



Champion Electric Reverse Gear

For

**Classic, Vintage, Chieftain, and Roadmaster
2014-2015**

Installation Instructions

Revision 1

****Installation should be installed by a qualified mechanic**

CAUTION : Failure to follow these instructions can lead to serious personal injury and/or property damage and may void the warranty.

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1 General Information

1.1 Reverse Gear Contents

Qty	Part Number	Description
1	EL-IN1-001	Electric Box Assy, w/ wiring
1	RG-301-002	Electric motor assy
1	RG-300-016	Bracket, adjuster
2	RG-300-013	Bracket, gear
1	RG-300-014	Mount, electric motor
2	RG-300-004	Gear, differential, electric reverse
2	RG-300-002	Spacer, 2 piece, pulley
2	RG-300-021	Bracket, clamp, mount, motor
2	RG-300-004	Gear
2	RG-300-003	Cap
1	HWK-IRG-001	Hardware kit, Indian, ERG

2 Reverse Gear Installation

- a. Remove the six SHCS from the LHS of the differential as indicated in Figure 1.

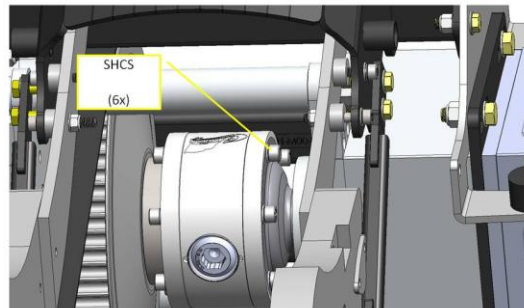


Figure 1

- b. Take both halves of the reverse gear over the differential housing. Connect the two pieces together use the linkage brackets onto the gear. The brackets need to be placed on the side facing the rear Champion pulley. Use 5/16-18x3/4" HHCS with lock washers and hand tighten the hardware. See Figure 2.

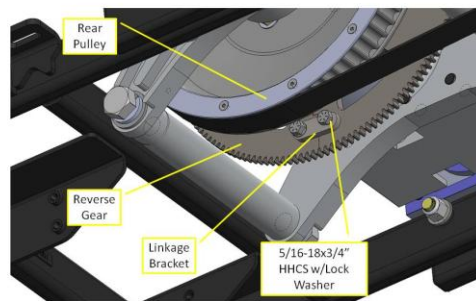
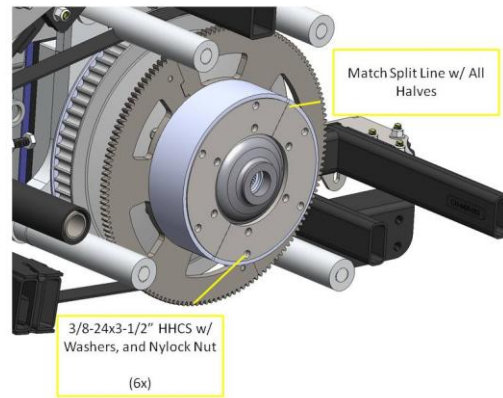


Figure 2

- c. Place the both pieces of the aluminum spacer with the two piece steel cap onto the differential. Match both the aluminum spacer and steel cap with their split lines. See the figure below. On the outer bolt pattern use six 3/8-24x3-1/2" HHCS, w/washers, and nylock nut. Keep loose.



- d. Attach the reverse gear assembly to the differential using six 3/8-16x1-1/2" HHCS with 25/64 washers as shown in Figure 3. Torque hardware to 26ft-lbs.

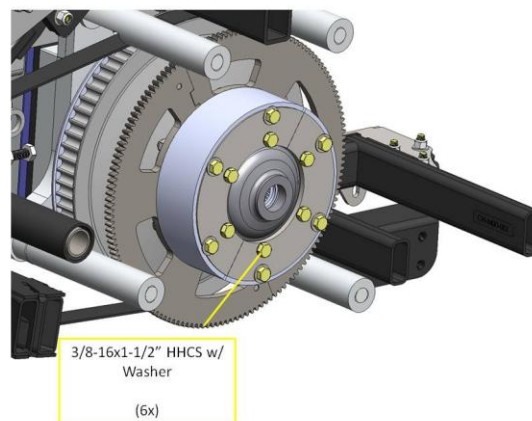
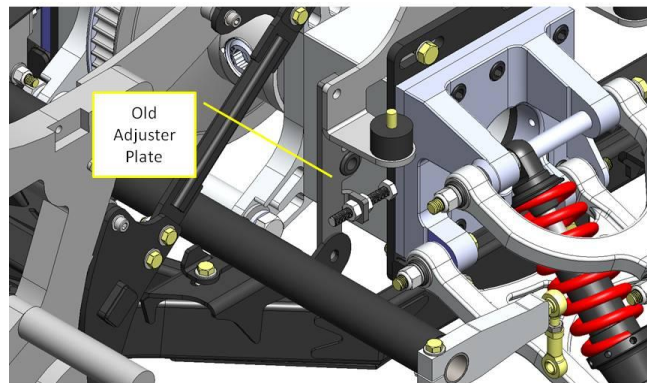


Figure 3

- e. Torque the 3/8-24x3-1/2" HHCS to 30ft-lbs.
- f. Torque the 5/16-18x3/4" HHCS with lock washers to 17ft-lbs.
- g. Remove the LHS adjuster bolt bracket and the hardware which is indicated below. Set aside the adjuster bolt with the jam nuts and the rubber grommet.



- h. To attach the new adjuster bolt bracket onto the swing arm a $\frac{1}{4}$ " hole will need to be drilled into the swing arm. Note: The ARB may need to be loosened in order to drill. For best results, install the adjuster bolt on the new bracket and re-use one $\frac{3}{8}$ -16x1- $\frac{1}{4}$ " HHCS w/washers, and nylock nut. Adjust the adjuster bolt such that the head of the $\frac{3}{8}$ screw is parallel to the rear differential assembly. See Figure 4.

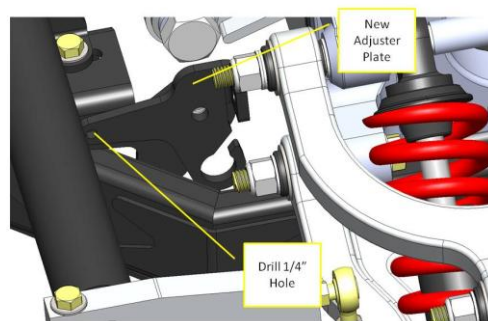


Figure 4

- i. Drill through the swing arm and attach the adjuster bolt bracket use a $\frac{1}{4}$ -20x $\frac{5}{8}$ " HHCS, w/washers, and nylock nut. Torque to 7ft-lbs. Torque the $\frac{3}{8}$ -16x1" HHCS to 26ft-lbs. Tighten the adjuster bolt. Note: Rotate the wheels to check the belt position has not changed.
- j. Connect the electric motor mounting bracket onto the differential cross tubes by using the two rectangular pieces with the $\frac{5}{16}$ -18x3" HHCS, w/washers, and nylock nuts. Keep loose for adjustment. See Figure 5.

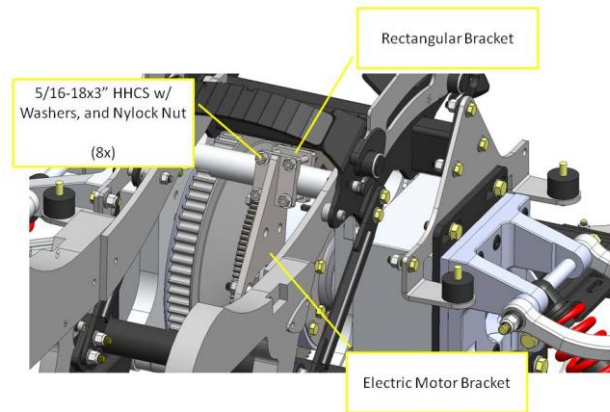


Figure 5

- k. Install the electric motor onto the bracket using two M10x1.25x45 HHCS, w/washers, and nylock nuts which is shown in Figure 6. Torque to 32ft-lbs.

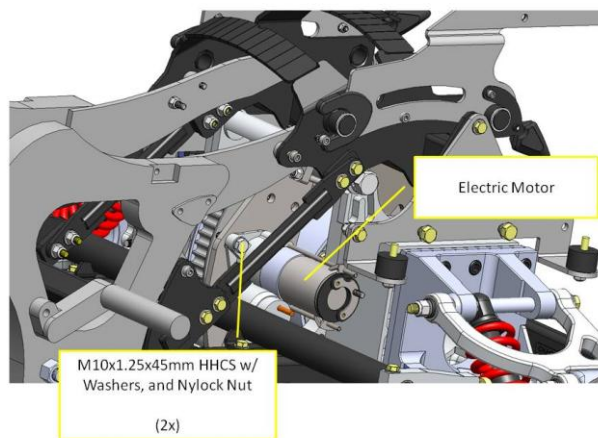


Figure 6

- l. Slide the assembly forward to the reverse gear. Position the assembly roughly 1" away from the reverse gear as shown below. Torque all eight 5/16-18x3" HHCS to 15ft-lbs.
- m. Install the electrical box onto the electric motor using 3/8-16x1-1/4" HHCS, w/fender washers, and nylock nut. Torque to 26ft-lbs.

3 Electrical Wiring

- a. Using Figure 7 below connect the indicated wiring.

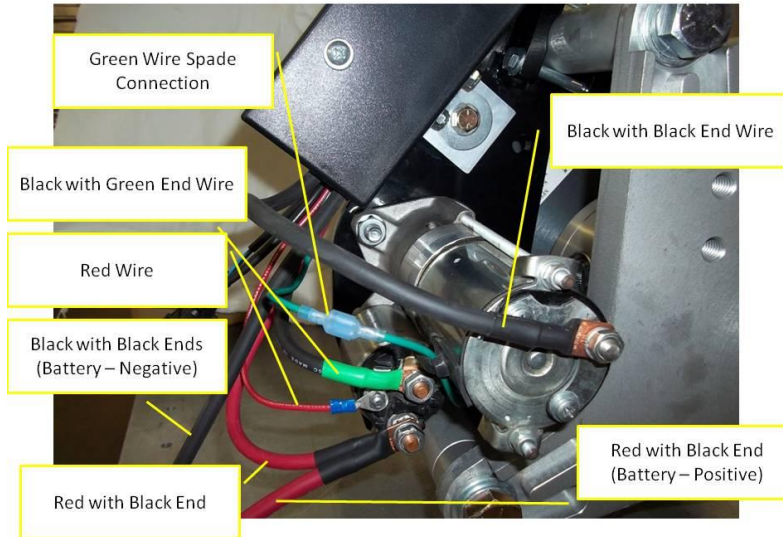
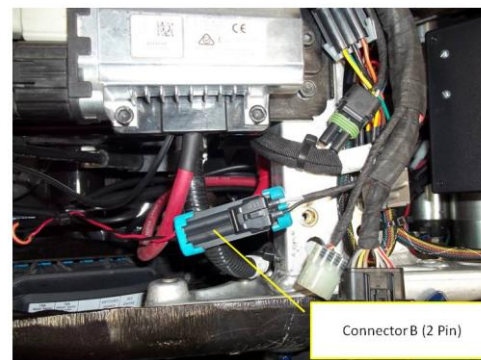
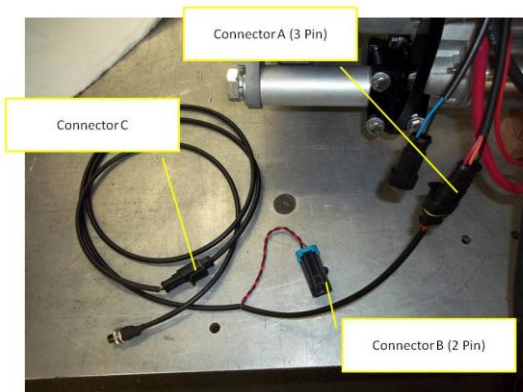


Figure 7

- b. Remove the fuel tank from the trike and the seat.
- c. Attach the Connector A to the electric reverse. Also connect Connector C to the reverse gear switch. Route the wiring through bike frame to the battery. Battery is located under the seat. See the figures below.



- d. Route the wiring through bike frame to the battery. Battery is located under the seat. Route Connector C wire through the OE plastic tray forward to the steering pivot (Neck). The connector is indicated in Figure 8.

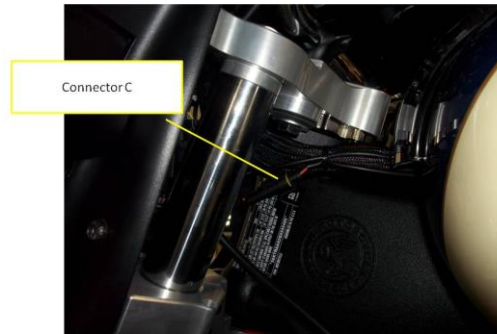


Figure 8

- e. Route the switch wire forward under the top clamp and tie to the handle bar. Install the switch and switch box using the clutch clamp lower bolt. See Figure 9 for details.

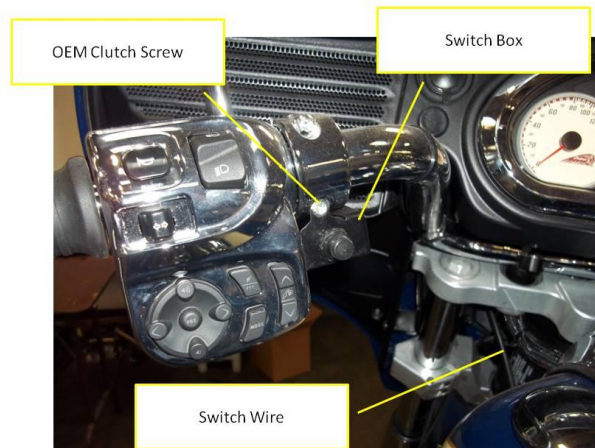
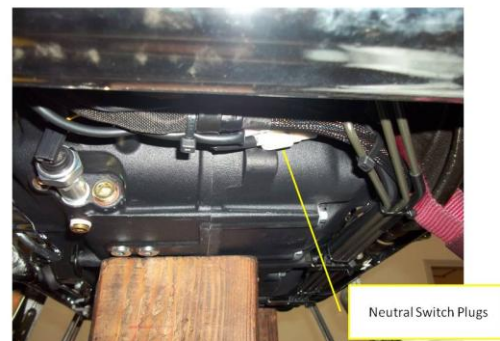


Figure 9

- f. Connect the neutral switch plug. Route the wiring through the LHS of the trike and below the Champion swing arm. At the rear of the Indian motor, on the RHS, there is the neutral switch wire. Unplug and connect the Champion wiring to the respect male and female plug as shown in the figure below.



- g. Connect the electric motor neutral safety switch to the electric motor. Figure 10 is only demonstrating the connection with the electric motor and the motors' neutral safety switch wire.



Figure 10

- h. Route the motors' neutral safety switch on the outside of the bike frames' RHS to the driver foot rest, as shown in Figure 11.



Figure 11

- i. Locate the side stand connector. The plug will be located on the bikes' RHS . The figure below only shows the general plug location. Cut the OE wire from the side stand connector and splice into the Champions' wiring. Reconnect the OE plug into the motorcycle plug and remove the side stand components.

