

INSTALLATION GUIDE FOR 30 GALLON SPRAY SYSTEM AERATOR

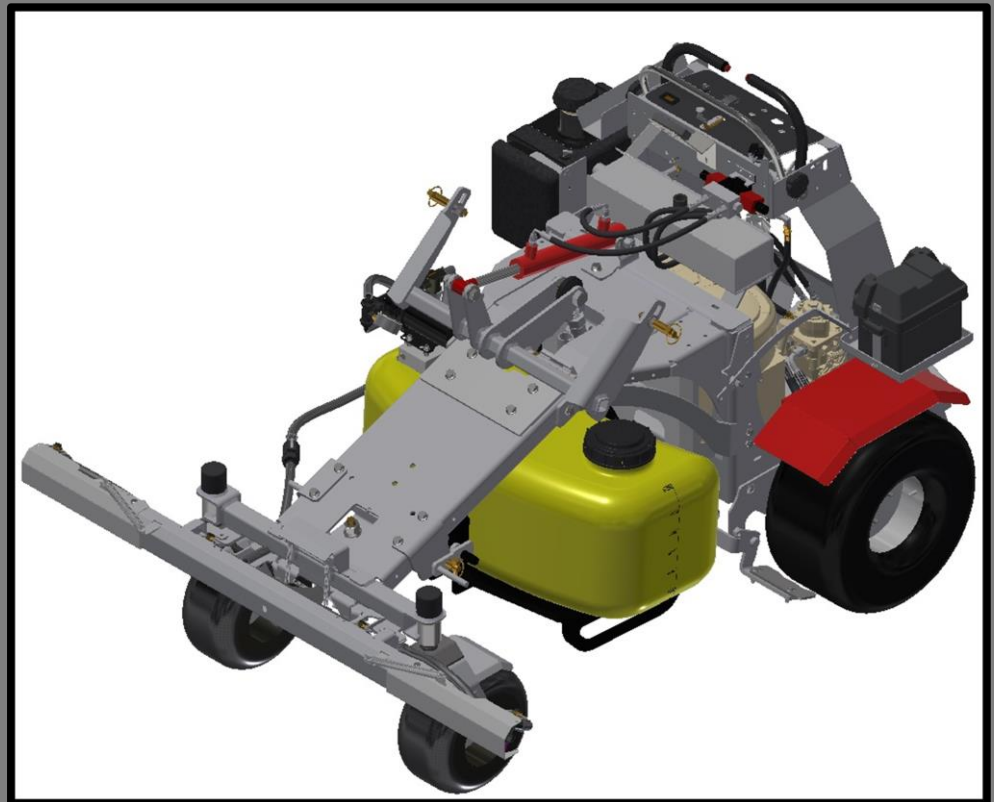




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1.0 IMPORTANT INFORMATION

1.1 PURPOSE

The purpose of this document is to provide instructions on how to install the 30 Gallon Spray System to the Z-Plug.

1.2 PRODUCT OVERVIEW

The 30 Gallon Spray System is an optional attachment which adds spraying capabilities for the Z-Plug. It includes an 8' boom, 5.0GPM liquid pump, Hypro Al tips, 25' coil hose, pressure gauge and a speedometer.

1.3 MANUAL OVERVIEW

The installation of the 30 Gallon Spray System consists of attaching the Boom, 30 Gallon Tank, Speedometer and a Spray Gun Tray to the Z-Plug. The Speedometer settings are adjusted and the Pump is tested for functionality.

1.4 SAFETY

It is recommended that safety goggles and gloves are worn when installing and using this product.

1.5 MAINTENANCE

The pump MFG recommends replacing the diaphragm every two to three years.

1.6 RELATED DOCUMENTS

- Z-Plug Owner's Manual

2.0 INSTALLATION

WARNING

Before Working on This Machine








- Switch Engine to OFF








- Please note that this installation guide is for a **standard machine only**.
- The hose and electrical harness routing may be different depending on the attachments that may already be installed on your machine.
- An Aerator is shown for all assembly photos.
- For any questions please contact us at toll free (877) 482-204 Mon-Fri 8 a.m. to 4:30 p.m.











2.1 SHIPPING LIST

Spray System				
ITEM	QTY	P/N	DESCRIPTION	PICTURE
1	1	30AA001-A	TANK, 30 GAL AUX, AERATOR	
2	1	80912-A	AERATOR BOOM	
3	1	AE20063	SPRAY GUN TRAY	
4	1	70100	SPRAY GUN CLIP	
5	2	HFC5-38114S	SCREW, HEX, FLANGE, SERRATED - ZINC, 3/8-16 X 1 1/4	
6	2	HFSSC-51634	SCREW, HEX, FLANGE - SS, 5/16-18 X 3/4	
7	1	TRPC-10125	MACHINE SCREW 10-32 X 1/2"	
8	2	HFNC5-38S	NUT, LOCK, FLANGE, SERRATED - ZINC, 3/8-16	
9	2	HFNC5-516S	NUT, LOCK, FLANGE, SERRATED - SS, 5/16-18	
10	1	HFNC5-10S	FLANGE NUT, 10-32	
11	10	CTB-1150	TIE, CABLE, 11"	

Speedometer Kit				
ITEM	QTY	P/N	DESCRIPTION	PICTURE
12	1	AE30026	SPEEDOMETER MOUNT BRACKET	
13	1	82072 R2	SPEEDOMETER SENSOR BRACKET	
14	1	80200-Striker	SPEEDOMETER	
15	1	80200-Power	WHEEL SENSOR AND POWER CABLES	
16	1	N/A	NEODYMIUM MAGNET	
17	2	SHMSS-407010	SCREW, CAP, SOCKET HEAD, METRIC - SS, M4 X 10MM	
18	2	HFC5-1434S	SCREW, HEX, FLANGE, SERRATED - ZINC, 1/4-20 X 3/4	

ELECTRICAL				
ITEM	QTY	P/N	DESCRIPTION	PICTURE
19	1	80205	AUX ELECTRICAL HARNESS	
20	1	80202	ROCKER SWITCH	
21	1	ATO-1	FUSE, 1 AMP	
22	1	BSN331	BUTT CONNECTOR	
23	2	N/A	LOOM, SPLIT WIRE, OD 3/8 X 15	

2.2 TOOLS AND EQUIPMENT

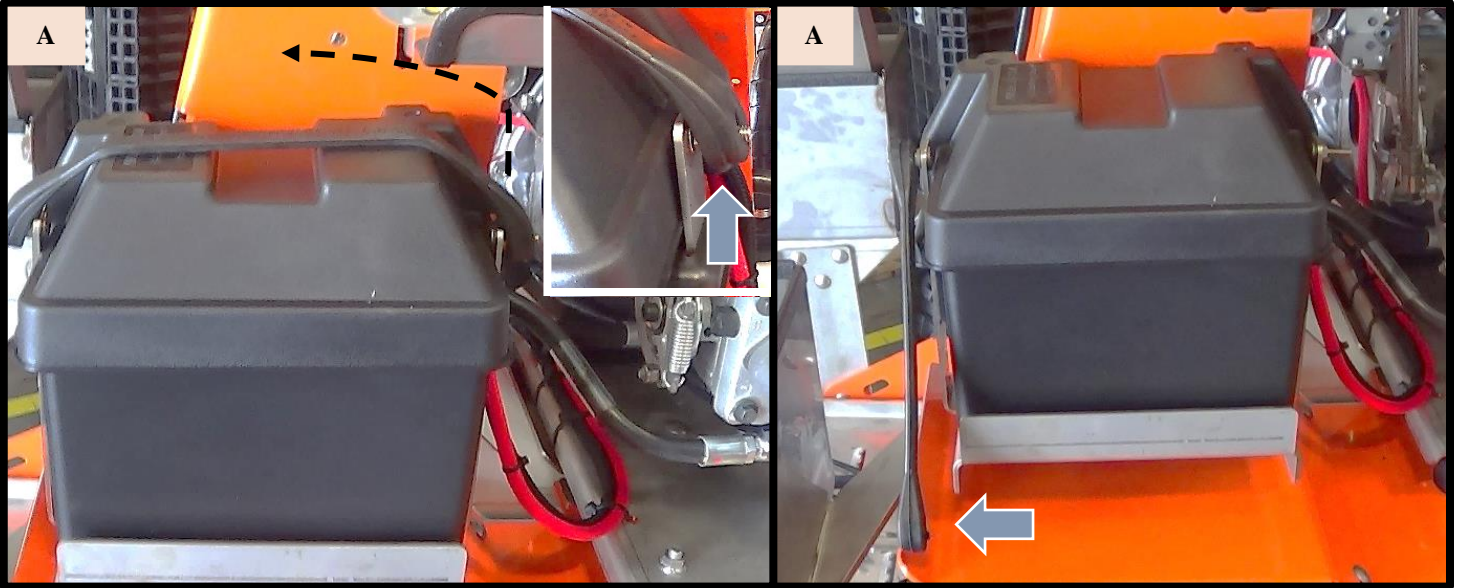
TOOLS			
ITEM	QTY	DESCRIPTION	PHOTO
1	1	RATCHET	
2	3	WRENCH: 3/8", 1/2", 9/16"	
3	1	ALLEN WRENCH, 3mm	
4	2	SOCKETS: 3/8", 7/16", 9/16", 3/4", 13/16", 10mm, 11mm	
5	1	PHILIPS SCREWDRIVER NO. 2	
6	1	WIRE CUTTERS	
7	1	WIRE STRIPPER/CRIMPER	
8	1	UTILITY KNIFE	
SAFETY EQUIPMENT			
ITEM	QTY	DESCRIPTION	PHOTO
1	1	GLOVES	
2	1	SAFETY GOGGLES	

2.3 DISCONNECT POWER

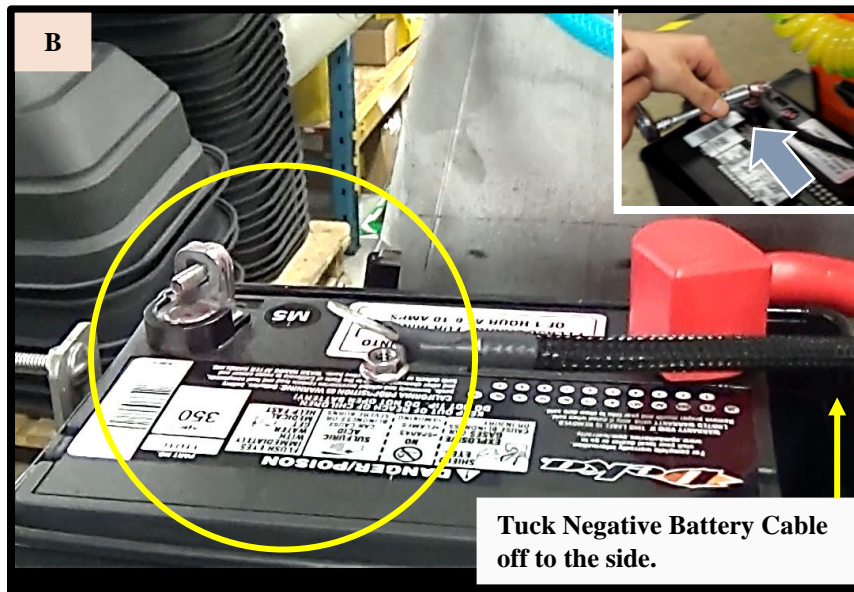
2.3.1 Disconnect Battery

Tools:
Ratchet with 1/2" Socket

A. Remove Battery Cover by unhooking strap.



B. Detach the Negative (black) Wire from battery.

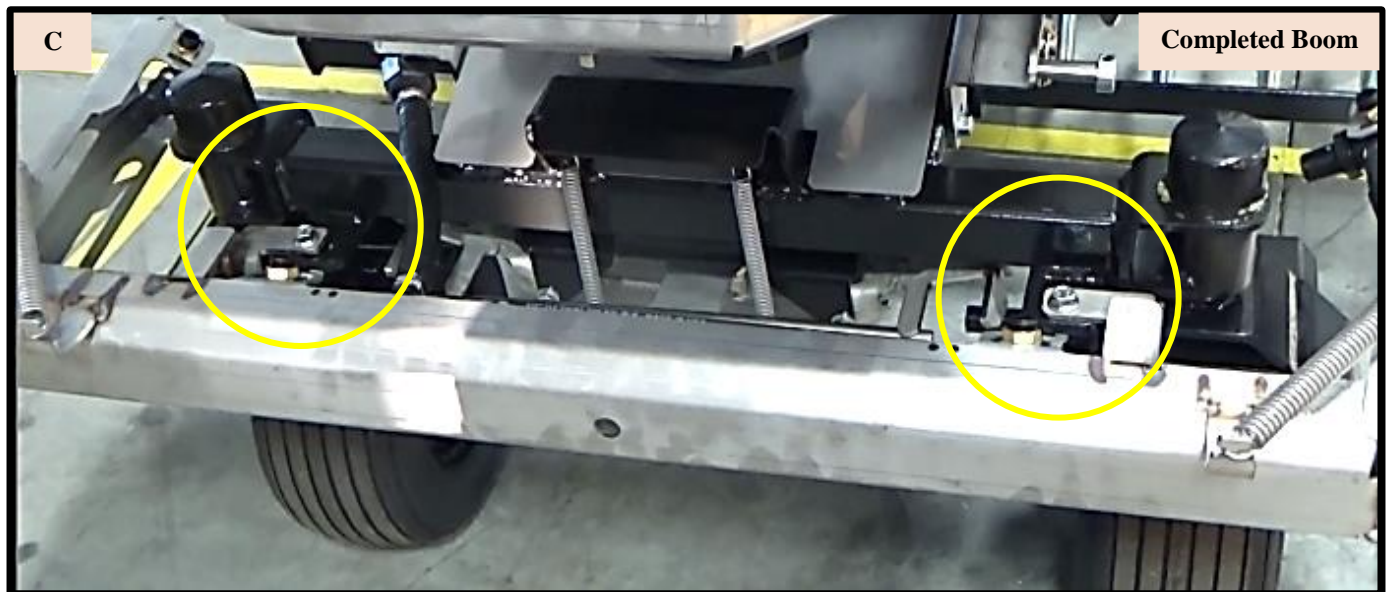
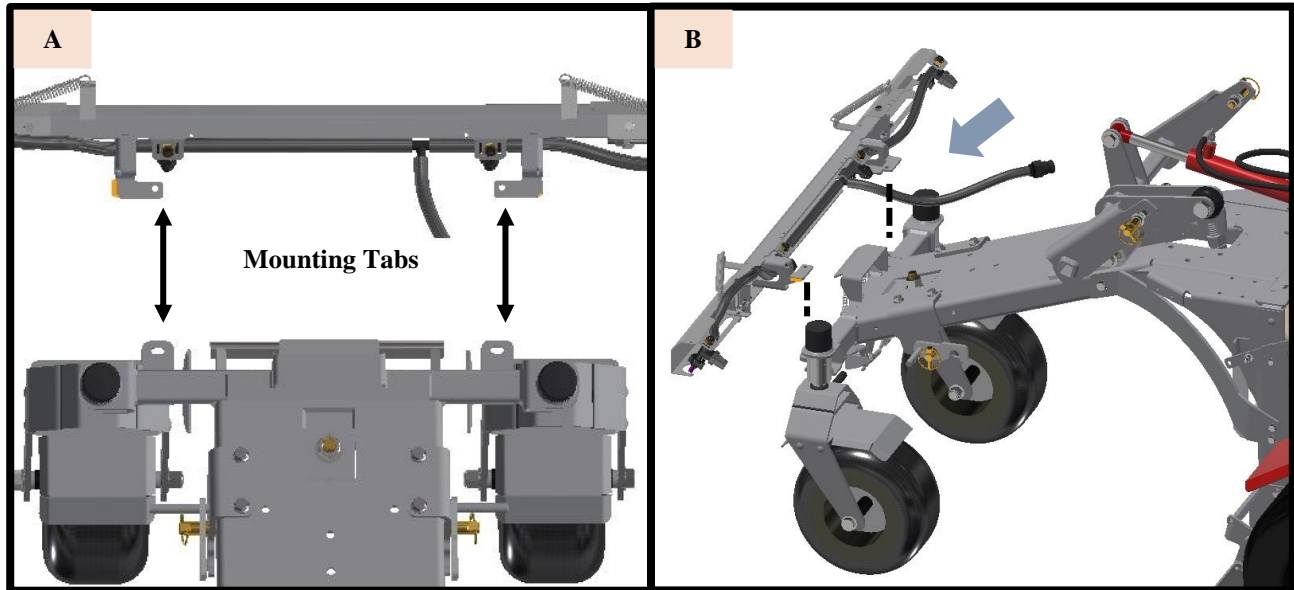


2.4 BOOM

2.4.1 Install Boom

Tools:
Ratchet with 9/16 Socket

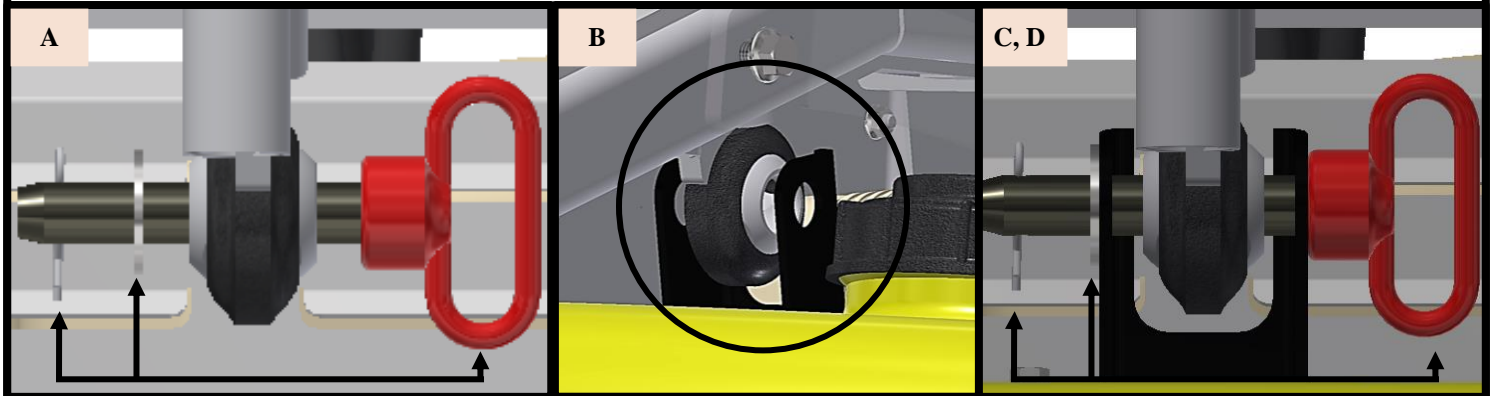
- A. Insert (2) 3/8" x 1 1/4" Flange Bolts into Holes on Boom.
- B. *Mount Boom* on **Frame** (align mounting tabs)
- C. *Fasten* with (2) 3/8" Flange Nuts.



2.5 30 GALLON AUX TANK

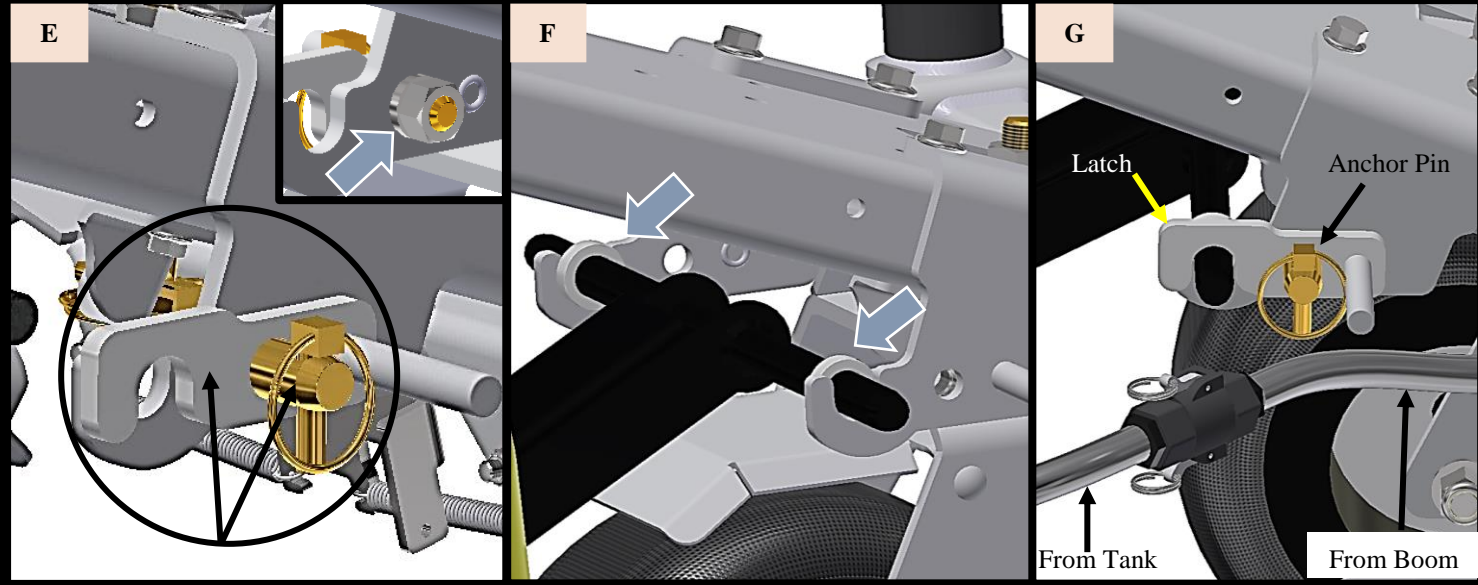
2.5.1 Attach Tank to Frame

- A. Remove **Cotter Pin, Washer and Hitch Pin**.
- B. Align **Mounting Holes** of Tank Arm with the Center Hole on Swivel Ball.
- C. Insert **Hitch Pin** through Tank Arm and Swivel Ball.
- D. Insert **Washer and Cotter Pin** on Hitch Pin.



2.5.1 Cont.

- E. Remove Anchor Release Pin and Latch from each side of Aerator.
- F. Set Handles in Front Hooks and tighten shaft collars against Front Hooks.
- G. Insert Anchor Release Pins/Latches and Connect Hose to Boom Hose.

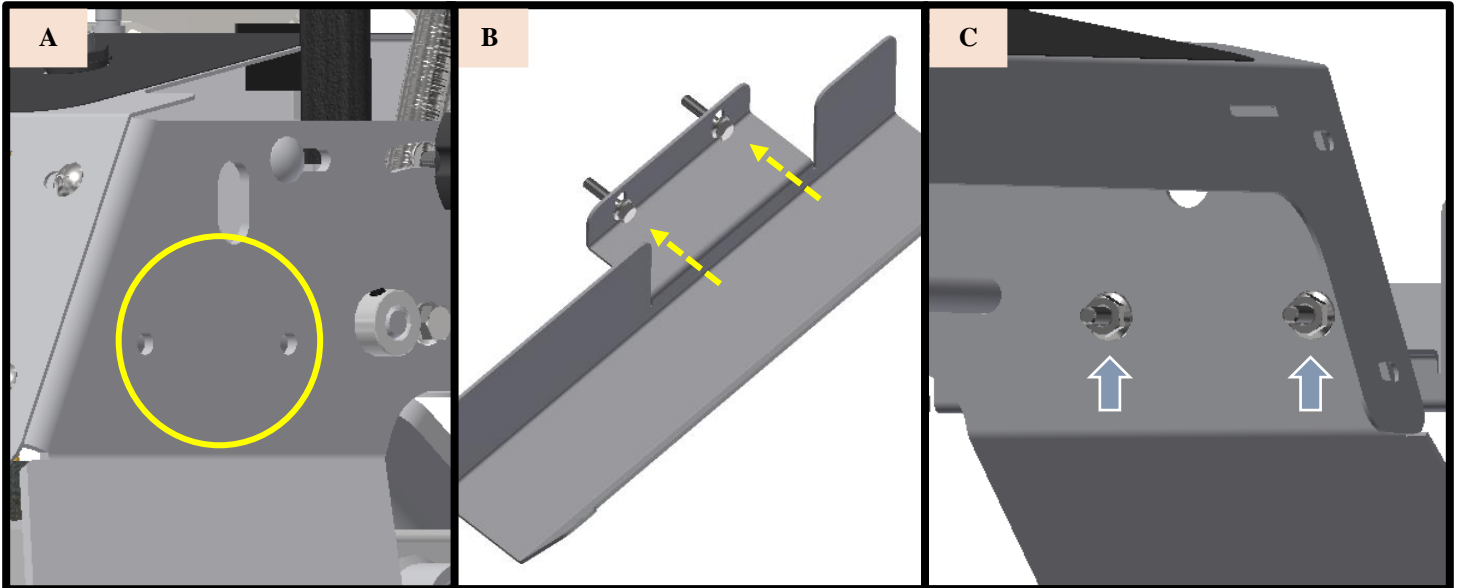


2.6 SPRAY GUN TRAY

2.6.1 Install Spray Gun Tray

Tools:
 Ratchet with 1/2 Socket
 1/2" Wrench

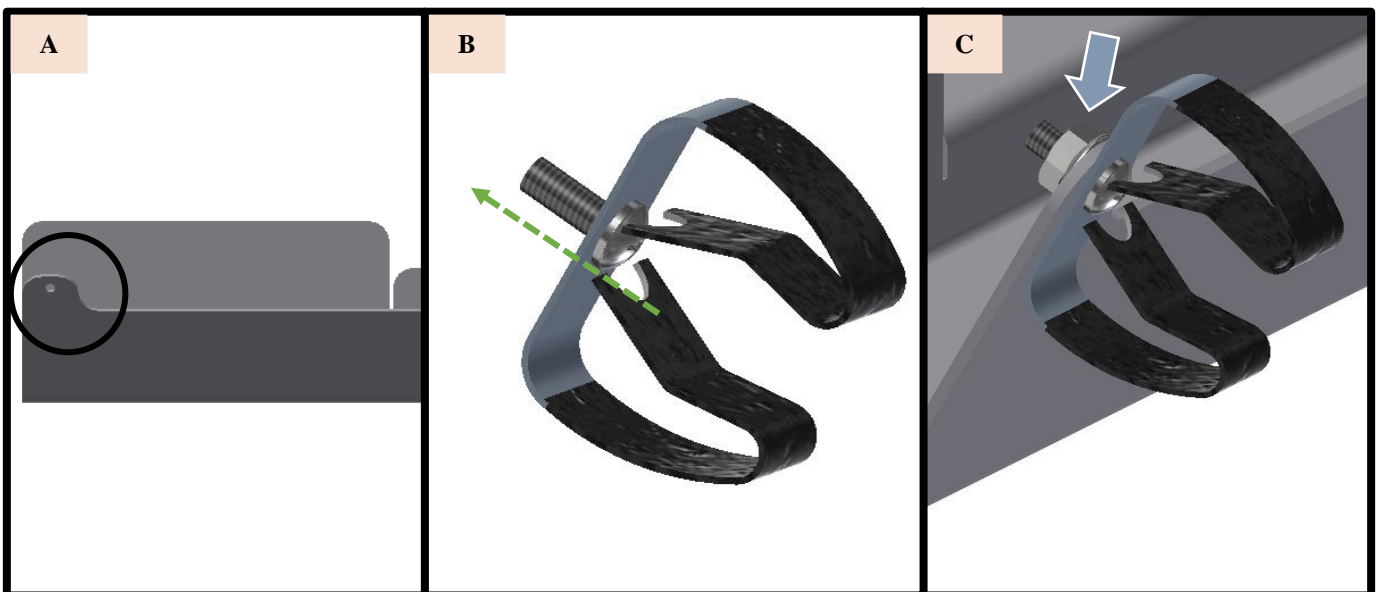
- A. Locate Spray Gun Tray mounting holes.
- B. Insert (2) 5/16" x 3/4" Flange Bolts into Spray Gun Tray.
- C. Fasten with (2) 5/16" Flange Nuts.



2.6.2 Attach Spray Gun Clip

Tools:
 Ratchet with 3/8 Socket
 Philips Screwdriver

- A. Locate Spray Gun Clip mounting hole.
- B. Insert (1) 10-32 x 1/2" into Spray Gun Clip.
- C. Fasten with (1) 10-32 Nut.

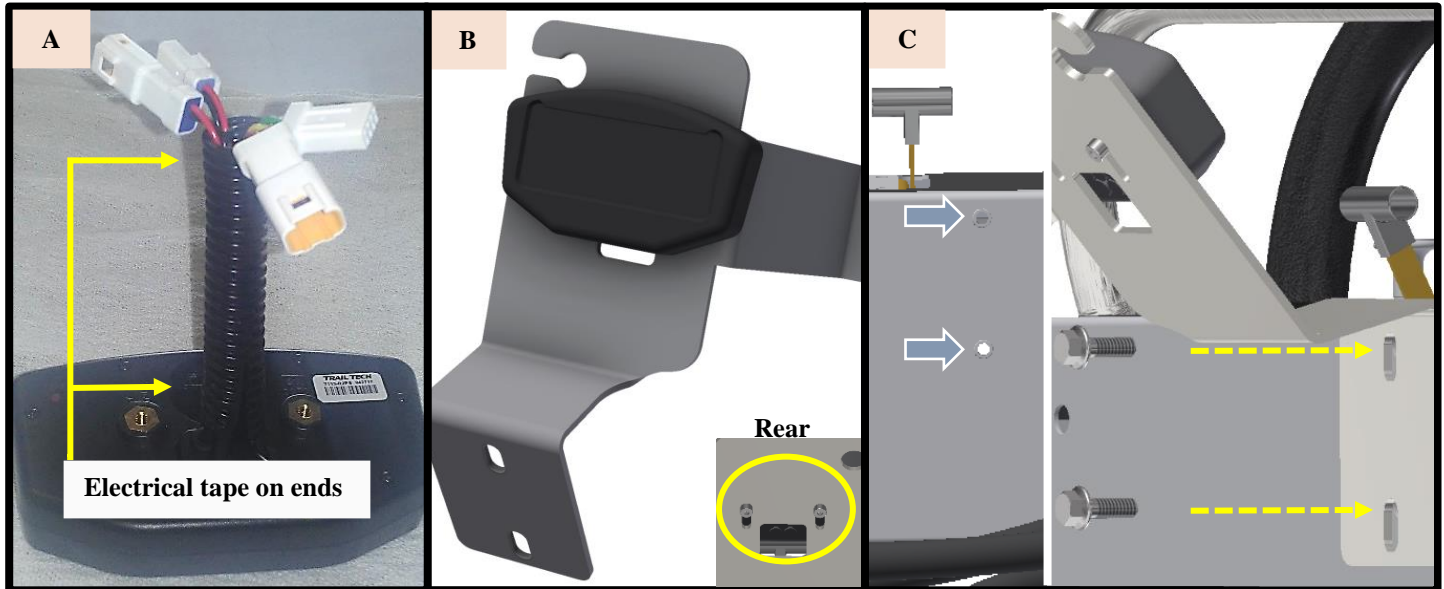


2.7 SPEEDOMETER

2.7.1 Install Speedometer

Tools:
Ratchet with 7/16 Socket
3mm Allen Wrench
Utility Knife
Electrical Tape

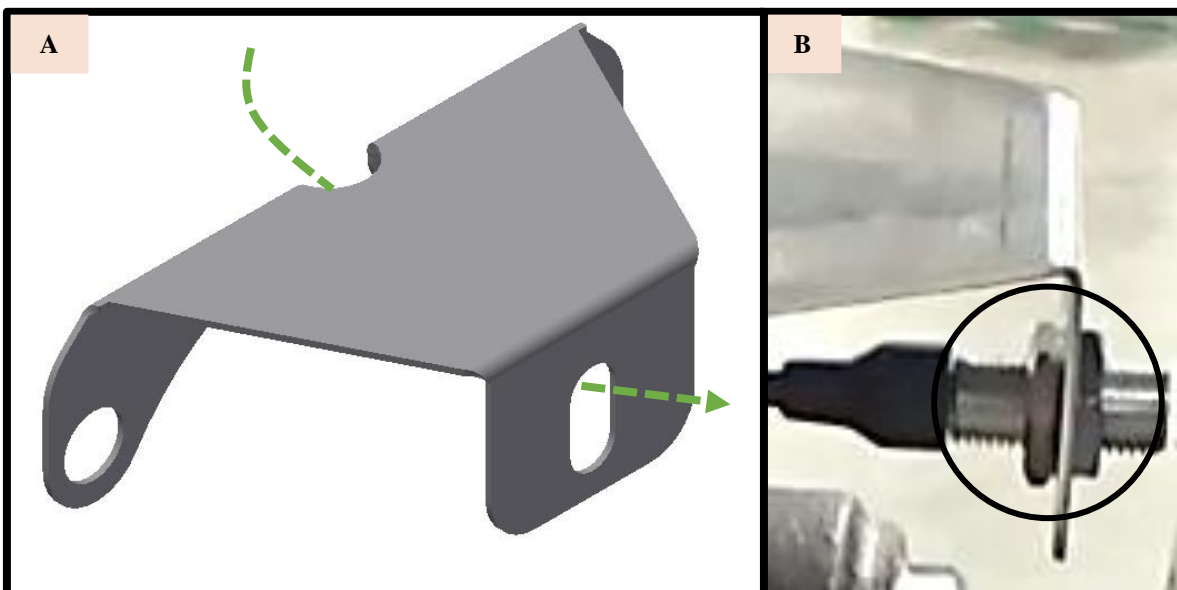
- A. Enclose Speedometer Wires in Plastic Conduit
- B. Attach Speedometer to Bracket with (2) M4 x 0.7 Screws.
- C. Attach the Bracket to Frame with (2) 1/4" x 3/4" Flange Bolts.



2.7.2 Attach the Sensor to the Bracket.

Tools:
(2) 9/16" Wrenches

- A. Insert Sensor in the Sensor Bracket slot.
- B. Loosely fasten nuts to Bracket

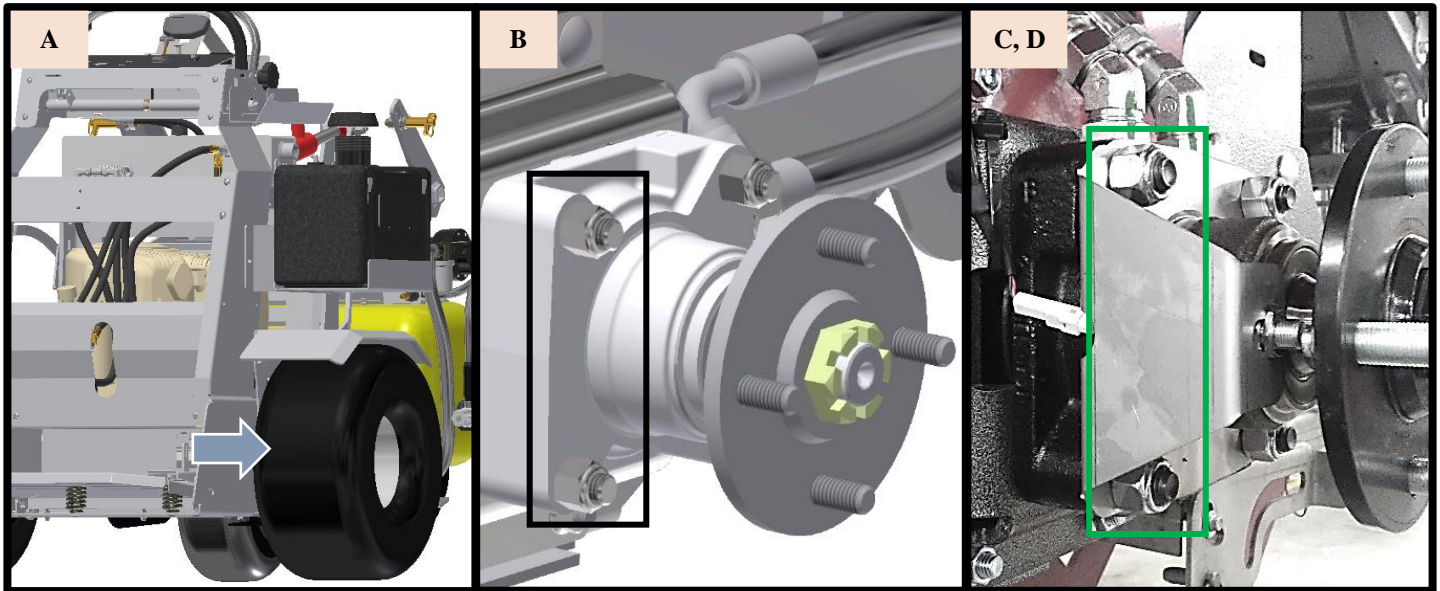


2.7.3 Attach the Speedometer Sensor Bracket

Note: If the nuts spin when you try to remove or tighten them, see additional instructions in Appendix A.

Tools:
Ratchet with 3/4 Socket
13/16 Socket

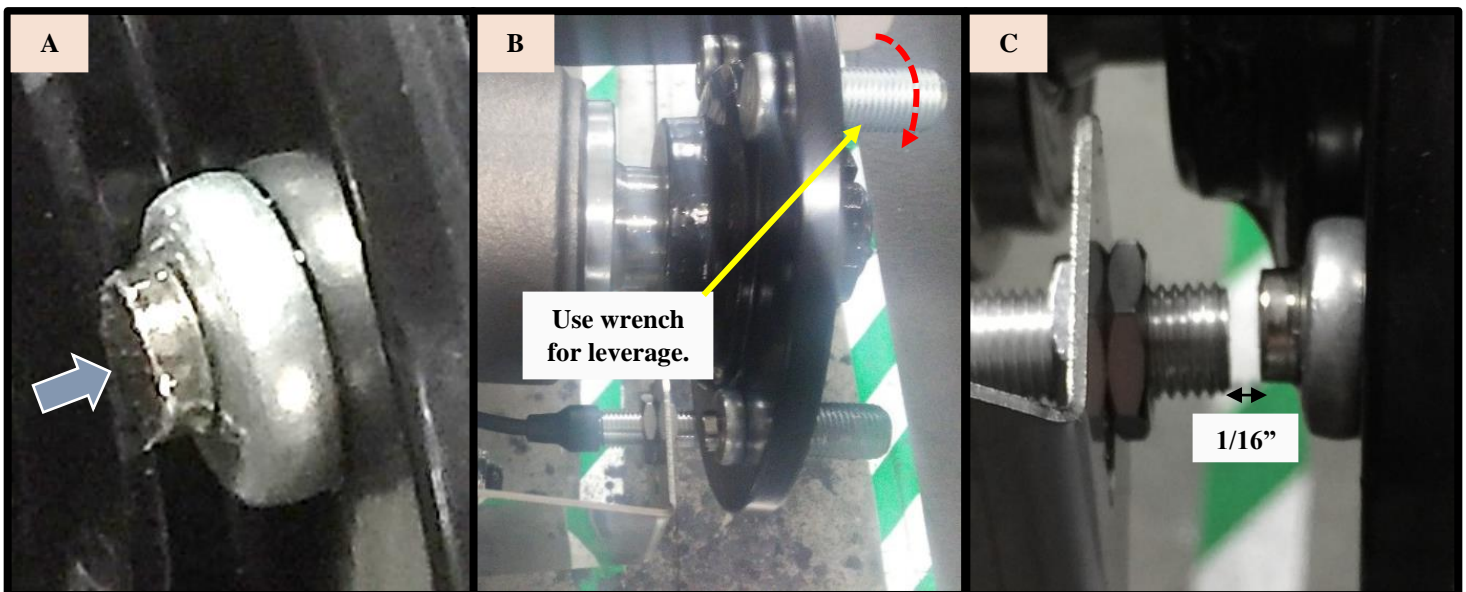
- A. Remove the Right Rear Tire.
- B. Remove the left (2) Nuts from the Wheel Motor.
- C. Attach the Speedometer Sensor Bracket to Left Posts of Wheel Motor.
- D. Fasten Nuts to Wheel Motor.



2.7.4 Install Magnet

Tools:
(2) 9/16 Wrenches
Super Glue

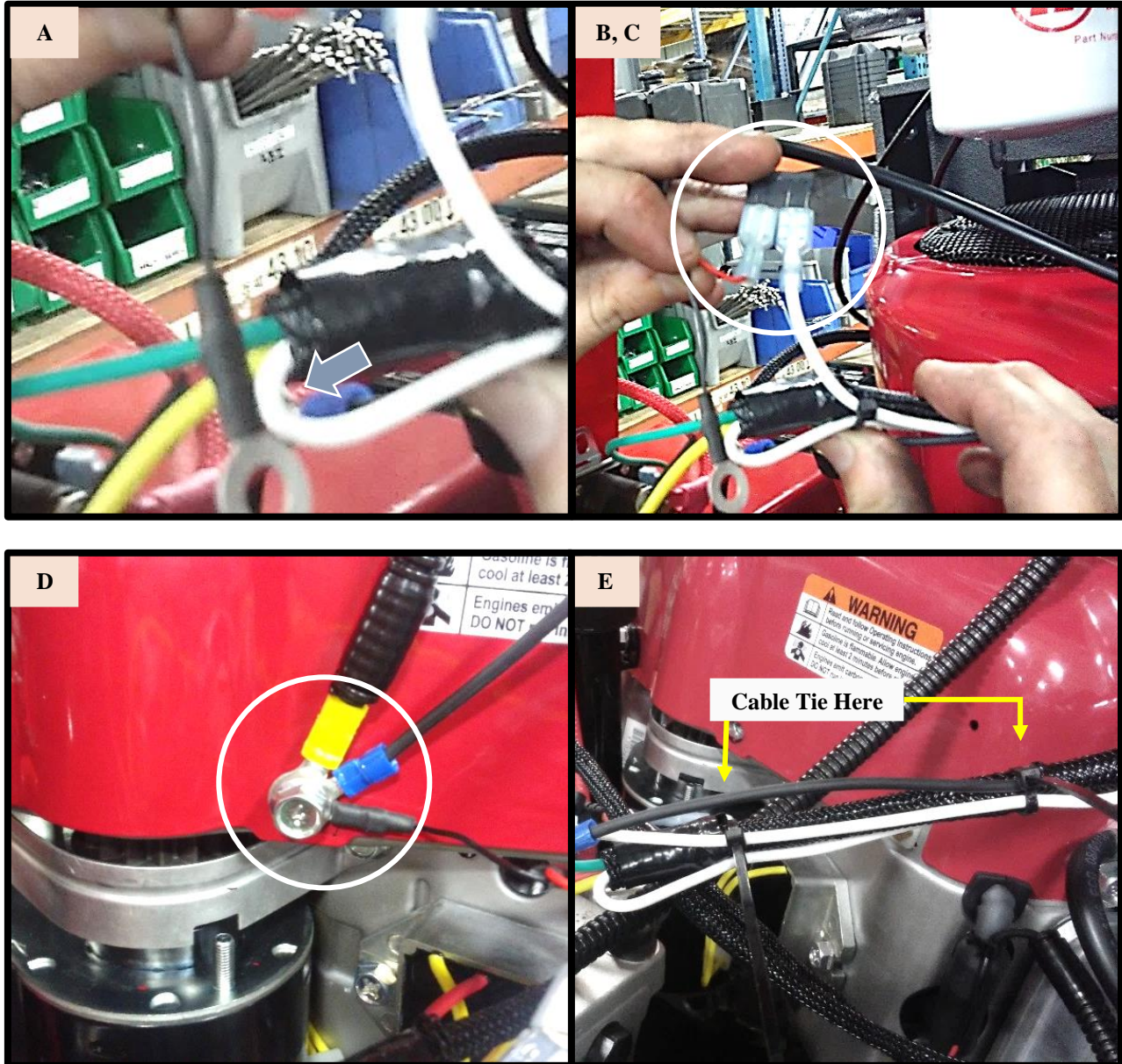
- A. Attach the Magnet to a Stud on the Wheel Motor with Super Glue.
- B. Rotate Rotor with Wrench to align Magnet with Sensor.
- C. Align the Sensor to the Stud on the Wheel Rotor to 1/16" and tighten.



2.7.5 Speedometer Power Cable

- A. Cut cable ties holding White Wire to Ignition Harness.
- B. Plug White Wire into one side of 1 Amp Fuse.
- C. Plug Red Wire from Speedometer Power Cable into the Fuse.
- D. Attach Ground Wire to Engine Chassis.
- E. Fold excess White Wire and attach to Ignition Harness.

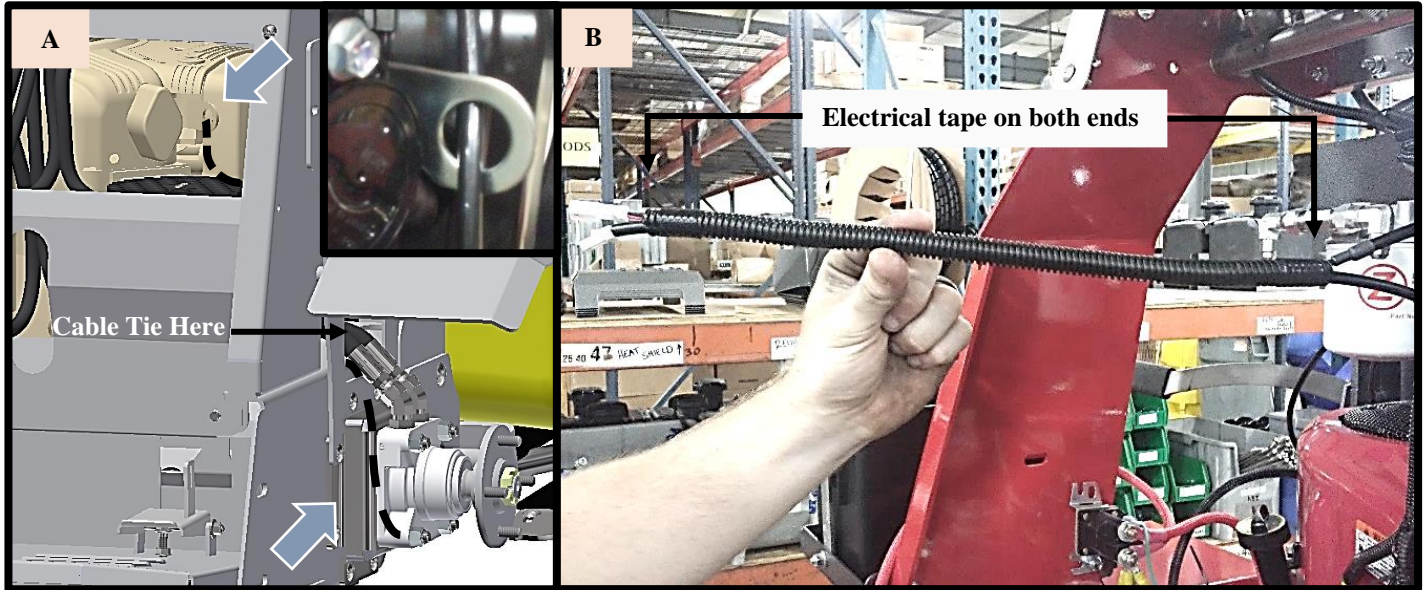
Tools:
Ratchet with 10mm Socket
Wire Cutters



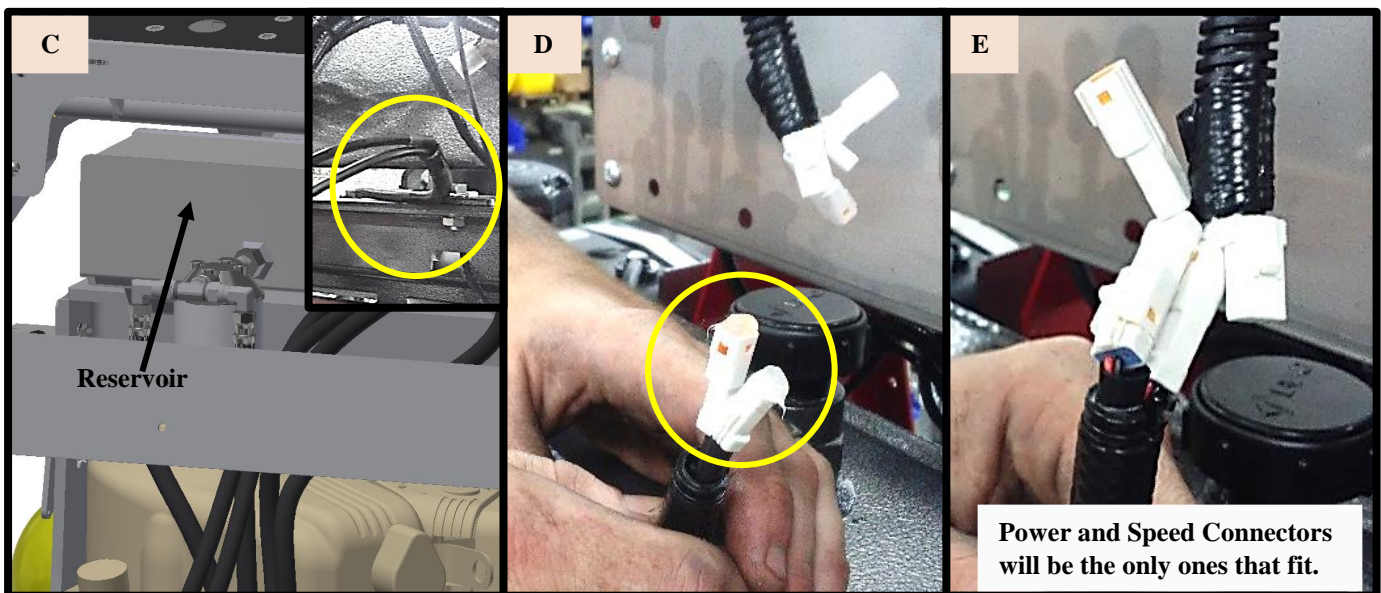
2.7.6 Speedometer Sensor Cable

Tools:
Wire Cutters
Utility Knife
Electrical Tape
Dielectric Grease

- A. Route cable along Hydraulic Hoses and through Engine Bracket.
- B. Enclose the Power and Sensor Cables in 3/8" x 12" Plastic Conduit



- C. Route the enclosed Cables underneath the Hydro Pump Reservoir.
- D. Apply Dielectric Grease to the ends of connectors.
- E. Connect the Sensor and Power Cables to the Speedometer.

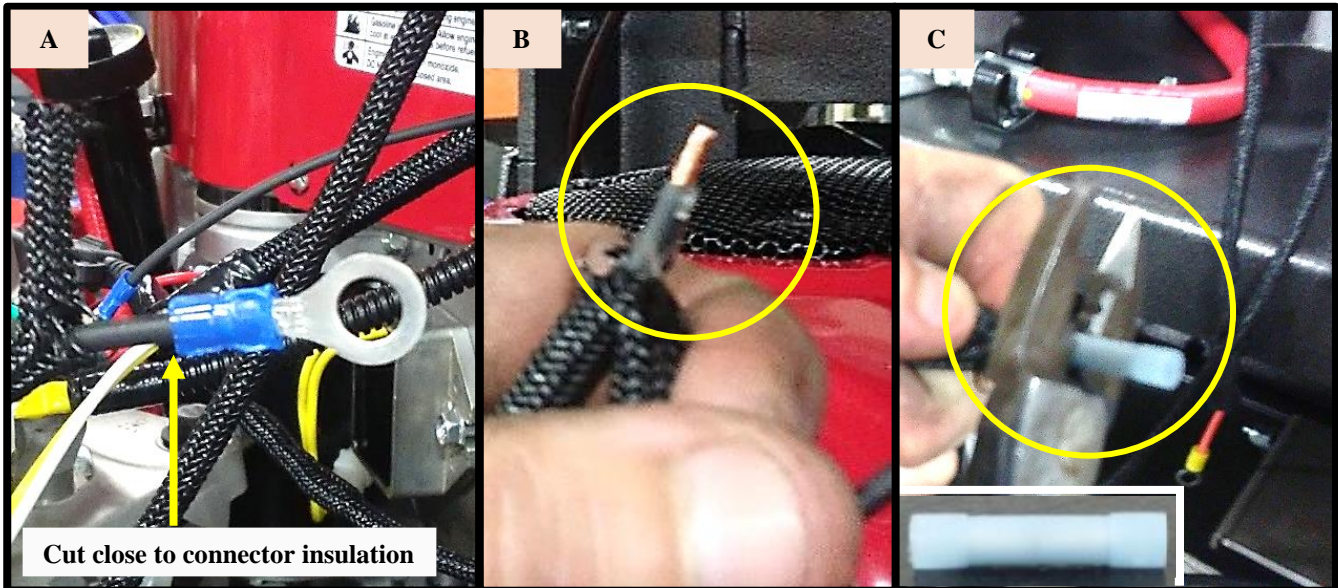


2.8 AUX ELECTRICAL HARNESS

2.8.1 Replace Ground Connector.

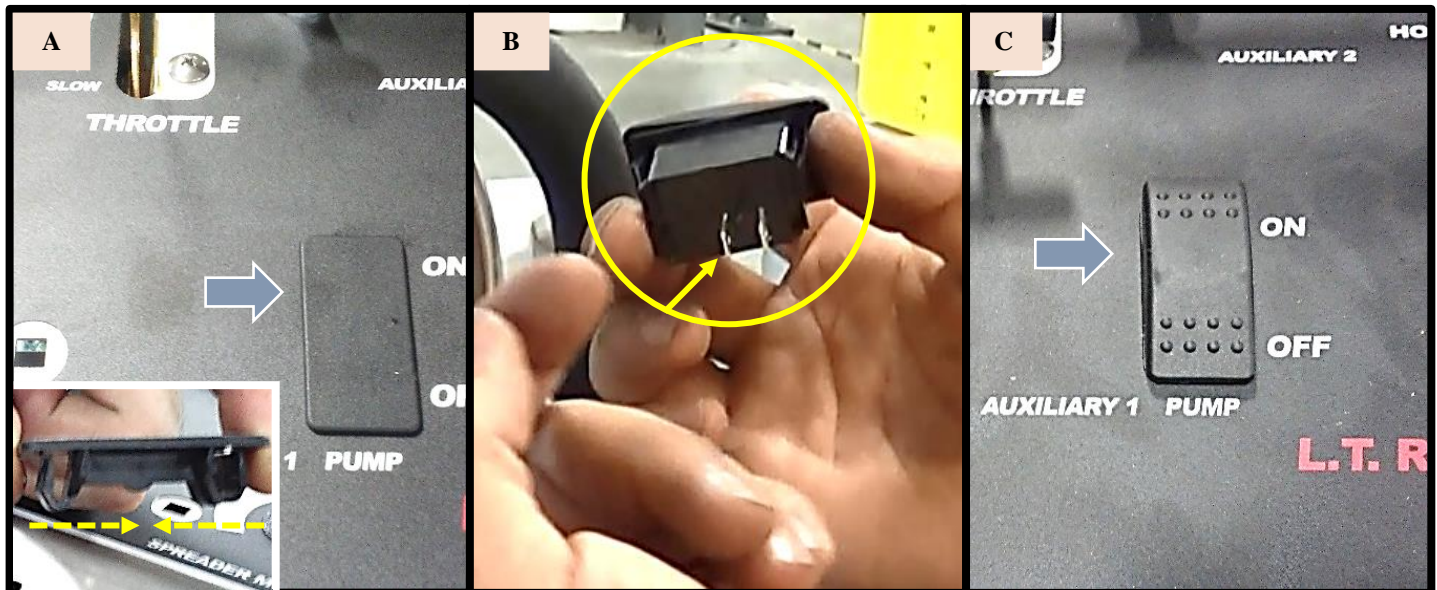
Tools:
Wire Cutters
Wire Strippers
Crimpers

- A. Cut existing O-Ring connector on AUX Harness.
- B. Strip approximately 1/4" of insulation from wire.
- C. Crimp Butt Connector onto wire.



2.8.2 Install Rocker Switch

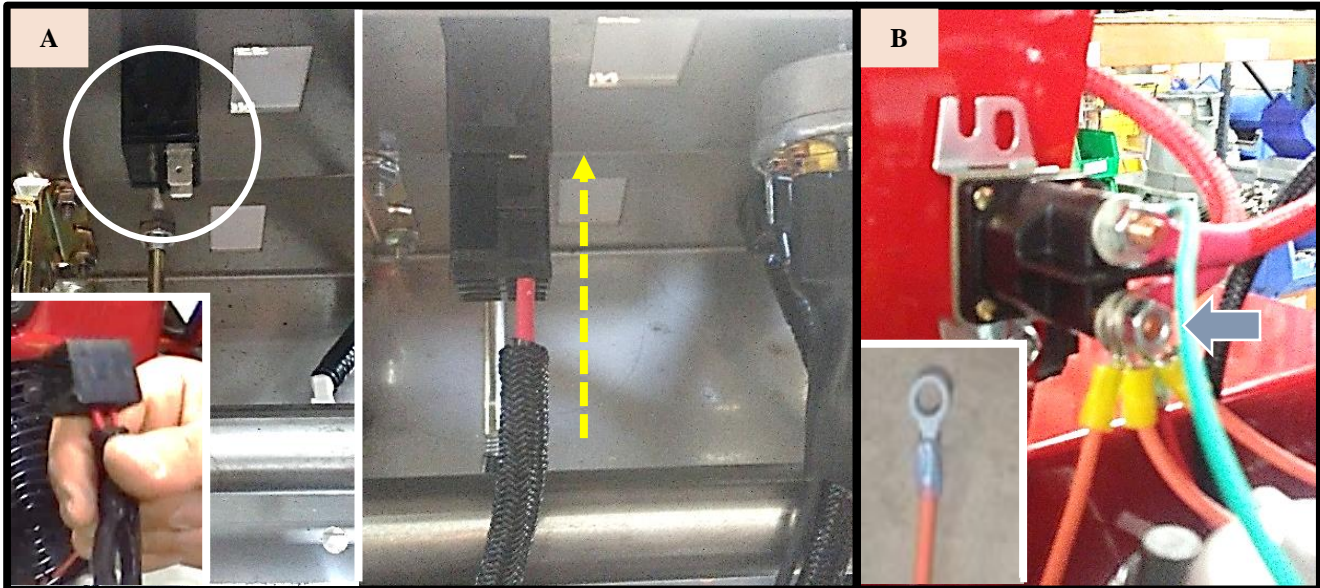
- A. Remove switch plug by pressing tabs together.
- B. Orient plug closest to operator.
- C. Insert Rocker Switch into Slot.



2.8.3 Install Aux Harness

Tools:
Ratchet with 11mm Socket

- A. Plug Switch Connector to Rocker Switch.
- B. Connect the Power Wire (orange) to the bottom Solenoid Post.



2.8.4 Connect the Ground Wire

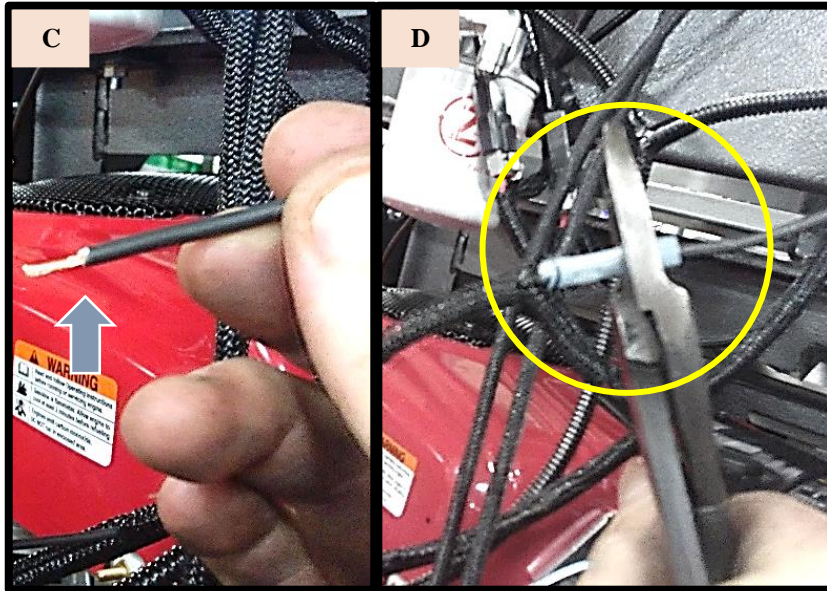
Tools:
Wire Cutters
Wire Strippers
Crimpers

- A. Cut cable ties holding the Ignition Harness Ground Wire.
- B. Cut Female Blade connector on Ignition Harness Ground Wire.



2.8.4 Cont.

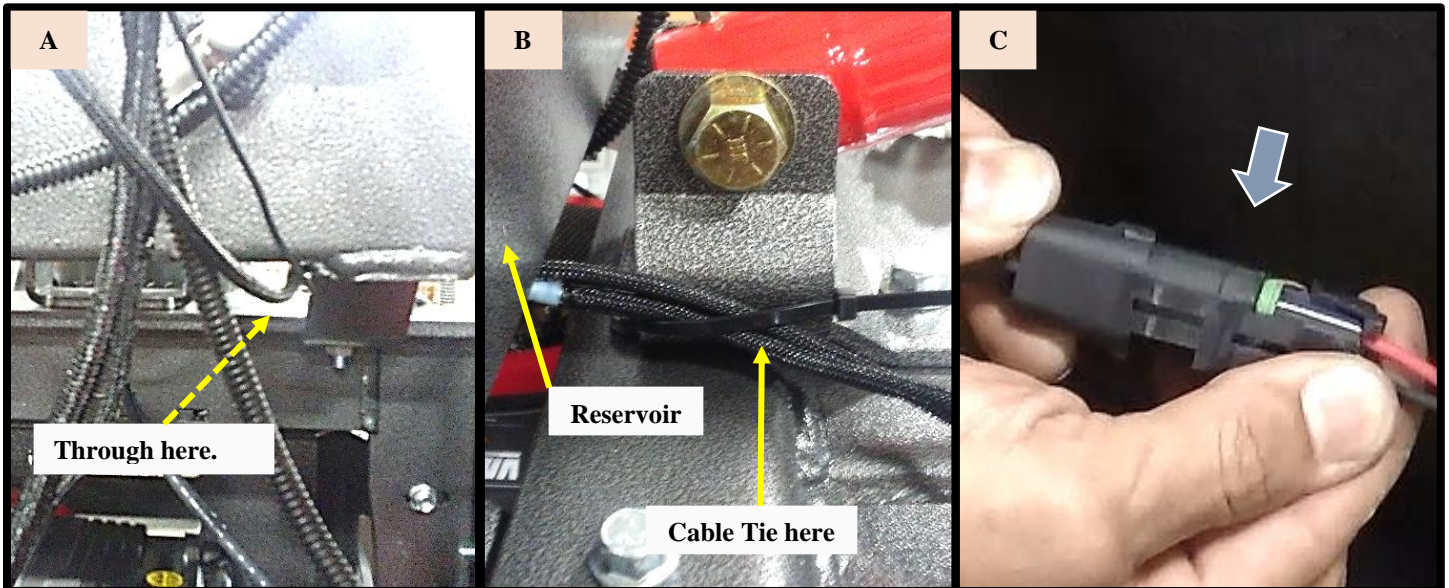
- C. Strip approximately 1/4" of insulation from wire
- D. Crimp the Butt Connector on Aux Harness (step 2.8.1) to this wire.



2.8.5 Connect the Pump Connector

Tools:
Wire Cutters

- A. Route the Pump Connector underneath the Hydro Pump Reservoir.
- B. Loop around bracket once and hold with a cable tie.
- C. Connect Pump Connector to Pump on AUX 30 Gal Tank.



2.9 CALIBRATION AND TESTING

2.9.1 Adjust Speedometer Settings

Refer to **page 31** of the **Trail Tech Speedometer User's Manual** for instructions on how to change settings for this section as well as exploring its other functions.

All new Z-Plug units manufactured from October 2011 to current will have this Speedometer setup.

Function	Setting
Distance Units	M/H
Wheel Size ¹	1580 [Kenda OEM Tires]
Clock Format	12 or 24 HR
Time ²	Current Time
Temperature	°F or °C
High Temp Alert	N/A [0°]
Danger Temp Alert	N/A [0°]
Low Voltage Alert ³	12V
Danger Voltage Alert	12V
Oil Alert	N/A [0]
Care Alert	N/A [0]
Average Speed ⁴	3 or 2
Distance Resolution	0.0 or 0.00

¹ If you are not using an L.T. Rich tire, refer to **page 16 & 17** of the User's Manual to calibrate (tire manufactures are allowing 8% over and/or up to 8% under stated tire size marked on the side walls).

² Refer to **page 26** of the User's Manual

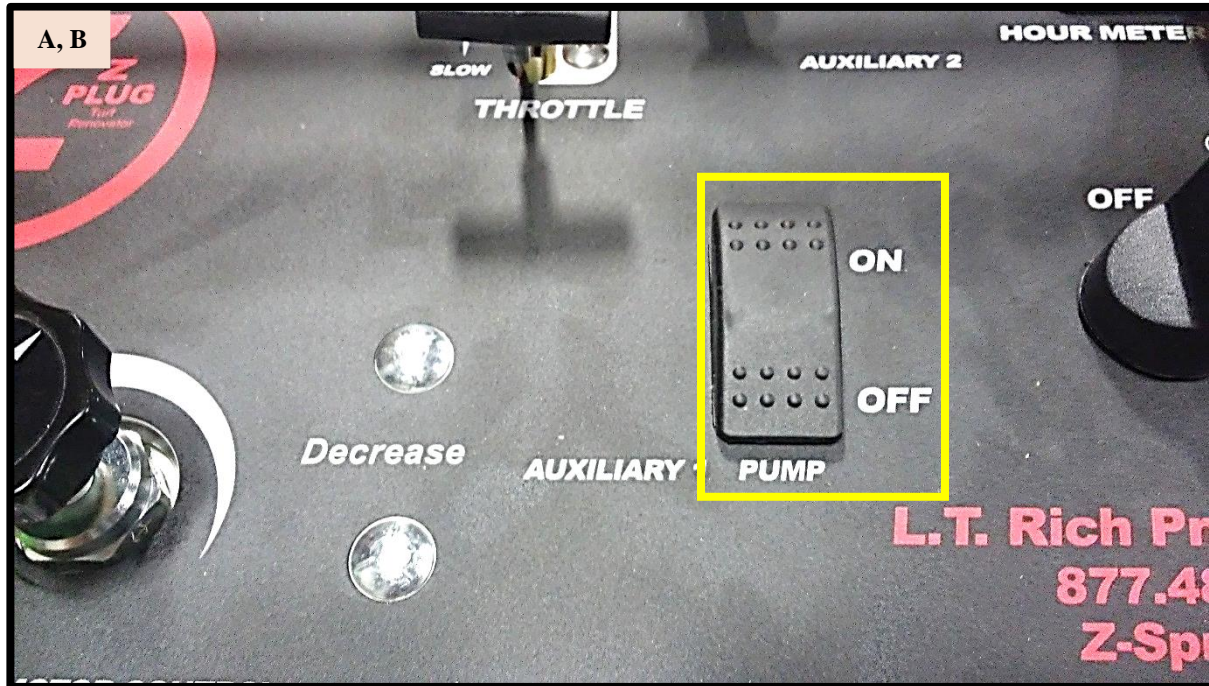
³ Refer to **page 24** of the User's Manual.

⁴ Refer to **page 21** of the User's Manual.

2.9.2 Test Aux 30 Gal. Pump

Note: Reconnect the negative battery cable before proceeding with this step.

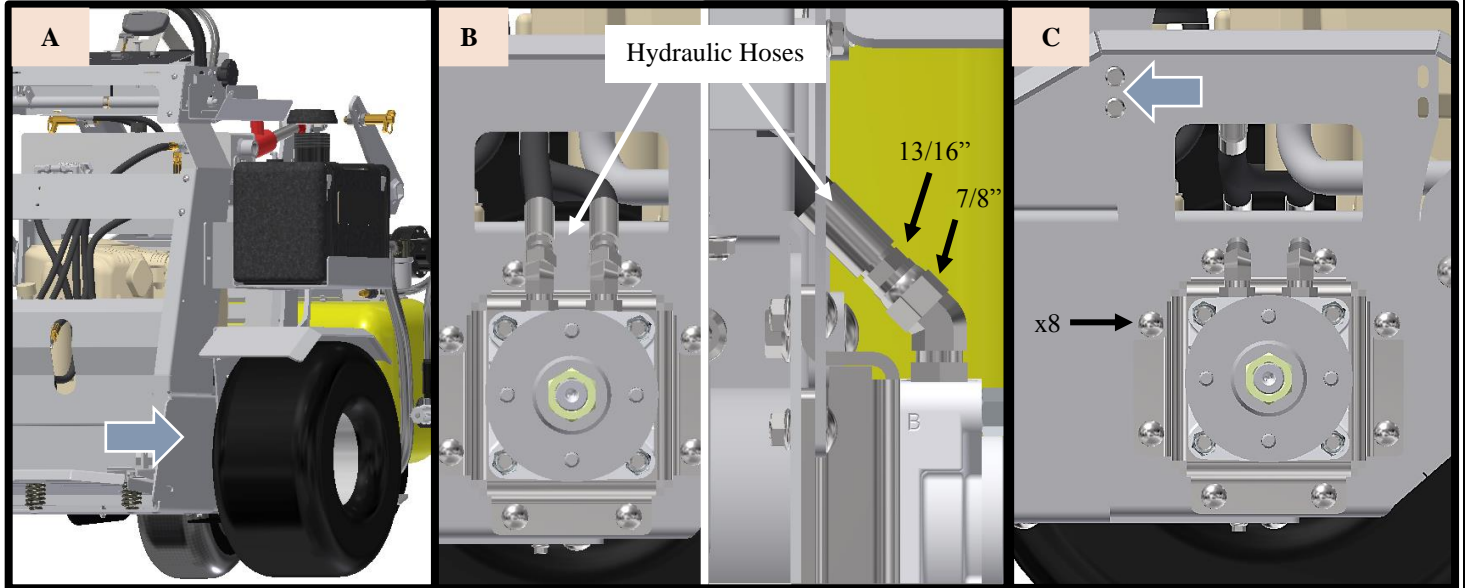
- A. Press the Pump Switch to the ON position.
- B. Listen for 30 Gal. Pump noise.
- C. Press the Pump Switch to the OFF position.



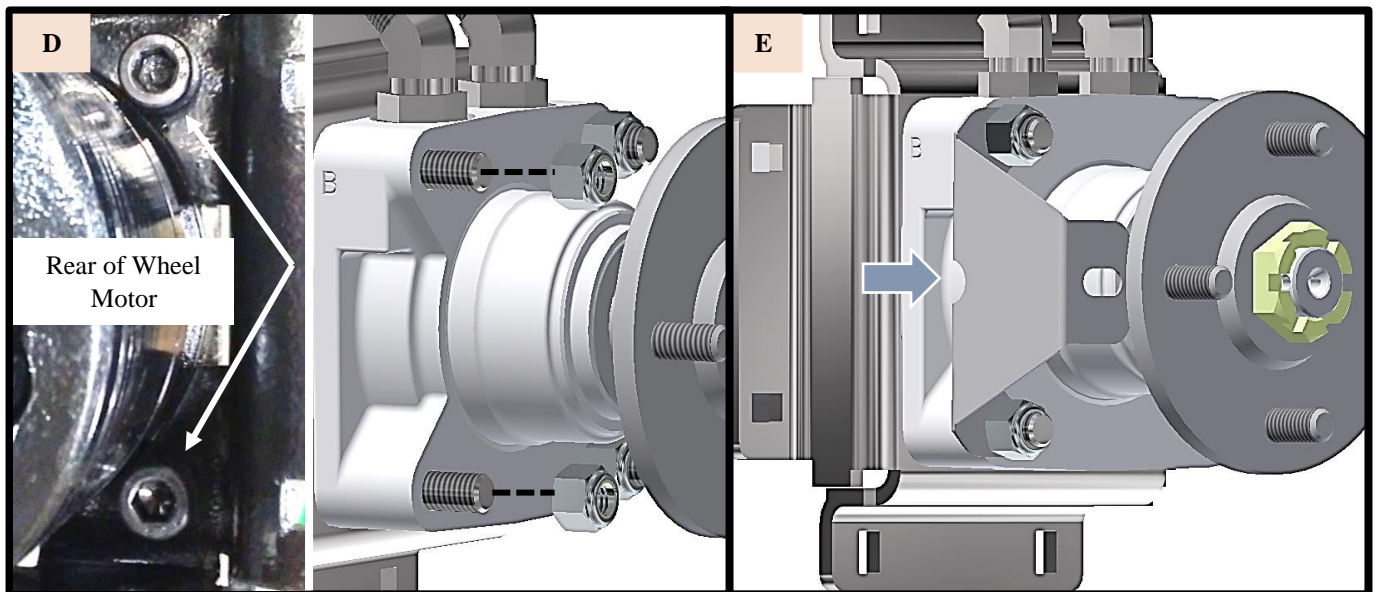
Tools:
Ratchet with 3/4 Socket
13/16 Socket
9/16 Wrench
13/16 Wrench
7/8 Wrench
3/8 Allen Wrench

3.0 APPENDIX A

- A. Remove the Right Rear Tire.
- B. Disconnect Hydraulic Hoses.
- C. Remove Wheel Motor and Fender.



- D. Remove the left two Nuts from Wheel Motor.
- E. Attach Speedometer Sensor Bracket (sensor not shown)



- F. Connect Hydraulic Hoses.
- G. Attach Wheel Motor and Fender to the Frame.
- H. Proceed with step 2.7.4