



BACKED BY
Roadranger
SUPPORT

Subject: Redesigned Input Shaft Sensor for Hybrid Transmissions

Document Number: TAIB0847 EN-US

Date: October 7, 2013

Issue Description:

A redesigned speed sensor has been released into production and service. External changes include a sensor body designed to minimize corrosion seizing and integrated retaining clip that will not distort the sensor when the retaining capscrew is tightened. Sensor output signal, harness connector interface and 14142 O-ring are all interchangeable with current design sensors.



New Sensor 4307349



Old Sensor 691905

Part Number Information:

New Sensor	Old Sensor
4307349 Speed Sensor available in Hybrid Input Shaft Speed Sensor Kit K-4211 and will be in K-3772 Q4 2013	K-3772 (Currently has 691905 Speed Sensor)

For drive socket clearance during installation, a new external Torx head retaining screw will also be included in the sensor service kits that use the integrated retaining clip.

Hybrid Production

X-8-460:

- Replaces X-8C-409 (0.250" - 20 x 0.625")
- Use E8 external Torx drive socket for installation
- Torque spec is 4-6 lbs. ft. (6-8 Nm)



Affected Models/Population:

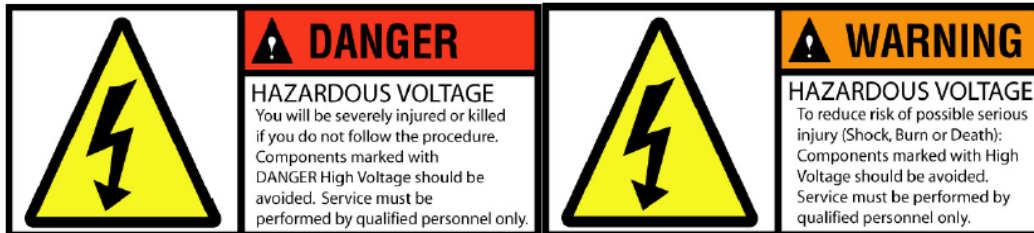
All Hybrid transmissions produced to date use the 4305936 PTO cover and 691905 speed sensor. A Hybrid transmission serial number and cut-in date will be added to this FSUD once 4308332 PTO cover and 4307349 speed sensor are in production. 4305936 PTO cover and 4307349 speed cannot be used together possibly resulting in a low lube failure.

Field Strategy:

Replace the PTO cover if the new 4308332 sensor is replaced. Instructions from K-4211 (L-2013-15) will be changed in K-3772. K-3772 will continue to be used as the service kit for the output shaft speed sensor. InfoRanger will be updated to include K-4211 to service the input shaft speed sensor.

Information from L-Letter L-2013-15:

Hybrid Input Shaft Speed Sensor Kit



Warning: Before inspecting or working on any high-voltage cables or components the "High-Voltage Service Shutdown Procedure" should be followed. Failure to follow these instructions may result in severe personal injury or death.

Reference Hybrid Service Manual TRSM-2000 for removal / installation instructions and Hybrid Service Shutdown Procedure. All service literature is available online at www.roadranger.com.

IMPORTANT: Please reference Service Bulletin TAIB-0817 for Return Shipping Information and Required Hazmat Compliance Training.

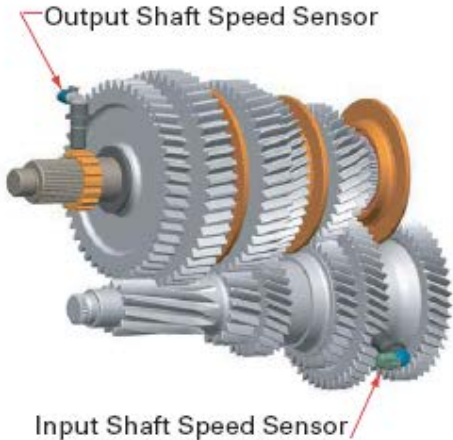
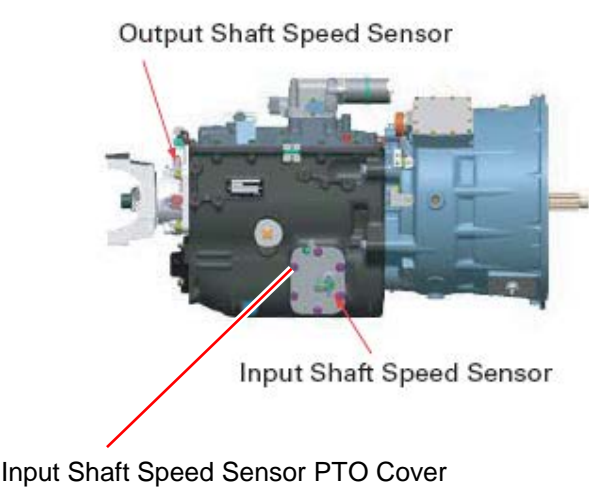
For spec'ing or service assistance, call 1-800-826-HELP (4357) 24 hours a day, 7 days a week, (Mexico 8-332-1515) for more time on the road. Or visit our website at www.roadranger.com.

Service Bulletin – Product

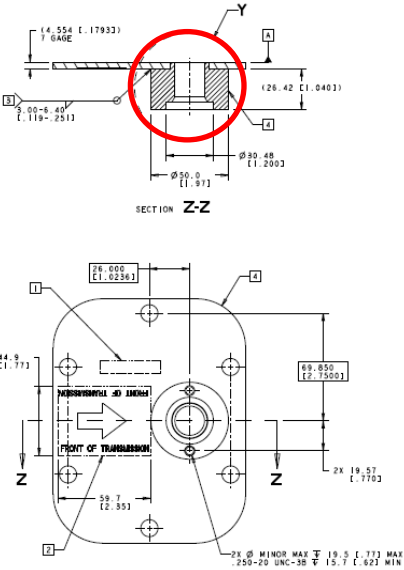
A speed sensor design was changed March 2013. The sealing O-ring was **moved up** on the speed sensor.



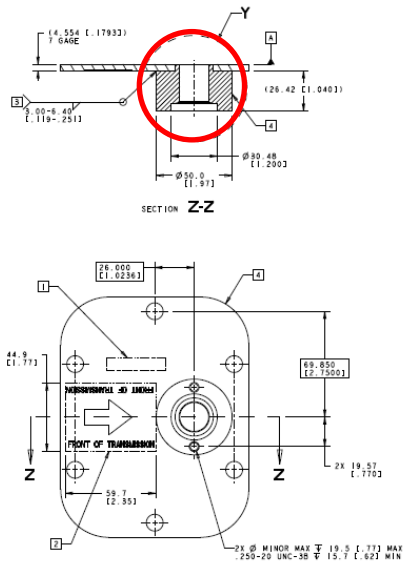
If the current design speed sensor is changed to the new design the **PTO cover must be changed** to accommodate the new sealing O-ring location of the speed sensor.



4305936 Old PTO Cover Speed Sensor Sealing Area



4308332 New PTO Cover Speed Sensor Sealing Area



Input Shaft Speed Sensor Instructions

Removal:

1. Disconnect the Transmission Harness from the Input Shaft Speed Sensor located at the PTO cover.
Note: Drain the transmission lubricant before removing the sensor.
2. Remove the sensor retaining bolt(s).
3. Remove the Input Shaft Speed Sensor from the PTO cover.
4. Remove 4305936 PTO cover and mounting gasket.

Installation

1. Clean gasket area on the Hybrid transmission main case.
2. Install new 4305309 gasket, new 4308332 PTO cover, and new (6) X-8-686 capscrews. Torque PTO Cover capscrews to 20-25 lb. ft. (27-34 Nm).
3. Apply a light coat of included anti-seize material part number 5564357 to the body of the sensor including the O-ring.
4. Insert sensor into the bore until the O-ring contacts the PTO cover, then fully seat the sensor by hand until the sensor contacts the PTO cover.
Note: Do not use the retaining bolt to pull the sensor into place.
5. Install new retaining bolt X-8-460 using an E8 Torx drive socket. Torque to 4-6 lbs. ft. (6-8 Nm).
Note: Over-tightening the retainer bolt will result in retainer clip distortion.
6. Apply included material 5564527 (Nye Lubricants NYOGEL) to the Input Shaft Speed Sensor connector terminals.
Note: Apply just enough material to cover the end of the terminal.
Note: Use only Eaton lubricant part number 5564527 Nye Lubricants NYOGEL 760G – for MSDS safety or other information see www.nyelubricants.com
7. Reconnect the Transmission Harness to the Input Shaft Speed Sensor.
Note: Refill the transmission with lubricant.

Warranty Information:

N/A

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