 liters)	N/A	50/50 Pre-Mix Antifreeze and water 1.25 Gallons (4.73 liters)	N/A	50/50 Pre-Mix Antifreeze and water 1.25 Gallons (4.73 liters)	N/A		

Deck Fluid Levels

Use SAE E.P. (Extreme Pressure) 90W oil until the oil level is up to (submerges) the horizontal shaft in the gearbox (shaft parallel to cover plate).

NOTE: In case the gearboxes are completely drained of oil, approximately 5 fl. oz. (15 cl) of oil per gearbox is required to refill the gear drive assembly.

NOTE: Since the gearboxes are connected as a unit by connector tubes, it is necessary to add oil slowly. Allow a few minutes after adding oil for the oil to flow throughout the assembly and the oil level to stabilize before reassembly.

IMPORTANT: DO NOT overfill the deck gearboxes. The gearbox assembly is not vented, and overfilling with oil will cause excessive pressure and result in oil leaks.

DSD52 or DSD62 Decks

With the deck in the normal operating position, remove the level plug in the side of the gearcase. Add SAE E.P. (Extreme Pressure) 90W oil to maintain the oil level to the plug.

Walker

SERVICE INSTRUCTIONS

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Implement Fluid Levels

	Perfaerator	Rotary Broom	Two-Stage Snowblower	SB36 Snowblower
Gearbox Oil Level	80W-90 15 oz. (44.36 cl)		SAE E.P. (Extreme Pressure) 80W-90 5 fl. oz. (15 cl)	

Walker

SERVICE INSTRUCTIONS

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Implement Assembly

SETUP INSTRUCTIONS

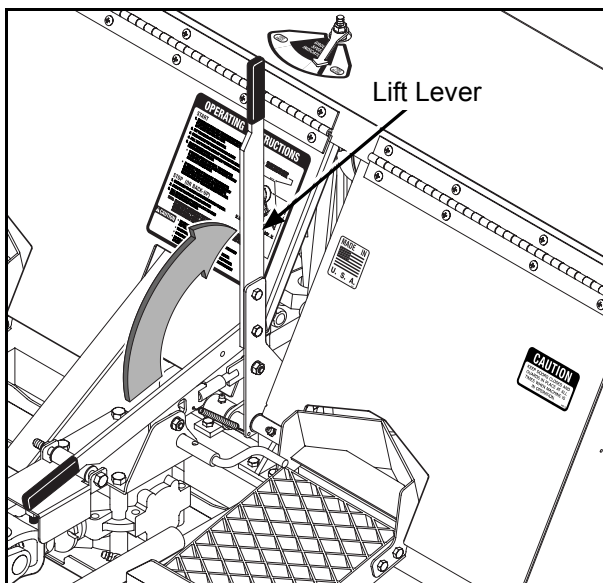
Perfaerator

The *PERFAERATOR*™ is shipped partially assembled. After uncrating, initial setup is required.

NOTE: During the process of unpacking, any damaged or missing parts should be noted and reported to the delivering carrier immediately (put in writing within 15 days). The carrier will provide directions for proceeding with a claim to receive compensation for damage.

Lift Lever Installation

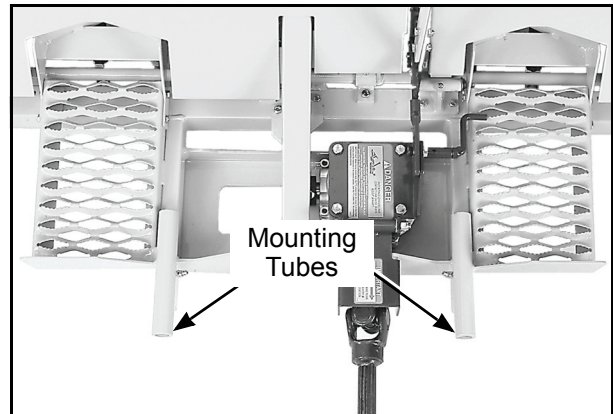
The lift lever for the camshaft assembly position is partially assembled. Stand the lift lever upright and attach the remaining hardware.



Install Lift Lever Handle
(stand upright and insert hardware)

Installation on Tractor

1. Remove the mower deck from the tractor if necessary. Refer to the appropriate Tractor Owner's Manual.
2. Lightly grease each tractor support arm (2) on the tractor.



Attach Aerator to Tractor

3. Engage the aerator frame tube sockets on the tractor support arms. Slide the implement hitch onto the support arms approximately 3 in. (76 mm).



Connect Driveline Coupler to Tractor PTO

4. Connect the aerator driveline to the tractor PTO shaft by sliding back the locking collar on the yoke, then push the yoke over the PTO shaft until the locking collar **snaps back fully**. Make sure the driveline is well secured at both ends.

⚠ DANGER

This shaft turns at very high RPM. If the collar is not locked to the PTO shaft at the tractor end, or if the yoke at the aerator end is not secured properly, the driveline can fly loose with great force capable of causing serious injury or death.

5. Install the hitch pin through the hole on the end of each support arm to lock the hitch in place. Two (2) hitch pins are included in the owner's packet of materials.

Walker

SERVICE INSTRUCTIONS

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Implements

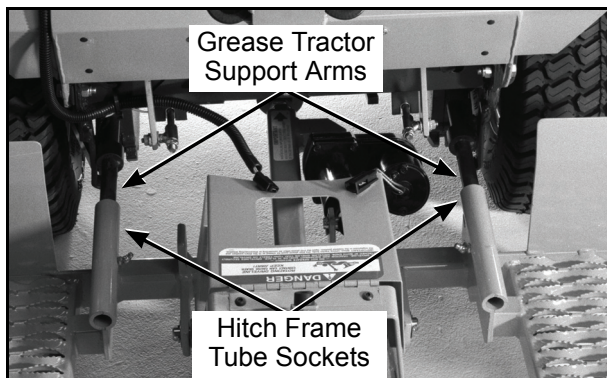
Walker Implements are shipped partially assembled. After uncrating the implement adaptor and/or implement(s), initial setup is required.

NOTE: During the process of unpacking, any damaged or missing parts should be noted and reported to the delivering carrier immediately (put in writing within 15 days). The carrier will provide directions for proceeding with a claim to receive compensation for damage.

IMPLEMENT HITCH

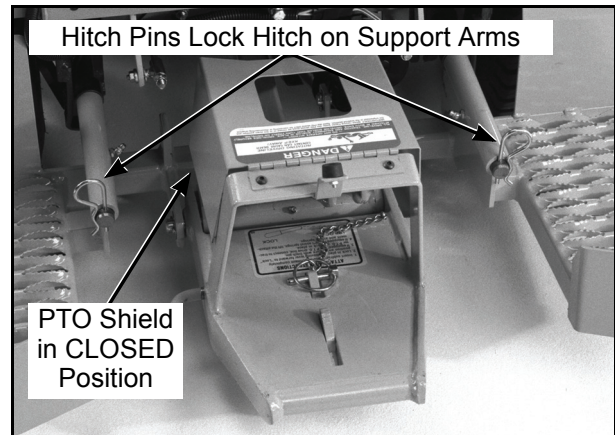
Implement Hitch Installation

1. Remove the mower deck from the tractor if necessary. Refer to the appropriate Tractor Owner's Manual.
2. Lightly grease each tractor support arm (2) on the tractor. Refer to **Implement Hitch Installation** photo for location of tractor support arms.
3. Engage the hitch frame tube sockets on the tractor support arms. Slide the implement hitch onto the support arms approximately 3 in. (76 mm).
4. Install the hitch pin through the hole on the end of each support arm to lock the hitch in place. Two (2) hitch pins are included in the owner's packet of materials.



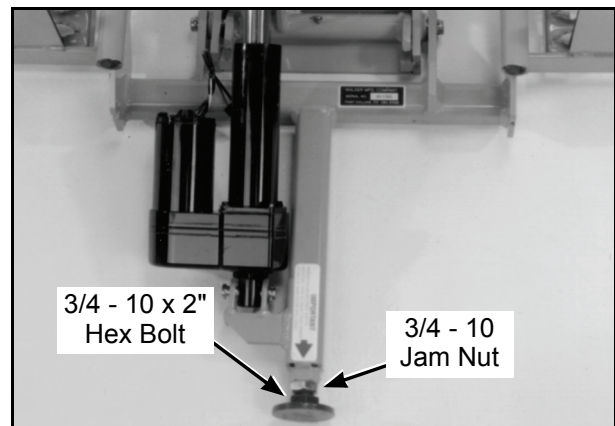
Implement Hitch Installation

IMPORTANT: If the tractor body needs to be raised, the PTO shield must be in the **closed or down position** and the implement must be in the **lowered position**. The only time the PTO shield needs to be open or raised is when connecting or disconnecting the driveline for the rotary broom, snowblower, or debris blower.



PTO Shield in CLOSED Position

5. Loosen the 3/4-10 jam nut on the end of the implement Hitch. Adjust the 3/4-10 x 2 in. hex bolt until deck support arms are parallel with ground. Securely tighten the 3/4-10 jam nut to prevent the bolt from moving.



Implement Hitch Jam Nut Adjustment

IMPORTANT: This adjustment will need to be made only once if the same tractor and hitch are used together. If the hitch will be used on more than one tractor, this adjustment will be required every time the hitch is mounted on a different tractor.

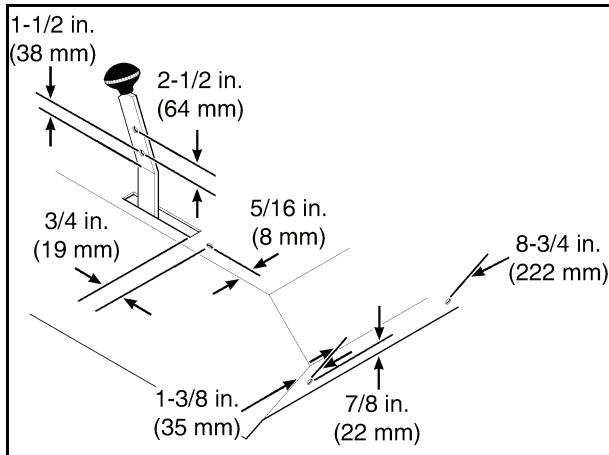
Walker

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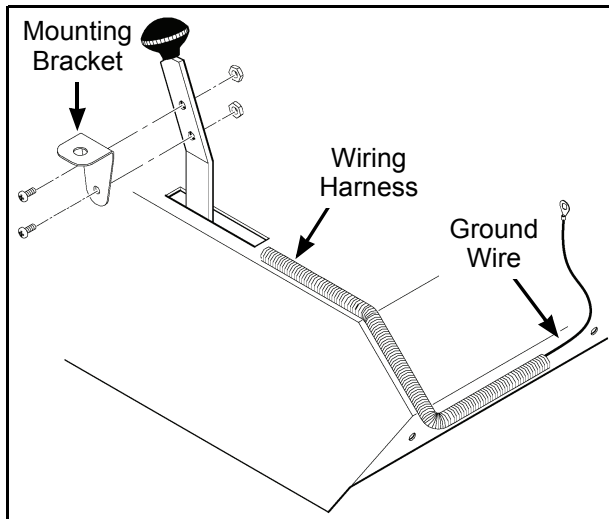
Implement Hitch Wiring

1. Drill five (5) 13/64 in. (5 mm) diameter holes in the tractor, two in the FSC lever and three in the body, as shown in the illustration.



Drill Holes for Implement Hitch Wiring

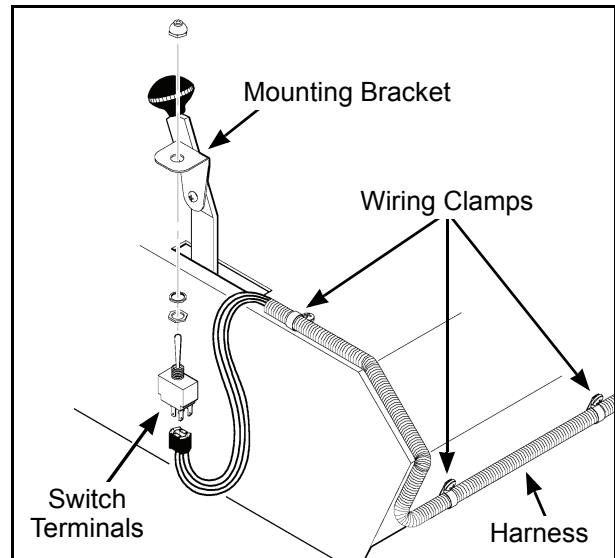
2. Attach the toggle switch mounting bracket on the FSC lever using two (2) 10-24 x 1/2 in. bolts and Keps nuts.



Attach Toggle Switch Mounting Bracket

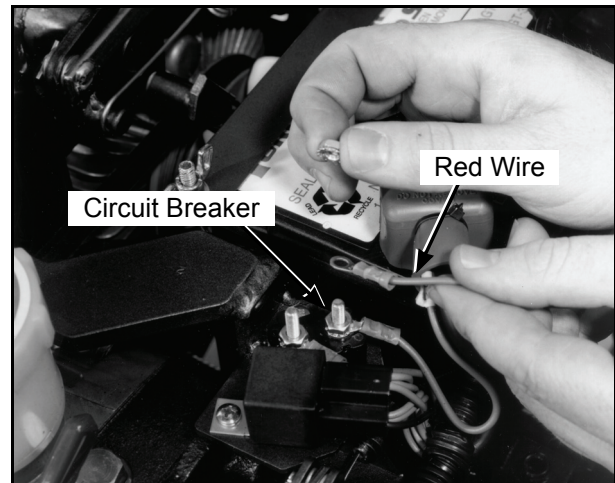
3. Install the wiring harness to the tractor body using the three wiring clamps, three 10-24 x 3/8 in. bolts and Keps nuts.

4. Attach the toggle switch to the mounting bracket, placing the switch terminals toward the **front** of the mower.



Attach Wiring Harness and Toggle Switch

5. On Models MC, MDD/MDG, and MT, connect the harness red wire to the load side of the circuit breaker mounted on the bracket behind the battery. Connect the green ground wire to the chassis ground bolt.



Connect Harness Wire to Circuit Breaker

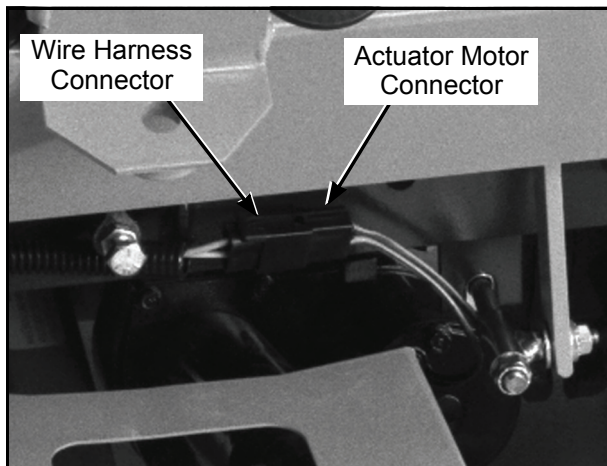
IMPORTANT: For all 1987-1997 Model MC tractors (with Kohler Magnum engine), connect the harness red wire to the free connector of the PTO clutch switch red wire. Refer to **Implement Hitch Wiring Diagram** illustration.

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6. Complete the wiring by connecting the wiring harness ends to the toggle switch and to the actuator motor of the implement hitch.



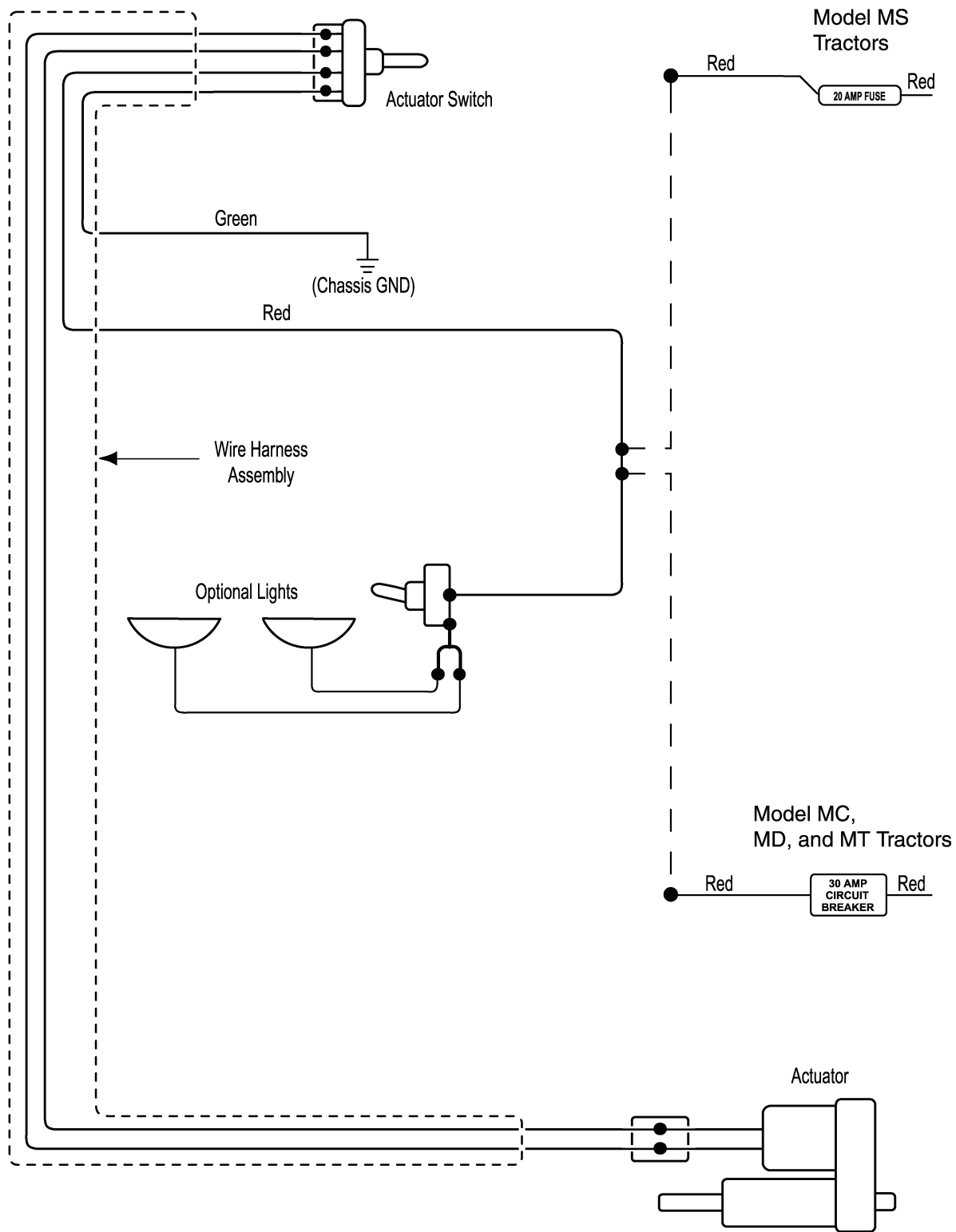
Complete Implement Hitch Wiring

7. Move the implement lift switch backward to raise the implement hitch to the **UP** position.
8. Move the implement lift switch forward to lower the implement hitch to the **DOWN** position.
9. Raise and lower the hitch a few times to check the operation and make sure it moves smoothly. If not, make sure the wiring harness ends are connected properly and securely. Refer to **Implement Hitch Wiring Diagram** illustration.

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Implement Hitch Wiring Diagram

Walker

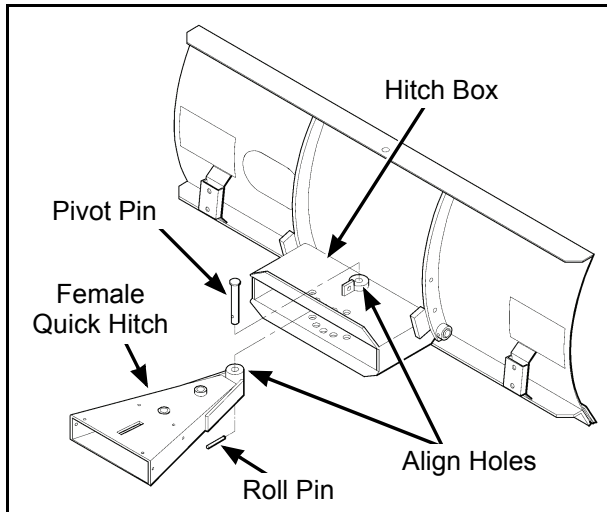
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DOZER BLADE

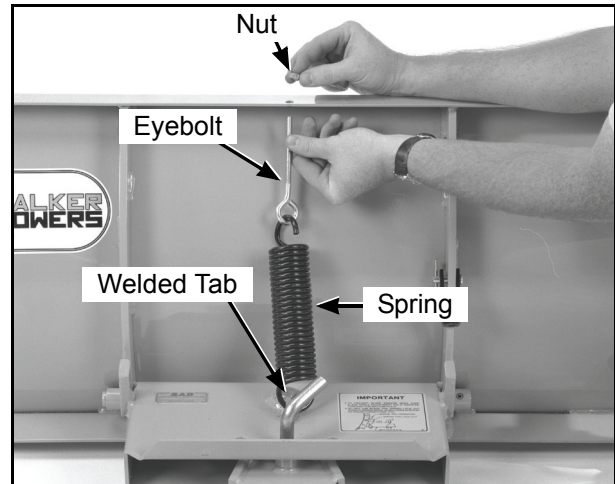
Dozer Blade Assembly

1. Insert the female quick hitch into the hitch box on the blade attachment.
2. Align the single hole at the end of the female quick hitch with the single hole in the hitch box and insert the pivot pin through both holes. Secure the pivot pin on the underside with a 1/4 x 1 in. roll pin.



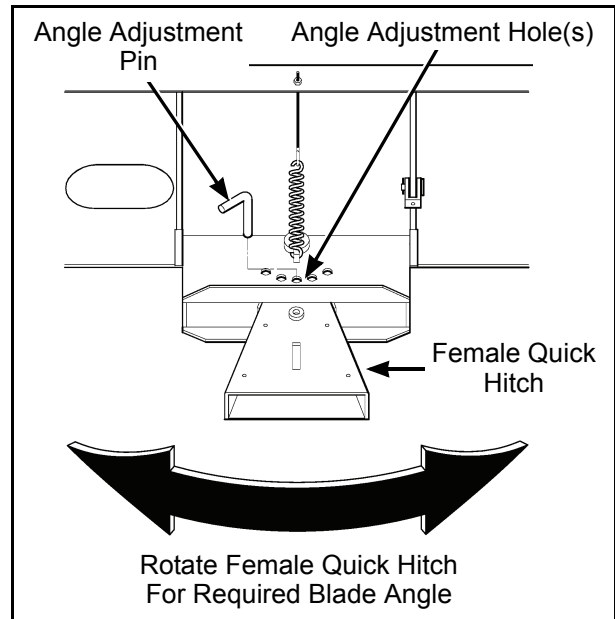
Insert Female Hitch into Blade Attachment

3. Hook one end of the spring onto the welded tab on the hitch box. Hook the eyebolt onto the free end of the spring.
4. Insert the eyebolt up through the hole in the upper bend of the blade and secure it with a flat washer and nut. Adjust the length of the eyebolt according to the amount of spring tension required for safe operation. [Normally about 1/2 in. (13mm) of thread should protrude beyond the nut.]



Attach Spring to Blade Assembly

5. Insert a 3/16 x 1 in. split spring pin into the angle adjustment pin.
6. Rotate the female quick hitch to obtain the required blade angle. Align the hole in the center of the female quick hitch with one of the five (5) holes in the hitch box, and insert the angle adjustment pin through the top and bottom holes.



Insert Adjustment Pin and Set Blade Angle

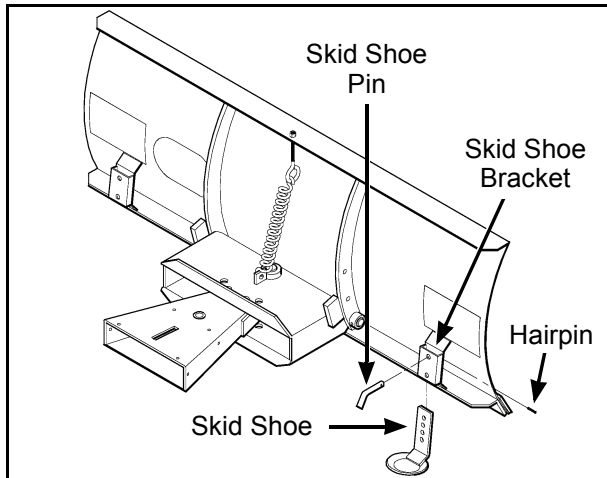
7. Install the two (2) skid shoes in the two brackets on the rear outer edges of the blade.

Walker

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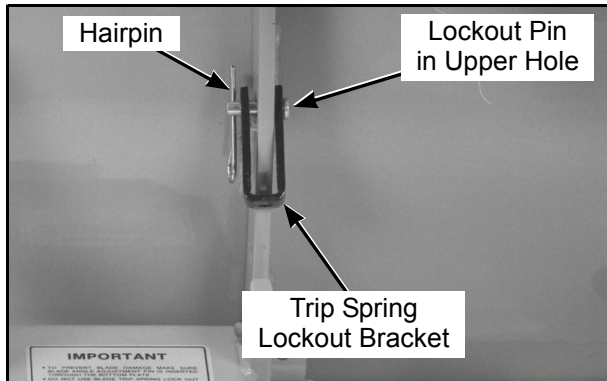
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- Adjust the skid shoes to allow the required clearance under the blade. Install a skid shoe pin in each shoe and lock in place with a 4 mm x 80 mm hairpin. Refer to **ADJUSTMENTS of Dozer Blade Skid Shoes** in the **Service Procedures Section**.



Install Skid Shoes

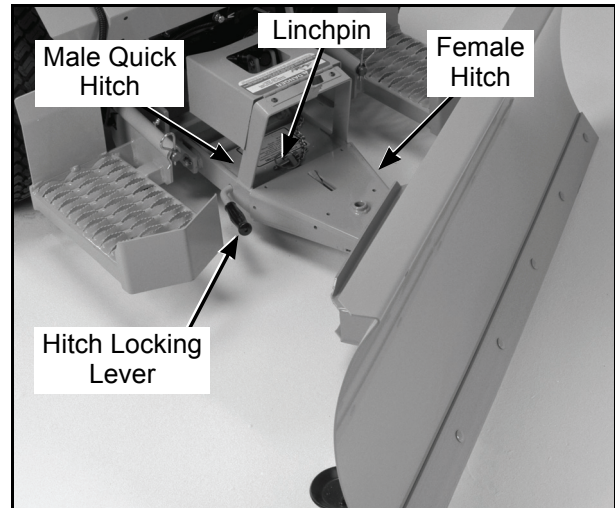
- Install the trip spring lockout bracket in the upper hole behind the blade using the lockout pin and hairpin.



Install Trip Spring Lockout Bracket

Dozer Blade Installation

- Insert the male quick hitch section of the implement hitch into the female hitch of the blade. Lock in place by moving the hitch locking lever **fully forward** to the **LOCKED** position. Secure the male quick hitch latch with the linchpin.



Attach Blade to Tractor

- To install the optional tire chains:
 - Remove the tractor wheels.
 - Attach the tire chains to the wheels.
 - Place the wheel spacer plates on the lug bolts. The wheel spacer plates provide clearance for the chains between the tires and the tractor body.
 - Place the wheels back on the tractor.
 - Reinstall and tighten the lug bolts.

ROTARY BROOM

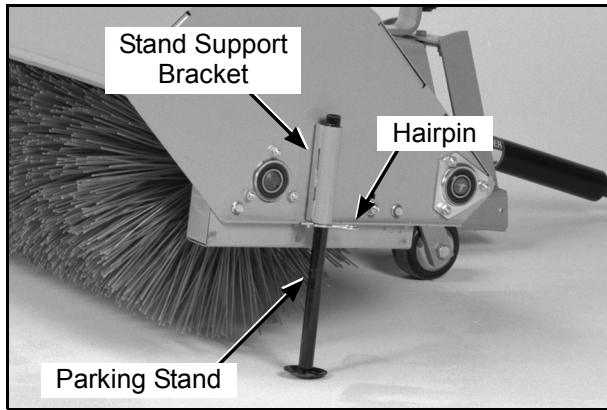
Rotary Boom Installation

- Insert a parking stand into each stand support bracket from the underside. Install a 5/32 x 1-1/4 in. cotter pin in the upper hole of each parking stand. Set the parking stands in their **most extended position and secure each stand** with a 4 mm x 80 mm hairpin.
- Check the pivot lock pin and make sure it is in the **innermost position** to prevent bulking of the female hitch member, and to facilitate quick hitch attachment.

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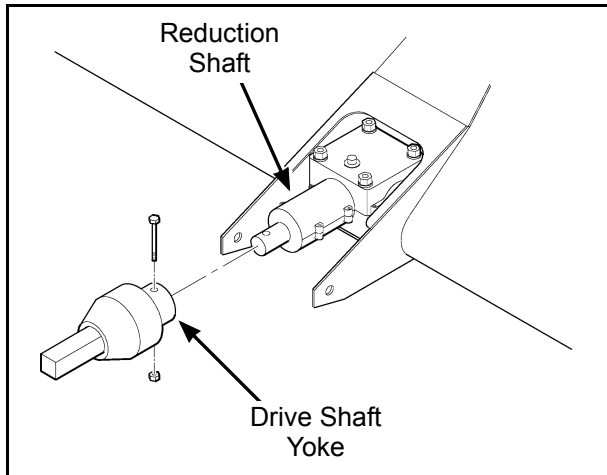
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Prepare Rotary Broom for Installation

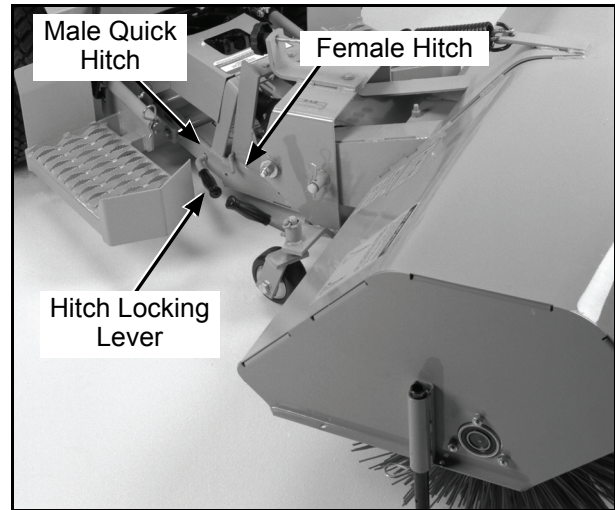
3. Attach the female broom driveline half (with quick connect yoke) over the male broom driveline half. Set the driveline on its support.

NOTE: Driveline sliding surfaces must be greased.



Assemble Rotary Broom Driveline

4. Insert the male quick hitch section of the implement hitch into the female quick hitch of the rotary broom and place the male quick hitch lever **fully forward** to the **LOCKED** position. Secure the male quick hitch latch with the linchpin.

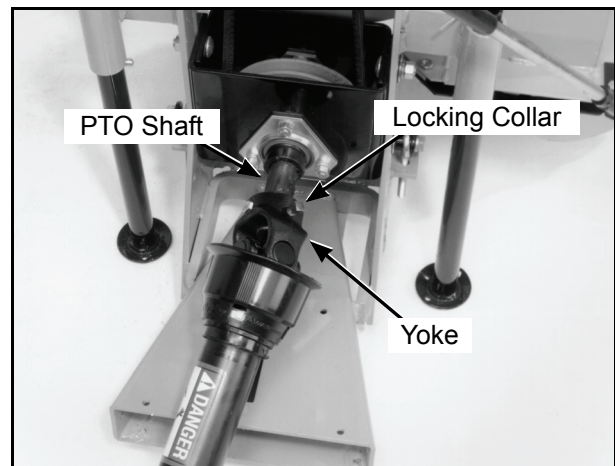


Attach Broom to Implement Hitch

5. Connect the broom driveline to the tractor PTO shaft by sliding back the locking collar on the yoke, then push the yoke over the PTO shaft until the locking collar **snaps back fully**. Make sure the driveline is well secured at both ends.

 **DANGER**

This shaft turns at very high RPM. If the collar is not locked to the PTO shaft at the tractor end, or if the yoke at the broom end is not secured properly, the driveline can fly loose with great force capable of causing serious injury or death.



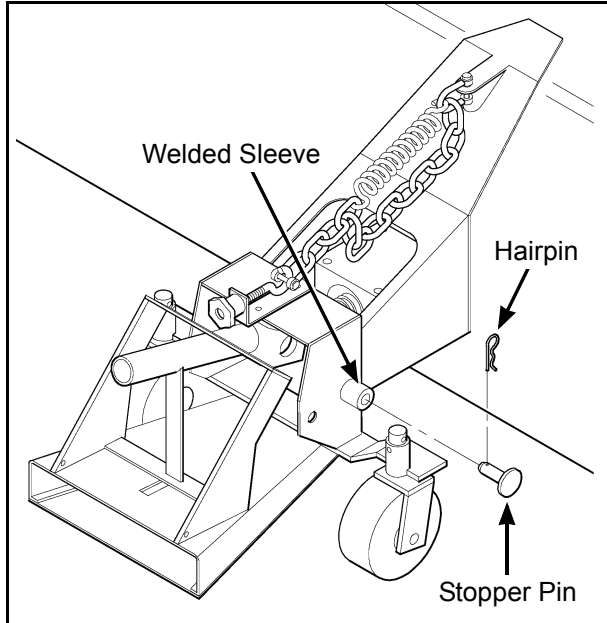
Connect Broom Driveline to Tractor PTO Shaft

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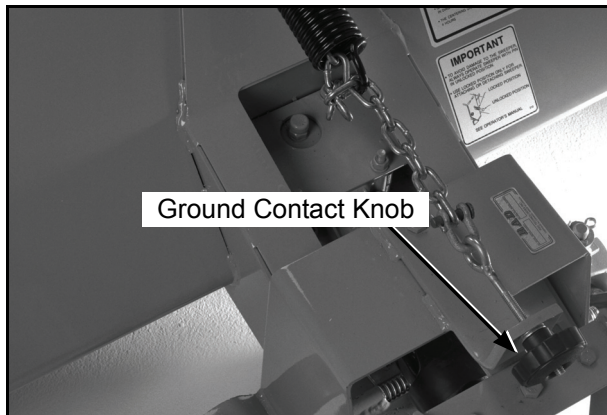
- Remove the hairpin from the welded sleeve on the right hand side of the broom mounting bracket. Carefully pull out the stopper pin to its **most extended position** and lock in place with the hairpin.



Lock Stopper Pin in Place

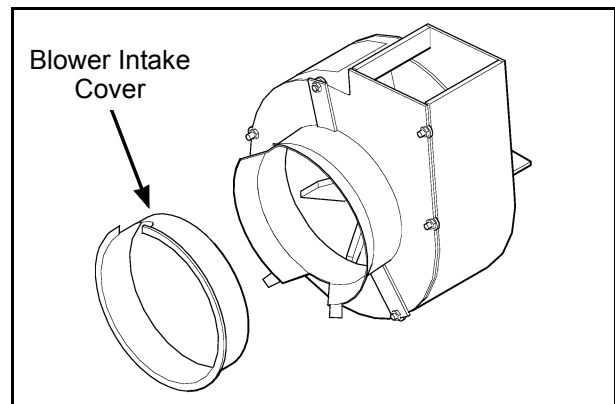
NOTE: The pin in the innermost position is used to prevent the female hitch on the broom from being pulled up by the brush ground contact adjustment spring, thus facilitating mounting and dismounting of the broom.

- Adjust brush ground contact by threading knob.



Adjust Brush to Ground Contact

- Retract the parking stands and secure with the hairpins prior to operation.
- To install the optional tire chains:
 - Remove the tractor wheels.
 - Attach the tire chains to the wheels.
 - Place the wheel spacer plates on the lug bolts. The wheel spacer plates provide clearance for the chains between the tires and the tractor body.
 - Place the wheels back on the tractor.
 - Reinstall and tighten the lug bolts.
- For GHS (Grass Handling System) equipped Walker tractors, install a blower intake cover in the blower intake tube. The cover "unloads" the blower and seals the intake to effectively eliminate power loss and noise when the blower is not being used.



GHS Blower Intake Cover

- For stability of the tractor when transporting with the rotary broom in raised position, approximately 80 lb (36 kg) of counterweight should be installed on the tail of the tractor. Optional tail weights for the various tractor models are available from your Walker dealer or a sandbag or similar weight may be used.

Walker

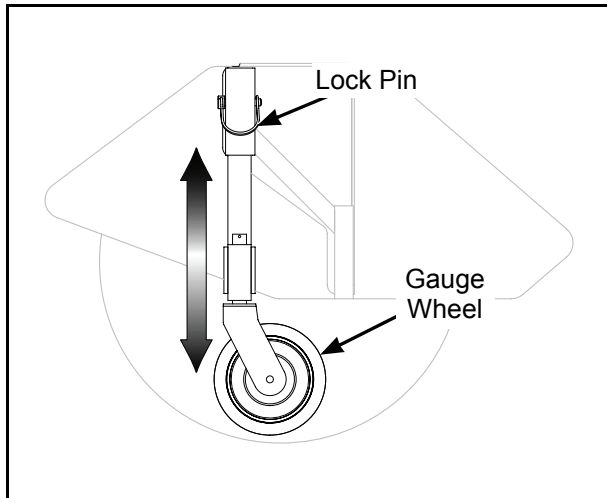
SERVICE INSTRUCTIONS

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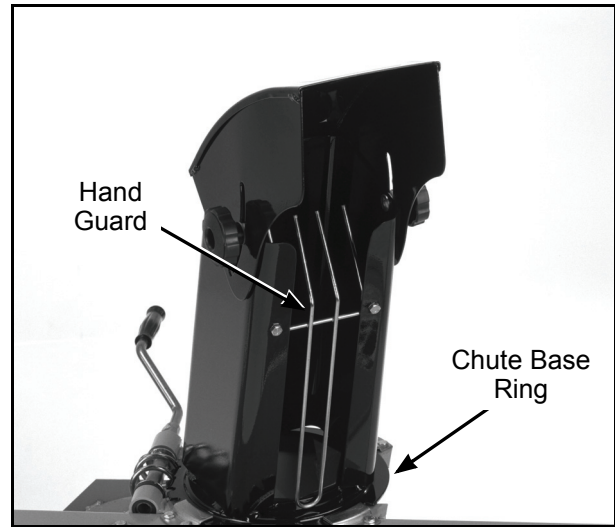
Optional Gauge Wheel Installation

NOTE: Gauge wheels are required for lawn work or heavy loads.

This adjustment is required for lawn thatching or leaf raking operations. Height is adjusted by removing pin and adjusting broom height to correct position. Adjust height according to type of application.



Optional Gauge Wheel Installation



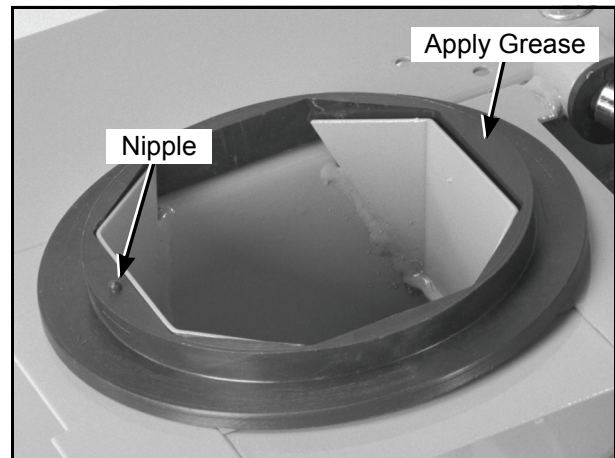
Install Hand Guard on Chute

2. Remove the bushing support from the chute base lip and discard the existing bolt (refer to **Install Rotation Worm Assembly** photo).
3. Place the plastic anti-friction insert over the chute base (placing the nipple on the upper side towards the center of the fan housing). Only one position provides a perfect fit. Apply grease on top of the insert where it will contact the chute base.

TWO-STAGE SNOWBLOWER

Snowblower Assembly

1. Install the hand guard on the chute, with the top section inside the chute and the bottom section outside the chute base ring. Place two (2) 1/4 x 3/4 in. bolts through the chute and the hand guard. Secure with a flat washer, lock washer, and nut. Position the bolt with the head on the outside of the chute and the nut on the inside. Torque both bolts to 10 ft-lb. (13.6 N·m).



Install Plastic Insert over Chute Base Lip

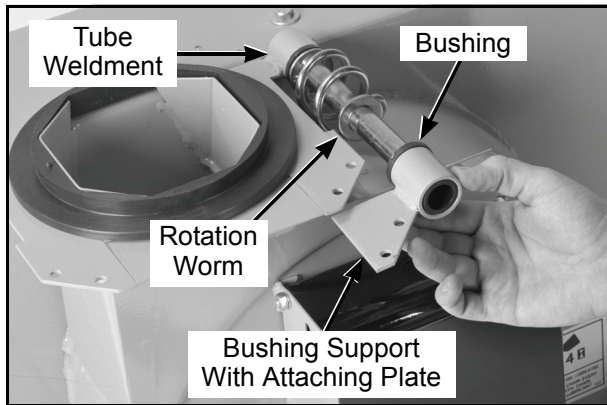
4. Insert the 1-5/16 in. (33 mm) plastic bushing into the tube weldment.
5. Insert the 1-11/16 in. (43 mm) plastic bushing into the bushing support and place this over the shaft on the rotation worm.

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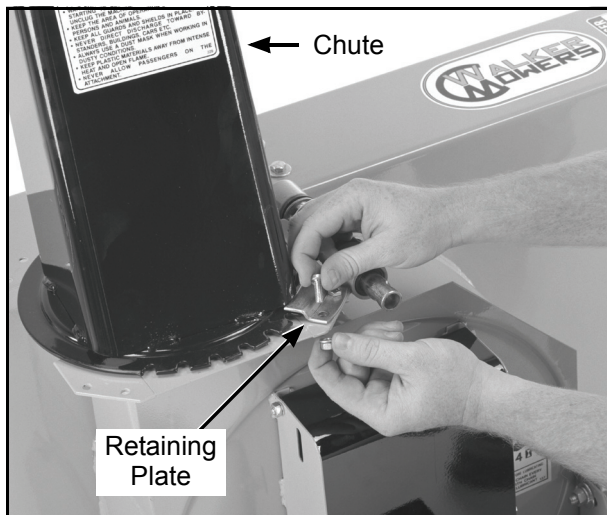
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6. Install the rotation worm assembly through the tube weldment with the attaching plate of the support on the underside of the chute base lip.



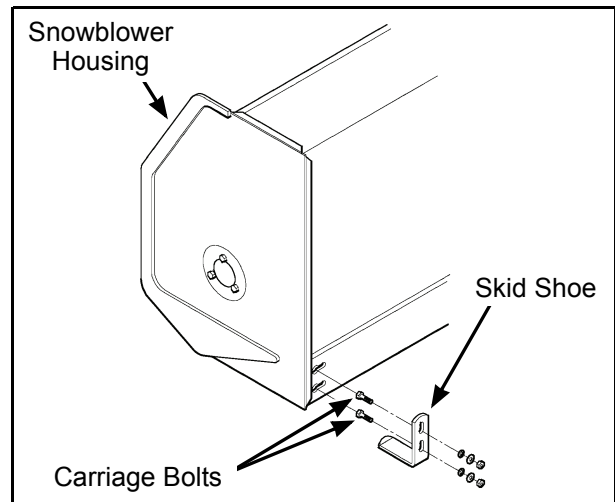
Install Rotation Worm Assembly

7. Install the chute over the plastic insert and secure with four retaining plates, using two (2) 1/4 x 1/2 in. bolts, lock washers, and nuts in each of the three (3) standard retaining plates, and two (2) 1/4 x 3/4 in. bolts, lock washers and nuts in the rear right retaining plate which also secures the support. Torque all bolts to 10 ft-lb. (13.6 N·m).



Install Chute over Plastic Insert

8. Insert two (2) 5/16 x 1 in. carriage bolts through each of the skid shoes from inside the bend. Place a flat washer, lock washer, and nut loosely on each bolt and place the bolt heads through the round holes in the outer ends of the bottom angle of the snowblower body. Adjust the skid shoes to allow the required clearance under the cutting edge. Slide the square shank portion of the bolt head into the slot and torque to 19 ft-lb (25.8 N·m). Refer to **ADJUSTMENTS of Two-Stage Snowblower Skid Shoes** in **Maintenance Instructions**.



Install Skid Shoes

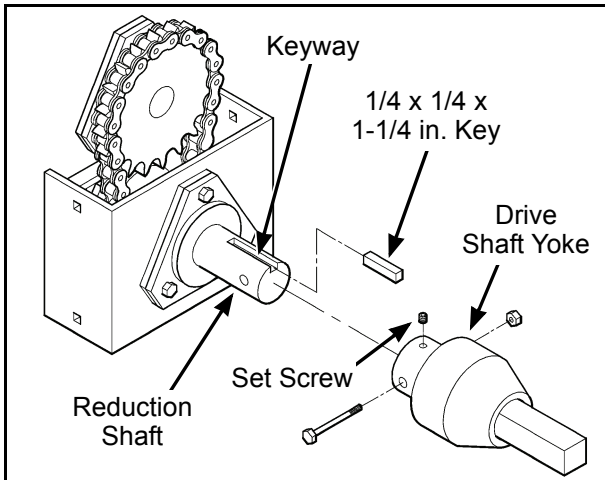
Snowblower Installation

1. Thoroughly clean the drive shaft yoke and install a 1/4 x 1/4 x 1-1/4 in. key in the reduction shaft keyway.
2. Slide the drive shaft yoke over the reduction shaft.
3. Secure the yoke to the reduction shaft with a 1/4 x 2-1/2 in. bolt and nylon locknut. Tighten the nut and the 3/8 x 3/8 in. allen set screw securely over the key in the yoke.

Walker

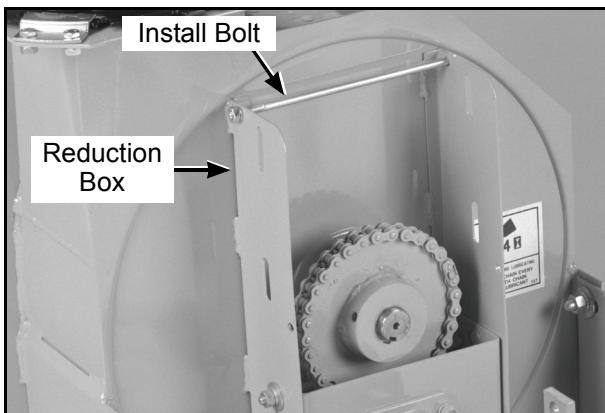
SERVICE INSTRUCTIONS

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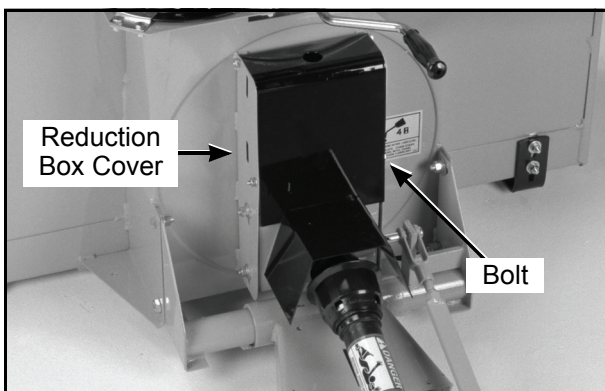
Attach Drive Shaft Yoke to Reduction Shaft

4. Install one 1/4 x 7-1/2 in. bolt through the upper set of holes in the reduction box and secure loosely with a lock washer and nut.



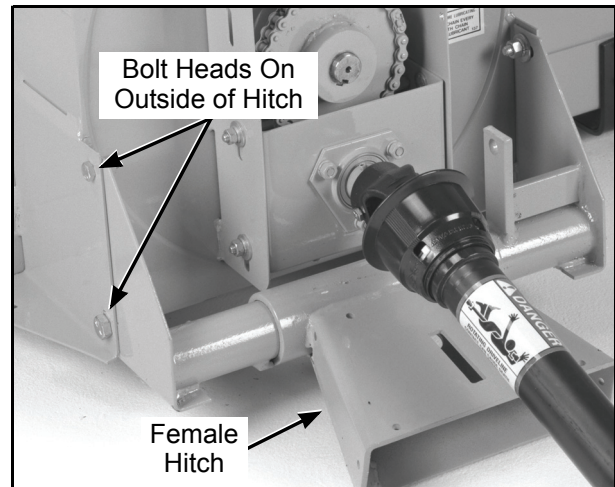
Install Bolt in Reduction Box

5. Hook the reduction box cover over the bolt and secure the cover with a second 1/4 x 7-1/2 in. bolt, lock washer, and nut through the lower set of holes in the reduction box. Torque both bolts to 10 ft-lb (13.6 N·m).



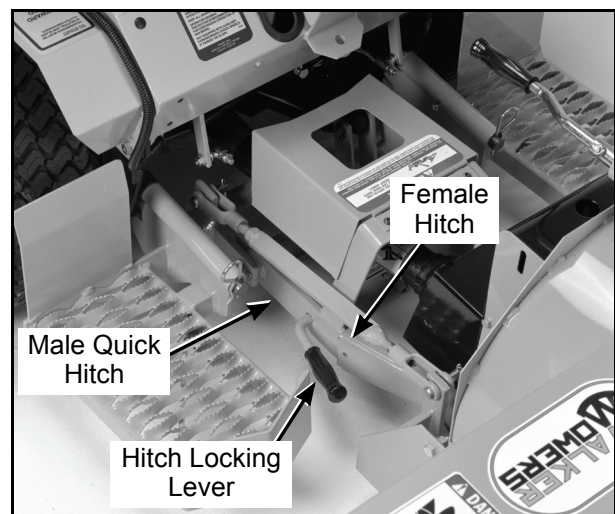
Install Reduction Box Cover

6. Attach the female portion of the hitch to the snowblower using one 3/8 x 1 in. bolt in the upper hole of each side, placing the bolt head on the outside, with a flat washer, lock washer, and nut on the inside. Use one 1/2 x 1 in. bolt, lock washer and nut in the bottom hole of each side. Tighten all four (4) bolts securely.



Mount Female Hitch to Snowblower

7. Insert the male quick hitch section of the implement hitch into the female hitch of the snowblower and lock in place by moving the hitch locking lever **fully forward** to the **LOCKED** position. Secure the latch with the linchpin.
8. Grease the drive shaft sliding surfaces and slide the male shaft inside the female tube.



Attach Snowblower to Implement Hitch

Walker

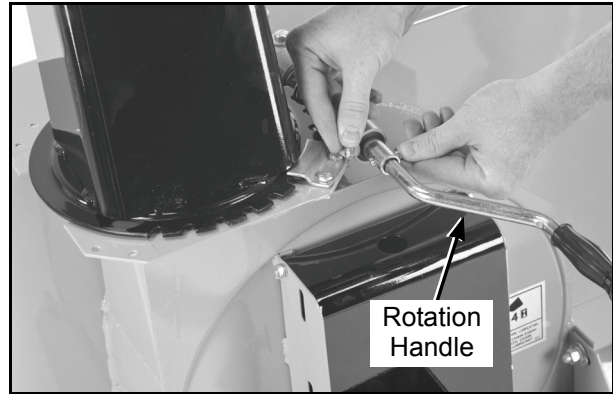
SERVICE INSTRUCTIONS

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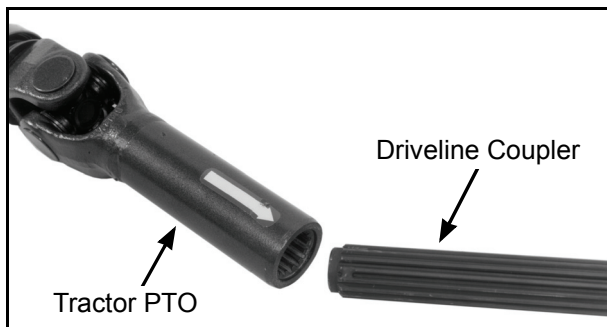
9. Attach the driveline quick lock coupler to the tractor PTO.

WARNING

This shaft turns at high RPM. If the collar is not locked to the shaft at the tractor end, or if the yoke at the blower end is not secured properly, the drive shaft can fly loose with great force, capable of causing serious injury or death.

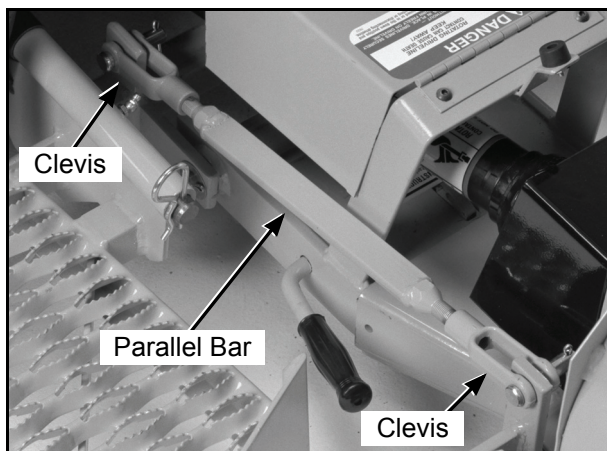


Insert Rotation Handle into Rotation Worm



Connect Driveline Coupler to Tractor PTO

10. Attach the parallel bar to the female hitch and the implement adaptor using the two clevises and spring clips.



Attach Parallel Bar to Female Hitch

11. Insert the rotation handle into the rotation worm. Align the holes and lock in place with a 1/4 x 1 in. socket head cap screw and nylon locknut.
12. Install the plastic handle grip on the chute rotation handle.

13. To install the optional tire chains:

- Remove the tractor wheels.
- Attach the tire chains to the wheels.
- Place the wheel spacer plates on the lug bolts. The wheel spacer plates provide clearance for the chains between the tires and the tractor body.
- Place the wheels back on the tractor.
- Reinstall and tighten the lug bolts.

14. For GHS (Grass Handling System) equipped Walker tractors, install a blower intake cover in the blower intake tube. The cover "unloads" the blower and seals the intake to effectively eliminate power loss and noise when the blower is not being used. Refer to **GHS Blower Intake Cover** illustration for **ROTARY BROOM** in this section.

15. For stability of the tractor when transporting with the snowblower in raised position, approximately 80 lb (36 kg) of counterweight should be installed on the tail of the tractor. Optional tail weights for the various tractor models are available from your Walker dealer or a sandbag or similar weight may be used.

Walker

SERVICE INSTRUCTIONS

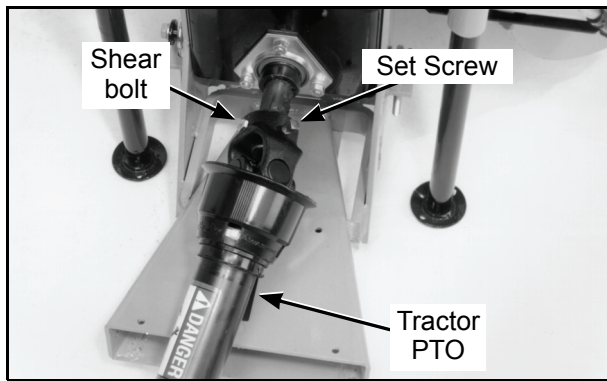
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DEBRIS BLOWER

Debris Blower Installation

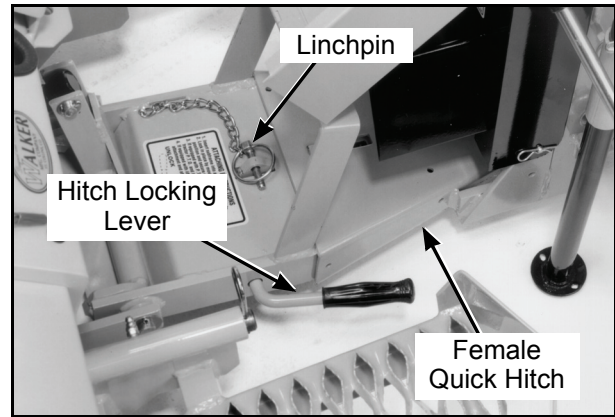
The debris blower is shipped completely assembled except for the driveline, which must be connected to the input shaft.

1. Remove the belt guard from the debris blower housing by removing the two (2) cover pins and hairpins securing it to the housing.
2. Thoroughly clean the debris blower input shaft and install a 1/4 x 1/4 x 1-1/4 in. key in the input shaft keyway.
3. Thoroughly clean the inside of the tractor PTO shaft and align the PTO shaft keyway with the key in the input shaft keyway.
4. Secure the PTO shaft to the input shaft with a 1/4 x 2-1/2 in. bolt and nylon locknut. Tighten the locknut and the set screw over the key.



Attach Tractor PTO to Debris Blower Input Shaft

5. Reinstall the belt guard by reversing the removal procedure.
6. Insert the male quick hitch section of the implement hitch into the female hitch of the debris blower and lock in place by moving the hitch locking lever **fully forward** to the **LOCKED** position. Secure the latch with the linchpin.



Attach Debris Blower to Implement Hitch

7. To install the optional tire chains:
 - a. Remove the tractor wheels.
 - b. Attach the tire chains to the wheels.
 - c. Place the wheel spacer plates on the lug bolts. The wheel spacer plates provide clearance for the chains between the tires and the tractor body.
 - d. Place the wheels back on the tractor.
 - e. Reinstall and tighten the lug bolts.
8. For GHS (Grass Handling System) equipped Walker tractors, install a blower intake cover in the blower intake tube. The cover "unloads" the blower and seals the intake to effectively eliminate power loss and noise when the blower is not being used. Refer to **GHS Blower Intake Cover** illustration for **ROTARY BROOM** in this section.
9. For stability of the tractor when transporting with the debris blower in raised position, approximately 80 lb (36 kg) of counterweight should be installed on the tail of the tractor. Optional tail weights for the various tractor models are available from your Walker dealer or a sandbag or similar weight may be used.

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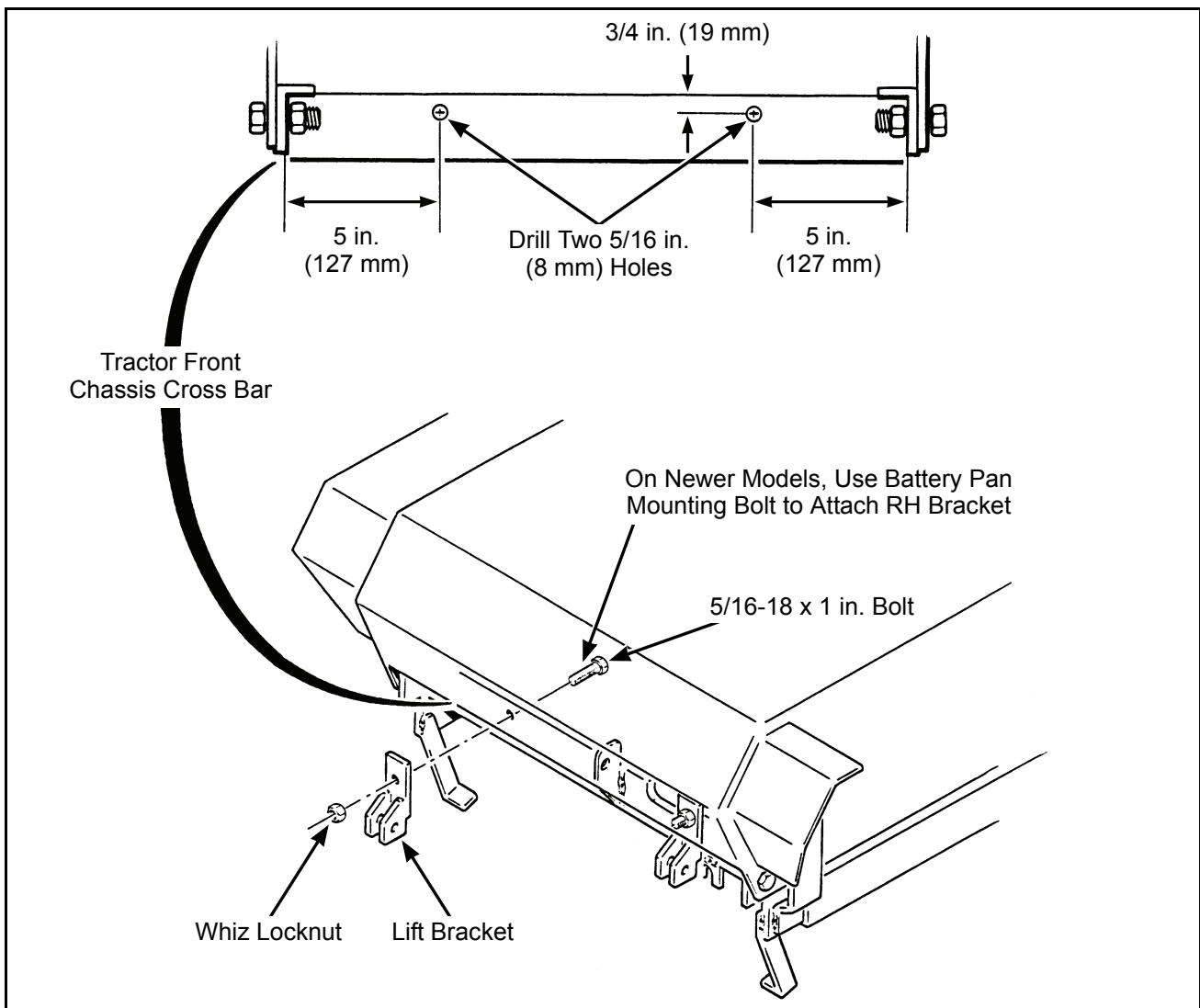
SB36 Snowblower

Model MS, MC, MD, MT, MTL, MTEFI

1. Remove the mower deck from the tractor if necessary. Refer to the appropriate Tractor Owner's Manual.
2. Attach each of the lift brackets to the predrilled holes on the front chassis cross bar with a 5/16-18 x 1 in. bolt and a Whiz locknut. The locknuts should be on the front sides of the lift brackets. Refer to **Lift Bracket Installation** illustration. The RH bracket is attached using the existing battery pan mount bolt on newer models. On earlier models, obtain the 5/16-18 x 1 in. bolt and nut locally to attach the RH bracket.

NOTE: Predrilled holes exist only on Walker tractors built after 1984. For earlier models, drill two 5/16 in. (8 mm) holes in the front chassis cross bar at the positions indicated in the **Lift Bracket Installation** illustration.

IMPORTANT: For all 1980 to 1984 tractors, **remove the battery before drilling the RH hole.** Reinstall the battery after the lift brackets have been installed. Refer to *Battery Installation* in **Battery Service** in this section for battery installation procedures.



Lift Bracket Installation

Walker

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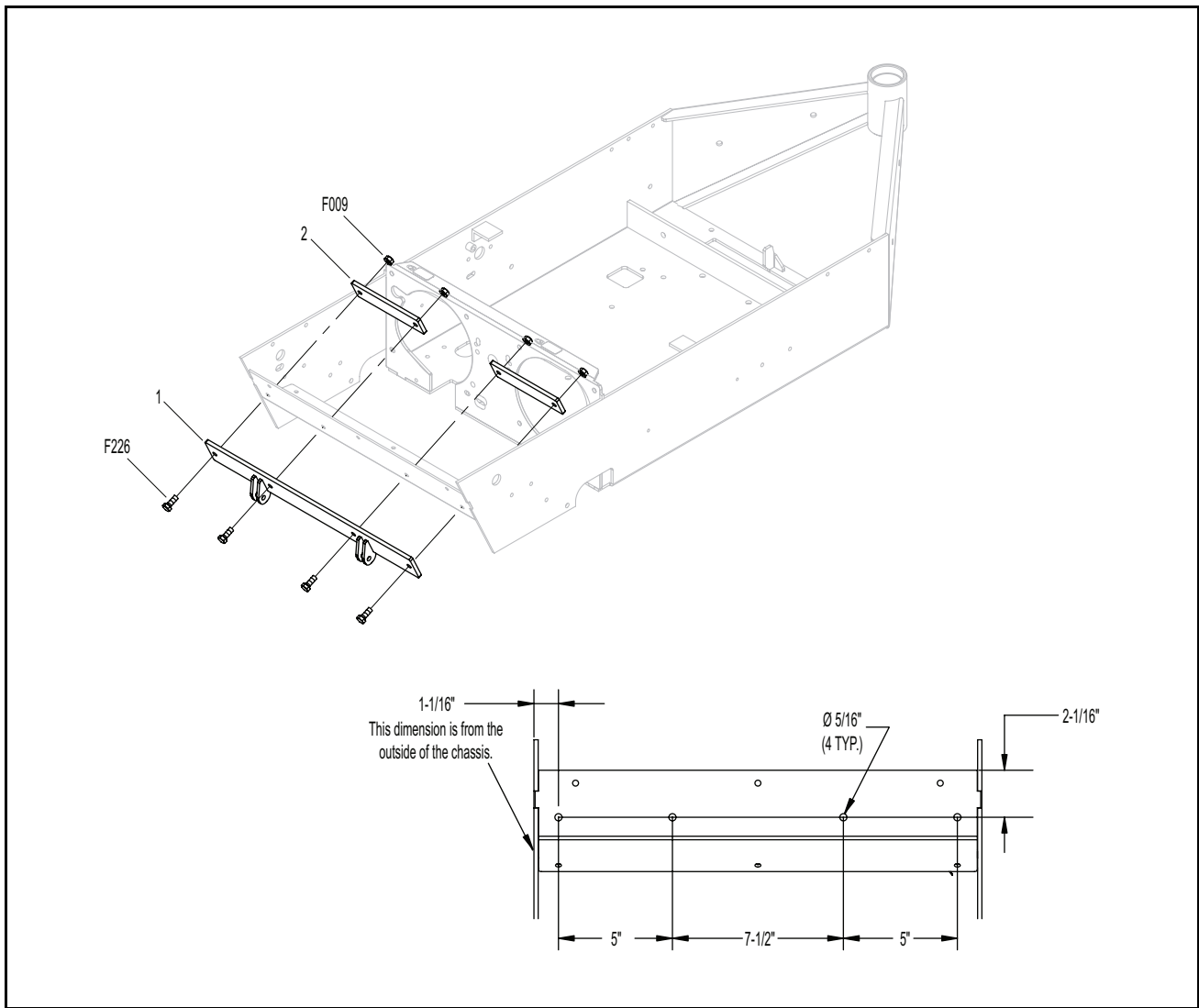
July 2006

Model MB

1. Remove the mower deck from the tractor if necessary. Refer to the appropriate Tractor Owner's Manual.
2. Raise tractor body and use prop to hold body up. Install lift plate and backing plates, as shown in parts breakdown. Refer to **Lift Plate Installation** illustration.

NOTE: Predrilled holes exist only on Walker tractors built after model beginning S/N 2006-8780. For earlier models, measure and drill four 5/16 in. (8 mm) holes in the front chassis at the positions indicated in the **Lift Plate Installation** illustration.

IMPORTANT: For all tractors before S/N 2006-8780, **remove the battery before drilling the LH hole.** Reinstall the battery after the lift plate has been installed. Refer to *Battery Installation* in **Battery Service** in this section for battery installation procedures.



Lift Plate Installation

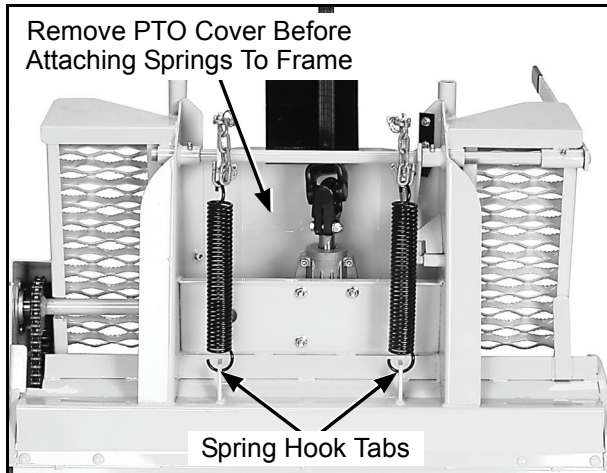
Walker

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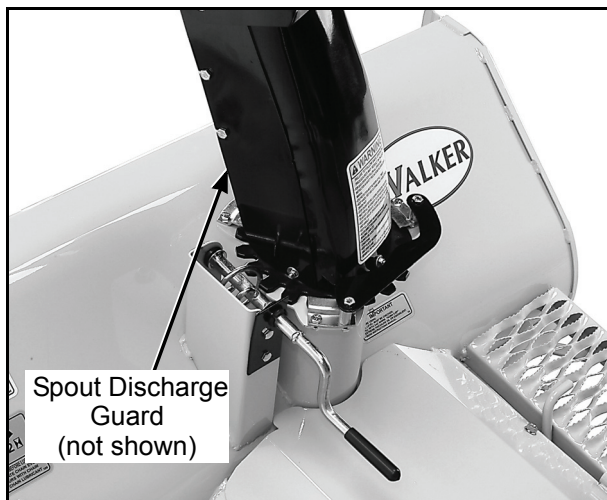
Model MS, MB, MC, MD, MT, MTL, MTEFI

- Remove the PTO cover (between the footrests). Remove the shipping wire from the counterweight springs, place the lift handle in the **UP** (back) position, and hook the counterweight springs onto the hook tabs on the frame. The tabs are located below the right angle gearbox and drive shaft (refer to **Counterweight Spring Hook Tab Locations** photo).



Counterweight Spring Hook Tab Locations (bottom view)

- Install the spout assembly.



Install Spout Assembly

- Place the chute on the chute base and align the holes of the three (3) retaining plates with the holes in the chute base. Attach the rear and right hand side retaining plates with one (1) 1/4-20 x 1/2 bolt in the forward most hole and the front retaining plate with two (2) 1/4-20 x 1/2 bolts and secure with four (4) 1/4-20 flange nuts.

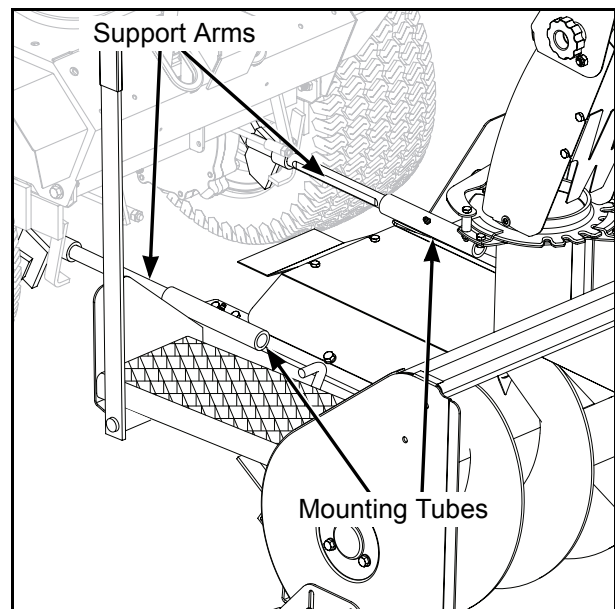
- Insert the two (2) 1/4-20 x 1-3/4 bolts in the rotation stopper, the spacer rings and through the remaining holes of the rear and right hand side retaining plates and secure in place with two (2) 1/4-20 nuts. Tighten the nuts firmly.

- Insert one (1) grommet in rotation support and one (1) grommet in handle support, mount handle support and rotation handle to blower using two (2) 1/4-20 x 1/2 bolts and two (2) 1/4-20 flanged nuts.

- Install 1/2" plastic handle on rotation handle.

- Lightly grease the tractor support arms.

- Engage the snowblower mounting tubes on the tractor support arms.



Engage Snowblower Mounting Tubes with Tractor Support Arms

- Slide the snowblower onto the tractor support arms and connect the snowblower PTO shaft to the tractor with the PTO quick coupler as follows:

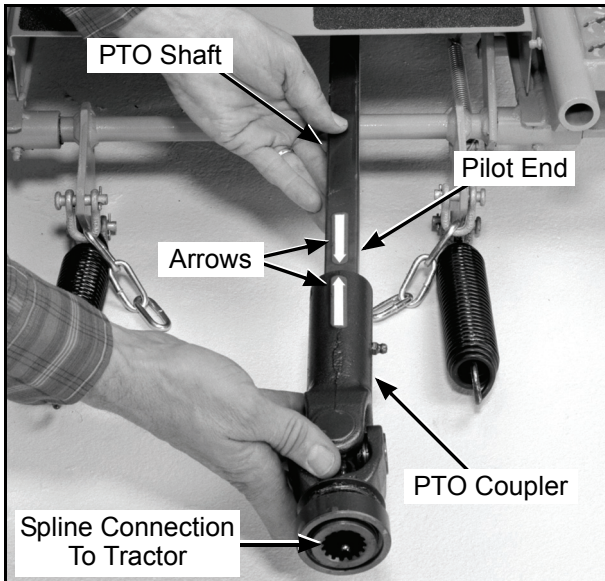
NOTE: Model MS and earlier Model MC do not have the PTO quick coupler. Use sliding joint to connect tractor to snowblower PTO.

- Place the pilot end of the snowblower PTO shaft into the socket of the PTO quick coupler and rotate the PTO shaft until it is aligned correctly with the socket in the PTO quick coupler, then slide together. Use arrows on the shaft and tube for correct alignment.

Walker

SERVICE INSTRUCTIONS

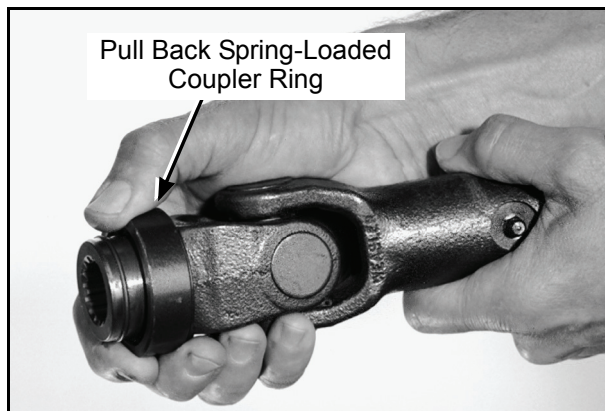
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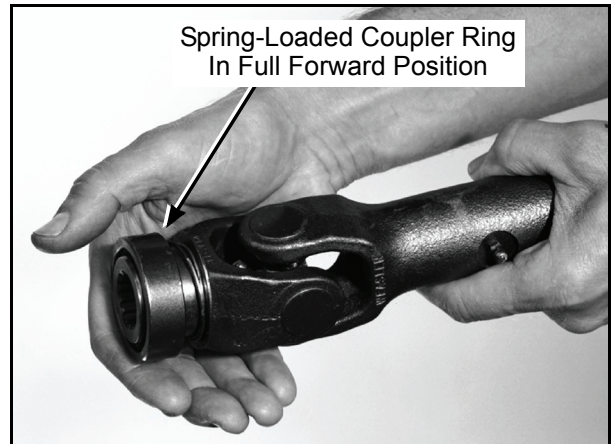
Align PTO Shaft and PTO Coupler (shown before engaging snowblower mounting tubes with tractor support arms)

- b. Slide snowblower assembly onto tractor. Reaching under the tractor, pull the ring back on the PTO quick coupler, slide the coupler onto the tractor spline shaft, and release the coupler ring.

IMPORTANT: To prevent damage to the machine, make sure the PTO quick coupler is securely locked on the tractor, with the locking balls fully seated in the groove and the ring in the full forward position (refer to the **Coupler Ring "Locked" Position** photo). After installation, pull on the shaft to check for security.



Installing PTO Quick Coupler

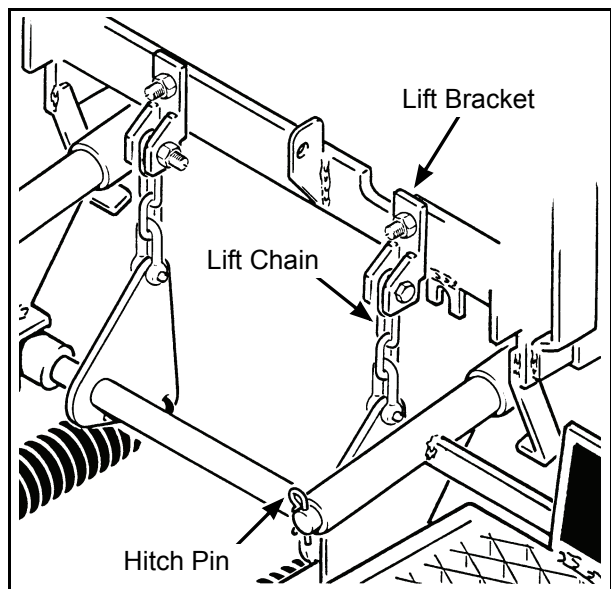


Coupler Ring "Locked" Position

8. Insert the hitch pins in the ends of the tractor support arms.
9. Pull the lift handle back, press the foot trigger, and push the snowblower lift handle forward against the spring pressure into the **DOWN** (forward) position. Attach each of the lift chains to the lift brackets with a 5/16-18 x 1-1/4 in. bolt and an ESNA nut.

NOTE: Use a bungee cord or strap to secure lift handle in forward position while connecting lift chains to tractor.

10. Reinstall the PTO cover.



Attach Lift Chains to Lift Brackets

Walker

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11. Pull the lift handle back to raise the snowblower to the **UP** position.



Snowblower in UP (Raised) Position

12. Pull the lift handle back, press the foot trigger, and **hold on to the lift handle while letting it move forward** to lower the snowblower to the **DOWN** position.

CAUTION

DO NOT release the lift handle before releasing the foot trigger or before the snowblower has reached the **DOWN** position.



Snowblower in DOWN (Lowered) Position

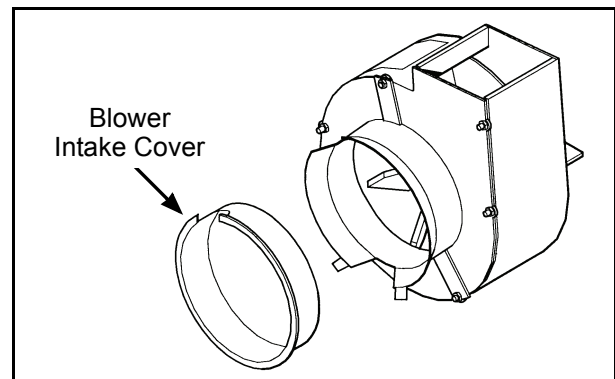
13. Raise and lower the snowblower a few times to check the operation and make sure it moves smoothly. If not, grease the lift handle pivot grease fittings located on the three tubes that support the lift handle pivot.

14. Adjust the gauge wheels or skid shoes. Refer to **ADJUSTMENTS of Gauge Wheels or Skid Shoes** in **Service Procedures Section**.

15. To install the optional tire chains:

- Remove the tractor wheels.
- Attach the tire chains to the wheels.
- Place the wheel spacer plates on the lug bolts. The wheel spacer plates provide clearance for the chains between the tires and the tractor body.
- Place the wheels back on the tractor.
- Reinstall and tighten the lug bolts.

16. For GHS (Grass Handling System) equipped Walker tractors, install a blower intake cover in the blower intake tube. The cover "unloads" the blower and seals the intake to effectively eliminate power loss and noise when the blower is not being used.



GHS Blower Intake Cover

17. For stability of the tractor when transporting with the snowblower raised position, approximately 80 lb (36 kg) of counterweight should be installed on the tail of the tractor. Optional tail weights for the various tractor models are available from your Walker dealer or a sandbag or similar weight may be used.

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SECTION 2

Lubrication

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LUBRICATION - TRACTORS



WARNING

DO NOT attempt to lubricate the machine with the engine running. Disengage the PTO clutch, shut off the machine, and remove the ignition key.

Proper lubrication is an important maintenance procedure. It reduces wear and makes the machine quieter and easier to operate.

Engine Oil - All Models

Engine Break-In Oil

Model MW, MC, MT, MTL, MTEFI

No special break-in oil is required. The engine is serviced with 10W-30, Service Class SG oil from the factory. Change the oil after the initial engine **break-in period of 5 hours**. Thereafter, change oil **after every 100 hours** of operation or more often in extremely dusty or dirty conditions (200 hour interval for MTL).

Model MD

No special break-in oil is required. The engine is serviced with 10W-30, Service Class SG oil from the factory. Change the oil after the initial engine **break-in period of 35 hours**. Thereafter, change oil **after every 100 hours** of operation.

Model MS

No special break-in oil is required. The engine is serviced with 10W-30, Service Class SG oil from the factory. The oil should be changed after the initial engine **break-in period of 8 hours**. Thereafter, change oil **after every 50 hours** of operation.

Model MB

No special break-in oil is required. The engine is serviced with 10W-30, Service Class SG oil from the factory. The oil should be changed after the initial engine **break-in period of 5-8 hours**. Thereafter, change oil **after every 50 hours** of operation.

Checking Engine Crankcase Oil Level - Model MW, MB, MC, MD, MT, MTL, MTEFI

Model MB, MC, MT, MTL, MTEFI

Check the engine crankcase oil level before use and **after each 8 hours** of continuous operation.

Model MW, MD

Check the engine crankcase oil level before use and **after each 5 hours** of continuous operation.

Model MW, MB, MC, MD, MT, MTL, MTEFI

IMPORTANT: The importance of checking and maintaining the proper crankcase oil level cannot be over-emphasized. Check the oil level **BEFORE EACH USE**.

1. Park the mower on a **level surface with the engine stopped**. Also, make sure the engine is cool and oil has had time to drain into the sump [allow **at least five (5) minutes** after stopping the engine].

IMPORTANT: NEVER check or add oil with the engine running.

2. Before removing the dipstick, clean the area around the dipstick to keep any dirt or debris out of the engine.

Model MW, MC, MT, MTL, MTEFI

3. Remove the dipstick, wipe off with a clean rag, then reinsert the dipstick into the tube **without screwing it in**.

Model MB, MD

3. Remove the dipstick, wipe off with a clean rag, then reinsert the dipstick into the tube and press all the way down.

Model MW, MB, MC, MD, MT, MTL, MTEFI

4. Remove the dipstick again and check the oil level on the dipstick. The oil level should be within the "Operating Range" on the dipstick (between the "L" mark and the "F" mark).

IMPORTANT: DO NOT operate engine without a sufficient oil supply in the crankcase. **DO NOT** operate with the oil level below the "L" mark or above the "F" mark on the dipstick.

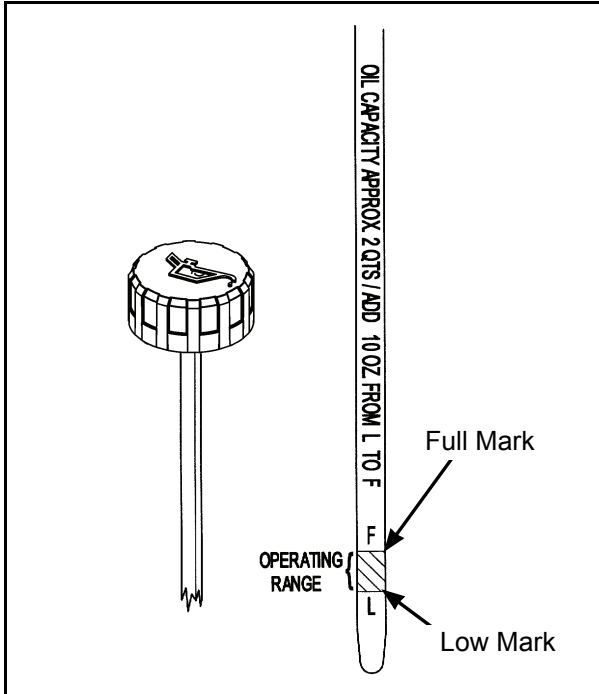
5. If additional oil is needed, refer to **Specifications** for proper crankcase lubricant. **Fill up to, but not above, the "F" mark on the dipstick.**

Walker

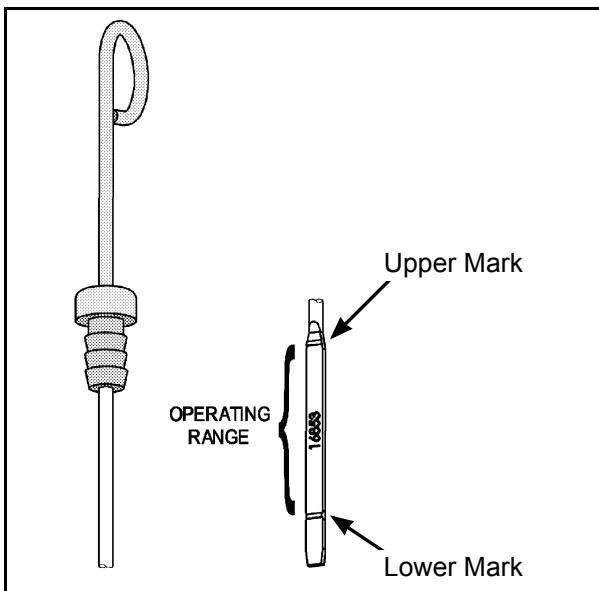
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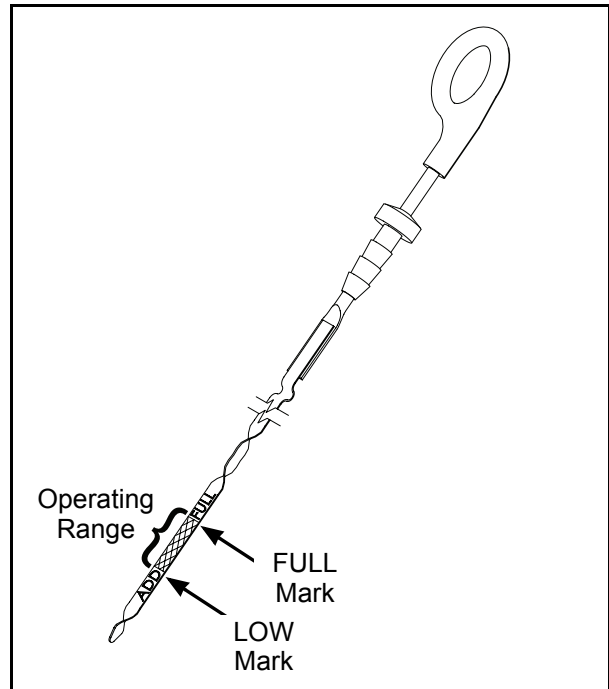
IMPORTANT: DO NOT overfill the crankcase (oil above "F" mark) as this **CAN** result in engine overheating, loss of power, and possible engine damage.



Dipstick Operating Range - Model MC, MT, MTL, MTEFI



Dipstick Operating Range - Model MD



Dipstick Operating Range - Model MB

Checking Engine Crankcase Oil Level - Model MS

Check the engine crankcase oil level before use and **after each 5 hours** of continuous operation.

IMPORTANT: The importance of checking and maintaining the proper crankcase oil level cannot be over-emphasized. Check the oil level **BEFORE EACH USE**.

1. Park the mower on a **level surface with the engine stopped**. Also, make sure the engine is cool and oil has had time to drain into the sump [allow **at least five (5) minutes** after stopping the engine].

IMPORTANT: NEVER check or add oil with the engine running.

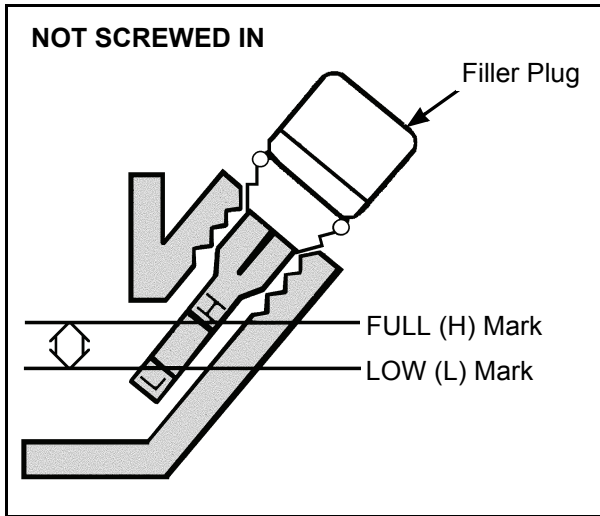
2. Before removing the dipstick, clean the area around the dipstick opening in the engine block to keep any dirt or debris out of the engine.
3. Unscrew and remove the filler plug/dipstick and wipe off with a clean rag. Insert dipstick into filler hole but **DO NOT screw it in** to check the oil level. Remove the dipstick and check the level. The oil level should be within the safe range (between the **H** and **L** marks on the dipstick).

IMPORTANT: DO NOT operate engine without sufficient oil supply in the crankcase. **DO NOT** operate with oil level below the **LOW (L)** mark or above the **FULL (H)** mark on the dipstick.

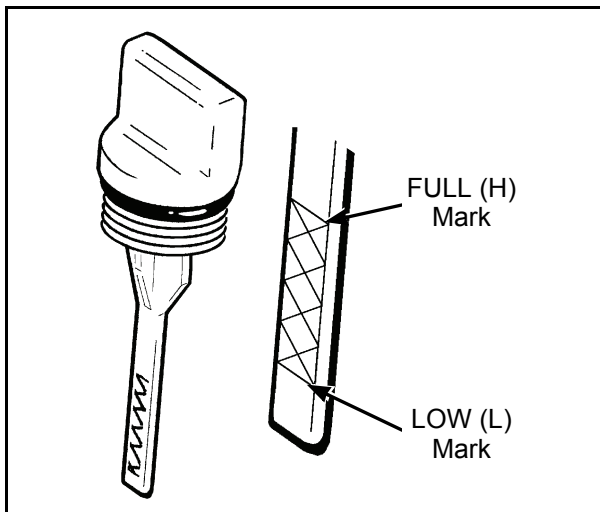
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**Dipstick Position
for Checking Oil Level**



Dipstick Operating Range

4. If additional oil is needed, refer to **Specifications** for proper crankcase lubricant. **Fill to the FULL (H) mark.**

IMPORTANT: DO NOT overfill crankcase [oil above **FULL (H)** level] as this **CAN** result in engine overheating, loss of power, and possible engine damage.

Changing Engine Crankcase Oil/Oil Filter - All Models

Model MC, MT, MTL, MTEFI

For Model MT, MTEFI, and MC, change the engine crankcase oil **after every 100 hours** of operation and replace the oil filter every other oil change (**every 200 hours** of operation).

For Model MTL, change the engine crankcase oil **after every 200 hours** of operation and replace the oil filter at the same time.

Model MD

Change the engine crankcase oil **after every 100 hours** of operation and replace the oil filter every other oil change (**every 200 hours** of operation).

Model MS, MB

Change the engine crankcase oil **after every 50 hours** of operation and the oil filter **after every 100 hours** of operation as follows:

Model MW

Change the engine crankcase oil **after every 100 hours** of operation and replace the oil filter every other oil change (**every 200 hours** of operation or more often in extremely dusty or dirty conditions).

All Models

1. Park the mower on a **level surface with the engine stopped**. The engine oil should be warm before draining. If not warm from operation, start the engine and run a few minutes to warm the oil.
2. Before removing the dipstick, clean the area around it to keep any dirt or debris out of the engine.

Model MS, MB, MC, MD, MT, MTL, MTEFI

3. Remove the dipstick and oil drain plug and drain the oil into a suitable container. Be sure to allow ample time for complete drainage.

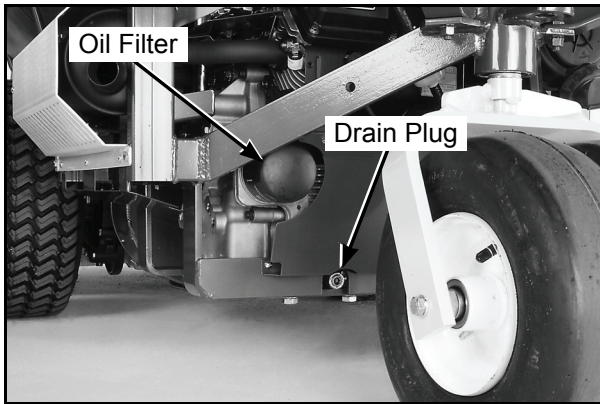
Model MW

3. Remove the dipstick, oil fill cap, and unscrew the oil drain plug 4-1/2 revolutions (to prevent the drain plug from coming out completely, do not exceed 4-1/2 turns). Drain oil into a suitable container. Be sure to allow ample time for complete drainage.

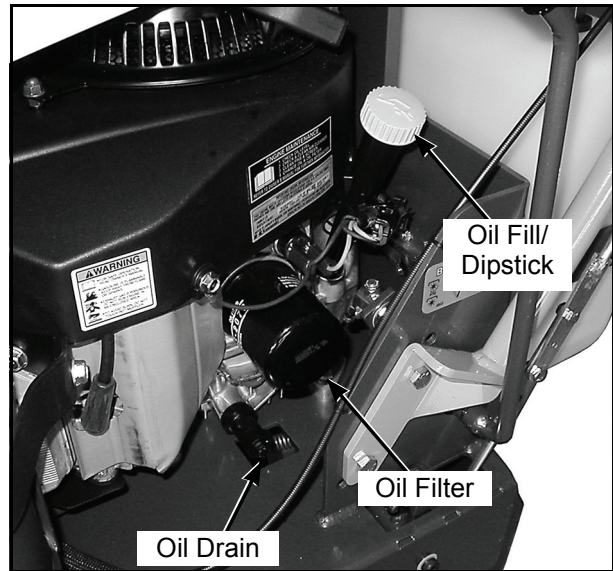
Walker

SERVICE INSTRUCTIONS

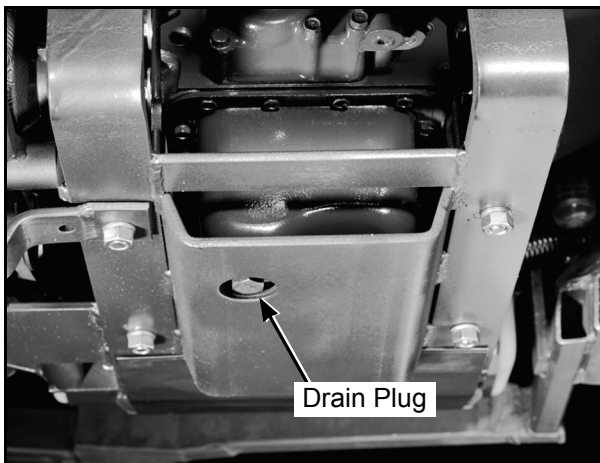
July 2006



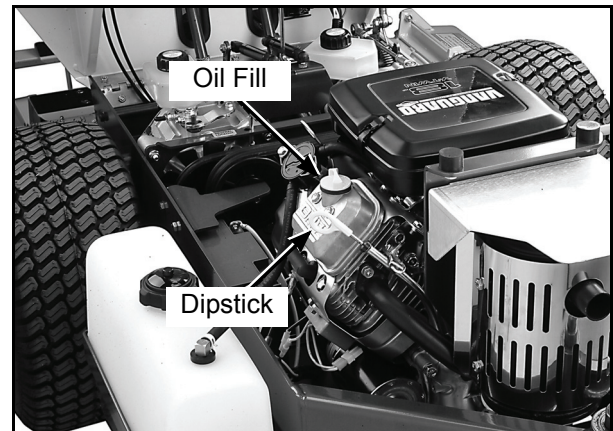
**Oil Drain/Oil Filter Location -
Model MC, MT, MTL, MTEFI (Model MT shown)**



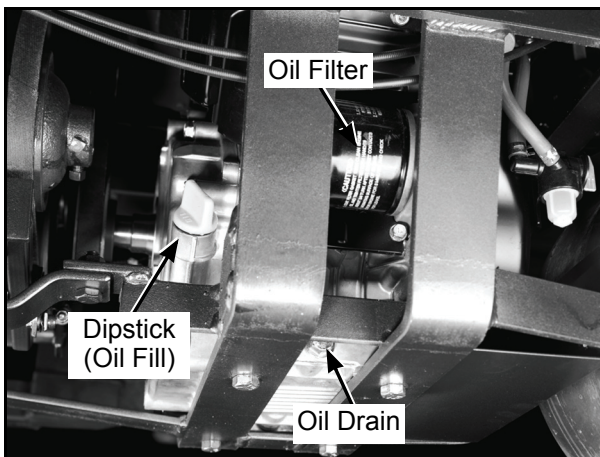
**Oil Drain, Dipstick (Oil Fill),
and Oil Filter Location - Model MW**



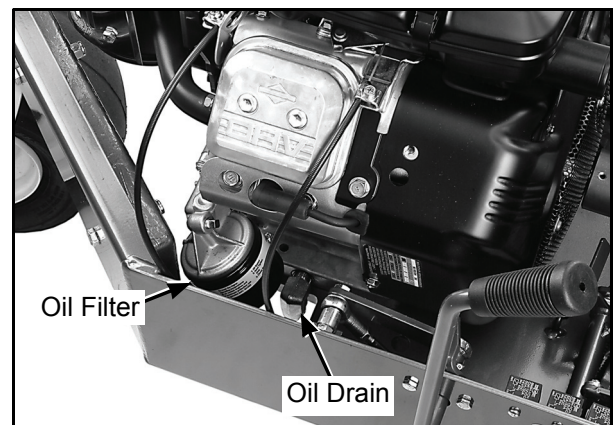
**Oil Drain Location
(view from left side of tractor) - Model MD**



**Dipstick and Oil Fill
(view from above left side of tractor) - Model MB**



**Oil Drain, Dipstick (Oil Fill),
and Oil Filter Locations
(view from lower left side of tractor) - Model MS**



**Oil Drain and Oil Filter Locations
(view from above right side of tractor) - Model MB**

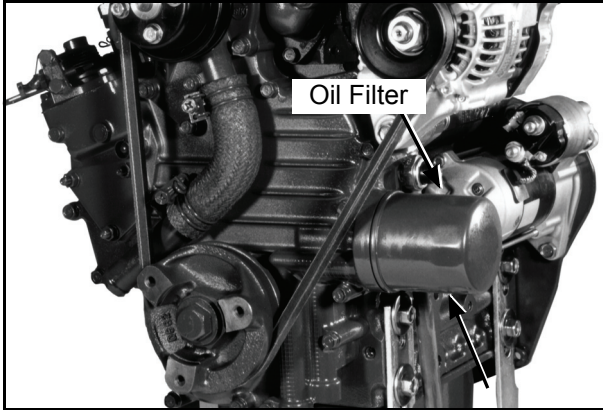
Walker

SERVICE INSTRUCTIONS

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All Models

4. Before removing the oil filter, clean the area around the filter to keep dirt and debris out of the engine.



Oil Filter Location - Model MD

5. Remove the old oil filter and wipe off the filter mounting surface on the engine.
6. Apply a thin coating of clean oil to the rubber gasket on the replacement oil filter.

IMPORTANT: Use **ONLY** oil filters from the engine manufacturer. Aftermarket oil filters may not seal properly and/or may not have the correct pressure relief valve for proper lubrication. Also, for certain models the **filter length dimension is critical for tailwheel clearance.**

Model MW, MC, MD, MT, MTL, MTEFI

7. Install the new oil filter on the engine. Turn the filter clockwise until the rubber gasket contacts the sealing surface, then tighten an additional **1/2 turn.**

Model MS

7. Install the new oil filter on the engine. Turn the oil filter clockwise until the rubber gasket contacts the sealing surface, then tighten the filter an additional **3/4 turn.**

Model MB

7. Install the new oil filter on the engine. Turn the oil filter clockwise until the rubber gasket contacts the sealing surface, then tighten the filter an additional **1/2 to 3/4 turn.**

Model MC, MD, MT, MTL, MTEFI

8. Reinstall the drain plug. Make sure it is tightened to 10 ft-lb (13.6 N·m).

Model MS

8. Reinstall the drain plug. Make sure it is tightened to 16.5 ft-lb (23 N·m).

Model MW

8. Close drain valve.

Model MB

8. Reinstall the drain plug.

Model MC, MT, MTL, MTEFI

9. Fill the crankcase through the oil filler tube (dipstick opening) with new, clean oil. Use only crankcase lubricants recommended by the engine manufacturer. Refer to **Specifications** in this manual or the engine owner's manual. Use the recommended oil viscosity for the expected ambient temperature. Oil with the correct viscosity will aid starting in cold weather and assure proper lubrication in hot weather. **Fill up to, but not above, the "F" mark** on the dipstick. Crankcase capacity is 1.85 quarts (1.75 liters) plus 1/2 pint (.24 liters) for the new oil filter.

Model MD

9. Fill the crankcase with new, clean oil. Use only crankcase lubricants recommended by the engine manufacturer. Refer to **Specifications** in this manual or the engine owner's manual. Use the recommended oil viscosity for the expected ambient temperature. Oil with the correct viscosity will aid starting in cold weather and assure proper lubrication in hot weather. **Fill up to, but not above, the upper mark** on the dipstick. Crankcase capacity is 3.1 quarts (2.9 liters) plus 1/2 pint (.24 liters) for the new oil filter.

IMPORTANT: DO NOT use oil that is rated for gasoline engines only (API SE/SF). This will cause problems with a diesel engine.

Model MS

9. Fill the crankcase (through the dipstick opening) with oil using only crankcase lubricants supplied by the engine manufacturer. Refer to **Specifications** in this manual or the engine owner's manual. Use the recommended oil viscosity for the expected ambient temperature. Oil with the correct viscosity will aid starting in cold weather and assure proper lubrication in hot weather. **Fill to FULL (H) mark** on the dipstick; crankcase capacity is 2.7 pints (1.3 liters).

Walker

SERVICE INSTRUCTIONS

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Model MW

9. Fill the crankcase with new, clean oil. Use only crankcase lubricants recommended by the engine manufacturer. Refer to **Specifications** in this manual or the engine owner's manual. Use the recommended oil viscosity for the expected ambient temperature. Oil with the correct viscosity will aid starting in cold weather and assure proper lubrication in hot weather. **Fill up to, but not above, the upper mark** on the dipstick. Crankcase capacity is 1.6 quarts (1.5 liters) plus 0.2 quart (0.2 liters) for the new oil filter.

Model MB

9. Fill the crankcase with new, clean oil. Use only crankcase lubricants recommended by the engine manufacturer. Refer to **Specifications** in this manual or the engine owner's manual. Use the recommended oil viscosity for the expected ambient temperature. Oil with the correct viscosity will aid starting in cold weather and assure proper lubrication in hot weather. **Fill to FULL mark** on the dipstick; crankcase capacity is 1.5 quarts (1.4 liters) when changing oil and filter.

All Models

IMPORTANT: Check the dipstick reading before adding the last 1/2 pint of oil and **fill only to the "F" mark**. **DO NOT** overfill the crankcase (oil above "F" mark) as this **CAN** result in engine overheating, loss of power, and possible engine damage.

10. Start the engine and check for oil leaks around the oil filter. Stop the engine, recheck the oil level, and add oil if necessary. (When the engine is first operated with a new oil filter, the oil level drops slightly as the filter is filled with oil.)

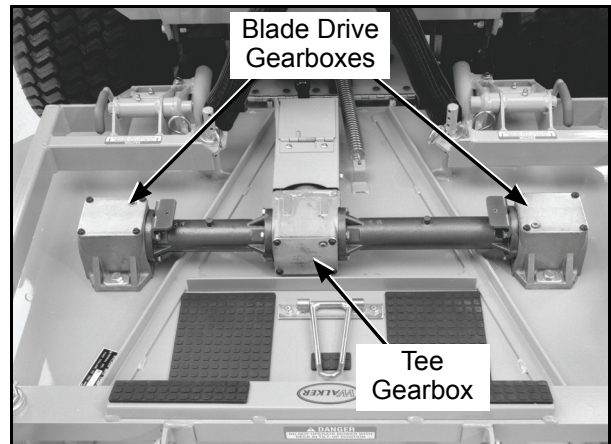
Mower Deck Gearbox Lubrication - All Models

NOTE: These instructions apply to all mower decks with gear-driven blades. Refer to **DSD52 or DSD62 Mower Deck Lubrication** in this section for the DSD52 or DSD62 deck with belt-driven blades.

All Gear Drive Models

The mower deck gearboxes (tee gearbox and blade drive gearboxes) are connected as a unitized assembly, and oil flows freely between them. The gearboxes are permanently lubricated (oil filled) and sealed requiring no scheduled lubrication. However, the gearbox oil seals should be checked **every 25 hours** for indication of an oil leak; **particularly the lower seals** on the blade drive gearboxes should be inspected, since they operate in a dirty environment. If an oil leak is noted, replace the oil seal and relubricate the gearbox assembly as follows:

1. Remove gearbox cover (footrest). Deck orientation should be the normal operating position.



Mower Deck Gearboxes
(shown with gearbox cover removed for clarity)

2. Clean the area around the individual gearbox cover plates to prevent contaminants from entering the gearcase.
3. Remove the screws securing the cover plates on the blade drive gearboxes.
4. Check the level of lubricant in the gearboxes. If the lubricant is low, add SAE E.P. (Extreme Pressure) 80W-90 gear lube until the level is up to (submerged) the horizontal shaft in the gearbox (shaft parallel to cover plate).

Walker

SERVICE INSTRUCTIONS

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NOTE: In case the gearboxes are completely drained of oil, approximately 5 fl. oz. (15 cl) of oil per gearbox is required to refill the gear drive assembly.

NOTE: Since the gearboxes are connected as a unit by connector tubes, it is necessary to add oil slowly. Allow a few minutes after adding oil for the oil to flow throughout the assembly and the oil level to stabilize before reassembly.

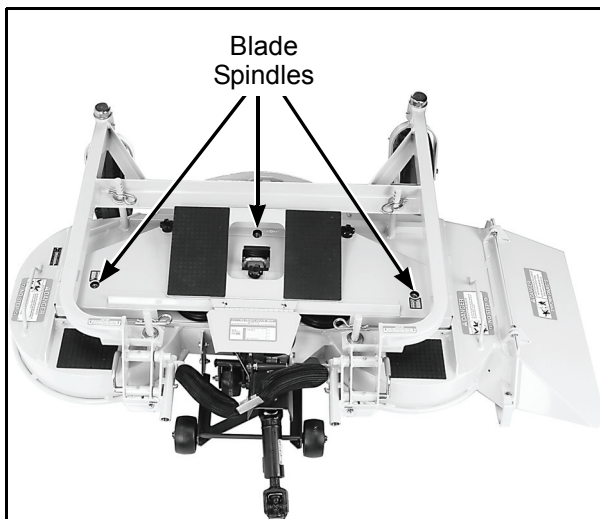
IMPORTANT: DO NOT overfill the deck gearboxes. The gearbox assembly is not vented, and overfilling with oil will cause excessive pressure and result in oil leaks.

5. Check condition of the cover gasket and replace if worn or damaged. Reinstall gearbox cover plates; torque screws to 24 in-lb (2.7 N·m).

DSD52 or DSD62 Mower Deck Lubrication

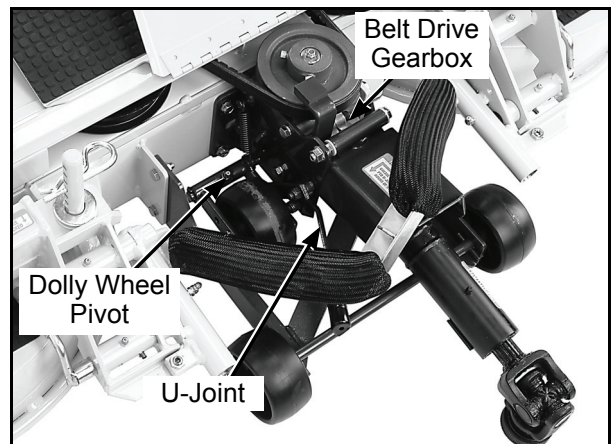
There are several special lubrication requirements for the DSD52 or DSD62 mower deck in addition to the requirements detailed in the **Chassis and Deck Lubrication** illustration. Lubricate the locations shown in the **Blade Spindle Lubrication** and **Gearbox, Dolly Wheel, and U-Joint Lubrication** photos and check and maintain oil in the belt drive gearbox.

1. Lubricate the blade spindles **every 25 hours** with two (2) shots of SAE general purpose lithium or molybdenum base grease.

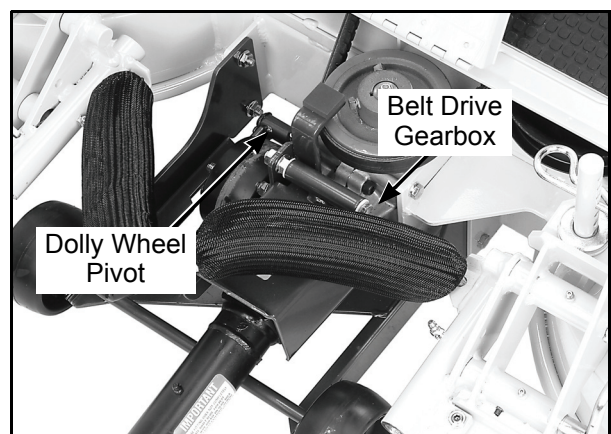


Blade Spindle Lubrication

2. Check the oil level in the belt drive gearbox **every 100 hours** (or sooner if a visible oil leak has developed). With the deck in the normal operating position, remove the level plug in the side of the gearcase. Add SAE E.P. (Extreme Pressure) 80W-90 gear lube to maintain the level to the plug. If the oil level is low, check the gearbox for any indication of an oil leak. If an oil leak is noted, the gearbox will need to be removed and rebuilt.
3. Lubricate the dolly wheel pivot **every 25 hours** with general purpose grease.
4. Lubricate the U-Joint in the drive shaft **every 8 hours** with SAE general purpose lithium or molybdenum base grease.



Gearbox, Dolly Wheel, and U-Joint Lubrication



Gearbox and Dolly Wheel Lubrication

Walker

SERVICE INSTRUCTIONS

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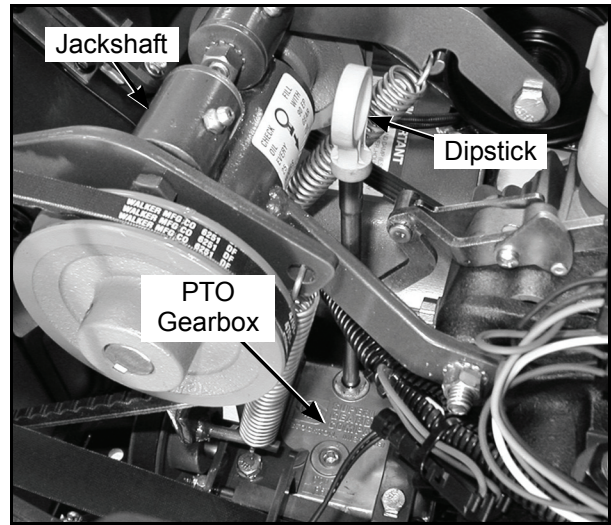
Tractor PTO Gearbox Lubrication - Model MC, MD, MT, MTL, MTEFI

Checking Gearbox Oil Level

Check the gearbox oil level **every 25 hours**, and if necessary, add oil [SAE E.P. (Extreme Pressure) 80W-90 gear lube] to maintain oil level to the **FULL** mark on the dipstick.

IMPORTANT: DO NOT overfill the PTO gearbox to avoid oil leakage out of the dipstick standpipe.

If the oil level is low, check the gearbox for any indication of an oil leak. If an oil leak is noted, the gearbox will need to be removed and rebuilt.

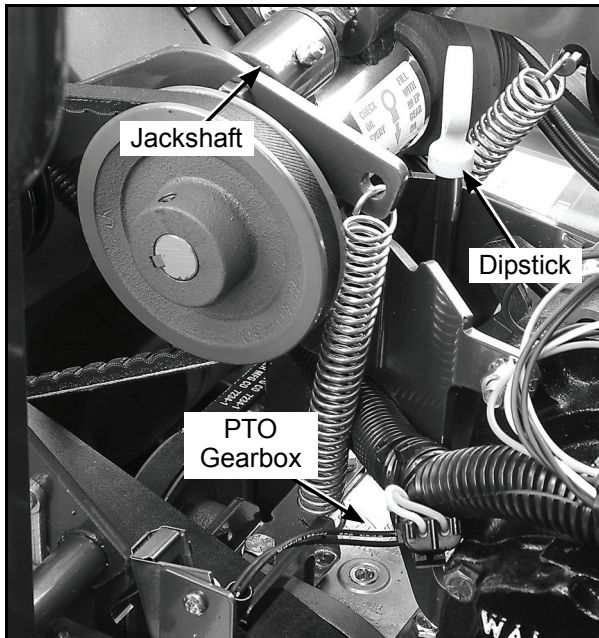


Dipstick Location, Tractor PTO Gearbox - Model MC

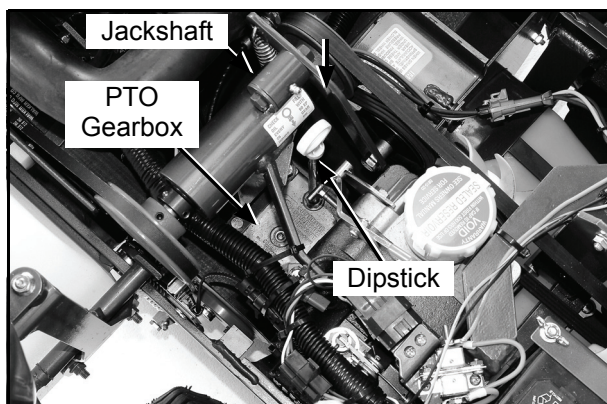
Changing Gearbox Oil

The tractor PTO gearbox is oil filled. No scheduled oil change is required. However, changing the oil **after the first 100 hour break-in period** will extend gearbox life and is recommended.

1. Remove the drain plug in the bottom of the gearcase, drain the oil, and reinstall the plug.
2. Refill the gearbox through the dipstick standpipe using 7 to 8 fl. oz. (21 to 24 cl) of SAE E.P. (Extreme Pressure) 80W-90 gear lube. Remove plug in top of gearcase to vent air when refilling.
3. Check that the oil level is at the **FULL** mark on the dipstick. **DO NOT** overfill.



Dipstick Location, Tractor PTO Gearbox - Model MT



Dipstick Location, Tractor PTO Gearbox - Model MD

Walker

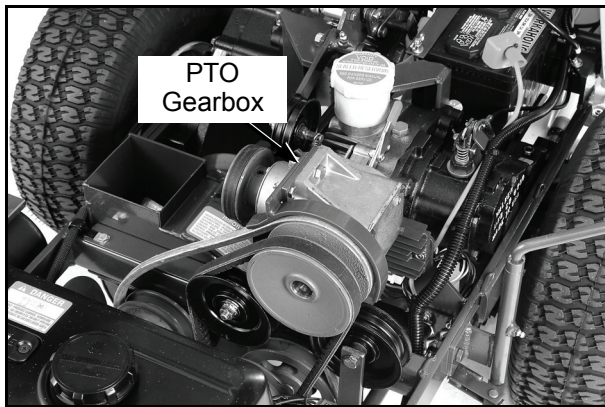
SERVICE INSTRUCTIONS

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Tractor PTO Gearbox Lubrication - Model MS

The tractor PTO gearbox is permanently lubricated (oil filled) and sealed requiring no scheduled lubrication. However, the gearbox oil seals should be checked **every 25 hours** for indication of oil leaks. If evidence of an oil leak is noted, replace the oil seal and relubricate the gearbox. The gearbox will need to be removed from the tractor to be serviced. Refill with SAE E.P. (extreme pressure) 80W-90 gear lube until level is up to (submerges) horizontal shaft of gearbox (shaft parallel to cover). **DO NOT** overfill.

NOTE: In case the gearboxes are completely drained of oil, approximately 5 fl. oz. (15 cl) of oil per gearbox is required to refill the gear drive assembly.



Tractor PTO Gearbox

Tractor PTO Gearbox Lubrication - Model MW

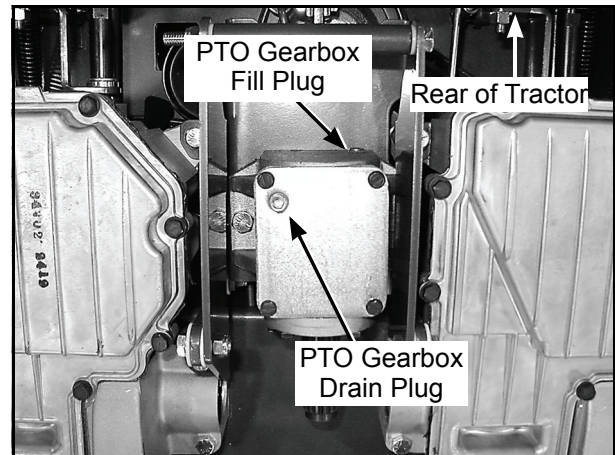
Checking Gearbox Oil Level

The tractor PTO gearbox is permanently lubricated (oil filled) and sealed requiring no scheduled lubrication. However, the gearbox oil seals should be checked **every 25 hours** for indication of oil leaks. If evidence of an oil leak is noted, replace the oil seal and relubricate the gearbox. The gearbox can be drained by removing the plug on the gearbox cover. Replace plug and refill gearbox using 5 fl. oz. (15cl) of SAE E.P. (Extreme Pressure) 80W-90 gear lube.

With the deck removed, the tractor unit may need to be tilted forward (resting on deck support arms) for positioning purposes, to add oil into the PTO gearbox.

CAUTION

Do not leave the mower in this position for an extended period of time to prevent oil from draining into the heads and causing possible engine damage.



Tractor PTO Gearbox Location
(view from underside of tractor)

Transaxle Lubrication - Model MW

- The transaxle oil lubrication is SAE 20W-50 engine oil.
- Inspect both transaxle cases **after every 100 hours** of operation for visible leaks. If a leak is detected, the oil level should be checked through the breather port on top of the transaxle. Using a clean rod, measure the oil level by placing the rod in the fill port and bottoming out the rod on the bottom of the case. Remove the rod and measure the oil level on the rod. It should measure 4 to 4-1/4 in. (10 to 10.75 cm) total depth of oil. **DO NOT** overfill.

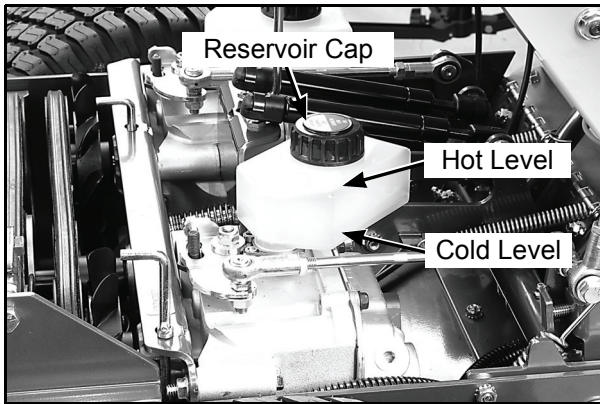
Walker

SERVICE INSTRUCTIONS

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Transaxle Lubrication - Model MB

- The transaxle oil lubrication is SAE 20W-50 engine oil.
- Inspect both transaxle cases and hoses **after every 100 hours** of operation for visible leaks.
- The fluid levels for each transaxle can be checked visually by looking at the fluid levels in each expansion reservoir. When the transaxles are cold, the fluid level in the expansion reservoirs should be between 1/4" and 1/2" (.64 cm and 1.27 cm).

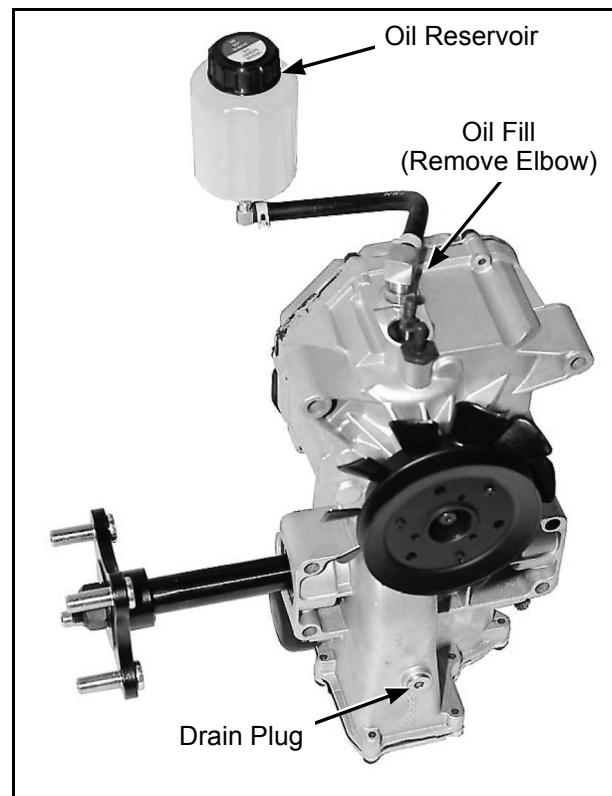


Expansion Reservoir Location

Changing Gearbox Oil

1. Thoroughly clean the exterior of the transmission housing before servicing. Using a 1/4" hex wrench, remove the plug located approximately 2" (50 mm) from the bottom on the back side of each transaxle allowing the oil to drain.
2. To remove the remainder of the oil [approximately 6-8 oz. (.18-.24 liter)] below the plug, use an oil suction gun. Reinstall drain plugs.
3. Remove and replace the oil filters using a 3/8" hex wrench.
4. Using an oil suction gun, remove all oil in the reservoirs.
5. Place 6" (15 cm) block under the left hand drive wheel.
6. Remove the oil reservoir hose attached to the elbow on top of the transaxles and remove the elbows to access the oil fill openings.
7. Fill the transaxles with 20W-50 oil through the opening where the elbows were. Fill up to the opening.

8. Before reinstalling the elbows, screw the locking nut on the elbows down until they are snug (the o-ring on the elbow will be to the bottom of the o-ring groove).
9. Reinstall the elbows. When the elbow begins to be snug, position the elbow as it was when removed and tighten the lock nut.
10. Remove the block from the left wheel and reattach the reservoir hoses to the transaxles.
11. Fill both reservoirs to 1" (25 mm) with 20W-50 oil.
12. Start and drive the unit for 1- 2 minutes.
13. If the transaxles sound noisy or have poor steering response, recheck oil level in both transaxles by removing the elbows (check oil level at fill opening).
14. If oil needs to be added refer back to steps 5-13.

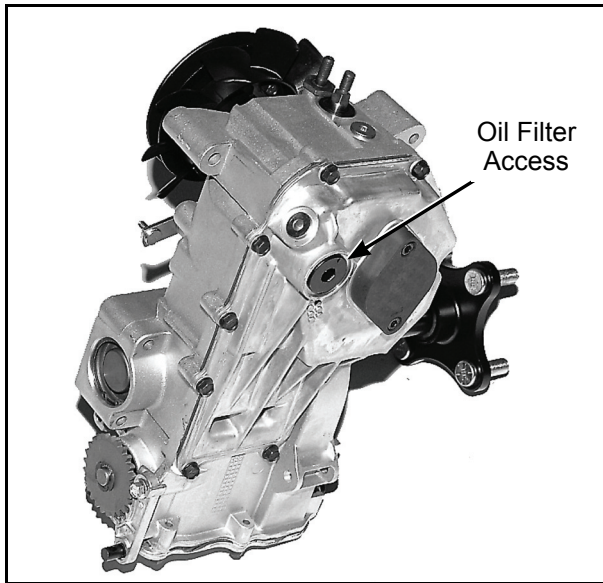


Component Locations

Walker

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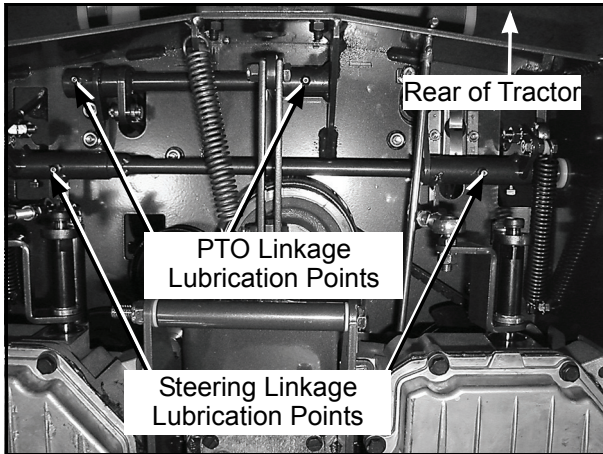
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Oil Filter Access

Steering Linkage and PTO Linkage Lubrication - Model MW

The steering and PTO linkage are located at the rear of the tractor below the body. The grease and oil points should be lubricated **every 25 hours**.



Steering and PTO Linkage Location
(view from underside of tractor)

Gear Axle Lubrication - Model MS, MC, MD, MT

- The gear axle oil lubrication is SAE 80W-90 (API GL-5) gear lube.
- Check the axle oil level **after every 100 hours** of operation by removing the oil level plug. If additional oil is needed, remove the breather vent on top of axle and fill until oil is at the level plug.
- Change axle oil **every 1000 hours** or **two (2) years**.

Hydrostatic Transmission Fluid - Model MS, MC, MD, MT

Checking Hydrostatic Transmission Fluid Level

Hydrostatic transmission fluid level should be checked **every 25 hours** of machine operation. It is preferable to **check the fluid level when fluid is cold**. Check fluid level as follows:

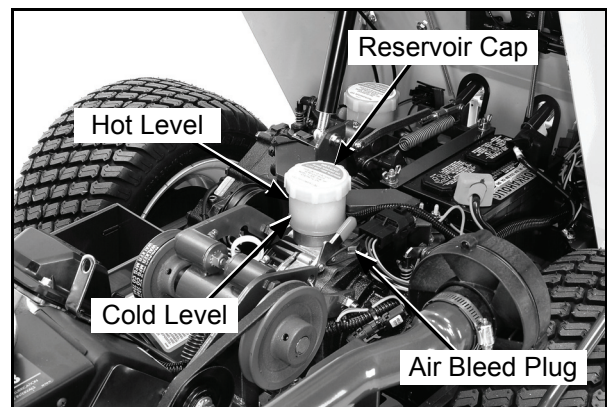
1. Park the mower on a **level surface**. Stop the engine and wipe dirt and contaminants from around the reservoir cap and air bleed plug.

IMPORTANT: Before removing the reservoir cap, clean any dirt from around it. Any dirt or contaminants entering the transmission will accelerate wear and eventually cause loss of power to the drive wheels.

IMPORTANT: Removing or breaking the seal within the first 500 hours will void the warranty.

NOTE: Check oil level of sealed hydrostatic transmission **after first 500 hours** using a light next to the reservoir.

2. Remove the reservoir cap and check the level of the fluid. The reservoir has a fluid level **COLD** mark and **HOT** mark. The reservoir **oil level should ALWAYS be at or above the COLD mark and NEVER above the HOT mark**.



Transmission Reservoir
and Air Bleed Plug Location (Model MC shown)

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3. If the fluid is below the **COLD** mark (or the transmission is not performing properly), **loosen the air bleed plug** (located on the top of transmission case next to the plastic reservoir).
- a. If a small amount of fluid leaks from around the air bleed plug:
- * The transmission is full of fluid.
 - * Tighten the plug and fill the reservoir to the **COLD** level mark.
- b. If no fluid leaks from around the air bleed plug:
- * Slowly add fluid into the reservoir until fluid starts to leak from around the plug. (Transmissions are serviced from the factory with **Mobil 1 (15W50) Synthetic Oil**). When it is necessary to add fluid, refer to **Specifications** for the proper fluid.
 - * As soon as there is fluid leaking from around the air bleed plug, tighten the plug and fill the reservoir to the **COLD** level mark. Wipe any excess oil off of the transmission housing.

IMPORTANT: DO NOT overfill the transmission reservoir. This will result in oil leaking out of the reservoir cap vent when the transmission warms up. It is preferable to add fluid to the transmission when it is cold and **make sure the oil is not above or below the COLD** level mark.

IMPORTANT: The transmission reservoir has a fine mesh screen in the bottom to trap dirt and foreign particles from entering the transmission. When filling the reservoir, fluid will **flow quite slowly** through this screen; so it is essential that there is fluid at the bleed plug before the transmission is considered full.

IMPORTANT: Any attempt to remove or in any way alter the filtering screen in the transmission reservoir could cause damage to the transmission and will **VOID** any transmission warranty.

Changing Hydrostatic Transmission Fluid - Model MS, MC, MD, MT

The hydrostatic fluid should be changed **every 1000 hours or two (2) years**. Also, the fluid should be changed if the natural **color** of the fluid has become **black or milky** (indicating possible overheating or water contamination of fluid). The transmission is re-filled using the factory service fluid noted in **TRANSMISSION Specifications**. The fluid is changed as follows:

1. Park the mower on a **level surface** and stop the engine.
2. Remove the lower drain plug and the air bleed plug. Allow the fluid to drain out.
- IMPORTANT:** Clean any dirt from around the plugs and reservoir cap **before** removing them.
3. Reinstall the lower drain plug, making sure the rubber O-ring on the plug is in place and in **good condition**.
4. Refill the transmission through the air bleed plug hole until it is as full as possible.

IMPORTANT: Avoid fluid contamination when filling the reservoir. Use clean container, spout, funnel, etc. when pouring the fluid into the reservoir.

5. Rotate the transmission input shaft about five (5) revolutions to allow any trapped air to escape.
6. Before installing the air bleed plug, fill the reservoir with fluid allowing a small amount to leak out of the air bleed plug hole.
7. Install the air bleed plug and fill the **reservoir** to the **COLD** level line.

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Grease Fitting and Oil Point Lubrication - All Models

Lubricate the grease fittings and oil points **after every 25 hours** of operation. Lubricate **more often** when operating in **dusty or dirty conditions**. Use SAE general purpose lithium or molybdenum base grease for grease fittings and light machine oil (SAE 10) to lubricate oil points. **Lubricate the locations shown in the Chassis and Deck Lubrication Points illustration.**

NOTE: PTO universal joints (on the deck and tractor) require routine lubrication **after every 8 hours** of running time. Remove tractor PTO tube assembly for easy access to grease fittings.

Model MS, MB

NOTE: The pillowblock bearings on the PTO drive shaft are a sealed, relubricatable-type bearing. Grease lightly **once per year** using care to not over-lubricate and damage the seals.

LUBRICATION - IMPLEMENTS



WARNING

DO NOT attempt to lubricate the machine with the tractor engine running. **Disengage the PTO clutch, shut off the machine, and remove the ignition key.**

Proper lubrication is an important maintenance procedure. It reduces wear and makes the machine quieter and easier to operate.

Perfaerator

Grease Fitting and Oil Point Lubrication

Lubricate the grease fittings and oil points **after every 8 hours** of operation (or as recommended below). Use SAE general purpose lithium or molybdenum base grease for grease fittings and light machine oil (SAE 10) to lubricate oil points.

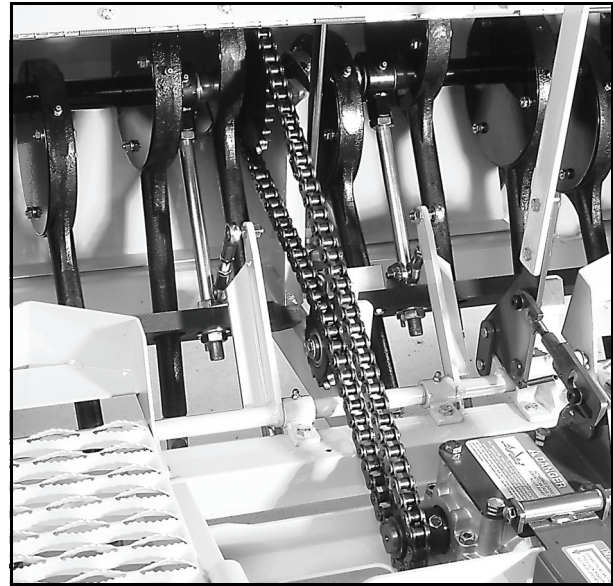
Gearbox

The gearbox is permanently lubricated (oil filled) and sealed requiring no scheduled lubrication. However, the gearbox oil seal(s) should be checked **every 25 hours** for indication of an oil leak. If gearbox oil is changed, fill with 15 oz. of 80W-90 gear oil. **Do not overfill.**

Drive Chain

Lubricate the drive chain **every 8 hours**. A light penetrating oil or special purpose chain oil is recommended. Lubricate the drive chain as follows:

1. Remove the three (3) screws fastening the removable chain guard cover to the frame.



Remove Chain Guard Cover

2. Apply oil to the drive chain.
3. Adjust the chain if necessary. Refer to **ADJUSTMENTS of Drive Chain Tension** in the **Service Procedures Section**.
4. Reinstall chain guard cover by reversing the removal procedure.

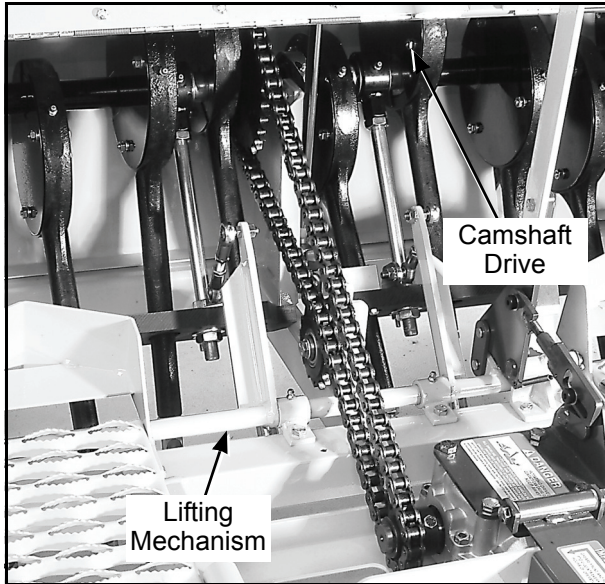
Walker

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Lifting Mechanism

Lubricate the grease fittings (4) across the lifting mechanism attached to the frame **every 25 hours**. Use SAE general purpose lithium or molybdenum base grease.



Lubricating Lift Mechanism and Camshaft Drive

Camshaft Drive System

Lubricate the grease fittings (16) on the camshaft drive system **every 4 hours**. Use Almagard® #3752 lubricant (Walker P/N 6685-7).

The bearings at each end and attached to the retractor plate arms are sealed and should be greased **every 100 hours** of operation. Use SAE general purpose lithium or molybdenum base grease.

PTO U-Joint

Lubricate the grease fitting for the PTO U-Joint **every 8 hours** with SAE general purpose lithium or molybdenum base grease.

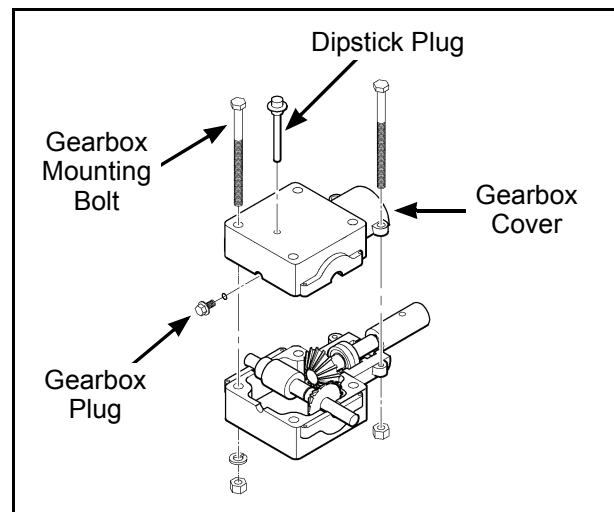
The PTO U-Joint is accessed by removing the gearbox cover.

Implements

Rotary Broom Gearbox

The gearbox is permanently lubricated (oil filled) and sealed requiring no scheduled lubrication. However, the gearbox oil seal(s) should be checked **every 25 hours** for indication of an oil leak. If an oil leak is noted, replace the oil seal and relubricate the gear-box as follows:

1. Remove the gearbox following the procedure described in **REPLACING/REPAIRING** the **Rotary Broom Gearbox** in this section.



Rotary Broom Gearbox with Cover Removed

2. Clean the area around the plug located on the front of the gearbox.
3. Remove the gearbox plug on the gearbox.
4. If the lubricant is flowing out of the plug hole, the gearbox is full. Reinsert the plug. If no lubricant flows out, add SAE E.P. (Extreme Pressure) 80W-90 oil into the gearbox through the plug hole until it starts to flow out.
5. Wipe the threads of the gearbox plug before re-installing.
6. Torque plug to 24 in-lb (2.7 N·m).

NOTE: In case the gearbox is completely drained of oil, approximately 5 fl. oz. (15 cl) of oil is required to refill the gearbox.

Walker

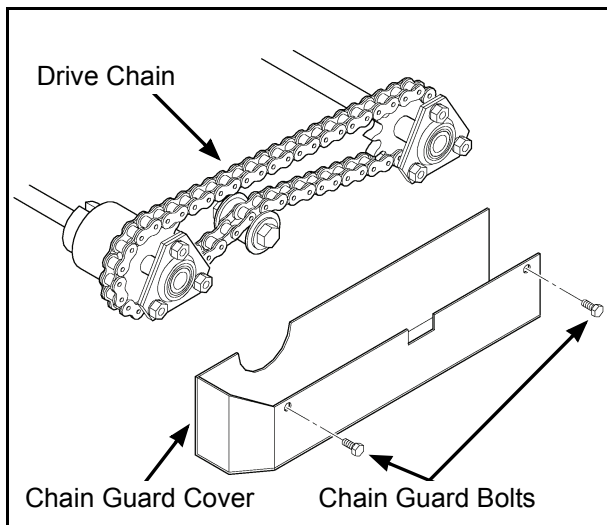
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Rotary Broom Drive Chain

Lubricate the drive chain **every 25 hours**. A light penetrating oil or special purpose chain oil is recommended. Lubricate the drive chain as follows:

1. Remove the two (2) bolts fastening the chain guard cover to the broom housing and remove the cover.



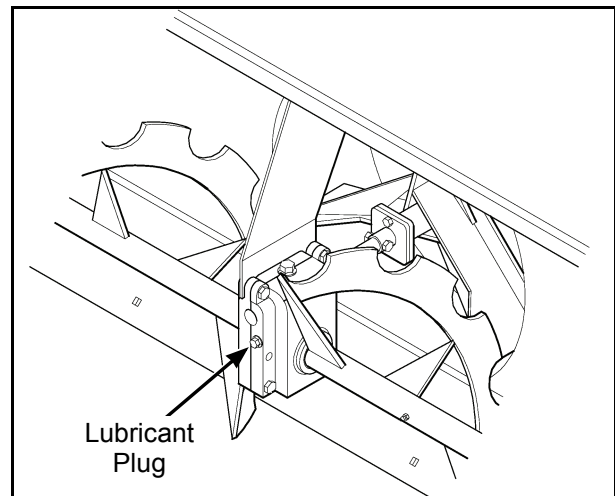
Remove Chain Guard Cover

2. Apply oil to the drive chain.
3. Reinstall the chain guard cover by reversing the removal procedures.

Two-Stage Snowblower Gearbox

The gearbox is permanently lubricated (oil filled) and sealed requiring no scheduled lubrication. However, the gearbox oil seal(s) should be checked **every 25 hours** for indication of an oil leak. If an oil leak is noted, replace the oil seal(s) and relubricate the gear-box as follows:

1. Remove the gearbox following the procedure described in **REPLACING/REPAIRING** the **Two-Stage Snowblower Gearbox** in this section.



Snowblower Lubricant Plug Location

2. Clean the area around the lubricant plug located on the front of the gearbox.
3. Remove the lubricant plug on the gearbox.
4. If the lubricant is flowing out of the plug hole, the gearbox is full. Reinsert the plug. If no lubricant flows out, add SAE E.P. (Extreme Pressure) 80W-90 lubricant into the gearbox through the plug hole until it starts to flow out.
5. Wipe the threads of the gearbox plug before re-installing.
6. Torque plug to 24 in-lb (2.7 N·m).

NOTE: In case the gearbox is completely drained of oil, approximately 5 fl. oz. (15 cl) of oil is required to refill the gearbox.

Walker

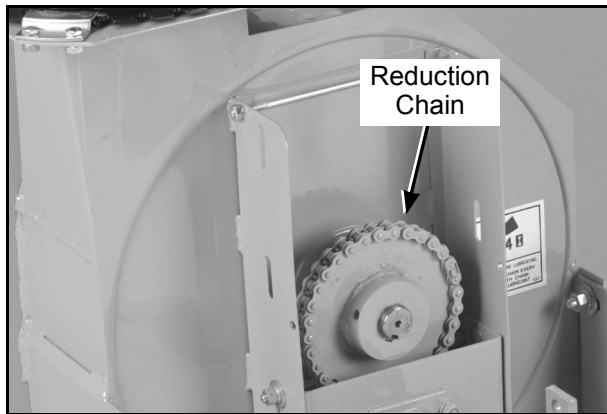
SERVICE INSTRUCTIONS

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Two-Stage Snowblower Reduction Chain

Lubricate the reduction chain **every 25 hours**. A light penetrating oil or special purpose chain oil is recommended. Lubricate the reduction chain as follows:

1. Remove the bolt fastening the reduction box cover to the reduction box and remove the cover.



Remove Reduction Box Cover

2. Apply oil to the reduction chain.
3. Adjust the chain if necessary. Refer to **ADJUSTMENTS of Two-Stage Snowblower Reduction Chain Tension** in the **Service Procedures Section**.
4. Reinstall the reduction box cover by reversing the removal procedures.

Grease Fitting and Oil Point Lubrication

Lubricate the grease fittings and oil points **after every 25 hours** of operation. Use SAE general purpose lithium or molybdenum base grease for grease fittings and light machine oil (SAE 10) to lubricate oil points. **Lubricate the locations shown in the Lubrication Points illustrations.**

SB36 Snowblower

Grease Fitting and Oil Point Lubrication

Lubricate the grease fittings and oil points **after every 25 hours** of operation. Use SAE general purpose lithium or molybdenum base grease for grease fittings and light machine oil (SAE 10) to lubricate oil points. **Lubricate the locations shown in the Snowblower Lubrication Points illustration.**

PTO U-Joint

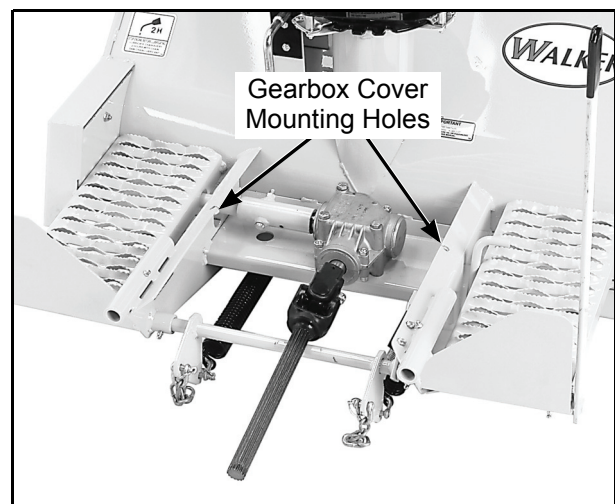
Lubricate the grease fitting for the PTO U-joint **every 8 hours** with SAE general purpose lithium or molybdenum base grease.

The PTO U-joint is accessed by removing the gearbox cover. Four (4) bolts fasten the gearbox cover to mounting holes on the snowblower frame (refer to **Snowblower with Gearbox Cover Removed** photo).

Gearbox Lubrication

The gearbox is permanently lubricated (oil filled) and sealed requiring no scheduled lubrication. However, the gearbox oil seal(s) should be checked **every 25 hours** for indication of an oil leak. If an oil leak is noted, replace the oil seal(s) and relubricate the gearbox as follows:

1. Remove the gearbox following the procedure described in **Gearbox Replacement** in **REPLACING/REPAIRING**.



Snowblower with Gearbox Cover Removed

Walker

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2. Clean the area around the gearbox cover plate to prevent contaminants from entering the gearcase.
3. Remove the screws securing the cover plate on the gearbox.
4. Check the level of lubricant in the gearbox. If the lubricant is low, add SAE E.P. (Extreme Pressure) 80W-90 oil until the oil level is up to (submerges) the horizontal shaft in the gearbox (shaft parallel to cover plate).

NOTE: In case the gearbox is completely drained of oil, approximately 5 fl. oz. (15 cl) of oil is required to refill the gearbox.

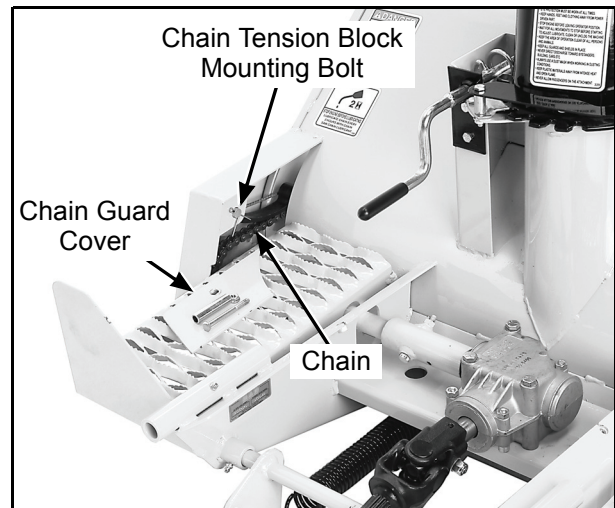
IMPORTANT: DO NOT overfill the gearbox. The gearbox assembly is not vented, and overfilling with oil will cause excessive pressure and result in oil leaks.

5. Check the condition of the cover gasket and replace if worn or damaged. Reinstall gearbox cover plate; torque screws to 24 in-lb (2.7 N·m).
6. Reinstall the gearbox cover by reversing the removal procedures.

Drive Chain Lubrication

Lubricate the drive chain **every 25 hours**. A light penetrating oil or special purpose chain oil is recommended. Lubricate the drive chain as follows:

1. Remove the screw fastening the removable chain guard cover to the snowblower housing and remove the cover.



Remove Chain Guard Cover

2. Apply oil to the drive chain.
3. Adjust the chain if necessary. Refer to **ADJUSTMENTS of Drive Chain Tension** in the **Service Procedures Section**.
4. Reinstall chain guard cover by reversing the removal procedures.

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Lubrication Points - MT, MTL, MTEFI, MTLEFI

Ident No.	Location	Lubrication Type	No. Places	Ident No.	Location	Lubrication Type	No. Places
1	Deck Caster Wheel Fork Pivot	Grease	2	25	Brake Actuator Rod and Brake Band Pivot Pins (Clevis)	Oil	3
2	Deck Caster Wheel Bearing	Grease	2	26	Brake Actuator Pivot	Grease	1
3	Tee Gearbox, Deck	Oil*	1	27	Catcher Hinge Point	Oil	2
4	Blade Drive Gearbox	Oil*	2	28	Rear Wheel Bearings	Grease	2
5	Universal Joint Shaft Assembly	Grease**	1	29	Engine Oil	Oil***	1
6	Pivot Assembly, Tilt-Up Deck	Grease	4	30	Choke Control Cable Ends (Models MT and MTL only)	Oil	2
7	Deck Support Arm Socket	Grease	2	31	Belt Tightener Pivot, Blower Drive (GHS Model Only)	Grease	1
8	Body Hinge Point	Oil	2	32	Belt Tightener Pivot, Ground Drive	Grease	1
9	FSC Actuator Rod Pivot Pins	Oil	2	33	PTO Gearbox Dipstick	Oil***	1
10	FSC Lever Pivot	Grease	1	34	Hydrostatic Drive	Oil***	2
11	FSC Lever Fork (Grease Slide Area)	Grease	1	35	Choke Control Pivot (Models MT and MTL only)	Oil	1
12	(FSC) Friction Body Pivot	Grease	1	36	Throttle Control Pivot	Oil	1
13	Steering Lever Pivot	Grease	4				
14	Deck Support Arm Pivot	Grease	2				
15	Deck-to-PTO Coupling (Grease Slide Area)	Grease	1				
16	Universal Joint Tube Assembly	Grease**	1				
17	Universal Joint Quick Connect Spline (Grease Slide Area)	Grease	1				
18	Parking Brake Lever	Grease	1				
19	Gear Axle	Oil***	2				
20	Belt Tightener Pivot, Jackshaft Drive	Grease	1				
21	Throttle Control Cable Ends	Oil	2				
22	Clutch Actuator Push Rod	Grease	2				
23	PTO Clutch Lever Pivot	Grease	1				
24	Belt Tightener Pivot, PTO Clutch	Grease	1				

* Gearboxes are permanently lubricated and sealed requiring no scheduled lubrication. Oil level should be checked only when an oil leak is noted. Refer to **Mower Deck Gearbox Lubrication** in this section.

** Grease every eight (8) hours.

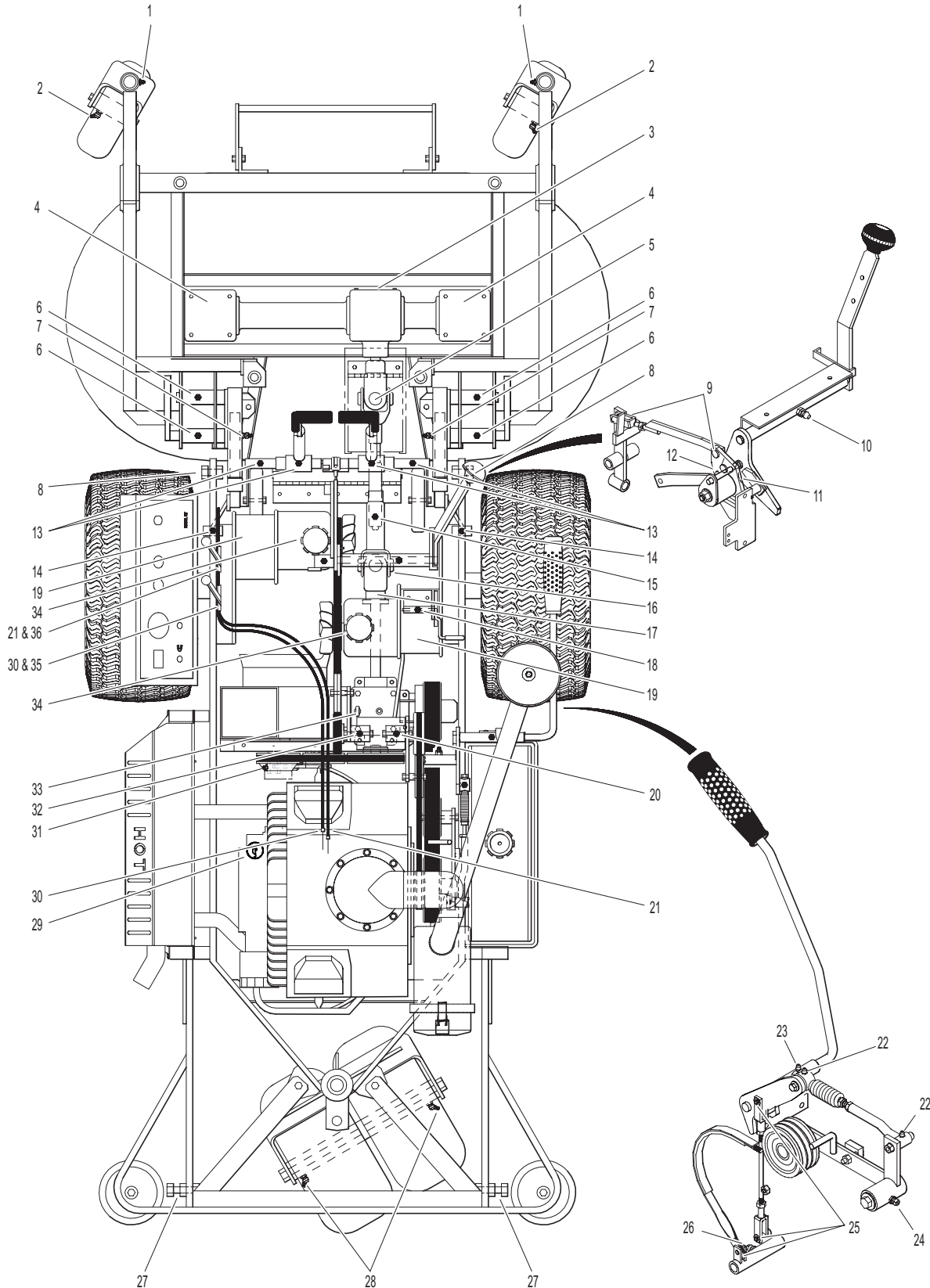
*** Refer to **Gear Axle Lubrication, Engine Oil, Tractor PTO Gearbox Lubrication, and Hydrostatic Transmission Fluid** in this section.

NOTE: DGHS42 Tilt-Up Deck is shown for reference. For other Deck Lubrication Points, Refer to Deck and Carrier Frame **Illustrated Parts Manual**.

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Chassis and Deck Lubrication Points - Model MT

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Lubrication Points - MD

Ident No.	Location	Lubrication Type	No. Places	Ident No.	Location	Lubrication Type	No. Places
1	Deck Caster Wheel Fork Pivot	Grease	2	20	PTO Clutch Lever Pivot	Grease	1
2	Blade Drive Gearbox	Oil*	2	21	Clutch Actuator Push Rod	Grease	2
3	Tee Gearbox, Deck	Oil*	1	22	Brake Actuator Rod and Brake Band Pivot Pins (Clevis)	Oil	3
4	Deck Caster Wheel Bearing	Grease	2	23	Throttle Control Cable Ends	Oil	2
5	Universal Joint Shaft Assembly	Grease**	1	24	Cold Start Lever	Grease	1
6	Pivot Assembly, Tilt-Up Deck	Grease	4	25	Catcher Hinge Point	Oil	2
7	Deck Support Arm Socket	Grease	2	26	Rear Wheel Bearings	Grease	2
8	Body Hinge Point	Oil	2	27	Engine Dipstick / Oil Filler	Oil***	1
9	FSC Actuator Rod Pivot Pins	Oil	2	28	Belt Tightener Pivot, Blower Drive (GHS Model Only)	Grease	1
10	FSC Lever Pivot	Grease	1	29	PTO Gearbox Dipstick	Oil***	1
11	FSC Lever Fork (Grease Slide Area)	Grease	1	30	Hydrostatic Drive	Oil***	2
12	Steering Lever Pivot	Grease	4	31	(FSC) Friction Body Pivot	Grease	1
13	Deck Support Arm Pivot	Grease	2				
14	Deck-to-PTO Coupling (Grease Slide Area)	Grease	1				
15	Universal Joint Tube Assembly	Grease**	1				
16	Universal Joint Quick Connect Spline (Grease Slide Area)	Grease	1				
17	Parking Brake Lever	Grease	1				
18	Gear Axle	Oil***	2				
19	Belt Tightener Pivot, Ground Drive	Grease	1				

* Gearboxes are permanently lubricated and sealed requiring no scheduled lubrication. Oil level should be checked only when an oil leak is noted. Refer to **Mower Deck Gearbox Lubrication** in this section.

** Grease every eight (8) hours.

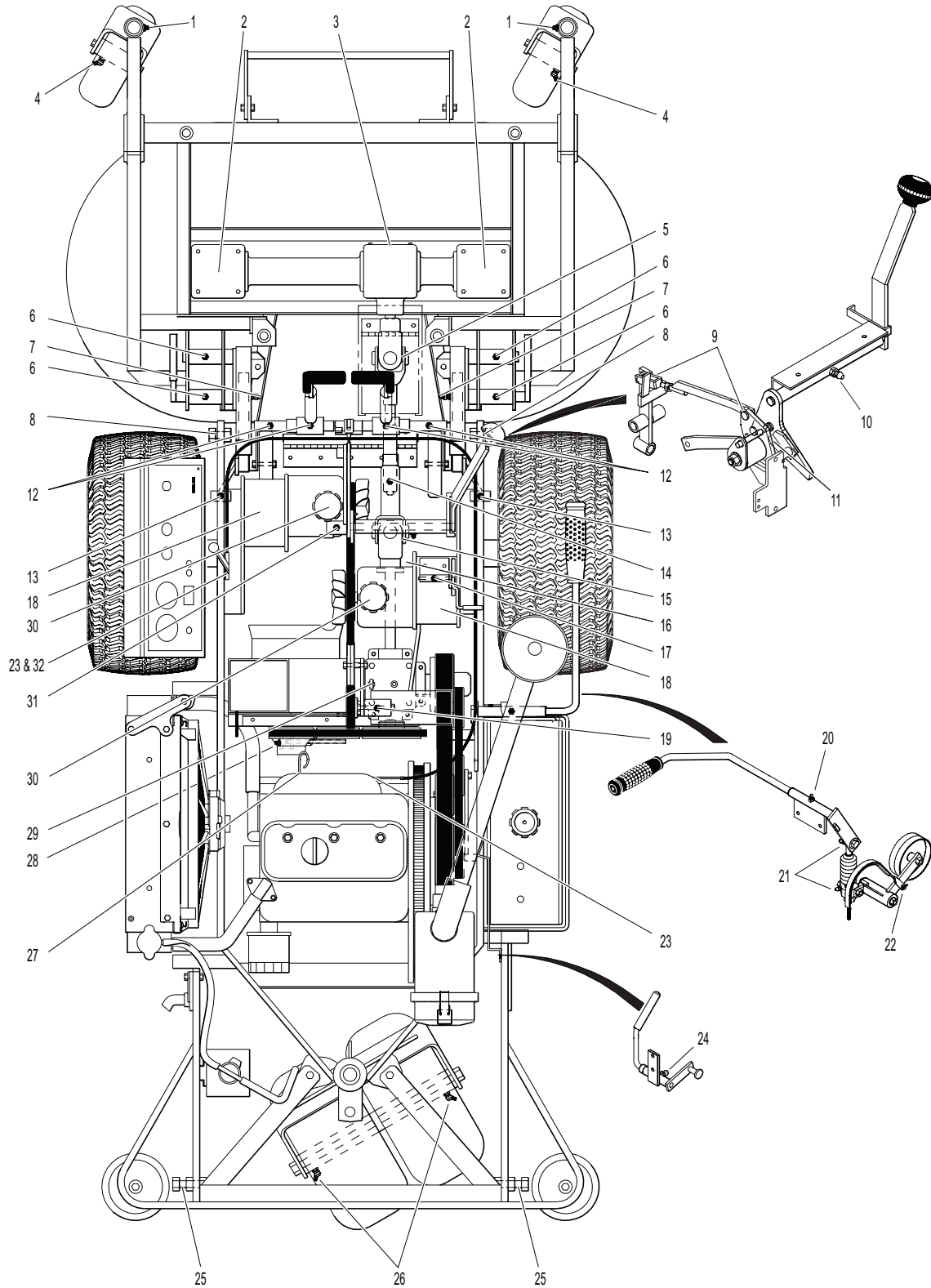
*** Refer to **Gear Axle Lubrication, Engine Oil, Tractor PTO Gearbox Lubrication, and Hydrostatic Transmission Fluid** in this section.

NOTE: DGHS42 Tilt-Up Deck is shown for reference. For other Deck Lubrication Points, Refer to Deck and Carrier Frame **Illustrated Parts Manual**.

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Chassis and Deck Lubrication Points - Model MD

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Lubrication Points - MC

Ident No.	Location	Lubrication Type	No. Places	Ident No.	Location	Lubrication Type	No. Places
1	Deck Caster Wheel Fork Pivot	Grease	2	24	Brake Actuator Rod and Brake Band Pivot Pins (Clevis)	Oil	3
2	Deck Caster Wheel Bearing	Grease	2	25	Brake Actuator Pivot	Grease	1
3	Tee Gearbox, Deck	Oil*	1	26	Catcher Hinge Point	Oil	2
4	Blade Drive Gearbox	Oil*	2	27	Choke Control Cable Ends	Oil	2
5	Universal Joint Shaft Assembly	Grease**	1	28	Throttle Control Cable Ends	Oil	2
6	Pivot Assembly, Tilt-Up Deck	Grease	4	29	Engine Oil	Oil***	1
7	Deck Support Arm Socket	Grease	2	30	Belt Tightener Pivot, Blower Drive (GHS Model Only)	Grease	1
8	Body Hinge Point	Oil	2	31	Belt Tightener Pivot, Ground Drive	Grease	1
9	FSC Actuator Rod Pivot Pins	Oil	2	32	PTO Gearbox Dipstick	Oil***	1
10	FSC Lever Pivot	Grease	1	33	Hydrostatic Drive	Oil***	2
11	FSC Lever Fork (Grease Slide Area)	Grease	1	34	Choke Control Pivot	Oil	1
12	(FSC) Friction Body Pivot	Grease	1	35	Throttle Control Pivot	Oil	1
13	Steering Lever Pivot	Grease	4				
14	Deck Support Arm Pivot	Grease	2				
15	Deck-to-PTO Coupling (Grease Slide Area)	Grease	1				
16	Universal Joint Tube Assembly	Grease**	1				
17	Universal Joint Quick Connect Spline (Grease Slide Area)	Grease	1				
18	Parking Brake Lever	Grease	1				
19	Gear Axle	Oil***	2				
20	Belt Tightener Pivot, Jackshaft Drive	Grease	1				
21	Clutch Actuator Push Rod	Grease	2				
22	PTO Clutch Lever Pivot	Grease	1				
23	Belt Tightener Pivot, PTO Clutch	Grease	1				

* Gearboxes are permanently lubricated and sealed requiring no scheduled lubrication. Oil level should be checked only when an oil leak is noted. Refer to **Mower Deck Gearbox Lubrication** in this section.

** Grease every eight (8) hours.

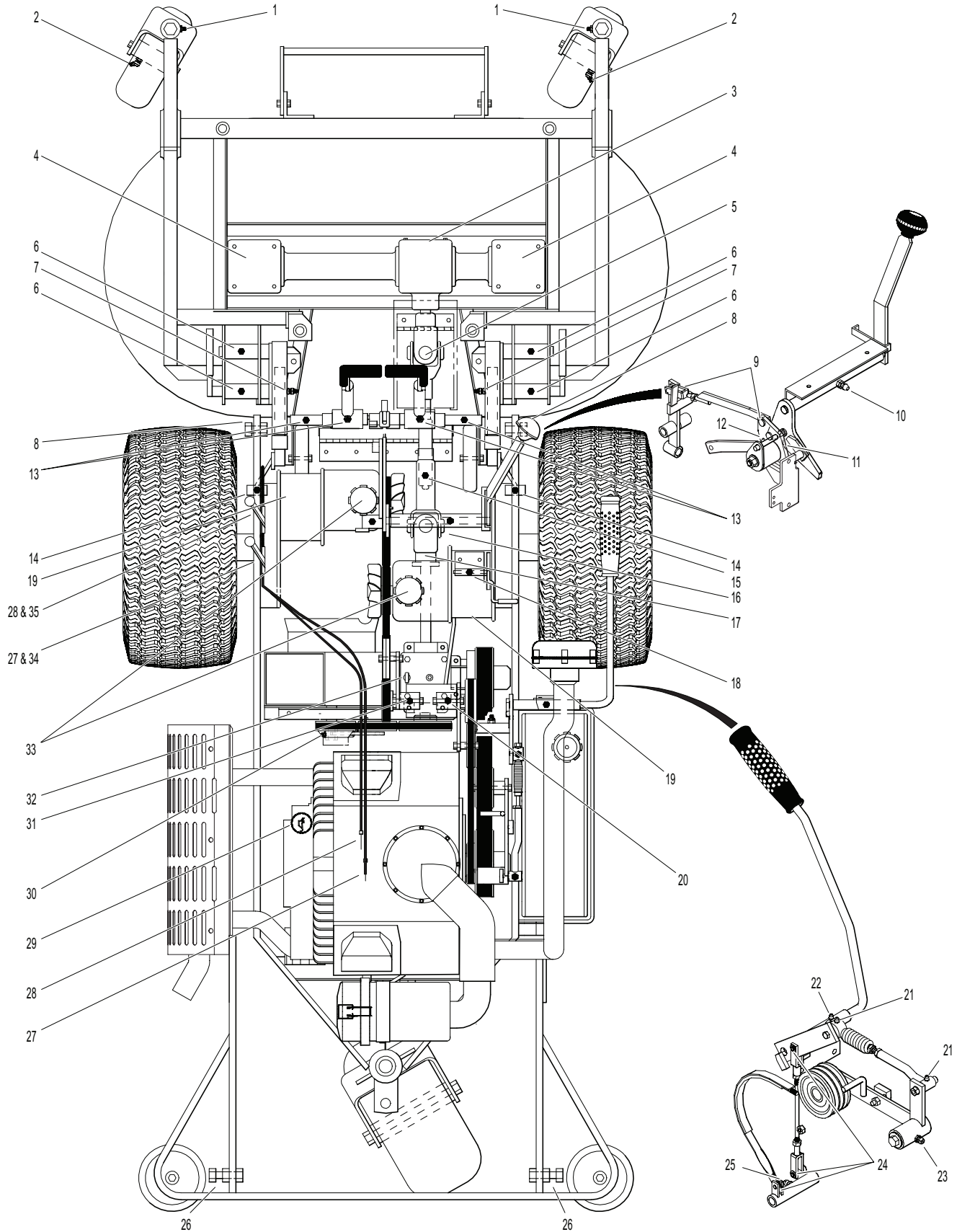
*** Refer to **Gear Axle Lubrication, Engine Oil, Tractor PTO Gearbox Lubrication, and Hydrostatic Transmission Fluid** in this section.

NOTE: DGHS42 Tilt-Up Deck is shown for reference. For other Deck Lubrication Points, Refer to Deck and Carrier Frame **Illustrated Parts Manual**.

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Chassis and Deck Lubrication Points - Model MC

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Lubrication Points - MS

Ident No.	Location	Lubrication Type	No. Places	Ident No.	Location	Lubrication Type	No. Places
1	Deck Caster Wheel Fork Pivot	Grease	2	24	PTO Belt Tightener Pivot	Grease	1
2	Blade Drive Gearbox	Oil*	2	25	Engine Dipstick / Oil Filler	Oil***	2
3	Tee Gearbox, Deck	Oil*	1	26	Catcher Hinge Point	Oil	2
4	Deck Caster Wheel Bearing	Grease	2	27	Throttle Control Cable Ends	Oil	2
5	Universal Joint Shaft Assembly	Grease**	1	28	Choke Control Cable Ends	Oil	2
6	Pivot Assembly, Tilt-Up Deck	Grease	4	29	Engine Belt Tightener Pivot	Grease	1
7	Deck Support Arm Socket	Grease	2	30	Right Angle Gearbox, Tractor	Oil***	1
8	Steering Lever Pivot	Grease	4	31	Hydrostatic Drive	Oil***	2
9	Body Hinge Point	Oil	2	32	Ground Drive Belt Tightener Pivot	Grease	1
10	FSC Actuator Rod Pivot Pins	Oil	2	33	Choke Control Pivot	Oil	1
11	FSC Lever Pivot	Grease	1	34	Throttle Control Pivot	Oil	1
12	FSC Lever Fork (Grease Slide Area)	Grease	1				
13	(FSC) Friction Body Pivot	Grease	1				
14	Deck-to-PTO Coupling (Grease Slide Area)	Grease	1				
15	Deck Support Arm Pivot	Grease	2				
16	Universal Joint Tube Assembly	Grease**	1				
17	Parking Brake Lever	Grease	1				
18	Pillowblock Bearing, Drive Shaft	Grease ^Δ	2				
19	Gear Axle	Oil***	2				
20	Clutch Control Lever Pivot	Grease	1				
21	Clutch Control Clevis Pin	Oil	1				
22	Scrubber Brake Linkage (GHS Model Only)	Oil	5				
23	Clutch Actuator Rod (Grease Slide Area)	Grease	1				

* Gearboxes are permanently lubricated and sealed requiring no scheduled lubrication. Oil level should be checked only when an oil leak is noted.

** Grease every eight (8) hours.

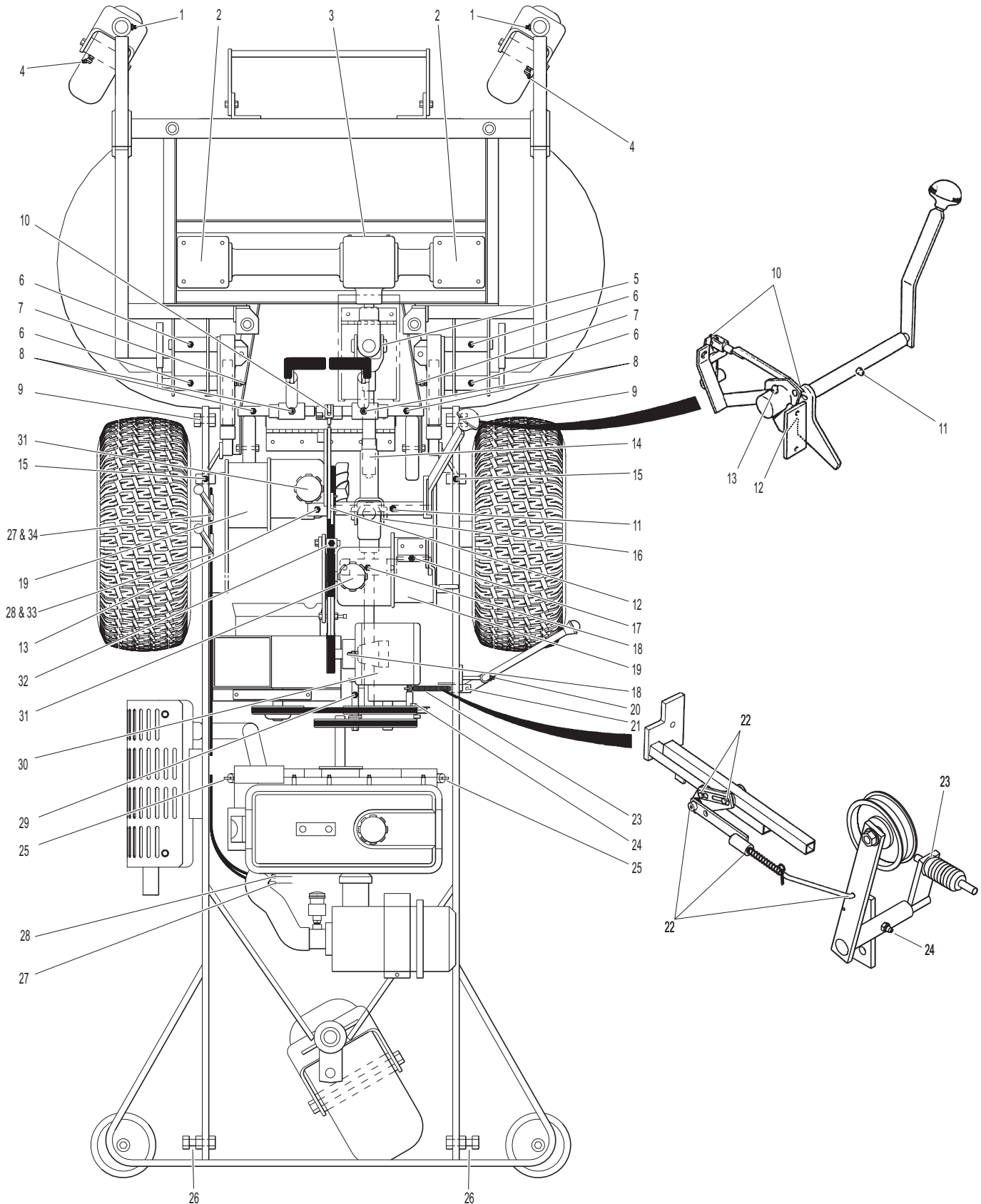
*** Refer to **Gear Axle Lubrication, Engine Oil, Tractor PTO Gearbox Lubrication, and Hydrostatic Transmission Fluid** in this section.

NOTE: DGHS42 Tilt-Up Deck is shown for reference. For other Deck Lubrication Points, Refer to Deck and Carrier Frame **Illustrated Parts Manual**.

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Chassis and Deck Lubrication Points - Model MS

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Lubrication Points - MW

Ident No.	Location	Lubrication Type	No. Places	Ident No.	Location	Lubrication Type	No. Places
1	Deck Caster Wheel Fork Pivot	Grease	2	11	PTO Clutch Lever Pivot	Grease	3
2	Deck Caster Wheel Bearing	Grease	2	12	Parking Brake Pivot	Oil	1
3	Tee Gearbox, Deck	Oil*	1	13	Engine Oil	Oil***	1
4	Blade Drive Gearbox	Oil*	2	14	Steering Control Linkage	Grease	2
5	Universal Joint Shaft & Tube Assembly	Grease**	1	15	Tail Wheel Fork Pivot & Wheel Bearing (not shown)	Grease	2
6	Pivot Assembly, Tilt-Up Deck	Grease	4	16	Clutch Actuator Push Rod	Grease	1
7	Deck Support Arm Socket	Grease	2	17	Deck Support Pivot Arm	Grease	2
8	Universal Joint Quick Connect Spline (Grease Slide Area)	Grease	1				
9	Ground Drive Belt Idler Arm (not visible - access side of body)	Grease	1				
10	Throttle/Choke Control Pivot (on Control Panel) & Cable End	Oil	1				

* Gearboxes are permanently lubricated and sealed requiring no scheduled lubrication. Oil level should be checked only when an oil leak is noted. Refer to **Mower Deck Gearbox Lubrication** in this section.

** Lubricate every eight (8) hours.

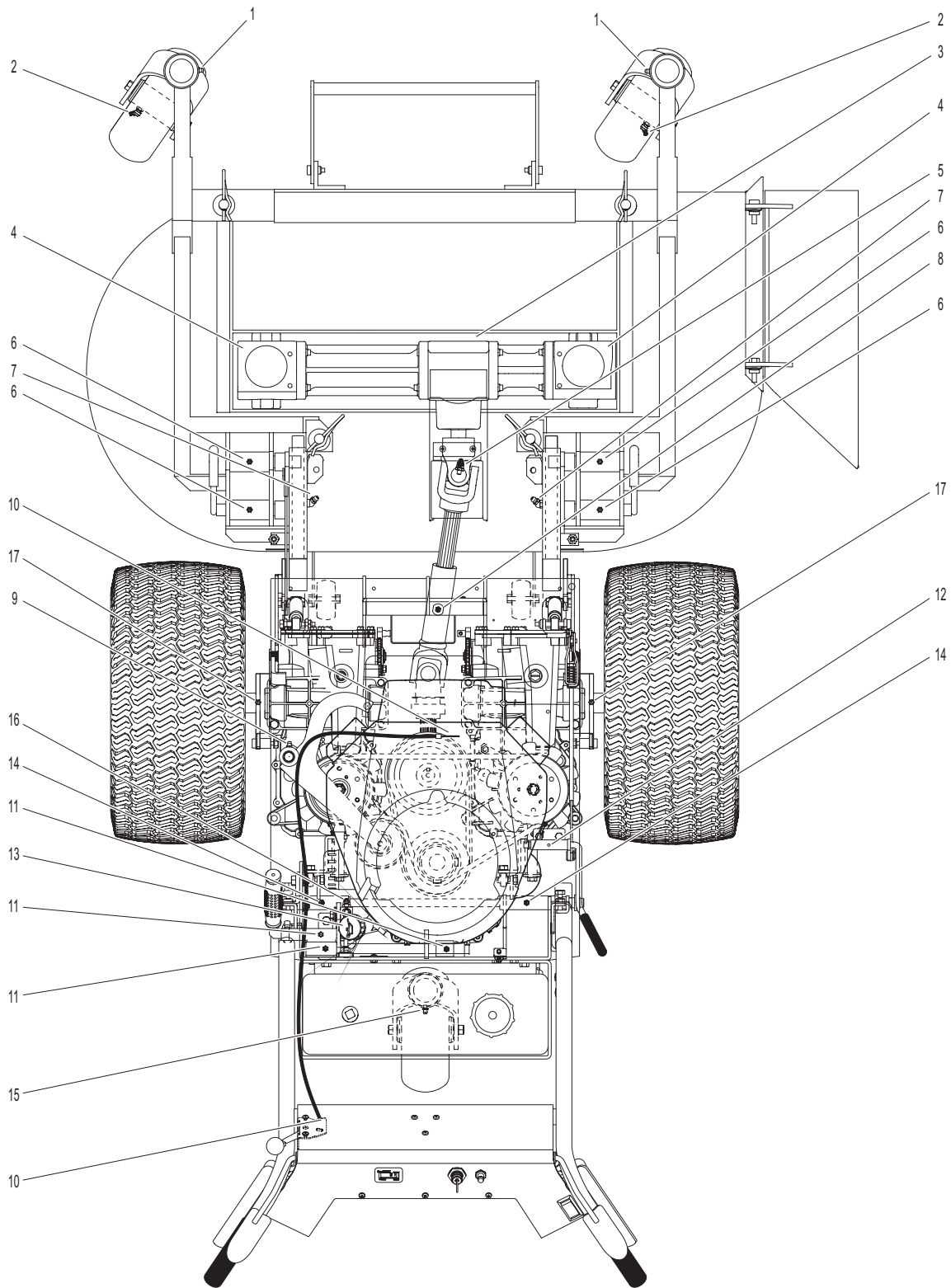
*** Refer to **Engine Oil** in this section.

NOTE: DSD42 Deck is shown for reference. For other Deck Lubrication Points, Refer to Deck and Carrier Frame **Illustrated Parts Manual**.

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Chassis and Deck Lubrication Points - Model MW

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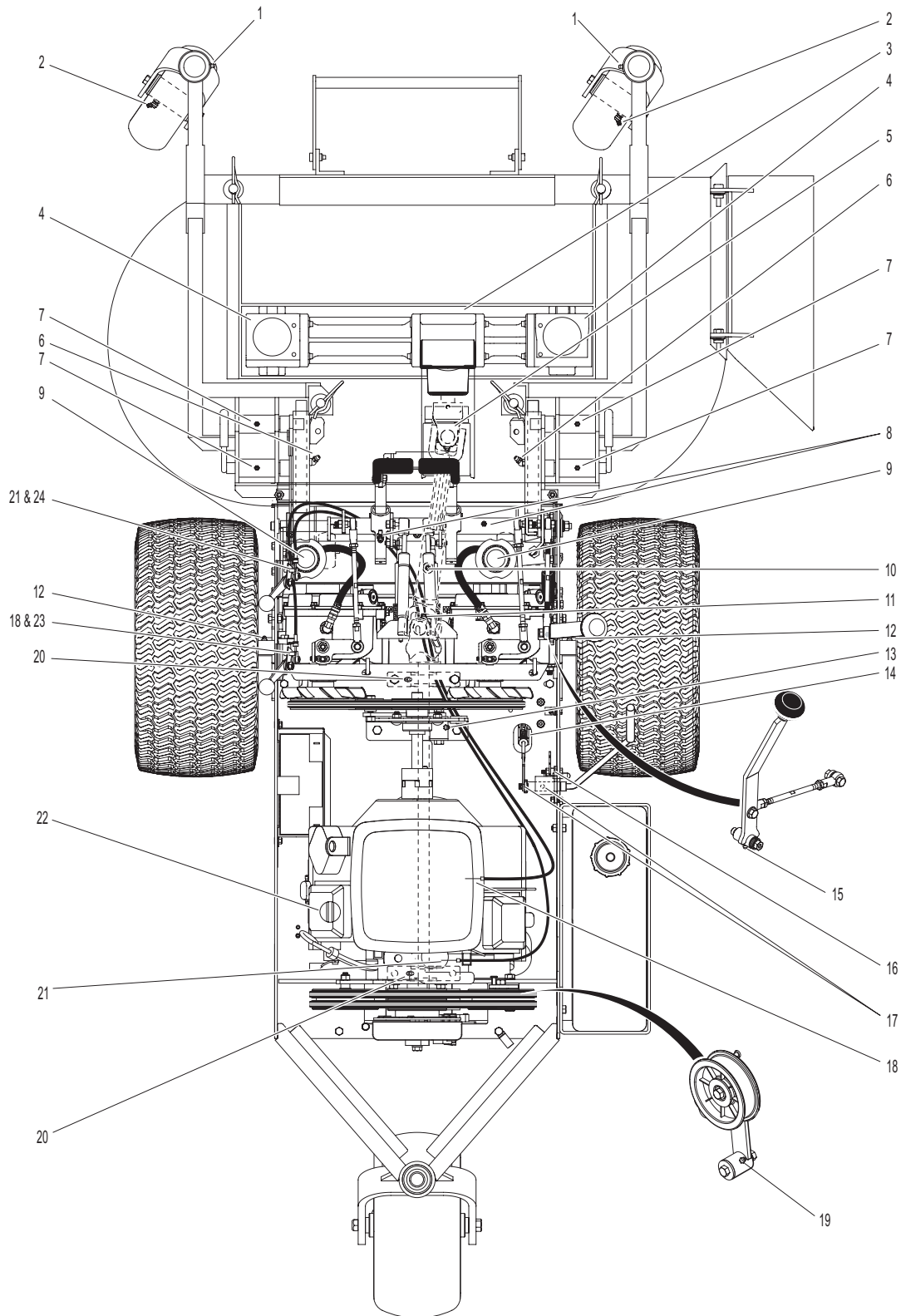
Lubrication Points - MB (Start S/N 2004-68441)

Ident No.	Location	Lubrication Type	No. Places	Ident No.	Location	Lubrication Type	No. Places
1	Deck Caster Wheel Fork Pivot	Grease	2	20	Pillowblock Bearing, Drive Shaft	Grease ^Δ	2
2	Deck Caster Wheel Bearing	Grease	2	21	Throttle Control Cable Ends	Oil	2
3	Tee Gearbox, Deck	Oil*	1	22	Engine / Oil Filler	Oil***	1
4	Blade Drive Gearbox	Oil*	2	23	Choke Control Pivot	Oil	1
5	Universal Joint Shaft Assembly	Grease**	1	24	Throttle Control Pivot	Oil	1
6	Deck Support Arm Socket	Grease	2				
7	Pivot Assembly, Tilt-Up Deck	Grease	4	*	Gearboxes are permanently lubricated and sealed requiring no scheduled lubrication. Oil level should be checked only when an oil leak is noted.		
8	Steering Lever Pivot	Grease	2	**	Grease every eight (8) hours.		
9	Transaxle Oil Reservoir	Oil	2	***	Refer to Engine Oil located in this section.		
10	Deck-to-PTO Coupling (Grease Slide Area)	Grease	1	Δ	Sealed, relubricatable-type bearings, grease lightly once per year, do not over grease or seals will be damaged.		
11	Universal Joint Tube Assembly	Grease**	1	NOTE:	DSD42 Tilt-Up Deck is shown for reference. For other Deck Lubrication Points, refer to Deck and Carrier Frame Illustrated Parts Manual.		
12	Deck Support Arm Pivot	Grease	2				
13	Hydro Idler Arm Pivot	Grease	1				
14	Parking Brake Clevis	Oil	1				
15	FSC Lever Pivot	Grease	1				
16	Body Latch	Oil	1				
17	Parking Brake Lever	Oil	2				
18	Choke Control Cable Ends	Oil	2				
19	PTO Belt Tightener Pivot	Grease	1				

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Chassis and Deck Lubrication Points - Model MB (Start S/N 2004-68441)

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Lubrication Points - MB (Start S/N 2007-85248)

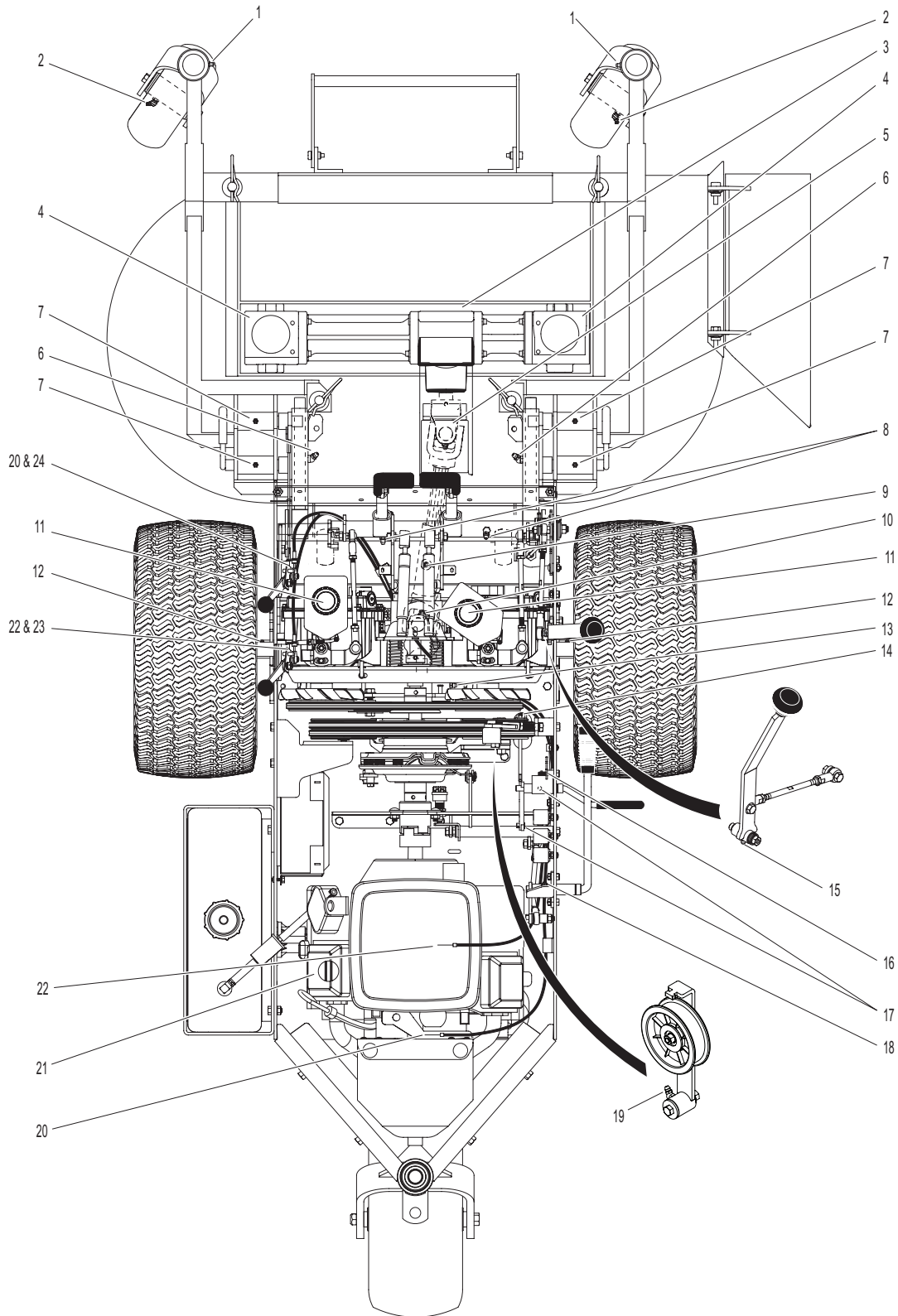
Ident No.	Location	Lubrication Type	No. Places	Ident No.	Location	Lubrication Type	No. Places
1	Deck Caster Wheel Fork Pivot	Grease	2	19	PTO Belt Tightener Pivot	Grease	1
2	Deck Caster Wheel Bearing	Grease	2	20	Throttle Control Cable Ends	Oil	2
3	Tee Gearbox, Deck	Oil*	1	21	Engine / Oil Filler	Oil***	1
4	Blade Drive Gearbox	Oil*	2	22	Choke Control Cable Ends	Oil	2
5	Universal Joint Shaft Assembly	Grease**	1	23	Choke Control Pivot	Oil	1
6	Deck Support Arm Socket	Grease	2	24	Throttle Control Pivot	Oil	1
7	Pivot Assembly, Tilt-Up Deck	Grease	4				
8	Steering Lever Pivot	Grease	2	*	Gearboxes are permanently lubricated and sealed requiring no scheduled lubrication. Oil level should be checked only when an oil leak is noted.		
9	Deck-to-PTO Coupling (Grease Slide Area)	Grease	1	**	Grease every eight (8) hours.		
10	Universal Joint Tube Assembly	Grease**	1	***	Refer to Engine Oil located in this section.		
11	Transaxle Oil Reservoir	Oil	2				
12	Deck Support Arm Pivot	Grease	2				
13	Hydro Idler Arm Pivot	Grease	1				
14	Parking Brake Clevis	Oil	1				
15	FSC Lever Pivot	Grease	1				
16	Body Latch	Oil	1				
17	Parking Brake Lever	Oil	2				
18	PTO Clutch Lever Pivot	Grease	1				

NOTE: DSD42 Tilt-Up Deck is shown for reference. For other Deck Lubrication Points, refer to Deck and Carrier Frame **Illustrated Parts Manual**.

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Chassis and Deck Lubrication Points - Model MB (Start S/N 2007-85248)

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Lubrication Points - Perfaerator

Ident No.	Location	Lubrication Type	No. Places	Ident No.	Location	Lubrication Type	No. Places
1	Deck Caster Wheel Fork Pivot	Grease	2	6	Actuator Rod Pivots	Grease	4
2	Deck Caster Wheel Bearing	Grease	2	7	Deck Support Arm Socket	Grease	2
3	Rod Bearing Bushing	Grease	4	8	Universal Joint Shaft Assembly	Grease*	1
4	Drive Chain	Oil*	1	9	Actuator Link Latch	Oil	1
5	Eccentric Assembly Tine	Grease**	12	10	Foot Trigger Pivot	Oil	1
				11	Engage Lever Pivot	Grease	1

* Grease every eight (8) hours.

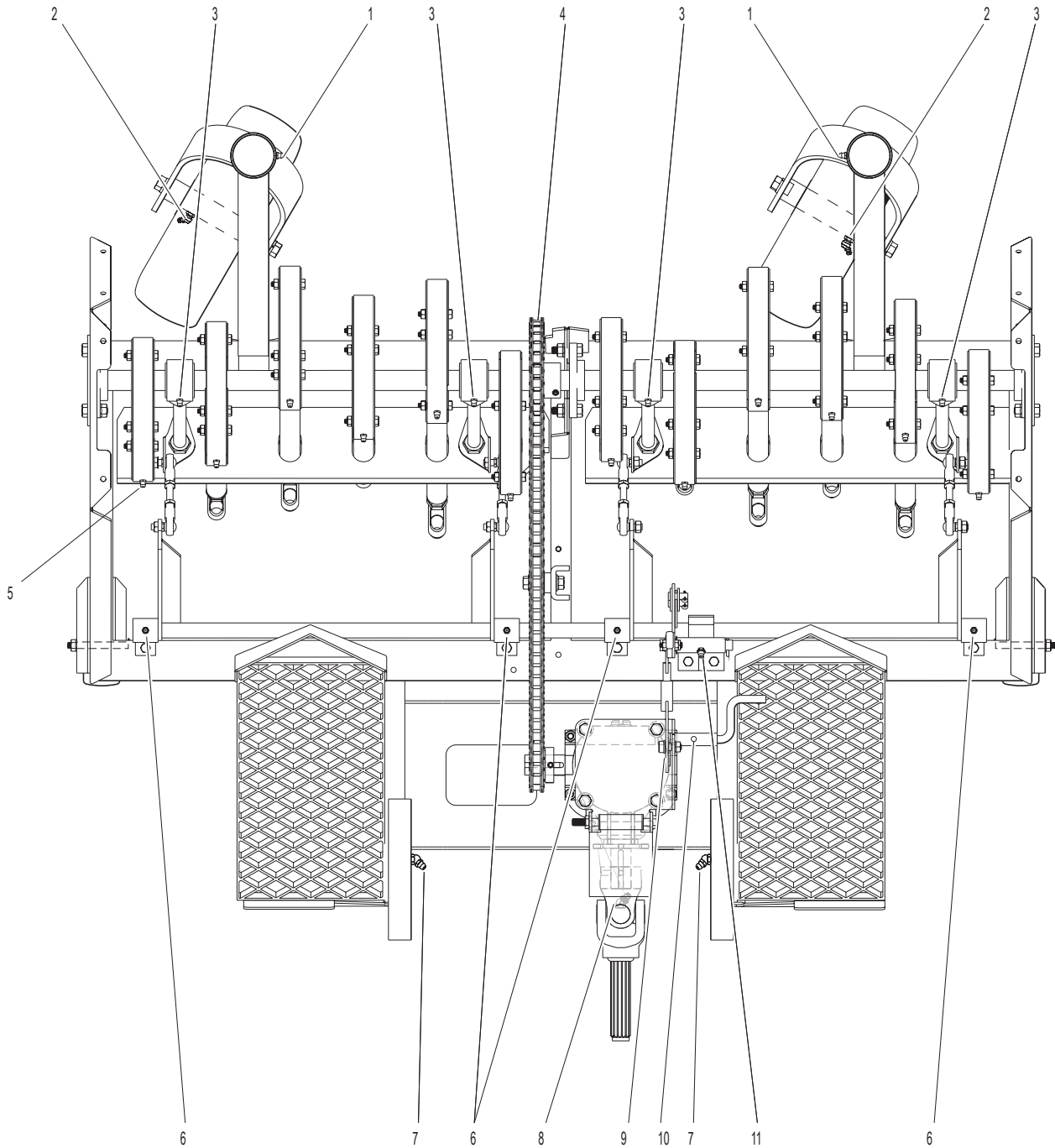
** Grease every eight (8) hours using Almagard #3752 lubricant (Walker P/N 6685-7).

NOTE: The gearbox is permanently lubricated (oil filled) and sealed requiring no scheduled lubrication. However, the gearbox oil seal(s) should be checked **every 25 hours** for indication of an oil leak.

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Chassis and Deck Lubrication Points - Perfaerator

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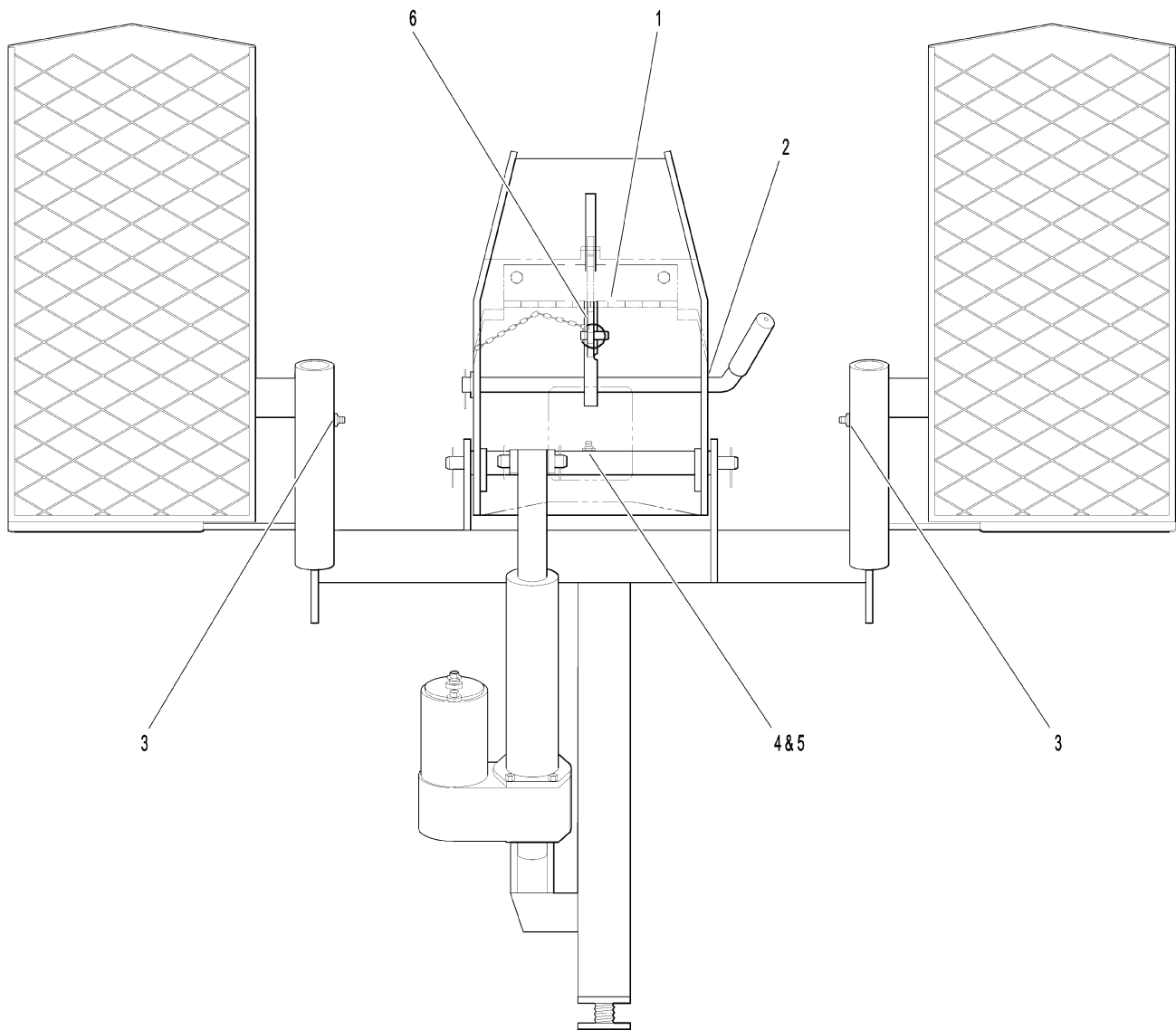
Lubrication Points - Implement Hitch

Ident No.	Location	Lubrication Type	No. Places	Ident No.	Location	Lubrication Type	No. Places
1	PTO Shield Hinge	Oil	1	4	Hitch Lift Crank	Grease	1
2	Hitch Locking Lever Pivot	Oil	1	5	Hitch Pivot Shaft	Oil	1
3	Mounting Tube Sockets	Grease	2	6	Quick Hitch Latch	Oil	1

Walker

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Lubrication Points - Implement Hitch

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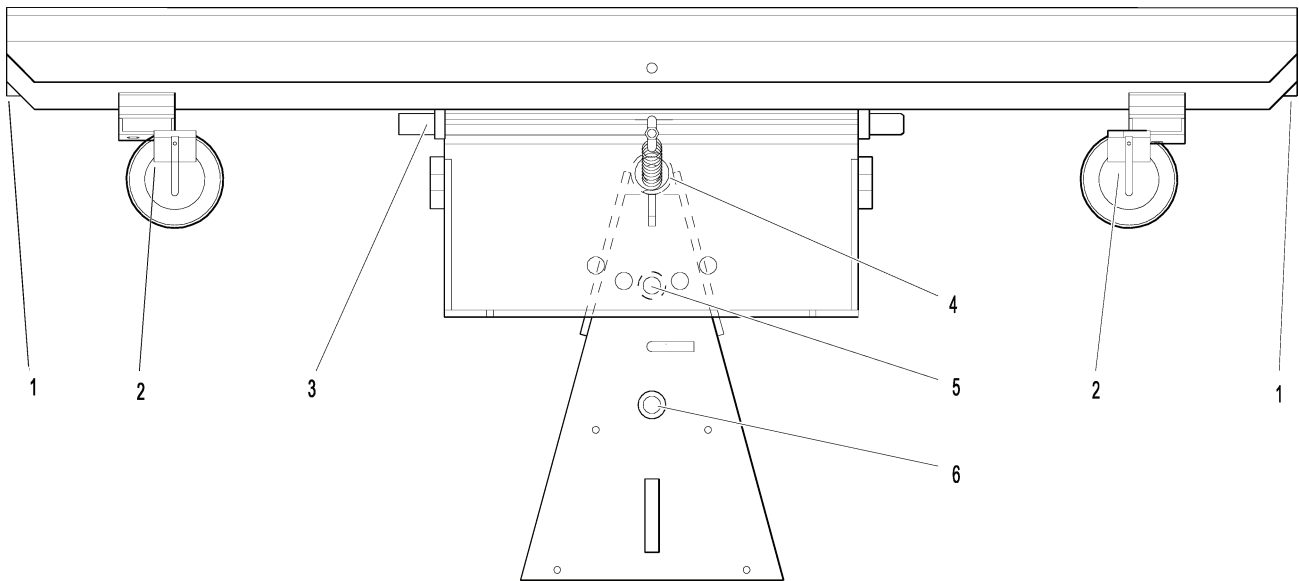
Lubrication Points - Dozer Blade

Ident No.	Location	Lubrication Type	No. Places	Ident No.	Location	Lubrication Type	No. Places
1	Cutting Edge	Oil	1	4	Trip Spring Lockout Bracket		
2	Skid Shoe Brackets (Grease Slide Area)	Grease	2		Pivot Pin	Oil	1
3	Hitch Box Pin	Oil	1	5	Angle Adjustment Pin	Oil	1
				6	Female Quick Hitch Pivot Pin	Oil	1

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Lubrication Points - Dozer Blade

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Lubrication Points - Rotary Broom

Ident No.	Location	Lubrication Type	No. Places	Ident No.	Location	Lubrication Type	No. Places
1	Chain Drive Sprocket	Oil	1	9	Universal Joint Shaft Assembly	Grease**	1
2	Chain Drive Shaft	Grease	1		(Grease Slide Area)		
3	Gearbox	Oil*	1	10	Ground Contact Knob Eyebolt	Grease	1
4	Wheel Brackets	Grease	2	11	Drive Chain	Oil	1
5	Angle Adjustment Lever Pivot	Oil	1				
6	Driveline	Grease	1				
7	Driveline Support Pivot	Oil	1				
8	Angle Adjustment Plate	Oil	1				

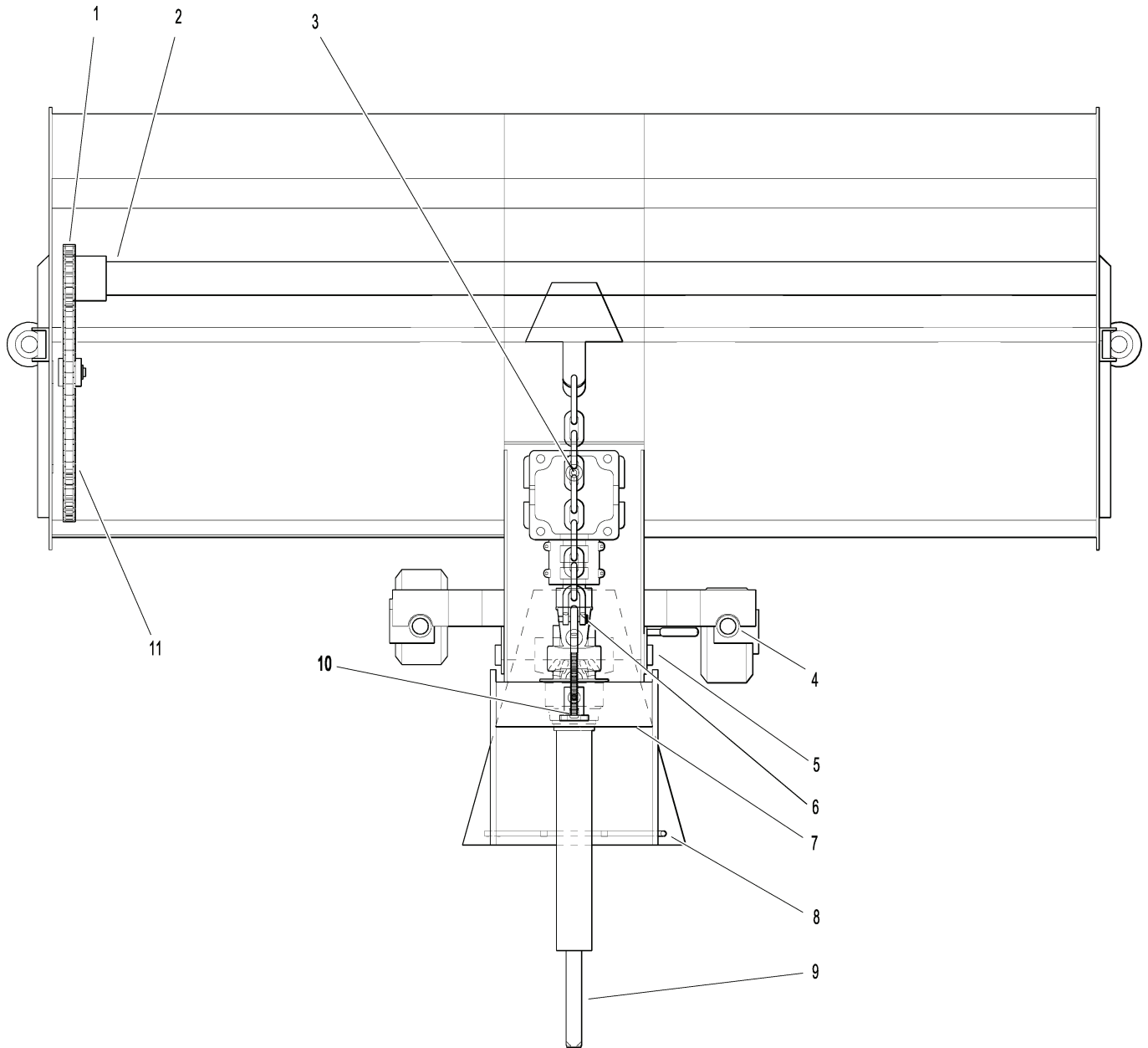
* Gearboxes are permanently lubricated and sealed requiring no scheduled lubrication. Oil level should be checked only when an oil leak is noted. Refer to **Rotary Broom Gearbox** in this section.

** Grease every eight (8) hours.

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Lubrication Points - Rotary Broom

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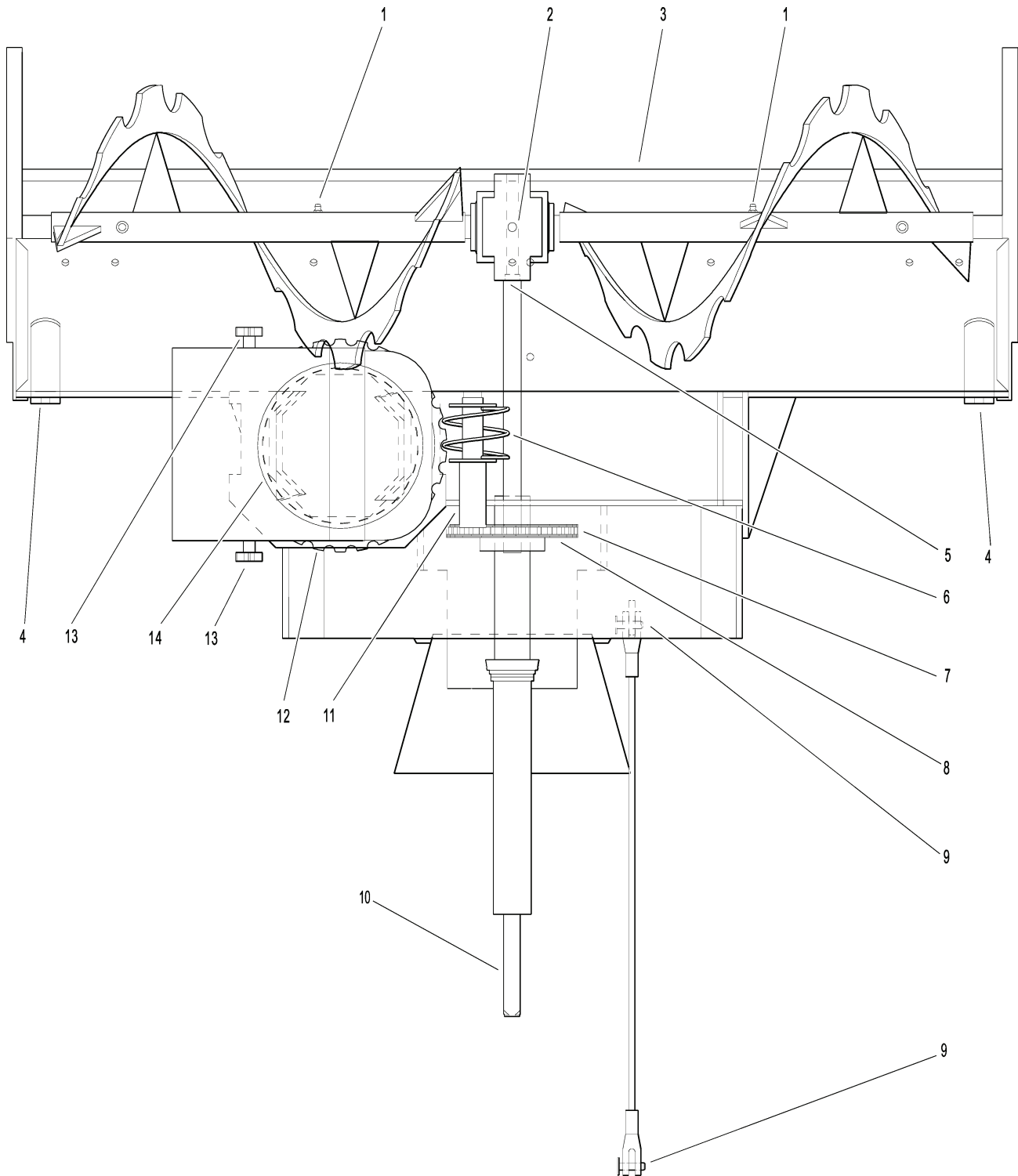
Lubrication Points - Two-Stage Snowblower

Ident No.	Location	Lubrication Type	No. Places	Ident No.	Location	Lubrication Type	No. Places
1	Auger Sections	Grease	2	11	Rotation Handle Pivot	Oil	1
2	Gearbox	Oil*	1	12	Plastic Anti-Friction Insert	Grease	1
3	Cutting Edge	Oil	1	13	Chute Knobs	Grease	2
4	Skid Shoes	Grease	2	14	Deflector Slide Area	Grease	1
5	Gearbox Shaft	Oil	1				
6	Rotation Worm	Grease	1	*	Gearboxes are permanently lubricated and sealed requiring no scheduled lubrication. Oil level should be checked only when an oil leak is noted. Refer to Two-Stage Snowblower Gearbox in this section.		
7	Reduction Chain	Oil	1				
8	Sprockets	Oil	2	**	Grease every eight (8) hours.		
9	Parallel Bar Pivot Pins	Oil	2				
10	Universal Joint Shaft Assembly (Grease Slide Area)	Grease**	1				

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Lubrication Points - Two-Stage Snowblower

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Lubrication Points - Debris Blower

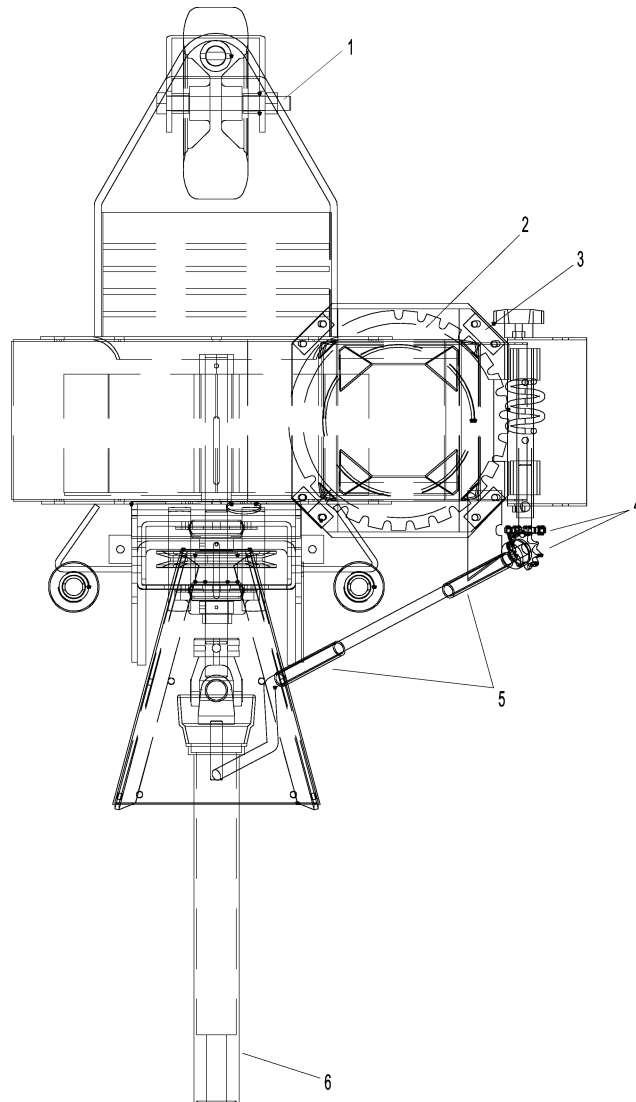
Ident No.	Location	Lubrication Type	No. Places	Ident No.	Location	Lubrication Type	No. Places
1	Front Gauge Wheel	Grease	1	5	Rotation Handle	Grease*	2
2	Plastic Anti-Friction Insert	Grease	1	6	Universal Joint Shaft Assembly (Grease Slide Area)	Grease*	1
3	Air Blast Nozzle	Oil	1				
4	Sprockets	Oil	2				

* Grease every eight (8) hours.

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Lubrication Points - Debris Blower

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Lubrication Points - SB36 Snowblower

Ident No.	Location	Lubrication Type	No. Places	Ident No.	Location	Lubrication Type	No. Places
1	Spout Deflector Pivot	Oil	2	7	Universal Joint Shaft Assembly	Grease*	1
2	Rotation Worm	Oil	1	8	Foot Trigger Pivot	Oil	1
	Handle Pivot			9	Right Angle Gearbox	Oil**	1
3	Foot Trigger Latch (Grease Slide Area)	Grease	1	10	Drive Chain	Oil	1
4	Mounting Tube Sockets	Grease	2				
5	Lift Handle Pivot	Grease	3				
6	Counterweight Spring and Lift Chain Clevis Pins	Oil	4				

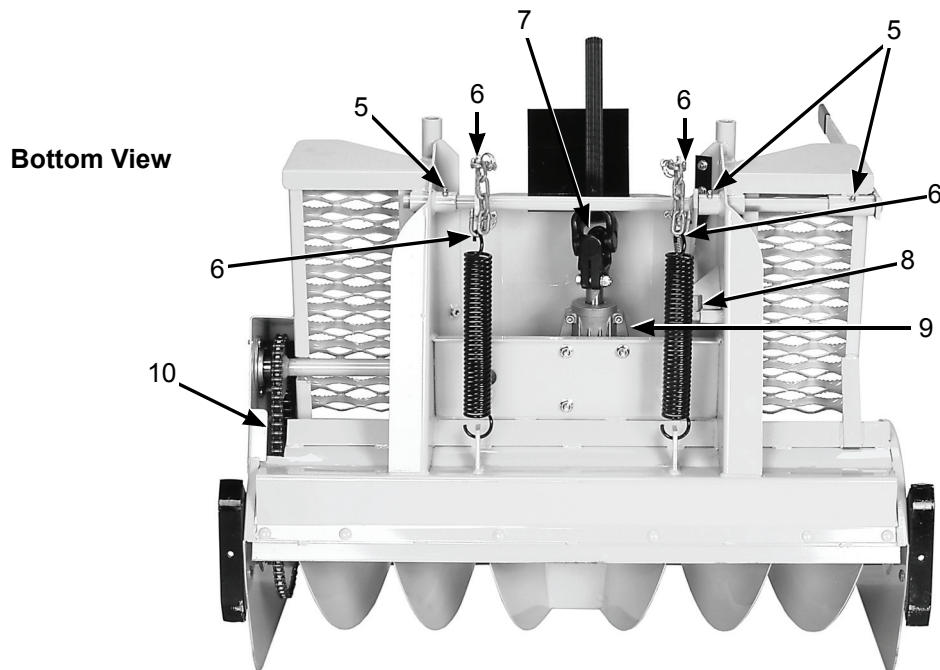
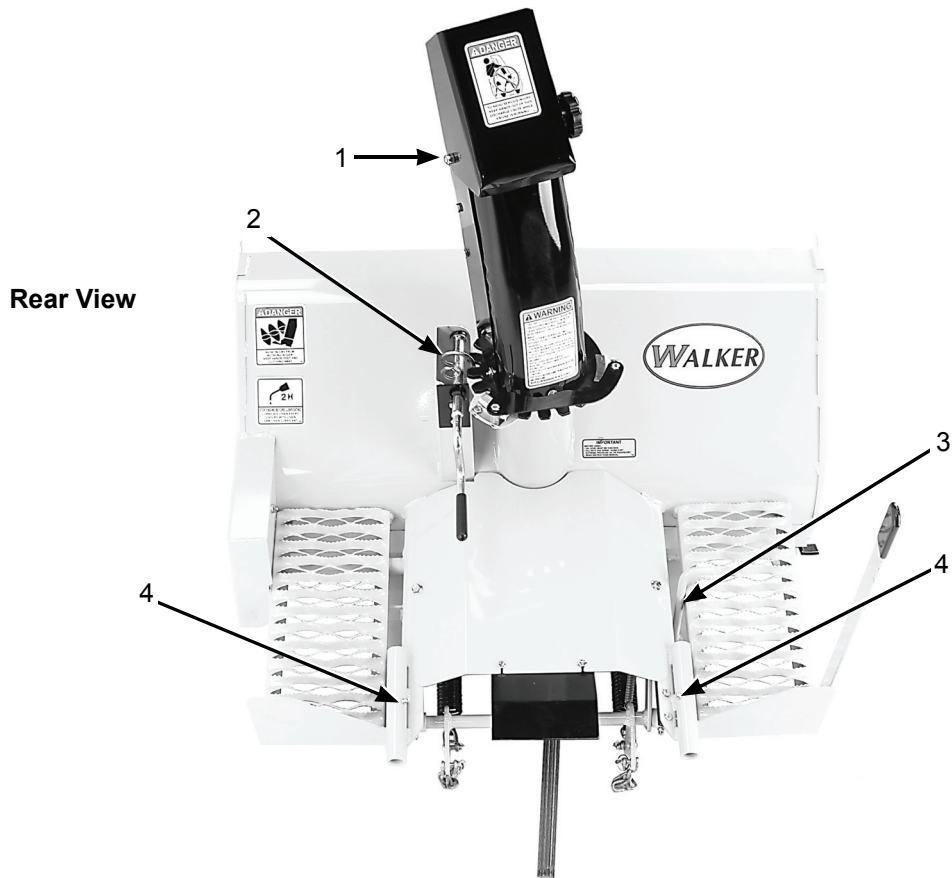
* Grease every eight (8) hours.

** Gearboxes are permanently lubricated and sealed requiring no scheduled lubrication. Oil level should be checked only when an oil leak is noted. Refer to **Gearbox Lubrication** in this section.

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Lubrication Points - SB36 Snowblower

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SECTION 3

Maintenance Instructions

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Maintenance procedures requiring special training or tools should be performed by a trained technician.

MAINTENANCE SCHEDULE CHART

RECOMMENDED SERVICE INTERVALS - MODEL MT, MTL, MTEFI, MTLEFI

Service Item	Daily	25 Hours	100 Hours	200 Hours	Yearly	Every 2Years	Ref. Page
Check Engine Crankcase Oil Level	x						2-3
Check/Clean Engine Air Cooling System*	x						3-24
Check Coolant Level, Radiator/Overflow Tank MTL	x						3-11
Clean Radiator Screen and Cooling Fins* MTL	x						3-25
Check Security of Air Filtration Components	x						3-12
Check Air Filter Restriction Gauge	x						3-22
Clean Grass Buildup Under Deck	x						3-28
Clean GHS Exhaust Screen*	x						3-30
Clean GHS Blower*	x						3-29
Service Mower Blades	x						3-13
Check Functions of Instrument Panel and Warning Horn	x						
Lubricate Grease Fittings and Oil Points*		x					2-15
Check PTO Gearbox Oil Level**		x					2-10
Check Battery Electrolyte Level		x					
Check Hydrostatic Transmission Fluid		x					2-13
Check Tire Pressure		x					3-12
Check Drive Belts (Jackshaft, Engine PTO, GHS Blower, Ground Drive)		x					3-14
Check Gearbox Oil Seals		x					3-15
Check Turbine Precleaner*			x				3-18
Check/Clean Air Filter Element***			x				3-22
Check Oil Level in Gear Axle			x				2-13
Clean Hydrostatic Transmission Cooling Fins			x				3-30
Clean Engine Cooling Fins MT, MTEFI			x				3-24
Change Engine Crankcase Oil MT, MTEFI ^Δ			x				2-5
Check Wheel Bolt Torque (75 to 85 ft-lb)			x				3-12
Change Engine Oil Filter MT, MTEFI ^Δ				x			2-5
Change Engine Crankcase Oil MTL ^Δ				x			2-5
Change Engine Oil Filter MTL ^Δ				x			2-5
Check Radiator Hoses and Clamps (MTL)				x			3-15
Check Fuel Lines and Clamps				x			3-15
Check/Regap Spark Plugs				x			
Replace Air Filter Element, safety filter, Vacuator™ Valve***					x		3-22
Replace Fuel Filter					x		4-24
Flush Radiator and Change Coolant (MTL)					x		3-26
Service Battery					x		3-12
Check PTO U-Joints for Wear/Looseness					x		3-17
Change Gear Axle Oil ^{ΔΔ}						x	2-13
Replace Radiator Hoses and Clamps (MTL)						x	3-15
Replace Fuel Lines and Clamps						x	3-15
Replace Ignition Wires						x	

* More often in extremely dusty or dirty conditions

** Change PTO gearbox oil after first 100 hours of operation (break-in period)

*** Air cleaner is remote mounted Donaldson Radialseal™ unit, replace filter every year or after 6 cleanings

Δ Change engine oil and filter after first 5 hours of operation of a new engine (break-in period)

ΔΔ Change every 2 years or 1000 hours

Walker

SERVICE INSTRUCTIONS

July 2006



Maintenance procedures requiring special training or tools should be performed by a trained technician.

MAINTENANCE SCHEDULE CHART - RECOMMENDED SERVICE INTERVALS - MODEL MD

Service Item	Daily	25 Hours	100 Hours	200 Hours	Yearly	Every 2Years	Ref. Page
Check Engine Crankcase Oil Level	x						2-3
Check Coolant Level in Radiator and Overflow Tank	x						3-11
Clean Radiator Screen and Cooling Fins*	x						3-25
Check Security of Air Filtration Components	x						3-12
Check Air Filter Restriction Gauge	x						3-22
Clean Grass Buildup Under Deck	x						3-28
Clean GHS Exhaust Screen*	x						3-30
Clean GHS Blower*	x						3-29
Service Mower Blades	x						3-13
Check Functions of Instrument Panel and Warning Horn	x						
Lubricate Grease Fittings and Oil Points*		x					2-15
Check PTO Gearbox Oil Level**		x					2-10
Check Battery Electrolyte Level		x					
Check Hydrostatic Transmission Fluid		x					2-13
Check Tire Pressure		x					3-12
Check Drive Belts (Jackshaft, Engine PTO, GHS Blower, Ground Drive and Engine Fan Belt)		x					3-14
Check Gearbox Oil Seals		x					3-15
Check Turbine Precleaner*			x				3-18
Check/Clean Air Filter Element***			x				3-22
Change Engine Crankcase Oil ^Δ			x				2-5
Check Fan Belt Tension			x				3-11
Check/Adjust Blade Clutch (PTO) / Brake Action			x				3-17
Check Oil Level in Gear Axle			x				2-13
Clean Hydrostatic Transmission Cooling Fins			x				3-30
Change Engine Oil Filter			x				2-5
Check Radiator Hoses and Clamps				x			3-15
Check Fuel Lines and Clamps				x			3-15
Replace Air Filter Element and Vacuator™ Valve***					x		3-22
Replace Fuel Filters					x		4-25
Flush Radiator and Change Coolant					x		3-26
Service Battery					x		3-12
Check Fuel Injection Nozzle Pressure					x		3-15
Check/Adjust FSC Friction Lock					x		4-59
Check Engine Valve Clearance ^{ΔΔ}					x		3-15
Check/Adjust Vertical Position of Grass-Pak® Switch					x		4-72
Change Gear Axle Oil ^{ΔΔΔ}						x	2-13
Change Hydrostatic Transmission Fluid ^{ΔΔΔ}						x	2-14
Replace Radiator Hoses and Clamps						x	3-15
Replace Fuel Lines and Clamps						x	3-15

- * **More often in extremely dusty or dirty conditions**
- ** **Change PTO gearbox oil after first 100 hours of operation (break-in period)**
- *** **Air cleaner is remote mounted Donaldson Radialseal™ unit, replace filter every year or after 6 cleanings**
- Δ **Change engine oil and filter after first 35 hours of operation of a new engine (break-in period)**
- ΔΔ **Change every year or 800 hours**
- ΔΔΔ **Change every 2 years or 1000 hours**

Walker

SERVICE INSTRUCTIONS

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 **CAUTION**

Maintenance procedures requiring special training or tools should be performed by a trained technician.

MAINTENANCE SCHEDULE CHART - RECOMMENDED SERVICE INTERVALS - MODEL MC

Service Item	Daily	25 Hours	100 Hours	200 Hours	Yearly	Every 2Years	Ref. Page
Check Engine Crankcase Oil Level	x						2-3
Check/Clean Engine Air Cooling System*	x						3-24
Check Security of Air Filtration Components	x						3-12
Check Air Filter Restriction Gauge	x						3-22
Clean Grass Buildup Under Deck	x						3-28
Clean GHS Exhaust Screen*	x						3-30
Clean GHS Blower*	x						3-29
Service Mower Blades	x						3-13
Check Function of Oil Pressure Warning Light	x						
Lubricate Grease Fittings and Oil Points*		x					2-15
Check PTO Gearbox Oil Level**		x					2-10
Check Battery Electrolyte Level		x					
Check Hydrostatic Transmission Fluid		x					2-13
Check Tire Pressure		x					3-12
Check Drive Belts (Jackshaft, Engine PTO, GHS Blower, Ground Drive)		x					3-14
Check Gearbox Oil Seals		x					3-15
Check Turbine Precleaner*			x				3-18
Check/Clean Air Filter Element ^Δ			x				3-22
Change Engine Crankcase Oil ^{ΔΔ}			x				2-5
Check/Adjust Blade Clutch (PTO)/ Brake Action			x		x		3-17
Check Oil Level in Gear Axle			x				2-13
Clean Hydrostatic Transmission Cooling Fins			x				3-30
Clean Engine Cooling Fins			x				3-24
Check/Regap Spark Plugs				x			
Change Engine Oil Filter				x			2-5
Check Fuel Lines and Clamps					x		3-15
Replace Air Filter Element and Vacuator™ Valve ^Δ					x		3-22
Replace Fuel Filter					x		4-24
Service Battery					x		3-12
Check/Adjust FSC Friction Lock					x		4-59
Service Solenoid Shift Starter					x		3-15
Check Engine Valve Clearance					x		3-15
Change Gear Axle Oil ^{ΔΔΔ}						x	2-13
Replace Fuel Lines and Clamps						x	3-15

- * More often in extremely dusty or dirty conditions
- ** Change PTO gearbox oil after first 100 hours of operation (break-in period)
- Δ Air cleaner is remote mounted Donaldson Radialseal™ unit, replace filter every year or after 6 cleanings
- ΔΔ Change engine oil and filter after first 5 hours of operation of a new engine (break-in period)
- ΔΔΔ Change every 2 years or 1000 hours

 **CAUTION**

When performing maintenance with the mower body raised, a safety prop should be installed from back of body to chassis frame (fail-safe protection in case of failure of body lift support). For GHS Model, empty grass catcher before raising body.

Walker

SERVICE INSTRUCTIONS

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CAUTION

Maintenance procedures requiring special training or tools should be performed by a trained technician.

MAINTENANCE SCHEDULE CHART - RECOMMENDED SERVICE INTERVALS - MODEL MS

Service Item	Daily	25 Hours	50 Hours	100 Hours	Yearly	Every 2Years	Ref. Page
Check Engine Crankcase Oil Level	X						2-4
Check/Clean Engine Air Cooling System*	X						3-24
Clean Grass Buildup Under Deck	X						3-28
Clean GHS Exhaust Screen*	X						3-30
Clean GHS Blower*	X						3-29
Service Mower Blades	X						3-13
Check Security of Air Filtration Components	X						3-12
Check Air Filter Restriction Gauge	X						3-22
Lubricate Grease Fittings and Oil Points*		X					2-15
Check Battery Electrolyte Level		X					
Check Hydrostatic Transmission Fluid		X					2-13
Check Tire Pressure		X					3-12
Check Drive Belts (Engine, PTO, Ground Drive)		X					3-14
Check PTO and Deck Gearbox Oil Seals		X					3-15
Change Engine Crankcase Oil**			X				2-5
Clean Fuel Filter			X				3-23
Change Engine Oil Filter				X			2-5
Clean Air Filter Element*				X			3-22
Check Gear Axle Oil Level				X			2-13
Clean Hydrostatic Transmission Cooling Fins				X			3-30
Clean and Regap Spark Plug				X			
Clean Engine Cooling Fins					X		3-25
Check Fuel Lines and Clamps					X		3-15
Replace Air Filter Element and Vacuator™ Valve***					X		3-22
Service Battery					X		3-12
Check/Adjust Blade/Brake Action					X		3-17
Check/Adjust FSC Friction Lock					X		4-59
Check/Adjust Vertical Position of Grass-Pak® Switch					X		4-72
Change Gear Axle Oil ^Δ						X	2-13
Change Hydrostatic Transmission Fluid ^Δ						X	2-14
Replace Fuel Lines and Clamps						X	3-15

- * More often in extremely dusty or dirty conditions
- ** Change engine oil and filter after first 8 hours of operation of a new engine (break-in period)
- *** Replace every year or after 6 cleanings
- Δ Change every 2 years or 1000 hours



CAUTION

When performing maintenance with the mower body raised, a safety prop should be installed from back of body to chassis frame (fail-safe protection in case of failure of body lift support). For GHS Model, empty grass catcher before raising body.

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Maintenance procedures requiring special training or tools should be performed by a trained technician.

MAINTENANCE SCHEDULE CHART - RECOMMENDED SERVICE INTERVALS - MODEL MW

Service Item	Daily	25 Hours	50 Hours	100 Hours	200 Hours	Ref. Page
Check Engine Crankcase Oil Level	x					2-3
Check/Clean Engine Air Intake Screen*	x					3-27
Check for Loose or Lost Nuts and Screws	x					
Clean Grass Buildup Under Deck	x					3-28
Service Mower Blades	x					3-13
Lubricate Grease Fittings and Oil Points*		x				2-15
Check Tire Pressure		x				3-12
Check Drive Belts (PTO, Ground Drive)		x				3-14
Check PTO and Deck Gearbox Oil Seals		x				3-15
Clean Air Filter Foam Element*		x				3-26
Inspect Air Filter Paper Element*			x			3-26
Change Engine Crankcase Oil**				x		2-5
Clean and Regap Spark Plugs				x		
Clean Engine Cooling Fins				x		3-27
Change Engine Oil Filter					x	2-5
Check Fuel Lines and Clamps					x	3-15
Check/Adjust Blade/Brake Action					x	3-17
Replace Air Filter Paper Element*					x	3-26

* **More often in extremely dusty or dirty conditions**
 ** **Change engine oil and filter after first 8 hours of operation of a new engine (break-in period)**

Walker

SERVICE INSTRUCTIONS

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CAUTION

Maintenance procedures requiring special training or tools should be performed by a trained technician.

MAINTENANCE SCHEDULE CHART - RECOMMENDED SERVICE INTERVALS - MODEL MB

Service Item	Daily	25 Hours	50 Hours	100 Hours	Yearly	Ref. Page
Check Engine Crankcase Oil Level	X					2-3
Check/Clean Engine Air Cooling System*	X					3-27
Clean Grass Buildup Under Deck	X					3-28
Service Mower Blades	X					3-13
Check Security of Air Cleaner System	X					3-12
Lubricate Grease Fittings and Oil Points*		X				2-15
Check Transaxle Fluid		X				2-12
Check Tire Pressure		X				3-12
Check Drive Belts (Engine, PTO, Ground Drive)		X				3-14
Check PTO and Deck Gearbox Oil Seals		X				3-15
Inspect Air Filter Paper Element*		X				3-27
Clean and Re-Oil Air Filter Foam Element		X				3-27
Change Engine Crankcase Oil**			X			2-5
Change Engine Oil Filter				X		2-5
Check Security of Drive Tire Mounting Nuts (75-85 ft-lbs.)				X		3-13
Clean Transaxle Cooling Fins				X		3-31
Replace Fuel Filter					X	4-24

- * More often in extremely dusty or dirty conditions
- ** Change engine oil and filter after first 8 hours of operation of a new engine (break-in period)



CAUTION

When performing maintenance with the mower body raised, a safety prop should be installed from back of body to chassis frame (fail-safe protection in case of failure of body lift support).

Walker

SERVICE INSTRUCTIONS

July 2006



CAUTION

Maintenance procedures requiring special training or tools should be performed by a trained technician.

MAINTENANCE SCHEDULE CHART - RECOMMENDED SERVICE INTERVALS - IMPLEMENTS

Model	Service Item	Daily	25 Hours	Yearly	Reference Page
All Models:	Check Tire Chains (Optional)	X			
	Check Gauge Wheels or Skid Shoes	X			
	Check Tractor Tailweight	X			
	Lubricate Grease Fittings and Oil Points		X		2-15
	Repaint Components/Parts			X	
Implement Hitch:	Check Implement Lift Switch Operation	X			
	Check Hitch Locking Lever Function	X			
Dozer Blade:	Check Dozer Blade Cutting Edge Condition	X			
	Check Dozer Blade Trip Spring Tension	X			
	Check Dozer Blade Swivel Adjustment	X			
Rotary Broom:	Check Rotary Broom Brush Condition	X			
	Check Broom Angle Adjustment Lever	X			
	Check Broom Side to Side Level Adjustment	X			
	Check Rotary Broom Ground Contact Knob	X			
	Check Rotary Broom Gearbox Oil Seals		X		2-16
	Lubricate Rotary Broom Drive Chain		X		2-17
Two-Stage Snowblower:	Check Snowblower Auger Condition	X			
	Check Snowblower Chute Rotation Handle	X			
	Check Snowblower Deflector Position	X			
	Check Snowblower Scraper Blade Condition	X			
	Check Snowblower Gearbox Oil Seals		X		2-17
	Lubricate Snowblower Reduction Chain		X		2-18
Debris Blower:	Check Debris Blower Chute Rotation Handle	X			
	Check Debris Blower Deflector Position	X			
	Check Debris Blower Gauge Wheel	X			
	Check Debris Blower Impeller Condition	X			
	Check Debris Blower Drive Belt			X	

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SERVICE INSTRUCTIONS

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CAUTION

Maintenance procedures requiring special training or tools should be performed by a trained technician.

MAINTENANCE SCHEDULE CHART - RECOMMENDED SERVICE INTERVALS - SB36 SNOWBLOWER

Service Item	Daily	25 Hours	Yearly	Reference Page
Check Auger Condition	X			
Check Lift Handle and Foot Trigger Function	X			
Check Spout Position Control Handle	X			
Check Deflector Position Control Handle	X			
Check Gauge Wheel or Skid Shoe	X			4-78
Check Scraper Blade	X			4-45
Check Tire Chains (Optional)	X			
Check/Adjust Chain Drive		X		4-41
Lubricate Grease Fittings and Oil Points		X		2-15
Lubricate Drive Chain		X		2-19
Check PTO Gearbox Oil Seals		X		2-18
Check Flexible Coupling		X		4-45
Repaint Components/Parts			X	

Walker

SERVICE INSTRUCTIONS

July 2006

CHECKING/SERVICING - ALL MODELS

Model MS, MW, MB, MC, MT

 **DANGER**

To prevent accidental starting of the engine when servicing or adjusting the machine, remove the key from the ignition switch and disconnect the spark plug wire(s).

Model MD

 **DANGER**

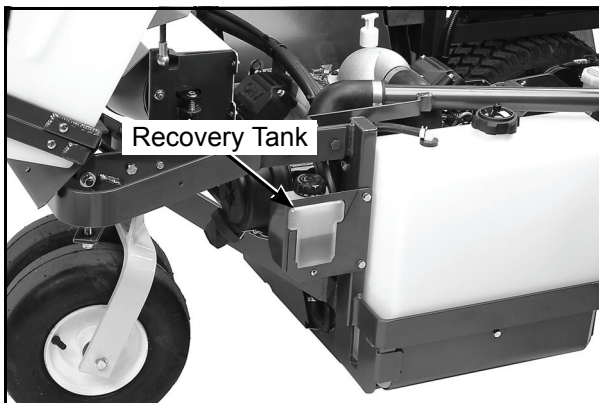
To prevent accidental starting of the engine when servicing or adjusting the machine, remove the key from the ignition switch and disconnect the electric plug on the fuel shut-off solenoid.

Engine Cooling System - Model MD, MTL

Coolant Level

 **WARNING**

NEVER remove the radiator pressure cap when the engine is hot — hot water could spray and cause a burn if the cap is taken off too soon.



Overflow Tank - Model MTL

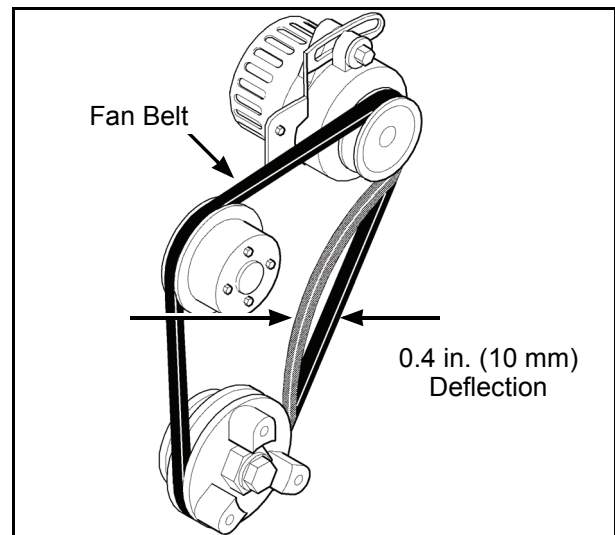
Check the coolant level in the coolant recovery tank and **maintain the coolant level between the FULL and LOW marks on the recovery tank**. When the engine is cold, the coolant level should be at or slightly above the **LOW** mark on the recovery tank.

If the coolant level is low, remove the radiator cap and fill to the overflow port level and then fill the recovery tank above the **LOW** mark. Use a pre-mixed 50/50 solution of antifreeze (ethylene glycol) and distilled water to fill the cooling system.

IMPORTANT: The coolant solution of antifreeze and distilled water must be thoroughly pre-mixed before putting it in the engine (adding pure antifreeze into the radiator may cause damage to the engine by causing overheating).

Fan Belt Tension - Model MD

Check and adjust the fan belt tension to **avoid engine overheating and insufficient battery charging**. Push on the belt in the middle of the span between the alternator and crankshaft. If properly tensioned, it should deflect about **0.4 in. (10 mm)**. Also check the belt for cracks or deterioration.



Fan Belt Tension

Walker

SERVICE INSTRUCTIONS

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Security of Air Filtration Components - Model MS, MC, MD, MT

NOTE: The following inspection is **only an external inspection** and should be done without “**disturbing**” the filtration components.

On a daily basis, visually inspect the external condition of the complete air cleaner system. The following items should be inspected:

1. Check the Donaldson Radialseal™ air cleaner canister for damage. Make sure the cover is in place and the cover latches are secure - do not run the engine without the air cleaner cover in place and secure.
2. Inspect the air intake hose for cracks, nicks, cuts, etc., and check the hose clamps for tightness.
3. Check to make sure the air flow indicator is in place and tight.

Security of Air Cleaner System - Model MB

NOTE: The following inspection is **only an external inspection** and should be done without “**disturbing**” the filtration components.

On a daily basis, visually inspect the external condition of the air cleaner cover.

Check for damage. Make sure the cover is in place and the cover latches are secure - do not run the engine without the air cleaner cover in place and secure.

Battery

Model MS, MB, MC, MD, MT

NOTE: For initial battery service during setup, refer to **Battery Service** in the **Set-Up Section**.

IMPORTANT: Make sure battery is securely mounted in the frame. A loose battery may cause damage to the case resulting in acid leakage and severe damage to the machine. A hazard may be created by damage to critical working parts and safety systems.

CAUTION

Important Battery Service, Installation, and Changing Tips for MTEFI:

- Do not allow the battery cables to touch opposing terminals. When connecting battery cables attach the positive (+) cable to positive (+) battery terminal first, followed by negative (-) cable to negative (-) battery terminal.
- Never start the engine when the cables are loose or poorly connected to the battery terminals.
- Never disconnect battery while engine is running.
- Never use a quick battery charger to start the engine.
- Never "jump start" the engine using another source. Electricity fluctuations can damage the ECU (Electronic Control Unit).
- Do not charge battery with key switch "on."
- Always disconnect negative (-) battery cable lead before charging battery, and also unplug harness from ECU before performing any welding on equipment.

Cleaning the Terminals - All Models

If battery terminals are corroded, **remove battery** from the mower. Using a wire brush, remove corrosion with a solution of **one part baking soda and four parts water**. Rinse with clean water. Coat the terminals with petroleum jelly or terminal protector spray to retard further corrosion.

Tire Pressure - All Models

Inflate tires to pressures shown below:

Deck Caster Wheel = 20 PSI (137 kPa)
Drive = 15 PSI (103 kPa)
Rear = 20 PSI (137 kPa)

Wheel Bolt Torque - Model MS, MC, MD, MT

Check **every 100 hours** the eight (8) lug bolts that mount the drive tires. They should be torqued to 75 to 85 ft-lb.

Walker

SERVICE INSTRUCTIONS

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Wheel Nuts Torque - Model MW, MB

Check **every 100 hours** the eight (8) Drive Tire mounting nuts. They should each be torqued to 75-85 ft-lbs. (101.7-115.2 N·m).

Sharpen Mower Blades - All Models

Check mower blade(s) for **straightness, sharpness, condition of the cutting edge**, and **balance every 10 hours** of operation (or more often when mowing abrasive type grass or operating on sandy soils). **Replace blades if worn, bent, cracked, or otherwise damaged** (refer to **REPLACING/REPAIRING the Mower Blades** in the **Service Procedures Section**). Use the following procedure to check and sharpen blades:

NOTE: Keep blades sharp - cutting with dull blades not only yields a poor mowing job but slows the cutting speed of the mower and causes extra wear on the engine and blade drive by pulling hard.

Model MS, MW, MB, MC, MT, MTL

1. Stop the engine, remove ignition key, and disconnect the spark plug wire(s) **before** raising the mower deck to service blades.

Model MD

1. Stop the engine, remove ignition key, and disconnect the electrical plug on the fuel shut-off solenoid **before** raising the mower deck to service blades.

All Models

2. Raise the deck and secure it in the **TILT-UP** position. Refer to **CLEANING the Grass Buildup in Mower Housing** in this section for deck raising instructions.

⚠ DANGER

NEVER operate cutter blades with the deck in the raised position.

NOTE: PTO shaft must be **disconnected** before checking blades for straightness.

3. Check the blades for **straightness** by marking the blade tip position inside the deck housing, and then rotating the opposite end of the blade to the same position and comparing. If the difference in blade tip track is **more than 1/8 in. (3 mm)**, the blade is bent and **should be replaced**.

⚠ WARNING

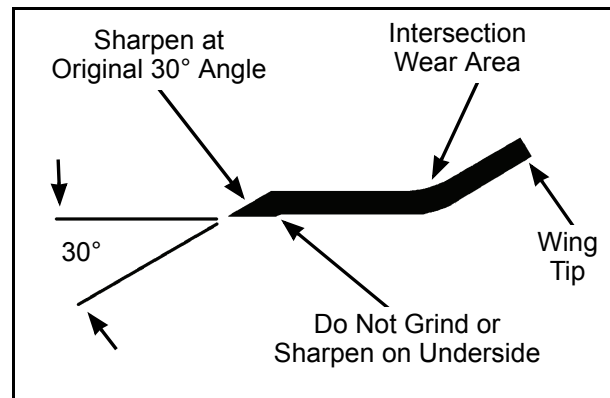
DO NOT try to straighten a blade that is bent. NEVER weld a broken or cracked blade. ALWAYS replace with a new blade to assure safety.

4. If the blade cutting edge is **dull or nicked**, it should be sharpened. Remove blades for sharpening by grasping the end of the blade using a rag or a thick, padded glove, while loosening and removing the nut, lock washer, and flat washer that mounts the blade.
5. Grind cutting edge at the same bevel as the original. Sharpen only the top of the cutting edge to maintain sharpness.

NOTE: Blades can be sharpened with an electric blade sharpener, conventional electric grinder, or a hand file.

⚠ CAUTION

ALWAYS wear eye protection and gloves when sharpening a blade.



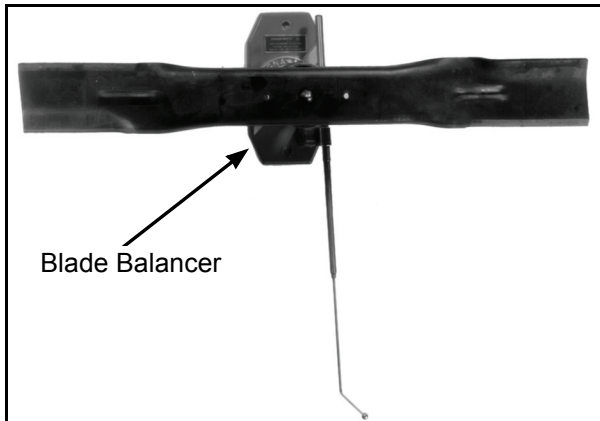
Mower Blade Profile For Sharpening

6. Check blade balance by positioning the blade **horizontally** on a blade balancer or use a nail or shaft through the center hole. If either end of the blade rotates downward, grind (remove) metal on that end until the blade will balance. The blade is properly balanced when neither end drops. Balance of a blade is generally maintained by removing an equal amount of material from each end of the blade when sharpening.

Walker

SERVICE INSTRUCTIONS

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**Blade Balanced on Magnetic
Wall-Mounted Balancer**

7. Mount the blade with wing tips pointing up into the housing. Reinstall the blade, washer, lock washer, and nut. **Tighten the nut to 60 ft-lb (81.3 N·m).**

Model MS, MC, MD, MT, MTL

NOTE: When reinstalling blades on **GHS** models, remember, the **blades turn toward each other** (counter-rotate) and the RH and LH blade cannot be switched. Check for proper blade rotation before installing blades on the deck.

Drive Belts - Model MC, MT, MTL

Raise the body and inspect the condition of the four (4) belts (3 belts on SD models) **every 25 hours** of operation - engine PTO drive, jackshaft drive, hydrostatic ground drive, and GHS blower drive. If the belts show **signs of cracking or deteriorating**, the belts should be **replaced**. Refer to **REPLACING/REPAIRING** the **Drive Belts** in the **Service Procedures Section**.

Drive Belts - Model MD

Raise the body and inspect the condition of the five (5) belts (4 belts on SD models) **every 25 hours** of operation - engine PTO drive, jackshaft drive, hydrostatic ground drive, GHS blower drive, and engine fan belt. If the belts show **signs of cracking or deteriorating**, the belts should be **replaced**. Refer to **REPLACING/REPAIRING** the **Drive Belts** in the **Service Procedures Section**.

Drive Belts - Model MS

Raise the body and inspect the condition of the three (3) drive belts **after every 25 hours** of operation -- engine, PTO drive, and ground drive. If the belts show **signs of cracking or deteriorating**, the belts should be **replaced**. Refer to **REPLACING/REPAIRING** the **Drive Belts** in the **Service Procedures Section**.

Drive Belts - Model MW

Look under the body and inspect the condition of the two (2) belts **every 25 hours** of operation - engine PTO drive, and ground drive belt. If the belts show **signs of cracking or deteriorating**, the belts should be **replaced**. Refer to **REPLACING/REPAIRING** the **Drive Belts** in the **Service Procedures Section**.

Drive Belts - Model MB

Raise the body and inspect the condition of the two (2) drive belts **after every 25 hours** of operation -- engine/PTO drive and ground drive. If the belts show **signs of cracking or deteriorating**, the belts should be **replaced**. Refer to **REPLACING/REPAIRING** the **Drive Belts** in the **Service Procedures Section**.

Walker

SERVICE INSTRUCTIONS

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Mower Deck Gearbox Oil Seals - All Decks

The mower deck gearbox seals should be inspected **every 25 hours** for evidence of oil leaking; **particularly the lower oil seal on the blade drive gearbox**. This seal is protected by the trash guard on the blade hub and seal protector plate on the housing, but is still vulnerable to seal damage due to operating in an adverse environment. The mower blade must be removed for inspection of the seal, so it is recommended to **inspect the gearbox seals when blades are removed for sharpening**. If an oil leak is noted, the seal should be replaced and the gearbox assembly relubricated. Refer to **LUBRICATION** for **Mower Deck Gearbox Lubrication** in the **Lubrication Section**.

Fuel Lines and Clamps - All Models

Every year, inspect the fuel supply line from the tank to engine for deterioration or damage. Also, inspect the fuel line **clamps for tightness**. Good preventive maintenance calls for complete **replacement** of fuel lines and clamps **every two (2) years**.

Model MTEFI, MTLEFI

NOTE: High-pressure fuel line with an SAE R9 rating is required for safe and reliable operation, due to the higher operating pressure of the EFI system. Special Oetiker clamps are used on all fuel line connections to prevent tampering and safety hazards with the high fuel pressure. The old clamp must be cut to open a connection, so replacement is necessary each time.



CAUTION

Standard fuel line is not compatible and must not be used! Use only Oetiker clamps on fuel line connections.

Model MD

NOTE: This procedure is of special importance for the diesel engine due to poor performance when air is injected with the fuel.

Radiator Hoses and Clamps - MD, MTL

Inspect the radiator hoses **every 200 hours** for deterioration or damage. Also check the tightness of the hose clamps. Good preventive maintenance calls for complete **replacement** of the radiator hoses and clamps **every two (2) years**.

Engine Valve Clearance - Model MD

Check and adjust the Kubota engine valve clearance **every 800 hours**. Refer to the Kubota Engine Owner's Manual and Workshop Manual for specifications and procedure to check the valve clearance. For engine servicing, contact an authorized Kubota engine dealer or a trained engine technician.

IMPORTANT: Always use the proper engine service manual when working on the engine. Improper engine maintenance or adjustments will adversely affect engine operation, performance, and durability and may **VOID** the warranty.

Engine Valve Clearance - Model MC

Yearly or every 500 hours, check and adjust the Kohler engine valve clearance. Refer to the Kohler Service Manual for specifications and procedure to check the valve clearance or contact an authorized Kohler engine dealer to perform this service.

Fuel Injection Nozzle Pressure - Model MD

Check and adjust the Kubota diesel engine fuel injection nozzle pressure **yearly or every 1000 hours** (or in case of low power). Refer to the Kubota Workshop Manual for specifications and procedures to check nozzle pressure. For engine servicing, contact an authorized Kubota engine dealer or a trained engine technician.

IMPORTANT: Always use the proper engine service manual when working on the engine. Improper engine maintenance or adjustments will adversely affect engine operation, performance, durability, and may **VOID** the warranty.



WARNING

The fuel oil injection system operates under high pressure and can penetrate the skin and result in serious injury. Unqualified persons should not remove or attempt to adjust a pump injector, nozzle, or any part of the fuel injection system.

Engine Starter - Model MC, MT, MTL, MTEFI

Yearly or every 500 hours disassemble and clean the solenoid shift starter. Refer to the Kohler Service Manual for this procedure or contact an authorized Kohler engine dealer to perform this service.

Walker

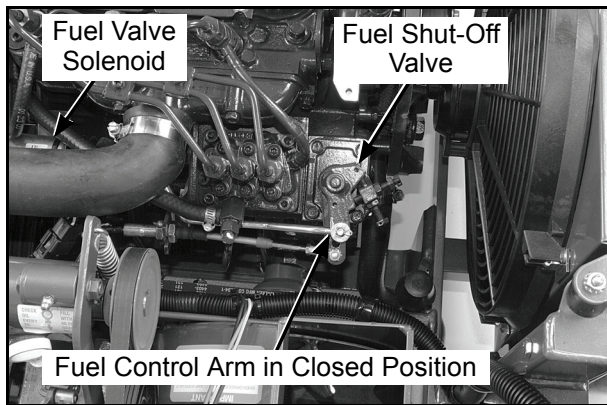
SERVICE INSTRUCTIONS

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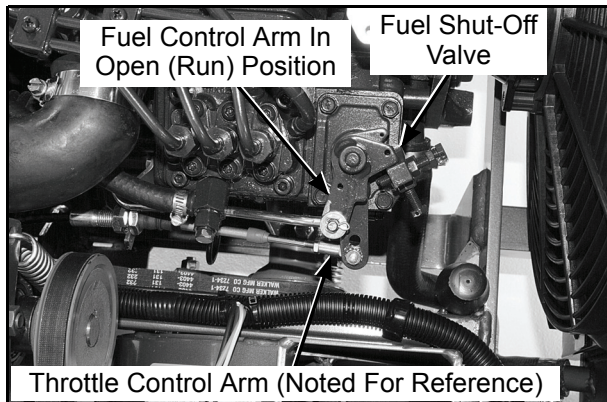
Fuel Valve Solenoid - Model MD

The starting and stopping of the diesel engine is controlled by the fuel shut-off valve. If the engine cranks, but does not start or the engine does not stop when the ignition switch is turned **OFF**, check operation of the fuel valve.

Raise the mower body and locate the fuel valve on the engine. The valve is operated by an electric solenoid which is **controlled by the ignition switch**. The valve is open when the ignition key is moved to the **START** or **RUN** position, and the valve is closed when the ignition key is moved to the **OFF** position.



Fuel Valve Closed (Engine OFF Position)



**Fuel Valve Open
(Engine START and RUN Position)**

If the fuel valve solenoid is not operating properly, the problem may be isolated by **first** checking the operation of the solenoid as follows:

1. Disconnect the fuel valve solenoid wire plug from the wire harness.
2. Make jumper wire connections from the solenoid to the battery:
 - a. Red wire to positive terminal (+), black wire to ground (-).
 - b. Touch white wire to the positive terminal (+) and the solenoid should pull closed (open the fuel valve).
 - c. Remove the white wire and the solenoid should **hold** the fuel valve open.
 - d. Remove the red wire and the solenoid should open (close the fuel valve).

Replace the solenoid if it does not operate properly by the above test. If it does operate, the problem is in the electrical system and can be checked using the wiring diagram. Refer to **SCHEMATICS** for the **Wiring Diagram** in the **Electrical Systems Section**.

Walker

SERVICE INSTRUCTIONS

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Blade Brake Action - All Models



WARNING

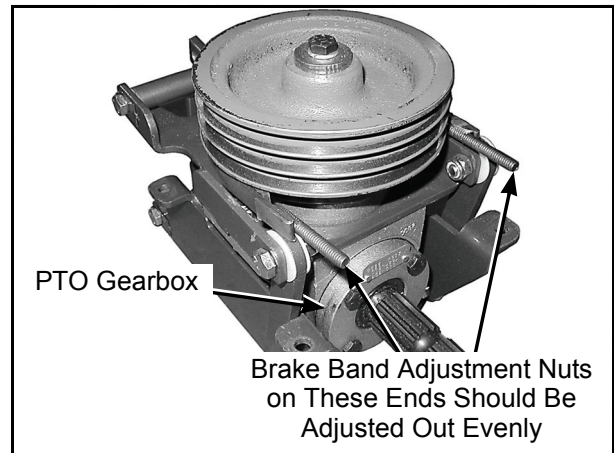
It is important to check and maintain blade brake action for safe operation of the machine.

Model MS, MW, MC, MD, MT

Check the function of the cutter blade brake (and blower brake on GHS models) by engaging the blade clutch (PTO), operating the engine at full throttle, then disengaging the clutch and measuring how quickly the blades stop. Watch the rotation of the blade drive shaft and blower pulley as a visual indication that movement has stopped. If the brake is **working properly, all rotation will stop five (5) seconds after disengagement** of the clutch. If the brake system malfunctions - blades do not stop in five (5) seconds - adjust or repair the brake before operating the mower. Refer to **ADJUSTMENTS of Blade Clutch (PTO)** in the **Service Procedures Section**.

Model MB

Check the function of the cutter blade brake by engaging the blade clutch (PTO), operating the engine at full throttle, then disengaging the clutch and measuring how quickly the blades stop. Watch the rotation of the blade drive shaft as a visual indication that movement has stopped. If the brake is **working properly, all rotation will stop five (5) seconds after disengagement** of the clutch. If the brake system malfunctions - blades do not stop in five (5) seconds - replace the brake before operating the mower.



Brake Band - Model MW
(View with PTO Gearbox Assembly Removed)

PTO U-Joints - Model MT

The PTO U-joints should be inspected **yearly** for looseness and wear. If either is noticed, the respective shaft or tube should be replaced. A worn U-joint can cause vibration and extensive damage to the PTO and deck gearboxes.

Walker

SERVICE INSTRUCTIONS

July 2006

CLEANING

Engine Air Cleaner System - Model MS, MC, MD, MT

Model MC, MD, MT

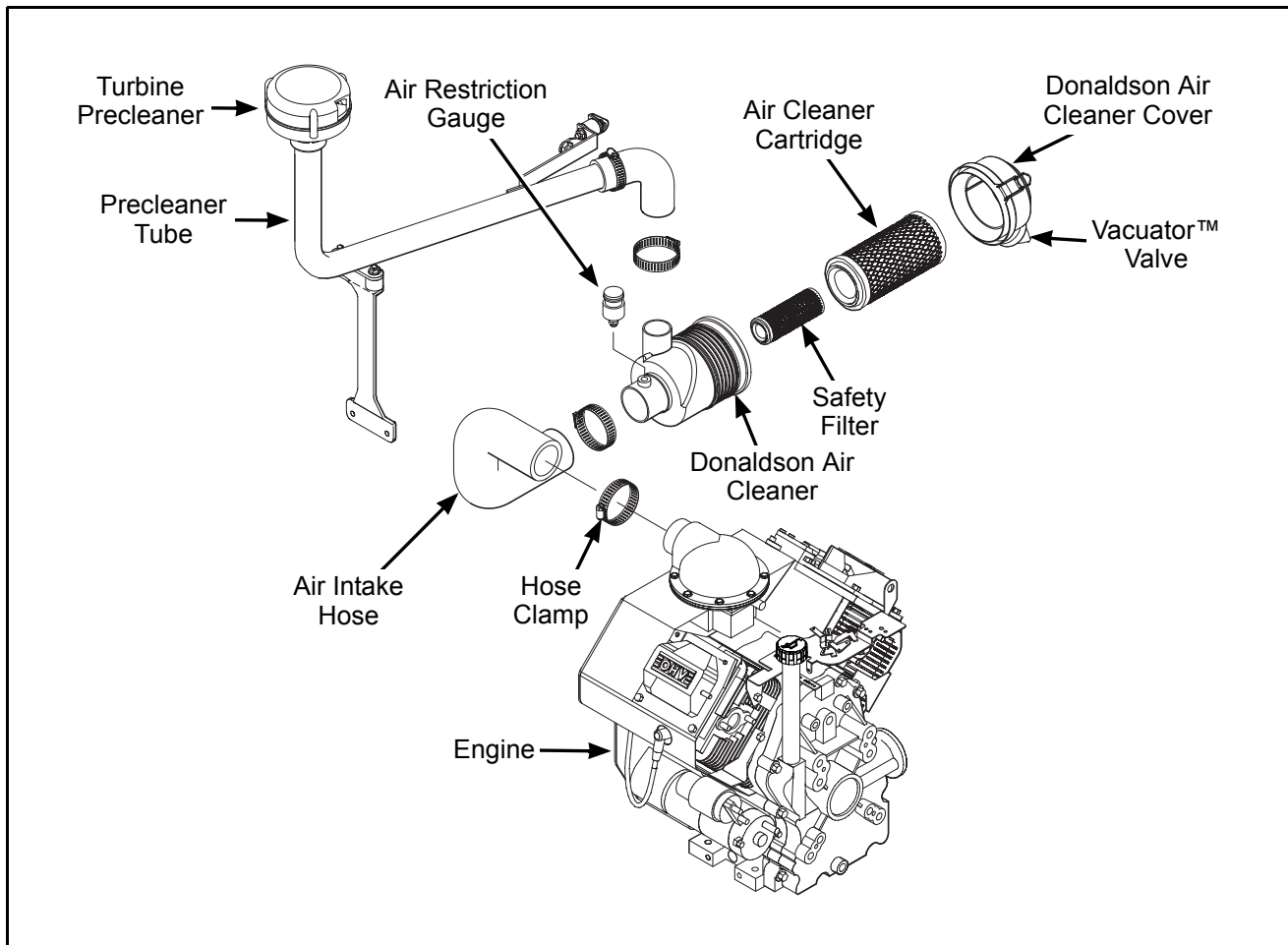
There are two main components in the engine air cleaner system: a turbine precleaner and a Donaldson Radialseal™ air cleaner. Each component is checked, cleaned and maintained on a different schedule based on the filtering action required. Each component is serviced as follows:

Turbine Precleaner - Model MC, MD, MT

The turbine precleaner is mounted on a remote air intake tube connected to the Donaldson air cleaner. A spinning fan driven by the intake airflow separates dust from the air, giving the initial stage of air cleaning. Dust particles are exhausted through a single small vent in the side of the housing. Since no dust is trapped, the precleaner operates without cleaning. The only maintenance required is to check the operation of the internal fan **every 100 hours**. Verify operation:

1. Look into the exhaust vent while shining a light into the intake.
2. Start the engine and watch the fan begin to spin as the throttle is advanced.

If the fan is not spinning, service or replace the pre-cleaner as required.

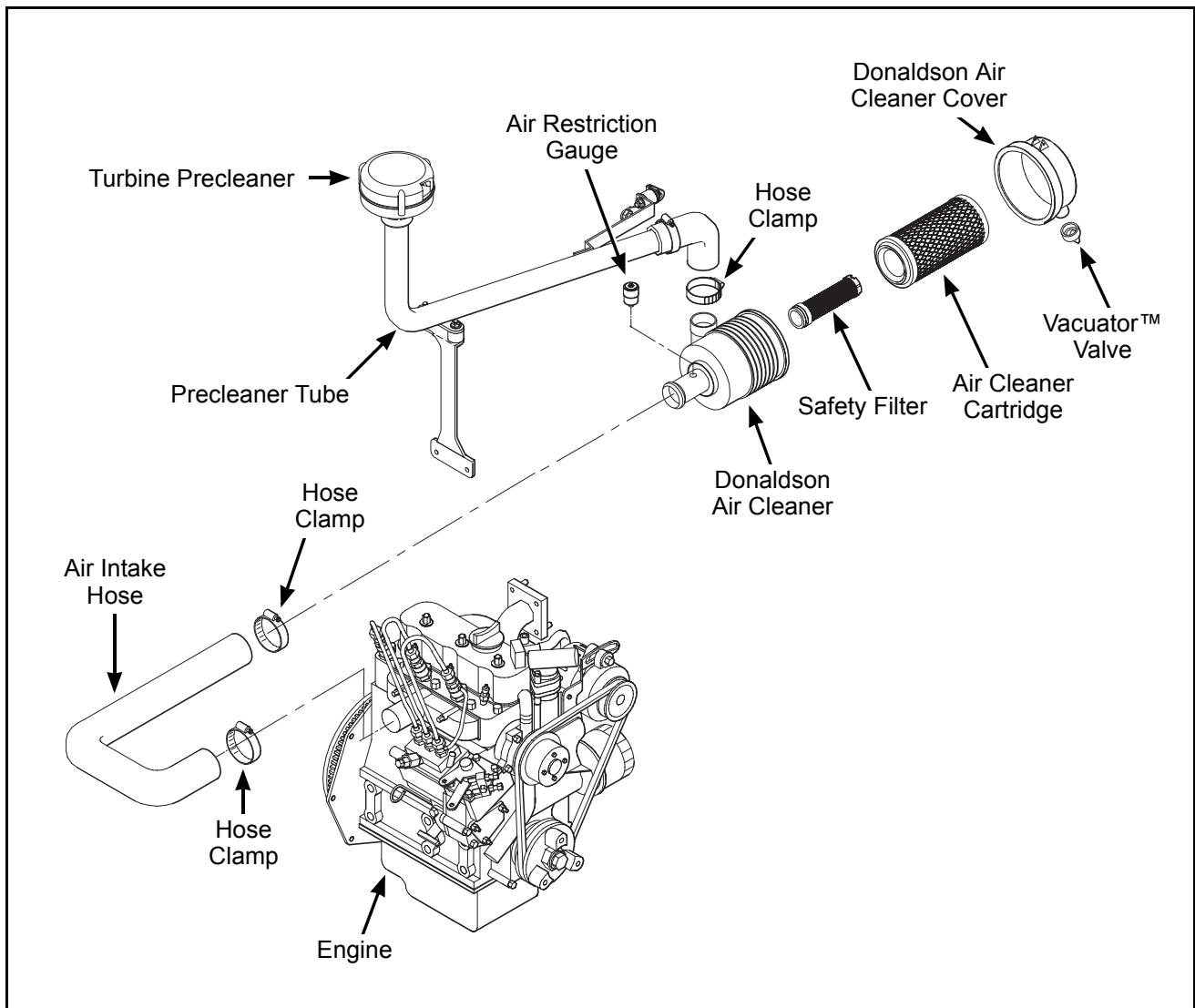


Engine Air Cleaner System Components - Model MT, MTL, MTEFI

Walker

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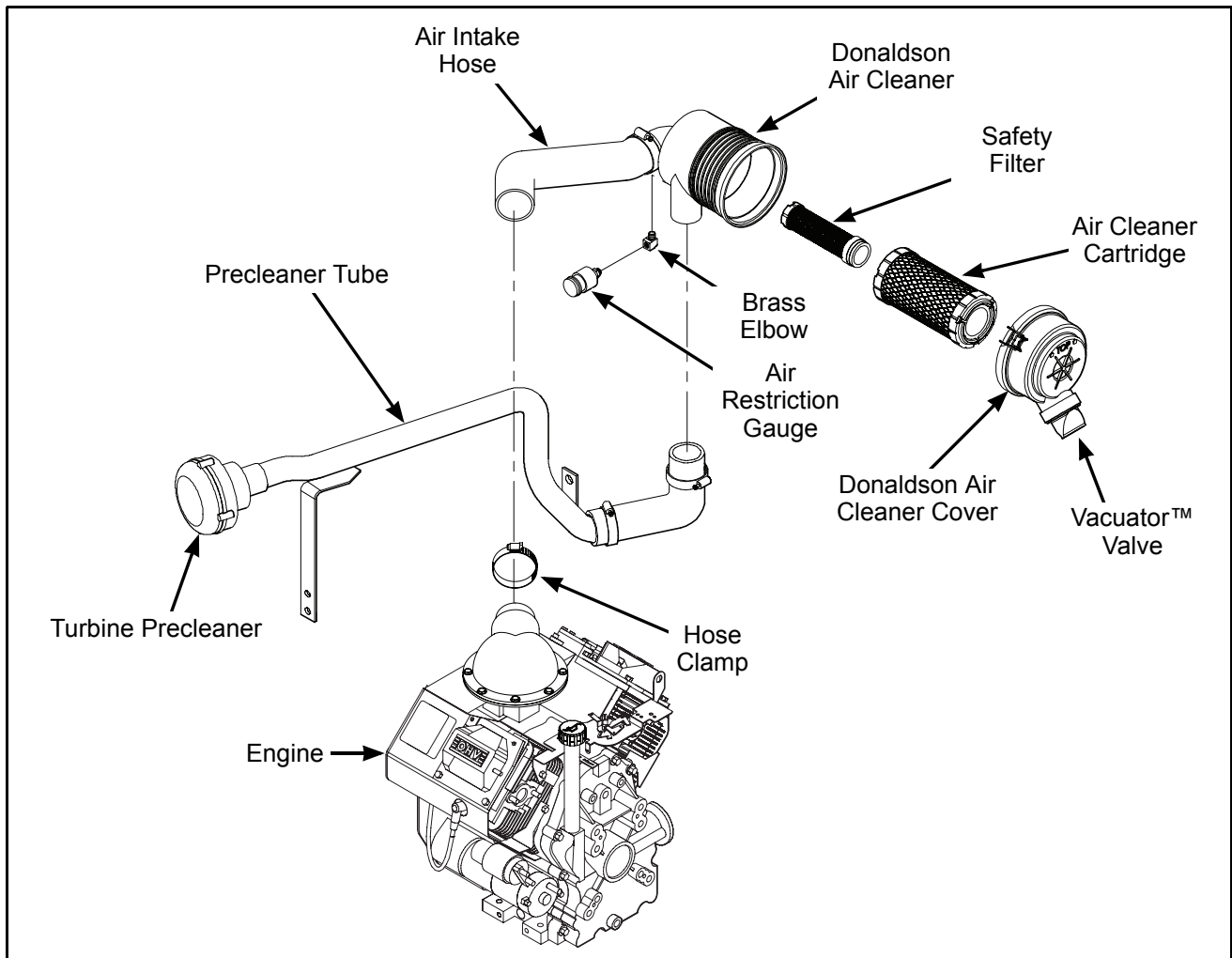


Engine Air Cleaner System Components - Model MD

Walker

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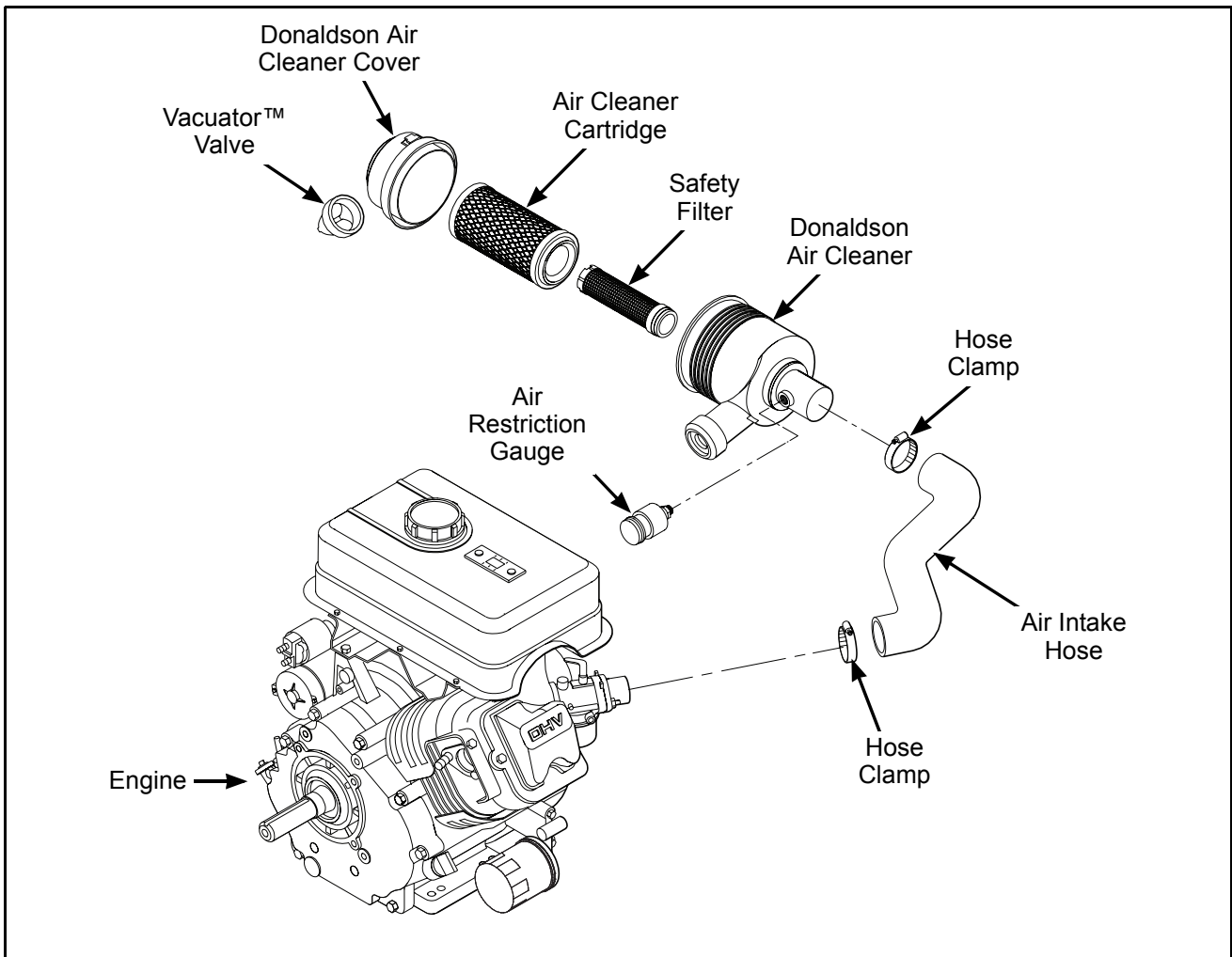


Engine Air Cleaner System Components - Model MC

Walker

SERVICE INSTRUCTIONS

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Engine Air Cleaner System Components - Model MS

Walker

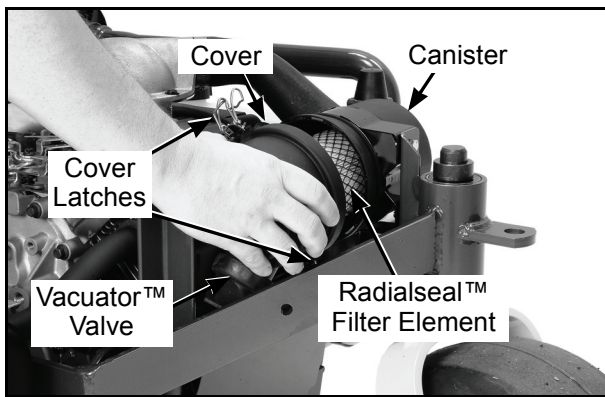
SERVICE INSTRUCTIONS

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Donaldson Radialseal™ Air Cleaner - Model MS, MC, MD, MT, MTL

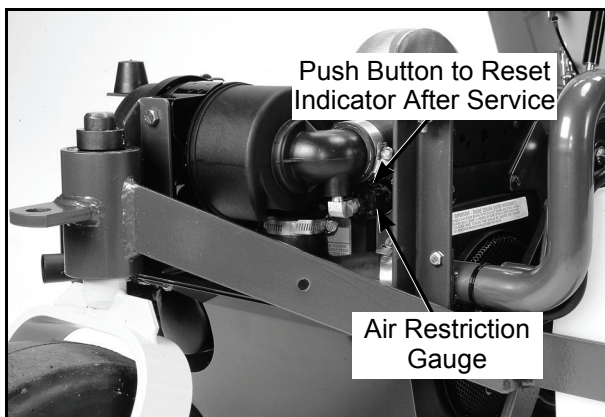
A remote mounted Donaldson Radialseal™ air cleaner provides the air filtering function. The paper filter element slides over an outlet tube inside the air cleaner canister with **radial** sealing action, eliminating the possibility of dust leaks due to improper filter installation. Intake design, internal baffling, and a Vacuator™ valve provide dust separation and automatic precleaning action. Daily or frequent servicing of the air cleaner is **not required**. Use the air restriction gauge on the air cleaner outlet to indicate when the air filter needs servicing - a red flag will appear when the filter is overly restricting airflow into the engine.

IMPORTANT: Use **only** Donaldson air filter elements for replacement (Donaldson P822686 or Walker 5090-1). Aftermarket filters may not seal properly or filter efficiently.



**Air Cleaner Components
(shown with cover being removed)**

IMPORTANT: The Donaldson air cleaner uses a dry paper-type air filter element. **NEVER** apply oil to the paper element.



**Air Restriction Gauge Location
(Model MC shown)**

Inspect the paper element **after every 100 hours** of service and **replace** the element and safety filter **yearly** (or when dirty or damaged). More frequent replacement may be required when operating in extremely dusty conditions as indicated by the air restriction gauge. Service the air cleaner as follows:

1. Release the top and bottom cover latches and remove the air cleaner cover. Wash the cover and Vacuator™ valve. Check that these components are in good condition. The Vacuator™ valve is subject to wear and deterioration and should be replaced **yearly** or when damaged. The lips of the valve should close and fit together; any cracks, deformation, or wear in the valve is cause for replacement.
2. Remove the filter element by pulling it out of the canister. There will be some initial resistance as the filter seal breaks loose and slides off of the outlet tube. **Gently** move the end of the filter up and down and side to side or twist to loosen the seal. Use gentle action to minimize the amount of dust dislodged as the filter is removed.
3. Replace the filter element.
NOTE: Washing the element in water or cleaning solution is **not recommended**. Do not try to clean the element with compressed air.
4. Use a bright light inside the element to inspect for damage. Check the element very carefully for **pin holes or other damage** that will allow dirt to leak through the paper media. Replace element if necessary.
5. Without removing, visually inspect the condition of the safety filter for damage or holes. The safety filter should only be removed for yearly replacement (or when dirty or damaged).
6. Check the condition and resilience of the radial sealing surface (inside of the open end) of the filter. Replace the filter if any cracks, tears, or other damage to the sealing surface are noted.

Walker

SERVICE INSTRUCTIONS

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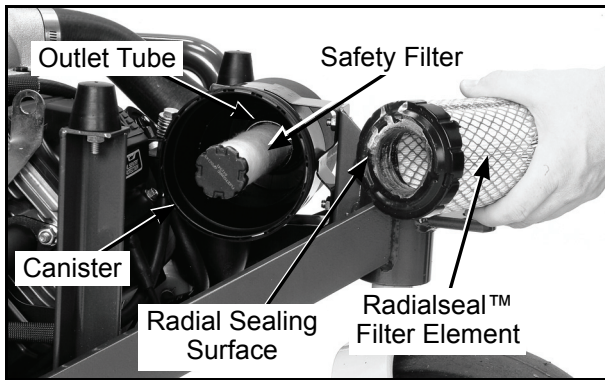
7. Use a clean, damp cloth and wipe the interior of the air cleaner canister clean. Use special care to clean **both the inside and outside** surfaces of the outlet tube.

IMPORTANT: Any dust left on the inside of the outlet tube will go into the engine and cause wear.

8. Check the outside surface of the outlet tube for smoothness and cleanness (this is the sealing surface).
9. Insert and seat the safety filter and Radialseal™ element carefully into the canister, applying pressure at the outer rim of the filter; not at the flexible center. Make sure the filter element is completely in place before installing the cover.

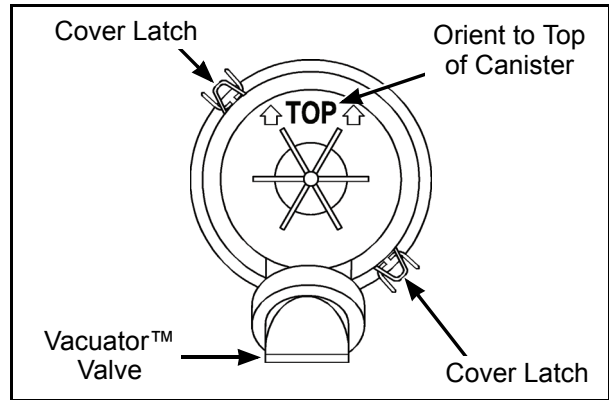
IMPORTANT: DO NOT use the cover latches to force the filter into the canister -- the cover should fit on with **no extra force**.

NOTE: DO NOT use petroleum based lubricants on the sealing surfaces of the filter; use talcum powder or dry silicone lubricants if required for filter installation.



Air Filter Element Replacement

10. Install the cover with the word "TOP" properly oriented to the top of the canister. Give the cover a slight twist as it reaches the canister to make sure the tab inside the cover goes into a slot, otherwise the cover will not fit properly. Make sure both the top and bottom cover latches are securing the cover in place.

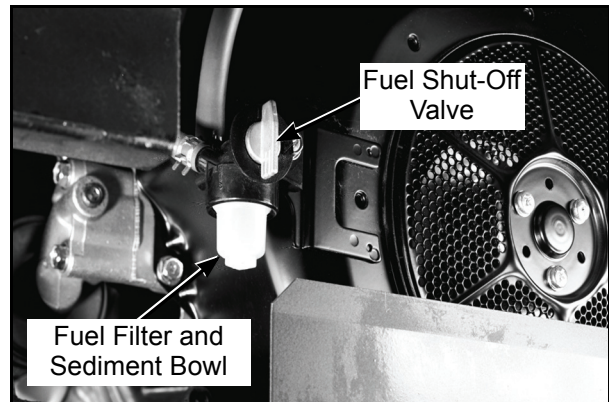


Proper Orientation of Air Cleaner Cover

11. Check the air intake hose for cuts, nicks, cracks, etc., and the hose clamps for tightness.
12. Reset the air restriction indicator (press button on the end of the indicator).

Fuel Filter - Model MS

Clean and inspect the fuel filter screen **after every 50 hours** of service. Replace if damaged. Service the fuel filter as follows:



Fuel Filter and Fuel Shut-off Valve Location

IMPORTANT: Service the fuel filter screen only in a clean area where the fuel filter components will not be contaminated by any dust and dirt.

Walker

SERVICE INSTRUCTIONS

July 2006

DANGER

Gasoline is extremely flammable and can be highly explosive. To minimize danger:

- Use an approved fuel container for gasoline.
- **DO NOT** allow open flames or sparks while performing maintenance or refueling; **DO NOT** smoke while working with fuel.
- Wipe up spilled gasoline immediately and completely.

1. Close the fuel shut-off valve.
2. Loosen sediment bowl and remove filter screen and gasket. Replace filter screen, if damaged (use only Kawasaki replacement filter #49019-2095).
3. Remove any sediment, wipe clean and reinstall assembly.
4. Open the fuel shut-off valve.

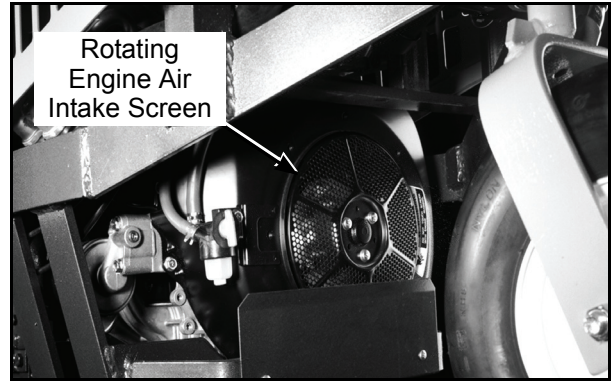
Engine Cooling System - Model MS, MC, MT, MTEFI

Air Intake System

To prevent engine overheating and possible engine damage, clean grass clippings, chaff, and dirt from the rotating engine air intake screen **after every 8 hours of operation**. In certain mowing conditions (dry grass, leaves, tree "cotton", etc.), it may be necessary to check and clean the screen several times each day to prevent engine overheating.

CAUTION

Operating the engine with a blocked air intake screen, dirty or plugged cooling fins, and/or cooling shrouds removed will cause engine damage from overheating.



Rotating
Engine Air
Intake Screen

Engine Air Intake Screen - Model MS

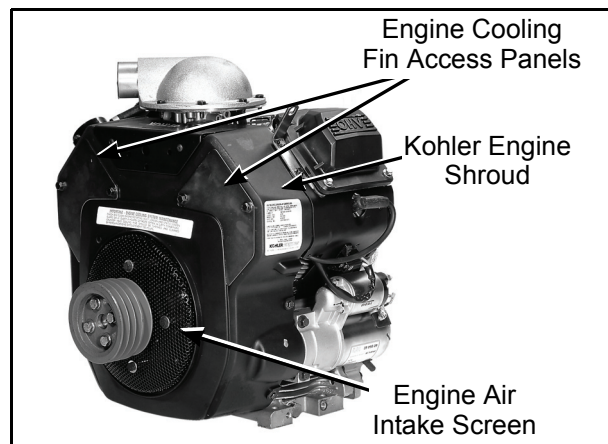
Cylinder Head Cooling Fins - Model MC, MT, MTEFI

It is essential for performance and longevity of the air-cooled engine to keep the cylinder head cooling fins clean and free of obstruction. After **every 8 hours** of operation, check the performance of the cooling system by starting the engine, holding a hand adjacent to the cylinder head, and feeling the cooling airflow. If there is little or no airflow, clean the cooling fins as described.

DANGER

Make sure to keep hands clear of exhaust pipe, muffler, and moving parts when checking airflow.

Every 100 hours, inspect and clean the cooling fins (more often when operating in extremely dusty, dirty conditions). Remove the two (2) cooling fin access panels in the engine shroud and clean the cooling fins and external surfaces using compressed air. Make sure to reinstall the access panels before operating the engine.



Engine Cooling
Fin Access Panels

Kohler Engine
Shroud

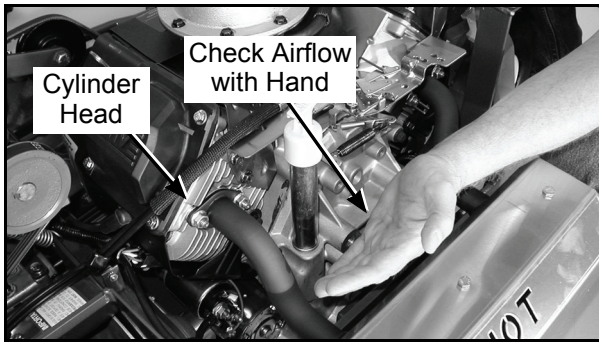
Engine Air
Intake Screen

Engine Air Intake Screen and Cooling Fin Access Panels - Model MC, MT, MTEFI (Model MC shown)

Walker

SERVICE INSTRUCTIONS

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Cooling System Airflow

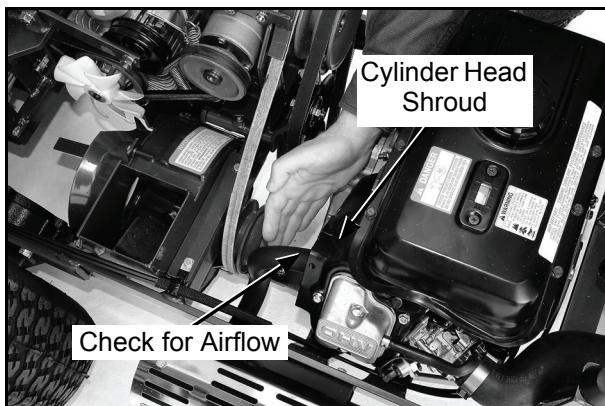
Cylinder Head Cooling Fins - Model MS

It is essential for performance and longevity of the air-cooled engine to keep the cylinder head cooling fins clean and free of obstruction. **After every 8 hours** of operation, check the performance of the cooling system by starting the engine, holding a hand adjacent to the cylinder head, and feeling the cooling airflow. If there is little or no airflow, clean the cooling fins as follows:

 **DANGER**

Make sure to keep hands clear of exhaust pipe, muffler, and moving parts when checking airflow.

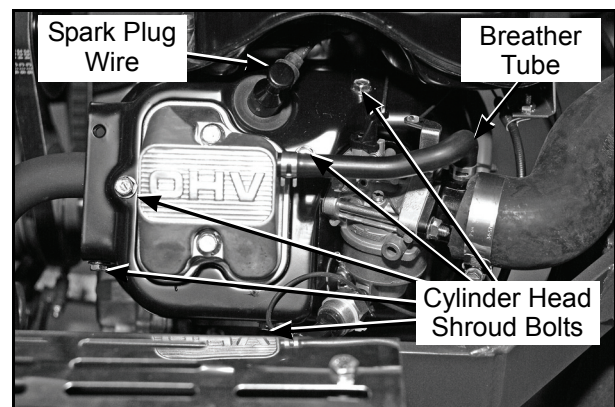
NOTE: The planned maintenance schedule calls for cleaning the cylinder head cooling fins **yearly or every 300 hours** as a minimum.



Cooling System Airflow

1. Inspect accessible cooling fins and clean with compressed air as needed. If the buildup is excessive, refer to step 2.

2. Remove the spark plug wire and disconnect the breather tube on the valve cover. **Do not** disconnect the breather tube from the carburetor side. Remove the cylinder head shroud by removing the five (5) bolts, as shown in the **Inspect and Clean Cylinder Head Cooling Fins** photo. Cover the breather tube end and spark plug boot before cleaning out the cooling fins. Clean the cooling fins by blowing with compressed air. If the buildup is excessive, use a piece of wire to probe into the fins for cleaning.
3. Reinstall the shrouds by reversing the preceding steps. Start the engine and confirm the cooling airflow.



Inspect and Clean Cylinder Head Cooling Fins - Model MS (viewed from left side of tractor)

Engine Cooling System - Model MD, MTL

Radiator Screen and Cooling Fins

To prevent the engine from overheating and possible engine damage, clean grass clippings, chaff, and dirt from the fine mesh radiator intake screen **daily**. In certain mowing conditions (dry grass, leaves, tree "cotton", etc.), it may be necessary to check and clean the screen several times during use to prevent engine overheating.

1. Remove the screen. To clean the screen, wash with soapy water or blow out with compressed air.
2. Inspect the radiator cooling fins for material lodged in this area which would restrict cooling airflow. Use pressurized air or water to clean. **DO NOT use any tool, like a screwdriver or knife**, to clean material out of the fins as this may damage the cooling fins. **DO NOT** use cold water on a hot radiator.

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NOTE: Directing pressurized air or water from the fan side of the radiator outward is recommended to dislodge material packed on the outside of the cooling fins. **DO NOT** use cold water on a hot radiator.



WARNING

Radiator and engine parts can become extremely hot during operation. Wear gloves and avoid touching hot parts while cleaning the radiator screen and cleaning debris away from the engine and cooling system.

Flushing Radiator and Changing Coolant

Change engine coolant **every year**. Drain the coolant from the engine and radiator:

1. Remove the radiator cap.
2. Open the drain cocks on the engine block and radiator (see the Kohler or Kubota Owner's Manual for location of the drain cocks). Also, drain the coolant recovery tank.
3. If there is any **indication of deposits** or scaling inside the radiator, use a commercial scale remover and **flush the cooling system** thoroughly before adding fresh coolant.

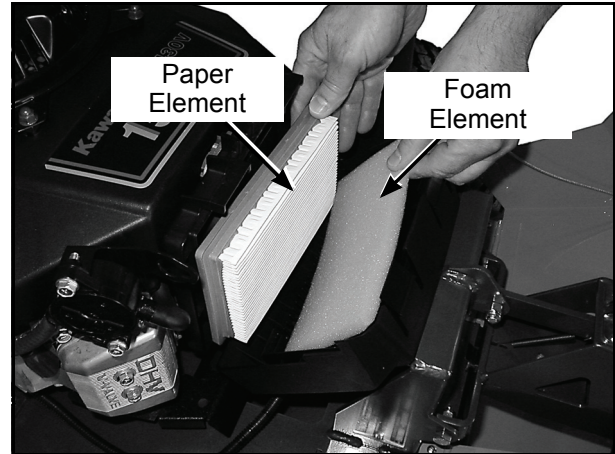
Use a pre-mixed 50/50 solution of antifreeze (ethylene glycol) and distilled water to refill the cooling system.

IMPORTANT: The solution of antifreeze and water must be thoroughly pre-mixed before putting it in the engine. Adding pure antifreeze into the radiator may cause damage to the engine from overheating.

IMPORTANT: Maintain **proper coolant level** in the radiator and coolant recovery tank. The coolant level should be maintained between **FULL** and **LOW** marks on the coolant recovery tank. **Recheck** the coolant level after the first time the engine has been operated after filling the coolant system (it would be normal to add a little coolant after initial operation).

Engine Air Cleaner System - Model MW

There are two components in the engine air cleaner system: a foam prefilter element and a paper element. Each component is checked, cleaned and maintained on a different schedule based on the filtering action required. Each component is serviced as follows:



Engine Air Cleaner Foam and Paper Element

Foam Precleaner Element

Clean and inspect the foam element after every 25 hours of service and replace the element yearly (or when dirty or damaged). Wash the element in detergent and water; and dry it thoroughly. More frequent cleaning may be required when operating in extremely dusty conditions.

Paper Precleaner Element

Inspect the paper element **after every 50 hours** of service and **replace** the element **every 200 hours** (or when dirty or damaged). More frequent replacement may be required when operating in extremely dusty conditions.

Be careful to reinstall the foam element and the paper element into the air cleaner case. Carefully reinstall the air cleaner cover into the air cleaner body by putting the hooks on the bottom of the air cleaner cover into the air cleaner body bottom.

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Engine Cooling System - Model MW

Air Intake Screen

Before each use, check that the air intake (rotary) screen is free from grass and debris and clean if necessary.

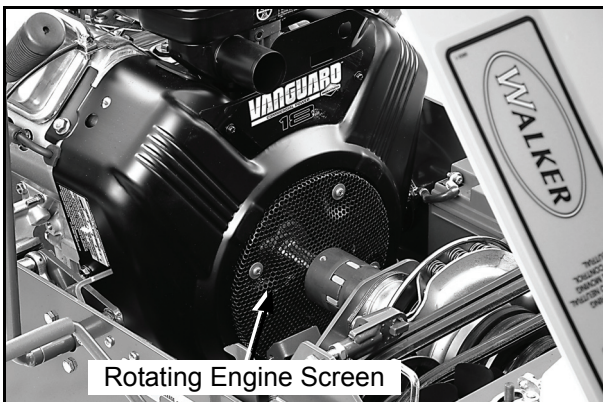
Engine Cooling Fins

Every 100 hours, check and clean the cooling fins and inside of engine shrouds to remove grass, chaff or dirt clogging the cooling system and causing overheating. When cleaning, remove the recoil starter and the fan housing.

Engine Air Cooling System - Model MB

To prevent engine overheating and possible engine damage, clean grass clippings, chaff and dirt from the rotating engine air intake screen every 8 hours of operation. In certain mowing conditions (dry grass, leaves, tree "cotton", etc.) it may be necessary to check and clean this area several times each day to prevent engine overheating. Also, visually check inside cylinder head shroud and between cylinder head fins for material packed in this area which would prevent cooling airflow; remove shroud and clean as required.

IMPORTANT: Yearly or every 100 hours, remove engine cooling shroud and clean cylinder head cooling fins to prevent overheating. Make sure cooling shroud is reinstalled properly.



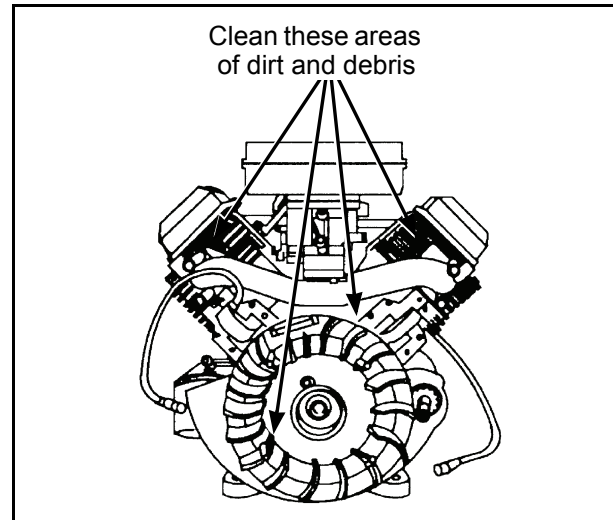
Rotating Engine Screen

Keep Engine Screen Clean



CAUTION

Operating the engine with a blocked air intake screen, dirty or plugged cooling fins, and/or cooling shrouds removed will cause engine damage from overheating.



Clean Cooling Fins and Fan

Air Cleaner System - Model MB

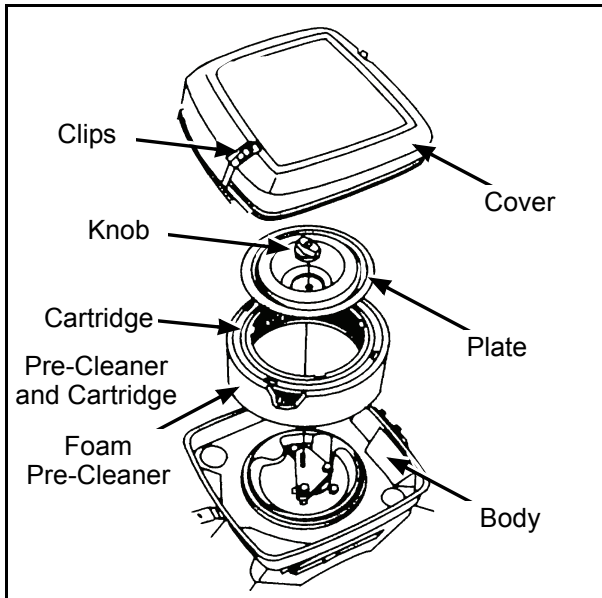
The engine is equipped with a paper air cleaner element with an oiled foam pre-cleaner which surrounds the paper element. Clean and re-oil the foam pre-cleaner every 25 hours; more often in dusty/dirty conditions. Inspect the paper element every 100 hours and replace yearly (or when dirty or damaged). Service the foam pre-cleaner as follows:

- Remove air cleaner cover and remove foam pre-cleaner by sliding it off the paper element.
- Wash foam pre-cleaner in liquid detergent and warm water.
- Wrap foam pre-cleaner in cloth and squeeze dry (do not wring).
- **Saturate foam in clean engine oil.** Squeeze foam to distribute and remove excess oil.
- Remove the paper filter element by pulling it out of the air cleaner body.
- Use a clean, damp cloth and wipe the interior of the air cleaner body clean. Use special care to clean **both the inside and outside** surfaces of the outlet tube.
- Install foam pre-cleaner over dry element and reassemble onto engine. Tighten knob mounting air cleaner element securely, 1/2 to 1 turn after contacting cover, but do not over-tighten. Make sure element is sealed tightly against the element cover and base plate. Reinstall air cleaner cover.

Walker

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Air Cleaner Components

Grass Buildup in Mower Housing - All Models

Model MS, MW, MB, MC, MT

⚠ DANGER

Before raising or removing the mower deck for cleaning, stop the engine, remove the ignition key, and disconnect the spark plug wire(s).

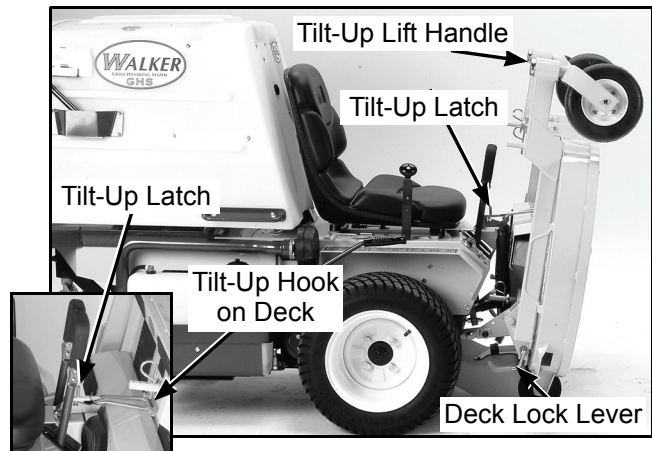
Model MD

⚠ DANGER

Before raising or removing the mower deck for cleaning, stop the engine, remove the ignition key, and disconnect the electrical plug on the fuel shut-off solenoid.

All Models

1. **Raise** the deck lock lever handle on each side of the carrier frame **and pull out** to release carrier frame for tilting action.
2. Using the carrier frame lift handle, raise deck to the **TILT-UP** position and insert the deck hook into the tilt-up latch on the tractor body.



Deck Secured in TILT-UP Position - Model MS, MB, MC, MD, MT (Model MC shown)

⚠ DANGER

Do not operate the mower with deck in tilt-up position. Do not move the tractor with the deck in the tilt-up position.

3. Clean grass buildup underneath the deck using a pressure washer (and scraper if required).

NOTE: If the buildup is severe, it may be easier to clean the deck by removing the deck assembly from the tractor and standing the deck assembly on its "nose".

NOTE: While some degree of material buildup in the mower deck housing can be tolerated, a point is finally reached **where cutting quality deteriorates and clogging begins to occur** because of too much buildup on the baffling and housing.

4. Lower the deck to the normal operating position and re-engage the deck lock levers.

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GHS Blower - Model MS, MC, MD, MT

Normally, the GHS blower operates with no maintenance or cleaning. However, when mowing **grass that is dirty and damp** (especially springtime mowing), a deposit of dirt may accumulate inside the blower housing, causing wear and binding of the blower wheel. When operating in these conditions, **inspect the blower frequently for dirt buildup.**

NOTE: A visual clue of binding of the blower wheel is the blower **blade tips are polished** from rubbing on dirt.

When a dirt deposit is found, use a high pressure washer or water spray to clean the inside of the housing as follows:

Model MS, MC, MT

 **DANGER**

Before attempting to wash the blower, stop the engine, remove the ignition key, and disconnect the spark plug wire(s).

Model MD

 **DANGER**

Before attempting to wash the blower, stop the engine, remove the ignition key, and electrical plug on the fuel shut-off solenoid.

Model MC, MD, MT

1. Remove the GHS blower drive belt tension by depressing the idler pulley on the tightener arm. Roll the belt off the blower pulley. The belt should be clear of the blower pulley, allowing **free movement** of the blower wheel.

Model MS

1. Remove the PTO drive belt from the GHS blower pulley as follows: Move the blade clutch (in direction of engagement) far enough to relax the belt scrubber brake without tightening the PTO drive belt. Roll the belt off of the blower pulley, then move blade clutch to full "engagement" position. Both the drive belt and scrubber brake bar should be clear of blower pulley, allowing **free movement** of the blower wheel.

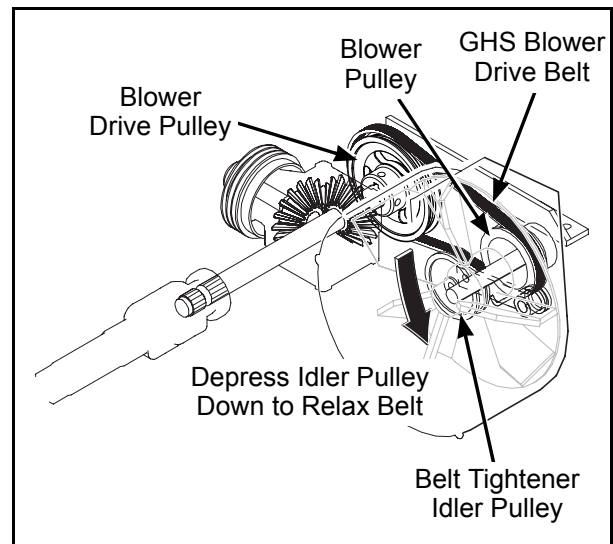
Model MS, MC, MD, MT

IMPORTANT: With the belt removed, the blower wheel **must spin freely**. Any binding or dragging of the wheel is an indication of dirt buildup. This **buildup must be cleaned** to avoid abrasive wear of the blower blades, excessive power loss and eventual loss of blower performance (clogging).

2. Use a pressure washer or water spray, and direct the spray inside the blower housing against the blower blades. Water pressure will cause the blower wheel to begin to spin and the combination of spinning action and water will effectively wash the inside of the housing. Spray may be directed against the blower blades vertically and horizontally to cause rotation in both directions for thorough washing action. **Wash blower until the blower wheel spins freely** in both directions.

Model MC, MD, MT

3. Reinstall the GHS blower drive belt by reversing the removal procedure.



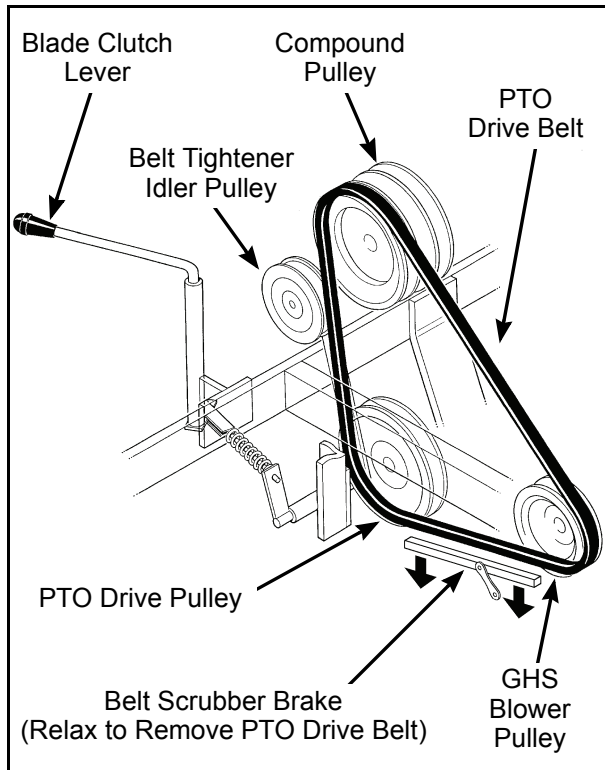
Collapse Blower Belt Tightener to Remove GHS Blower Drive Belt - Model MC, MD, MT

Walker

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Model MS



PTO Drive Belt Removal for Cleaning GHS Blower - Model MS

3. Reinstall the PTO drive belt by reversing the removal procedure.

GHS Exhaust Screen - Model MS, MC, MD, MT

Refer to **Cleaning the GHS Exhaust Screen** in this section.

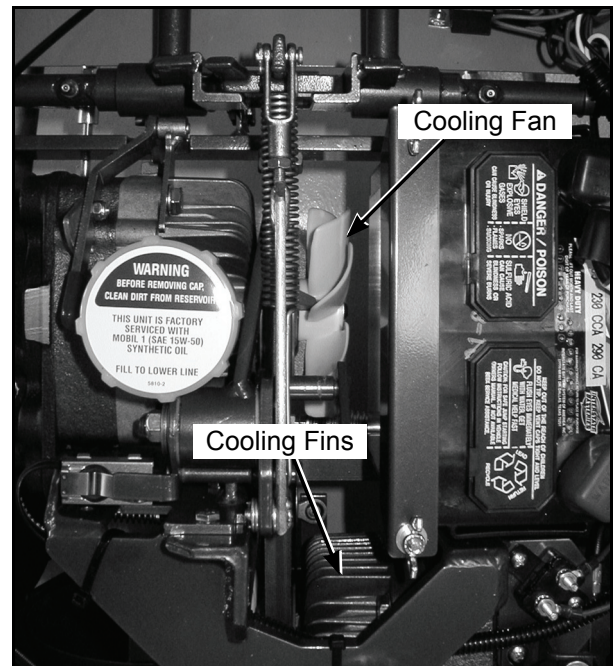
Hydrostatic Transmission Cooling Fins - Model MS, MC, MD, MT

Keeping the cooling fins on the hydrostatic transmissions clean and free of obstruction is **essential to avoid overheating** the transmission fluid and shortening transmission life. The cooling fins should be checked **every 100 hours**; and cleaned if necessary.

To clean the fins, use compressed air and/or a pressure washer. The cooling fins extend all the way around the housing -- the fins underneath need to be clean as well as the more visible fins above. Also, pay close attention to the area under the drive pulley.

IMPORTANT: In case an oil leak develops on the input shaft, the cooling fan blowing dusty air and oil on the transmission will **quickly** pack the cooling fins with **oily dirt**. If this condition occurs, replace the seal immediately to avoid overheating and damaging the transmission. The input shaft assembly and seal are easily replaced without removing the transmission from the machine.

An additional procedure in maintaining transmission cooling is to inspect the cooling fans. Replace the fan(s) if blades are missing or damaged.



Hydrostatic Transmission Cooling Fins

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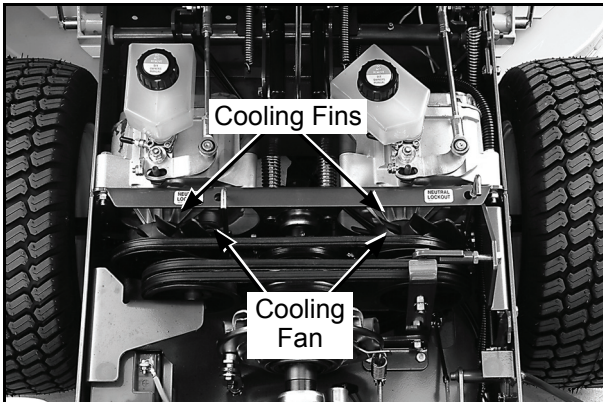
Transaxle Cooling Fins - Model MB

Keeping the cooling fins on the transaxles clean and free of obstruction is **essential to avoid overheating** the transmission fluid and shortening transmission life. The cooling fins should be checked **every 100 hours**; and cleaned if necessary.

To clean the fins, use compressed air and/or a pressure washer. The cooling fins extend all the way around the housing -- the fins underneath need to be clean as well as the more visible fins above. Also, pay close attention to the area under the drive pulley.

IMPORTANT: In case an oil leak develops on the input shaft, the cooling fan blowing dusty air and oil on the transmission will **quickly** pack the cooling fins with **oily dirt**. If this condition occurs, contact your dealer immediately to avoid overheating and damaging the transaxle.

An additional procedure in maintaining transaxle cooling is to inspect the cooling fans. Replace the fan(s) if blades are missing or damaged.



Transaxle Cooling Fins

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SECTION 4

Service Procedures

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REPLACING/REPAIRING - ALL MODELS

Model MS, MW, MB, MC, MT



DANGER

To prevent accidental starting of the engine when replacing parts or repairing the machine, remove the key from the ignition switch and disconnect the spark plug wire(s).

Model MD



DANGER

To prevent accidental starting of the engine when replacing parts or repairing the machine, remove the key from the ignition switch and disconnect the electrical plug on the fuel shut-off solenoid.

All Models

IMPORTANT: ALWAYS use genuine factory replacement parts. Substitute parts **CAN** result in product malfunction and possible injury to the operator and/or others.

Drive Belts - Model MC, MT, MTL

There are **four (4) individual belts** on GHS models or **three (3)** belts on SD models:

- Engine PTO Drive Belt (3 Groove Power Band)
- Jackshaft Drive Belt
- GHS Blower Drive Belt (GHS Model Only)
- Hydrostatic Ground Drive Belt

Drive Belts - Model MD

There are **five (5) individual belts** on GHS models or **four (4)** belts on SD models:

- Engine PTO Drive Belt (3 Groove Power Band)
- Jackshaft Drive Belt
- GHS Blower Drive Belt (GHS Model Only)
- Hydrostatic Ground Drive Belt
- Engine Fan Belt

Drive Belts - Model MS

There are **three (3) individual belts** on the machine:

- Engine Belt
- PTO Drive Belt
- Ground Drive Belt

Drive Belts - Model MW

There are **two (2) individual belts**:

- Ground Drive Belt
- PTO Drive Belt (3 Groove Power Band)

Drive Belts - Model MB

There are **three (3) individual belts** on the machine:

- Engine/PTO Belt (matched pair)
- Ground Drive Belt

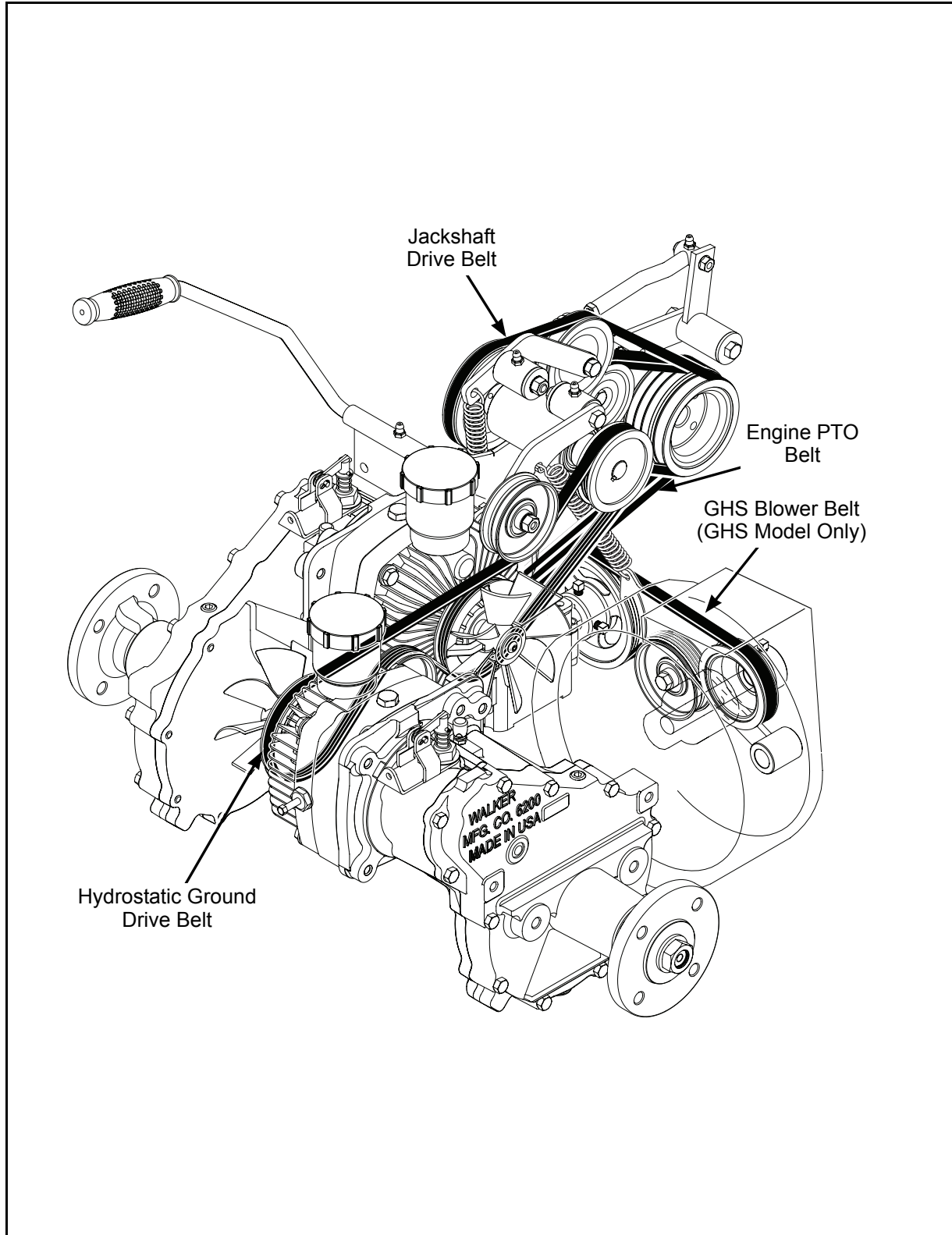
All Models

The belts may be removed and replaced using the **procedures described on the following pages.**

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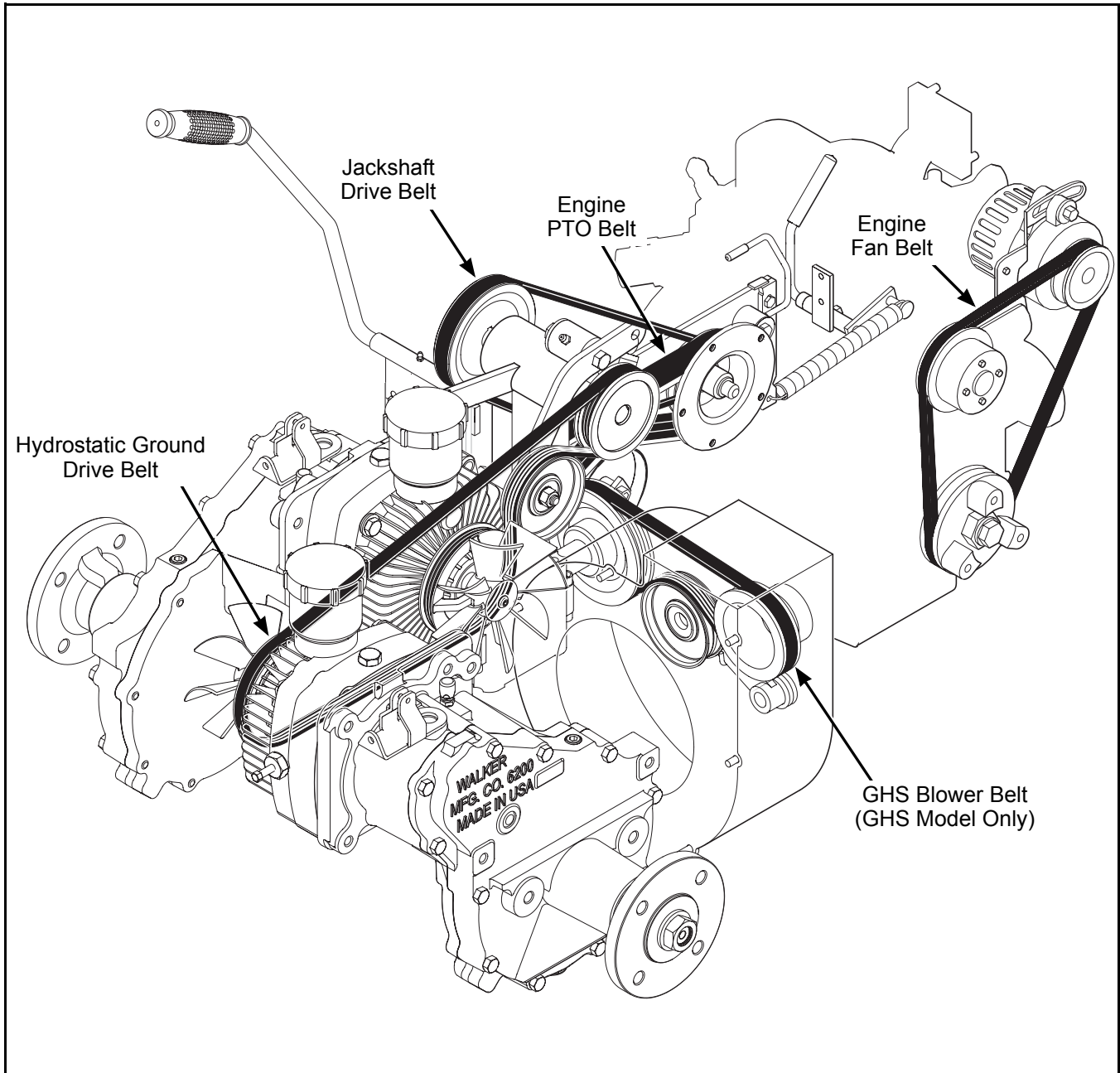


Belt Locations - Model MC, MT, MTL

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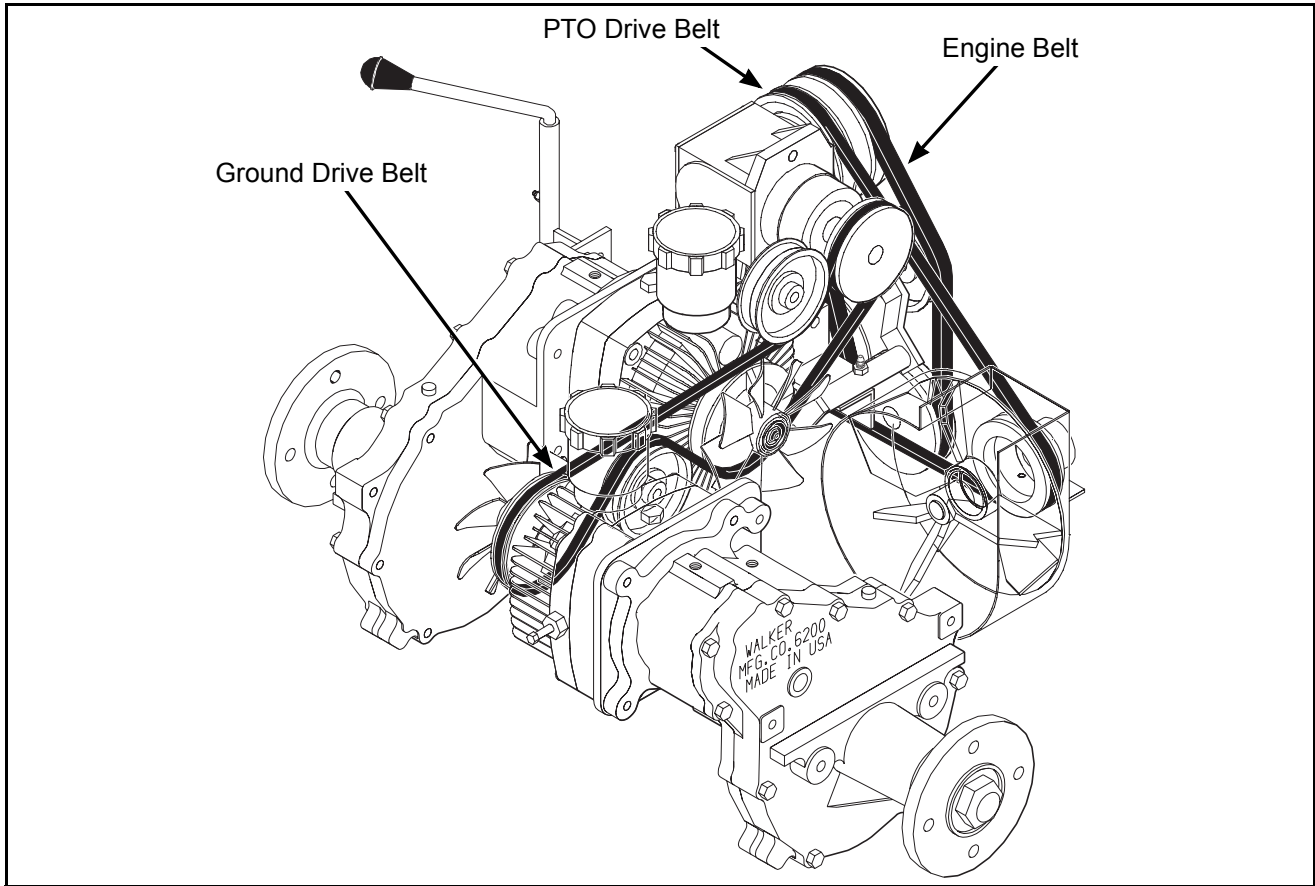


Belt Locations - Model MD

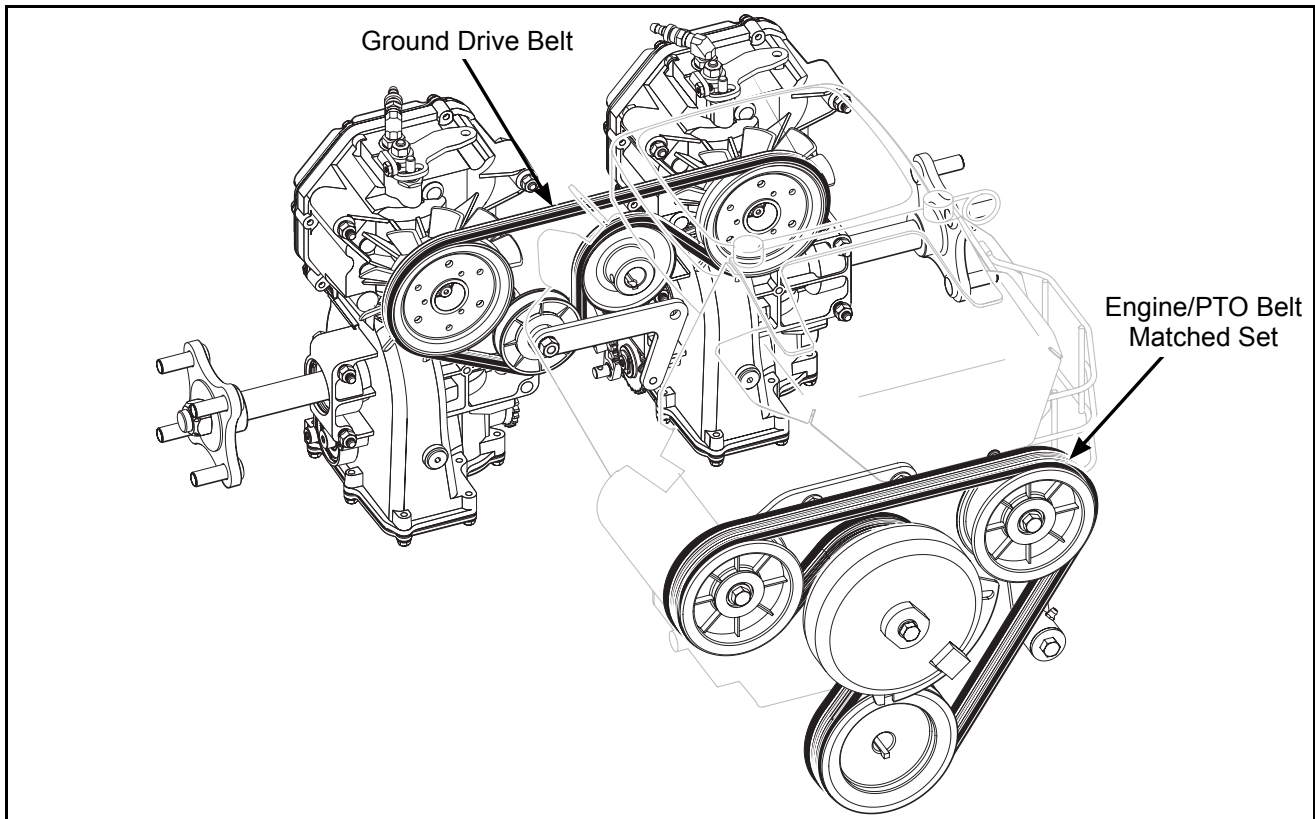
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Belt Locations - Model MS



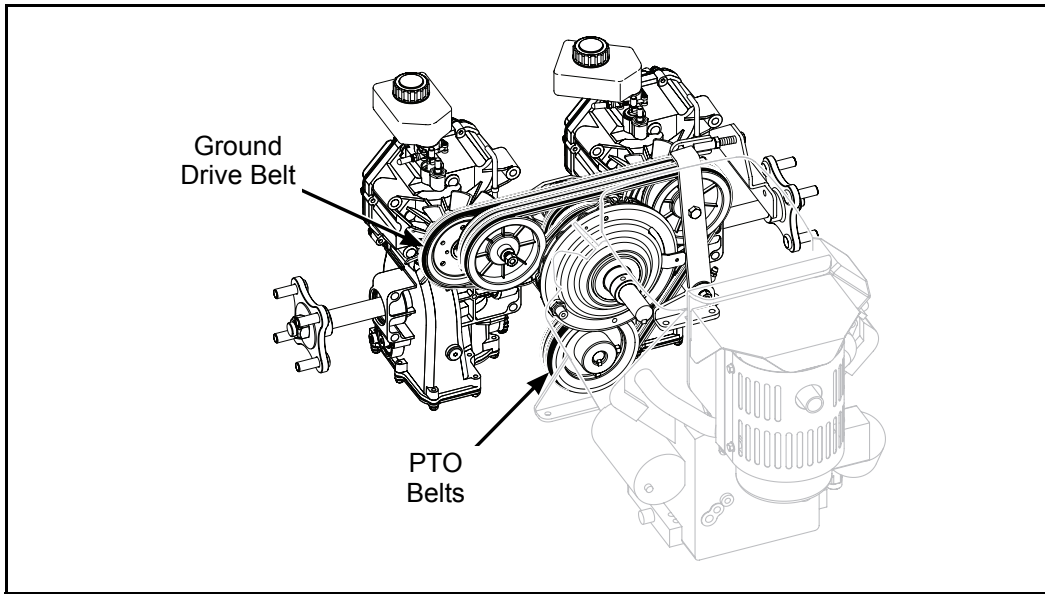
Belt Locations - Model MB S/N 2004-68441

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Belt Locations - Model MB S/N 2007-85248

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Engine PTO Drive Belt (3 Groove Power Band) -
Model MC, MT, MTL

1. To remove the engine PTO drive belt:
 - a. Remove the jackshaft drive belt from its idler pulley (by pushing down on idler pulley) and let the belt drop down out of the way.

NOTE: Step (a) is not essential to removing the PTO belt, but it makes more room to work with the PTO belt.

- b. Push the clutch idler pulley down (until the PTO belt tightener stop block contacts the frame) and then shift the belt off the idler pulley (to the inside).

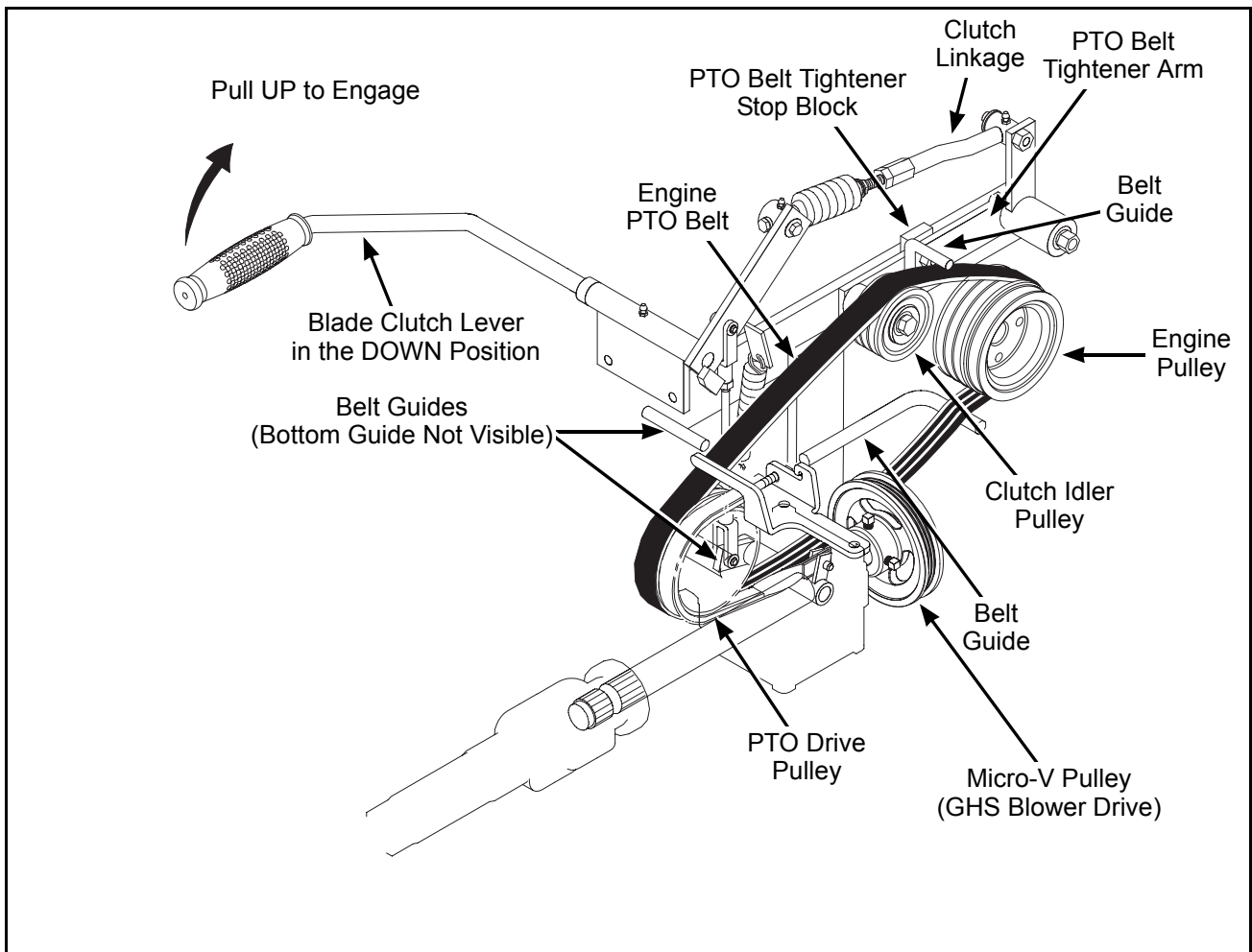
- c. Raise the clutch lever (engage position) to lift the clutch idler away from the belt.
 - d. Next remove the belt from the engine pulley and then the PTO drive pulley.

2. Install the PTO drive belt by reversing the removal procedure.

IMPORTANT: Make sure the belt is installed **inside** the four (4) belt guide pins.

Check and make the following adjustments:

- a. Clutch engagement for proper belt tension.
- b. Clutch disengagement and brake action.



Engine PTO Drive Belt Removal - Model MC, MT, MTL

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Engine PTO Drive Belt (3 Groove Power Band) - Model MD

1. To remove the engine PTO drive belt:

- a. Remove the jackshaft drive belt from its idler pulley (by pushing down on cold start lever) and let the belt drop down out of the way.

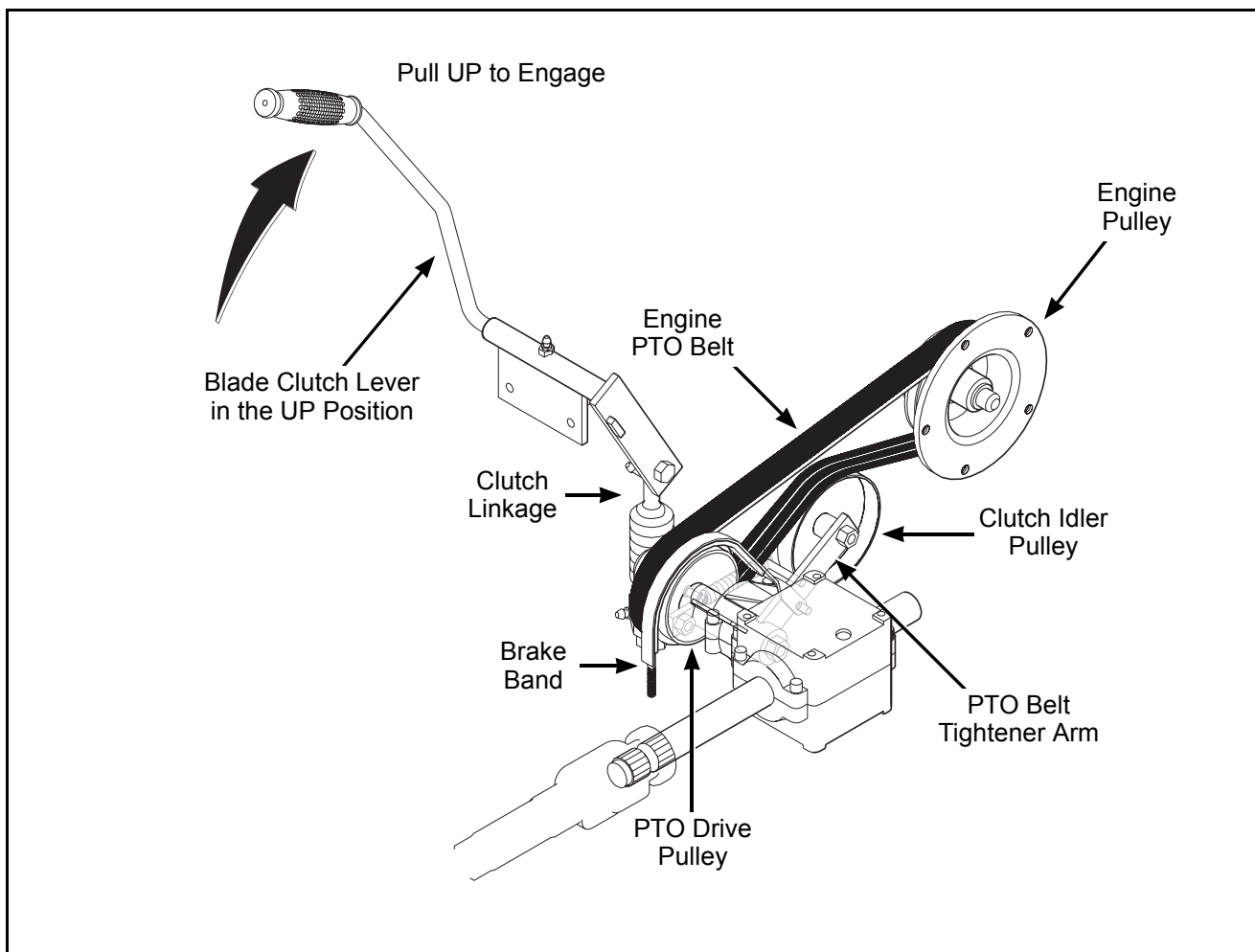
NOTE: Step (a) is not essential to removing the PTO belt, but it makes more room to work with the PTO belt.

- b. Loosen the brake band adjustment nut to allow the clutch idler pulley to drop down against the frame. This provides maximum looseness of the belt to assist removal.

- c. Remove the PTO drive belt by “walking” the belt off of the engine and PTO pulleys one groove at a time until the belt is completely removed.

2. Install the PTO drive belt by reversing the removal procedure. Check and make the following adjustments:

- a. Adjust clutch disengagement (brake band adjustment) and check brake action.
- b. Adjust clutch engagement for proper belt tension.



Engine PTO Drive Belt Removal - Model MD

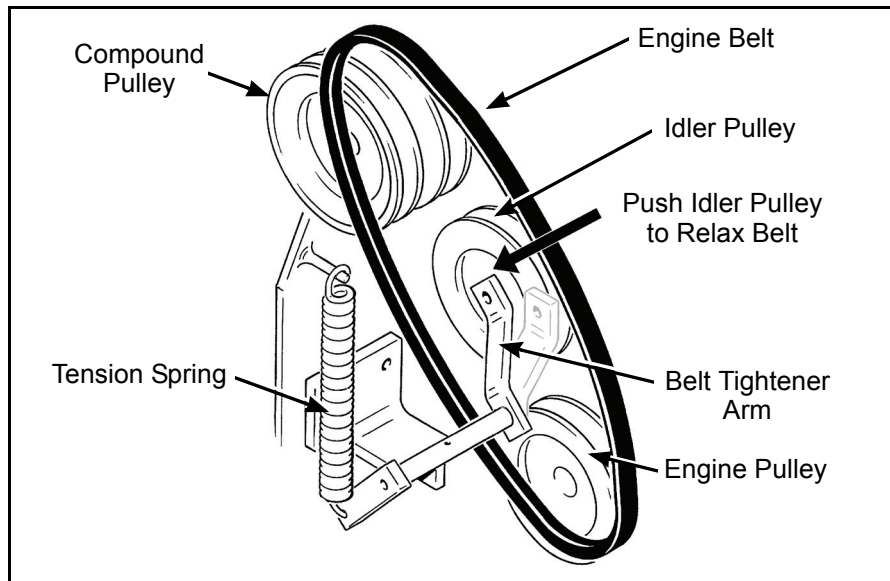
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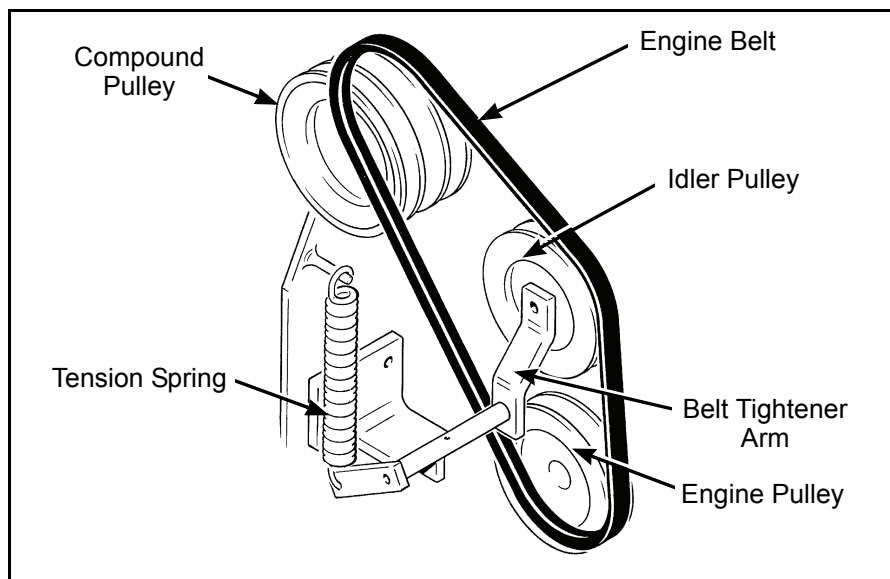
Engine Belt - Model MS

1. To remove the engine belt:
 - a. Relax the belt by depressing the spring-loaded idler arm.
 - b. Roll the belt off the compound pulley and remove the belt.



Engine Belt (Disengaged)

2. Reverse the removal procedure to replace the engine belt.



Engine Belt (Engaged)

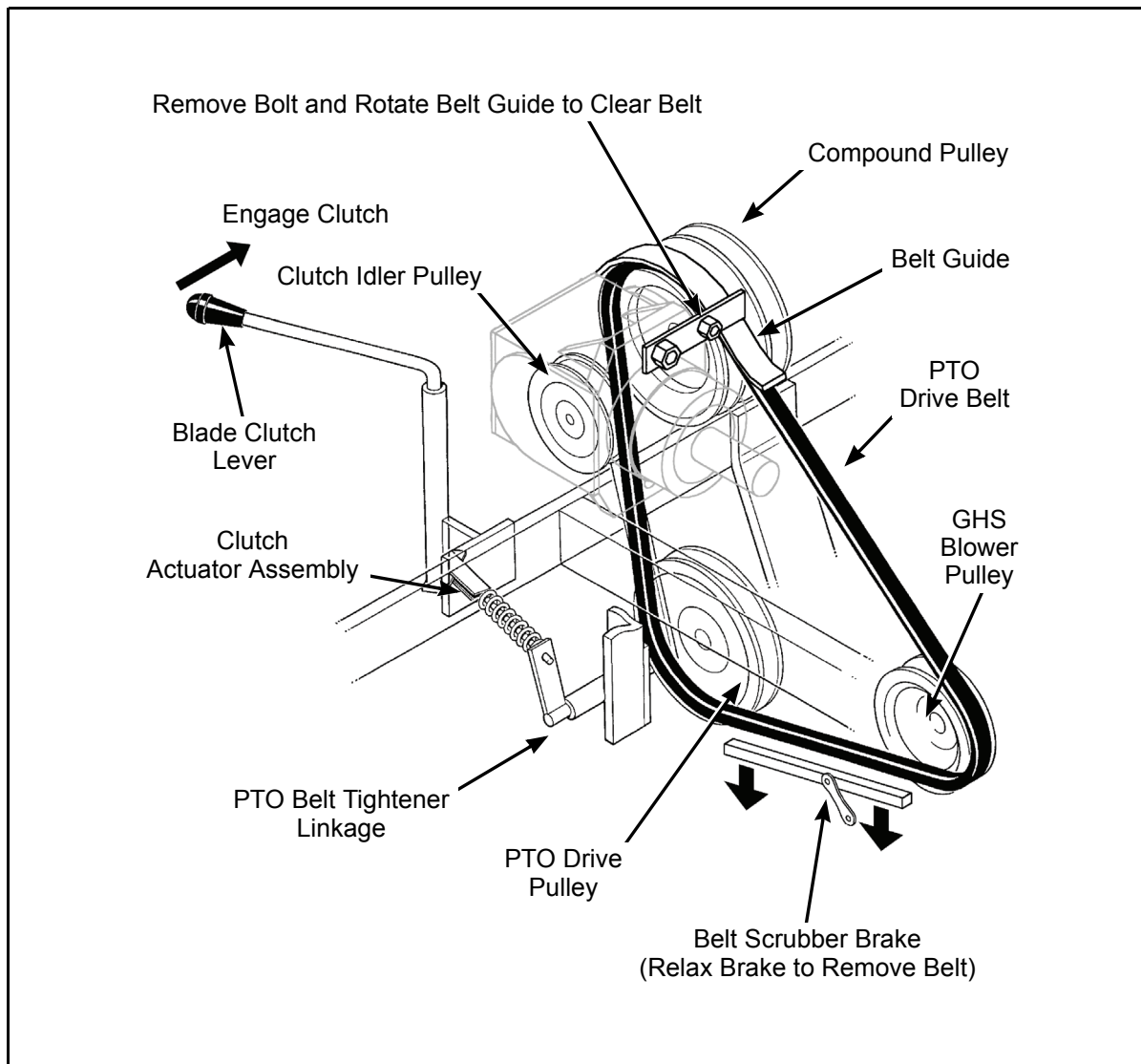
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PTO Drive Belt - Model MS

1. To remove the PTO drive belt:
 - a. Remove the engine belt, as described in previous section.
 - b. Remove 1/4-20 x 3/4 bolt locating belt guide on gearbox pulley and rotate guide to clear belt.
 - c. Move blade clutch (in direction of engagement) far enough to relax belt scrubber brake without tightening the PTO drive belt. Roll belt off PTO drive pulley and GHS blower pulley (GHS model only).
2. Install the PTO drive belt by reversing the removal procedure. Check scrubber brake adjustment and brake action.



PTO Drive Belt Removal

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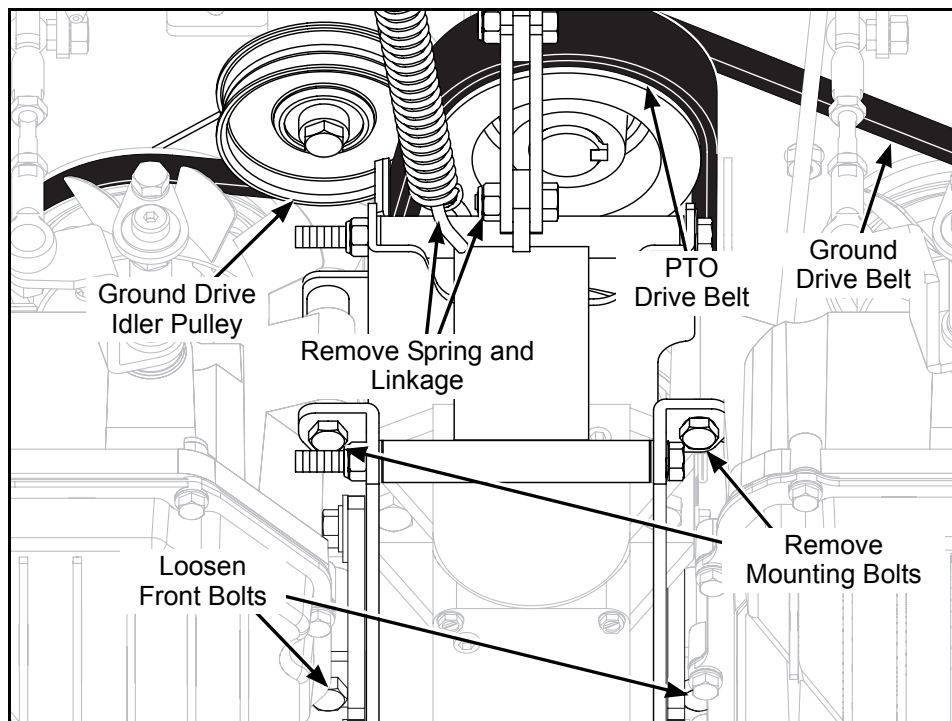
PTO Drive Belt - Model MW

1. Remove the two mounting bolts holding the PTO belt guide in place and loosen the front mounting bolts of PTO actuator assembly (as shown). Remove belt guide. Remove nuts on the front of brake band and remove.
2. Unhook spring and unbolt actuator clevis attached to the PTO gearbox assembly. Pull gearbox assembly to the rear and remove belt.
3. Install the PTO drive belt by reversing removal procedure.

Ground Drive Belt - Model MW

NOTE: The PTO drive belt must be removed for removal of the ground drive belt.

1. Relax the belt by releasing spring tension from the ground drive belt idler arm.
2. Slide the belt over both transaxle pulleys and feed it toward the back of the mower.
3. Install ground drive belt by reversing removal procedure.



**PTO Drive and Ground Drive Belt Removal
(view from underside rear of tractor)**

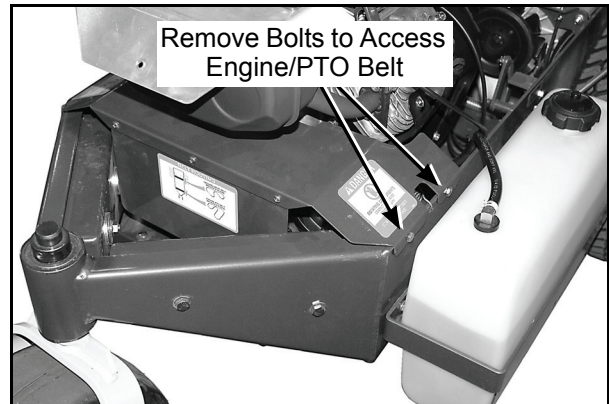
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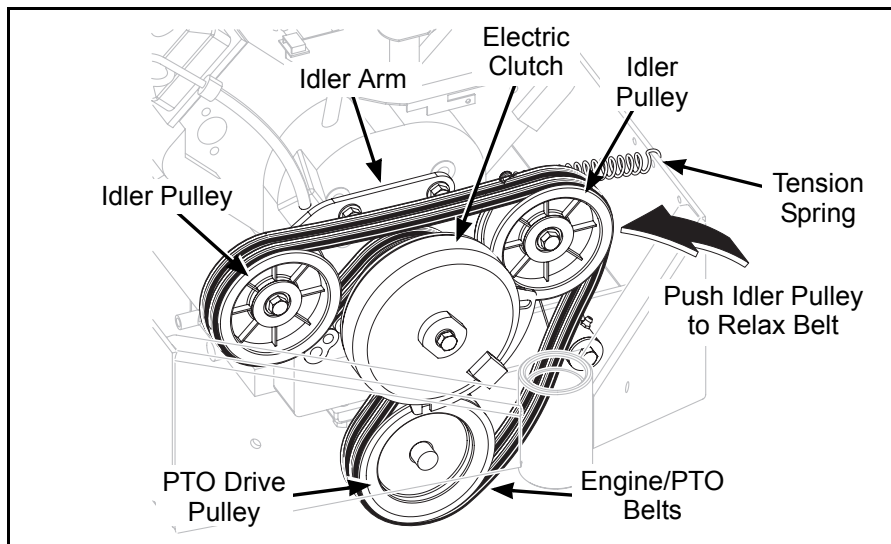
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Engine/PTO Belt - Model MB

1. To remove the engine/PTO belts:
 - a. Remove belt guard from underneath muffler. Refer to **Remove Belt Guard** photo.
 - b. Relax the belt by depressing the spring-loaded idler arm.
 - c. Roll the belts off the pulley one at a time and remove the belts.

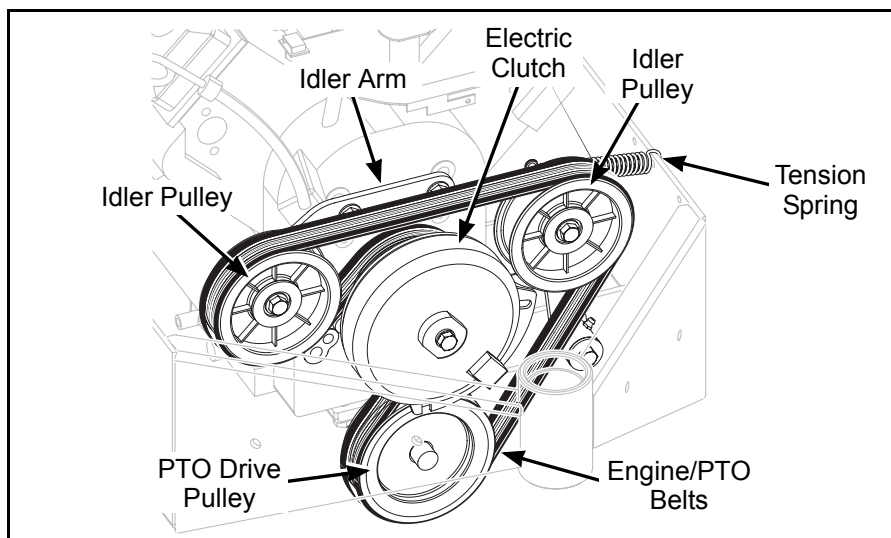


Remove Belt Guard



Engine/PTO Belt (Disengaged)

2. Reverse the removal procedure to replace the engine belt.



Engine/PTO Belt (Engaged)

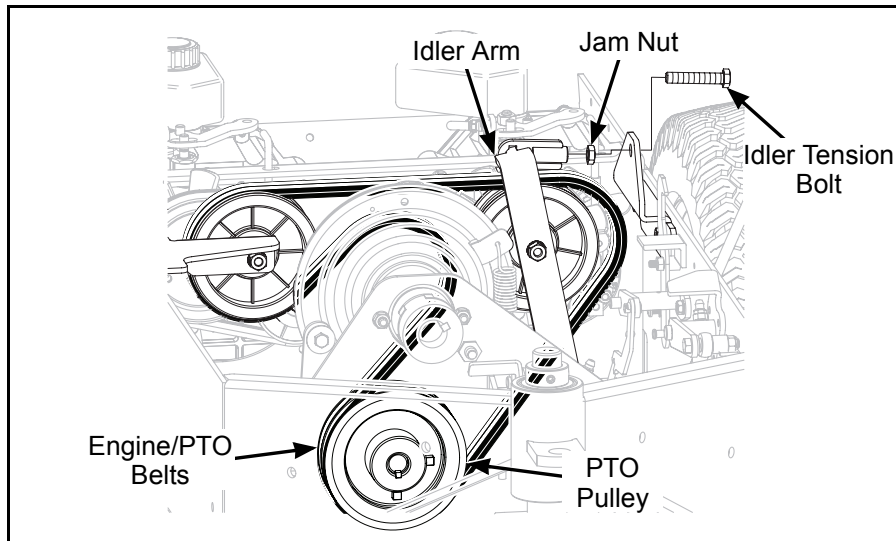
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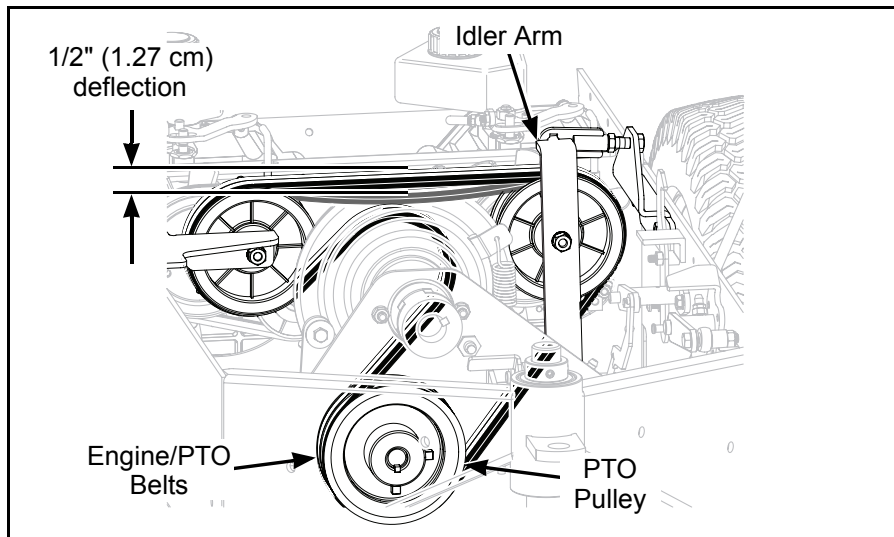
Engine/PTO Belt

1. To remove the engine/PTO belt:
 - a. Loosen and remove idler tension bolt and jam nut.
 - b. Relax belt by depressing idler arm.
 - c. Roll the belt off the pulley and remove the belt.



**Engine/PTO Belt (Disengaged)
(Engine Hidden for Clarity)**

2. Reverse the removal procedure to replace the engine belt.



**Engine/PTO Belt (Engaged)
(Engine Hidden for Clarity)**

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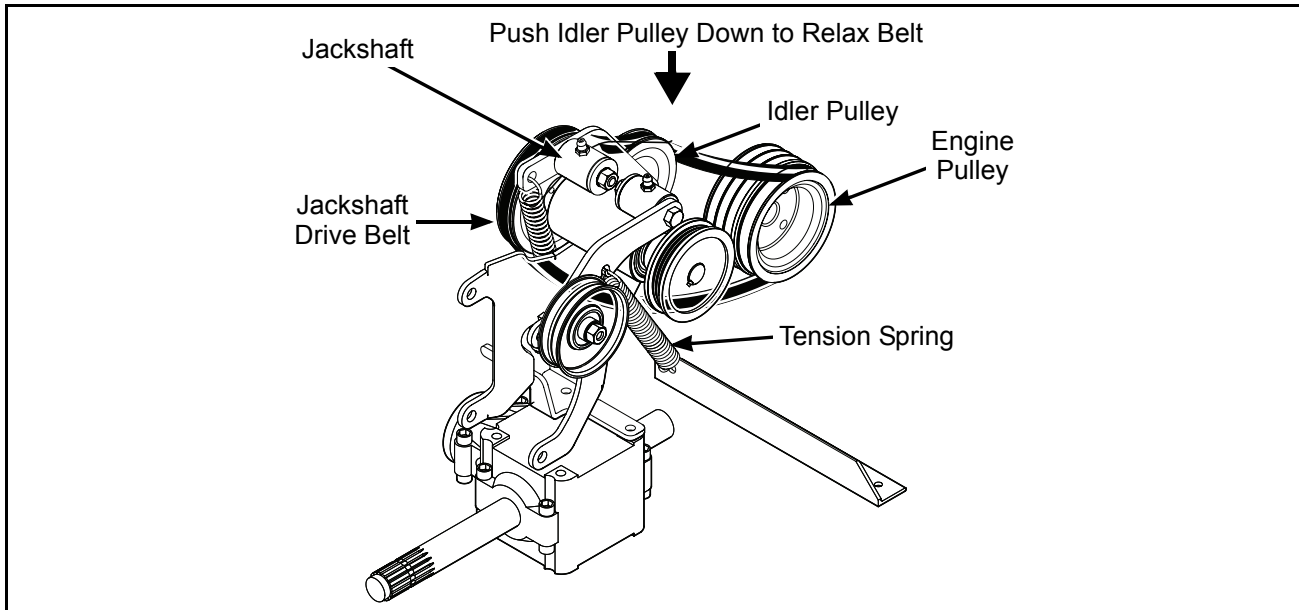
Jackshaft Drive Belt - Model MC, MT, MTL

1. To remove the jackshaft drive belt:

a. Remove the engine PTO drive belt, as described in previous section.

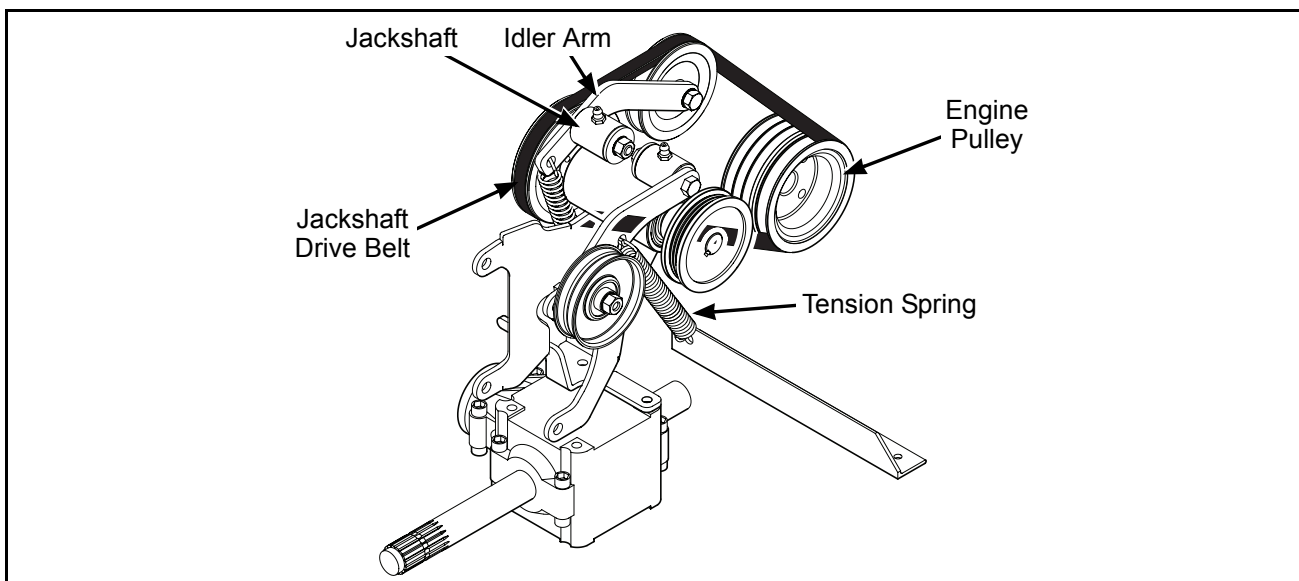
b. Relax the belt by depressing the spring-loaded idler arm.

c. Roll the belt off the jackshaft pulley and remove.



Jackshaft Drive Belt (Disengaged)

2. Reverse the removal procedure to replace the jackshaft drive belt.



Jackshaft Drive Belt (Engaged)

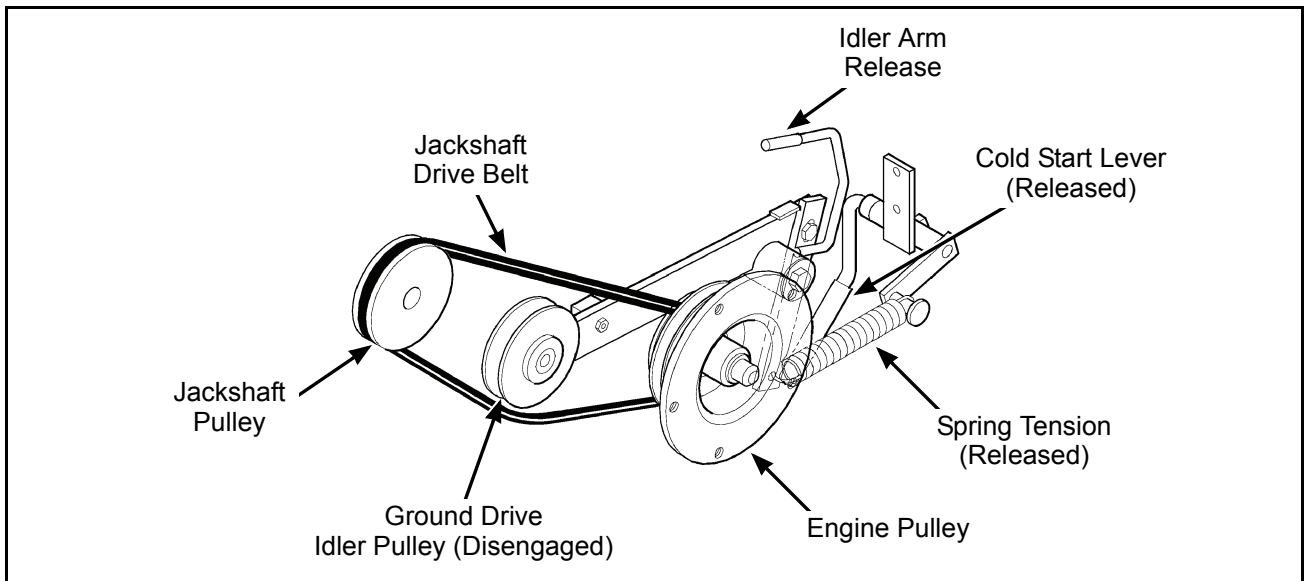
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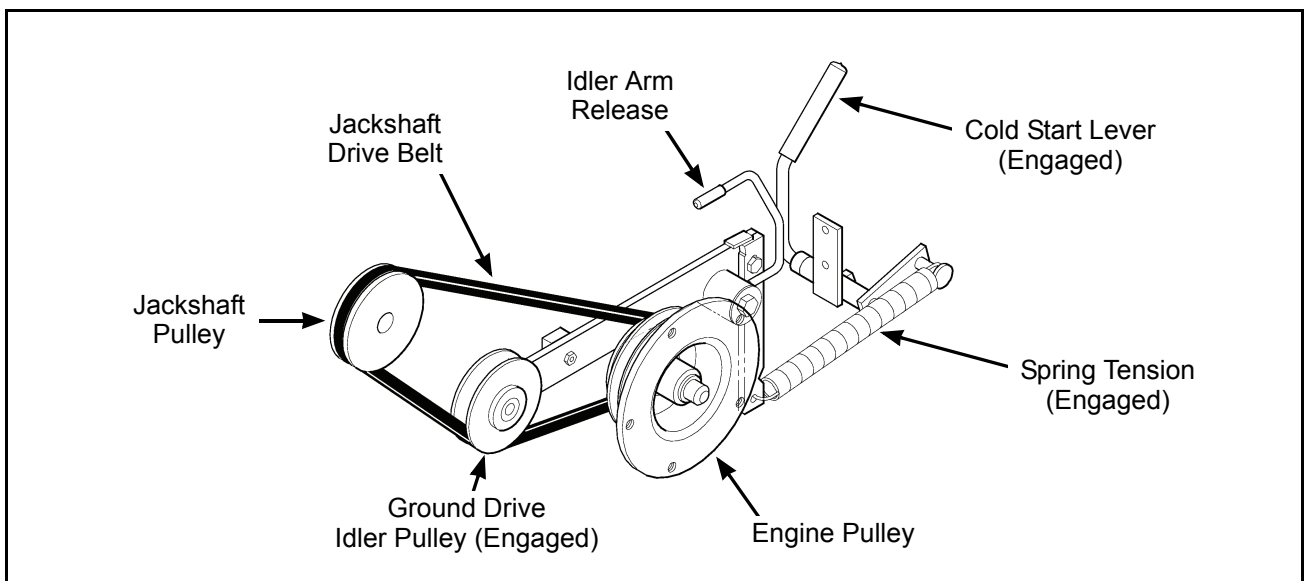
Jackshaft Drive Belt - Model MD

1. To remove the jackshaft drive belt:
 - a. Relax the belt by releasing spring tension from the jackshaft drive idler arm using the **cold start lever**.
 - b. Slide the idler arm release down to unlock the idler arm from the spring lever. Then pivot the arm up and away from the belt.
 - c. Roll the belt off the jackshaft pulley and remove.



Jackshaft Drive Belt (Disengaged)

2. Reverse the removal procedure to replace the jackshaft drive belt.



Jackshaft Drive Belt (Engaged)

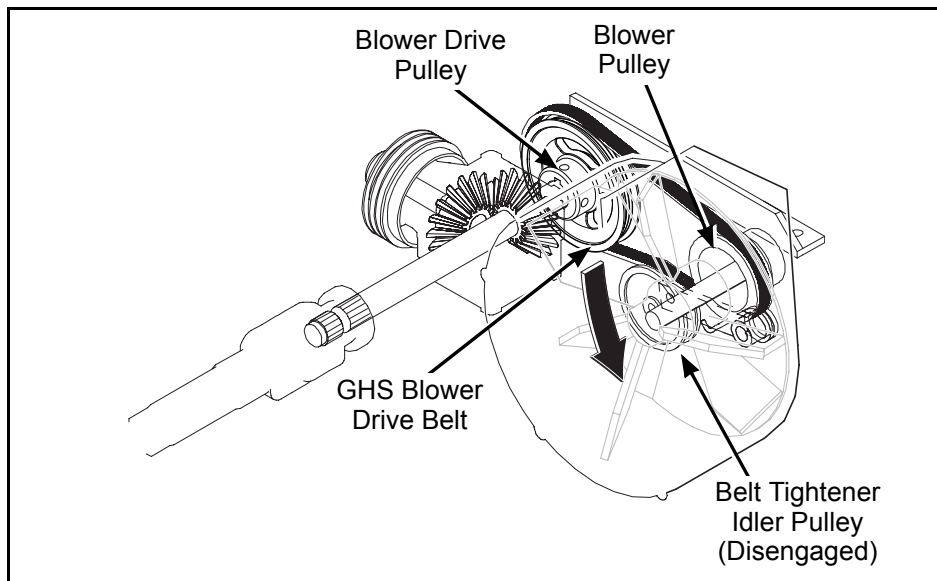
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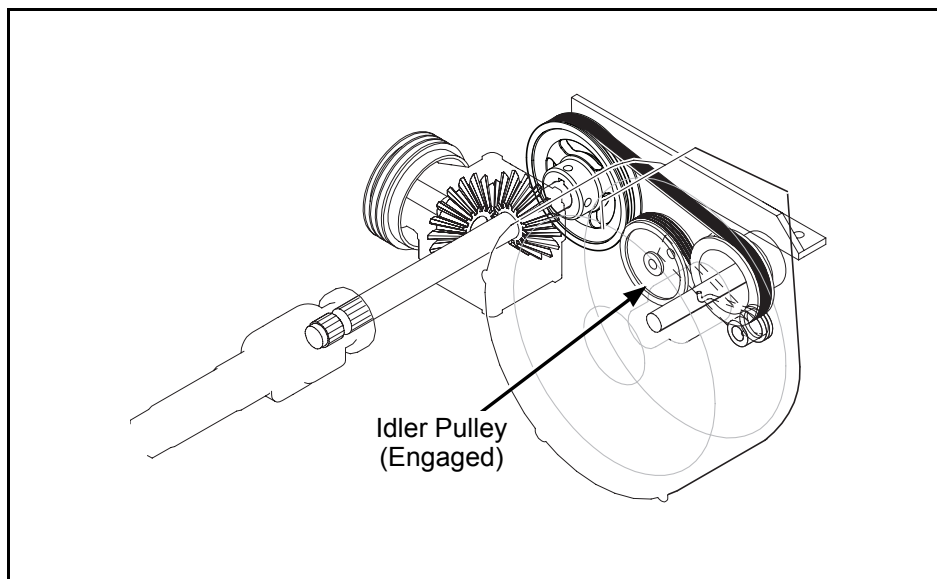
GHS Blower Drive Belt - Model MC, MD, MT, MTL

1. Remove the GHS blower drive belt tension by depressing the idler pulley on the tightener arm. Roll the belt off the blower pulley. The belt should be clear of the blower pulley, allowing **free movement** of the blower wheel.



**GHS Blower Drive Belt Assembly (Disengaged)
Blower Drive Belt Spring Removal**

2. Reverse the procedure to install the GHS blower drive belt and spring.



GHS Blower Drive Belt Assembly (Engaged)

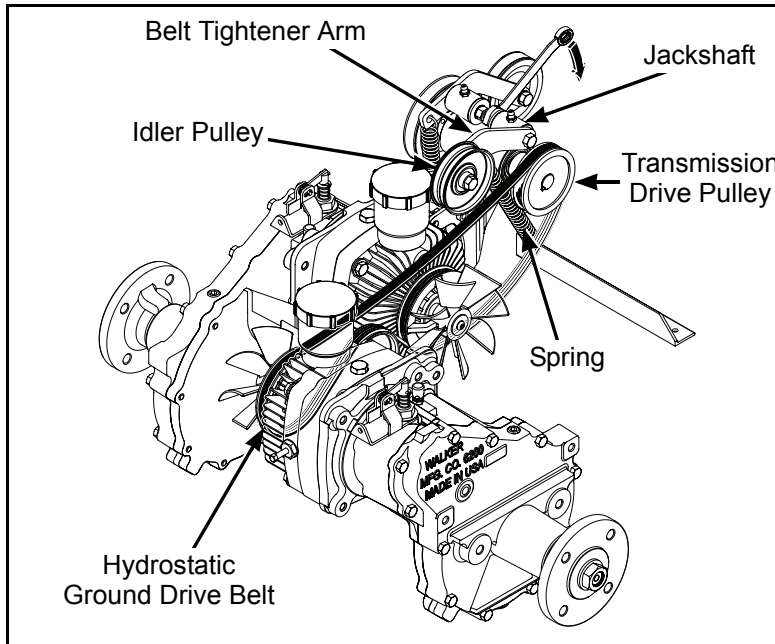
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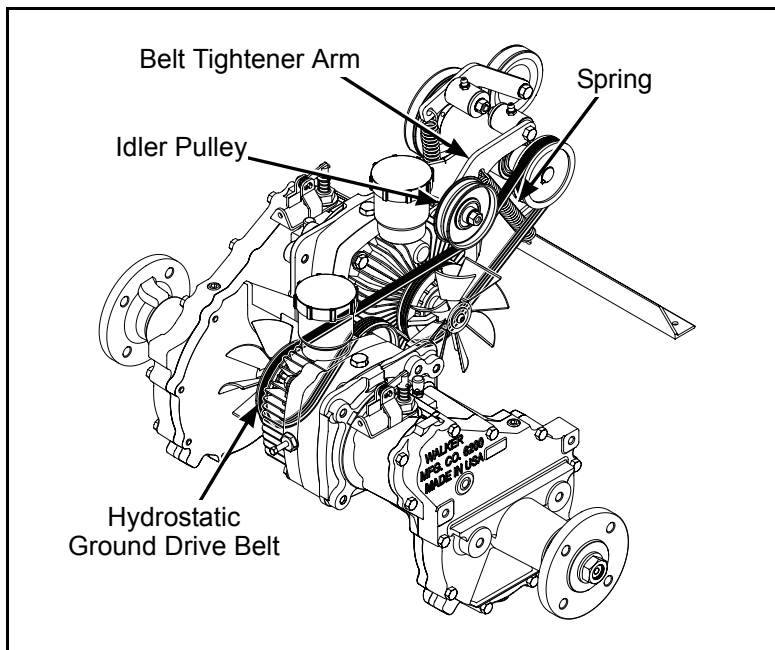
Hydrostatic Ground Drive Belt - Model MC, MT, MTL

1. To remove the hydrostatic ground drive belt:
 - a. Raise the spring-loaded belt tightener arm and idler pulley to relax belt.
 - b. Slide belt off pulleys, then release the idler.



Hydrostatic Ground Drive Belt Assembly (Disengaged)

2. Reverse the procedure to install the hydrostatic ground drive belt.



Hydrostatic Ground Drive Belt Assembly (Engaged)

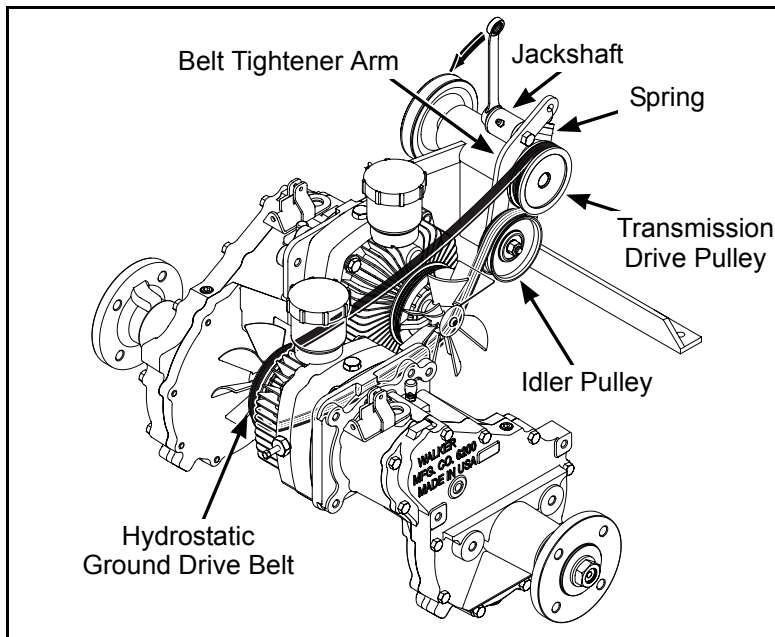
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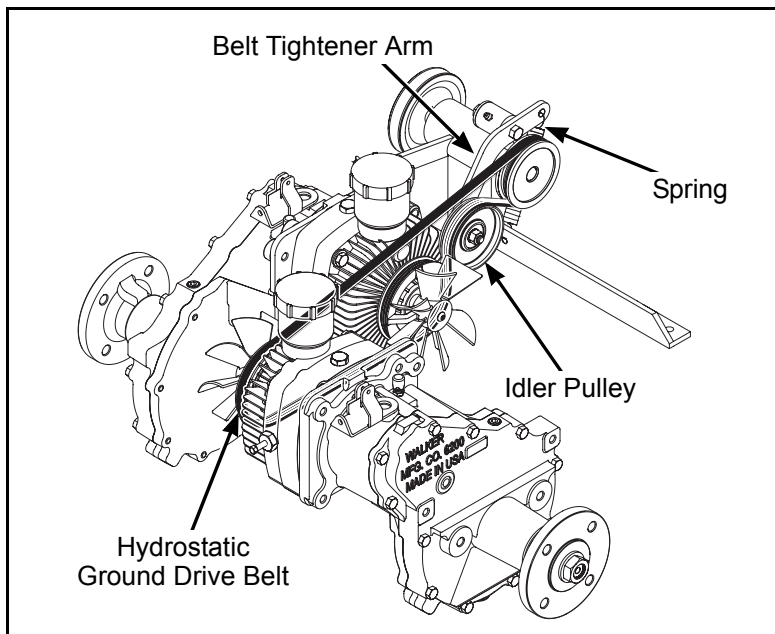
Hydrostatic Ground Drive Belt - Model MD

1. To remove the hydrostatic ground drive belt:
 - a. Raise the spring-loaded belt tightener arm and idler pulley to relax belt.
 - b. Slide belt off pulleys, then release the idler.



Hydrostatic Ground Drive Belt Assembly (Disengaged)

2. Reverse the procedure to install the hydrostatic ground drive belt.



Hydrostatic Ground Drive Belt Assembly (Engaged)

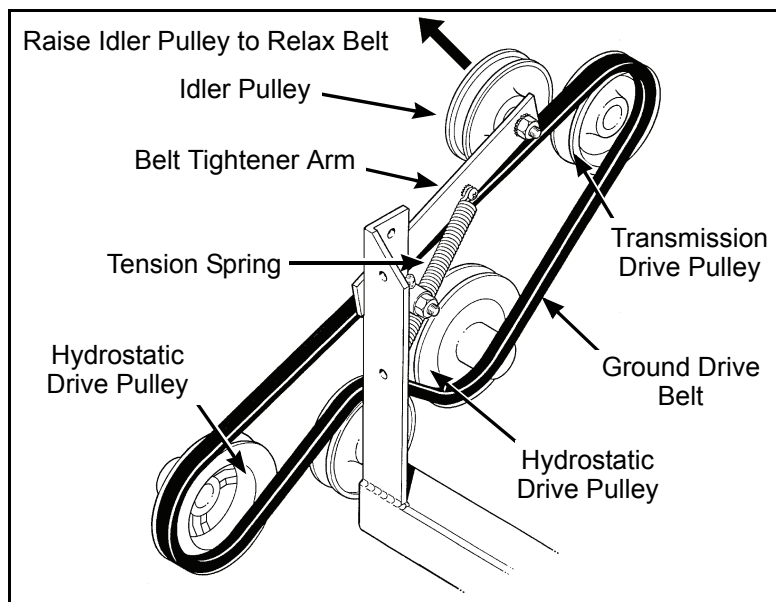
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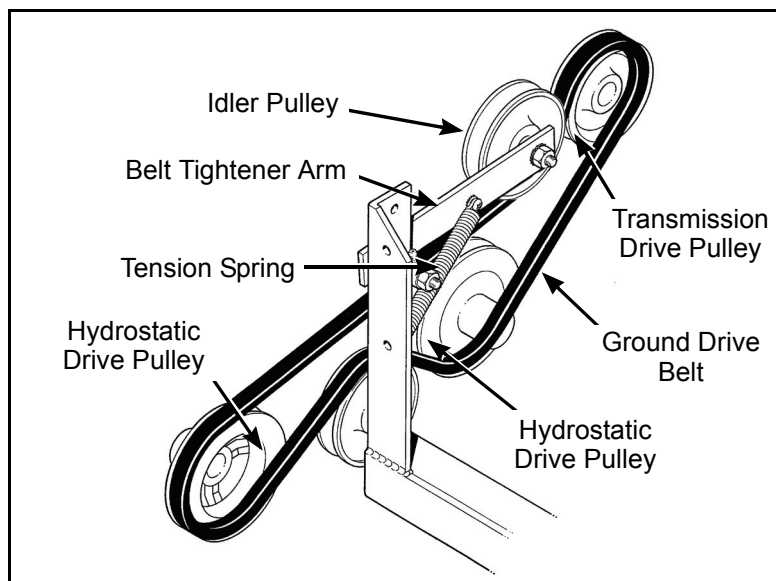
Ground Drive Belt - Model MS

1. To remove the ground drive belt:
 - a. Raise the spring-loaded idler to relax belt.
 - b. Slide belt off pulleys, then release the idler.



Ground Drive Belt Assembly (Disengaged)

2. Reverse the procedure to install the ground drive belt.



Ground Drive Belt Assembly (Engaged)

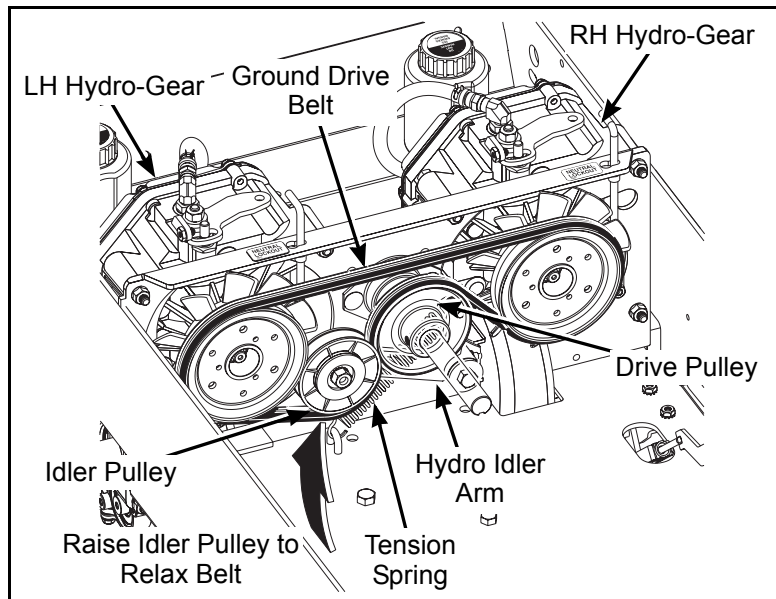
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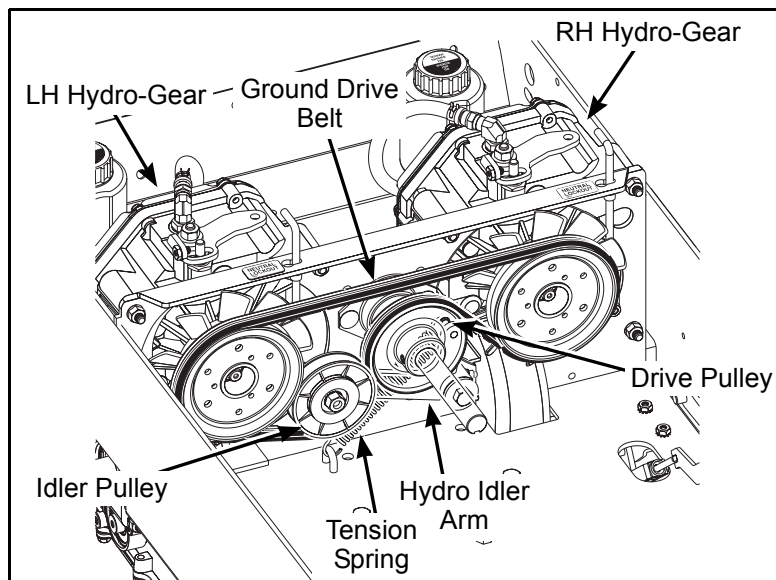
Ground Drive Belt - Model MB

1. To remove the ground drive belt:
 - a. Raise the spring-loaded idler to relax belt.
 - b. Slide belt off pulleys, then release the idler.



Ground Drive Belt Assembly (Disengaged)

2. Reverse the procedure to install the ground drive belt.



Ground Drive Belt Assembly (Engaged)

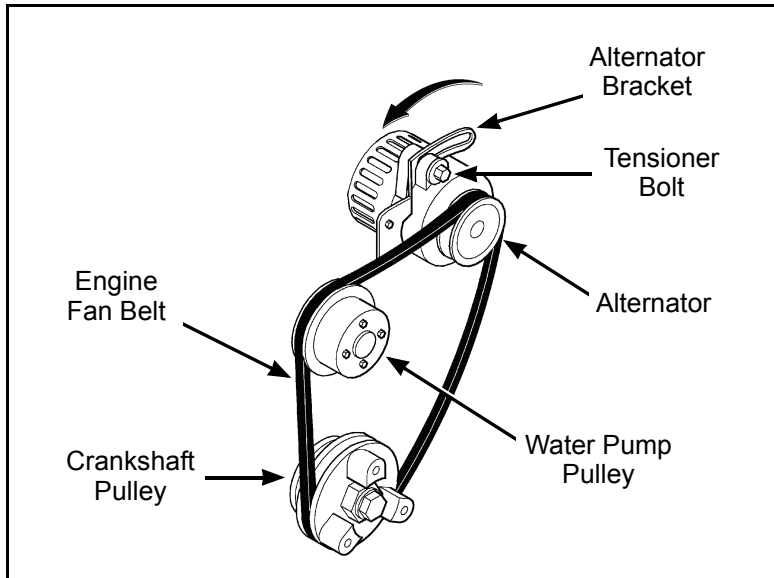
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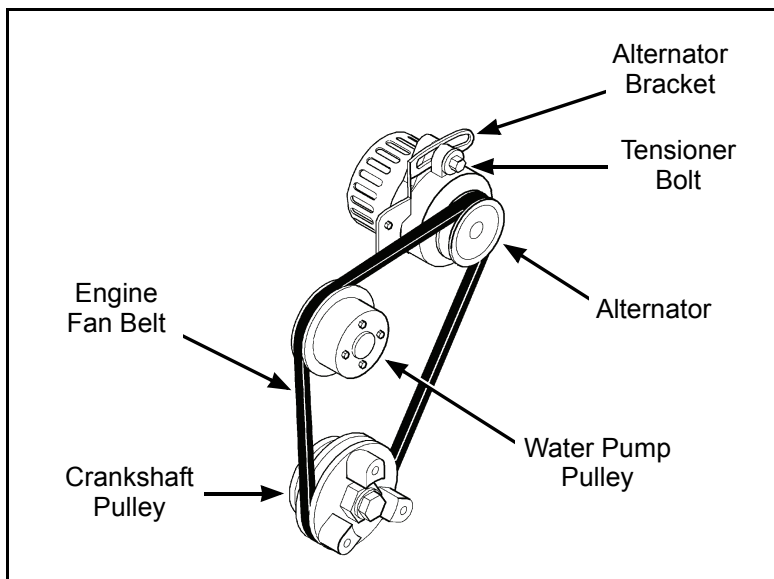
Engine Fan Belt - Model MD

1. To remove the fan belt:
 - a. Loosen the alternator mounting pivot bolt and the alternator bracket tensioner bolt.
 - b. Pivot the alternator as shown to relax and remove belt.



Engine Fan Belt (Loose)

2. Reverse the procedure to install the belt. Adjust and check the belt tension by referring to **CHECKING/SERVICING** the *Fan Belt Tension* in the **Maintenance Instructions Section**.



Engine Fan Belt (Tight)

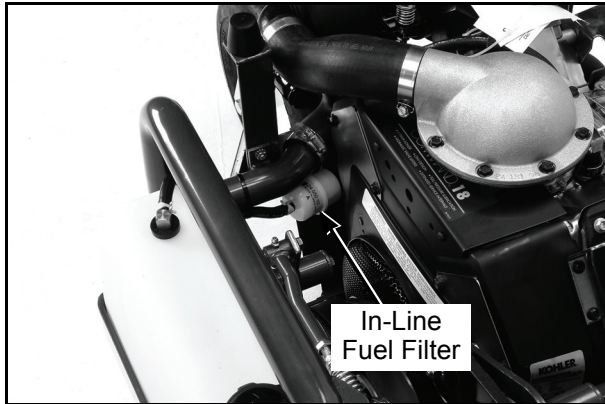
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Fuel Filter - Model MB, MC, MT, MT25

Models MT, MTL, MC and MB are equipped with an in-line fuel filter. Visually inspect the filter periodically, and replace the filter **yearly**.



Fuel Filter Location

IMPORTANT: Replace the fuel filter only in a clean area where the fuel line and connections will not be contaminated by any dust and dirt.

DANGER

Gasoline is extremely flammable and can be highly explosive. To minimize danger:

- Use only an approved fuel container for gasoline.
- **DO NOT** allow open flames or sparks near the machine while performing maintenance or refueling; **DO NOT** smoke while working with fuel.
- Wipe up spilled gasoline immediately and completely.

1. Expand and slide clamps on either side of the filter away from filter and pull fuel lines off filter.
2. Replace filter.

Fuel Filter - Model MTEFI, MTLEFI

WARNING

The MTEFI fuel system operates under high pressure. This system should be serviced by a Walker dealer or authorized Kohler service dealer.

EFI engines use a high-volume, high-pressure, 10-15 micron, in-line fuel filter.



In-Line Fuel Filter

Service

Fuel filter replacement is recommended **every 1500 hours** of operation or more frequently under extremely dusty or dirty conditions. Use only the specified filter, and install it according to the directional arrows. **DO NOT** use a substitute filter as operating performance and safety can be affected. Relieve system pressure through the safety valve in the fuel rail before servicing.

General

High-pressure fuel line with an SAE R9 rating is required for safe and reliable operation, due to the higher operating pressure of the EFI system. If hose replacement is necessary, order by part number or use only the type specified. Special Oetiker clamps (Kohler Part No. 24 237 05-S or Walker P/N 5879-5) are used on all fuel line connections to prevent tampering and safety hazards with the high fuel pressure. The old clamp must be cut to open a connection, so replacement is necessary each time. Pliers (SPX Part No. KO3217-5) is used to crimp the replacement clamps.

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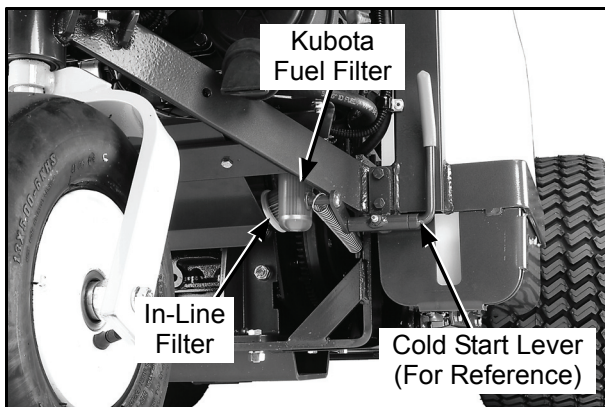
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CAUTION

Standard fuel line is not compatible and must not be used! Use only Oetiker clamps (Kohler Part No. 24 237 05-S or Walker P/N 5879-5) on fuel line connections.

Fuel Filter - Model MD

Model MD has **two (2) fuel filters**. Replace both the in-line filter and the Kubota filter element **every 400 hours** of operation.



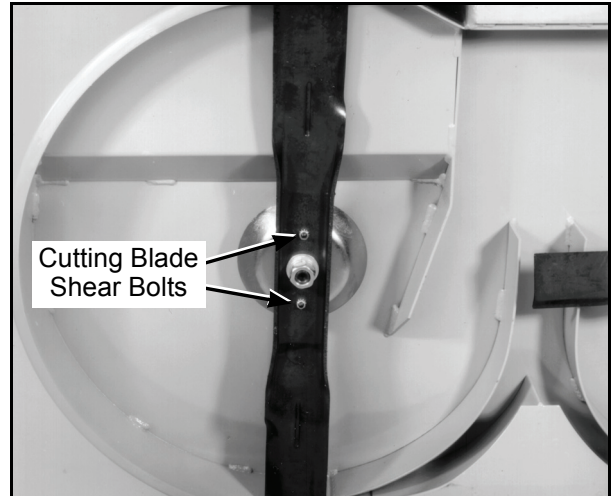
Fuel Filter Location

IMPORTANT: Replace fuel filters only in a clean area where the fuel line and connections will not be contaminated by dust and dirt.

1. Close the Kubota fuel filter cock.
2. Remove and replace the in-line filter; expand and slide clamps on either side of the filter away from filter and pull fuel lines off filter.
3. Loosen the ring screw on the Kubota filter assembly, remove the filter pot and filter element.
4. Clean the filter pot and reassemble the filter assembly with a new filter element (use only a Kubota replacement filter #15231-43560).
5. Open the fuel filter cock.

Blade Overload Shear Bolts - All Models

The cutting blade is keyed to the blade hub by **two (2) shear bolts** (10-24 x 5/8 in. stainless steel machine screws). These bolts are designed to shear and protect the blade drive gearbox from damage if the blade encounters a shock load.



Cutting Blade Shear Bolts

NOTE: Tightening the 5/8-18 blade mounting nut to **60 ft-lb (81.3 N·m)** is also important for proper shock load protection. It is important to **not overtighten** the mounting nut since this defeats (overrides) the function of the shear bolts.

If these bolts shear, remove the blade and install new bolts. Refer to **CHECKING/SERVICING** in the **Maintenance Instructions Section for Sharpen Mower Blades** which describes the blade removal and installation procedure.

After reinstalling the blade, check blade timing by moving blades through **one (1) complete revolution**. Make sure blade tips pass clear of each other. If timing is incorrect, refer to **Mower Deck Gearbox Replacement** in this section.

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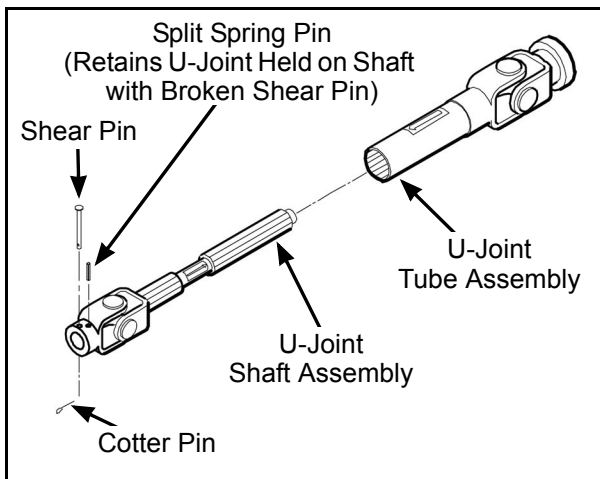
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PTO Shear Pin - All Models

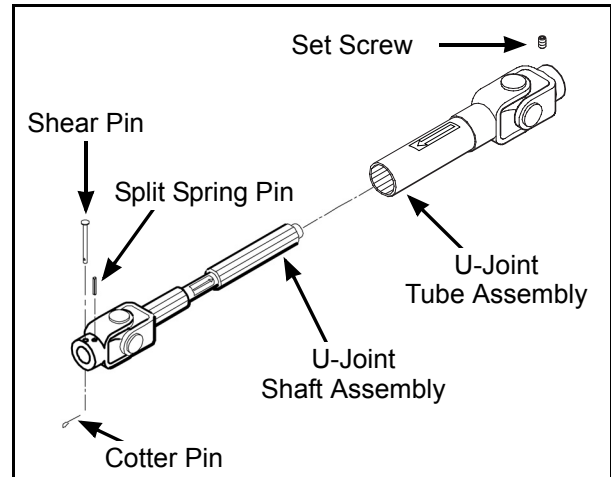
The PTO drive shaft connection to the deck gearbox has a shear pin to provide shock load protection to the mower deck drive. This system provides **primary shock protection** in case of blade impact and will normally shear before the individual shear bolts on the blade hub.

When the PTO pin has sheared, use the following procedure to replace it:

1. Loosen the two bolts securing the PTO shaft guard on the deck; lift the guard off. (Holes in guard are slotted for easy removal.)
2. Rotate U-joint on shaft to align the shear pin hole with the hole (and shear pin fragment) in the shaft. Use a punch to drive the remaining portion of the old shear pin out.
3. Install new shear pin and secure with cotter pin.



PTO Shear Pin - Model MW, MC, MD, MT, MTL



PTO Shear Pin - Model MS, MB

IMPORTANT: Use only Walker P/N 8067-13 shear pins for replacement to provide proper shock protection -- these pins are hardened to shear under a specific amount of load.

4. Reinstall the PTO shaft guard.

Before operating the deck, inspect the blade overload shear bolts and also check blade timing (on gear driven decks) by moving blades through **one (1) complete revolution**. Make sure blade tips pass clear of each other. If timing is incorrect, contact your Walker Dealer.

NOTE: Use Walker P/N 8067-10 for heavy duty gear-boxes.

Mower Blades - All Models

Mower blades are removed and remounted as described in **Sharpen Mower Blades** instructions. During the course of sharpening and inspecting mower blades, if there are **any of the following conditions of wear or damage, blades should be replaced** for reasons of safety and performance of the machine:

- An excessive amount of the **flat section** of the blade has been **ground away** (removed) when the blade is sharpened. Replace the blade **when less than a 3/4 in. (19 mm) flat section remains** at the blade tip.
- Examine ends of the blade carefully, especially the intersection where the flat section of the blade turns up to form the "wing tip" (refer to **Mower Blade Profile for Sharpening** illustration in **Sharpen Mower Blades** instructions). Since sand and abrasive material can wear metal away in this area, the blade should be **replaced when metal thickness has worn to 1/16 in. (1.6 mm) or less**.

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DANGER

When blades are operated over sandy soil, and if blades are allowed to wear, a "slot" may be worn into the wing tip of blade. Eventually a piece of the blade may break off creating a serious potential for injury or damage.

- Check the blades for **straightness** by marking blade tip position inside the deck housing and then rotating the opposite end of the blade to the same position and comparing or using a blade balancer with straightness indicator. If the difference in blade tip track is **more than 1/8 in. (3 mm)**, the blade is bent and **should be replaced**.
- Inspect the blade surface, especially in formed areas, for **cracks**. Replace the blade if any cracks are found.



WARNING

DO NOT try to straighten a blade that is bent. **NEVER** weld a broken or cracked blade. **ALWAYS** replace with a new blade to assure safety.

Reinstall the blades following procedure from **Sharpen Mower Blades** instructions. If blades are replaced, always use **Walker original equipment blades** to ensure safety and optimum performance. The quality and performance of **replacement blades offered by other manufacturers** cannot be guaranteed, they **could be dangerous**.



CAUTION

ALWAYS use genuine factory replacement parts. Substitute parts **CAN** result in product malfunction and possible injury to the operator.

Mower Deck Gearbox Replacement - All Gear Drive Decks

NOTE: Deck gearbox(es) may be changed with the deck mounted on the tractor. However, the deck may be removed from the tractor making the overall job of removing the gearbox assembly easier. Refer to *Deck Installation* in the **Set-Up Section** and reverse the procedure to remove the deck.

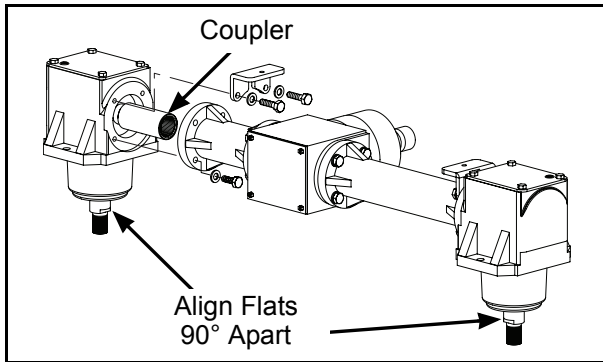
To replace the mower deck gearbox(es), use the following procedure:

1. Remove mower blades. Refer to procedure in **Sharpen Mower Blade** instructions.
2. Remove gearbox cover (two machine screws) and PTO shaft guard (two 1/4-20 bolts).
3. Remove two (2) 3/8-16 mounting bolts from each blade drive gearbox and lift the entire gearbox assembly from the deck (including PTO drive shaft).
4. Remove the screws securing the cover plates on the gearboxes and remove the covers. Remove all covers to be sure oil is completely drained from all gearboxes.
NOTE: With oil flow throughout the unitized gear drive assembly; if one gearbox has internal damage or excessive wear, the remaining gearboxes and connector tubes should be completely disassembled and thoroughly flushed out with solvent before reassembly.
5. Drain and properly dispose of oil.
6. Remove the four (4) bolts mounting the gearbox to the connector tube and slide the gearbox off the splined drive shaft coupling.
7. Install the new gearbox on the spline coupling of the drive shaft. Establish correct timing of the blade drive gearboxes by setting flats on the output shaft at 90 degrees when connecting the gearbox(es) to the spline coupling. Make sure the timing is correct before proceeding with assembly.

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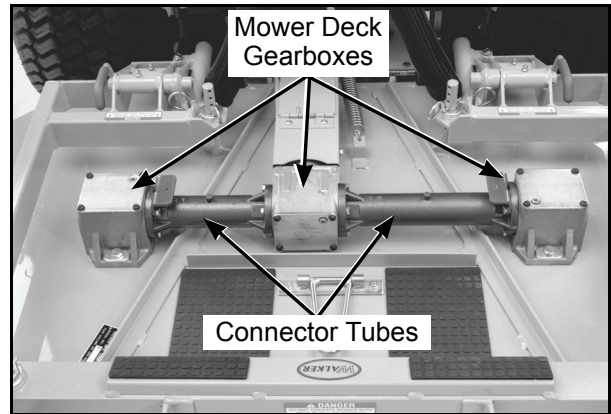


Blade Drive Gearbox Timing

8. Reinstall the four (4) bolts mounting the gearbox to the connector tube but **do not tighten** them at this time; leave connector tube bolts finger-tight.
9. Position the gear drive assembly on the deck and install the 3/8-16 bolts mounting the entire assembly. Leave the mount bolts finger-tight.
10. Torque all the connector tube bolts to 90 in-lb (9 N·m) for aluminum gearboxes or 115 in-lb (34.7 N·m) for cast iron gearboxes.

NOTE: This fastener tightening sequence aligns the gearbox assembly with the deck housing and eliminates the possibility of mounting the unitized assembly in a bind.

11. Tighten 3/8-16 mounting bolts.
12. Fill gearbox assembly with oil. Refer to **Mower Deck Gearbox Lubrication** in the **Lubrication Section** for instructions.
13. Reassemble remaining items onto deck to complete installation. After installing blades, check that the blade timing is correct by moving the blades through **one (1) complete revolution**. Make sure blade tips pass clear of each other.

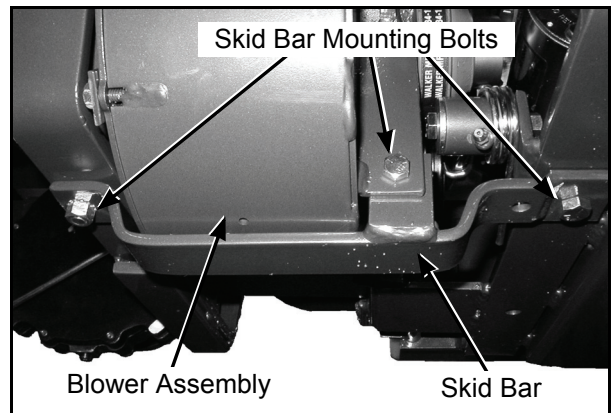


Mower Deck Gearboxes (Shown with Gearbox Cover Removed for Clarity)

GHS Blower Assembly (and/or Blower Wheel) - Model MS, MC, MD, MT

GHS Blower Assembly Removal - Model MC, MD, MT, MTL

1. Remove the mower deck. Refer to *Deck Installation* in the **Set-Up Section** and reverse the procedure to remove the deck.



Remove Skid Bar for GHS Blower Removal

2. Remove the blower faceplate by removing six (6) 1/4-20 nuts.
3. Remove the GHS blower drive belt. Refer to **REPLACING/REPAIRING the Drive Belts** in this section for instructions.

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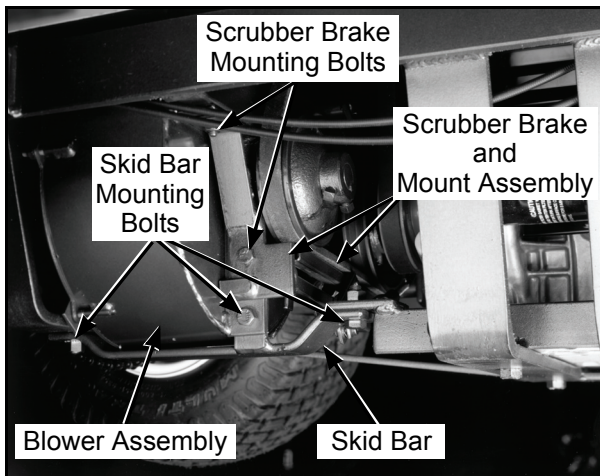
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4. Remove the blower assembly from the chassis as follows:
 - a. Remove the blower skid bar by removing front and rear mounting bolts from the skid bar (underneath the blower) and removing the bolt connecting the blower housing to the skid bar.
 - b. Remove the blower belt tightener idler arm assembly by removing the pivot bolt.
 - c. Remove two (2) bolts mounting the blower housing to the frame.
- NOTE:** Remove two (2) 1/4-20 x 2-1/2 mounting bolts and coupler nut from face plate (10.5 Blower only).
- d. Lower the blower assembly **straight down** out of the chassis frame and remove.

GHS Blower Assembly Removal - Model MS

1. Remove the mower deck. Refer to *Deck Installation* in the **Set-Up Section** and reverse the procedure to remove the deck.
2. Remove the blower faceplate by removing six (6) 1/4-20 nuts.



Remove Skid Bar and Scrubber Brake for GHS Blower Removal

3. Remove the blower assembly from the chassis as follows:
 - a. Remove the blower skid bar by removing front and rear mounting bolts from the skid bar (underneath the blower) and removing the bolt connecting the blower housing to the skid bar.
 - b. Remove two (2) bolts mounting the blower housing to the frame and the bolt mounting the scrubber brake assembly on the blower housing.
 - c. Remove scrubber brake assembly, and roll the blower drive belt off of blower pulley.
 - d. Lower the blower assembly **straight down** out of the chassis frame and remove.

10" Blower Wheel Removal - Model MS, MC, MD, MT

When required, replace the blower wheel using the following procedure:

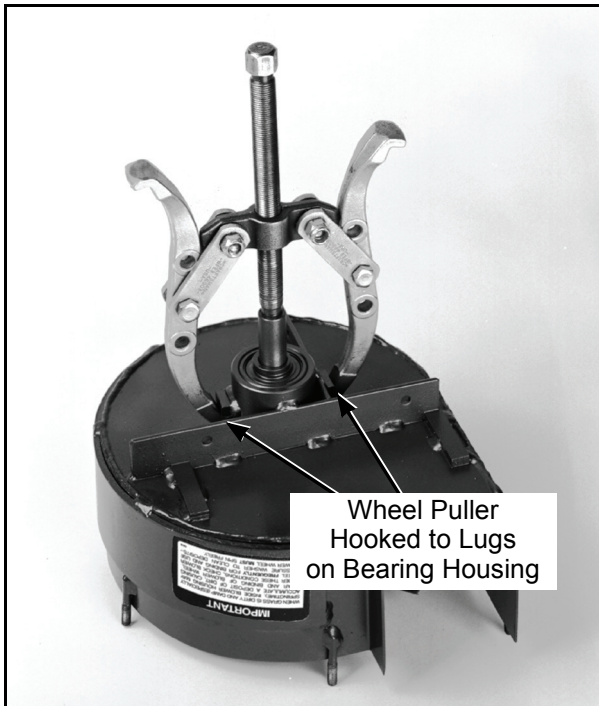
1. Loosen blower pulley set screws and remove the pulley using a wheel puller.
2. Remove the **locking collar** from the back bearing (closest to the pulley) by loosening the **set screw** and rotating the collar counterclockwise (use punch to drive).
3. Press blower wheel out of the housing using a wheel puller hooked to lugs on the bearing housing. The bearings have been secured in the housing with a retaining compound - Loctite® RC/680, and **considerable force** will be required to break this bond. After the bearings have "broken loose" from the housing, only light pressure should be required to remove the wheel assembly out of the housing.

NOTE: It may or may not be possible to remove the front bearing from the blower wheel without damaging it. If the bearing is damaged, it will need to be replaced along with the wheel.

Walker

SERVICE INSTRUCTIONS

July 2006



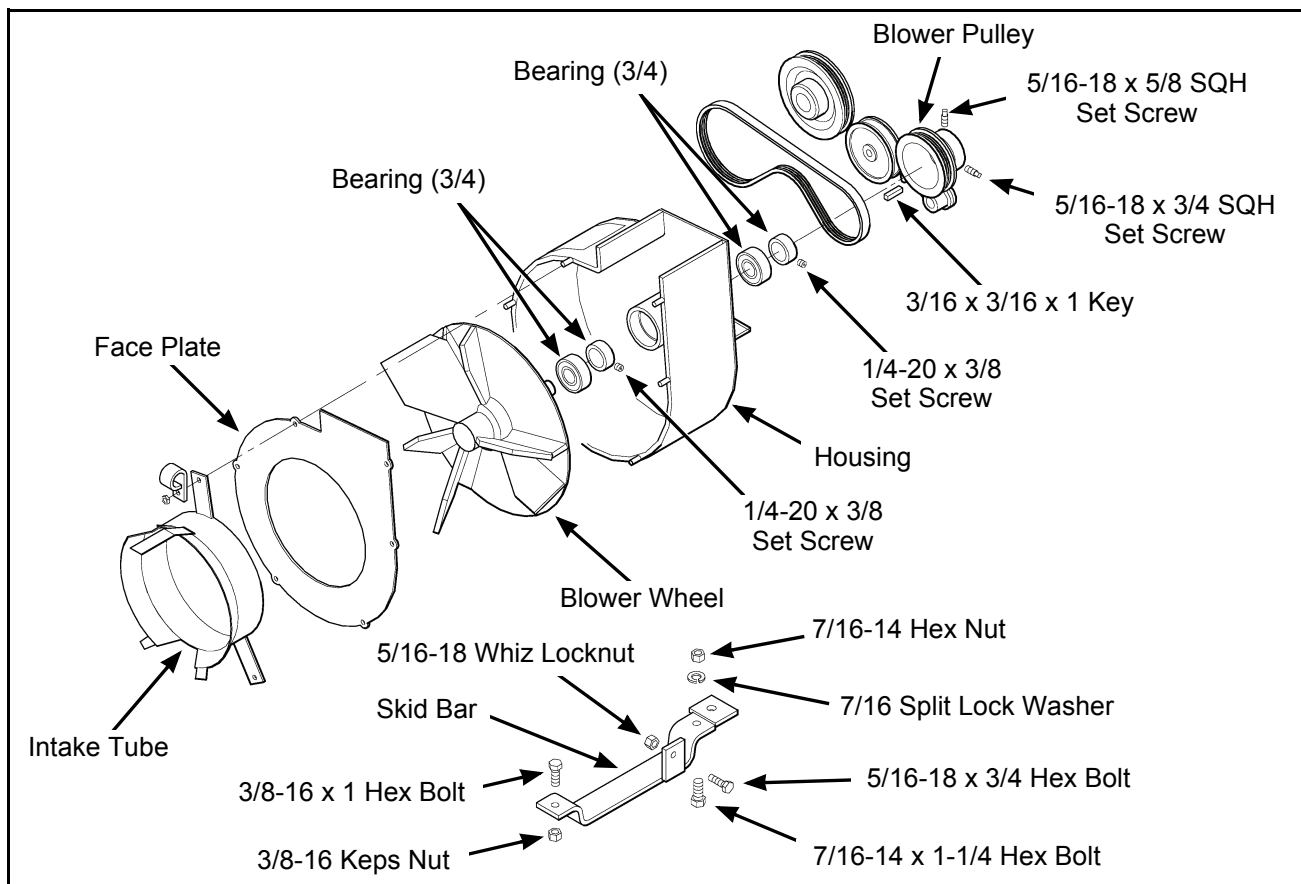
Pressing Blower Wheel Out of Housing

Blower Wheel Installation - Model MS, MC, MD, MT

1. To install the blower wheel, **reverse the removal procedures**. The front bearing is mounted on the blower wheel shaft, secured by a locking collar. Drive the locking collar clockwise with a punch, and tighten the set screw.
2. Press blower wheel and front bearing into the blower housing. Use Loctite® RC/680 retaining compound on the outer bearing race and inside the bearing housing.
3. Press the rear bearing into place, using Loctite® on both the outer bearing race and the housing.
4. Install the locking collar on the rear bearing and install the blower pulley to complete the blower assembly. Torque the blower pulley set screws to 250 in-lb (28.3 N·m).

GHS Blower Assembly Installation - Model MS, MC, MD, MT

Reinstall the blower assembly into the mower using the reverse procedures of *GHS Blower Assembly Removal*.



GHS Blower Components - Model MC, MD, MT

Walker

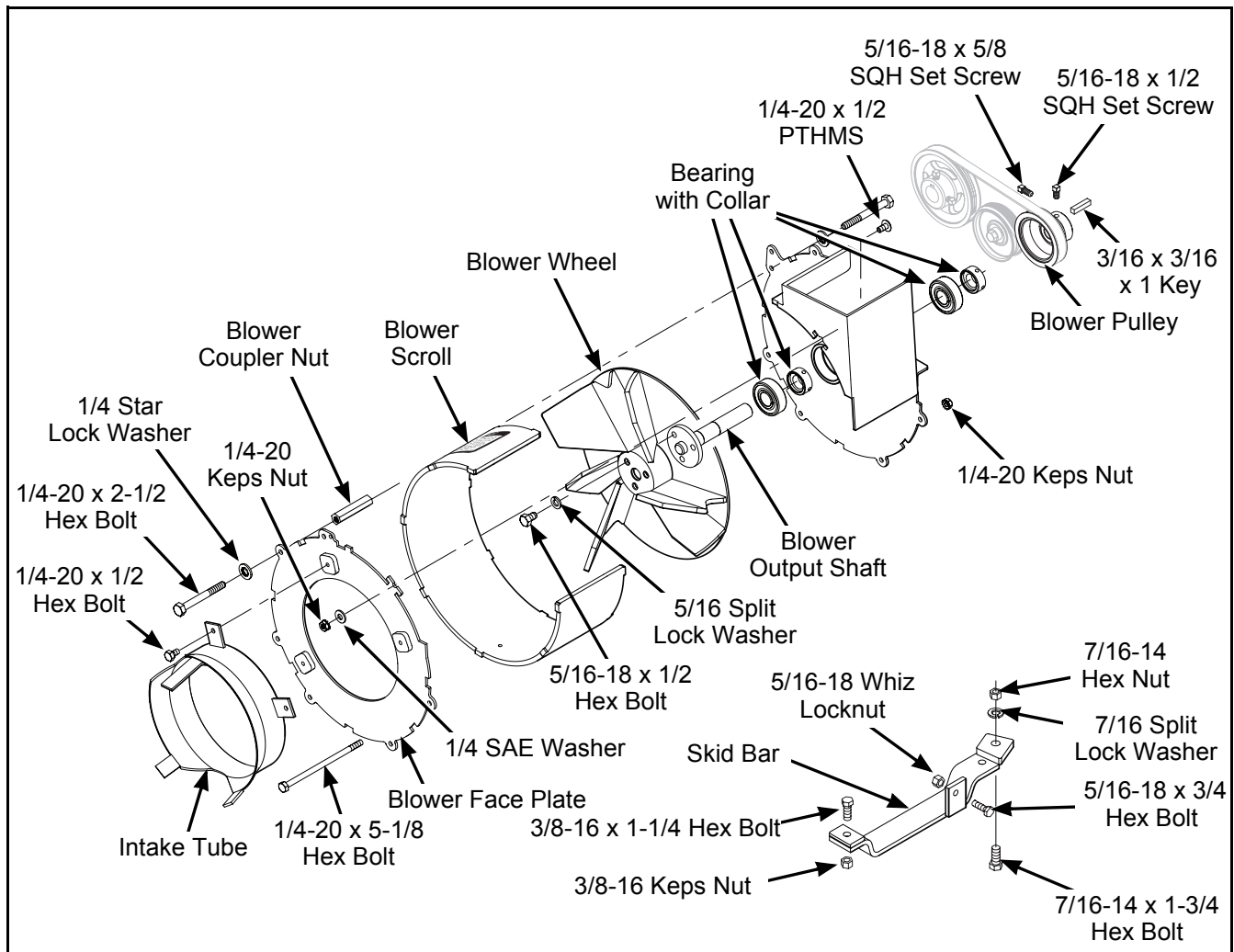
SERVICE INSTRUCTIONS

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10.5" Blower Wheel Removal - Model MC, MD, MT

With blower assembly removed and when required, replace the 10.5 blower wheel using the following procedure:

1. Remove intake tube by removing three (3) 1/4-20 x 1/2 bolts.
2. Remove blower face plate by removing five (5) 1/4-20 x 5-1/8 bolts and one (1) 1/4-20 x 1/2 PTHMS.
3. Blower scroll will fall free.
4. Remove blower wheel by removing three (3) 5/16-18 x 1/2 bolts and washers.
5. Reinstall by reversing procedure.



GHS 10.5 Blower Components - Model MC, MD, MT

Walker

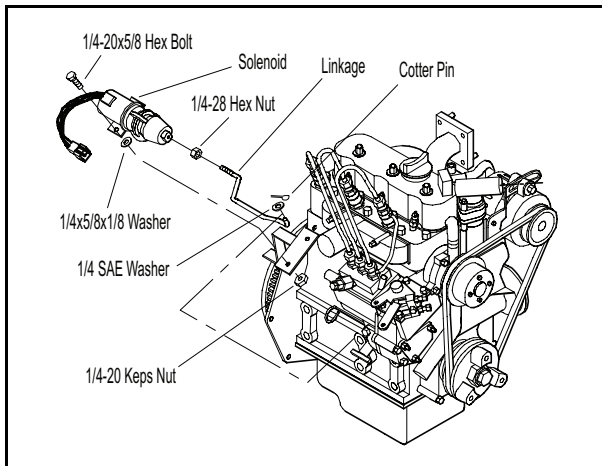
SERVICE INSTRUCTIONS

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Replacing Fuel Valve Solenoid - Model MD

For checking operation of the solenoid, refer to **CHECKING/SERVICING** the **Fuel Valve Solenoid** in the **Maintenance Instructions Section**. To replace the solenoid:

1. Remove the engine air intake hose for access to the solenoid.



Fuel Valve Solenoid Replacement

2. Disconnect the electrical plug, remove the two (2) mounting bolts and the cotter pin on the linkage, then remove the solenoid.
3. Unscrew the linkage rod out of the old solenoid and reinstall in the new solenoid. Leave the jam nut on the linkage rod loose.
4. Reinstall the solenoid. At this point, move the solenoid linkage by hand and check for any binding or dragging of the solenoid plunger and linkage. If the solenoid does not move freely, adjust the solenoid mounting position by bending the mount and/or loosening the mounting bolts. The solenoid must move freely for proper operation.
5. Refer to **ADJUSTMENTS** of **Fuel Valve Solenoid Linkage** in this section and make the fuel valve linkage adjustment for the 1/16 in. (1.6 mm) air gap with injector pump stop.
6. Reinstall the engine air intake hose. Make sure the hose clamps are tight and the hose is secure.

REPLACING/REPAIRING - IMPLEMENTS

Perfaerator

 **CAUTION**

ALWAYS use genuine factory replacement parts. Substitute parts **CAN** result in product malfunction and possible injury to the operator and/or others.

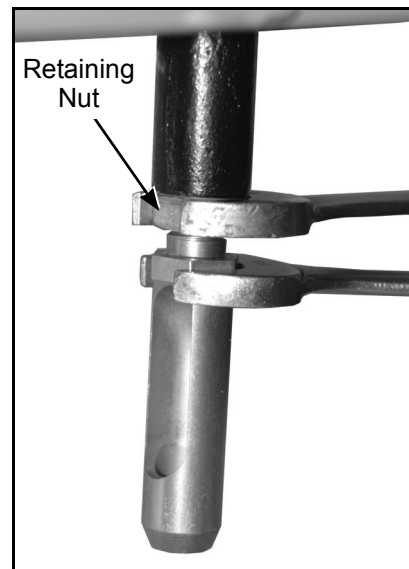
 **WARNING**

DO NOT attempt to make any replacements or repairs with the tractor engine running. Disengage the PTO clutch, shut off the machine, and remove the ignition key. Wait for all movement to stop before getting off the seat.

Tine Ends

Tine ends are replaceable by using the following procedure:

1. Loosen the retaining nut on the tine thread and unscrew tine end.



Tine End Replacement

2. Install new tine end by reversing the removal procedure. Open side of tine should be to rear.

Walker

SERVICE INSTRUCTIONS

July 2006

Implements



WARNING

To prevent accidental engine starting when replacing parts or repairing the machine, remove the key from the ignition switch and disconnect the fuel solenoid wire [diesel engines] or the spark plug wire(s) [gasoline engines].



CAUTION

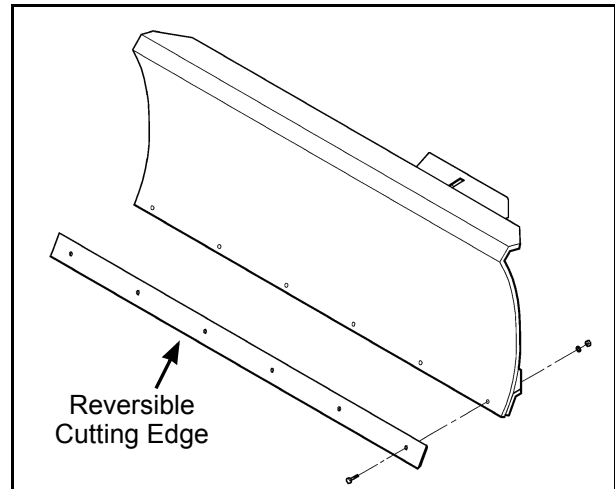
ALWAYS use genuine factory replacement parts. Substitute parts CAN result in product malfunction and possible injury to the operator and/or others.

Dozer Blade Cutting Edge

NOTE: The cutting edge of the dozer blade is **reversible** and needs to be replaced only when **both the top and bottom edges have worn**.

Replace the dozer blade cutting edge as follows:

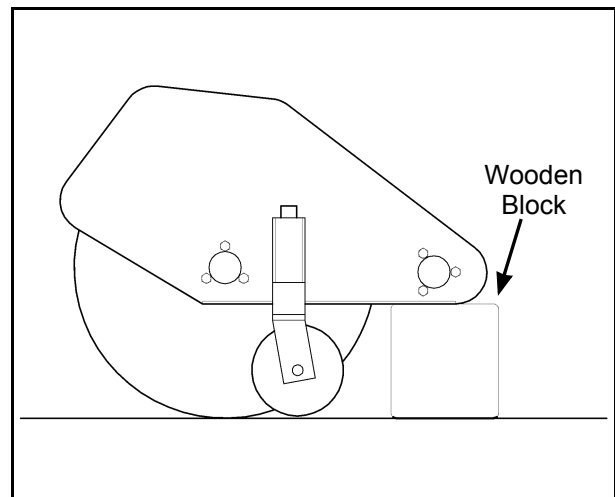
1. Remove the six (6) 5/16-NC hex nuts and 5/16 in. lock washers from the rear of the blade, behind the cutting edge. Remove the six (6) 5/16-NC x 1 in. carriage bolts from the front cutting edge.
2. If only **one edge** of the blade is **dull or nicked**, rotate the blade 180 degrees. (The sharp edge should now be at the bottom.) Reinstall the cutting edge onto the dozer blade by reversing the removal procedure.
3. If **both edges** are **dull or nicked**, remove the cutting edge and install a new one by reversing the removal procedure.



Dozer Blade Cutting Edge Replacement

Rotary Broom Brush

1. Stop the tractor engine, set the parking brake and remove the ignition key.
2. Lift the broom head from the front approximately 7 to 8 inches (18 to 20 cm) from the ground.
3. Place two (2) wooden blocks, one on each side, under the rear of the broom housing and gently lower the broom head.



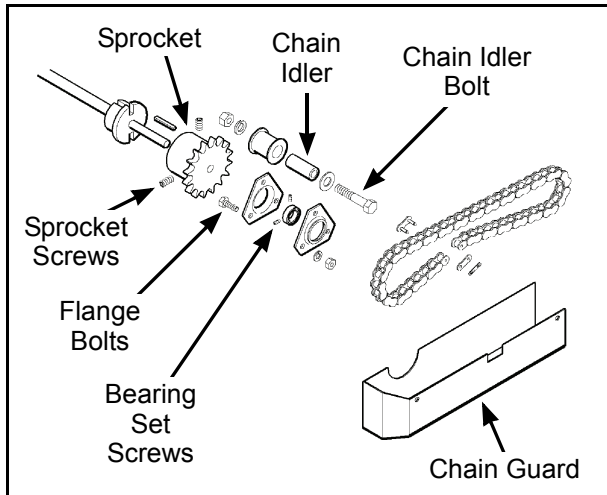
Support Rear of Broom Housing

4. Remove the two (2) bolts and the chain guard.
5. Loosen the bolt securing the chain idler so that the chain can be removed from the sprocket.
6. Loosen the two sprocket set screws and push sprocket towards the brush.

Walker

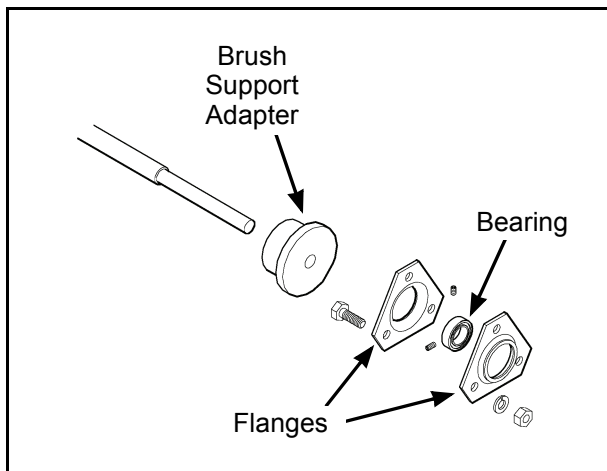
SERVICE INSTRUCTIONS

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Loosen Chain Idler and Set Screws

- Remove the three bolts on the bearing flanges on each side of the broom and loosen the bearing set screws. Push the bearings and flanges towards the brush.
- Remove the bearing, brush support adapter and flanges on the opposite side of the sprocket. Remove the brush by carefully sliding it downward from its position.



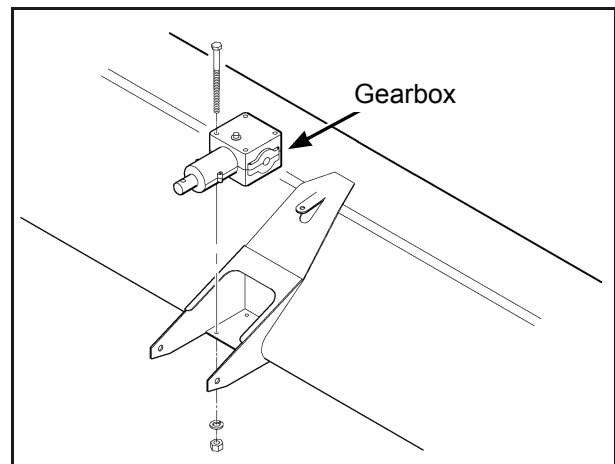
Remove Brush from Broom Housing

- Install the new brush by reversing the removal procedure.

Rotary Broom Gearbox

Remove and replace the gearbox as follows:

- Stop the tractor engine, set the parking brake, and remove the ignition key.
- Loosen the set screw fastening the driveline female half and slide the driveline off the gearbox shaft.
- Remove the four (4) bolts, lock washers, and hex nuts that fasten the gearbox to the broom housing.
- Loosen two (2) set screws on the chain drive shaft and slide it from the gearbox drive shaft.
- Replace the gearbox by reversing the removal procedures.



Replace Rotary Broom Gearbox

Rotary Broom Drive Chain

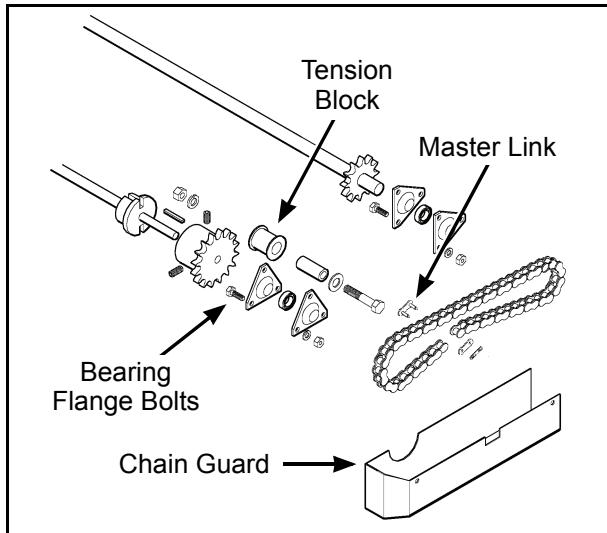
The drive chain should be replaced if, when adjusted properly, it can be pulled away from the front of the drive sprocket **more than 1/2 the height of a tooth on the sprocket**. Running the rotary broom with a worn chain **increases wear on the sprockets**.

- Remove the chain guard. Refer to **LUBRICATION of Rotary Broom Drive Chain** in the **Lubrication Section**.
- Loosen the bearing flange mounting nuts and bolts. Position the chain tension block so that the chain has as much slack as possible. Tighten the bearing flange mounting nuts and bolts slightly to hold the bearing flange in this position.

Walker

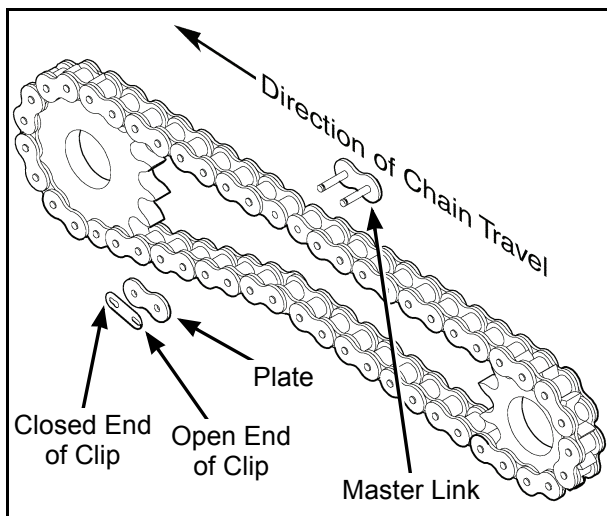
SERVICE INSTRUCTIONS

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Remove Chain Guard and Loosen Chain Tension

3. Turn the brush drive shaft until the master link for the chain is accessible.
4. Remove the master link from the chain and remove the chain from the sprocket.
5. Place the new chain on the sprockets and install the master link. Be sure to install the clip on the master link properly. The **closed end of the clip** should point in the **direction of chain travel**.

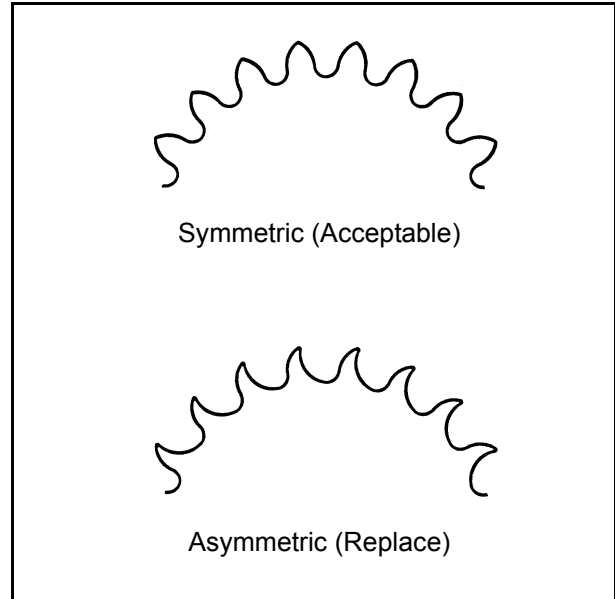


Replace Drive Chain

6. Adjust the chain. Refer to **ADJUSTMENTS of Rotary Broom Drive Chain Tension** in this section.
7. Reinstall the chain guard by reversing the removal procedures.

Rotary Broom Drive Sprocket

A sprocket should be replaced **when the teeth become asymmetric** (when the front side of a tooth is a different shape than the back side of the tooth).



Sprocket Wear

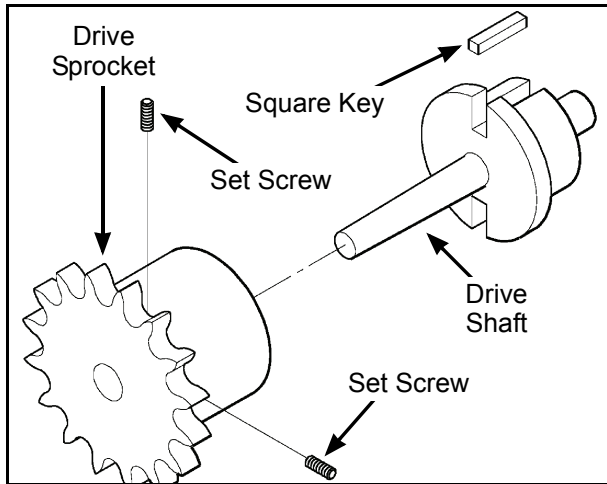
NOTE: Generally; a small sprocket wears faster than a large sprocket.

1. Remove the chain guard and drive chain. Refer to **REPLACING/REPAIRING of Rotary Broom Drive Chain** in this section.
2. Loosen the set screws that fasten the sprocket to the drive shaft.
3. Slide the sprocket off the drive shaft. Use a puller if necessary.
4. If necessary, clean off the end of the drive shaft with an emery cloth or a wire brush.
5. Slide the sprocket onto the drive shaft and align the slot in the new sprocket with the square keyway on the drive shaft.
6. Place the key in the keyway on the drive shaft.

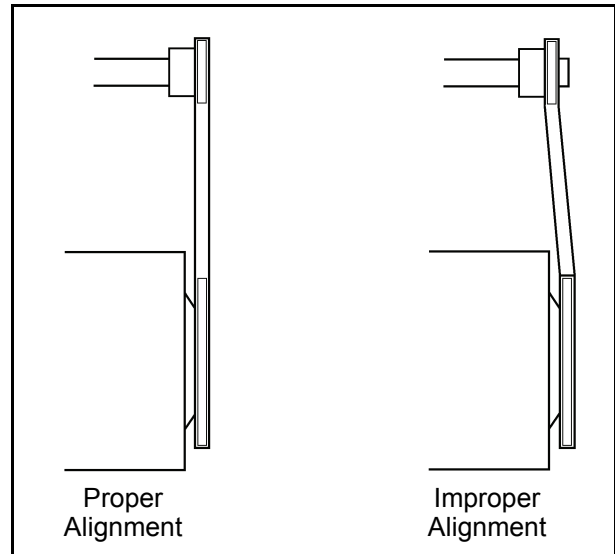
Walker

SERVICE INSTRUCTIONS

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Remove and Replace Sprocket



Check Sprocket Alignment with Chain Installed

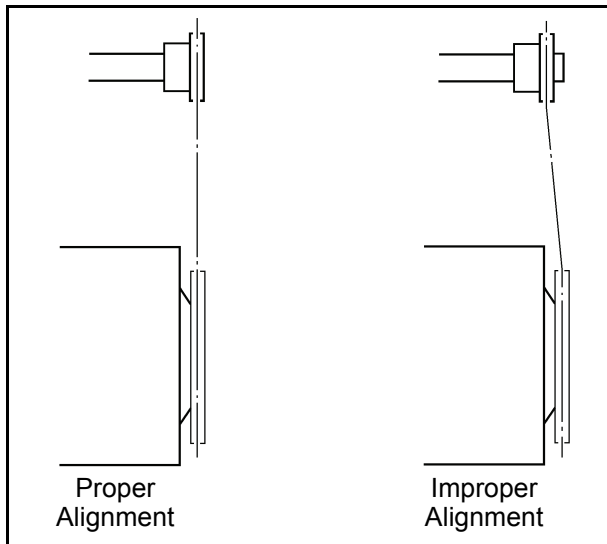
12. Reinstall the chain guard by reversing the removal procedures.

Two-Stage Snowblower Cutting Edge

NOTE: The cutting edge of the snowblower is **reversible** and needs to be replaced only when **both the top and bottom edges have worn**.

Replace the snowblower cutting edge as follows:

1. Remove the six (6) 5/16-NC hex nuts and 5/16 in. lock washers from the rear of the snowblower housing, behind the cutting edge. Remove the six (6) 5/16-NC x 1 in. carriage bolts from the front of the cutting edge.
2. If only **one edge** of the blade is **dulled or nicked**, rotate the blade 180 degrees. (The sharp edge should now be at the bottom.) Reinstall the cutting edge onto the snowblower housing by reversing the removal procedure.
3. If **both edges** are **dull or nicked**, remove the cutting edge and install a new one by reversing the removal procedure.



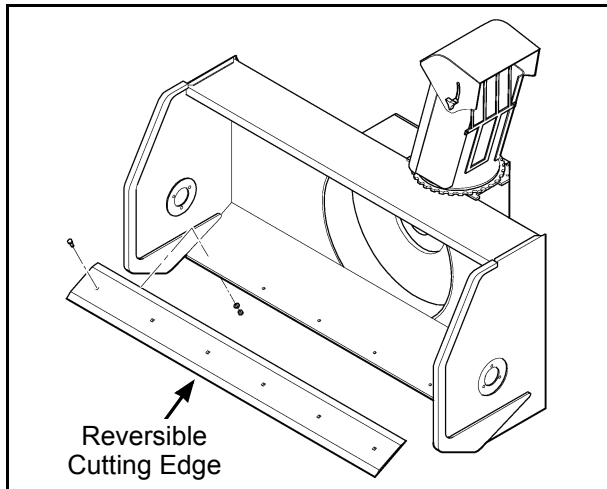
Align Sprockets

7. Position the sprocket on the drive shaft so it is aligned with the chain drive shaft sprocket.
8. When the sprockets are aligned properly, tighten the set screw in the drive shaft sprocket.
9. Install chain and adjust the chain tension. Refer to **ADJUSTMENTS of Rotary Broom Drive Chain Tension** in this section.
10. With the chain installed, recheck the sprocket alignment.
11. Lubricate the drive chain. Refer to **LUBRICATION of Rotary Broom Drive Chain** in this section.

Walker

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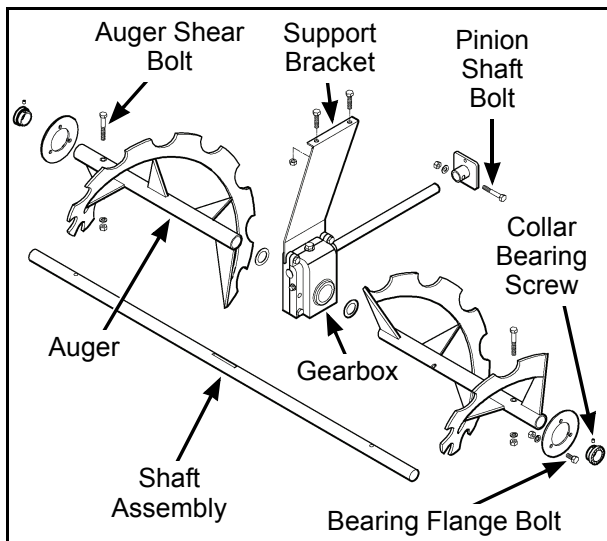


Snowblower Cutting Edge Replacement

Two-Stage Snowblower Gearbox

Remove and replace the gearbox as follows:

1. Stop the tractor engine, set the parking brake, and remove the ignition key.



Replace Snowblower Gearbox

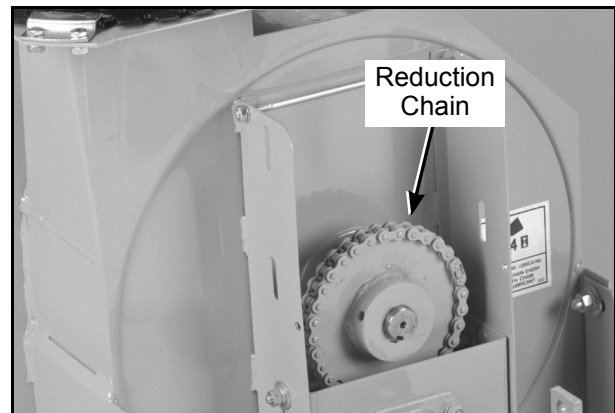
2. Remove the three (3) 5/16 nuts and the three (3) 5/16 x 3/4 bolts holding the bearing flanges on each end of the snowblower. Loosen the (2) two set screws on each collar bearing.
3. Remove the 5/16 nut and the 5/16 x 2 hex pinion shaft bolt.
4. Remove the two (2) 5/16-NC nylon locknuts and the two (2) 5/16-NC x 1-1/4 in. hex bolts fastening the support bracket and gearbox to the snowblower frame.

5. Hold and move the gearbox/auger assembly to the left and the right side will slide out. Slide the left side out.
6. Remove the two (2) 5/16-18 auger shear bolts and two (2) 5/16 nuts. Remove augers from gearbox/shaft assembly.
7. Replace the gearbox by reversing the removal procedures.

Two-Stage Snowblower Reduction Chain

The reduction chain should be replaced if, when adjusted properly, it can be pulled away from the front of the reduction sprocket **more than 1/2 the height of a tooth on the sprocket**. Running the snowblower with a worn chain **increases wear on the sprockets**.

1. Remove the 1/4 x 7-1/2 in. bolt, lock washer, and nut from the reduction box cover.
2. Remove the box cover from the reduction box.



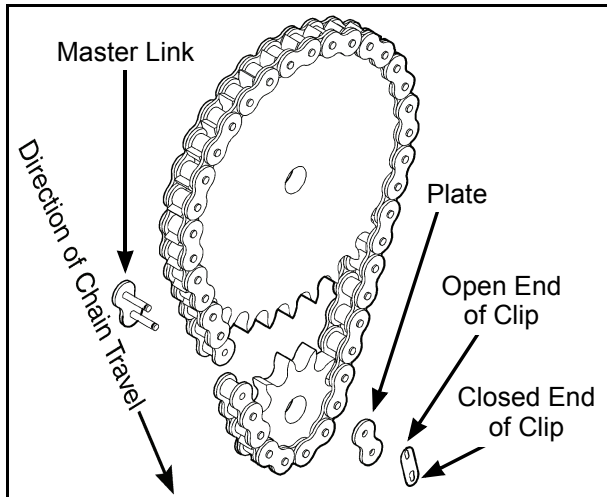
Remove Reduction Box Cover

3. Turn the reduction box drive shaft until the master link for the chain is accessible.
4. Remove the master link from the chain and remove the chain from the sprocket.
5. Place the new chain on the sprockets and install the master link. Install the clip on the master link properly. The **closed end of the clip** should point **in the direction of chain travel**.

Walker

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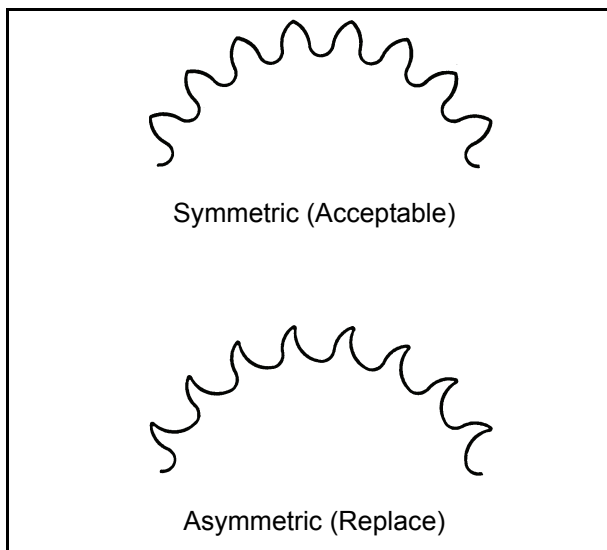


Replace Reduction Chain

- Adjust the chain tension. Refer to **ADJUSTMENTS of Two-Stage Snowblower Reduction Chain Tension** in this section.
- Reinstall the reduction box cover by reversing the removal procedures.

Two-Stage Snowblower Reduction Sprocket

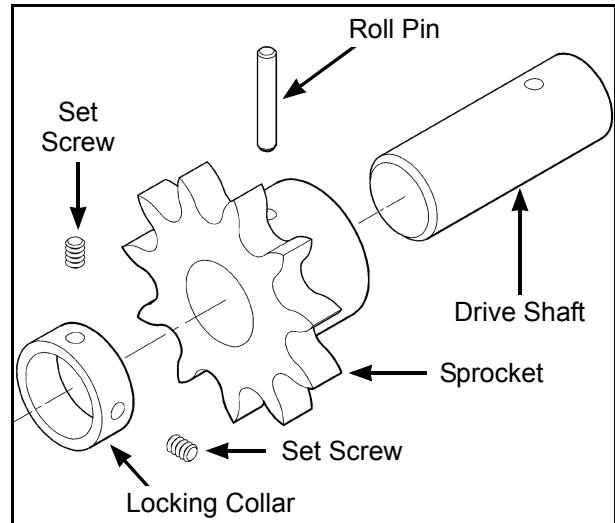
A sprocket should be replaced **when the teeth become asymmetric** (when the front of a tooth is a different shape than the back side of the tooth).



Reduction Sprocket Wear

NOTE: Generally, a small sprocket wears faster than a large sprocket.

- Remove the reduction box cover and reduction chain. Refer to **REPLACING/REPAIRING of Two-Stage Snowblower Reduction Chain** in this section.
- Remove roll pin.
- Loosen the set screws that fasten the sprocket to the fan assembly by applying heat to the thread sealant used on these screws during assembly.
- Slide the sprocket off the fan assembly. Use a puller if necessary.
- Position the new sprocket on the fan assembly. Install roll pin through sprocket in drive shaft. Apply Loctite® Threadlocker to set screws before tightening.



Remove and Replace Sprocket

- Install chain and adjust the chain tension. Refer to **ADJUSTMENTS of Two-Stage Snowblower Reduction Chain Tension** in this section.
- Lubricate the reduction chain. Refer to **LUBRICATION of Two-Stage Snowblower Reduction Chain** in the **Lubrication Section**.
- Reinstall the reduction box cover by reversing the removal procedures.

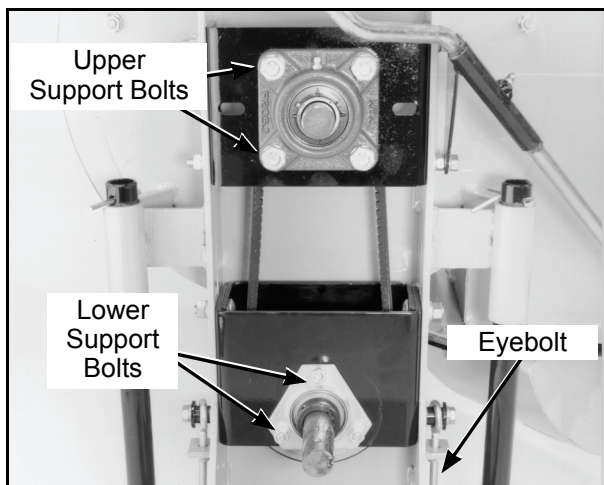
Walker

SERVICE INSTRUCTIONS

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Debris Blower Drive Belt

1. Remove the belt guard from the debris blower housing by removing the two (2) cover pins and hairpins securing it to the housing.
2. Loosen the three (3) nuts and three (3) bolts on lower pulley bearing support and the adjustment nut on the lower end of each (2) eyebolts to release belt tension.
3. Loosen the two (2) set screws securing the upper pulley bearing to the shaft. Unbolt and remove the upper pulley bearing support.
4. Install the new drive belt and reinstall the upper pulley bearing support. Secure the bearing on the shaft by tightening the two set screws.
5. Adjust the belt tension. Refer to **ADJUSTMENTS of Debris Blower Drive Belt Tension** in this section. Tighten fasteners securely and reinstall belt guard by reversing the removal procedures.

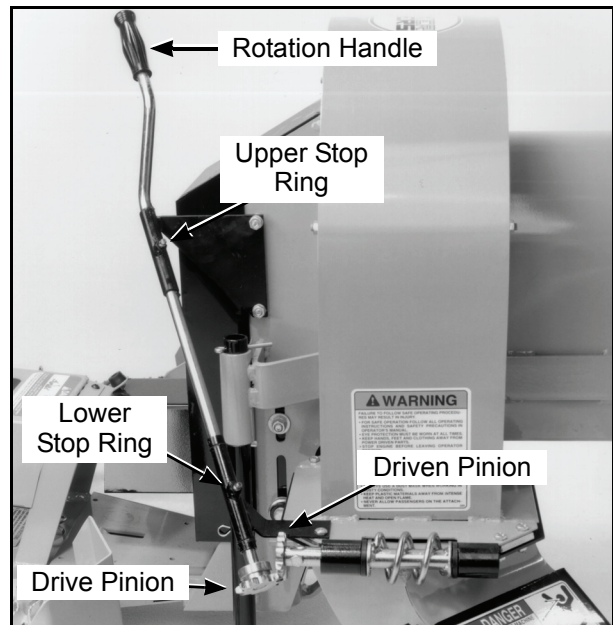


Debris Blower Drive Belt

Debris Blower Rotation Pinions

1. Remove the drive pinion from the rotation handle by loosening the set screw and pulling off the pinion.
2. Remove the rotation handle lower stop ring and pull up on the rotation handle. Loosen set screw in upper stop ring. Pull rotation handle up out of work way. Unbolt and remove the driven pinion.
3. Install the new driven pinion and tighten the nut and bolt securely.

4. Lower the rotation handle back into its original position and reinstall the lower stop ring. Position the new drive pinion flush with the shaft and securely tighten the pinion set screw.
5. Adjust the rotation pinions as instructed in **ADJUSTMENTS of Debris Blower Rotation Pinions** in this section. Securely tighten the set screw of each stop ring.



Debris Blower Rotation Pinions

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SERVICE INSTRUCTIONS

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SB36 Snowblower ending S/N 2001-1216



WARNING

To prevent accidental engine starting when replacing parts or repairing the machine, remove the key from the ignition switch and disconnect the fuel solenoid wire [diesel engines] or the spark plug wire(s) [gasoline engines].



CAUTION

ALWAYS use genuine factory replacement parts. Substitute parts CAN result in product malfunction and possible injury to the operator and/or others.

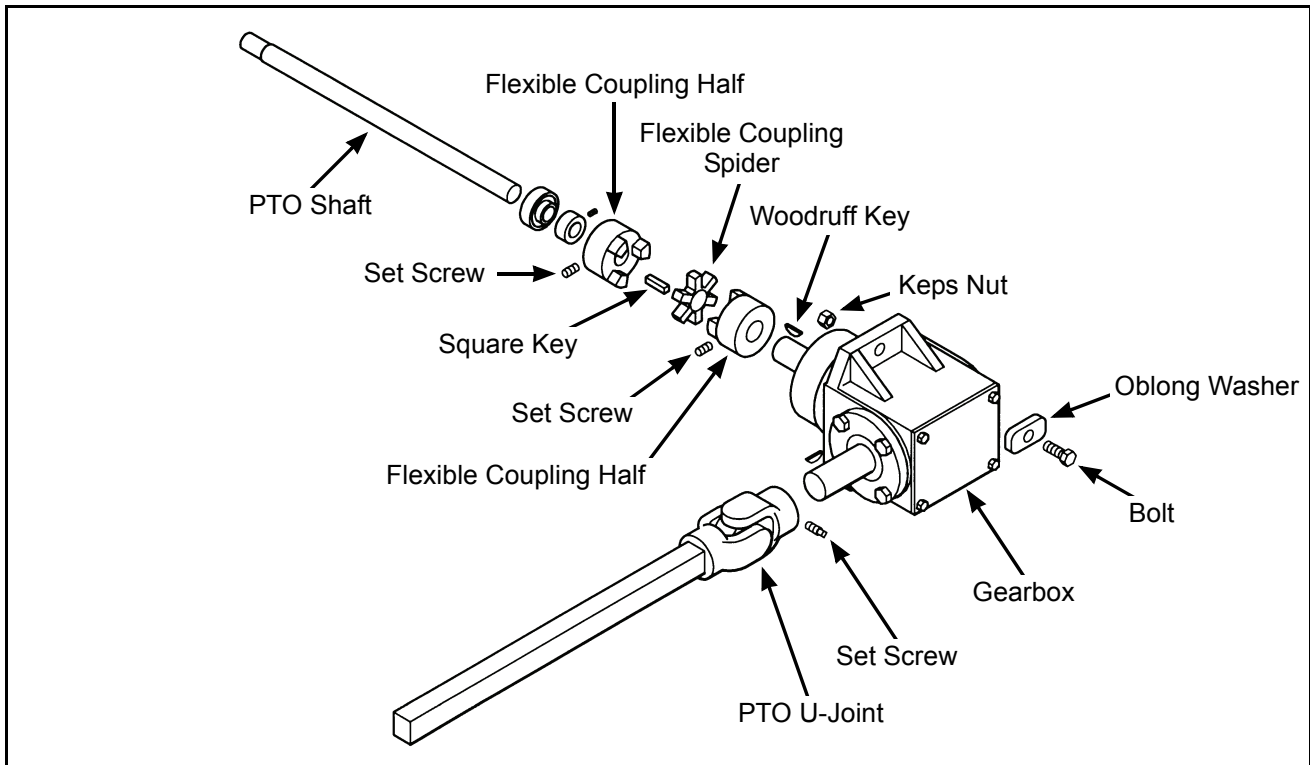
Gearbox Replacement

Remove and replace the gearbox as follows:

1. Remove the gearbox cover. Two (2) bolts (one on each side) fasten the cover to mounting tabs on the frame.
2. Loosen the set screw fastening the PTO U-joint to the gearbox shaft and slide the PTO shaft off the gearbox shaft.
3. Remove the two (2) bolts, oblong washers, and Keps nuts that fasten the gearbox to the snowblower frame.
4. Remove the gearbox from the snowblower frame.

NOTE: The flexible coupling spider will be loose; be sure to keep track of it. A good way to do this is to tape it in place on the flexible coupling half that is attached to the drive shaft.

5. Replace the gearbox by reversing the removal procedures.



Replace Gearbox

Walker

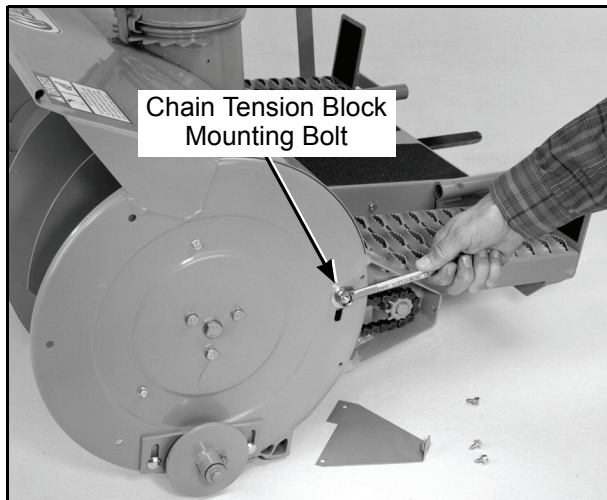
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Drive Chain

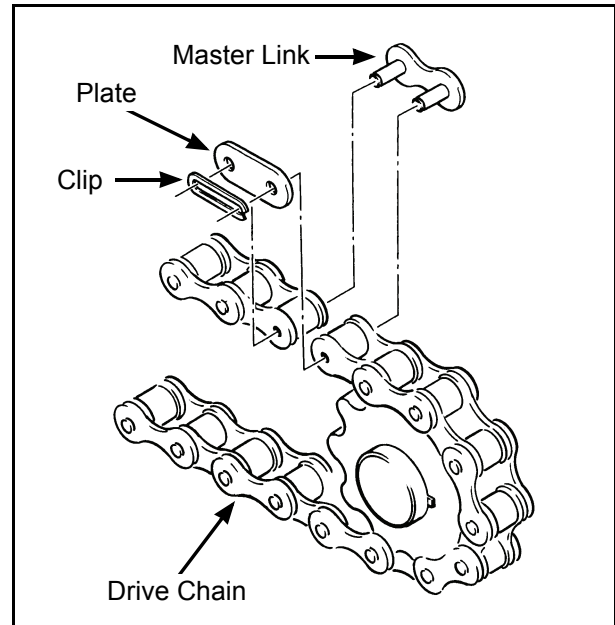
The drive chain should be replaced if, when adjusted properly, it can be pulled away from the front of the auger sprocket **more than 1/2 of the height of a tooth on the sprocket**. Running the snowblower with a worn chain **increases wear on the sprockets**.

1. Remove the chain guard cover and the LH auger guard. Refer to **LUBRICATION of Drive Chain** in the **Lubrication Section** for removing chain guard cover.
2. Loosen the chain tension block mounting nut and bolt. Position the chain tension block so the chain has as much slack as possible. Tighten the chain tension block mounting nut and bolt slightly to hold the chain tension block in this position.



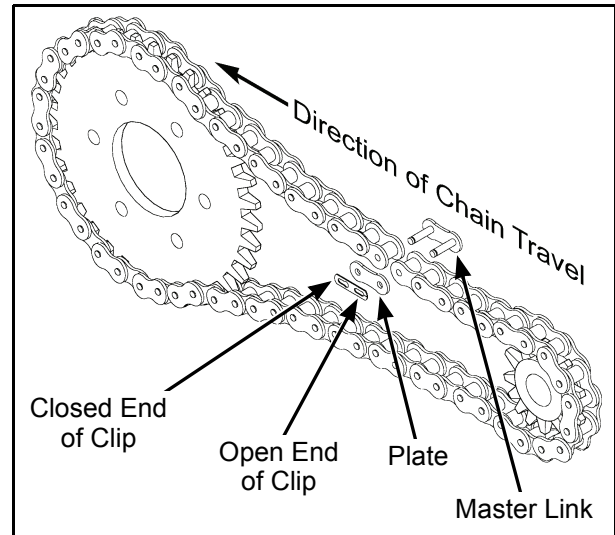
Loosen Chain Tension

3. Turn the auger until the master link for the chain is accessible.
4. Remove the master link from the chain and remove the chain from the sprockets.



Remove Master Link

5. Place the new chain on the sprockets and install the master link. Be sure to install the clip on the master link properly. The **closed end of the clip** should point **in the direction of chain travel**.



Proper Master Link Clip Installation

6. Adjust the chain. Refer to **ADJUSTMENTS of Drive Chain Tension** in this section.
7. Reinstall the auger guard and the chain guard by reversing the removal procedures.

Walker

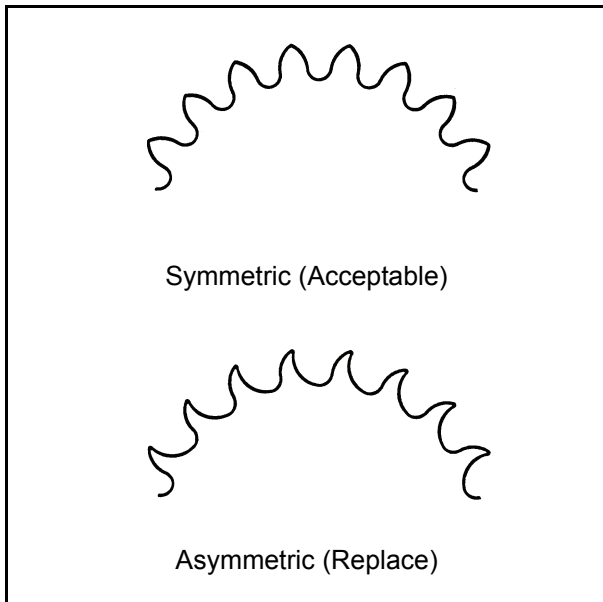
SERVICE INSTRUCTIONS

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Sprockets

A sprocket should be replaced **when the teeth become asymmetric** (when the front side of a tooth is a different shape than the back side of the tooth).

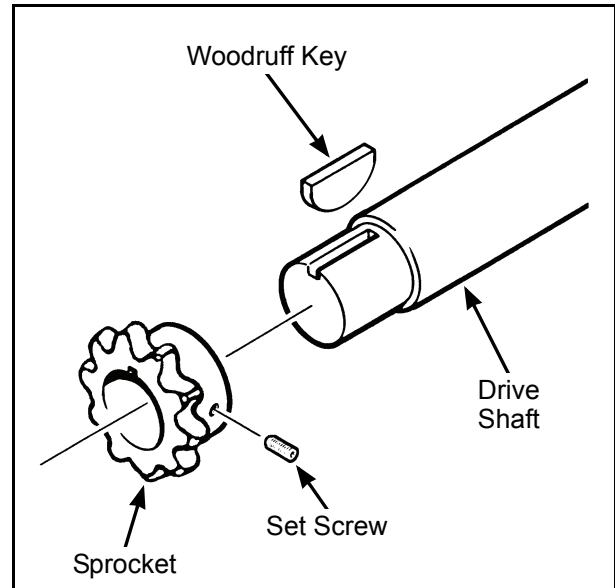
NOTE: Generally; a small sprocket wears faster than a large sprocket.



Sprocket Wear

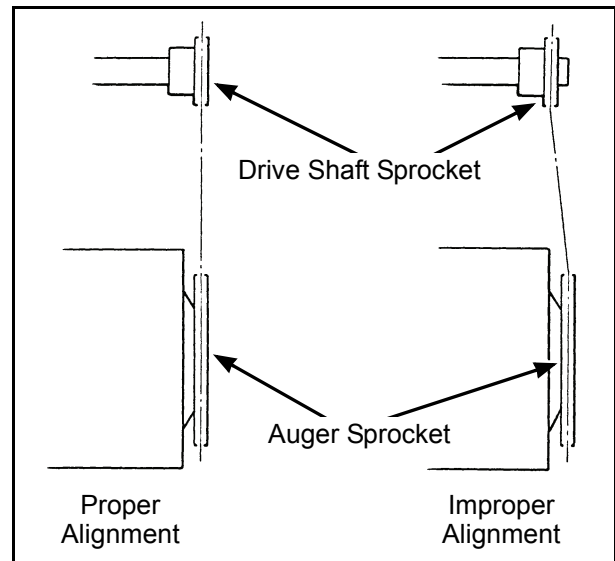
Drive Shaft Sprocket Replacement

1. Remove the chain guard cover, auger guard, and drive chain. Refer to **REPLACING/REPAIRING of Drive Chain** in this section.
2. Loosen the set screw that fastens the sprocket to the drive shaft.
3. Slide the sprocket off the drive shaft. Use a puller if necessary.
4. If necessary, clean the end of the drive shaft with an emery cloth or a wire brush.
5. Place the Woodruff key in the keyway on the drive shaft.
6. Align the slot in the new sprocket with the Woodruff key and slide the sprocket onto the drive shaft. Make sure the Woodruff key is in place between the driveshaft and sprocket.



Remove and Replace Sprocket

7. Position the sprocket on the drive shaft so it is aligned with the auger sprocket. To check alignment, look at the drive shaft sprocket, over the top of the auger sprocket, from the front of the snow-blower.



Align Sprockets

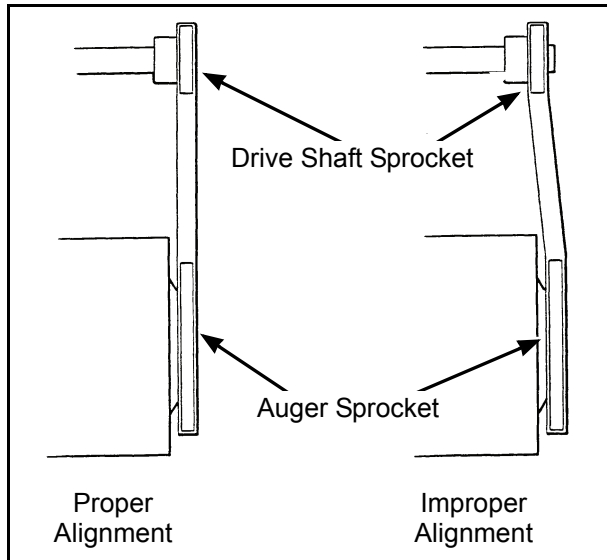
8. When the sprockets are aligned properly, tighten the set screw in the drive shaft sprocket.
9. Reinstall and adjust the drive chain by reversing the removal procedures. Refer to **ADJUSTMENTS of Drive Chain Tension** in this section.

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10. Recheck the sprocket alignment with the chain installed.



Check Sprocket Alignment with Chain Installed

11. Lubricate the drive chain. Refer to **LUBRICATION of Drive Chain** in the **Lubrication Section**.
12. Reinstall the auger guard and chain guard by reversing the removal procedures.

Auger Sprocket Replacement

1. Remove the chain guard cover, both auger guards, and the drive chain. Refer to **REPLACING/REPAIRING of Drive Chain** in this section.
2. Place blocks under the ends of the auger to support it when the bolts are removed from the ends of the auger shaft.
3. Remove the three (3) bolts that fasten the auger shaft key plate to the drive chain side of the snowblower housing.
4. Remove the two (2) bolts that fasten the auger shaft at each side of the snowblower housing.
5. Remove the auger from the snowblower housing. There is a spacer washer on each end of the auger shaft.
6. Remove the six (6) bolts that fasten the sprocket to the auger and remove the sprocket.
7. Install the new sprocket.
8. Reinstall and tighten the sprocket bolts.

9. Make sure the spacer washers are **on the ends of the auger shaft**.

10. Place the auger back in the snowblower housing.
11. Reinstall the bolts in both ends of the snowblower housing and auger shaft, but **do not tighten**.
12. Slide the auger shaft key plate into position on the end of the auger shaft between the spacer washer and the snowblower housing.
13. Rotate the auger shaft as necessary to align the auger shaft key plate with the three (3) mounting bolt holes.
14. Reinstall and tighten the three (3) mounting bolts for the auger shaft key plate.
15. Make sure that **both spacer washers are on the auger shaft** - not between the end of the auger shaft and the snowblower housing.
16. Retighten the bolts on both sides of the snowblower housing and auger shaft.
17. Reinstall and adjust the drive chain by reversing the removal procedures. Refer to **ADJUSTMENTS of Drive Chain Tension** in this section.
18. Check sprocket alignment after the drive chain is installed. If the sprockets are not aligned:
 - a. Loosen the set screw in the drive shaft sprocket.
 - b. Align the drive shaft sprocket with the auger sprocket.
 - c. Tighten the set screw in the drive shaft sprocket.

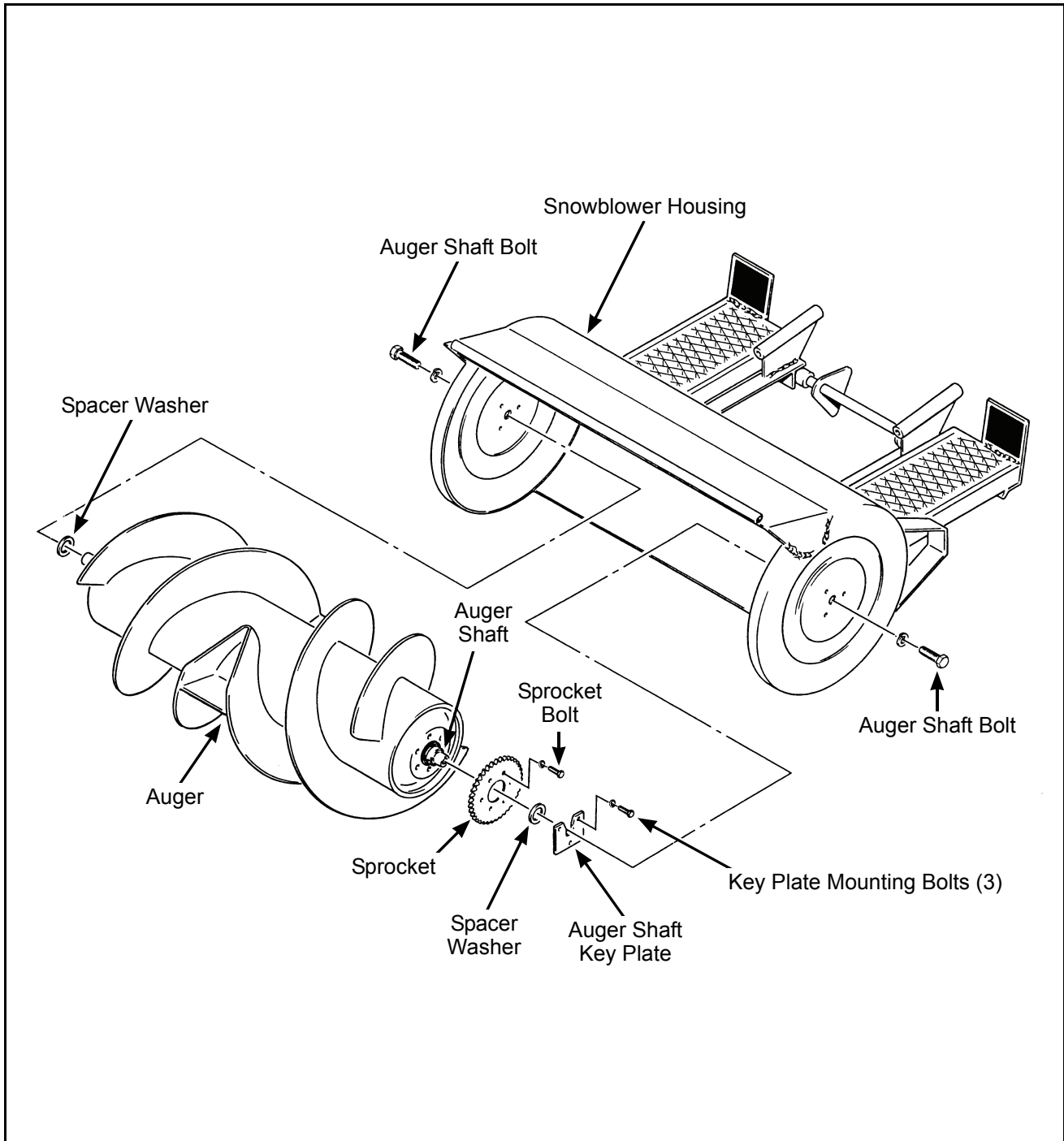
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19. Lubricate the drive chain. Refer to **LUBRICATION** of **Drive Chain** in the **Lubrication Section**.

20. Reinstall the auger guards and the chain guard cover by reversing the removal procedures.



Auger Components

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Scraper Blade

Inspect the scraper blade for wear or damage **before each use**. The blade is hardened and if the gauge wheels (or skid shoes) are properly adjusted, the blade should give a reasonable amount of service before replacement. The blade should be replaced **before** it has worn down to the point where the blade mount on the housing is dragging and wearing.

IMPORTANT: Continued operation with a worn out scraper blade and/or improperly adjusted gauge wheels will result in severe damage to the lower portion of the snowblower housing.

The scraper blade is replaced by removing seven (7) 1/4-20 x 3/4 carriage bolts and nuts.

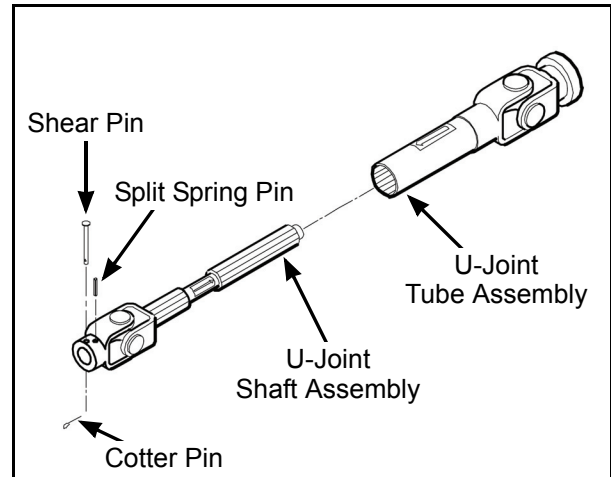
Flexible Coupling Spider

Inspect the flexible coupling spider after **every 25 hours** of operation. If the elastomeric media shows signs of **wear, cracking or deterioration**, the spider should be replaced. Refer to **Gearbox Replacement** in this section for removing and replacing the spider.

U-Joint Shear Pin (After S/N 99-1042)

In case of sudden stoppage of the auger, the PTO U-joint connection to the gearbox has a shear pin to provide **shock load protection** to the drivetrain. When the PTO pin has sheared, use the following procedure to replace it:

1. Remove the gearbox cover. Two (2) bolts (one on each side) fasten the cover.
2. Rotate U-joint on shaft to align the shear pin hole with the hole (and shear pin fragment) in the shaft. Use a punch to drive the remaining portion of the old shear pin out.
3. Install new shear pin and secure with cotter pin.



PTO Shear Pin

IMPORTANT: Use only Walker P/N 8067-10 shear pins for replacement to provide proper shock protection -- these pins are hardened to shear under a specific amount of load.

4. Reinstall the gearbox cover.

Before operating the blower after the shear pin has been replaced, inspect the auger flighting and paddle blades for damage. Also inspect the gearbox and chain drive for any damage. Make sure the auger turns smoothly and freely before resuming operation.

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ADJUSTMENTS - ALL MODELS



DANGER

If the engine must be running to perform a maintenance adjustment, keep hands, feet, and clothing from moving parts. DO NOT wear jewelry or loose clothing.

Safety Switches - Model MC, MD, MT, MTL

There are three (3) safety interlock switches on the tractor; Seat Switch, FSC Neutral - Park Switch, and PTO Switch.

If any of the following conditions occur during starting or operating, a safety interlock switch may be malfunctioning.

Slight adjustments can be made by carefully bending the leaf switch up or down as needed.

- With an operator in the seat, the engine starts with the Forward Speed Control (FSC) and/or the PTO engaged.
- With an operator in the seat, the engine starts but dies soon after the Forward Speed Control (FSC) or PTO is engaged.
- **Without** an operator on the seat, the engine starts and continues to run with the Forward Speed Control (FSC) and/or PTO engaged.
- With an operator in the seat, the Forward Speed Control (FSC) and PTO disengaged and panel horn works, but the starter is not engaging.

Safety Switches - Model MS

There are four (4) safety interlock switches (and one control switch if GHS equipped) on the tractor. Use the panel nuts on the switch body to position each switch for proper activation of the switch. The adjustment procedure for each switch is:

Seat Switch

Adjust switch position in body panel to achieve a 1/32 to 1/16 in. (.79 mm to 1.59 mm) air gap between the switch plunger and seat frame with no weight on the seat. Test for proper operation.

FSC Neutral-Park Switch

1. Place the FSC in **NEUTRAL-PARK** position.
2. Adjust switch to the point where the starter engages when the ignition switch is turned to the start position.
3. Adjust switch position forward an additional 1/2 to 1 turn of the panel nuts.

NOTE: If the switch cannot be adjusted forward enough to achieve proper function, it may be necessary to bend the switch mounting bracket slightly.

PTO Switch(es)

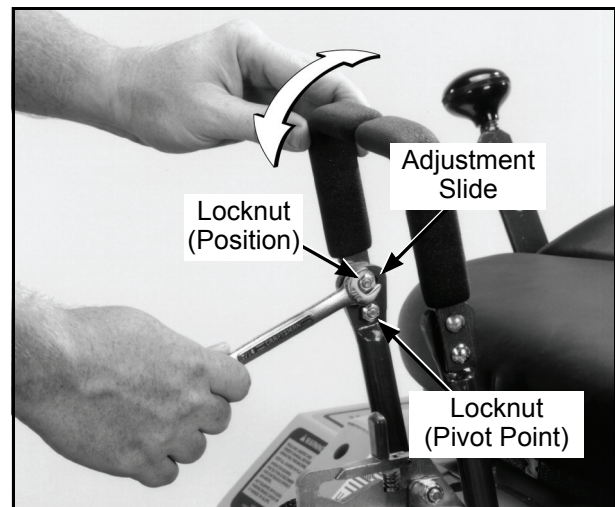
With the PTO engaged, adjust two (2) switches [three (3) if GHS equipped] to the point of activation plus 1 or two 2 turns of the panel nuts. Normally 1/8 to 3/16 in. (3 mm to 5 mm) of plunger travel will activate these switches. Make sure the switches are adjusted so the actuator plate is **not** bottoming out the plunger and striking the switch body.

Tail Wheel Bearing Preload - Model MD, MT, MTL

Preload the tail wheel bearings by tightening the axle nut until the wheel begins to tighten as it turns (not spin freely), then loosen the nut 1/2 to 1 turn. The wheel should spin freely without excessive end play. Lock the axle nut with the set screw in the nut.

Steering Levers - Model MS, MB, MC, MD, MT

An adjustment range of approximately 3 inches is available on the steering levers - the levers can be adjusted forward or aft depending on the arm length of the operator. The levers can be adjusted by loosening the locknut at the pivot point and the locknut holding the lever in position in the adjustment slide. Adjust levers into most comfortable position and tighten both locknuts.



Steering Lever Adjustment

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Blade Clutch (PTO) - Model MC, MT, MTL

Clutch Engagement/Belt Tension

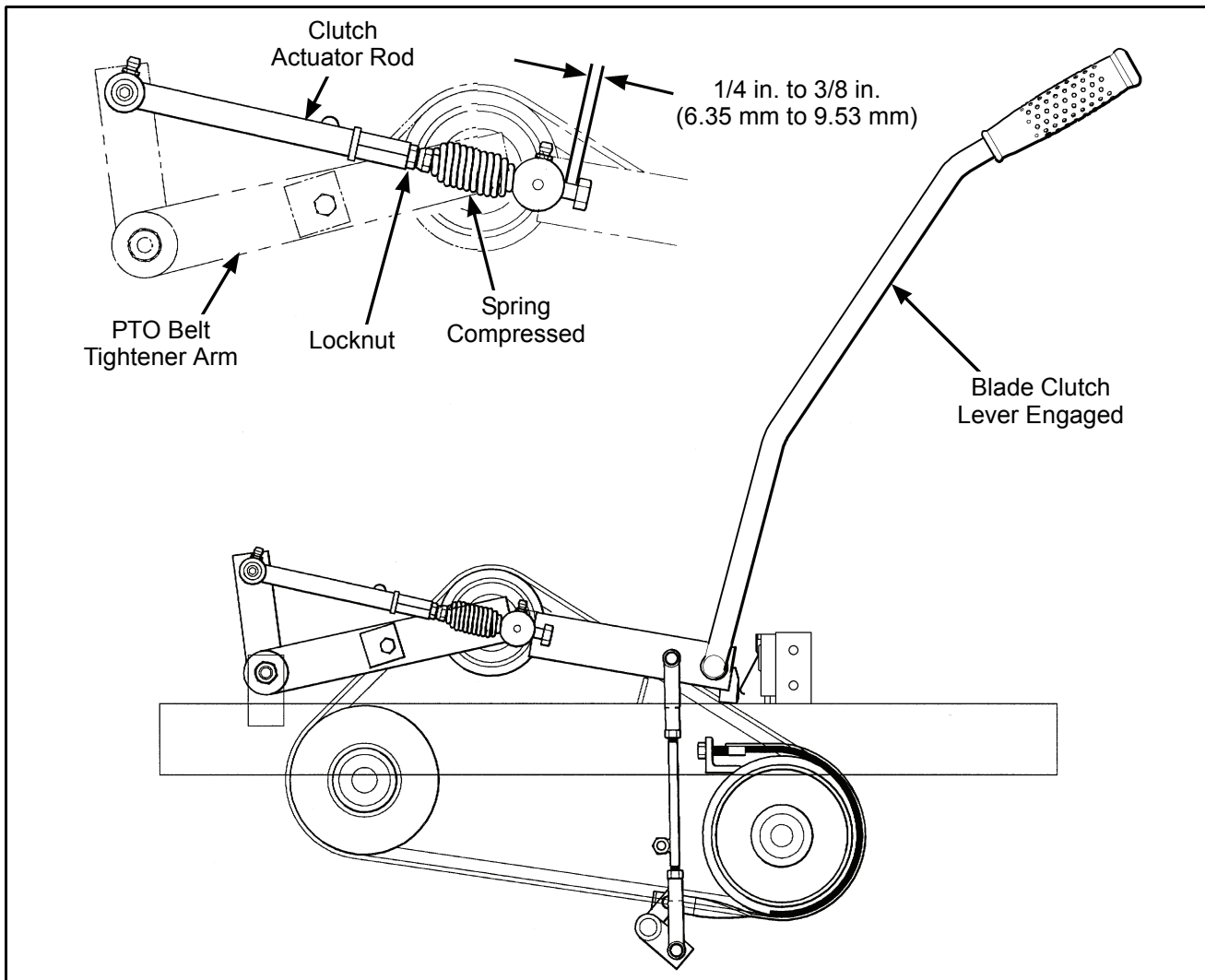
The clutch engagement and PTO belt tension are adjusted using the clutch actuator rod. Initially, after installing a new PTO belt, **after 10 hours and every 100 hours** thereafter, check and adjust for the two dimensions in the clutch actuator rod as shown in the **PTO Clutch Engaged** and **PTO Clutch Disengaged** illustrations.

Model MT, MTL

Adjust the bolt head clearance [1/4 in. to 3/8 in. (6.35 mm to 9.53 mm)] first (clutch engaged), then adjust uncompressed spring length (clutch disengaged). The spring must be adjusted to an uncompressed overall length of 2-1/8 in. (54 mm). If adjustments are needed more frequently than every 100 hours to maintain the linkage dimensions, it may suggest problems with pulley wear or belt misalignment.

Model MC

Adjust the bolt head clearance [1/4 in. to 3/8 in. (6.35 mm to 9.53 mm)] first (clutch engaged), then adjust uncompressed spring length (clutch disengaged). The spring must be adjusted to an uncompressed overall length of 2 in. (51 mm). If adjustments are needed more frequently than every 100 hours to maintain the linkage dimensions, it may suggest problems with pulley wear or belt misalignment.



PTO Clutch Engaged

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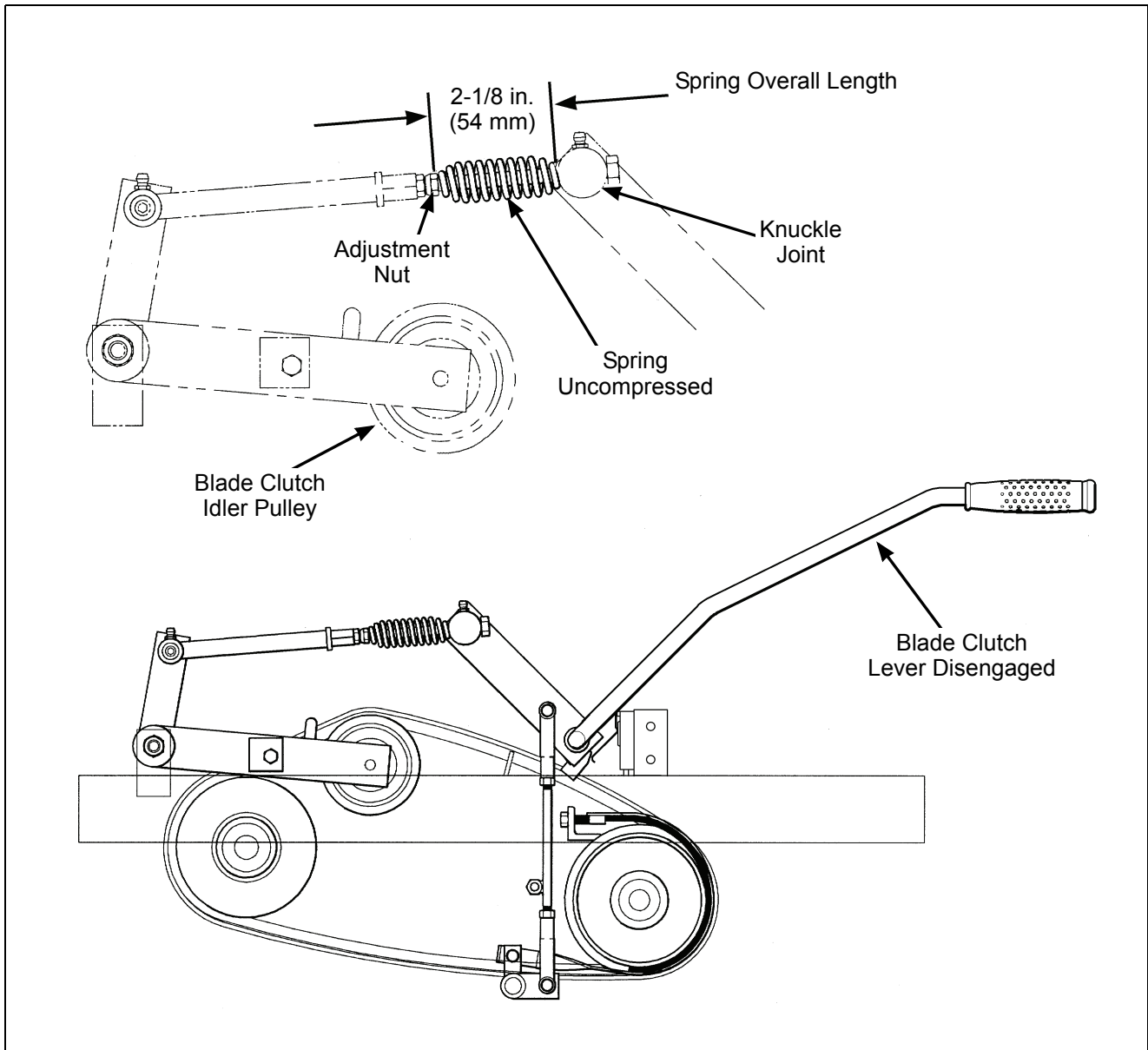
Clutch Disengagement/Brake Action -
Model MC, MT, MTL



WARNING

It is important to check and maintain blade brake action for safe operation of the machine.

The **declutched or disengaged** position of the blade clutch idler pulley is adjustable and is set to give belt release **without excessive slack** and to apply the blade brake. The blade brake is activated by the brake actuator rod linkage to the clutch idler pulley mechanism. The brake is designed to stop the blades within five (5) seconds after disengaging the clutch.

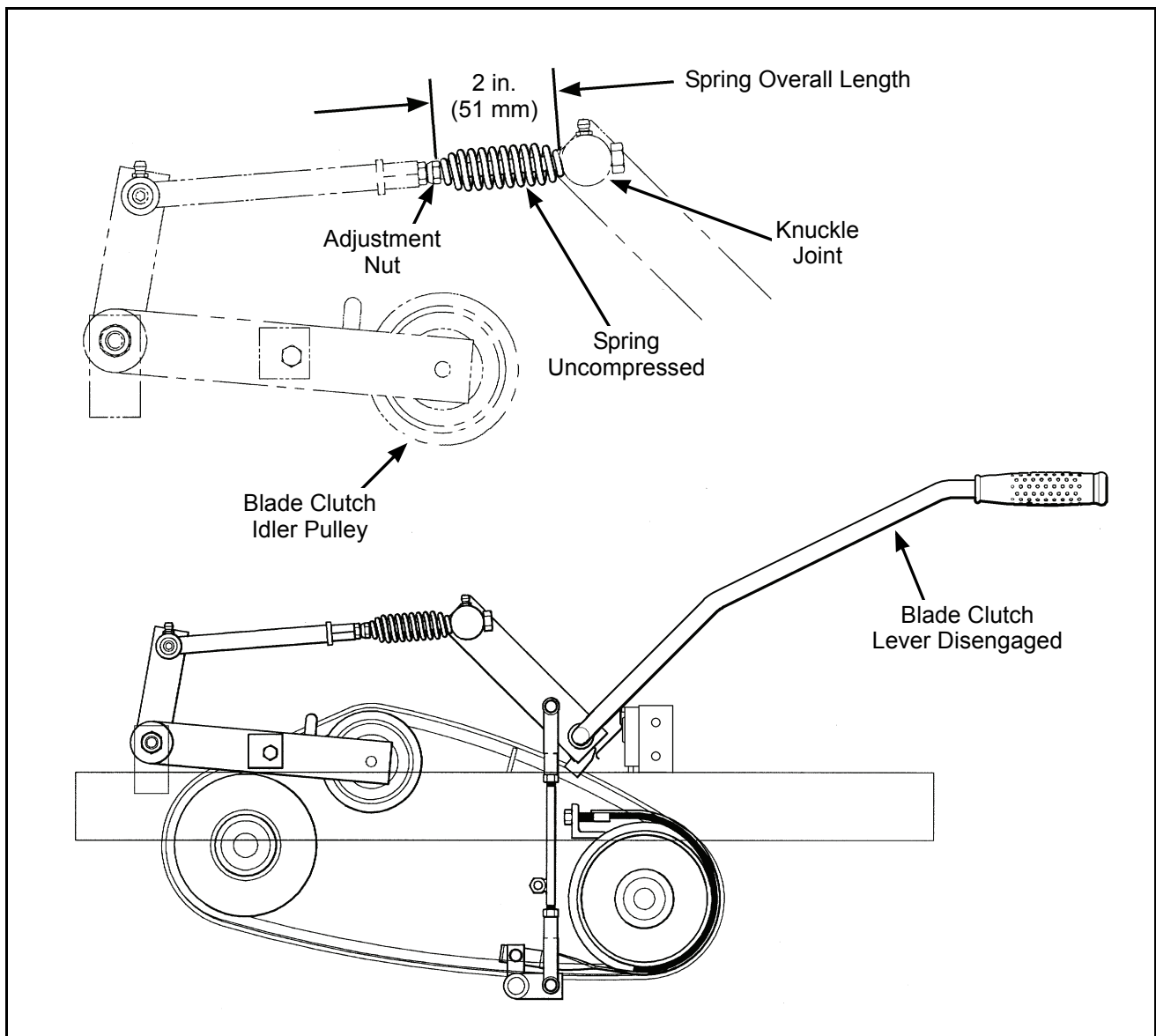


PTO Clutch Disengaged - Model MT, MTL

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PTO Clutch Disengaged - Model MC

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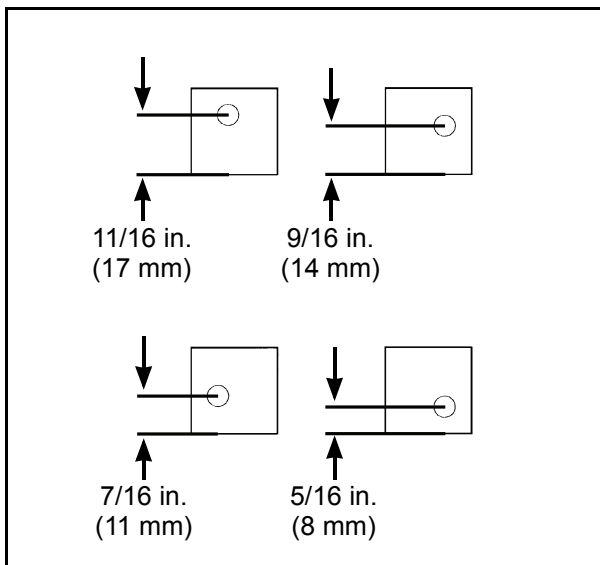
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Use the following procedures to check and adjust clutch disengagement and brake action:

Stop Block Eccentric Adjustment - Step 1

Use the stop block attached to PTO belt tightener arm to set the bottom position of the clutch idler pulley in the disengaged position. The stop block should contact the chassis to stop the clutch idler pulley from moving further down in the disengaged position. **If the stop block is not contacting the chassis** in the disengaged position, it will be necessary to **loosen the brake band adjustment nut**. The stop block is an “eccentric” block that will allow four adjustment positions from 5/16 in. (8 mm) to 11/16 in. (17 mm).

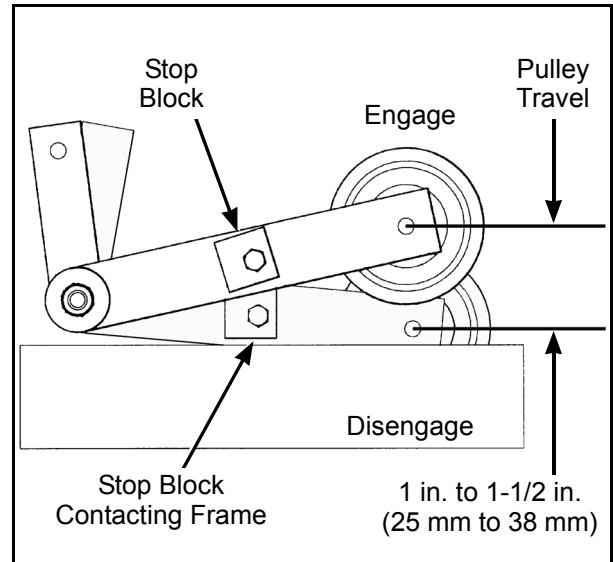


PTO Belt Tightener Stop Block Adjustments

Clutch Idler Pulley Travel Adjustment - Step 2

Adjust the stop block to give 1 in. (25 mm) to 1-1/2 in. (38 mm) pulley travel from “clutch engaged” to “clutch disengaged”. To check and adjust the pulley travel, first engage the clutch, then measure the distance the pulley moves down as the clutch is disengaged and the stop block contacts the frame.

NOTE: The importance of this adjustment is if the pulley travel is excessive and the belt develops too much slack, the belt will derail when disengaged.

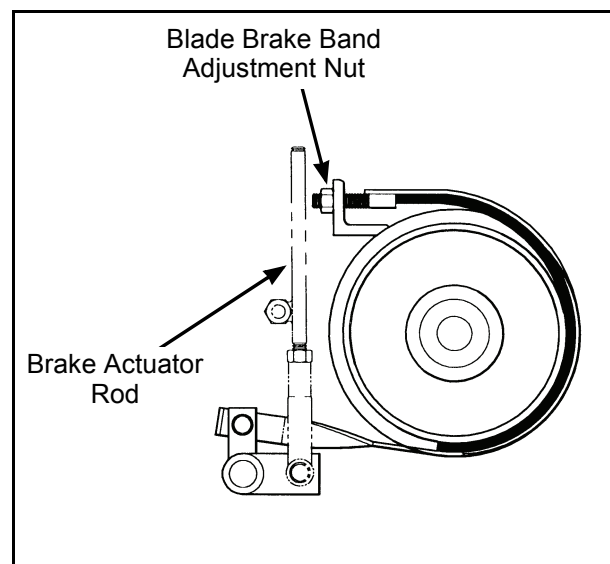


Clutch Idler Pulley Travel Adjustment

Blade Brake Band Adjustment - Step 3

After the pulley travel is set, make the following adjustment as needed:

1. Adjust the blade brake band, using the adjustment nut until there is a gap of approximately 1/8 in. (3 mm) between the PTO belt tightener stop block and chassis. If there are not enough threads on the brake band for adjustment, lengthen the brake actuator rod.

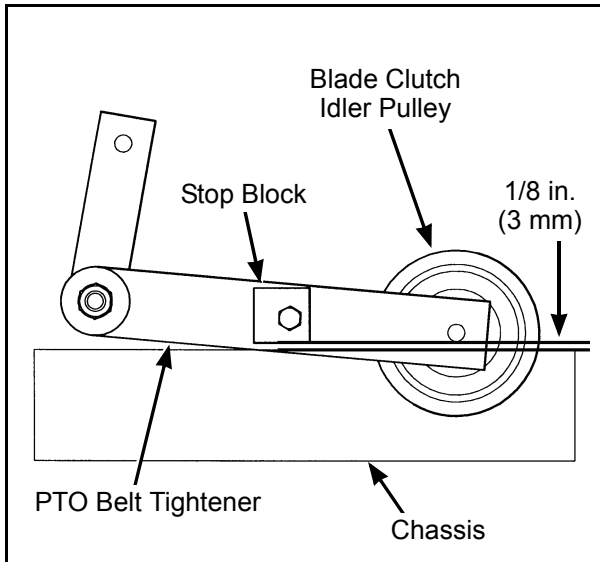


Blade Brake Band Adjustment

Walker

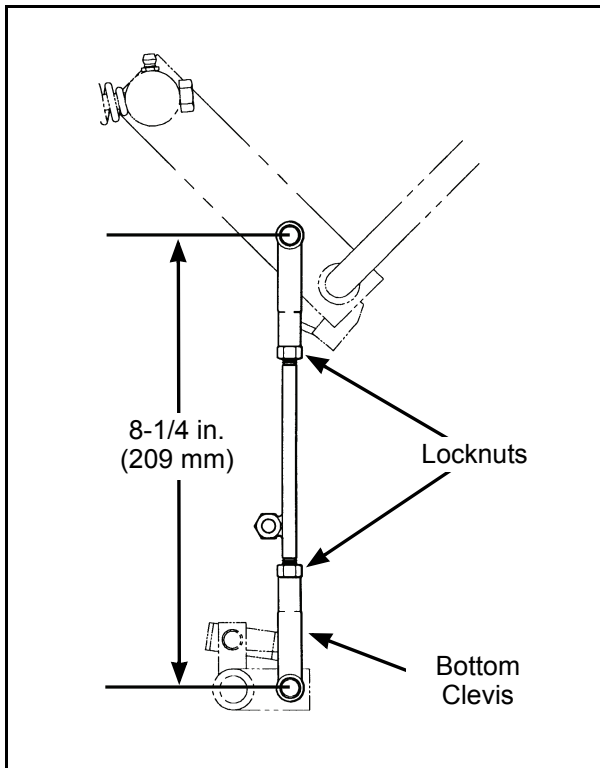
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Blade Brake Band Adjustment

NOTE: The length of the actuator rod is adjusted by disconnecting the bottom clevis and shortening or lengthening accordingly. The standard pre-set length of the actuator rod is set at the factory at 8-1/4 in. (209 mm).



Brake Actuator Rod Adjustment

2. After adjustments are complete, check blade brake action as described in **CHECKING/SERVICING the Blade Brake Action** in the **Maintenance Instructions Section**. If blades do not stop within five (5) seconds, check the following:

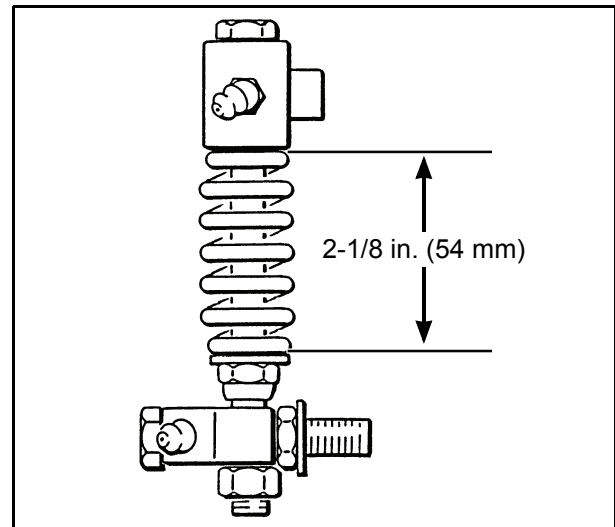
- a. Recheck 1/8 in. (3 mm) gap between stop block and chassis.
- b. Make sure clutch and brake linkage are working freely (no binding).
- c. Check the brake band lining.
- d. Check the brake drum on the pulley. If excessive wear is present, it will be necessary to replace worn parts.

Blade Clutch (PTO) - Model MD

Clutch Engagement/Belt Tension

The clutch engagement and PTO belt tension are adjusted using the clutch actuator rod. Initially, after installing a new PTO belt, **after 10 hours and every 100 hours** thereafter, check and adjust for the three dimensions in the clutch linkage as shown.

Adjust the bolt head clearance [1/4 to 3/8 in. (6 to 10 mm)] first, then adjust spring length. If adjustments are needed more frequently than 100 hours to maintain the linkage dimensions, it may suggest problems with pulley wear or belt misalignment.

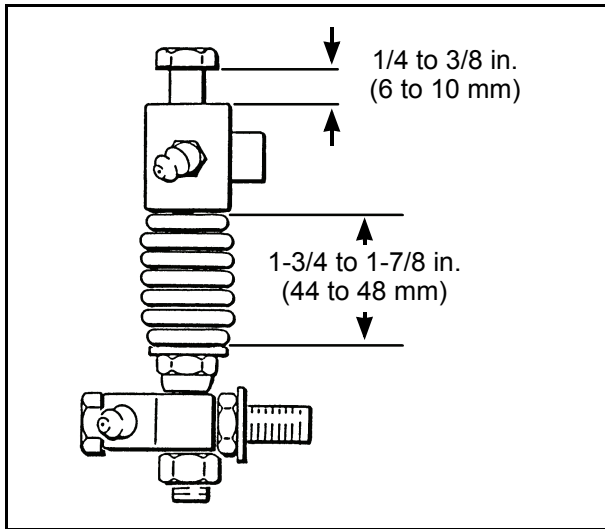


Clutch Linkage Adjustment - Disengaged

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Clutch Linkage Adjustment - Engaged

Clutch Disengagement/Brake Action

WARNING

It is important to check and maintain blade brake action for safe operation of the machine.

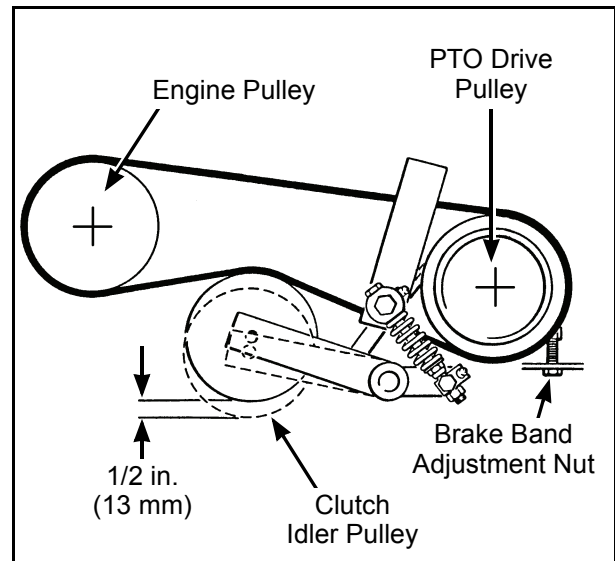
The **declutched or disengaged** position of the blade clutch idler pulley is adjustable and is set to give belt release **without excessive slack** and to apply the blade brake. The blade brake is activated by linkage to the clutch idler pulley mechanism. The brake is designed to stop the blades within five (5) seconds after disengaging the clutch.

Use the following procedure to check and adjust clutch disengagement and brake action:

1. Use the adjustment nut on the brake band (refer to **PTO Clutch Disengagement Adjustment** illustration) to set the position of the clutch idler pulley in the **declutched** position. Adjust the declutched pulley position to give **1/2 in. (13 mm) pulley travel** from "clutch engaged" to "clutch disengaged." To check and adjust the pulley travel, first engage the clutch, then measure the distance the pulley moves down as the clutch is disengaged.

2. After the pulley travel is set, **check blade brake action** as described in **CHECKING/SERVICING the Blade Brake Action** in the **Maintenance Instructions Section**. If the brake does not stop the blades within five (5) seconds, check the following:

- a. Check clearance between the clutch idler pulley and the motor mount when the pulley is in the declutched position. If there is no clearance and the idler pulley rests on the frame, the blade brake will not be applied when the clutch is disengaged. Normally, this problem would be caused by a short engine PTO drive belt. Change the belt (refer to **REPLACING/REPAIRING the Drive Belts** in this section), and readjust pulley travel as described by step 1.



PTO Clutch Disengagement Adjustment

- b. Check both the brake band and brake drum on the drive pulley for wear. Replace worn brake parts and readjust pulley travel as described by step 1 (above).

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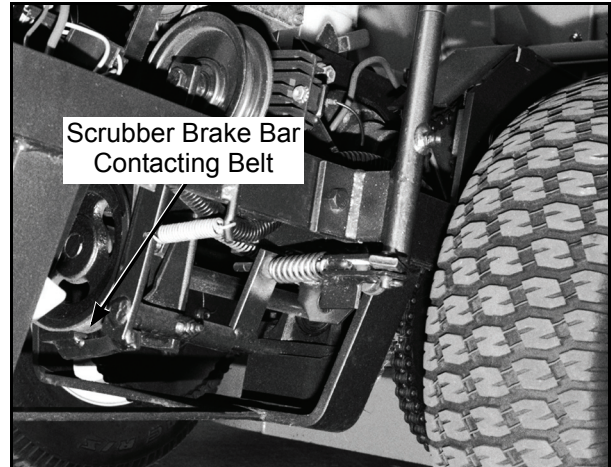
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Blade Brake - Model MS

 **WARNING**

It is important to check and maintain blade brake action for safe operation of the machine.

The mower blade drive (and blower on GHS models) is equipped with a brake system to stop blades within five (5) seconds after disengaging the clutch. A belt scrubber brake acting on the PTO drive belt provides braking action. The brake action is adjusted by **springing or bending the scrubber mount** on GHS models and **bending the scrubber** on SD models. If the brake system malfunctions - blades do not stop within five (5) seconds - adjust or repair the brake as follows:



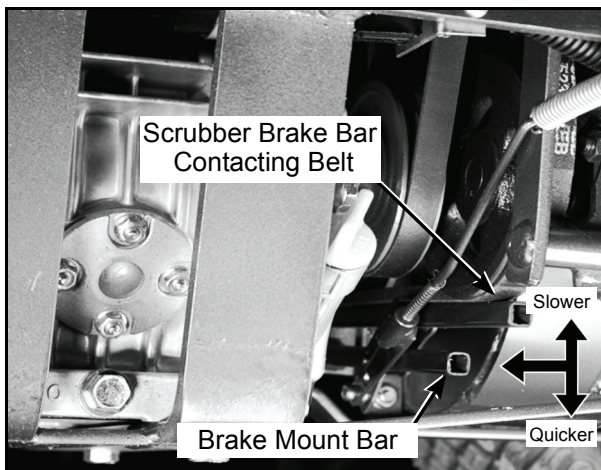
Scrubber Brake Adjustment - SD

Use "trial and error" to adjust scrubber braking action and achieve a stopping time of approximately 4 to 5 seconds after disengaging clutch with full throttle. **Do not exceed five (5) seconds.** Avoid having the brake stop too quickly, as this will reduce PTO drive belt life (burns belt).

Also check for alignment of the brake bar (scrubber) on the belt and make sure bar is **only contacting the back of belt** and not the edges of the pulley(s). For GHS models, it may be necessary to spring the brake mount bar to shift (align) the brake bar on the belt; likewise, the scrubber on SD models is bent for alignment with the belt.

Desired Brake Action	GHS Model Direction of Mount Bend	SD Model Direction of Scrubber Bend
Stronger (Quicker)	Bend Down	Bend Up
Weaker (Slower)	Bend Up	Bend Down

Braking Action Adjustment



Scrubber Brake Adjustment - GHS

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Blade Clutch (PTO) - Model MW

Clutch Disengagement/Brake Action

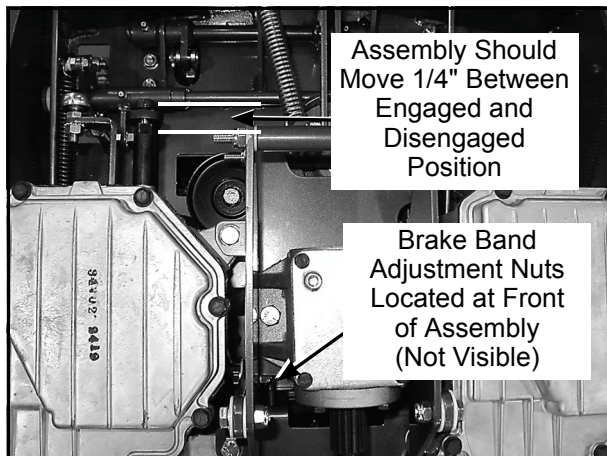
WARNING

It is important to check and maintain blade brake action for safe operation of the machine.

The blade brake is activated by linkage to the clutch pulley mechanism. The brake is designed to stop the blades within five (5) seconds after disengaging the clutch.

Use the following procedure to check and adjust clutch disengagement and brake action:

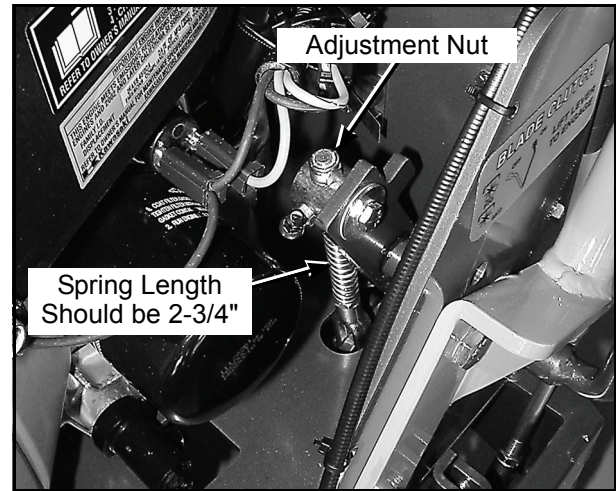
1. Evenly adjust the nuts on the end of the brake band to achieve 1/4" of travel of the PTO gearbox assembly between the engaged and the disengaged position (refer to **PTO Gearbox Engagement Photo**).



PTO Gearbox Engagement
(view from underside of tractor)

2. Use the adjustment nut on the PTO clutch actuator assembly (refer to **PTO Clutch Linkage Adjustment** photo) to set the tension applied by the PTO clutch lever. The adjustment nut is initially set to achieve an approximate measurement of 2-3/4" between the jam nut and the knuckle joint. As the belt and pulleys wear, it will be necessary to tighten the adjustment nut in order to prevent belt slippage--this adjustment is the same in the Engaged and Disengaged positions.

Do not overtighten the adjustment nut. This may cause damage to the clutch linkage and the PTO belt.



PTO Clutch Linkage Adjustment

Transmission Control - Model MS, MC, MD, MT, MTL

IMPORTANT: The proper adjustment of the transmission control stops is **essential** for efficient operation and life of the transmission. These stops are properly adjusted at the factory and should only require readjustment if the transmission or related control linkage is removed or changed.

NOTE: It would not be unusual for a new machine, after initial 5 or 10 hours of operation, to begin to not travel straight (this is due to the break-in of the transmissions). In this case, proceed to *Straight Ground Travel Adjustment - Step 4*.

IMPORTANT: The following adjustment procedures are sequential. Check and adjust each function in the order given.

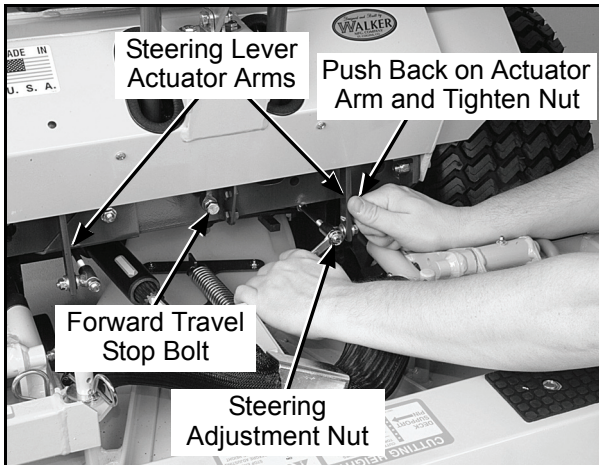
Set Forward Travel Limit (Stop) - Step 1

1. Move the Forward Speed Control (FSC) lever to the most **FORWARD** position.
2. Check clearance of the RH and LH steering lever actuator arms with the frame and **adjust forward stop bolt** so each lever clears the frame by at least 1/16 in. (1.6 mm). Clearance of the arm to the frame should be checked while **applying pressure back** on the arm to remove any slack in the linkage.
3. Tighten the jam nut on the forward travel stop adjusting bolt.

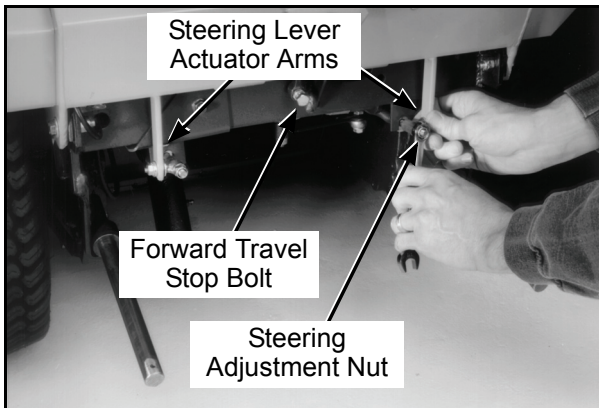
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Forward Speed Control Stop and Steering Lever Adjustment - Model MT



Forward Speed Control Stop and Steering Lever Adjustment - Model MC

Steering Lever End Play Adjustment - Step 2

1. Position the FSC lever to the most **FORWARD** position.
2. Loosen the adjustment nut on each steering lever actuator until end play develops between the lever actuator and the adjustment nut (sliding on transmission control rod).
3. Hold the actuator back as shown (against the spring pressure) and tighten the nut to the point where the end play is removed and **then tighten two additional turns**.

IMPORTANT: If the **adjustment nut is too loose** (end play exists) excessive loads are placed on transmission internal control stops. If the **adjustment nut is too tight** (preferred condition), the maximum forward travel speed is reduced.

Neutral Function Adjustment - Step 3

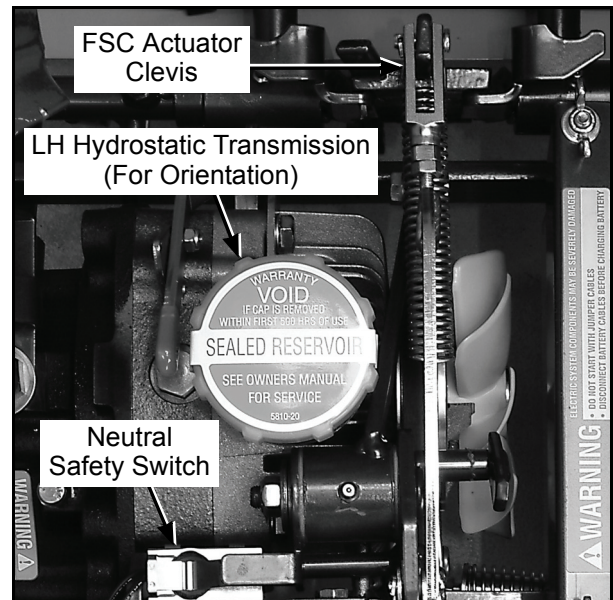
1. Move the FSC lever to the **NEUTRAL-PARK** position (rear travel limit).
2. Start the engine (operate first at idle and then normal operating speeds) and **check for movement of the drive wheels**.

NOTE: If the engine will not start, check and adjust the neutral safety switch (see item 4).



CAUTION

NEVER attempt to disconnect any safety devices or defeat the purpose of these safety devices.



Neutral Function Adjustment - Model MT

3. If drive wheels are moving, stop the engine and **adjust the FSC neutral stop** by adjusting the FSC actuator clevis (see **Neutral Function Adjustment** photo for clevis location). If the drive wheels are moving backward, loosen jam nut and turn adjusting nut to move the clevis forward. If the drive wheels are moving forward, adjust the clevis backward. Restart the engine and check for wheel movement (several "trial and error" adjustments may be required). At this point it may **not be possible** to adjust **both** wheels stationary since the differential adjustment has not been made. (This is covered by the *Straight Ground Travel Adjustment - Step 4.*) In this case, the neutral adjustment should be made for one wheel stationary and the other moving **forward** slightly.

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Model MC, MD, MT, MTL

4. Check and **adjust the neutral safety switch** for closure and function with the FSC in neutral (the engine will not start when the switch is open). Slight adjustments can be made by carefully bending the leaf switch up or down as needed. Refer to adjustment description for **Safety Switches** in this section.

Model MS

4. Check and **adjust the neutral safety switch** for closure and function with the FSC in neutral (the engine will not start when the switch is open). Use panel nuts on the switch body to adjust switch position for closure in neutral. Refer to adjustment description for **Safety Switches** in this section.

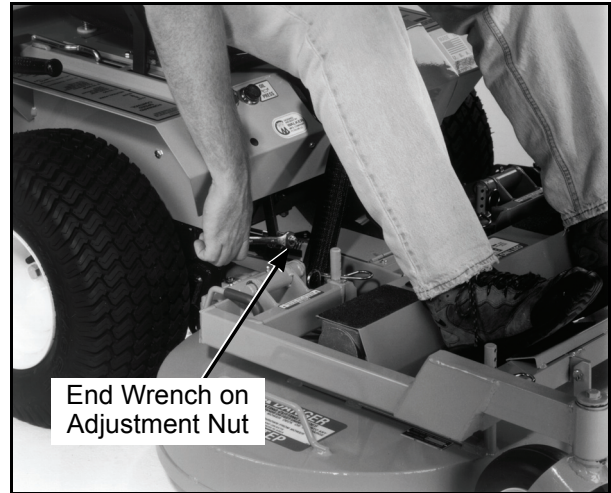
Straight Ground Travel Adjustment - Step 4

Model MS, MC, MD, MT, MTL

1. Sit in the seat, start the engine (operate at normal speed), and with the FSC in the **NEUTRAL-PARK** position check for **forward movement** of either drive wheel (if either wheel moves **backward**, refer back to *Neutral Function Adjustment - Step 3* and readjust). **Tighten the steering lever adjustment nut on the side of the mower with the wheel moving forward** until wheel movement stops.
2. Check for straight ground track on a **level surface** (with **hands off** the steering levers). Set the FSC at several different speeds and observe if the mower moves in a straight line (use cement joint or other line on the ground for reference).

NOTE: The final tracking adjustment is made with the mower moving, since the adjustment is quite sensitive and is more easily "fine tuned" when moving.

3. If travel is not straight, **tighten the adjustment nut that is on the same side of the mower as the wheel that is moving too fast**, e.g., the mower tracks to the right, indicating the LH wheel is moving too fast, tighten the LH adjustment nut.



Straight Ground Travel Adjustment

Transmission Control - MW



If the engine must be running to perform a maintenance adjustment, keep hands, feet, and clothing from moving parts. DO NOT wear jewelry or loose clothing.

IMPORTANT: The proper adjustment of the transmission control stops is **essential** for efficient operation and life of the transmission. These stops are properly adjusted at the factory and should only require readjustment if the transmission or related control linkage is removed or changed.

NOTE: It would not be unusual for a new machine, after initial 5 or 10 hours of operation, to begin to not travel straight (this is due to the break-in of the transmissions). In this case, proceed to *Tracking Adjustment - Step 4*.

IMPORTANT: The following adjustment procedures are sequential. Check and adjust each function in the order given.

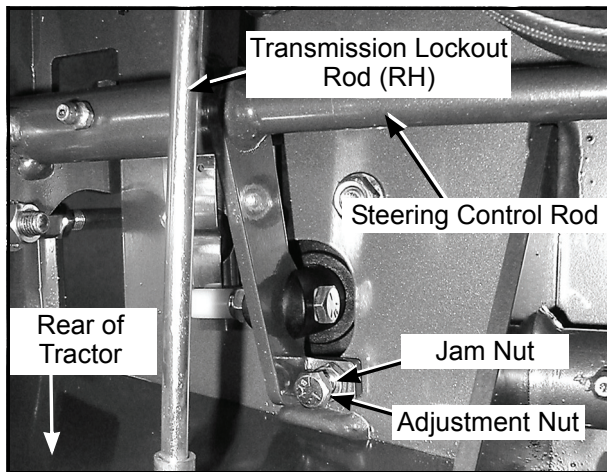
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FSC Actuator Stop Adjustment - Step 1

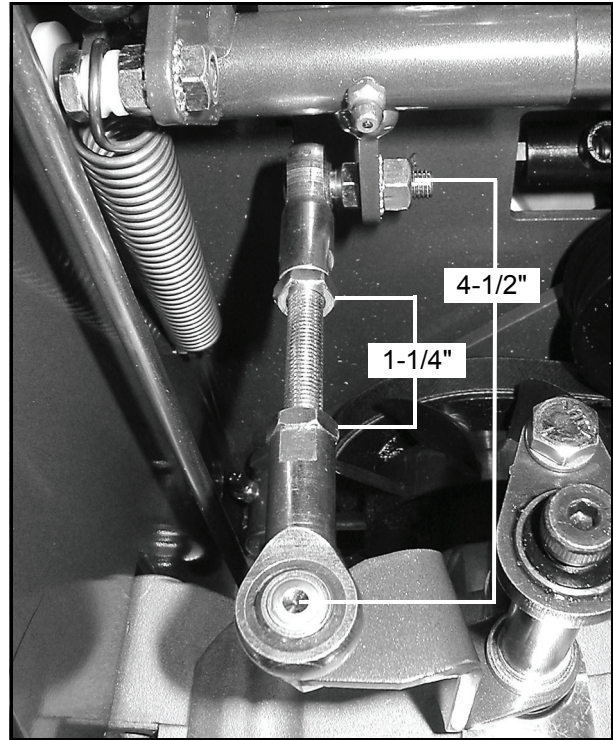
1. Loosen jam nut and back off the adjustment bolt located in the steering pivot rod (as shown).
2. Turn the ignition key to the ON position and toggle the FSC switch to the Neutral position (fully retracted).
3. Tighten the adjustment bolt until it contacts the chassis and turn an additional 1/2 turn. Tighten jam nut.



**FSC Actuator Stop Adjustment
(View from underside of tractor)**

Control Arm Rod Adjustment - Step 2

1. For both control arm rods, loosen jam nut on ball joint end of control arm rod and adjust to obtain a 1-1/4" measurement between jam nuts (4-1/2" measurement between centers of ball joints). Tighten jam nuts.



**Control Arm Rod Adjustment - Both Transaxles
(view from underside of tractor)**

Neutral Adjustment - Step 3

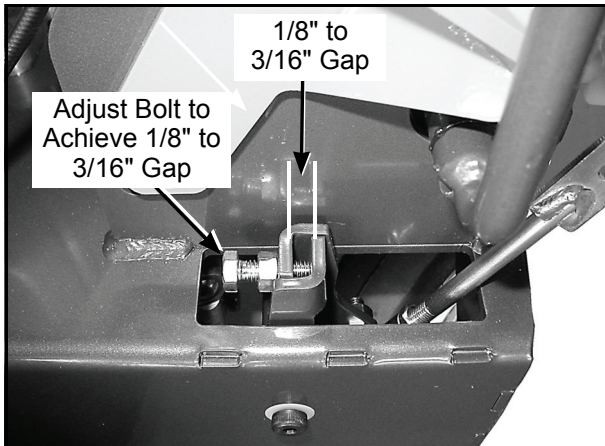
1. Turn the ignition key to the ON position and toggle the FSC switch to the Neutral position (fully retracted).
2. Tighten adjustment bolt in speed control actuator to achieve approximately an 1/8" to 3/16" gap between speed control actuator and speed control stop.
3. Make identical adjustment to the other side of tractor.
4. Start engine. If one or both drive wheels creep forward, turn corresponding adjustment bolt in (toward rear of mower). If drive wheels creep backwards, turn corresponding adjustment bolt out (toward front of mower).

NOTE: If the 1/8" to 3/16" gap between speed control actuator and speed control stop can not be maintained as neutral adjustments are made, it will be necessary to adjust the length of the control rod (Step 2). Increasing the length of the control rod, decreases the gap. Shortening the control rod, increases the gap.

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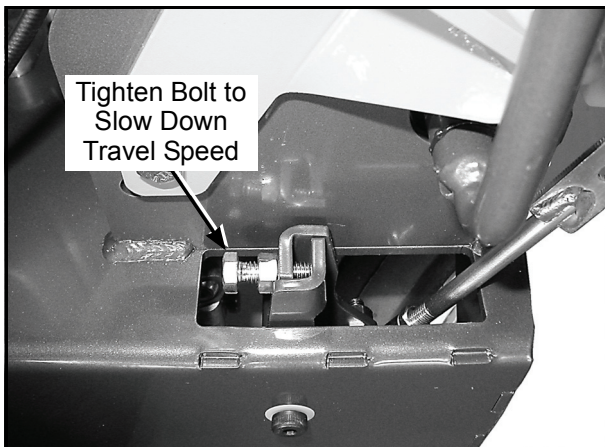
Speed Control Actuator Adjustment (LH)

Tracking Adjustment - Step 4

⚠ DANGER

If the engine must be running to perform a maintenance adjustment, keep hands, feet, and clothing from moving parts. **DO NOT** wear jewelry or loose clothing.

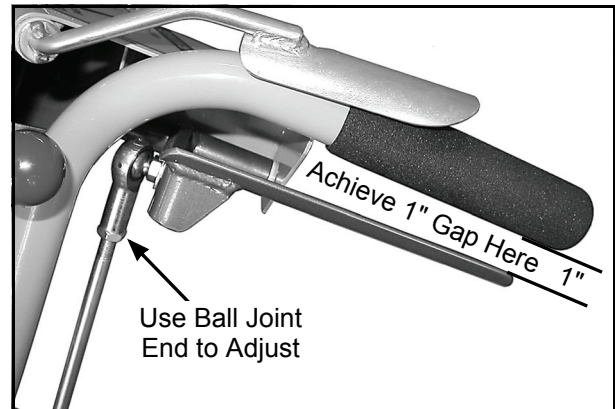
1. Start engine and set the FSC switch to a normal walking speed. Check for equal drive speed for both wheels.
2. If one wheel is moving too fast, bring the mower back into NEUTRAL (using the FSC switch) and slightly tighten the adjustment bolt on the speed control actuator on the side that is moving faster.



Tracking Adjustment

Control Handle (Pistol Grip) Adjustment - Step 5

1. Loosen jam nut and adjust upper ball joint on upper lever linkage to achieve a 1" gap between control handle and pistol grip.
2. Make identical adjustment to the other side of handle. It may be necessary to adjust both wheels in order to achieve tracking and neutral.

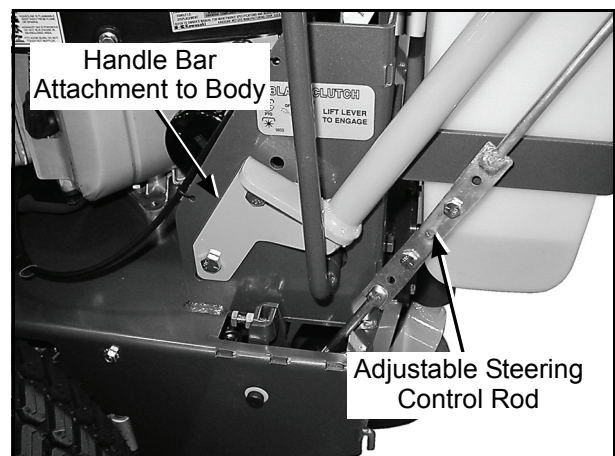


Pistol Grip Position Adjustment

Handlebar Height Adjustment - MW

The height of the handlebar position for operators can be adjusted (taller for taller operators, shorter for shorter operators) using the following steps:

1. Unbolt the handlebar connection at the body on both sides. Unbolt the steering control arms.
2. Reattach handlebar and control arms in corresponding holes.



Handlebar Height Adjustment

3. Recheck the *Control Handle (Pistol Grip) Adjustment - Step 5*.

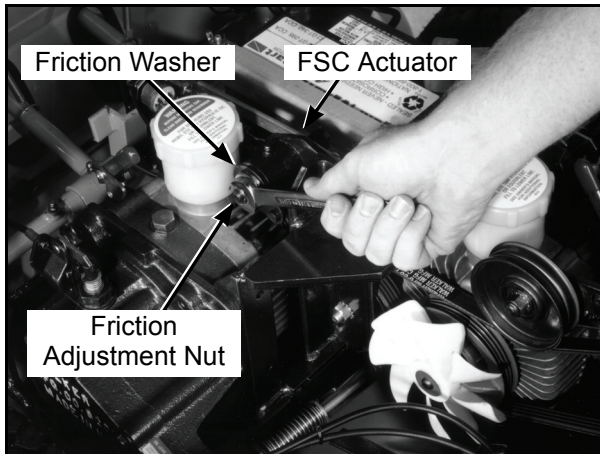
Walker

SERVICE INSTRUCTIONS

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Forward Speed Control Friction Lock - Model MS, MC, MD, MT

The FSC friction lock is adjusted to **hold the selected forward speed** when the steering levers are moved and yet the friction is not too heavy to make **moving the control difficult** (too much friction). The procedure for checking and adjusting the FSC friction lock is as follows:

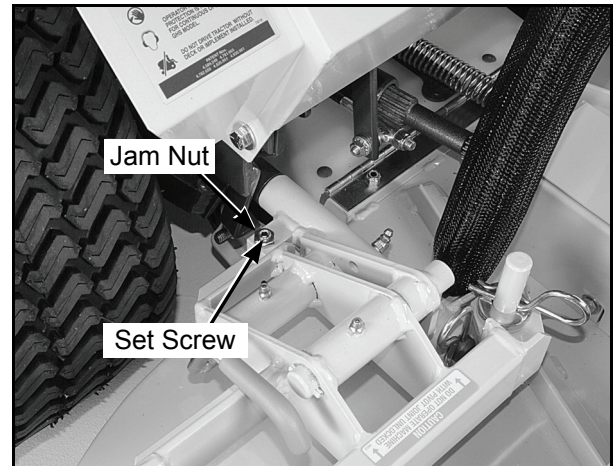


Forward Speed Control Friction Lock

1. Place the FSC in the full **FORWARD** position and pull both steering levers back; the FSC lever should not move. If the FSC lever moves back when the steering levers are pulled back, the **friction needs to be increased**.
2. With the steering levers held back, move the FSC lever back from the **FORWARD** position. With a proper amount of friction adjusted, the FSC lever should move back with a slight amount of resistance (friction). If the FSC lever movement is "stiff", the **friction needs to be decreased**.
3. The FSC friction is **increased** or **decreased** by **tightening** or **loosening** the **friction adjustment nut**. Loosen or tighten the nut and check the control function until conditions of both steps 1 and 2 (above) are met.

Tilt-Up Deck Adjustable Stop - All Decks

When the carrier frame hinge joint is properly adjusted, the deck lock levers should move in and out of the engaged and disengaged positions freely. Adjustments are made by loosening the jam nut and tightening or loosening the set screws on the Deck Mount Pivot Brackets. Retighten the jam nut when the adjustment is complete.



Tilt-Up Deck Adjustable Stop

Fuel Valve Solenoid Linkage - Model MD

To prevent damage to the fuel valve solenoid, the linkage to the engine must be adjusted so the solenoid bottoms out before the control arm on the engine contacts its stop (when the engine is running). A solenoid that does not bottom out when the engine is running will become overloaded and burn out.

IMPORTANT: The solenoid linkage should be checked and adjusted any time the solenoid is removed and replaced (either reinstalling an existing solenoid or installing a new replacement).

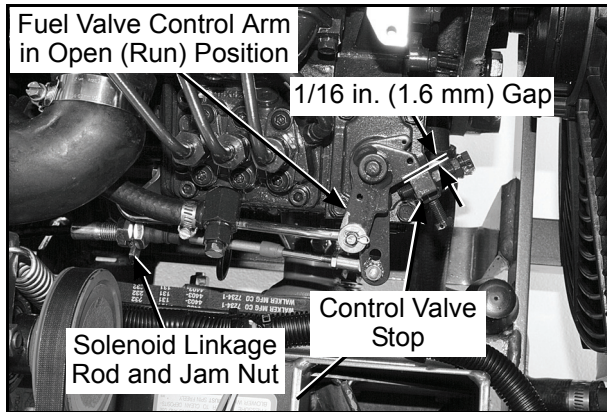
Check and adjust the solenoid linkage as follows:

1. Manually pull the fuel valve open and check the gap between the control arm on the injector pump and the stop. The required gap is approximately 1/16 in. (1.6 mm).

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Fuel Valve Solenoid Linkage Adjustment (shown with air intake hose removed for clarity)

2. If the gap is **incorrect**, adjust the linkage by **loosening** the jam nut at the solenoid, removing the cotter pin and washer from the connection to the fuel valve control arm, and screwing the linkage rod in or out of the solenoid ball joint as required.
3. After adjusting the linkage for the proper gap, turn the ignition key **ON**, and check the gap by operating the solenoid.

Carburetor - Model MC, MT



CAUTION

DO NOT change the engine governor settings or overspeed the engine. The governor has been factory set for maximum safe engine operating speed.

The fixed main jet carburetor is designed to deliver the correct fuel-to-air mixture to the engine under all operating conditions. The high idle is set at the factory and cannot be adjusted. The low idle mixture screw is also set at the factory and normally does not need adjustment. The only adjustment normally made to the carburetor is to **set the idle speed**. However, if the engine exhibits any of the following symptoms, it may be necessary to adjust or service the carburetor: black, sooty exhaust smoke; lack of power; engine miss or backfire; hard to start; rough running; stalls at low idle speed.

NOTE: Due to the technical requirements of modern carburetors, refer to the Kohler Service Manual or contact an authorized Kohler engine dealer for carburetor adjustments and service not described in this section.



CAUTION

ALWAYS use the proper engine service manual when working on the engine. Unauthorized maintenance operations or modifications to the engine MAY result in unsafe operating conditions.

Since the carburetor main jet is non-adjustable, for operation above 5000 ft (1,524 m) above sea level, it may be necessary to change the carburetor main jet for best fuel economy and power. Contact an authorized Kohler dealer to change the carburetor main jet.

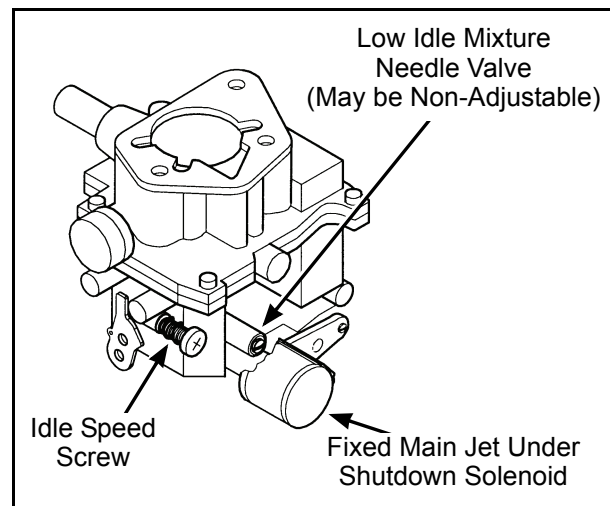
Engine Idle Adjustment

IMPORTANT: Some emission certified engines may not have an adjustable idle mixture needle valve; it is fixed from the factory and the adjustable screw is "capped". In this case, **only the idle speed** is adjustable and only Step 4 of the instructions below applies.

1. Gently close the idle mixture needle valve by turning it **clockwise** until it bottoms **lightly**.

IMPORTANT: The needle valve and carburetor seat may be **damaged** by turning the adjustment screw **too tight**.

2. Preliminary Setting: Turn the idle mixture needle valve out (counterclockwise) 1-1/2 turns from the closed position. This **initial adjustment** will allow the engine to be started and warmed up prior to the final adjustment.



Carburetor Adjustment

Walker

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DANGER

The engine must be running to adjust the carburetor for engine idle. To guard against injury, keep hands, feet, face, and other parts of body away from the muffler/exhaust pipe, other hot parts of the engine, and moving or rotating parts of the engine.

3. Start the engine and allow it to warm up by running at 1/2 throttle for approximately five (5) minutes. The engine must be warm before making final settings.
4. Move the throttle to the **idle** position. Adjust idle speed for 1200 rpm (± 75 rpm) by adjusting the idle speed screw. Check the idle speed using a tachometer.
5. With the engine idling, adjust the idle mixture by turning the idle mixture needle valve in (slowly) from the preliminary setting until engine speed decreases and then back out approximately 3/4 to 1 turn to obtain the best low speed performance.
6. Recheck idle speed after the final idle mixture adjustment.

Carburetor - MTL

CAUTION

DO NOT change the engine governor settings or overspeed the engine. The governor has been factory set for maximum safe engine operating speed.

The fixed main jet carburetor is designed to deliver the correct fuel-to-air mixture to the engine under all operating conditions. The high idle is set at the factory and cannot be adjusted. The low idle mixture screw is also set at the factory and normally does not need adjustment. The only adjustment normally made to the carburetor is to **set the idle speed**. However, if the engine exhibits any of the following symptoms, it may be necessary to adjust or service the carburetor: black, sooty exhaust smoke; lack of power; engine miss or backfire; hard to start; rough running; stalls at low idle speed.

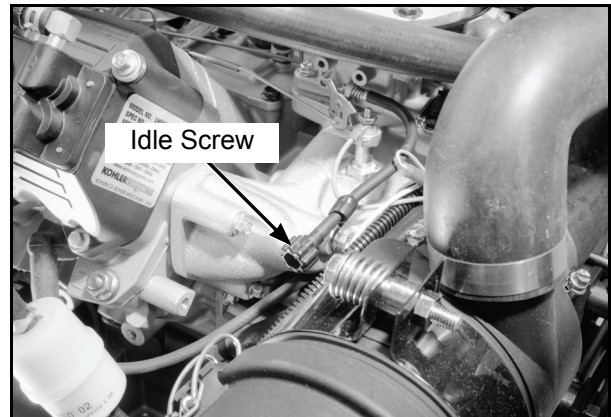
NOTE: Due to the technical requirements of modern carburetors, refer to the Kohler Service Manual or contact an authorized Kohler engine dealer for carburetor adjustments and service not described in this section.

CAUTION

ALWAYS use the proper engine service manual when working on the engine. Unauthorized maintenance operations or modifications to the engine **MAY** result in unsafe operating conditions.

Low Idle Speed (RPM) Adjustment

1. Place the throttle control into the "idle" or "slow" position. Set the low idle speed to 1200 RPM (± 75 RPM) by turning the low idle speed adjusting screw (cable w/knob). Check the idle speed using a tachometer.
2. If proper operation is not restored after adjusting the low idle speed, carburetor servicing by an authorized Kohler engine service dealer may be required.



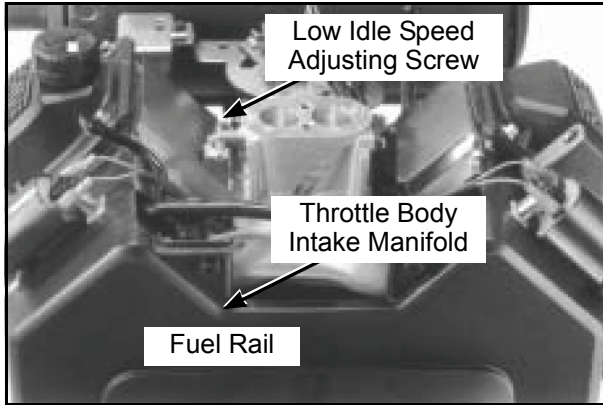
Model MTL Idle Screw

Walker

SERVICE INSTRUCTIONS

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Throttle Body/Intake Manifold Assembly - Model MTEFI



Upper Intake Manifold

General

The EFI engines have no carburetor, so the throttle function (regulate incoming combustion airflow) is incorporated in the intake manifold assembly. The manifold consists of a one-piece aluminum casting which also provides mounting for the fuel injectors, throttle position sensor, fuel rail, air baffle, idle speed screw, and air cleaner assembly.

Service

The throttle body/intake manifold is serviced as an assembly, with the throttle shaft, throttle plates, and idle speed adjusting screw installed. The throttle shaft rotates on needle bearings (non-serviceable), capped with rubber seals to prevent air leaks.

Idle Speed Adjustment (RPM) - Model MTEFI

General

The idle speed is the only adjustment that may be performed on the EFI system. The standard idle speed setting for EFI engines is 1500 RPM, but certain applications might require a different setting. Check the equipment manufacturer's recommendation.

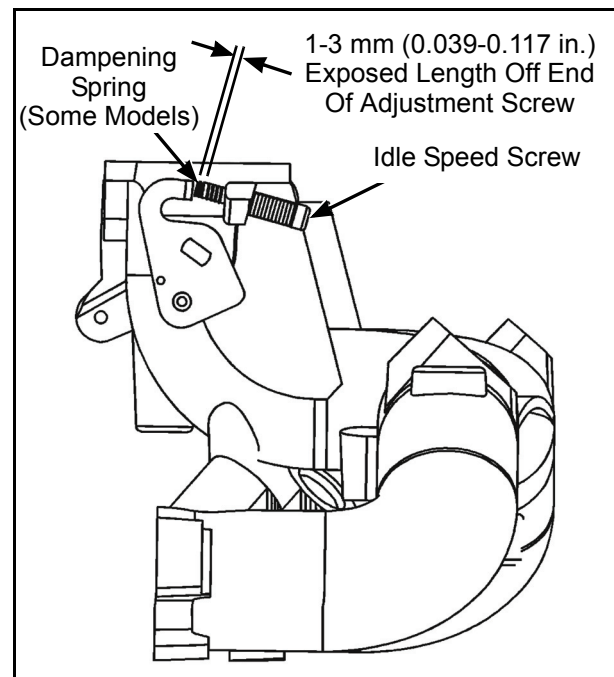
For starting and warm up, the ECU will adjust the fuel and ignition timing, based upon ambient temperature, engine temperature, and loads present. In cold conditions, the idle speed will probably be higher than normal for a few moments. Under other conditions, the idle speed may actually start lower than normal, but gradually increase to the established setting as operation continues. **Do not** attempt to circumvent this warm up period, or readjust the idle speed during this time. The engine must be completely warmed up for accurate idle speed adjustment.

Adjustment Procedure

1. Make sure there are no fault codes present in the ECU memory.
2. Start the engine and allow it to **fully warm up** and establish closed looped operation (approximately 5-10 min.).
3. Place the throttle control in the "idle/slow" position and check the idle speed with a tachometer. Turn the idle speed screw in or out as required to obtain **1500 RPM**, or the idle speed specified by the equipment manufacturer.
4. The low idle speed adjustment can affect the high-speed setting. Move the throttle control to the full throttle position and check the high speed. Adjust as necessary to 3750 RPM (no load), or the speed specified by the equipment manufacturer.

Idle Speed Screw Dampening Spring - Model MTEFI

A small dampening spring (Kohler P/N 24 089 42-S) is attached to the end of the idle speed screw of some EFI engines to help stabilize no load operating speeds. Refer to **Idle Speed Screw Details** illustration.



Idle Speed Screw Details

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The idle speed adjustment procedure remains the same for engines with or without a dampening spring. Typically, no periodic servicing is necessary in this area. If however, removal/replacement of the dampening spring is required, reinstall it as follows:

1. Thread the spring onto the end of idle screw leaving **1-3 mm (0.039-0.117 in.)** of the spring extending beyond the end of the idle speed screw.
2. Secure spring onto the screw with a small amount of PermaBond™ LM-737 or equivalent Loctite® adhesive. Do not get any adhesive on free coils of spring.
3. Start the engine and recheck the idle speed settings, after sufficient warm up. Readjust as required.

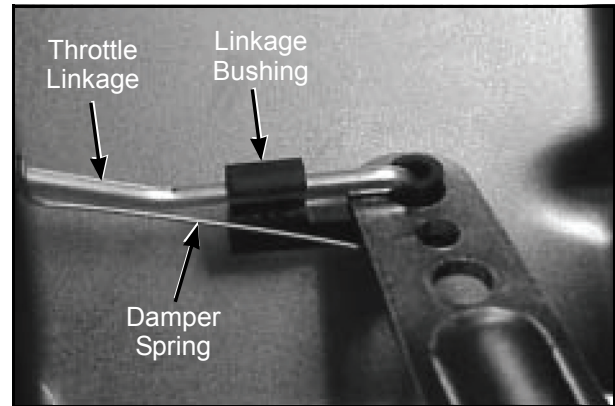
Initial Governor Adjustment - Model MTEFI

The initial governor adjustment is especially critical on EFI engines because of the accuracy and sensitivity of the electronic control system. Incorrect adjustment can result in overspeed, loss of power, lack of response, or inadequate load compensation. If you encounter any of these symptoms and suspect them to be related to the governor setting, the following should be used to check and/or adjust the governor and throttle linkage.

If the governor/throttle components are all intact, but you think there may be a problem with the adjustment, follow Procedure A to check the setting. If the governor lever was loosened or removed, go immediately to Procedure B to perform the initial adjustment.

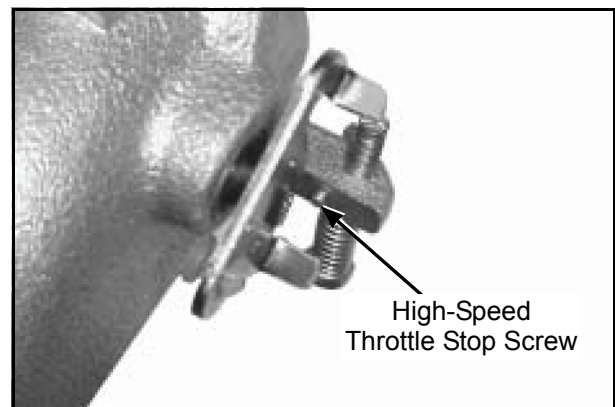
A. Checking the Initial Adjustment

1. Unsnap the plastic linkage bushing attaching the throttle linkage to the governor lever. Refer to **Throttle Linkage/Governor Lever Connection** photo. Unhook the damper spring from the lever, separate the linkage from the bushing, and remove the bushing from the lever. Mark the hole position and unhook the governor spring from the governor lever.



Throttle Linkage/Governor Lever Connection

2. Check if the engine has a high-speed throttle stop screw installed in the manifold casting boss. Refer to **Throttle Details** photo.



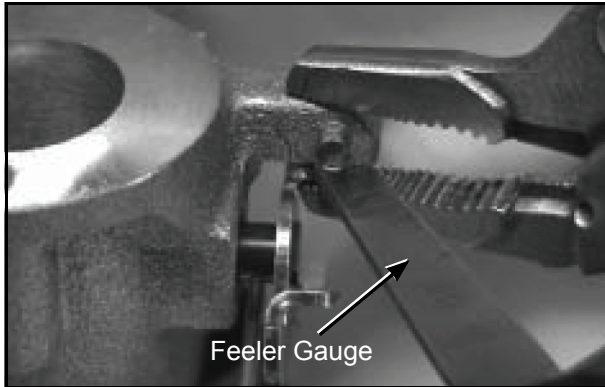
Throttle Details

- a. On engines without a stop screw, pivot the throttle shaft and plate assembly into the "Full Throttle" position. Insert a **1.52 mm (0.060 in.)** feeler gauge between the rear tang of the throttle shaft plate and the underside of the manifold boss. Use a locking pliers (needlenose works best) to temporarily clamp the parts in this position. Refer to **Inserting Feeler Gauge (Engines Without Stop Screw)** photo.

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SERVICE INSTRUCTIONS

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**Inserting Feeler Gauge
(Engines Without Stop Screw)**

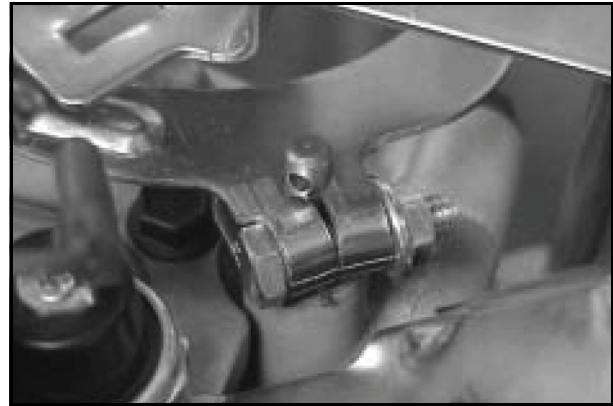
- b. On engines with a stop screw, pivot the throttle shaft and plate into the "Full Throttle" position, so the tang of the throttle shaft plate is against the end of the high-speed stop screw. Refer to **Throttle Details** photo. Temporarily clamp in this position.
3. Rotate the governor lever and shaft counterclockwise until it stops. Use only enough pressure to hold it in that position.
4. Check how the end of the throttle linkage aligns with the bushing hole in the governor lever. Refer to **Throttle Link in Center of Hole** photo. It should fall in the center of the hole. If it doesn't, perform the adjustment procedure as follows.



Throttle Link in Center of Hole

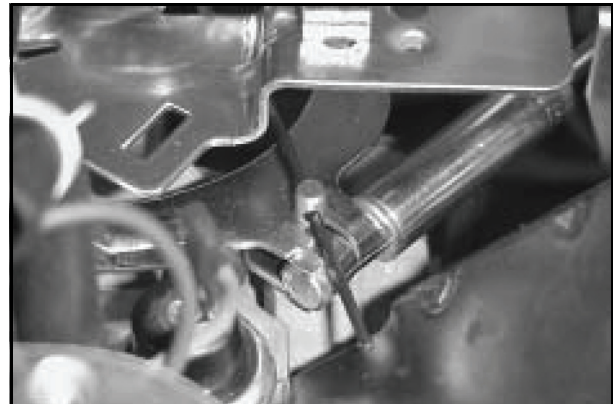
B. Setting the Initial Adjustment

1. Check the split where the clamping screw goes through the governor lever. Refer to **Checking "Split" of Clamp** photo. There should be a gap of at least 1/32". If the tips are touching and there is no gap present, the lever should be replaced. If not already installed, position the governor lever on the cross shaft, but leave the clamping screw loose.



Checking "Split" of Clamp

2. Follow the instructions in Step 2 of *Checking the Initial Adjustment*, then reattach the throttle linkage to the governor lever with the bushing clip. It is not necessary to reattach the damper or governor springs at this time.
3. Insert a nail into the hole in the top of the cross shaft. Using light pressure, rotate the governor shaft counterclockwise as far as it will turn, then torque the hex nut on the clamping screw to **6.8 N·m (60 in. lb.)**. Refer to **Adjusting Governor Shaft** photo. Make sure that the governor arm has not twisted up or down after the nut has been tightened.



Adjusting Governor Shaft

4. Verify that the governor has been set correctly. With the linkage still retained in the "Full Throttle" position (Step 2), unsnap the bushing clip, separate the linkage from the bushing, and remove the bushing from the lever. Follow Steps 3 and 4 in *Checking the Initial Adjustment*.

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5. Reconnect the dampening spring into its governor lever hole from the bottom. Reinstall the bushing and reattach the throttle linkage. Refer to **Throttle Linkage/Governor Lever Connection** photo. Reattach the governor spring in the marked hole.
6. Start the engine and allow it to fully warm up and establish closed loop operation (approximately 5-10 min.). Check the speed settings and adjust as necessary, first the low idle speed, and then the high speed setting.

Throttle Body/Intake Manifold Assembly - Model MTLEFI



Upper Intake Manifold

General

The EFI engines have no carburetor, so the throttle function (regulate incoming combustion airflow) is incorporated in the intake manifold assembly. The manifold consists of a one-piece aluminum casting which also provides mounting for the fuel injectors, throttle position sensor, fuel rail, air baffle, idle speed screw, and air cleaner assembly.

Service

The throttle body/intake manifold is serviced as an assembly, with the throttle shaft, throttle plate, and idle speed adjusting screw installed. The throttle shaft rotates on needle bearings (non-serviceable), capped with rubber seals to prevent air leaks.

Idle Speed Adjustment (RPM) - Model MTLEFI

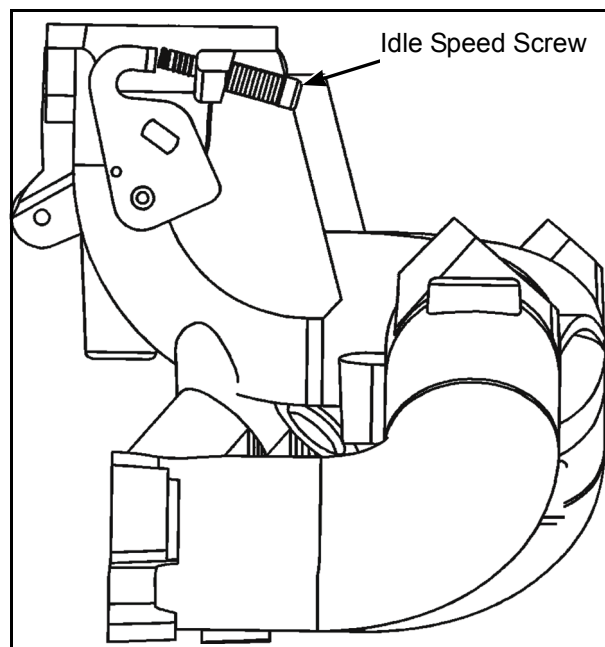
General

The idle speed is the only adjustment that may be performed on the EFI system. The standard idle speed setting for EFI engines is **1500 RPM**, but certain applications might require a different setting. Check the equipment manufacturer's recommendation.

For starting and warm up, the ECU will adjust the fuel and ignition timing, based upon ambient temperature, engine temperature, and loads present. In cold conditions, the idle speed will probably be higher than normal for a few moments. Under other conditions, the idle speed may actually start lower than normal, but gradually increase to the established setting as operation continues. Do not attempt to circumvent this warm up period, or readjust the idle speed during this time. The engine must be completely warmed up for accurate idle speed adjustment.

Adjustment Procedure

1. Make sure there are no fault codes present in the ECU memory.
2. Start the engine and allow it to **fully warm up** and establish closed looped operation (approximately 5-10 min.).
3. Place the throttle control in the "idle/slow" position and check the idle speed with a tachometer. Turn the idle speed screw in or out as required to obtain **1500 RPM**, or the idle speed specified by the equipment manufacturer.
4. The low idle speed adjustment can affect the high speed setting. Move the throttle control to the full throttle position and check the high speed. Adjust as necessary to **3750 RPM** (no load), or the speed specified by the equipment manufacturer.



Idle Speed Screw Details

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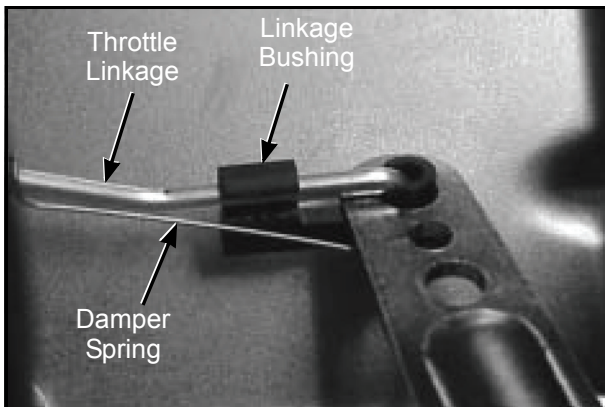
Initial Governor Adjustment - Model MTLEFI

The initial governor adjustment is especially critical on EFI engines because of the accuracy and sensitivity of the electronic control system. Incorrect adjustment can result in overspeed, loss of power, lack of response, or inadequate load compensation. If you encounter any of these symptoms and suspect them to be related to the governor setting, the following should be used to check and/or adjust the governor and throttle linkage.

If the governor/throttle components are all intact, but you think there may be a problem with the adjustment, follow Procedure A to check the setting. If the governor lever was loosened or removed, go immediately to Procedure B to perform the initial adjustment.

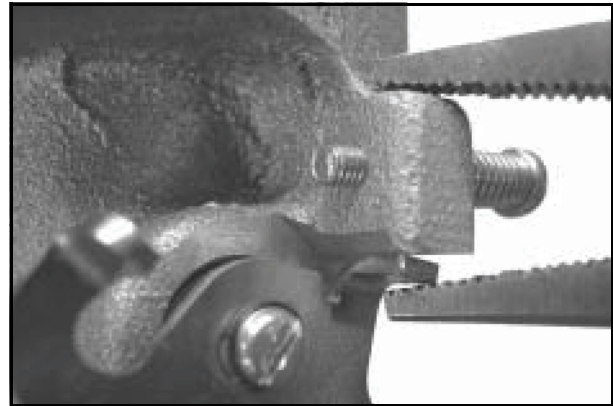
A. Checking the Initial Adjustment

1. Unsnap the plastic linkage bushing attaching the throttle linkage to the governor lever. Refer to **Throttle Linkage/Governor Lever Connection** photo. Unhook the damper spring from the lever, separate the linkage from the bushing, and remove the bushing from the lever. Mark the hole position and unhook the governor spring from the governor lever.



Throttle Linkage/Governor Lever Connection

2. Pivot the throttle shaft and plate into the "Full Throttle" position, so the tang of the throttle shaft plate is against the manifold casting. Refer **Clamping Throttle Against Stop** photo. Temporarily clamp in this position.



Clamping Throttle Against Stop

3. Rotate the governor lever and shaft counterclockwise until it stops. Use only enough pressure to hold it in that position.
4. Check how the end of the throttle linkage aligns with the bushing hole in the governor lever. Refer to **Throttle Link in Center of Hole** photo. It should fall in the center of the hole. If it doesn't, perform the adjustment procedure as follows.



Throttle Link in Center of Hole

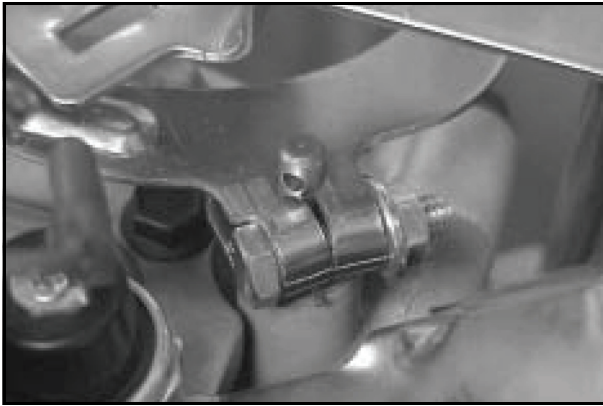
B. Setting The Initial Adjustment

1. Check the split where the clamping screw goes through the governor lever. Refer to **Checking "Split" of Clamp** photo. There should be a gap of at least 1/32". If the tips are touching and there is no gap present, the lever should be replaced. If not already installed, position the governor lever on the cross shaft, but leave the clamping screw loose.

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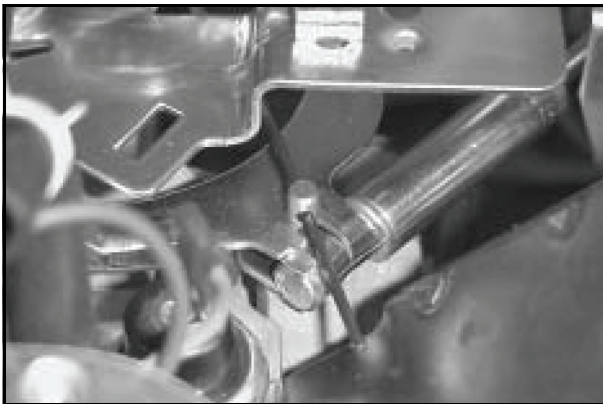
SERVICE INSTRUCTIONS

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Checking "Split" of Clamp

2. Follow the instructions in Step 2 of *Checking the Initial Adjustment*, then reattach the throttle linkage to the governor lever with the bushing clip. It is not necessary to reattach the damper or governor springs at this time.
3. Insert a nail into the hole in the top of the crossshaft. Using light pressure, rotate the governor shaft **counterclockwise** as far as it will turn, then torque the hex nut on the clamping screw to **6.8 N·m (60 in. lb.)**. Refer to **Adjusting Governor Shaft** photo. Make sure that the governor arm has not twisted up or down after the nut has been tightened.



Adjusting Governor Shaft

4. Verify that the governor has been set correctly. With the linkage still retained in the "Full Throttle" position (Step 2), unsnap the bushing clip, separate the linkage from the bushing, and remove the bushing from the lever. Follow Steps 3 and 4 in "Checking the Initial Adjustment".

5. Reconnect the dampening spring into its governor lever hole from the bottom. Reinstall the bushing and reattach the throttle linkage. Refer to **Throttle Linkage/Governor Lever Connection** photo. Reattach the governor spring in the marked hole.
6. Start the engine and allow it to fully warm up and establish closed loop operation (approximately 5-10 min.). Check the speed settings and adjust as necessary, first the low idle speed, and then the high speed setting.

Carburetor - Model MS

CAUTION

DO NOT change the engine governor settings or overspeed the engine. The governor has been factory-set for maximum safe engine operating speed.

Carburetor adjustments are required to compensate for differences in altitude, temperature, and fuel. Once the carburetor has been set, no further adjustments should be required. However, if the engine exhibits any of the following symptoms, the carburetor adjustment should be checked: black, sooty exhaust smoke, lack of power, engine miss or backfire, hard to start, rough running or idle.

NOTE: Also refer to the Kawasaki Service Manual for detailed carburetor adjustment information.

CAUTION

ALWAYS use the proper engine service manual when working on the engine. Unauthorized maintenance operations or modifications to the engine MAY result in unsafe operating conditions.

NOTE: The air cleaner and air intake hose must be connected to the carburetor when adjusting the carburetion.

The carburetor main jet is **fixed** (non-adjustable). For operation above 5,000 ft (1,524 m) above sea level, the carburetor main jet should be changed for best fuel economy and power. Contact an authorized Kawasaki engine dealer to change the carburetor main jet.

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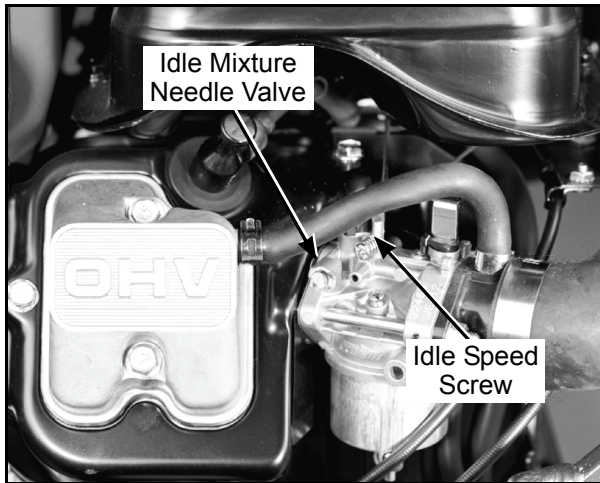
SERVICE INSTRUCTIONS

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To adjust the carburetor for engine idle, use the following procedure:

1. Gently close the idle mixture needle valve by turning it **clockwise** until it bottoms lightly.

IMPORTANT: The needle valve and carburetor seat may be **damaged** by turning the adjustment screw **too tight**.



Carburetor Adjustment

2. Preliminary Setting: Turn the idle mixture needle valve out (counterclockwise) 2 turns from the closed position. This **initial adjustment** will allow the engine to be started and warmed up prior to the final adjustment.

DANGER

The engine must be running to adjust the carburetor for engine idle. To guard against injury, keep hands, feet, face, and other parts of body away from the muffler/exhaust pipe, other hot parts of the engine, and moving or rotating parts of the engine.

3. Start the engine and allow it to warm up for approximately five (5) minutes.
4. Move throttle to the **IDLE** position. Adjust idle speed for 1300 RPM by adjusting the idle speed screw. Check the idle speed using a tachometer.

5. With the engine idling, adjust the idle mixture by turning the needle valve until the engine slows (clockwise - lean mixture). Then turn the needle valve out past the smooth operating point until the engine slows again (counterclockwise - rich mixture). Now turn the needle valve to the midpoint between rich and lean mixture. Check engine acceleration from the idle. If the engine will not accelerate properly, readjust the idle mixture, usually to a slightly richer mixture (open the valve).
6. Recheck idle speed after the final idle mixture adjustment.

Carburetor - Model MW

CAUTION

DO NOT change the engine governor settings or overspeed the engine. The governor has been factory set for maximum safe engine operating speed.

Carburetor adjustments are required to compensate for differences in altitude, temperature, and fuel. Once the carburetor has been set, no further adjustments should be required. However, if the engine exhibits any of the following symptoms, the carburetor adjustment should be checked by an authorized Kawasaki engine dealer: black, sooty exhaust smoke, lack of power, engine miss or backfire, hard to start, rough running or idle.

Carburetor - Model MB

The Vanguard ohv twin cylinder engine carburetor fuel mixture adjustment procedure is unique. Perform adjustments exactly in the sequence shown.

Initial Adjustment

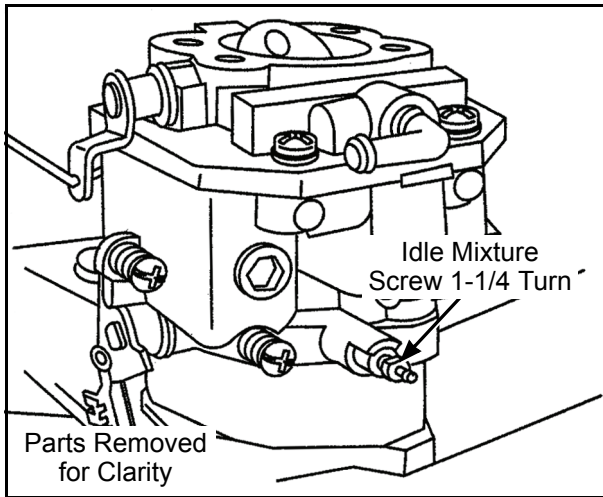
1. Turn idle mixture screw clockwise until it just seats. **DO NOT FORCE.**
2. Turn valve counterclockwise 1-1/4 turns.

This setting will permit engine to start. Final adjustment will be made with engine running.

Walker

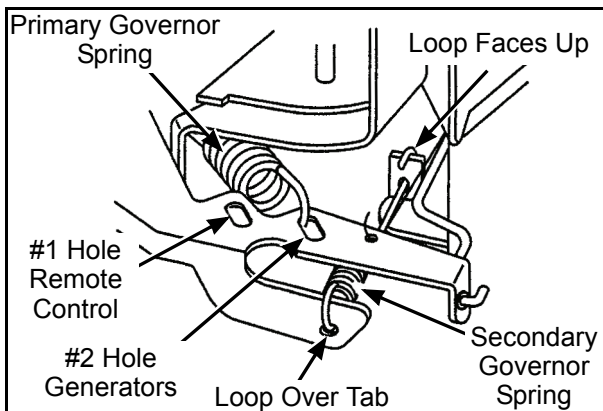
SERVICE INSTRUCTIONS

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Idle Mixture Screw Adjustment

If engine is equipped with a secondary governor spring as shown in **Secondary Governor Spring** illustration, check governor lever adjustment procedure before starting engine.



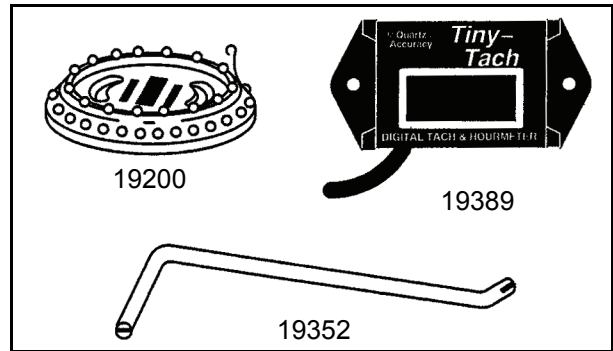
Secondary Governor Spring

Final Adjustment

All carburetor adjustments with engine running must be made with the air cleaner installed as done at the factory.

The following tools are required when making carburetor adjustments:

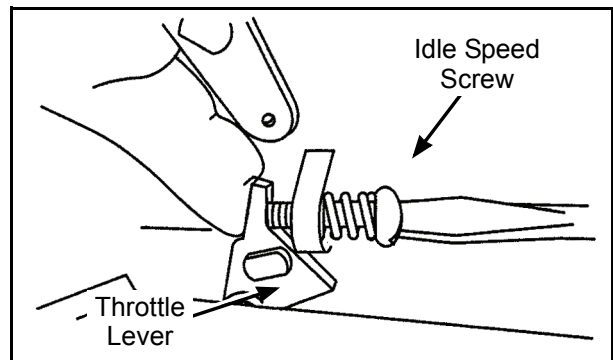
1. An accurate tachometer, such as Tool #19200 or #19389.
2. Tang bender, Tool #19352.



Adjustment Tools

Start and run engine for approximately 5 minutes to allow engine to warm up.

1. Move control lever on equipment to SLOW position.
2. Hold throttle lever against idle speed screw and temporarily adjust idle to RPM shown below.
 - a. 1400 RPM - Governed idle spring Part #805453 (red).
 - b. 1100 RPM - Governed idle spring Part #805454 (white).



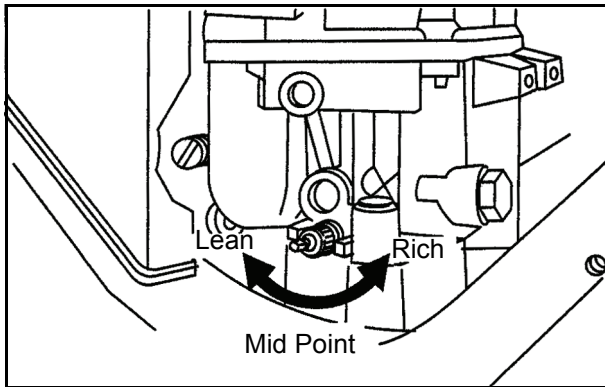
Adjust Idle Speed

3. Turn idle mixture screw slowly clockwise until engine speed just starts to slow (lean mixture).
4. Then turn idle mixture screw counterclockwise until engine speed just starts to slow (rich mixture).
5. Turn screw to mid point between rich and lean.

Walker

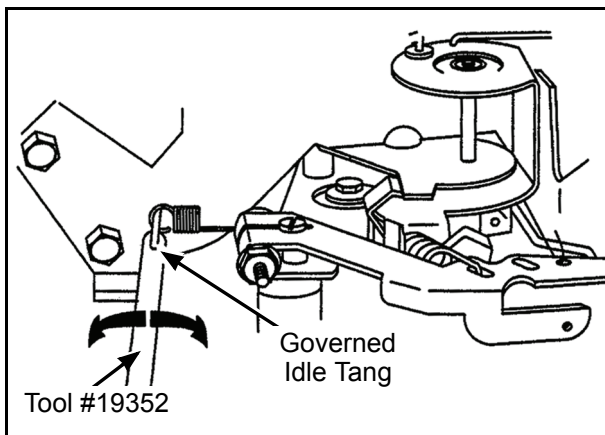
SERVICE INSTRUCTIONS

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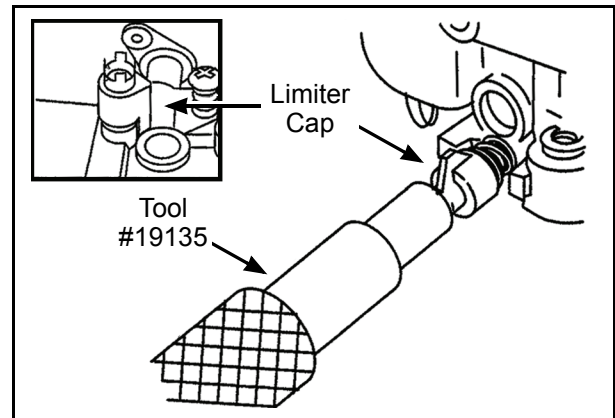
Adjust Idle Mixture

6. Hold throttle lever against idle speed adjustment screw and readjust idle to RPM shown below:
 - a. 1200 RPM - Governed idle spring Part #805453 (red).
 - b. 900 RPM - Governed idle spring Part #805454 (white).
7. Release throttle lever. Note RPM.
8. If necessary, use tang bending Tool, #19352, and bend governed idle tang, to obtain RPM shown:
 - a. 1750 RPM - Governed idle spring Part #805453 (red).
 - b. 1100 RPM - Governed idle spring Part #805454.



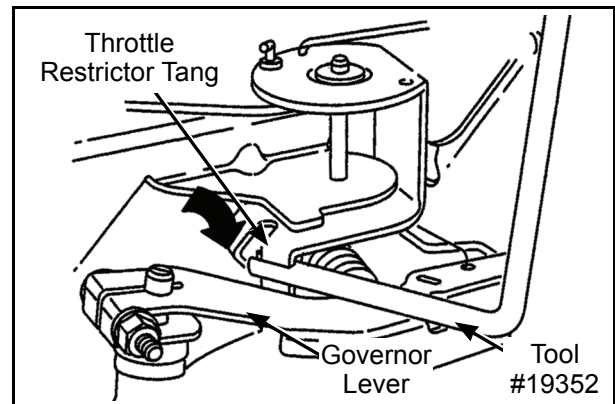
Adjust Governed Idle

9. IF CARBURETOR IS EQUIPPED WITH AN IDLE MIXTURE LIMITER CAP, INSTALL AT THIS TIME.
 - a. Position limiter cap so that stop(s) on limiter cap are at mid point between stop(s) on carburetor body.
 - b. Press limiter into position using knock out pin, Tool #19135.



Install Limiter Cap

10. With equipment control lever in SLOW position and engine running at governed idle RPM, use tang bender, Tool #19352, and bend throttle restrictor tang so that tang just contacts governor lever.



Adjust Throttle Restrictor

11. Move equipment control to FAST position. Engine should accelerate smoothly.
 - a. Readjust idle mixture valve 1/8 turn richer if necessary.

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GHS "Full" Signal Horn with Grass-Pak[®] Switch - Model MS, MC, MD, MT

Model MC, MD, MT

If the GHS "full" signal horn is not sounding when the catcher is full, the following troubleshooting instructions apply:

Model MS

If the GHS "full" signal horn is not sounding or is not adjusted to sound when the catcher is full, the following troubleshooting and adjustment instructions apply:

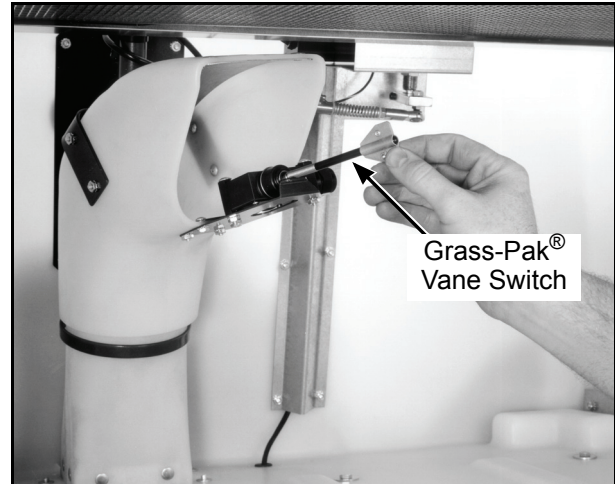
Model MS, MC, MD, MT

Troubleshooting (When Horn Fails to Operate)

1. Check the horn.
 - a. Disconnect the two wires from the Grass-Pak[®] switch electric connector plug and make a jumper wire connection between these wires (bypassing switch).
 - b. Turn the ignition switch **ON** and move the blade clutch to the **ENGAGED** position (engine not running) to make the horn sound.
 - c. If the horn does not sound, the horn is bad and needs to be replaced.
 - d. If the horn does sound, proceed to step 2.
2. Check the Grass-Pak[®] switch.
 - a. Reconnect the wires to the Grass-Pak[®] switch electric connector plug.
 - b. Turn the ignition switch **ON** and move the blade clutch to the **ENGAGED** position (engine not running).
 - c. Open the catcher back door and trigger the Grass-Pak[®] vane by hand as it oscillates.
 - d. The horn should sound as the switch is moved in both directions. If the horn does not sound, the switch is bad and needs to be replaced.

WARNING

DO NOT test the Grass-Pak[®] switch with the engine running. Projectiles CAN be thrown out of the grass delivery spout and CAN cause serious injury to bystanders or property damage.



Checking the Grass-Pak[®] Switch

Walker

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GHS Signal Horn Adjustment
(When Horn Sounds at Wrong Time) - Model MS,
MD, MT

 **DANGER**

PINCH POINT - SPRING LOADED DOOR

When lowering the door on the GHS catcher, depress the safety latch on the side of the catcher. **BE VERY CAREFUL** to keep hands, fingers, etc. out of the hinging mechanism and away from the door frame as the door closes. The springs that hold the door closed during operation are very powerful, and the door can slam shut with considerable force.

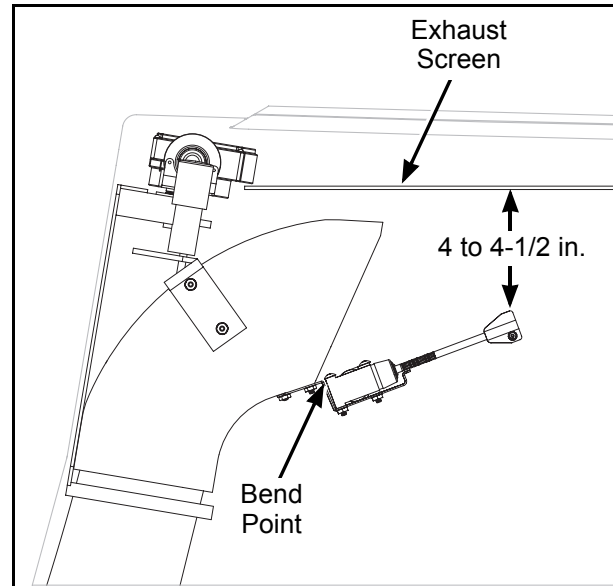
The vertical position of the Grass-Pak[®] switch is critical to make sure the catcher box does not overflow causing the delivery chute to clog. The vertical position can be adjusted by bending the mounting bracket for the Grass-Pak[®] switch.

1. Position the discharge chute so that it is pointing straight back.
 - a. Turn the ignition switch **ON** and move the blade clutch to the **ENGAGED** position (engine not running).
 - b. Open the catcher back door and monitor the spout position (as it oscillates) and move the blade clutch to the **DISENGAGED** position and turn the ignition switch to the **OFF** position.

 **WARNING**

DO NOT test the Grass-Pak[®] switch with the engine running. Projectiles CAN be thrown out of the grass delivery spout and CAN cause serious injury to bystanders or property damage.

2. Measure from the exhaust screen (top of catcher) to the top of the Grass-Pak[®] switch actuator vane, as shown. The proper measurement should be between 4 and 4-1/2 inches (10.16 and 11.43 cm).



Adjusting the Grass-Pak[®] Switch
(Side view of Catcher Box)

3. If adjustment is required, hold the Grass-Pak[®] switch mount bracket firmly, grasp the switch and bracket and bend it down. Adjustments should be done in very small increments checking the measurement each time until the recommended measurement is achieved. This measurement is applicable to all catcher box sizes.

NOTE: It will not be possible to adjust the switch to give a signal at the precise instant the catcher is full for a wide variety of mowing conditions. For example, wet heavy grass will fill the catcher differently than dry fluffy grass, causing the signal to come on a little sooner or later than usual. Primarily, the switch should be adjusted to give the "full" signal with a **little advance warning before overflowing and clogging** of the grass delivery chute begins (regardless of mowing conditions).

Walker

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ADJUSTMENTS - IMPLEMENTS



WARNING

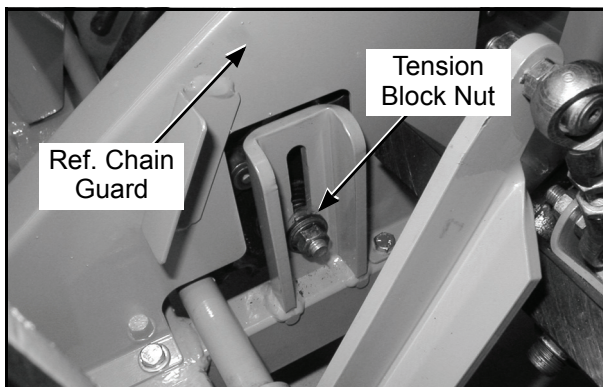
DO NOT attempt to make any adjustments with the tractor engine running. Disengage the PTO clutch, shut off the machine, and remove the ignition key. Wait for all movement to stop before getting off the seat.

Perfaerator

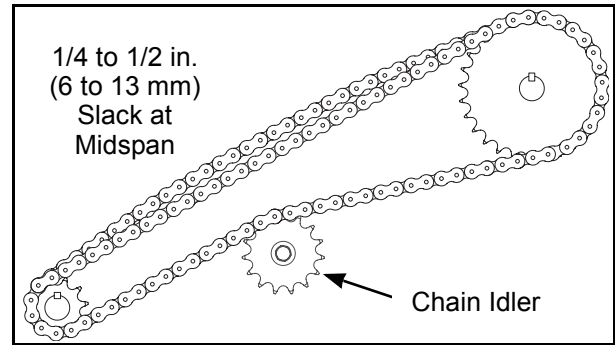
Drive Chain Tension

The drive chain should have 1/4 to 1/2 in. (6 to 13 mm) of slack at midspan. Remove the chain guard cover to check slack. Adjust the drive chain as follows:

1. Remove the three (3) screws fastening the removable chain guard cover to the frame.
2. Loosen the chain tension block mounting nut and bolt (see photo below).
3. Position the chain tension block so the chain has 1/4 to 1/2 in. (6 to 13 mm) of slack.
4. Retighten the chain tension block mounting nut and bolt.
5. Recheck the drive chain tension.



Drive Chain Adjustment



Proper Drive Chain Tension

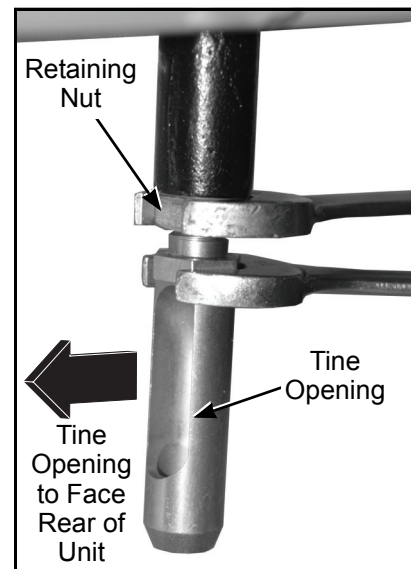
Tine Ends

Tine ends are adjustable by using the following procedure:

1. Loosen the retaining nut on the tine thread and unscrew tine end to achieve the desired depth. Open side of tine should be to rear.

IMPORTANT: Do not unscrew the tine ends too far. The maximum aerating depth is 2-1/2 in. (6.35 cm).

2. Tighten retaining nut.



Tine End Depth Adjustment

Walker

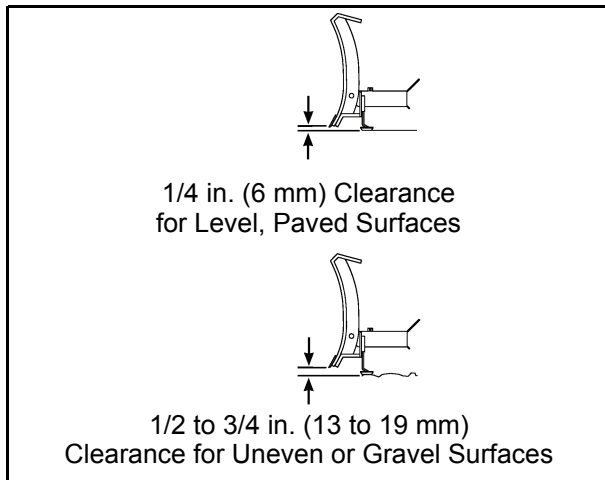
SERVICE INSTRUCTIONS

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Implements

Dozer Blade Skid Shoes

Adjust the skid shoes to allow the required clearance under the blade. **On level, paved surfaces**, adjust the skid shoes to allow approximately 1/4 in. (6 mm) clearance between the cutting edge and the surface. **On uneven or gravel surfaces**, allow 1/2 to 3/4 in. (13 to 19 mm) clearance, depending on the size of the gravel. Refer to **Skid Shoe Height Adjustment** illustration.

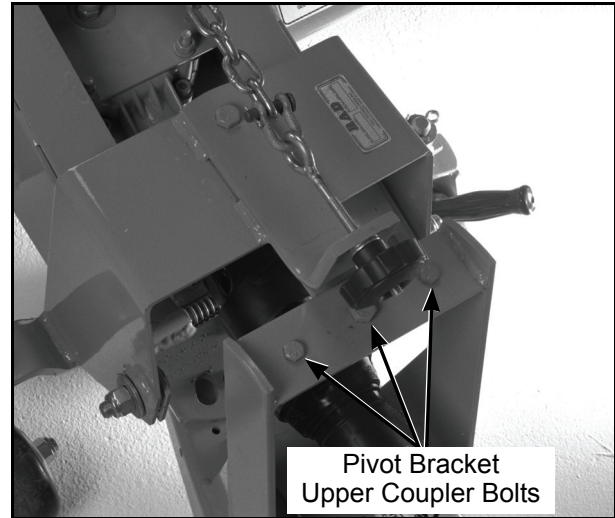


Skid Shoe Height Adjustment

Rotary Broom Brush Leveling

IMPORTANT: The proper level adjustment of the broom is **essential** for efficient operation and life of the bristles. The broom should regularly be adjusted to prevent **uneven brush wear**.

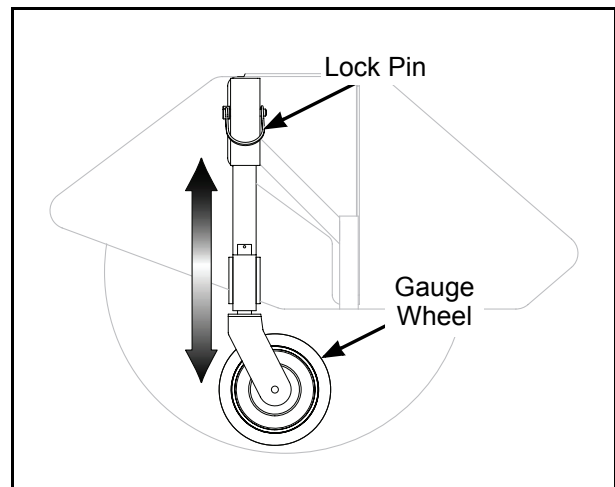
1. Extend the parking stands and raise the broom to the transport position (so that the bristles do not contact the ground).
2. Loosen the three bolts on the upper coupler of the pivot bracket.
3. Gently lower the broom head until the brush is parallel to ground level on both sides. Place a block of wood under each side of the brush to keep the brush in place.
4. Tighten the three bolts on the upper coupler, remove the wood blocks, and lower the broom to the ground to make sure the brush is level.



Side to Side Level Adjustment

Rotary Broom Gauge Wheels

This adjustment is required for lawn thatching or leaf raking operations. Height is adjusted by removing pin and adjusting broom height to correct position. Adjust height according to type of application.



Gauge Wheel Height Adjustment

Rotary Broom Drive Chain Tension

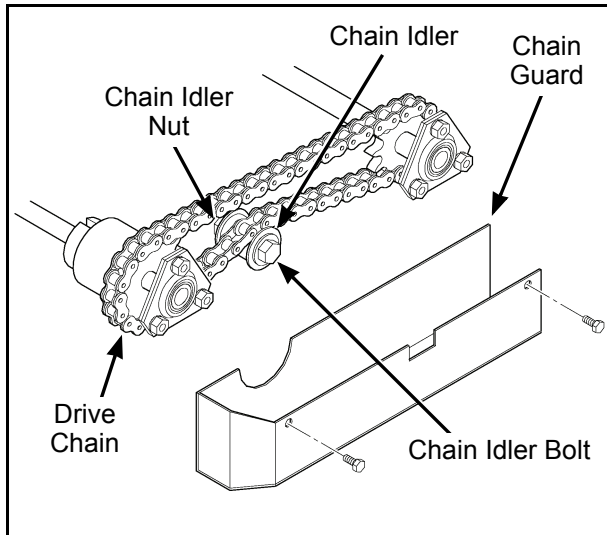
The drive chain should have 1/4 to 1/2 in. (6 to 13 mm) of slack at midspan. Remove the chain guard cover to check slack. Adjust the drive chain as follows:

1. Loosen the chain idler nut.

Walker

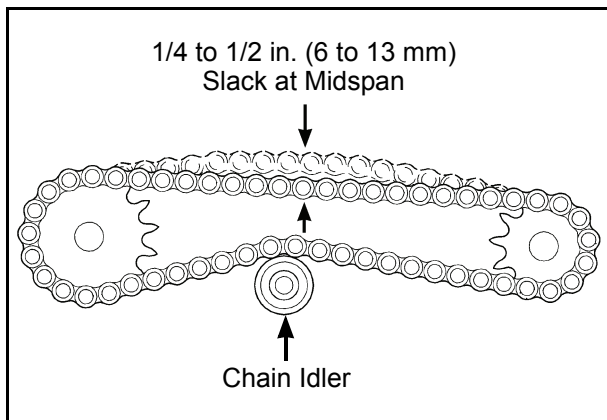
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Loosen Chain Idler Nut

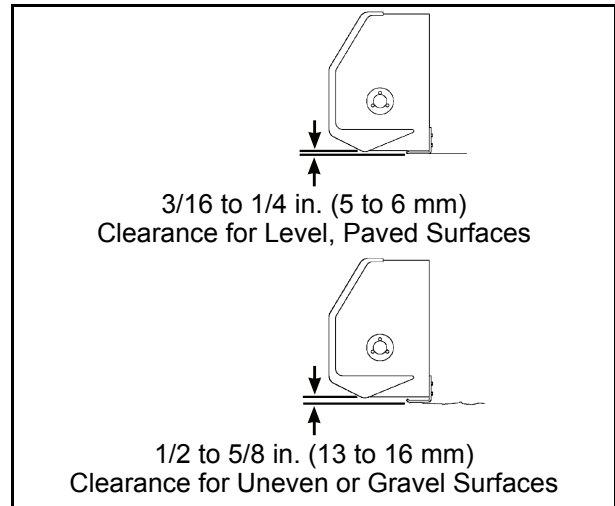
2. Position the chain idler so the chain has 1/4 to 1/2 in. (6 to 13 mm) of slack.
3. Retighten the chain idler nut.
4. Recheck the drive chain tension.



Proper Drive Chain Tension

Two-Stage Snowblower Skid Shoes

Adjust the skid shoes to allow the required clearance under the blade. **On level, paved surfaces**, adjust the skid shoes to allow 3/16 to 1/4 in. (5 to 6 mm) clearance between the cutting edge and the surface. **On uneven or gravel surfaces**, allow 1/2 to 5/8 in. (13 to 16 mm) clearance, depending on the size of the gravel. Refer to **Skid Shoe Height Adjustment** illustration.

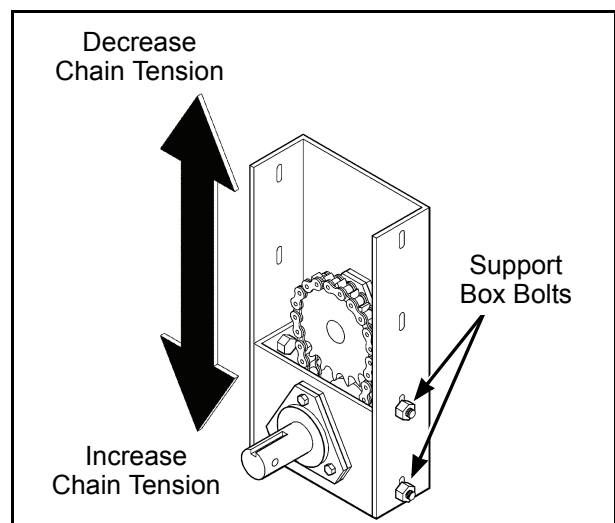


Skid Shoe Height Adjustment

Two-Stage Snowblower Reduction Chain Tension

Adjust the tension on the reduction chain as follows:

1. Loosen the four (4) bolts securing the lower sprocket support box to the reduction box housing.
2. Position the lower sprocket support box according to the amount of chain tension required. The chain should have about 1/4 to 1/2 in. (6 to 13 mm) of slack.
3. To **increase the chain tension**, position the support box **lower**. To **decrease the chain tension**, position the support box **higher**.
4. Retighten the four (4) bolts securing the support box.



Reduction Chain Tension Adjustment

Walker

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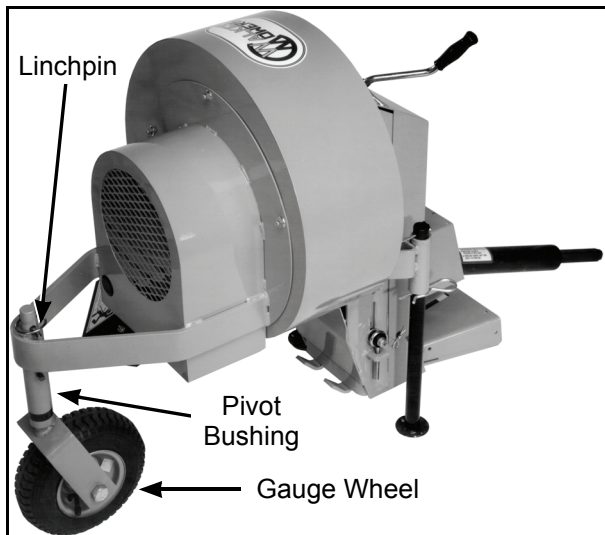
July 2006

Debris Blower Front Gauge Wheel

Adjust the gauge wheel height according to surface condition.

IMPORTANT: The air blast nozzle **must clear the ground at all times.**

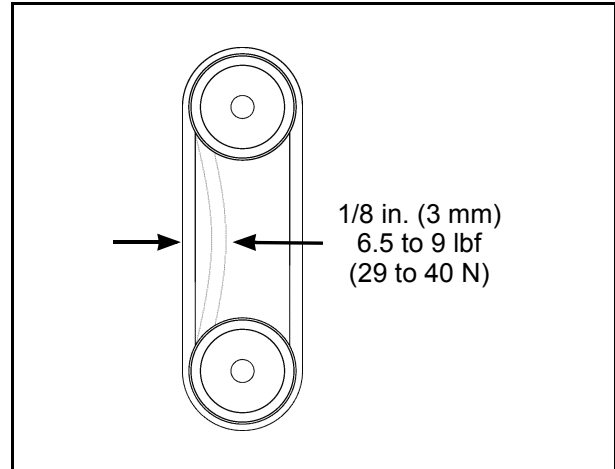
1. Remove the linchpin from the wheel pivot shaft.
2. Adjust wheel height by placing sleeve spacers either on the upper or lower side of the wheel pivot bushing. Placing the spacers on the **lower side increases** gauge wheel height. Placing the spacers on the **upper side lowers** gauge wheel height.
3. Reinstall the linchpin when proper gauge wheel height has been reached.



Gauge Wheel Height Adjustment

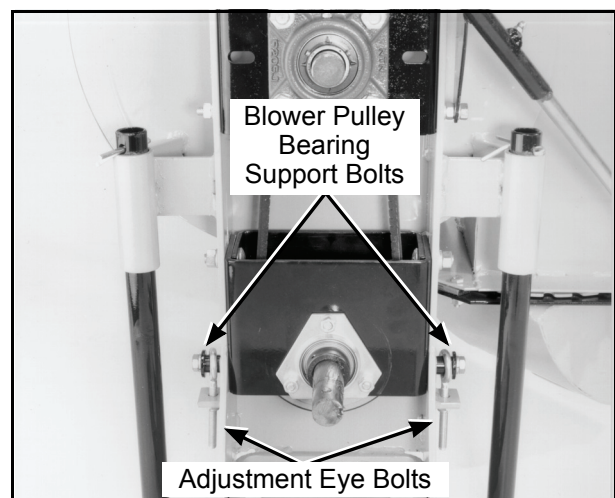
Debris Blower Drive Belt Tension

The drive belt deflection must be 1/8 in. (3 mm) when 6-1/2 to 9 lbf (29 to 40 N) is applied midway between the two pulleys.



Proper Drive Belt Deflection

1. Remove the belt guard from the debris blower housing by removing the two (2) cover pins and hairpins securing it to the housing.
2. Loosen the two (2) nuts and bolts on the blower pulley bearing support and turn the adjustment nuts on each side until the required tension is reached. Tighten the fasteners securely and reinstall the belt guard by reversing the removal procedures.



Drive Belt Tension Adjustment

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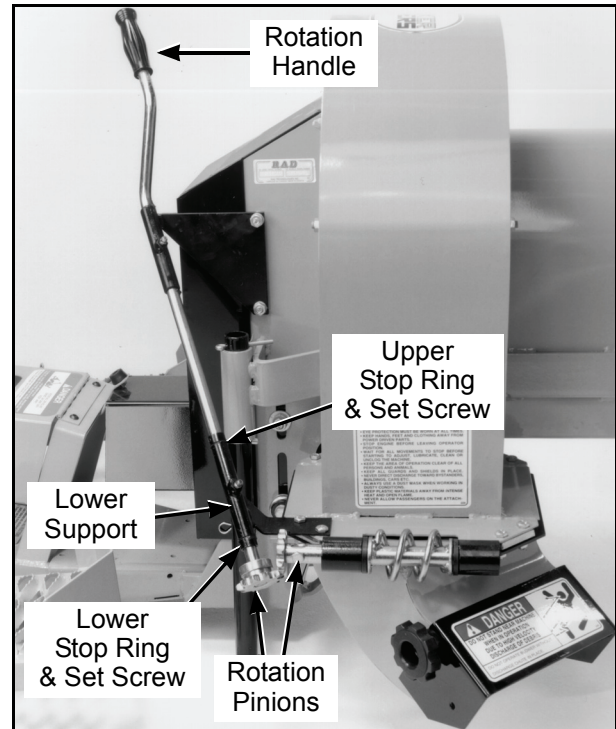
Debris Blower Rotation Pinions

The two (2) rotation pinions should slightly contact each other without any resistance.

1. Loosen the set screw of each stop ring on the rotation handle.
2. Keeping the two (2) pinions slightly in contact with each other, position the upper stop ring against the lower support and tighten the screw.
3. Position the lower stop ring close to the lower support and tighten the set screw. The rotation handle should rotate freely without excessive end play.

Debris Blower Rotation Handle

With the rotation pinions properly adjusted, the two (2) stop rings should be positioned close enough to the lower support to allow the rotation handle to rotate freely without excessive end play.



**Debris Blower Rotation Pinions
& Handle Adjustment**

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SB36 Snowblower

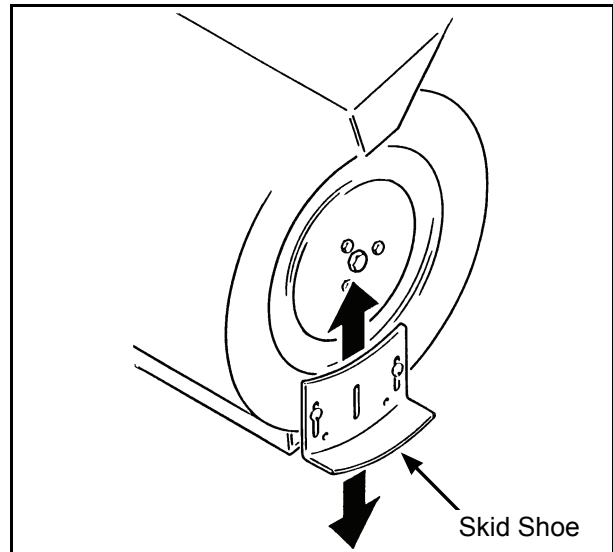
Gauge Wheels or Skid Shoes

Inspect for paper adjustment of the gauge wheels or skid shoes **before each use**.

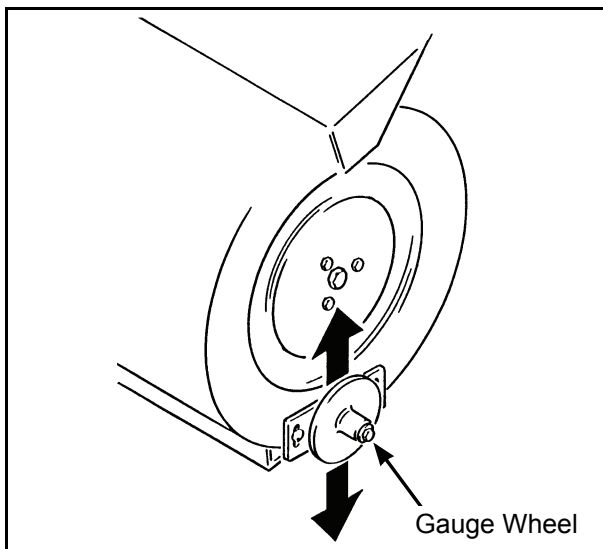
IMPORTANT: Failure to maintain proper adjustment of the gauge wheels or skid shoes can result in accelerated wear of the scraper blade.

Optional gauge wheels can be used instead of the skid shoes to operate the snowblower on soft surfaces. Adjust the gauge wheels or skid shoes as follows:

1. Park the tractor on a level surface and lower the snowblower.
2. Loosen the bolts that fasten the gauge wheels (or skid shoes) to the snowblower.



Adjust Skid Shoes



Adjust Gauge Wheels

3. Position the gauge wheels (or skid shoes) so that the snowblower is level and the scraper blade has **light contact or slight clearance** with the surface.
4. Retighten the bolts that fasten the gauge wheels (or skid shoes) to the snowblower.

SECTION 5

Electrical Systems

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Circuit Breakers	5-4
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Wiring Diagram - Model MT	5-5
Wiring Diagram - Model MTEFI	5-6
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ELECTRICAL SYSTEM - MODEL MT, MTL, MTEFI

For troubleshooting, refer to **Wiring Diagram**.

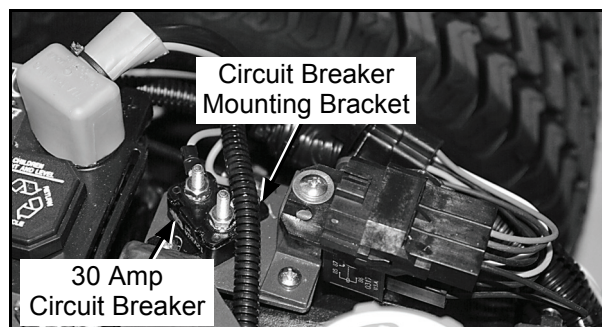
IMPORTANT: For Model MTEFI, an illuminated Engine Service Light on the control panel means that a fault has been detected in the electrical/fuel system. Contact an authorized Kohler Service Dealer to diagnose the fault.

IMPORTANT: Disconnect both battery cables before unplugging any wiring connectors or making repairs on the electrical system.

IMPORTANT: Disconnect the battery cables before unplugging and removing the instrument panel.

Circuit Breakers

A master circuit breaker is mounted on a bracket behind the battery. The circuit breaker may have either the manual or automatic reset function -- both types have been used. See **Circuit Breaker Location** photo.



Circuit Breaker Location

Location	Reset Amperage	Circuits (Electrical Load)
Master Circuit Breaker Mounted on Bracket Behind Battery	30 AMP	- Instrument Panel (MT, MTL, MTEFI) - Headlights (MT, MTEFI) - Starter Solenoid (MT, MTL, MTEFI) - ECU (MTEFI)
Radiator Fan Circuit Breaker Mounted Adjacent to Master Circuit Breaker	30 AMP	- Fan Control Module (MTL)
Instrument Panel	7 AMP	- Powerfil® (MT, MTL, MTEFI) - Safety Circuits (MT, MTL, MTEFI) - Warning Lights/Horn (MTL)
Instrument Panel	10 AMP	- Headlights (MTL)

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ELECTRICAL SYSTEM - MODEL MD

For troubleshooting, refer to **Wiring Diagram**.

IMPORTANT: Disconnect both battery cables before unplugging any wiring connectors or making repairs on the electrical system.

IMPORTANT: Disconnect the battery cables before unplugging and removing the instrument panel.

Circuit Breakers

Location	Reset Amperage	Circuits (Electrical Load)
Master Circuit Breaker Mounted on Bracket Behind Battery	40 AMP	- Instrument Panel - Starter Solenoid - Glow Plugs - Pull Circuit, Fuel Valve Solenoid
Radiator Fan Circuit Breaker Mounted Adjacent to Master Circuit Breaker	30 AMP	- Cooling Fan - Cooling Fan Module
Instrument Panel	7 AMP	- Time Delay Module - Panel Gauges - Warning Lights/Horn - Powerfil [®] Motor & Full Signal Horn
Instrument Panel	10 AMP	- Headlights - Safety Switch Relays - Hold Circuit, Fuel Valve Solenoid - Fuel Pump

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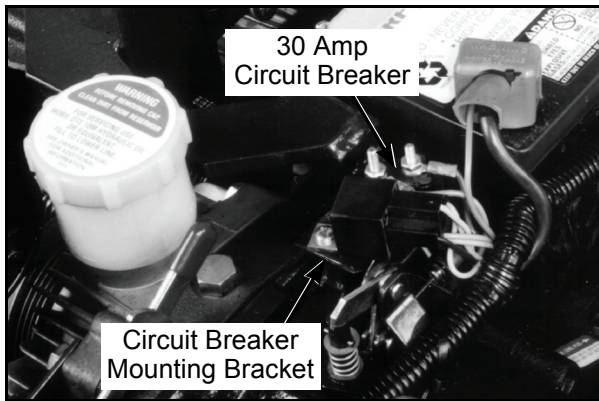
ELECTRICAL SYSTEM - MODEL MC

For troubleshooting, refer to **Wiring Diagram**.

IMPORTANT: Disconnect both battery cables before unplugging any wiring connectors or making repairs on the electrical system.

Circuit Breakers

A master circuit breaker is mounted on a bracket behind the battery. The circuit breaker may have either the manual or automatic reset function -- both types have been used. See **Circuit Breaker Location** photo.



Circuit Breaker Location

ELECTRICAL SYSTEM - MODEL MS, MB

For troubleshooting, refer to the **Wiring Diagram**.

IMPORTANT: Disconnect both battery cables before unplugging any wiring connectors or making repairs on the electrical system.

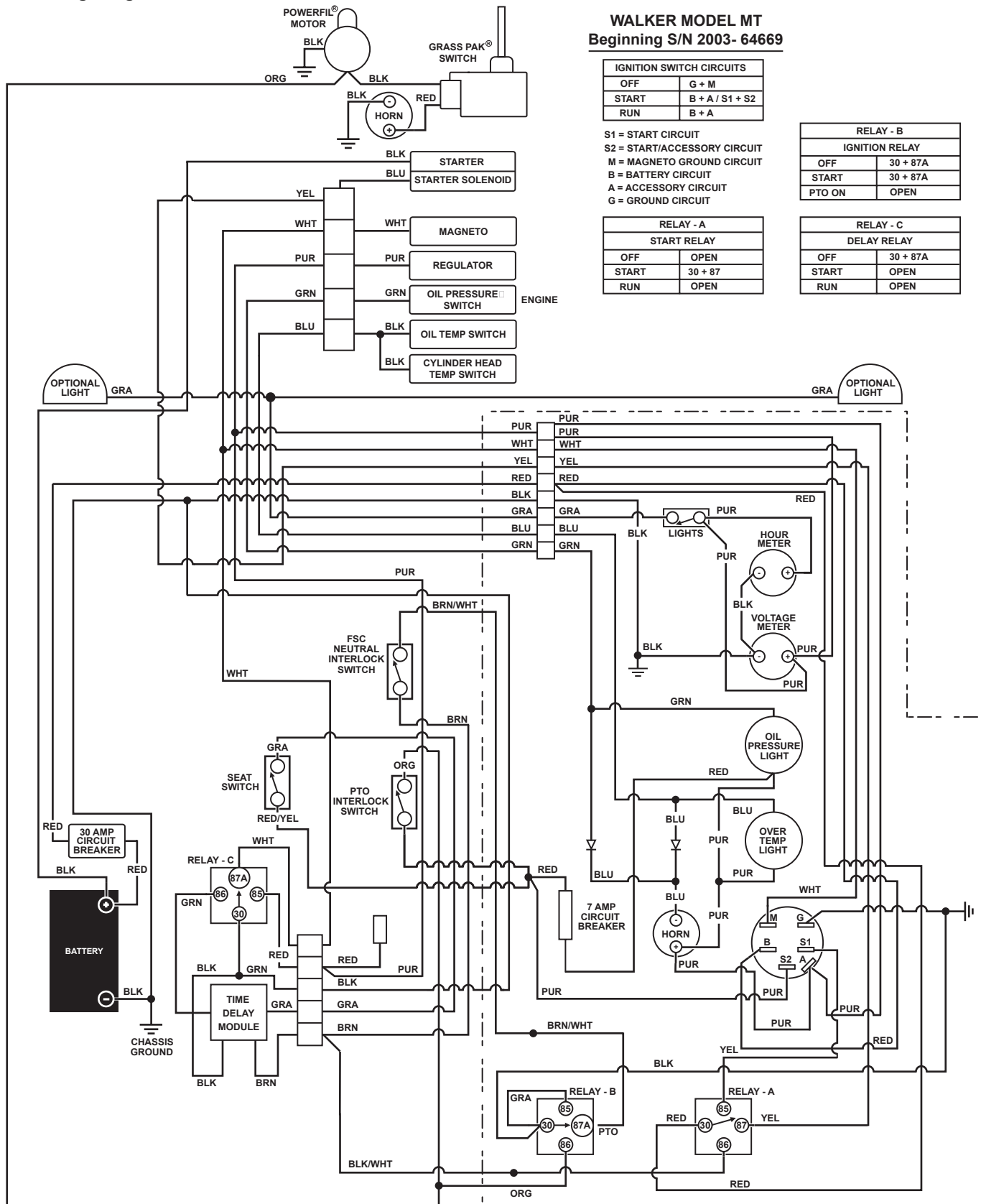
Walker

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SCHEMATICS

Wiring Diagram - Model MT



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Wiring Diagram - Model MTEFI

WALKER MODEL MT-EFI Beginning S/N 2003-64669

IGNITION SWITCH CIRCUITS	
OFF	G + M
START	B + A / S1 + S2
RUN	B + A

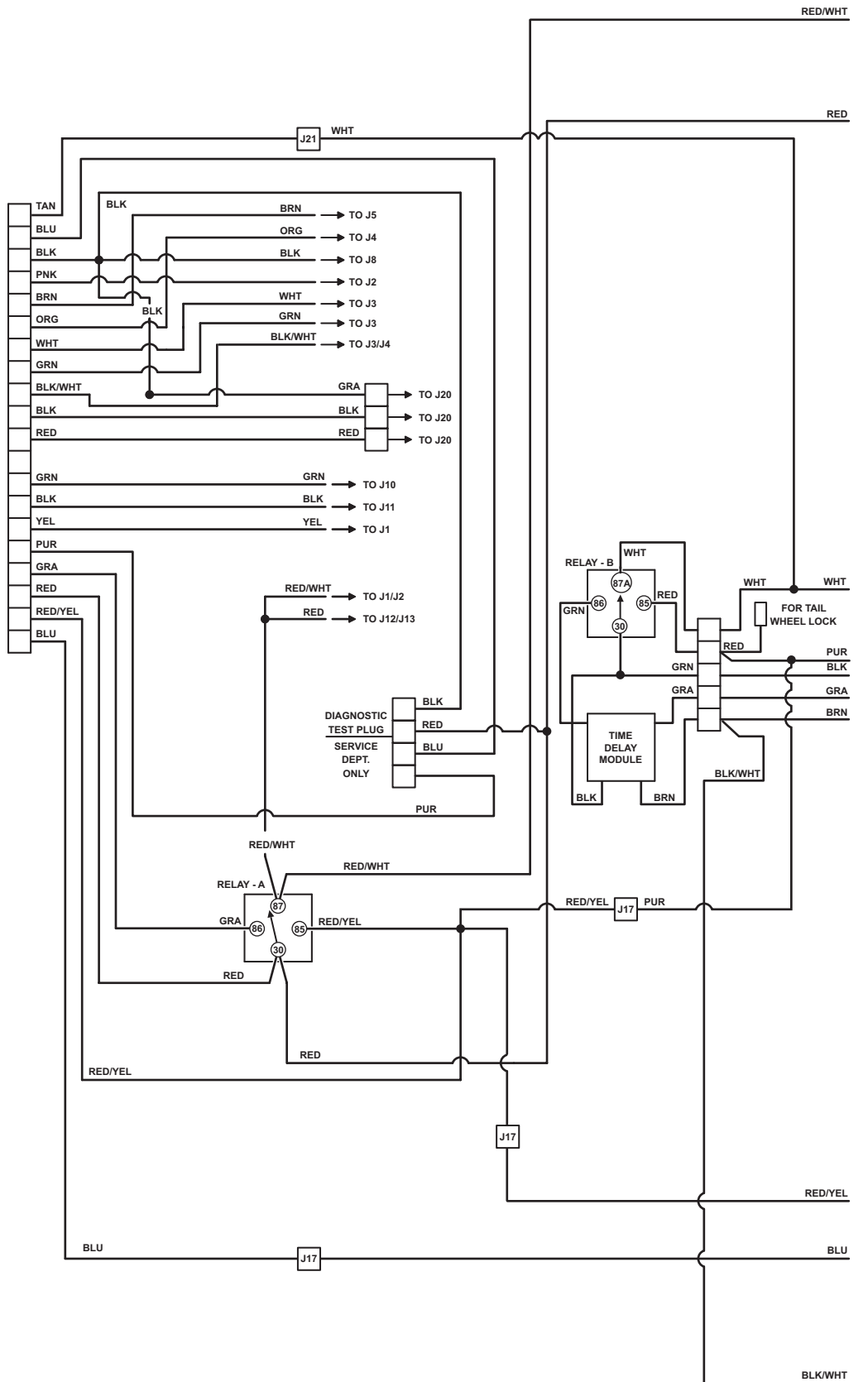
S1 = START CIRCUIT
 S2 = START / ACCESSORY CIRCUIT
 M = MAGNETO GROUND CIRCUIT
 B = BATTERY CIRCUIT
 A = ACCESSORY CIRCUIT
 G = GROUND CIRCUIT
 J1 = #1 FUEL INJECTOR
 J2 = #2 FUEL INJECTOR
 J3 = THROTTLE POSITION SENSOR
 J4 = OIL TEMP SENSOR
 J5 = OXYGEN SENSOR
 J6 = REGULATOR / RECTIFIER
 J8 = ENGINE GROUND
 J10 = #1 IGNITION COIL
 J11 = #2 IGNITION COIL
 J12 = #1 IGNITION COIL
 J13 = #2 IGNITION COIL
 J14 = IGNITION COIL GROUND
 J20 = SPEED PICK-UP SENSOR

RELAY - A IGNITION / FUEL RELAY	
OFF	OPEN
START	OPEN
PTO ON	30 + 87

RELAY - B DELAY RELAY	
OFF	30 + 87A
START	OPEN
RUN	OPEN

RELAY - C START / TIME DELAY RELAY	
OFF	30 + 87A
START	30 + 87A
RUN	OPEN

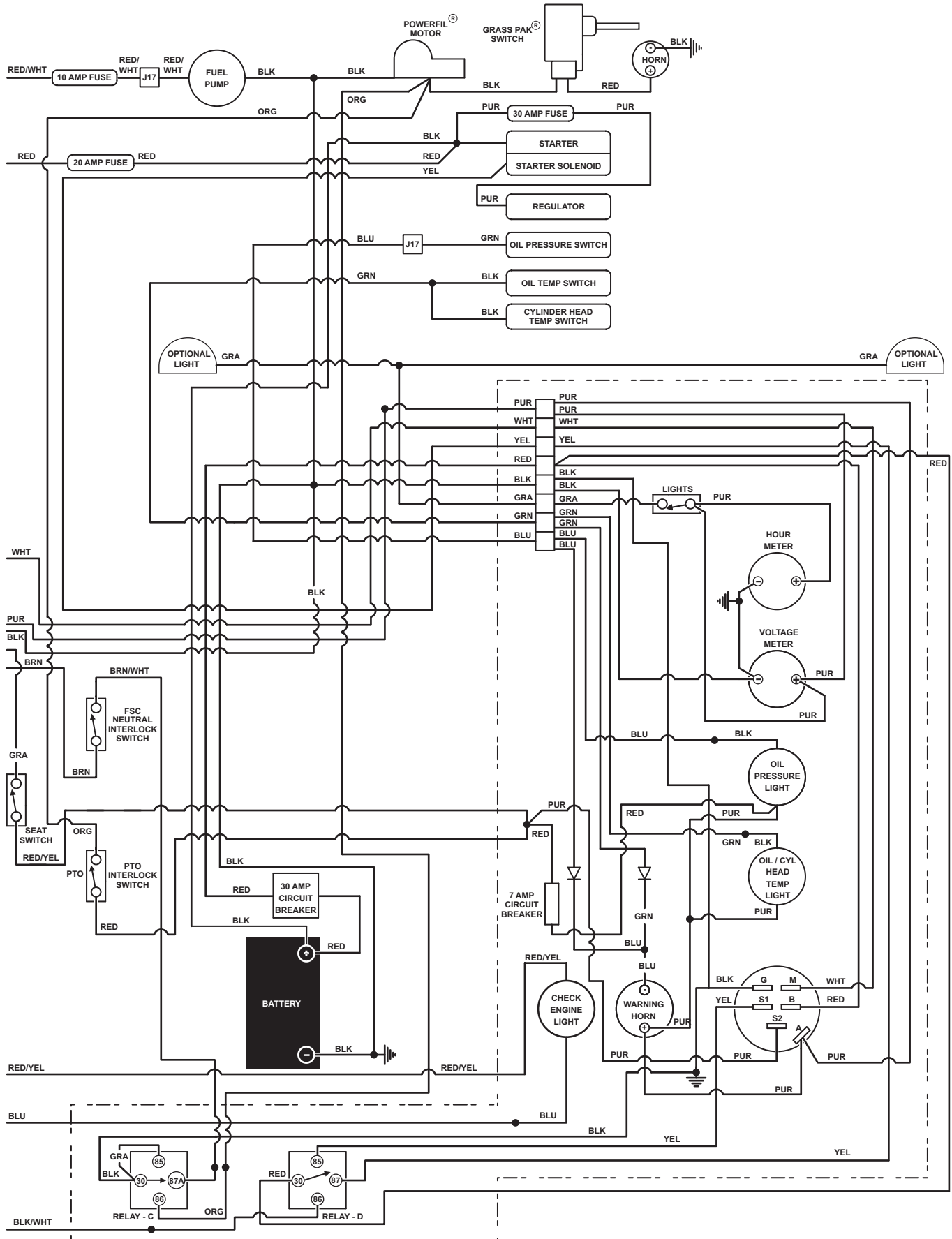
RELAY - D START / SOLENOID RELAY	
OFF	OPEN
RUN (LOW)	OPEN
RUN (HIGH)	30 + 87



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SERVICE INSTRUCTIONS

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Wiring Diagram - Model MTL-EFI

WALKER MODEL MTL-EFI
Beginning S/N 2005-75988

- S1 = START CIRCUIT
- S2 = START / ACCESSORY CIRCUIT
- M = MAGNETO GROUND CIRCUIT
- B = BATTERY CIRCUIT
- A = ACCESSORY CIRCUIT
- G = GROUND CIRCUIT
- J1 = #1 FUEL INJECTOR
- J2 = #2 FUEL INJECTOR
- J3 = THROTTLE POSITION SENSOR
- J4 = OIL TEMP SENSOR
- J5 = OXYGEN SENSOR
- J6 = REGULATOR / RECTIFIER
- J8 = ENGINE GROUND
- J10 = #1 IGNITION COIL
- J11 = #2 IGNITION COIL
- J12 = #1 IGNITION COIL
- J13 = #2 IGNITION COIL
- J14 = IGNITION COIL GROUND
- J20 = SPEED PICK-UP SENSOR

RELAY - A	
PTO RELAY	
OFF	30 + 87A
START	30 + 87A
PTO ON	OPEN

RELAY - B	
START RELAY	
OFF	OPEN
START	30 + 87
RUN	OPEN

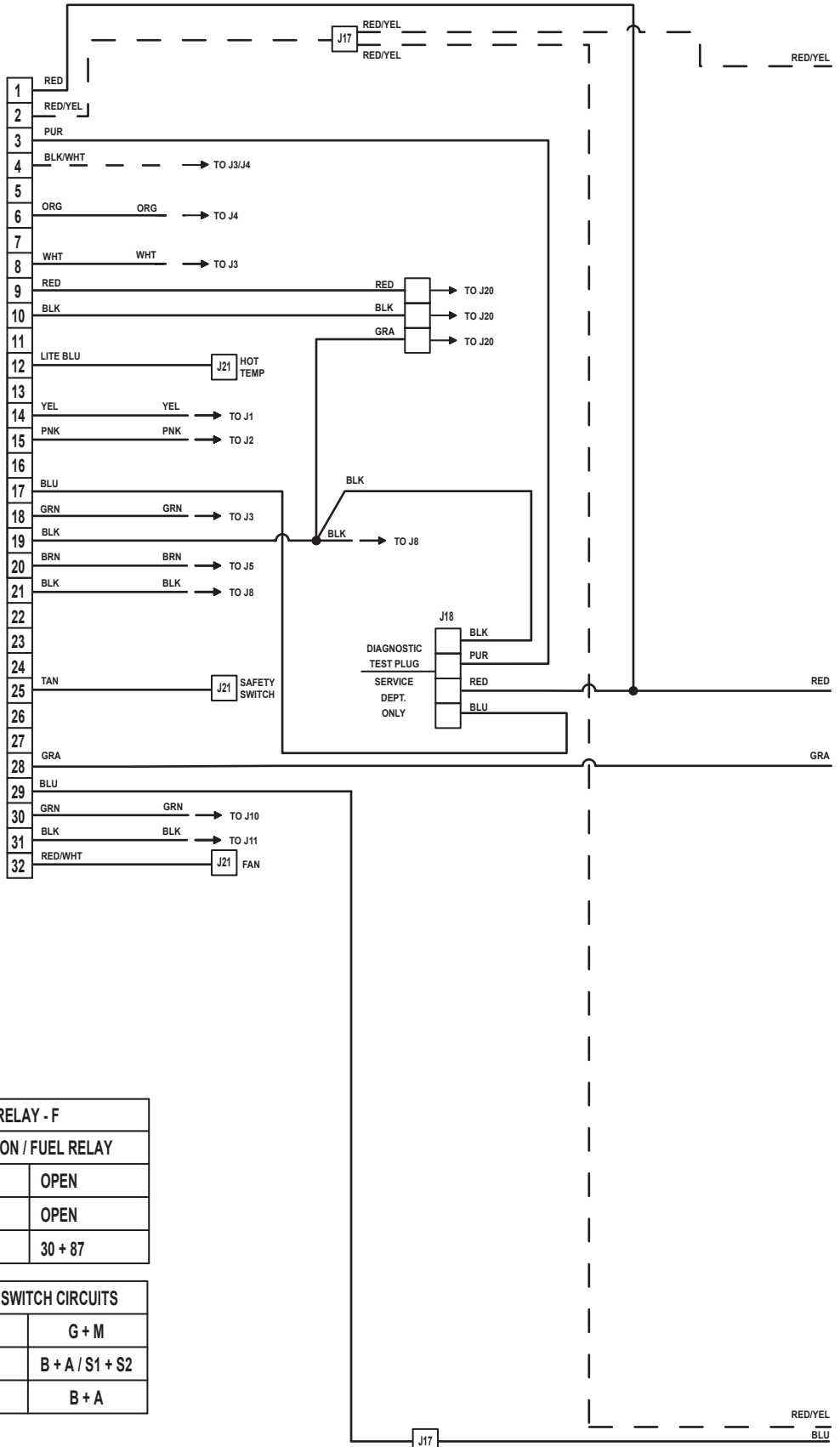
RELAY - C	
FAN INTERRUPT RELAY	
OFF	30 + 87A
START	OPEN
PTO ON	30 + 87A

RELAY - D	
FAN SPEED CONTROL	
OFF	30 + 87A
START	30 + 87A
PTO ON	30 + 87

RELAY - E	
DELAY RELAY	
OFF	30 + 87A
START	OPEN
PTO ON	OPEN

RELAY - F	
IGNITION / FUEL RELAY	
OFF	OPEN
START	OPEN
PTO ON	30 + 87

IGNITION SWITCH CIRCUITS	
OFF	G + M
START	B + A / S1 + S2
RUN	B + A

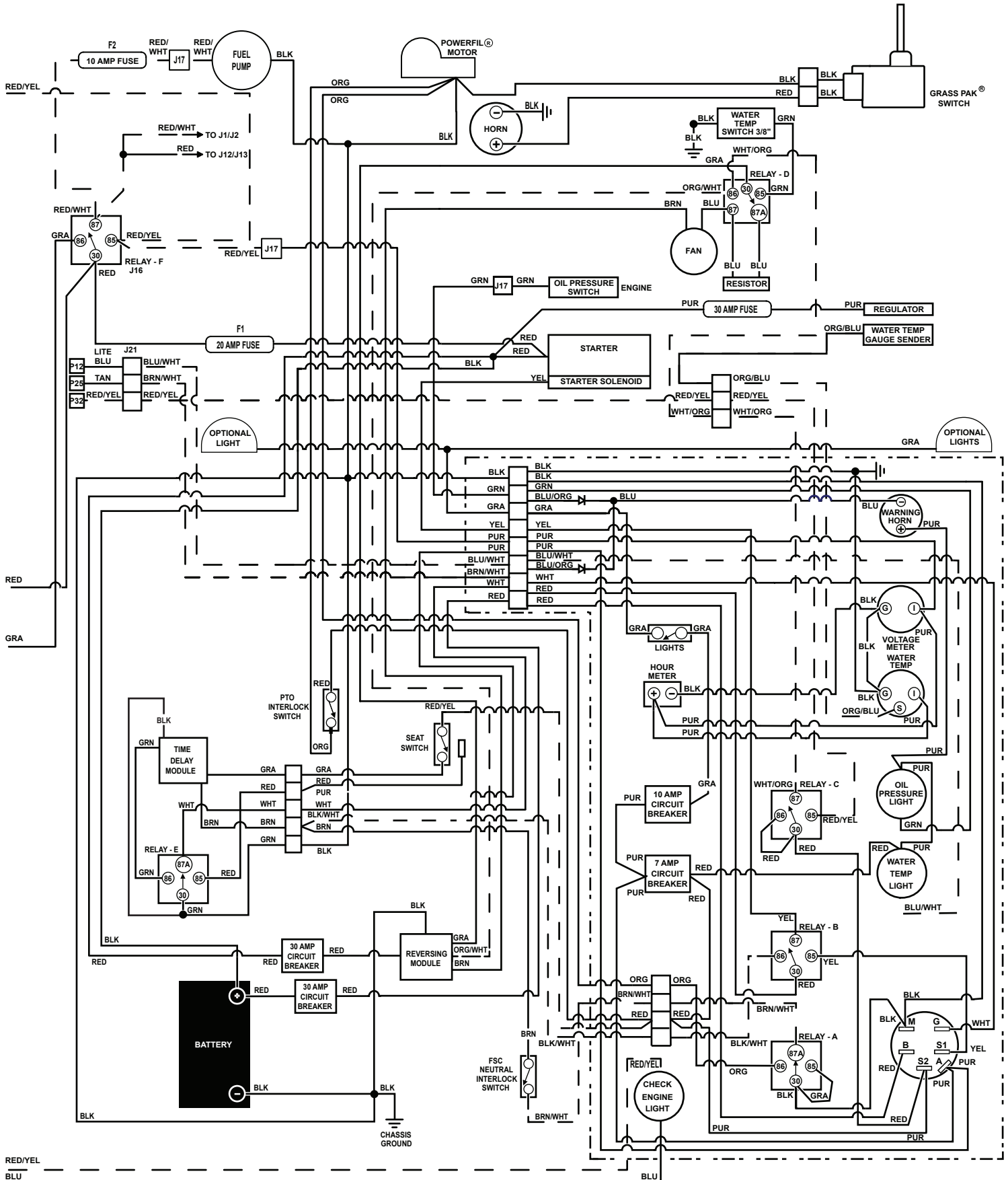


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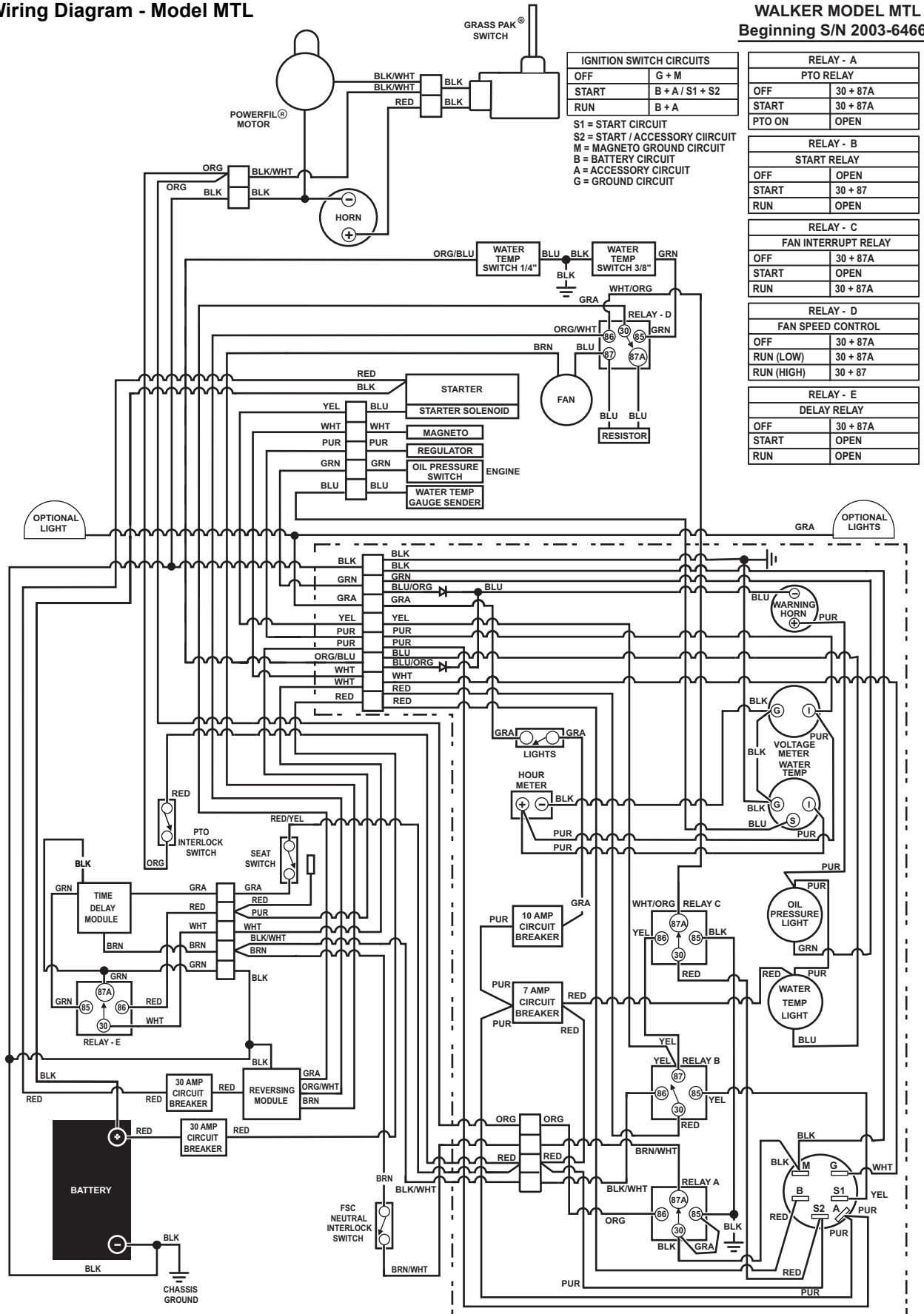
Walker

SERVICE INSTRUCTIONS

July 2006

Wiring Diagram - Model MTL

WALKER MODEL MTL Beginning S/N 2003-64669



IGNITION SWITCH CIRCUITS	
OFF	G + M
START	B + A / S1 + S2
RUN	B + A

S1 = START CIRCUIT
S2 = START / ACCESSORY CIRCUIT
M = MAGNETO GROUND CIRCUIT
B = BATTERY CIRCUIT
A = ACCESSORY CIRCUIT
G = GROUND CIRCUIT

RELAY - A PTO RELAY	
OFF	30 + 87A
START	30 + 87A
PTO ON	OPEN

RELAY - B START RELAY	
OFF	OPEN
START	30 + 87
RUN	OPEN

RELAY - C FAN INTERRUPT RELAY	
OFF	30 + 87A
START	OPEN
RUN	30 + 87A

RELAY - D FAN SPEED CONTROL	
OFF	30 + 87A
RUN (LOW)	30 + 87A
RUN (HIGH)	30 + 87

RELAY - E DELAY RELAY	
OFF	30 + 87A
START	OPEN
RUN	OPEN

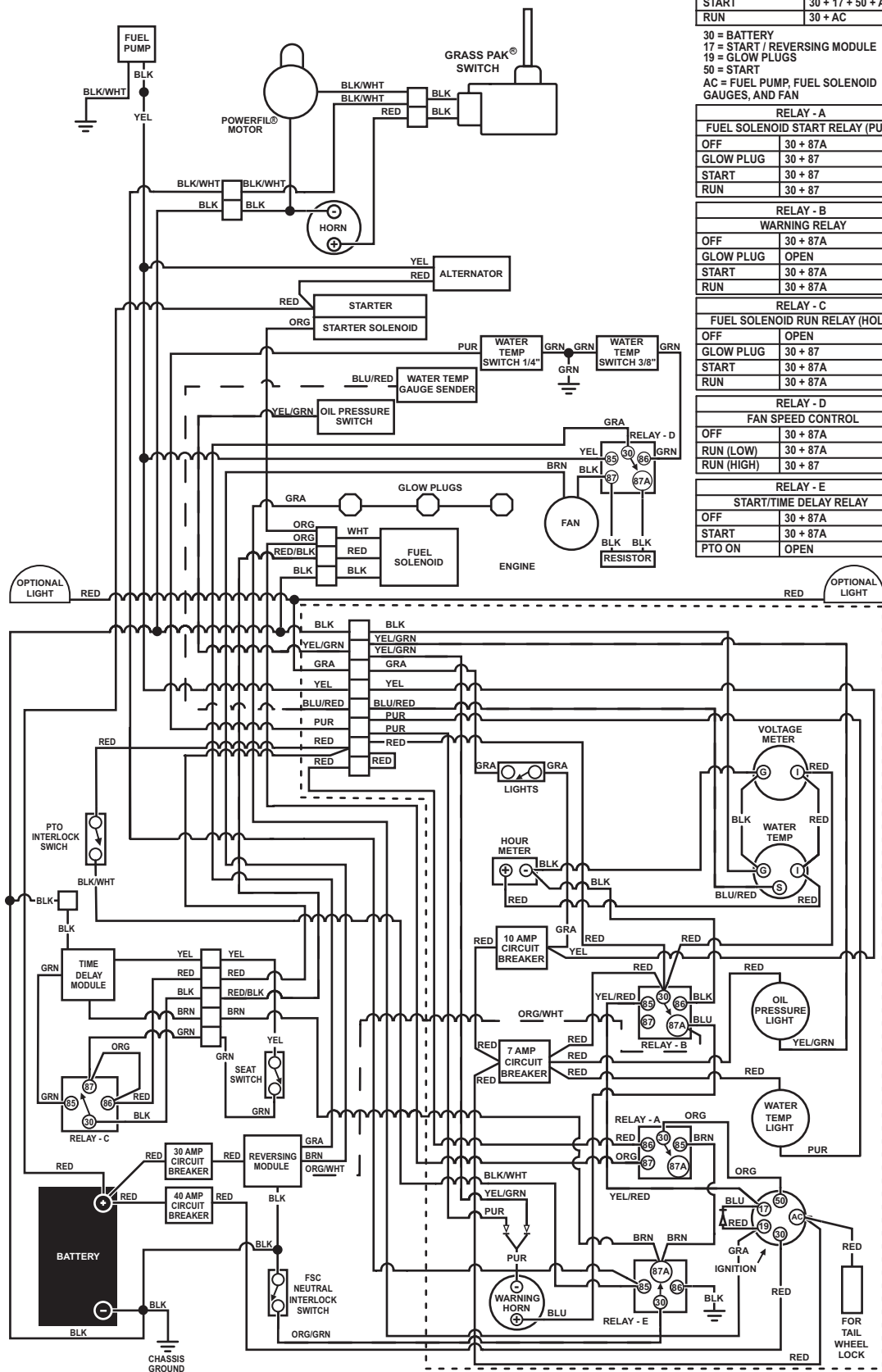
Walker

SERVICE INSTRUCTIONS

July 2006

Wiring Diagram - Model MD

WALKER MODEL MDD Beginning S/N 2004-66313



IGNITION SWITCH CIRCUITS	
OFF	ALL OPEN
GLow PLUG	30 + 19 + AC
START	30 + 17 + 50 + AC
RUN	30 + AC

30 = BATTERY
17 = START / REVERSING MODULE
19 = GLOW PLUGS
50 = START
AC = FUEL PUMP, FUEL SOLENOID
GAUGES, AND FAN

RELAY - A FUEL SOLENOID START RELAY (PULL)	
OFF	30 + 87A
GLow PLUG	30 + 87
START	30 + 87
RUN	30 + 87

RELAY - B WARNING RELAY	
OFF	30 + 87A
GLow PLUG	OPEN
START	30 + 87A
RUN	30 + 87A

RELAY - C FUEL SOLENOID RUN RELAY (HOLD)	
OFF	OPEN
GLow PLUG	30 + 87
START	30 + 87A
RUN	30 + 87A

RELAY - D FAN SPEED CONTROL	
OFF	30 + 87A
RUN (LOW)	30 + 87A
RUN (HIGH)	30 + 87

RELAY - E START/TIME DELAY RELAY	
OFF	30 + 87A
START	30 + 87A
PTO ON	OPEN

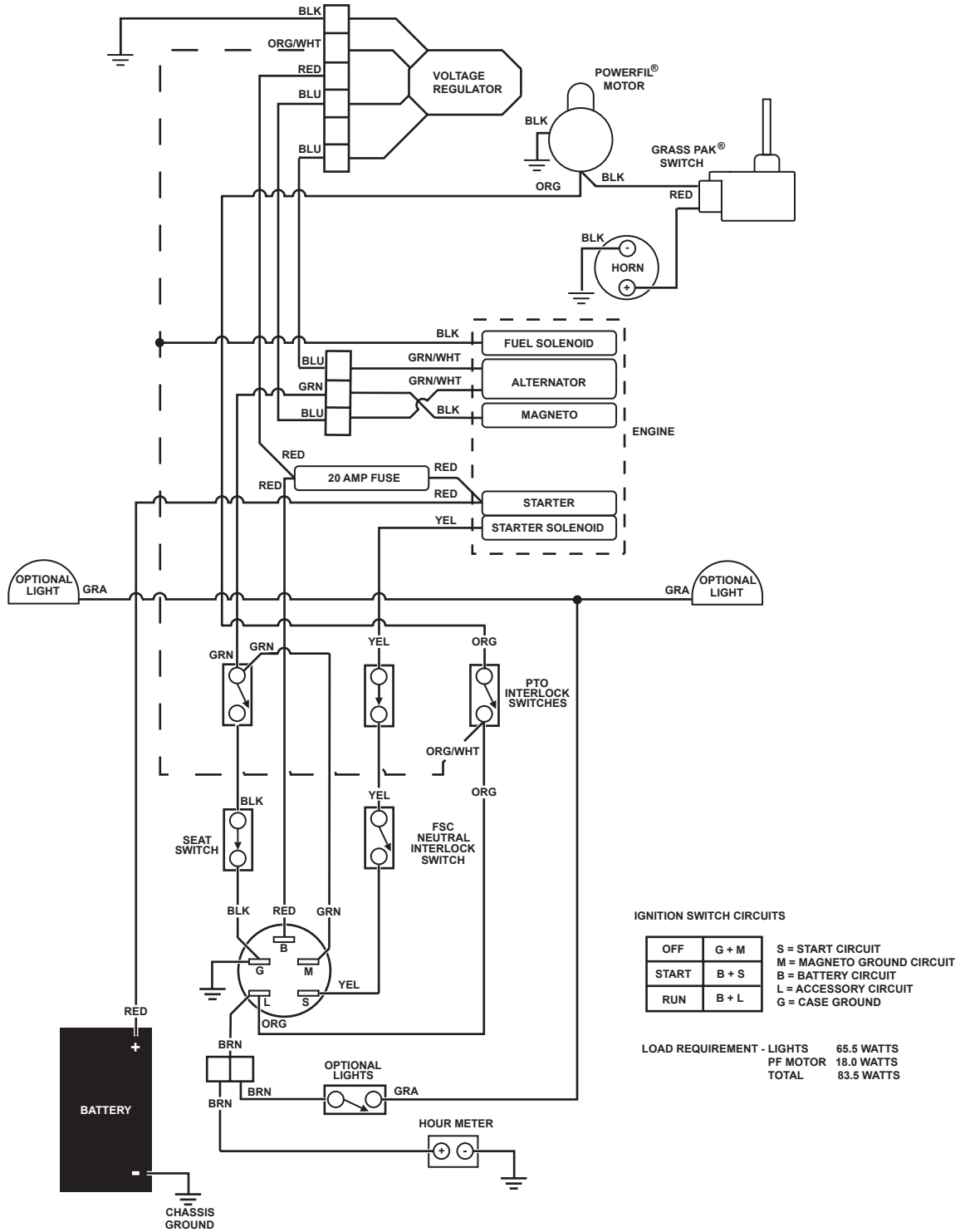
WALKER MANUFACTURING COMPANY

Walker

SERVICE INSTRUCTIONS

July 2006

Wiring Diagram - Model MS

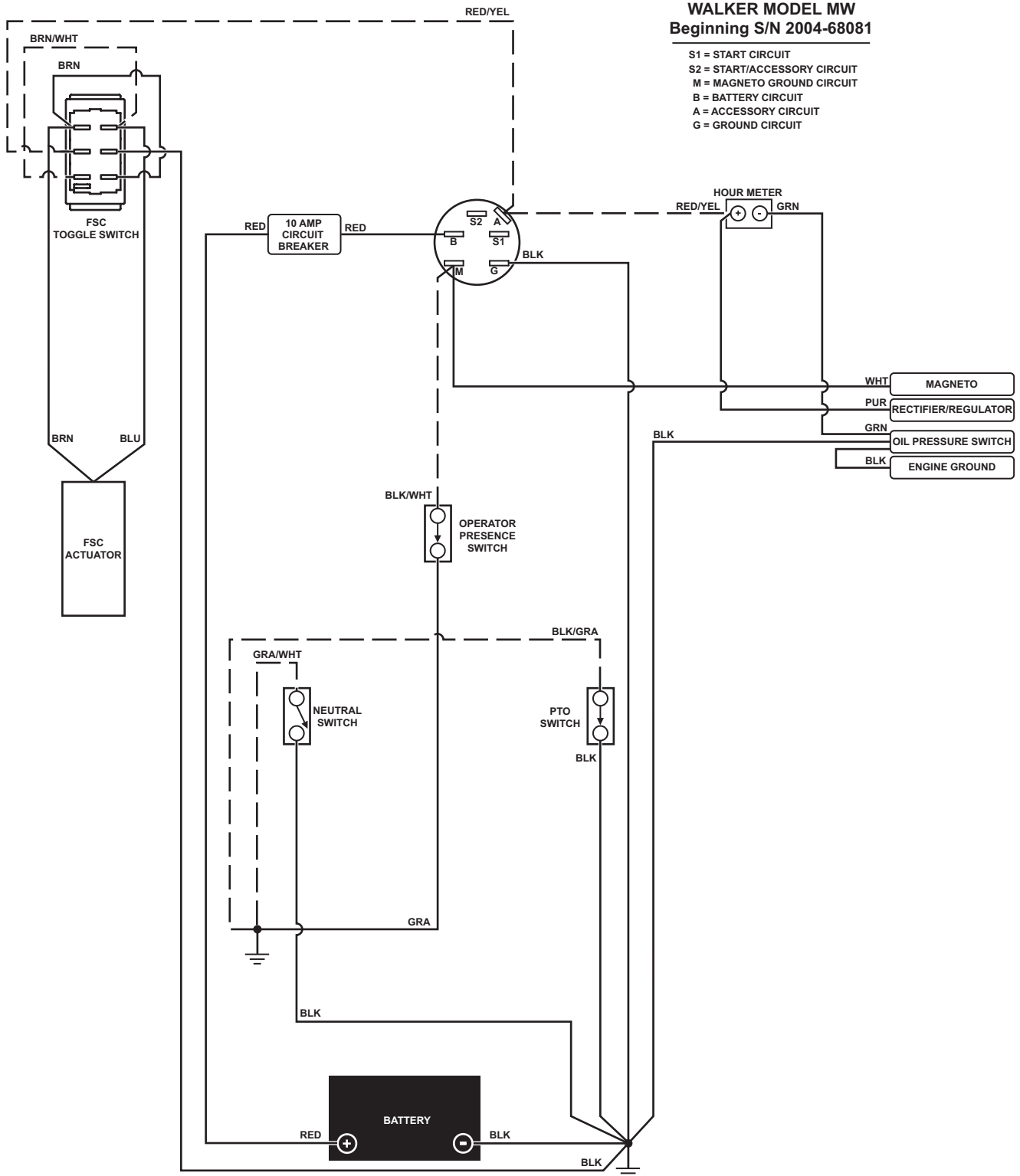


Walker

SERVICE INSTRUCTIONS

July 2006

Wiring Diagram - Model MW



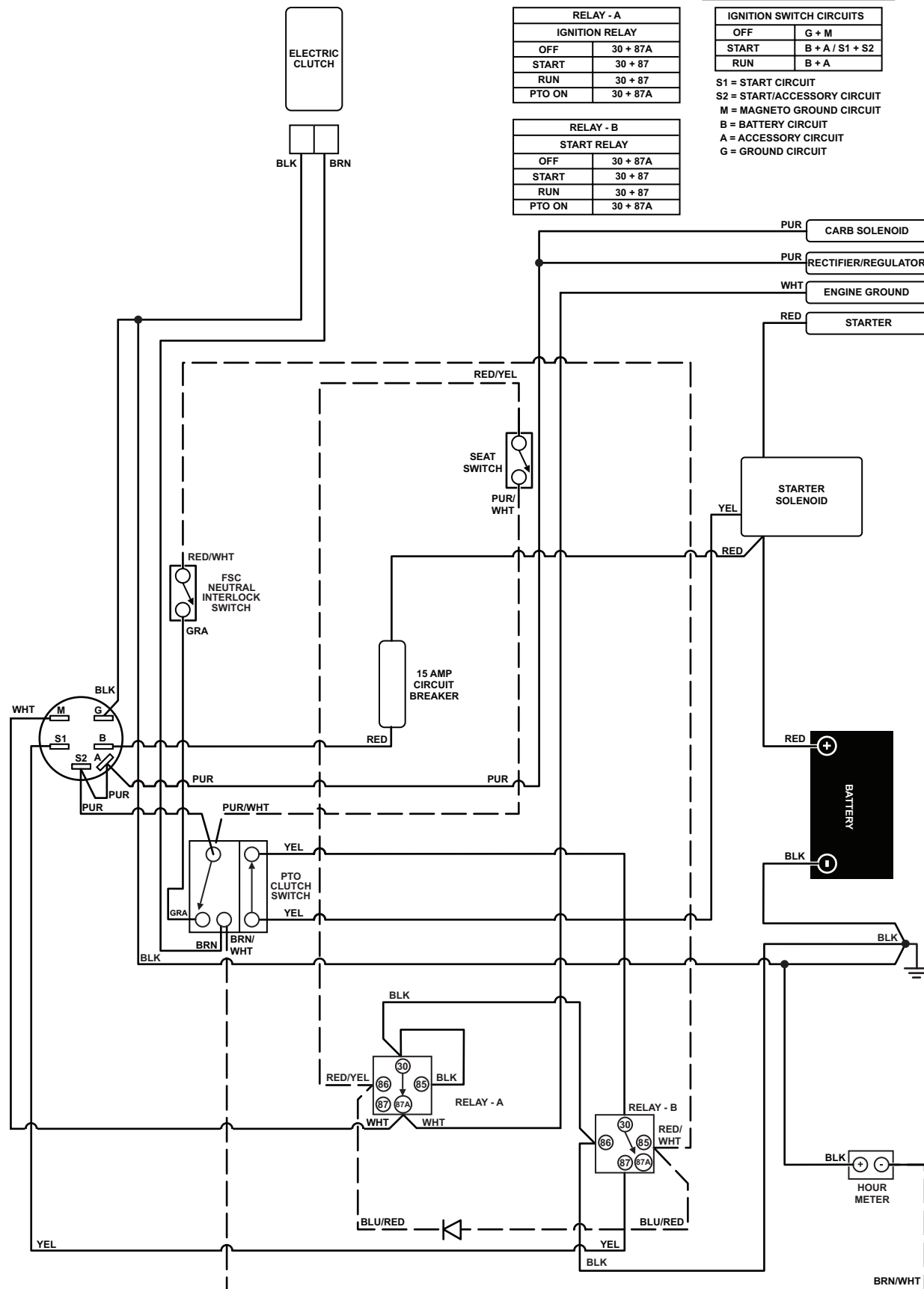
Walker

SERVICE INSTRUCTIONS

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Wiring Diagram - Model MB

WALKER MODEL MB
Beginning S/N 2005-68441 thru 2006-85007



WALKER MANUFACTURING COMPANY

Walker

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WALKER MODEL MB Beginning S/N 2007-85248

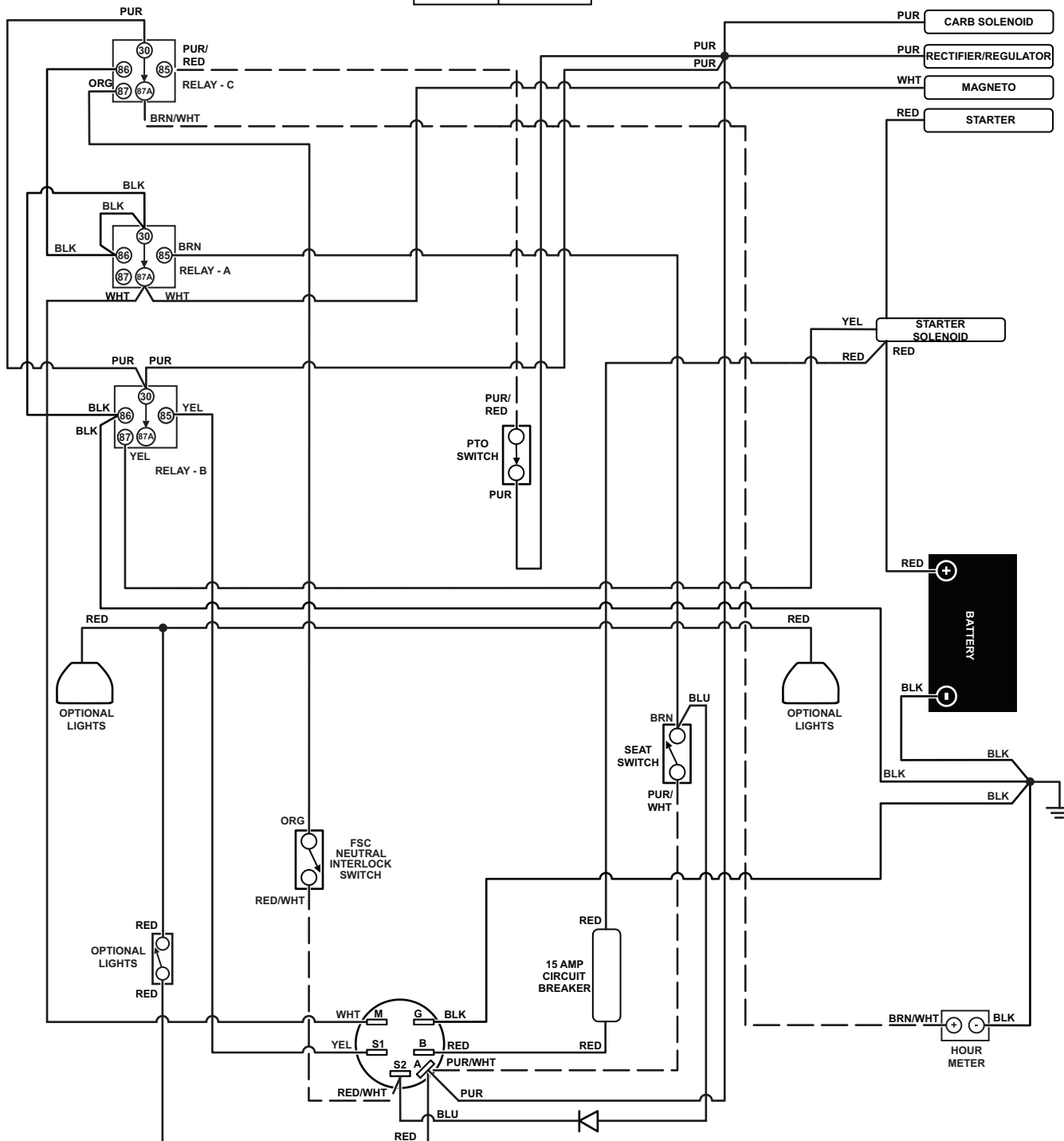
RELAY - A IGNITION RELAY	
OFF	30 + 87A
START	30 + 87
RUN	30 + 87
PTO ON	30 + 87A

RELAY - C IGNITION RELAY	
OFF	30 + 87A
START	30 + 87
RUN	30 + 87
PTO ON	30 + 87A

RELAY - B START RELAY	
OFF	30 + 87A
START	30 + 87
RUN	30 + 87
PTO ON	30 + 87A

IGNITION SWITCH CIRCUITS	
OFF	G + M
START	B + A / S1 + S2
RUN	B + A

S1 = START CIRCUIT
S2 = START/ACCESSORY CIRCUIT
M = MAGNETO GROUND CIRCUIT
B = BATTERY CIRCUIT
A = ACCESSORY CIRCUIT
G = GROUND CIRCUIT



WALKER MANUFACTURING COMPANY

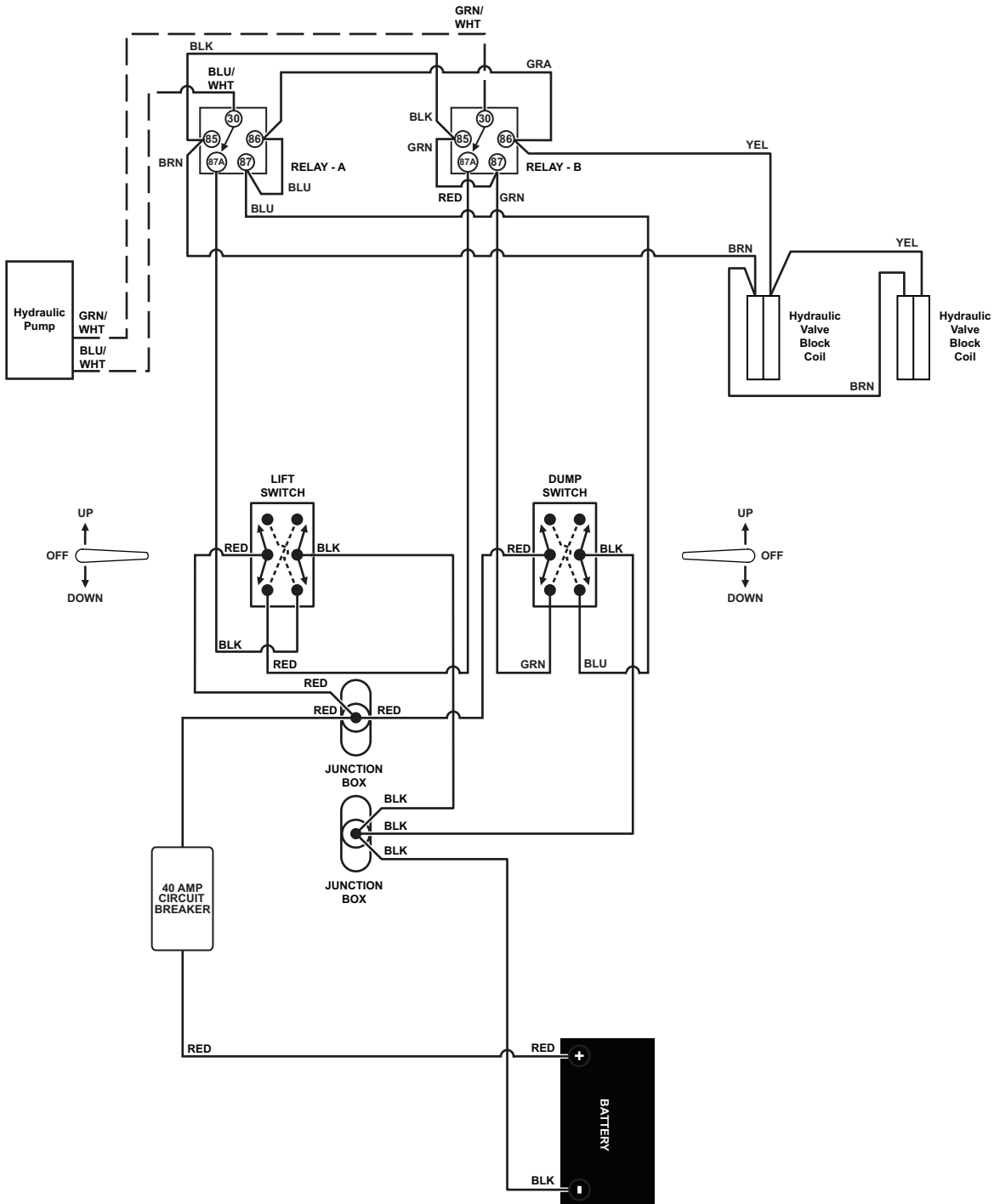
Walker

SERVICE INSTRUCTIONS

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Wiring Diagram - HD8400

WALKER HD8400 ELECTRICAL SCHEMATIC



Walker

SERVICE INSTRUCTIONS

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Walker
SERVICE INSTRUCTIONS

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SECTION 6

Decks

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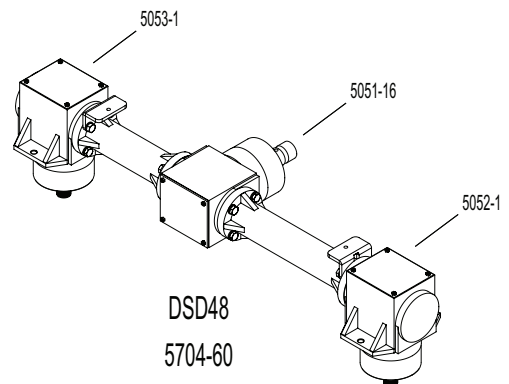
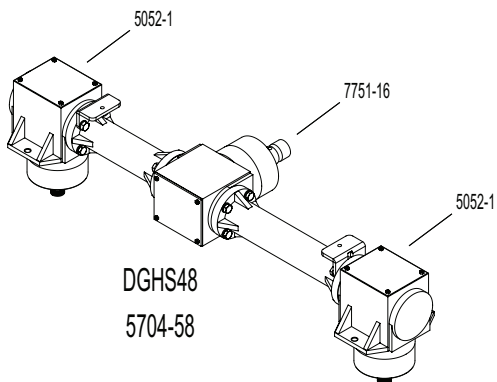
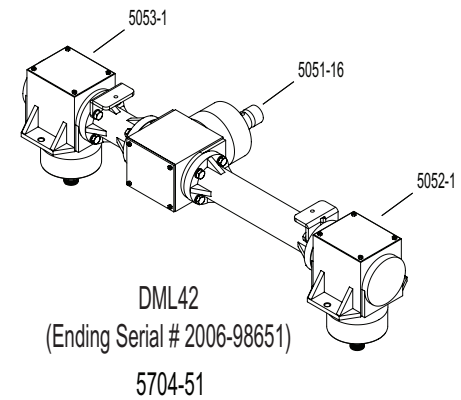
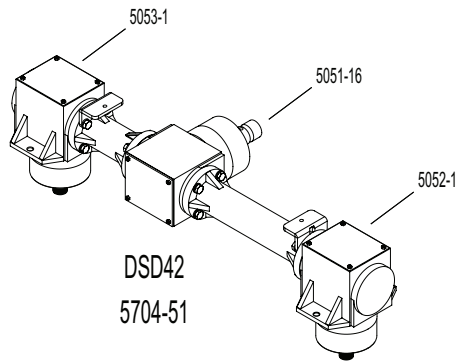
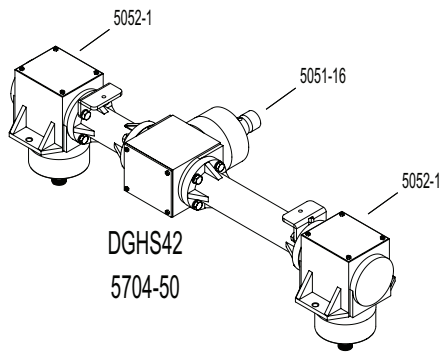
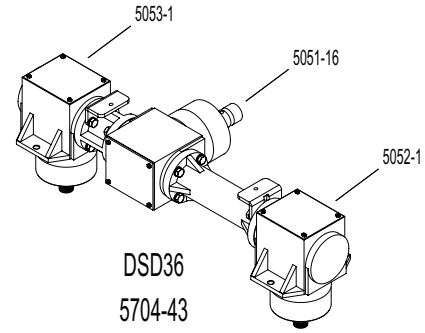
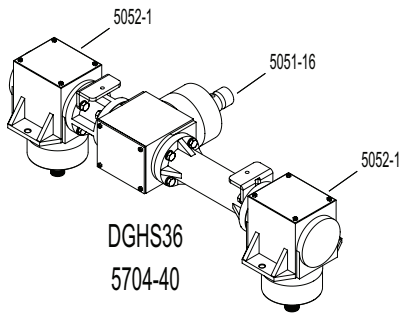
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Walker

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ALUMINUM GEAR DRIVES



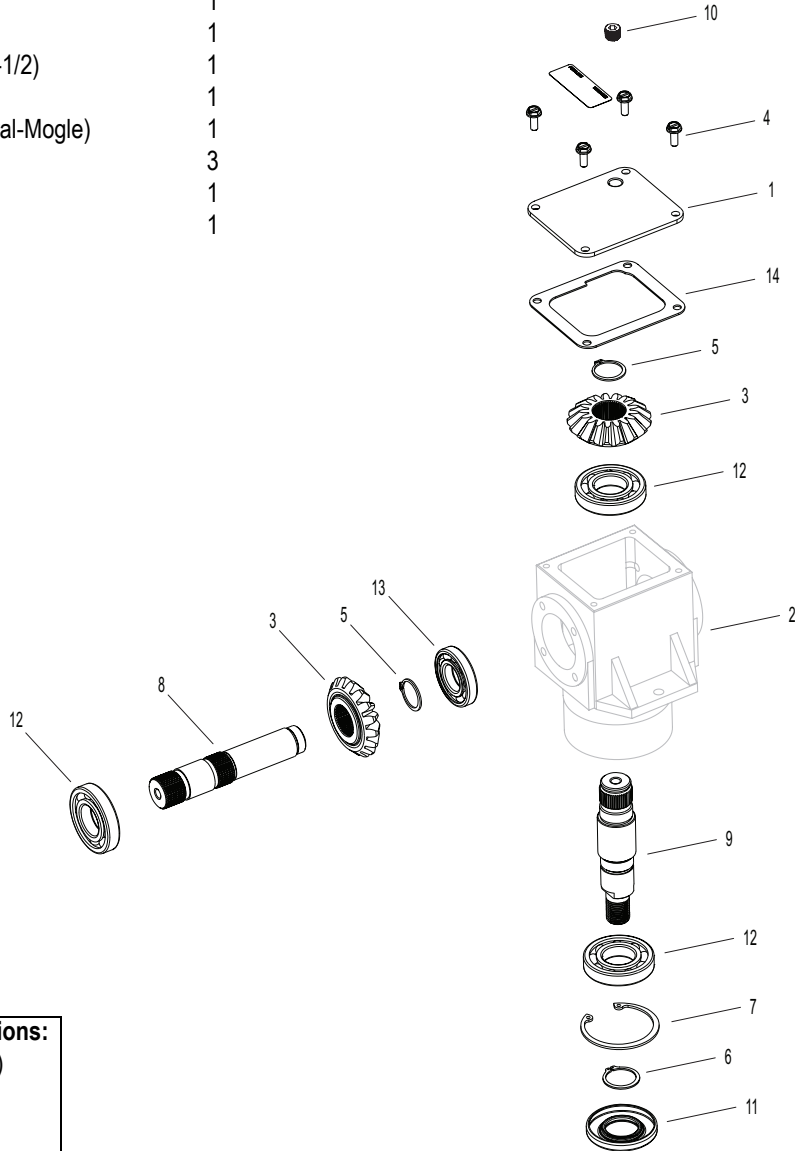
Walker

SERVICE INSTRUCTIONS

July 2006

ALUMINUM PEERLESS GEARBOX 1000-053A (WALKER P/N 5053-1)

ITEM NO.	WALKER	PEERLESS	DESCRIPTION	NO. REQ'D
	PART NO.	PART NO.		
1	P018	772067	Cover, LH	1
2	N/A	770092A	Right Angle Drive Housing	1
3	P003	778101	Miter Gear (17 teeth-steel)	2
4	P008	792025	Screw, RD/HD Self-Tap	4
5	P032	788018	Snap Ring, Gear Retainer	2
6	P028	788019	Snap Ring	1
7	P016	792119	Snap Ring	1
8	P005	776040A	Input Shaft	1
9	P030	776261	Output Shaft (4-1/2)	1
10	P041	28534	Plug, Cover	1
11	P001	471730	Seal, Oil (Federal-Mogge)	1
12	P024	780034	Ball Bearing	3
13	P019	780024	Ball Bearing	1
14	P004	788028	Gasket Cover	1



This Gearbox is used in the following applications:

(RH and LH indicate view from operator seat)

- DSD36 RH Gearbox
- DSD42 RH Gearbox
- DML42 RH Gearbox
- DSD54 RH Gearbox

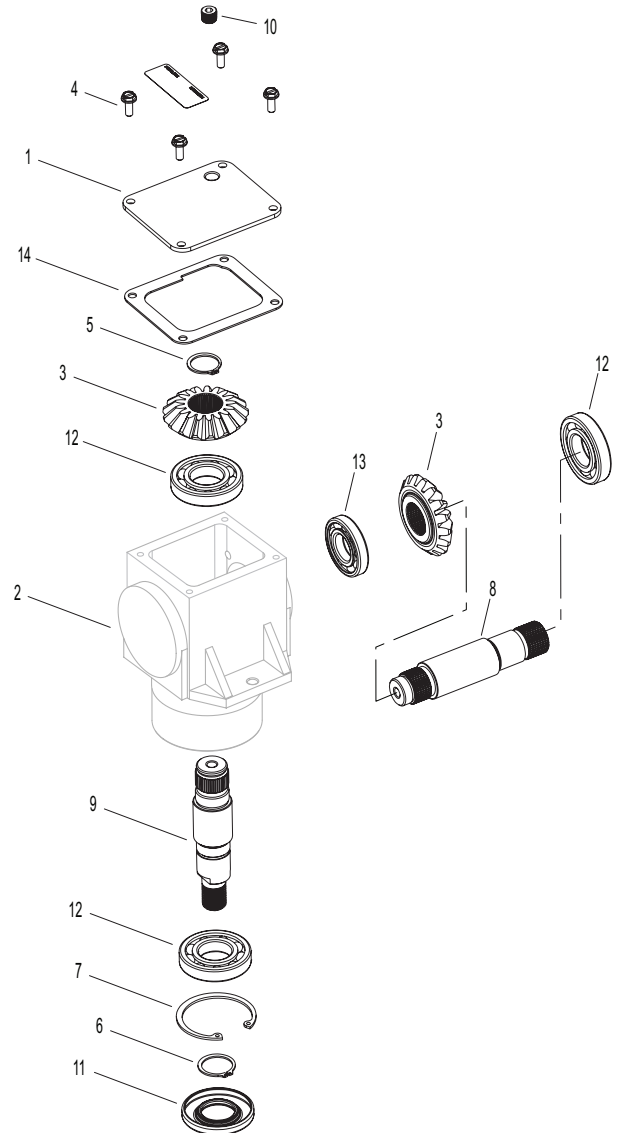
Walker

SERVICE INSTRUCTIONS

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ALUMINUM PEERLESS GEARBOX 1000-054A (WALKER P/N 5052-1)

ITEM NO.	WALKER	PEERLESS	DESCRIPTION	NO. REQ'D
	PART NO.	PART NO.		
1	P018	772067	Cover, LH	1
2	N/A	770092A	Right Angle Drive Housing	1
3	P003	778101	Miter Gear (17 teeth-steel)	2
4	P008	792025	Screw, RD/HD Self-Tap	4
5	P032	788018	Snap Ring, Gear Retainer	1
6	P028	788019	Snap Ring	1
7	P016	792119	Snap Ring	1
8	P011	776041A	Input Shaft	1
9	P030	776261	Output Shaft (4-1/2)	1
10	P041	28534	Plug, Cover	1
11	P001	471730	Seal, Oil (Federal-Mogge)	1
12	P024	780034	Ball Bearing	3
13	P019	780024	Ball Bearing	1
14	P004	788028	Gasket Cover	1



This Gearbox is used in the following applications:

(RH and LH indicate view from operator seat)

- DGHS36 RH Gearbox
- DGHS36 LH Gearbox
- DSD36 LH Gearbox
- DGHS42 RH Gearbox
- DGHS42 LH Gearbox
- DSD42 LH Gearbox
- DML42 LH Gearbox
- DGHS48 RH Gearbox
- DGHS48 LH Gearbox
- DSD54 LH Gearbox

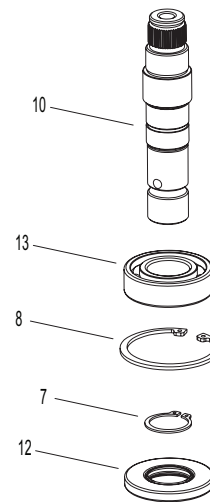
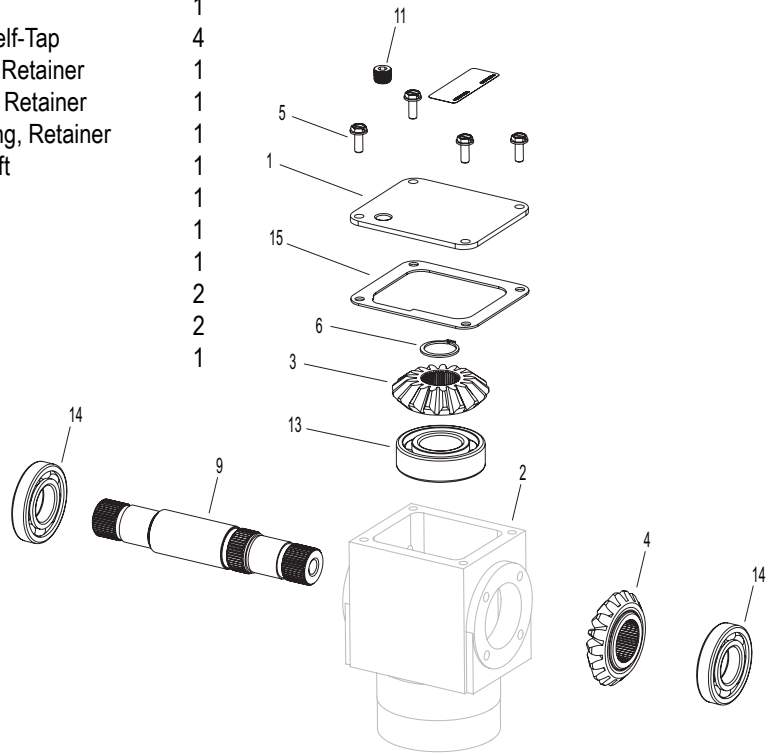
Walker

SERVICE INSTRUCTIONS

July 2006

ALUMINUM PEERLESS GEARBOX 1000-099 (WALKER P/N 5051-16) For 36", 42", and 54" Decks After S/N 99-46813

ITEM NO.	WALKER	PEERLESS	DESCRIPTION	NO. REQ'D
	PART NO.	PART NO.		
1	P018	772067	Cover, LH	1
2	N/A	770117	"T" Drive Housing	1
3	P003	778101	Miter Gear (17 teeth-steel)	1
4	P031	778210A	Gear, Miter	1
5	P008	792025	Screw, RD/HD Self-Tap	4
6	P032	788018	Snap Ring, Gear Retainer	1
7	P051	788079	Snap Ring, Shaft Retainer	1
8	P052	788080	Snap Ring Bearing, Retainer	1
9	P017	776072A	Input/Output Shaft	1
10	P056	6509-P1	Input Shaft	1
11	P041	28534	Plug, Cover	1
12	P042	788099	Seal	1
13	P044	780174	Ball Bearing	2
14	P024	780034	Ball Bearing	2
15	P004	788028	Gasket Cover	1



**This Gearbox is used in the following applications:
For The Following Decks After S/N 99-46813**

- DGHS 36 Tee Gearbox
- DSD36 Tee Gearbox
- DGHS42 Tee Gearbox
- DSD42 Tee Gearbox
- DML42 Tee Gearbox
- DSD54 Tee Gearbox

Walker

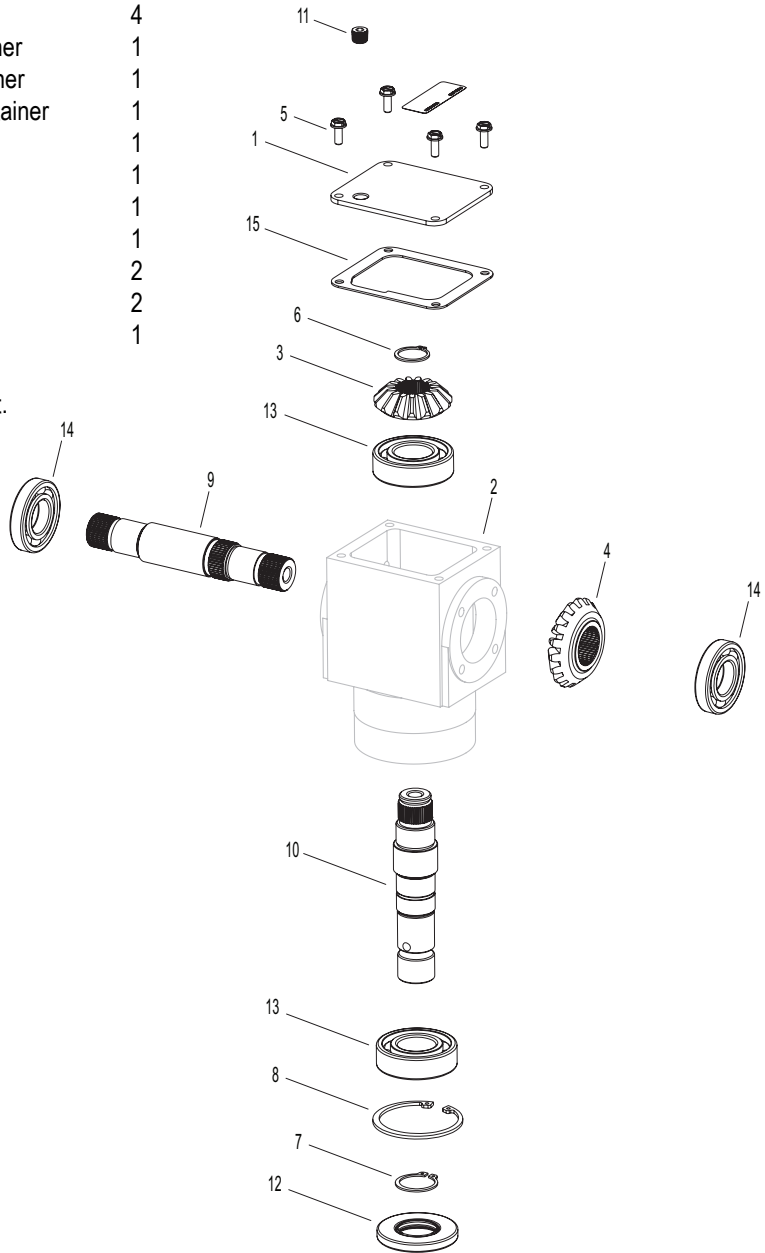
SERVICE INSTRUCTIONS

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ALUMINUM PEERLESS GEARBOX 1000-100 (WALKER P/N 7751-16) For 48" Decks After S/N 99-46813

ITEM NO.	WALKER	PEERLESS	DESCRIPTION	NO. REQ'D
	PART NO.	PART NO.		
1	P018	772067	Cover, LH	1
2	N/A	770117	"T" Drive Housing	1
3	P047*	6064P1	Bevel Gear (15 teeth-steel)	1
4	P047*	6065P1	Bevel Gear (18 teeth-steel)	1
5	P008	792025	Screw, RD/HD Self-Tap	4
6	P032	788018	Snap Ring, Gear Retainer	1
7	P051	788079	Snap Ring, Shaft Retainer	1
8	P052	788080	Snap Ring Bearing, Retainer	1
9	P017	776072A	Input/Output Shaft	1
10	P056	6509-P1	Input Shaft	1
11	P041	28534	Plug, Cover	1
12	P042	788099	Seal	1
13	P044	780174	Ball Bearing	2
14	P024	780034	Ball Bearing	2
15	P004	788028	Gasket Cover	1

* P047 is a Matched Set - Walker only offers these as a set.



**This Gearbox is used in the following applications:
For The Following Decks After S/N 99-46813
DGHS48 Tee Gearbox**

Walker

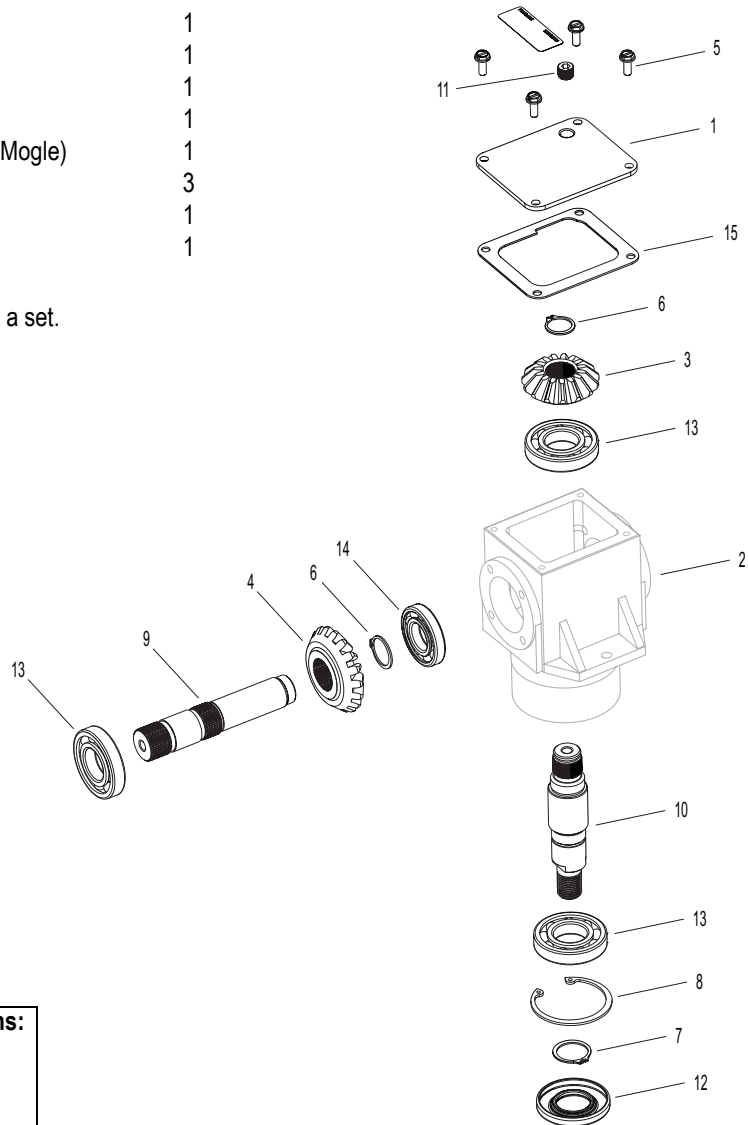
SERVICE INSTRUCTIONS

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ALUMINUM PEERLESS GEARBOX 1000-094 (WALKER P/N 5053-2)

ITEM NO.	WALKER	PEERLESS	DESCRIPTION	NO. REQ'D
	PART NO.	PART NO.		
1	P018	772067	Cover, LH	1
2	N/A	770092A	Right Angle Drive Housing	1
3	P057*	7062P1	Bevel Gear (15 teeth-steel)	1
4	P057*	6496P1	Bevel Gear (18 teeth-steel)	1
5	P008	792025	Screw, RD/HD Self-Tap	4
6	P032	788018	Snap Ring, Gear Retainer	2
7	P028	788019	Snap Ring	1
8	P016	792119	Snap Ring	1
9	P005	776040A	Input Shaft	1
10	P058	776450	Output Shaft	1
11	P041	28534	Plug, Cover	1
12	P001	471730	Seal, Oil (Federal-Mogile)	1
13	P024	780034	Ball Bearing	3
14	P019	780024	Ball Bearing	1
15	P004	788028	Gasket Cover	1

* P057 is a Matched Set - Walker only offers these as a set.



This Gearbox is used in the following applications:
 (RH and LH indicate view from operator seat)
 DSD56 RH Gearbox

Walker

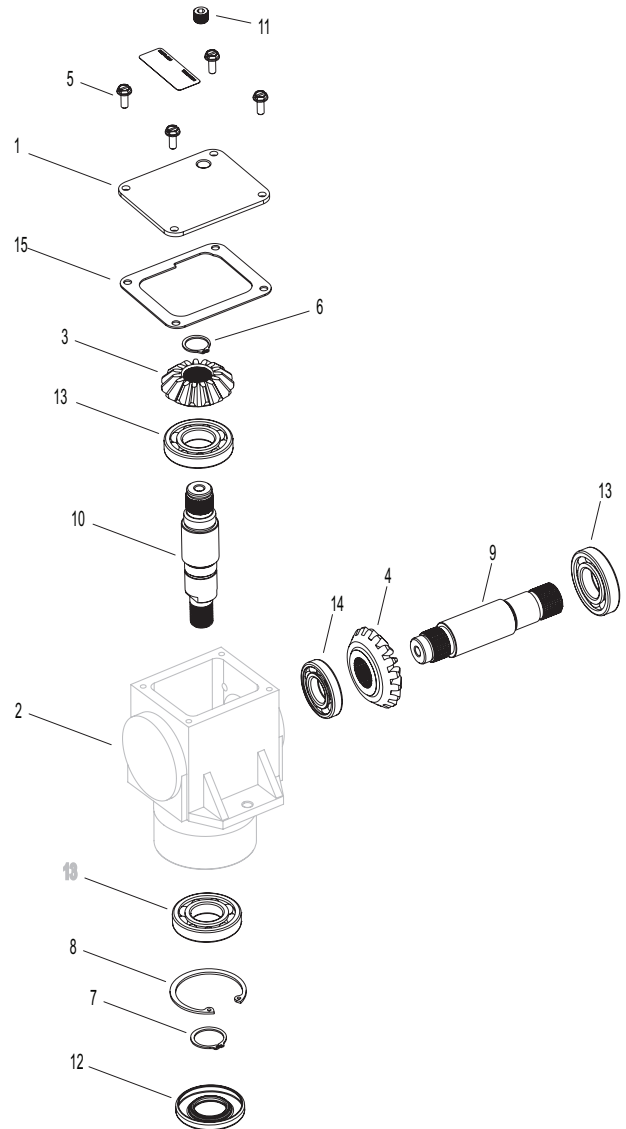
SERVICE INSTRUCTIONS

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ALUMINUM PEERLESS GEARBOX 1000-095 (WALKER P/N 5052-2)

ITEM NO.	WALKER PART NO.	PEERLESS PART NO.	DESCRIPTION	NO. REQ'D
1	P018	772067	Cover, LH	1
2	N/A	770092A	Right Angle Drive Housing	1
3	P060*	7062P1	Bevel Gear (15 teeth-steel)	1
4	P060*	6064P1	Bevel Gear (18 teeth-steel)	1
5	P008	792025	Screw, RD/HD Self-Tap	4
6	P032	788018	Snap Ring, Gear Retainer	1
7	P028	788019	Snap Ring	1
8	P016	792119	Snap Ring	1
9	P011	776041A	Input Shaft	1
10	P058	776450	Output Shaft	1
11	P041	28534	Plug, Cover	1
12	P001	471730	Seal, Oil (Federal-Mogile)	1
13	P024	780034	Ball Bearing	3
14	P019	780024	Ball Bearing	1
15	P004	788028	Gasket Cover	1

* P060 is a Matched Set - Walker only offers these as a set.



This Gearbox is used in the following applications:
 (RH and LH indicate view from operator seat)
 DSD56 LH Gearbox

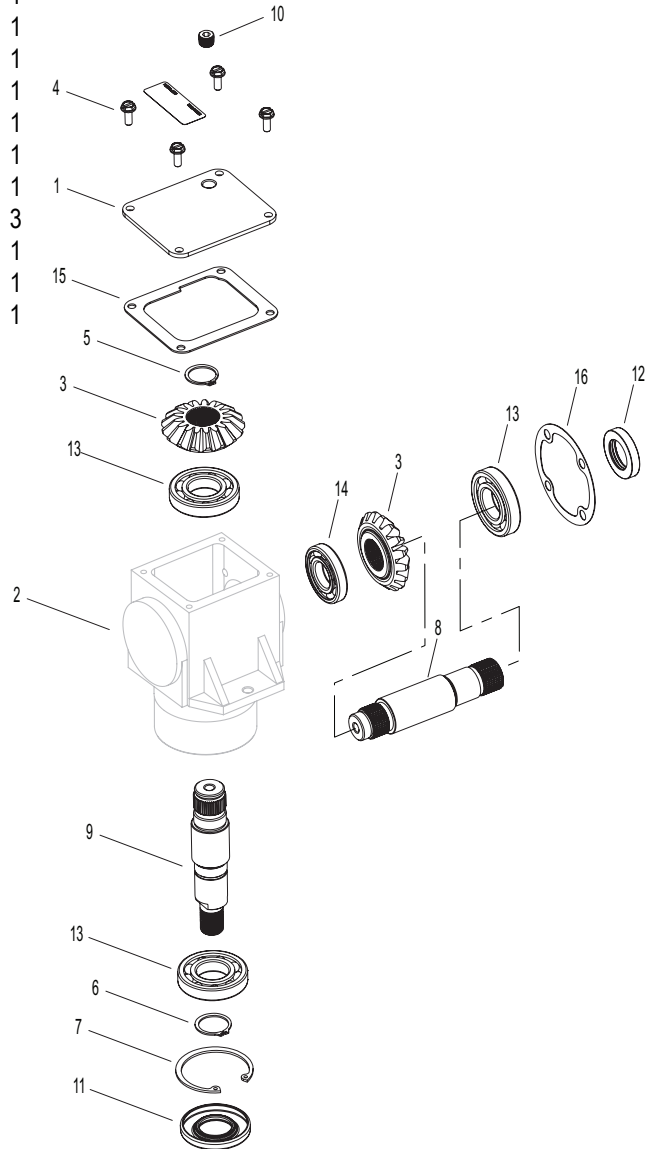
Walker

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ALUMINUM PEERLESS GEARBOX 1000-074 (WALKER P/N 5052-10) For 42" & 48" European Decks

ITEM NO.	WALKER	PEERLESS	DESCRIPTION	NO. REQ'D
	PART NO.	PART NO.		
1	P018	772067	Cover, LH	1
2	N/A	770092A	Right Angle Drive Housing	1
3	P003	778101	Miter Gear (17 teeth-steel)	2
4	P008	792025	Screw, RD/HD Self-Tap	4
5	P032	788018	Snap Ring, Gear Retainer	1
6	P028	788019	Snap Ring	1
7	P016	792119	Snap Ring	1
8	P011	776041A	Input Shaft	1
9	P055	P054-P1	Output Shaft (4-5/8)	1
10	P041	28534	Plug, Cover	1
11	P001	471730	Seal, Oil (Federal-Mogge)	1
12	P021	788031	Seal, Oil	1
13	P024	780034	Ball Bearing	3
14	P019	780024	Ball Bearing	1
15	P004	788028	Gasket Cover	1
16	P007	788030	Gasket, Cap	1



This Gearbox is used in the following applications:

(RH and LH indicate view from operator seat)

- DGHS42E RH Gearbox
- DGHS42E LH Gearbox
- DGHS48E RH Gearbox
- DGHS48E LH Gearbox

Walker

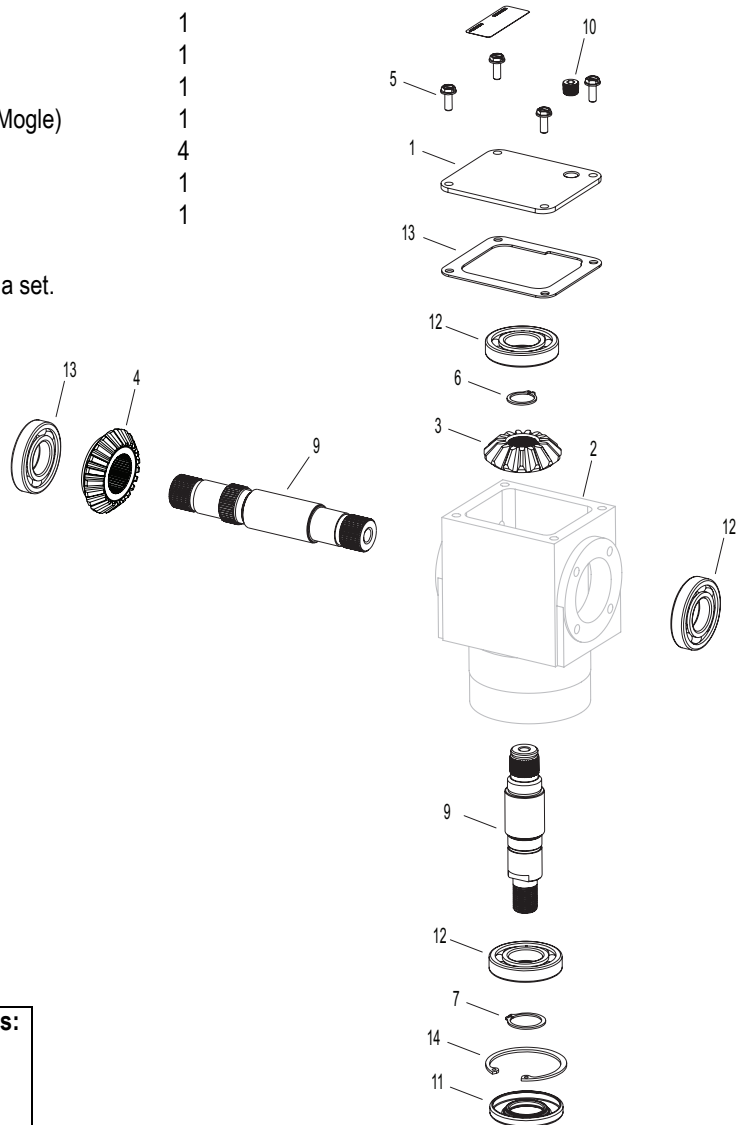
SERVICE INSTRUCTIONS

July 2006

ALUMINUM PEERLESS GEARBOX 1000-096 (WALKER P/N 5058-2)

ITEM NO.	WALKER PART NO.	PEERLESS PART NO.	DESCRIPTION	NO. REQ'D
1	P018	772067	Cover, LH	1
2	N/A	770093A	"T" Drive Housing	1
3	P060*	7062P1	Bevel Gear (15 teeth-steel)	1
4	P060*	6064P1	Bevel Gear (18 teeth-steel)	1
5	P008	792025	Screw, RD/HD Self-Tap	4
6	P032	788018	Snap Ring, Gear Retainer	1
7	P028	788019	Snap Ring	1
8	P017	776072A	Input/Output Shaft	1
9	P058	776450	Output Shaft	1
10	P041	28534	Plug, Cover	1
11	P001	471730	Seal, Oil (Federal-Mogge)	1
12	P024	780034	Ball Bearing	4
13	P004	788028	Gasket Cover	1
14	P016	792119	Snap Ring	1

* P060 is a Matched Set - Walker only offers these as a set.



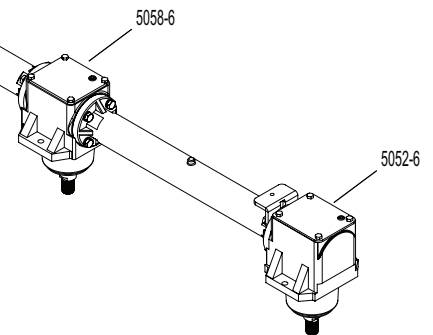
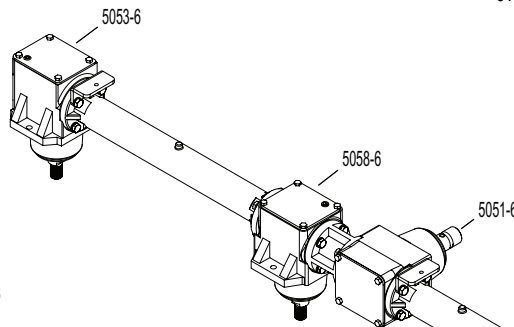
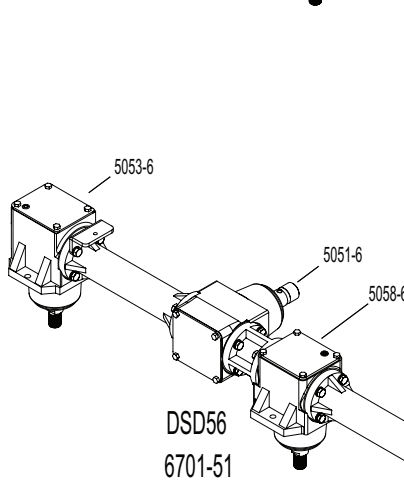
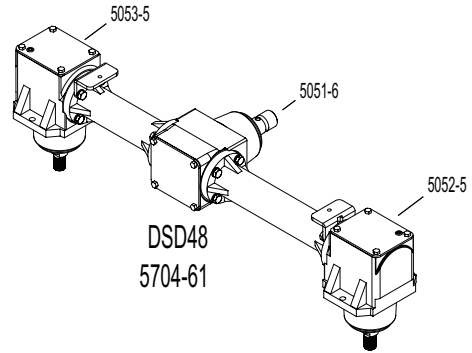
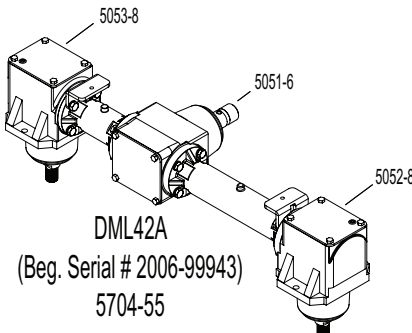
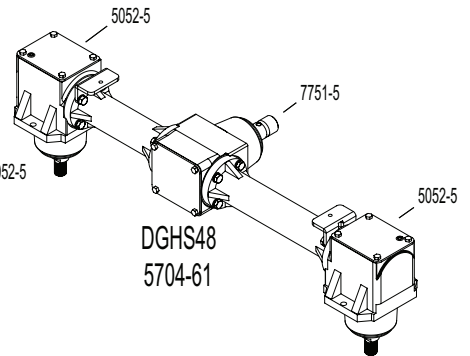
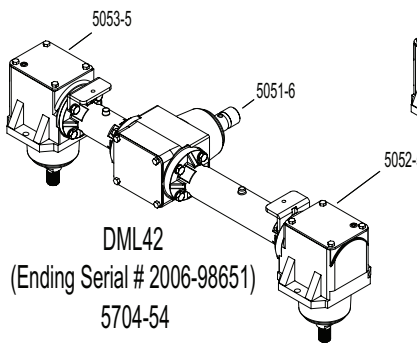
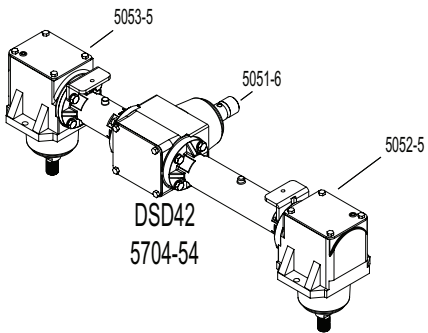
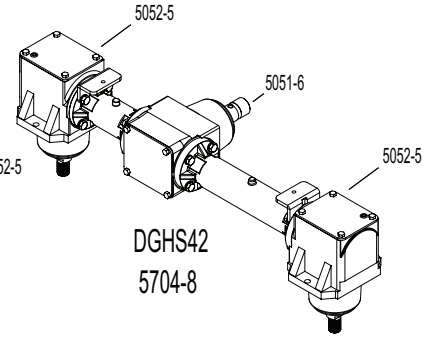
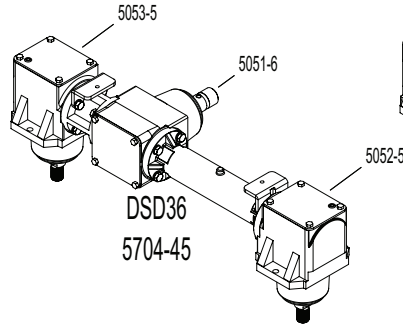
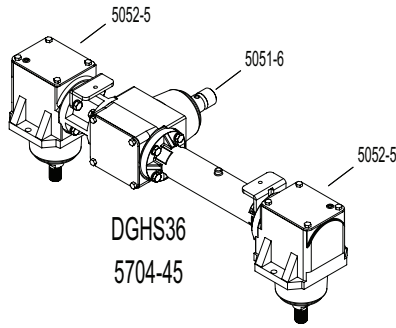
This Gearbox is used in the following applications:
 (RH and LH indicate view from operator seat)
 DSD56 Tee Gearbox

Walker

SERVICE INSTRUCTIONS

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CAST IRON GEAR DRIVES



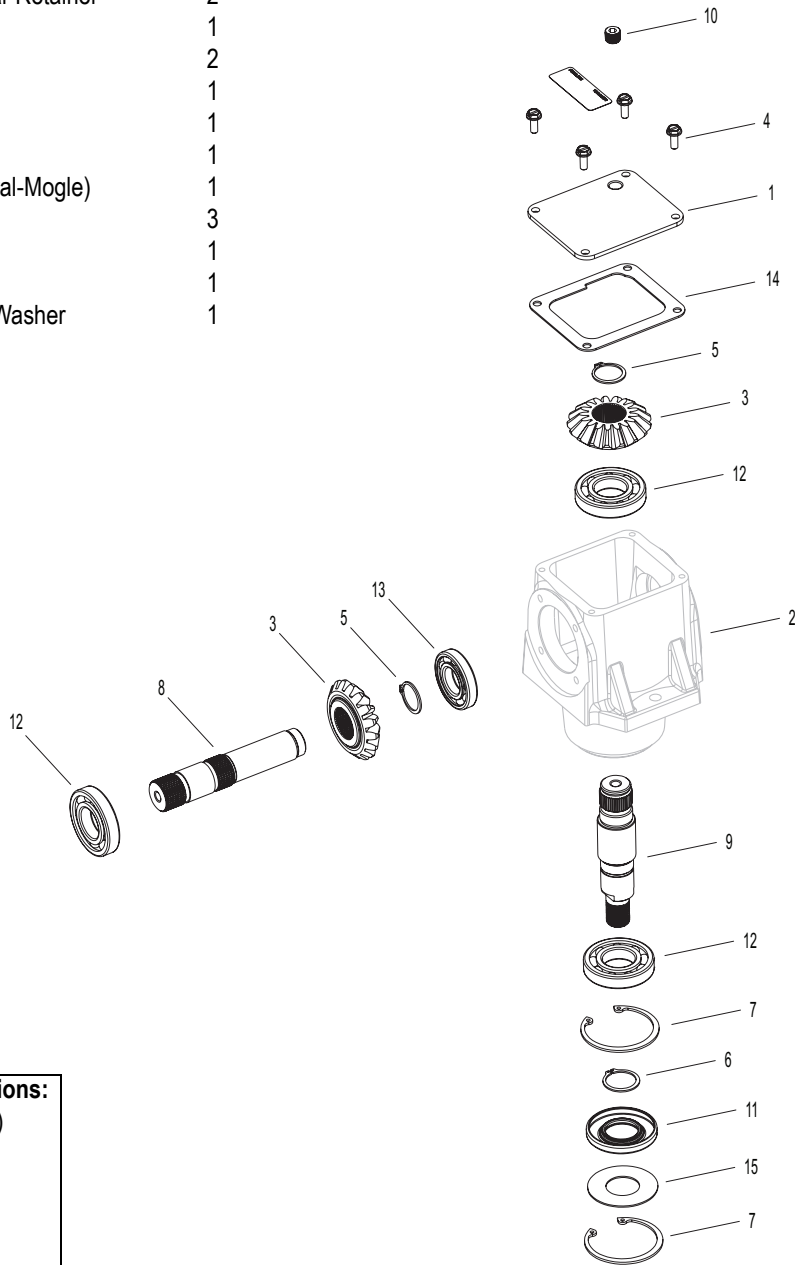
Walker

SERVICE INSTRUCTIONS

July 2006

CAST IRON PEERLESS GEARBOX 1050-001 (WALKER P/N 5053-5)

ITEM NO.	WALKER	PEERLESS	DESCRIPTION	NO. REQ'D
	PART NO.	PART NO.		
1	P018	772067	Cover, LH	1
2	N/A	770141	Right Angle Drive Housing	1
3	P003	778101	Miter Gear (17 teeth-steel)	2
4	P008	792025	Screw, RD/HD Self-Tap	4
5	P032	788018	Snap Ring, Gear Retainer	2
6	P028	788019	Snap Ring	1
7	P016	792119	Snap Ring	2
8	P005	776040A	Input Shaft	1
9	P059	776261	Output Shaft	1
10	P041	28534	Plug, Cover	1
11	P001	471730	Seal, Oil (Federal-Mogile)	1
12	P024	780034	Ball Bearing	3
13	P019	780024	Ball Bearing	1
14	P004	788028	Gasket Cover	1
15	P062	792219	Seal Protector Washer	1



This Gearbox is used in the following applications:

(RH and LH indicate view from operator seat)

- DSD36 RH Gearbox
- DSD42 RH Gearbox
- DML42 RH Gearbox
- DSD54 RH Gearbox

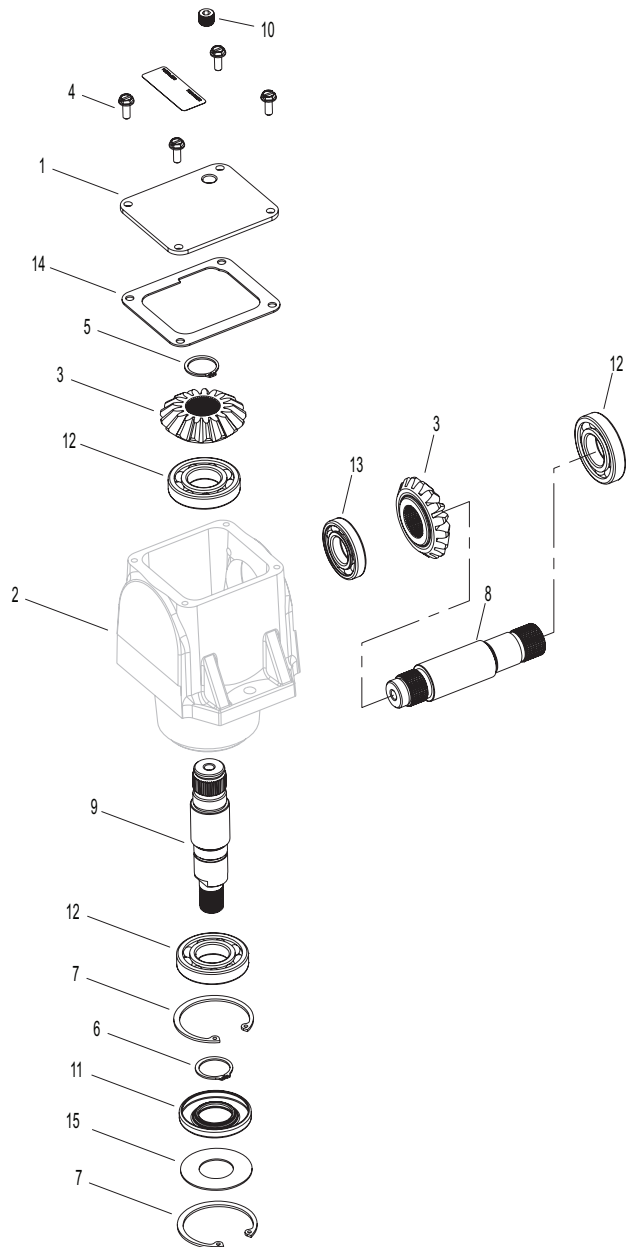
Walker

SERVICE INSTRUCTIONS

July 2006

CAST IRON PEERLESS GEARBOX 1050-002 (WALKER P/N 5052-5)

ITEM NO.	WALKER	PEERLESS	DESCRIPTION	NO. REQ'D
	PART NO.	PART NO.		
1	P018	772067	Cover, LH	1
2	N/A	770141	Right Angle Drive Housing	1
3	P003	778101A	Miter Gear (17 teeth-steel)	2
4	P008	792025	Screw, RD/HD Self-Tap	4
5	P032	788018	Snap Ring, Gear Retainer	1
6	P028	788019	Snap Ring	1
7	P016	792119	Snap Ring	2
8	P011	776041A	Input Shaft	1
9	P030	776261	Output Shaft	1
10	P041	28534	Plug, Cover	1
11	P001	471730	Seal, Oil (Federal-Mogge)	1
12	P024	780034	Ball Bearing	3
13	P019	780024	Ball Bearing	1
14	P004	788028	Gasket Cover	1
15	P062	792219	Seal Protector Washer	1



This Gearbox is used in the following applications:

(RH and LH indicate view from operator seat)

- DGHS36 RH Gearbox
- DGHS36 LH Gearbox
- DSD36 LH Gearbox
- DGHS42 RH Gearbox
- DGHS42 LH Gearbox
- DSD42 LH Gearbox
- DML42 LH Gearbox
- DGHS48 RH Gearbox
- DGHS48 LH Gearbox
- DSD54 LH Gearbox

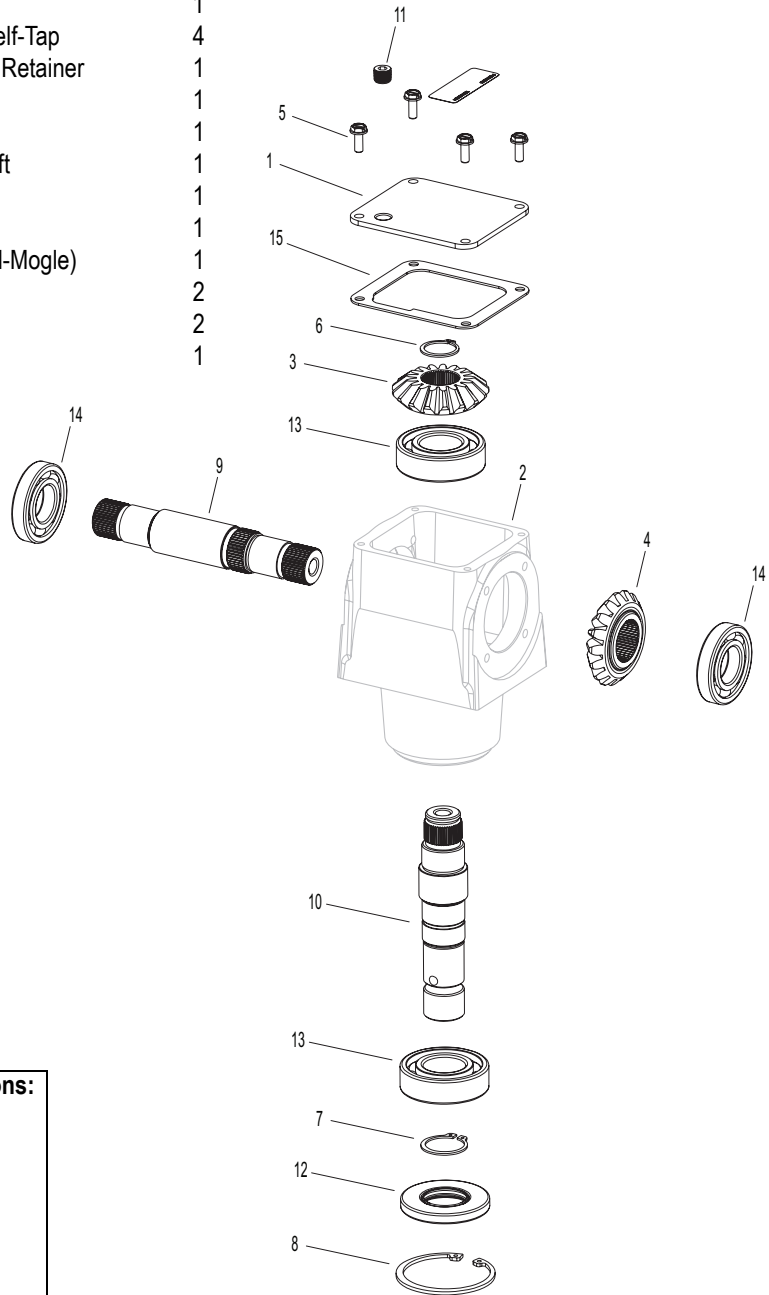
Walker

SERVICE INSTRUCTIONS

July 2006

CAST IRON PEERLESS GEARBOX 1050-003 (WALKER P/N 5051-6) For 36", 42", and 54" Decks After S/N 99-46813

ITEM NO.	WALKER PART NO.	PEERLESS PART NO.	DESCRIPTION	NO. REQ'D
1	P018	772067	Cover, LH	1
2	N/A	770142A	"T" Drive Housing	1
3	P003	778101	Miter Gear (17 teeth-steel)	1
4	P031	778210A	Gear, Miter	1
5	P008	792025	Screw, RD/HD Self-Tap	4
6	P032	788018	Snap Ring, Gear Retainer	1
7	P028	788019	Snap Ring	1
8	P016	792119	Snap Ring	1
9	P017	776072A	Input/Output Shaft	1
10	P056	6509-P1	Input Shaft	1
11	P041	28534	Plug, Cover	1
12	P001	471730	Seal, Oil (Federal-Mogel)	1
13	P044	780174	Ball Bearing	2
14	P024	780034	Ball Bearing	2
15	P004	788028	Gasket Cover	1



**This Gearbox is used in the following applications:
For The Following Decks After S/N 99-46813**

- DGHS 36 Tee Gearbox
- DSD36 Tee Gearbox
- DGHS42 Tee Gearbox
- DSD42 Tee Gearbox
- DML42 Tee Gearbox
- DSD54 Tee Gearbox

Walker

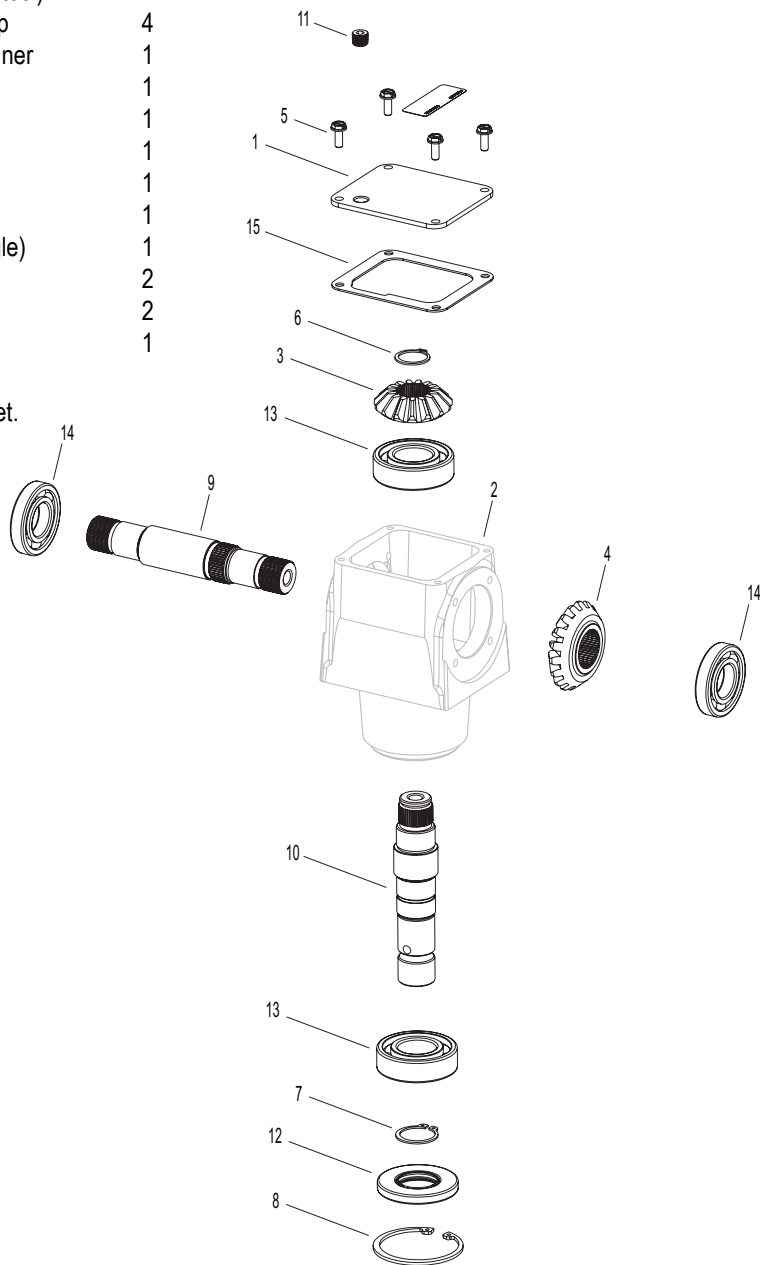
SERVICE INSTRUCTIONS

July 2006

CAST IRON PEERLESS GEARBOX 1050-004 (WALKER P/N 7751-5) For 48" Decks After S/N 99-46813

ITEM NO.	WALKER	PEERLESS	DESCRIPTION	NO. REQ'D
	PART NO.	PART NO.		
1	P018	772067	Cover, LH	1
2	N/A	770142A	"T" Drive Housing	1
3	P047*	6064P1	Bevel Gear (15 teeth-steel)	1
4	P047*	6065P1	Bevel Gear (18 teeth-steel)	1
5	P008	792025	Screw, RD/HD Self-Tap	4
6	P032	788018	Snap Ring, Gear Retainer	1
7	P028	788019	Snap Ring	1
8	P016	792119	Snap Ring	1
9	P017	776072A	Input/Output Shaft	1
10	P056	6509-P1	Input Shaft	1
11	P041	28534	Plug, Cover	1
12	P001	471730	Seal, Oil (Federal-Mogele)	1
13	P044	780174	Ball Bearing	2
14	P024	780034	Ball Bearing	2
15	P004	788028	Gasket Cover	1

* P047 is a Matched Set - Walker only offers these as a set.



**This Gearbox is used in the following applications:
For The Following Decks After S/N 99-46813
DGHS48 Tee Gearbox**

Walker

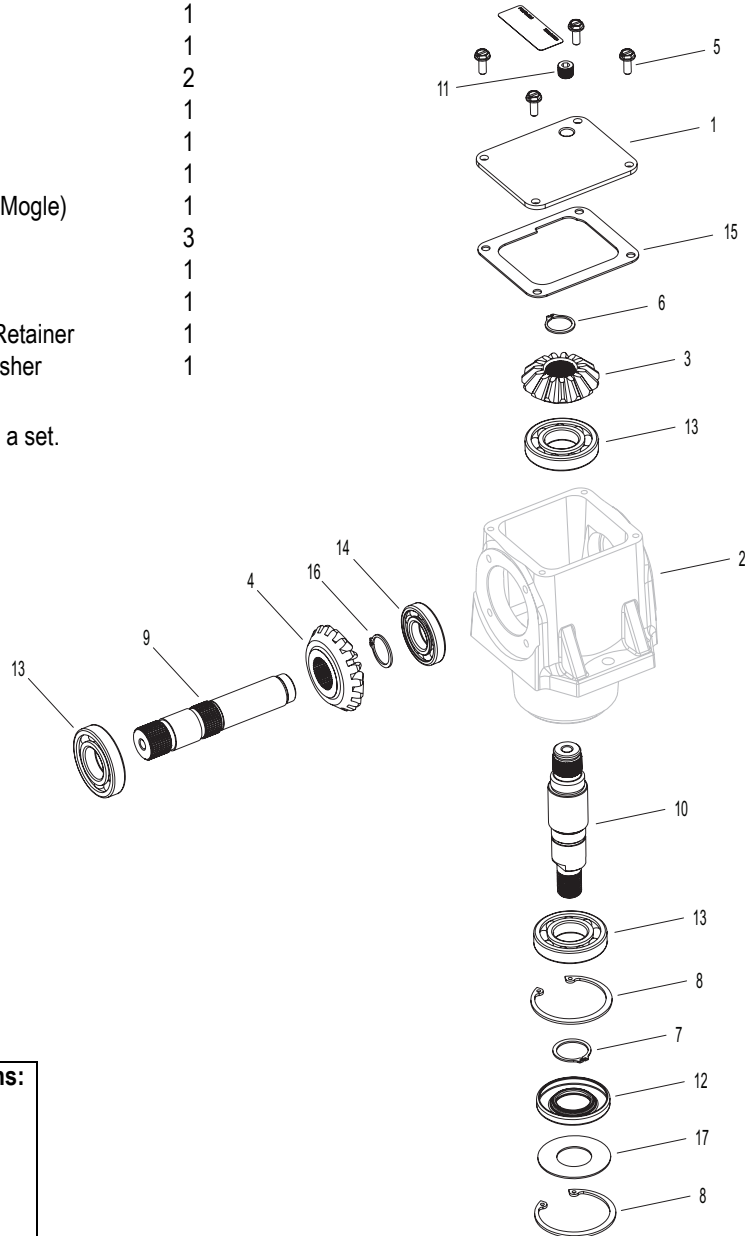
SERVICE INSTRUCTIONS

July 2006

CAST IRON PEERLESS GEARBOX 1050-005 (WALKER P/N 5053-6)

ITEM NO.	WALKER PART NO.	PEERLESS PART NO.	DESCRIPTION	NO. REQ'D
1	P018	772067	Cover, LH	1
2	N/A	770141	Right Angle Drive Housing	1
3	P057*	7062P1	Bevel Gear (15 teeth-steel)	1
4	P057*	6496P1	Bevel Gear (18 teeth-steel)	1
5	P008	792025	Screw, RD/HD Self-Tap	4
6	P061	792125	Snap Ring	1
7	P028	788019	Snap Ring	1
8	P016	792119	Snap Ring	2
9	P005	776040A	Input Shaft	1
10	P058	776450	Output Shaft	1
11	P041	28534	Plug, Cover	1
12	P001	471730	Seal, Oil (Federal-Mogile)	1
13	P024	780034	Ball Bearing	3
14	P019	780024	Ball Bearing	1
15	P004	788028	Gasket Cover	1
16	F032	788018	Snap Ring, Gear Retainer	1
17	F062	792219	Seal Protector Washer	1

* P057 is a Matched Set - Walker only offers these as a set.



This Gearbox is used in the following applications:
 (RH and LH indicate view from operator seat)
 DSD56 RH Gearbox

Walker

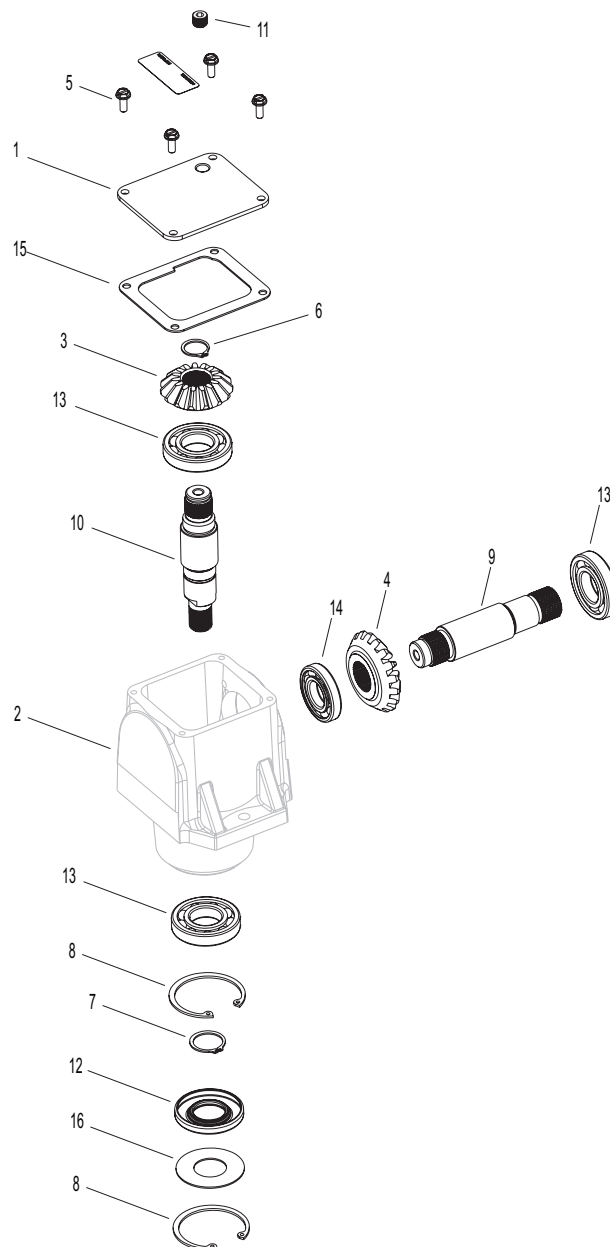
SERVICE INSTRUCTIONS

July 2006

CAST IRON PEERLESS GEARBOX 1050-006 (WALKER P/N 5052-6)

ITEM NO.	WALKER PART NO.	PEERLESS PART NO.	DESCRIPTION	NO. REQ'D
1	P018	772067	Cover, LH	1
2	N/A	770141	Right Angle Drive Housing	1
3	P057*	7062P1	Bevel Gear (15 teeth-steel)	1
4	P057*	6496P1	Bevel Gear (18 teeth-steel)	1
5	P008	792025	Screw, RD/HD Self-Tap	4
6	P061	792125	Snap Ring	1
7	P028	788019	Snap Ring	1
8	P016	792119	Snap Ring	2
9	P011	776041A	Input Shaft	1
10	P058	776450	Output Shaft	1
11	P041	28534	Plug, Cover	1
12	P001	471730	Seal, Oil (Federal-Mogge)	1
13	P024	780034	Ball Bearing	3
14	P019	780024	Ball Bearing	1
15	P004	788028	Gasket Cover	1
16	P062	792219	Seal Protector Washer	1

* P057 is a Matched Set - Walker only offers these as a set.



This Gearbox is used in the following applications:
 (RH and LH indicate view from operator seat)
 DSD56 LH Gearbox

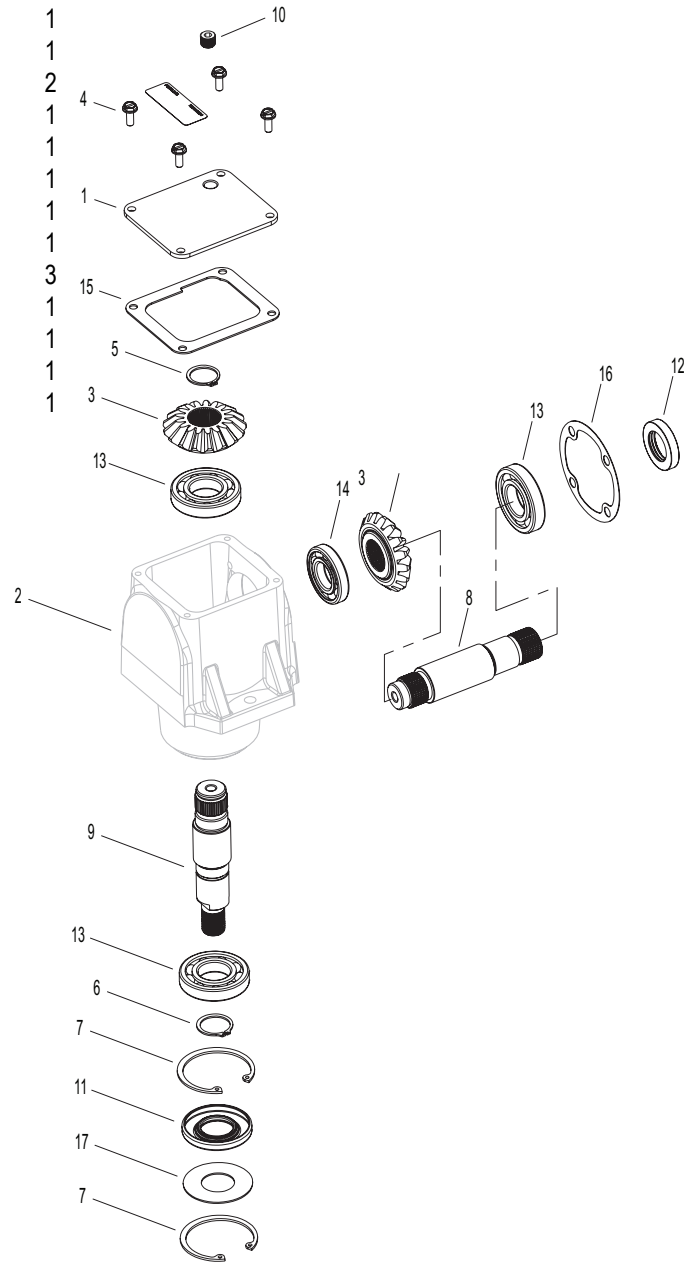
Walker

SERVICE INSTRUCTIONS

July 2006

CAST IRON PEERLESS GEARBOX 1050-007 (WALKER P/N 5052-7) For 42" & 48" European Decks

ITEM NO.	WALKER	PEERLESS	DESCRIPTION	NO. REQ'D
	PART NO.	PART NO.		
1	P018	772067	Cover, LH	1
2	N/A	770141	Right Angle Drive Housing	1
3	P003	778101	Miter Gear (17 teeth-steel)	2
4	P008	792025	Screw, RD/HD Self-Tap	4
5	P032	788018	Snap Ring, Gear Retainer	1
6	P028	788019	Snap Ring	1
7	P016	792119	Snap Ring	2
8	P011	776041A	Input Shaft	1
9	P055	P054-P1	Output Shaft (4-5/8)	1
10	P041	28534	Plug, Cover	1
11	P001	471730	Seal, Oil (Federal-Mogele)	1
12	P021	788031	Seal, Oil	1
13	P024	780034	Ball Bearing	3
14	P019	780024	Ball Bearing	1
15	P004	788028	Gasket Cover	1
16	P007	788030	Gasket, Cap	1
17	P062	792219	Seal Protector Washer	1



This Gearbox is used in the following applications:

(RH and LH indicate view from operator seat)

- DGHS42E RH Gearbox
- DGHS42E LH Gearbox
- DGHS48E RH Gearbox
- DGHS48E LH Gearbox

Walker

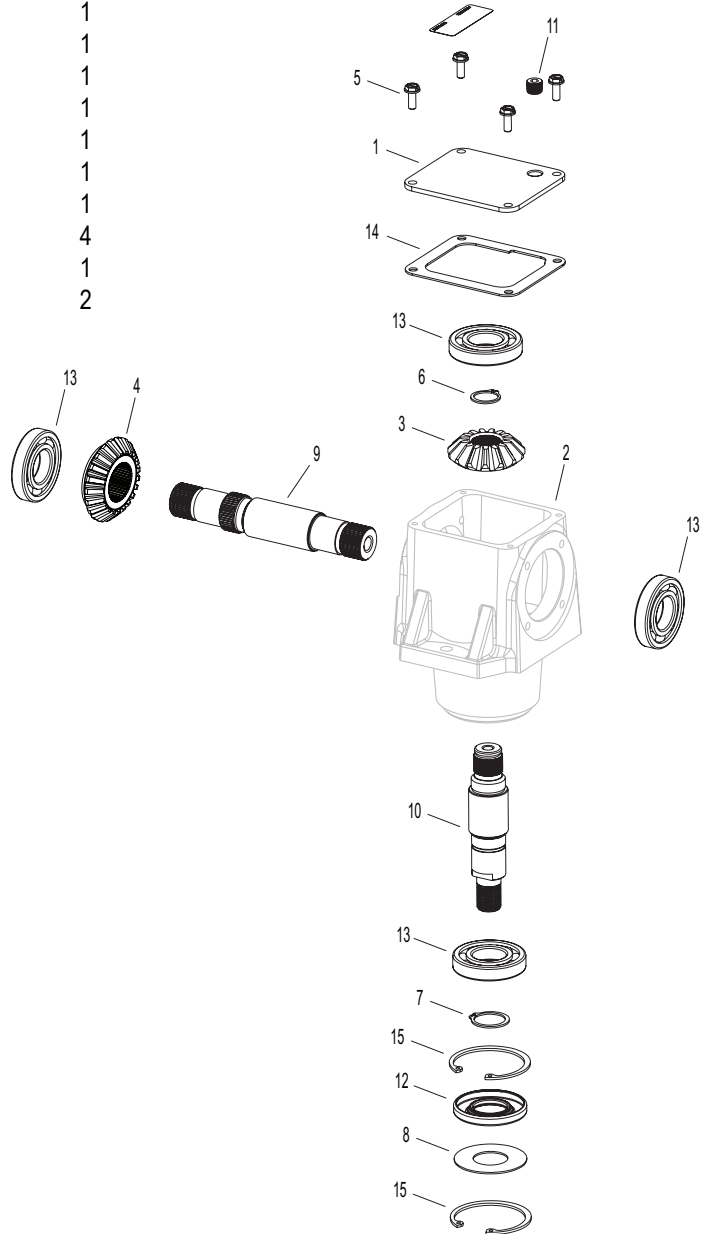
SERVICE INSTRUCTIONS

July 2006

CAST IRON PEERLESS GEARBOX 1050-008 (WALKER P/N 5058-6)

ITEM NO.	WALKER PART NO.	PEERLESS PART NO.	DESCRIPTION	NO. REQ'D
1	P018	772067	Cover, LH	1
2	N/A	770143A	"T" Drive Housing	1
3	P060*	7062P1	Bevel Gear (15 teeth-steel)	1
4	P060*	6064P1	Bevel Gear (18 teeth-steel)	1
5	P008	792025	Screw, RD/HD Self-Tap	4
6	P061	792125	Snap Ring	1
7	P028	788019	Snap Ring	1
8	P062	792219	Seal Protector Washer	1
9	P017	776072A	Input/Output Shaft	1
10	P058	776450	Output Shaft	1
11	P041	28534	Plug, Cover	1
12	P001	471730	Seal, Oil (Federal-Mogge)	1
13	P024	780034	Ball Bearing	4
14	P004	788028	Gasket Cover	1
15	P016	792119	Snap Ring	2

* P060 is a Matched Set - Walker only offers these as a set.



This Gearbox is used in the following applications:
 (RH and LH indicate view from operator seat)
 DSD56 Tee Gearbox

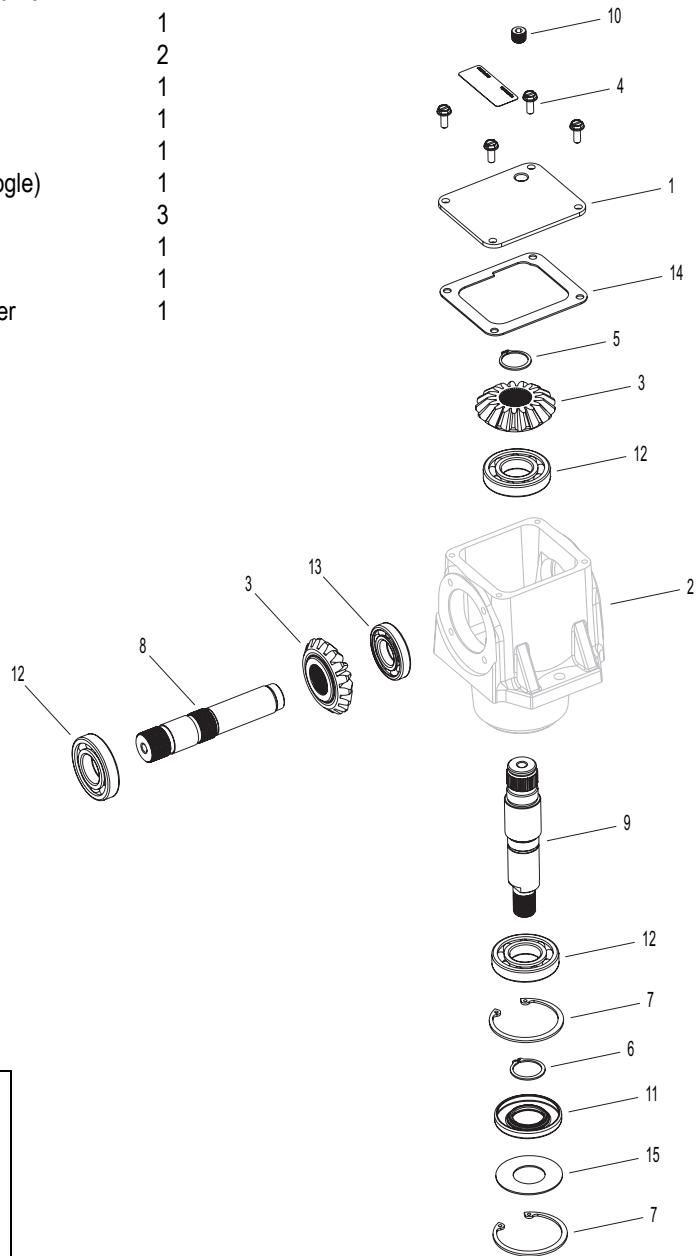
Walker

SERVICE INSTRUCTIONS

July 2006

CAST IRON PEERLESS GEARBOX 1050-010 (WALKER P/N 5053-8)

ITEM NO.	WALKER	PEERLESS	DESCRIPTION	NO. REQ'D
	PART NO.	PART NO.		
1	P018	772067	Cover, LH	1
2	N/A	770141	Right Angle Drive Housing	1
3	P003	778101	Miter Gear (17 teeth-steel)	2
4	P008	792025	Screw, RD/HD Self-Tap	4
5	P032	788018	Snap Ring, Gear Retainer	1
6	P028	788019	Snap Ring	1
7	P016	792119	Snap Ring	2
8	P005	776040A	Input Shaft	1
9	P063	776465	Output Shaft	1
10	P041	28534	Plug, Cover	1
11	P001	471730	Seal, Oil (Federal-Mogile)	1
12	P024	780034	Ball Bearing	3
13	P019	780024	Ball Bearing	1
14	P004	788028	Gasket Cover	1
15	P062	792219	Seal Protector Washer	1



This Gearbox is used in the following applications:
 (RH and LH indicate view from operator seat)
 DML42A RH Gearbox

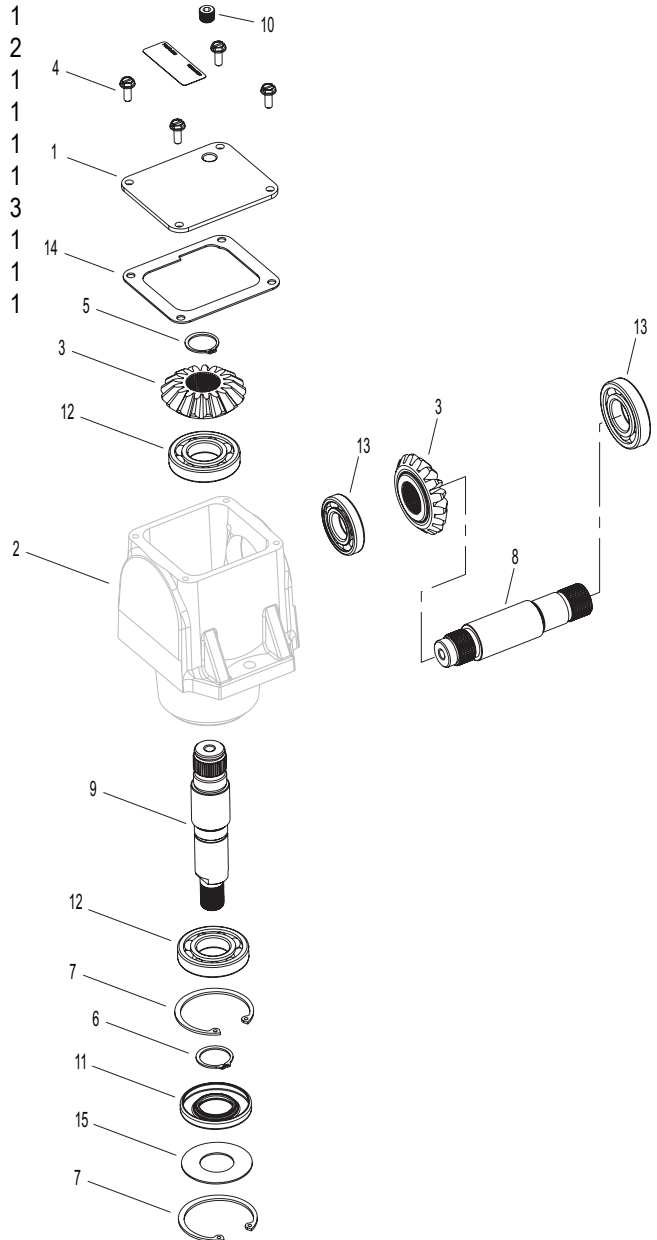
Walker

SERVICE INSTRUCTIONS

July 2006

CAST IRON PEERLESS GEARBOX 1050-011 (WALKER P/N 5052-8)

ITEM NO.	WALKER PART NO.	PEERLESS PART NO.	DESCRIPTION	NO. REQ'D
1	P018	772067	Cover, LH	1
2	N/A	770141	Right Angle Drive Housing	1
3	P003	778101	Miter Gear (17 teeth-steel)	2
4	P008	792025	Screw, RD/HD Self-Tap	4
5	P032	788018	Snap Ring, Gear Retainer	1
6	P028	788019	Snap Ring	1
7	P016	792119	Snap Ring	2
8	P011	776041A	Input Shaft	1
9	P063	776465	Output Shaft	1
10	P041	28534	Plug, Cover	1
11	P001	471730	Seal, Oil (Federal-Mogge)	1
12	P024	780034	Ball Bearing	3
13	P019	780024	Ball Bearing	1
14	P004	788028	Gasket Cover	1
15	P062	792219	Seal Protector Washer	1



This Gearbox is used in the following applications:
 (RH and LH indicate view from operator seat)
 DML42A LH Gearbox

SECTION 7

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Walker

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**LIMITED WARRANTY
FOR
WALKER
COMMERCIAL AND MODEL MB RIDER MOWER**

1. WHAT THIS WARRANTY COVERS, AND FOR HOW LONG:

Walker Manufacturing company will, at its option, repair or replace, without charge, any part covered by this warranty which is found to be defective in material and/or workmanship within one (1) year* after date of sale to the original retail purchaser unless the product is used for rental purposes, in which case this warranty is limited to ninety (90) days. At Walker's request, customer will make the defective part available for inspection by Walker and/or return the defective part to Walker, transportation charges prepaid. All parts and components of the Walker Mower are covered by this warranty **except** the following components which are warranted separately by their respective manufacturers:

Kohler Engine
Kubota Engine
Kawasaki Engine
Briggs & Stratton Engine
Hydro-Gear Transaxles
Eaton Hydraulic Transmission
Peerless Gearboxes
Battery
Tires

The available warranties covering these items are furnished with each mower. Walker does not assume any warranty obligation, liability or modification for these items, which are covered exclusively by the stated warranty of the respective manufacturers noted above.

* An extended three (3) year warranty is offered on the Walker P/N 6200-9 Gear Axle Assembly.

2. WHAT THIS WARRANTY DOES NOT COVER:

- A. This warranty does not cover defects caused by depreciation or damage caused by normal wear, accidents, improper maintenance, improper use or abuse of the product, alterations, or failure to follow the instructions contained in the Owner's Manual for operation and maintenance.
- B. The customer shall pay any charges for making service calls and/or for transporting the mower to and from the place where the inspection and/or warranty work is performed.

3. HOW TO OBTAIN SERVICE UNDER THIS WARRANTY:

Warranty service can be arranged by contacting the dealer where you purchased the mower or by contacting Walker Manufacturing Company, 5925 East Harmony Road, Ft. Collins, CO 80528. Proof of the date of purchase may be required to verify warranty coverage.

4. WARRANTY LIMITATION:

- A. **THERE IS NO OTHER EXPRESS WARRANTY. ANY WARRANTY THAT MAY BE IMPLIED FROM THIS PURCHASE INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IS HEREBY LIMITED TO THE DURATION OF THIS WARRANTY AND TO THE EXTENT PERMITTED BY LAW ANY AND ALL IMPLIED WARRANTIES ARE EXCLUDED.** Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you.
- B. **WALKER WILL NOT BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL, OR SPECIAL DAMAGES AND/OR EXPENSES IN CONNECTION WITH THE PURCHASE OR USE OF THE MOWER.** Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation(s) or exclusion(s) may not apply to you.
- C. Only the warranty expressed in this limited warranty shall apply and no dealer, distributor, or individual is authorized to amend, modify, or extend this warranty in any way. Accordingly, additional statements such as dealer advertising or presentations, whether oral or written, do not constitute warranties by Walker, and should not be relied upon.
- D. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

WALKER MOWERS™

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