

REPLACEMENT WHEEL ANGLE SENSOR (WAS) INSTALLATION

KIT CONTENTS

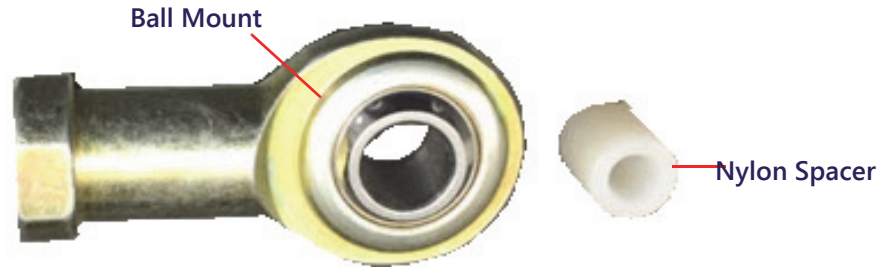
TABLE 1. Wheel Angle Sensor Installation Kit (P/N 117-0182-030 and 117-0182-031)

Picture	Item Description	Part Number	117-0182	
			030	031
Not Pictured	Installation Sheet - Linear Wheel Angle Sensor	016-0191-006	1	
	Sensor, Linear, Non-Contact, 300 MM	416-0001-052	1	
	Sensor, Linear, Non-Contact, 350 MM	416-0001-054		1
	Cable, WAS Update	115-4001-260	1	
	Nut, Jam, M10 x 1.5 Pitch x 5.5 MM Thick	312-1002-035	2	
	Mount, Universal, M10 Ball	103-0001-029	2	
	Spacer, Nylon, 10 MM OD x 13 MM Length M5 Screw Size	104-0000-013	2	
	Washer, Flat, #10 x 11/16 SS	313-2301-013	4	

LINEAR WHEEL ANGLE SENSOR (WAS) REPLACEMENT

1. Insert the nylon spacers (P/N 104-0000-013) into the ball mounts (P/N 103-0001-029).

FIGURE 1. Ball Mount and Spacer



2. Use a mallet to carefully hammer the spacers into place.

FIGURE 2. Nylon Spacer Installed in Ball Mount



3. Thread one jam nut (P/N 312-1002-035) and one ball mount assembly (P/N 103-0001-029) onto the threaded shaft coming from each end of the linear sensor (P/N 416-0001-052 or 416-0001-054). Do not tighten the nuts yet.

FIGURE 3. Linear Sensor with Jam Nut and Ball Mount Installed



4. Unscrew the locking nuts holding the sensor in place and remove the old sensor from the machine.

FIGURE 4. Old Sensor Installed



5. Adjust the location of one, or both wheel angle sensor brackets currently installed on the machine to accommodate the difference in length between the two sensors. The new sensor will be 2" longer than the old sensor when fully compressed.

FIGURE 5. Note Difference in Sensor Lengths



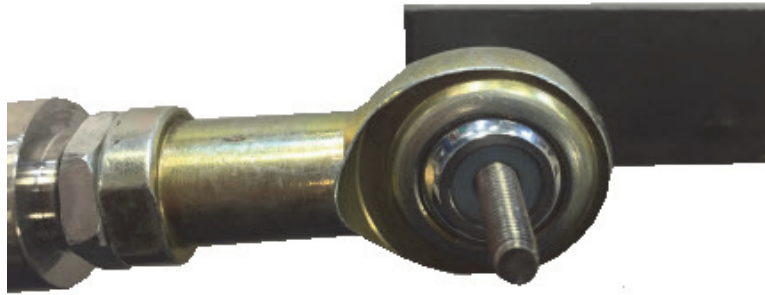
6. Place a washer (P/N 313-2301-013) on each of the threaded bolts on the original wheel angle sensor brackets.

FIGURE 6. Washer on Threaded Bolt Sensor



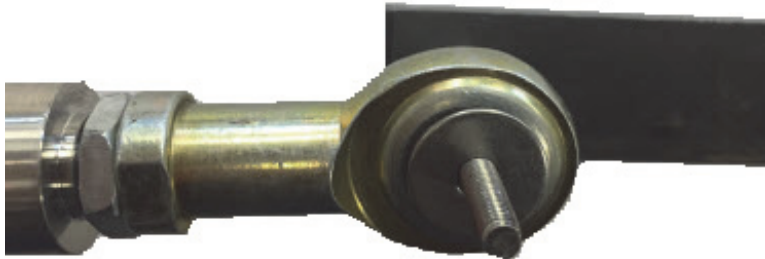
7. Double check that the sensor brackets are in a location that the wheels can turn from lock to lock without overextending or buckling the new sensor.
8. Install the new sensor on the threaded bolt ends so the electrical connector is on the same end it was on the original sensor.

FIGURE 7. Sensor Installed on Threaded Bolt Ends



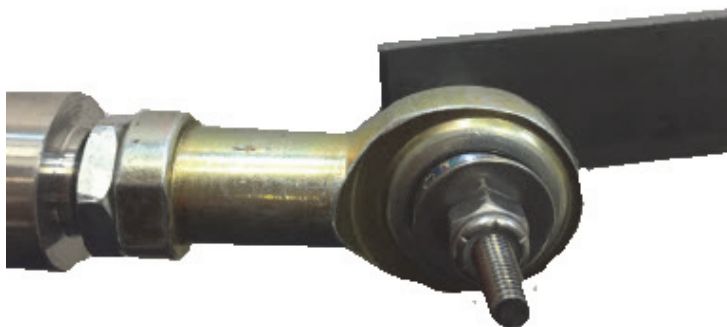
9. Place one washer (P/N 313-2301-013) on each of the threaded bolt ends.

FIGURE 8. Washer on Threaded Bolt Ends



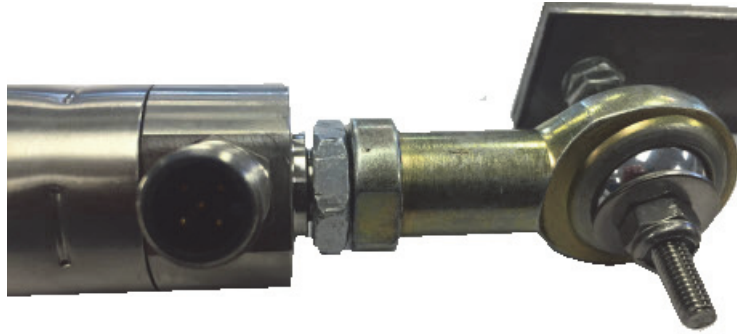
10. Thread the lock nut back onto the threaded bolt ends and tighten to secure the sensors in place.

FIGURE 9. Installed Lock Nut



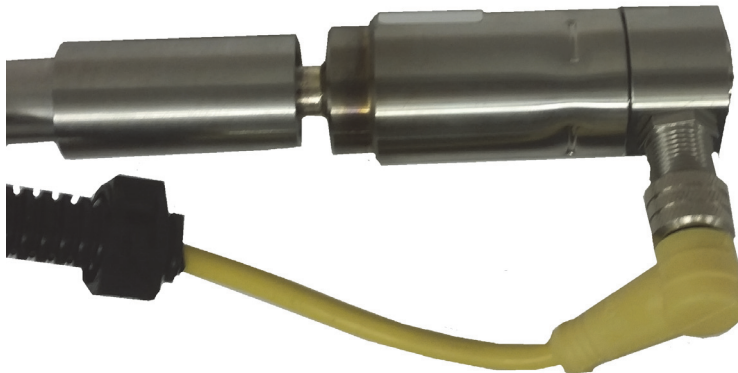
11. Orient the sensor body so the electrical connection is as accessible.
12. Tighten the jam nuts against the ball mounts on both ends of the sensor.

FIGURE 10. Sensor Oriented to Have Electrical Connection Accessible



13. Line up the notch on the connector of the adapter cable (P/N 115-4001-260) to insert it into the corresponding electrical connection on the sensor.
14. Tighten the thumb screw clockwise until it is snug.

FIGURE 11. Cable Connected to Sensor



15. Connect the other end of the adapter cable to the triangular connector on the existing SmarTrax cable.
16. Connect the remaining power wire to a switched 12 volt power source.
17. Recalibrate the Wheel Angle Sensor (WAS) using the Steering Position Sensor portion on the SmarTrax system and retune if necessary.

NOTE: Refer to the SmarTrax Calibration and Operation Manual (P/N 016-0171-277 for CAN SmarTrax or P/N 016-0159-956 for stand-alone SmarTrax control systems).

