

TECHNICAL BULLETIN

1-800-638-5111

Stock No. 8302310, 8302320 – ILS HOLLAND SLIDER 5TH WHEEL LOAD CELL

8302320 (RIGHT)

8302310 (LEFT)

7100195 Mounting Kit (One per load cell)

CONCEPT:

These load cells are designed specifically for the Holland ILS FW 35 series sliding fifth wheel. They are a direct replacement for the existing Holland slide brackets and will fit on both the inboard and outboard style slide tracks. The load cells provide real time weight information while maintaining the low trailer height of the ILS design.

APPLICATION:

The system consists of two slide bracket load cells and 7100195 mounting kits. The use of this product follows the same guidelines of design, intended use and capacities as described by SAF Holland for the FW 35, ILS sliding fifth wheel.

SPECIFICATIONS:

- **CAPACITY:** 55,000 lb. System vertical load
150,000 lb. System drawbar pull
- **OUTPUT:** .33 mV/V @ 12,500 lb.
- **ACCURACY:** Typical system error less than .5% Full Scale.
- **MATERIAL:** High strength alloy steel.
- **FINISH:** Plated for corrosion protection.

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INSTALLATION:

Remove the bracket pin retention bolts and nuts from both sides of the fifth wheel top plate, Figure 1. Inspect retention fasteners to ensure they are undamaged and can be re-used, retain for re-assembling fifth wheel top plate. If they are unable to be re-used, replace with grade 8 fasteners of equivalent size and thread type.



Figure 1.

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Using a pry bar, pull both bracket retention pins out of the fifth wheel top plate, Figure 2.



Figure 2.

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Using a proper lifting device capable of lifting 500 lb., remove the top plate from the exiting brackets and set aside on a flat clean working area, Figure 3.



Figure 3.

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There are pocket inserts for each of the two existing brackets. Inspect the inserts for excessive wear or damage, replace as required per SAF Holland requirements and instructions. If existing pocket inserts are determined to be re-usable, retain inserts for re-use when re-assembling the fifth wheel top plate, Figure 4.



Figure 4.

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Note: Only replace one bracket at a time. Disassembly and reassembly of the fifth wheel slide base is much easier if one bracket is replaced before the other.

Secure the stop bar when removing hex screws to prevent it from falling off causing injury or property damage.

Remove the three hex head screws from one of the brackets, see Figure 5.

Discard these screws, lock washers and stop bar, they must be replaced with the new supplied components when installing the ILS load cells.



Figure 5.

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Place the new ILS load cell slide bracket on the slide base. Make sure the curl of the bracket load cell wraps around the outer edge of the slide rail, Figure 6. Align the holes in the ILS load cell with the holes in the tie plate.



Figure 6.

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Place the new, supplied lock washers on each of the supplied hex cap screws, Figure 7.



Figure 7.

Place a small amount of **BLUE** LOCTITE onto the threads of the new cap screws as shown.

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Install these three cap screw, lock washer assemblies downward through the holes in the load cell and into the tie plate. Place the new supplied stop bar with the cutout facing upward toward the load cell. Align the stop bars' tapped holes with the holes in the tie plate. Use your fingers to thread the screws into the new stop bar, do not torque at this time, Figure 8A and 8B.



Figure 8A.

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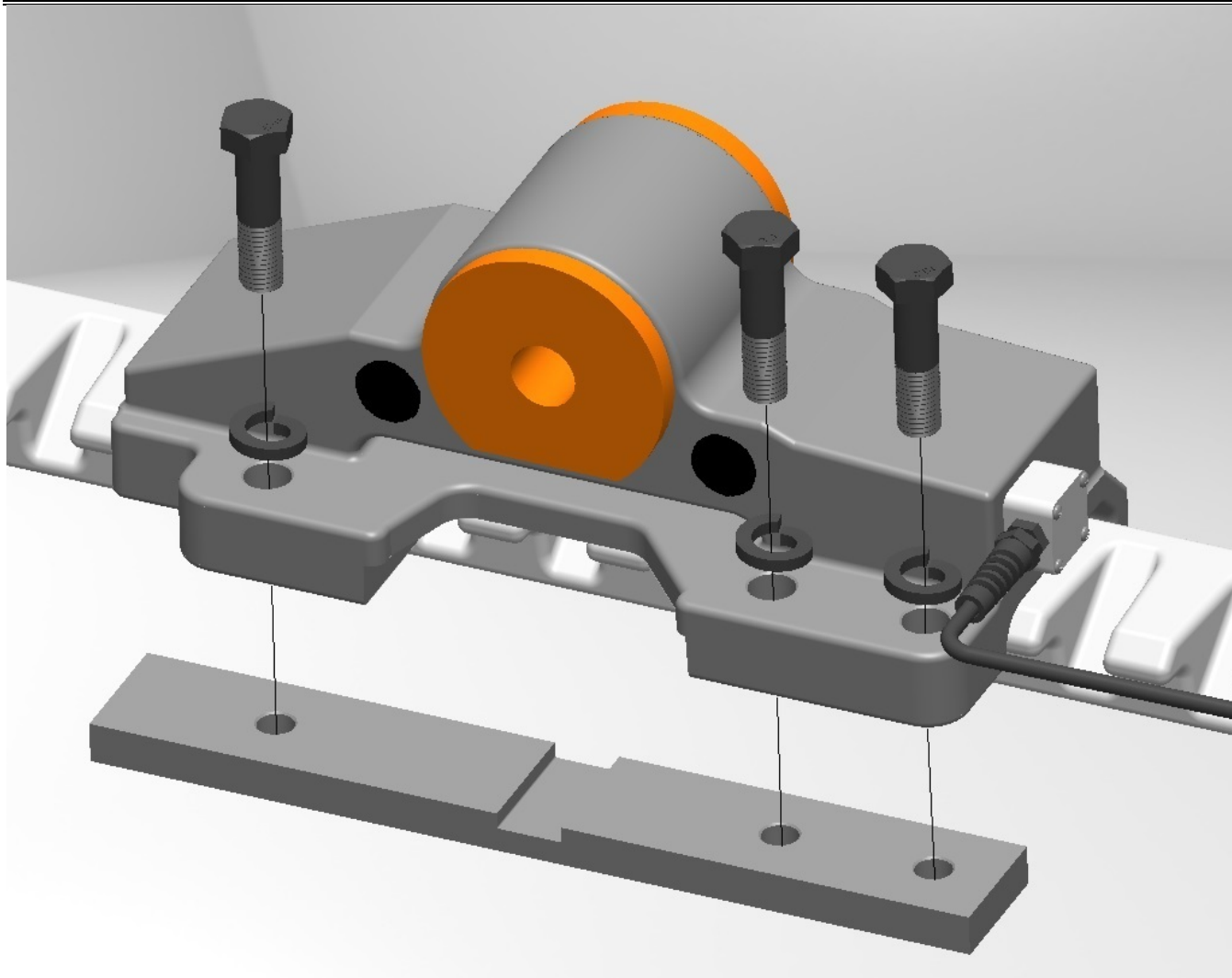


Figure 8B.

Install the other load cell using the same procedure.

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With both load cells installed and all mounting bolts finger tight, position the load cells such that they are 34" apart when measured from the outside edges of the brackets, measure from the outside edge of the bushing in the load cell.

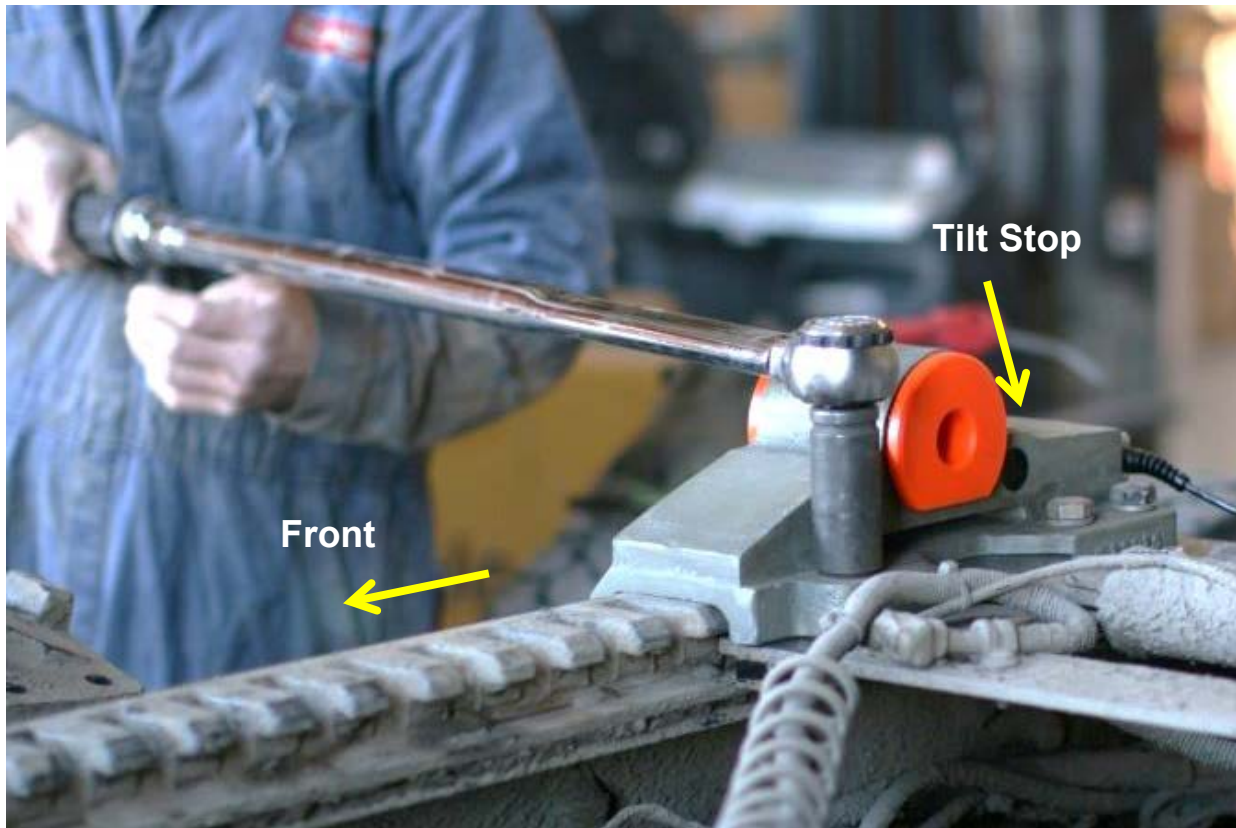


Figure 9.

Torque each load cell mounting fastener to 195 ft-lb using a torque wrench in the following sequence. For one load cell, torque the middle bolt first, then torque the front bolt (bolt opposite end of the tilt stop), then torque the rear bolt last. Repeat this sequence for the other load cell, Figure 9. Torque value specified is for clean, lubricated fasteners.

WARNING: Failure to torque the bolts properly could result in serious injury.

Grease the tops of the load cells and fifth wheel pockets per SAF Holland instructions.

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Figure 10.

Re-install pocket inserts, Figure 10. Position and install the fifth wheel top plate back on the load cells.

Grease and insert the load cell pins and re-attach the load cell pin retention bolts and nuts, and securely torque to 50-60 ft-lb.

Check assembly for free and proper articulation. Make sure the fifth wheel does not bind.

Verify the slide locking plungers are properly disengaged and are able to slide within the assembly. Engage plungers and lock into the slide base at the original set location. See SAF Holland literature for further information for the intended use, operation, set up and maintenance of the complete ILS fifth wheel slider assembly.

Prior to operation of the fifth wheel load cell assembly, installer must be thoroughly satisfied the assembly has been properly installed on the vehicle.

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Route and Connect Transmitter Cable

Locate and install transmitter under the tie plate, Figure

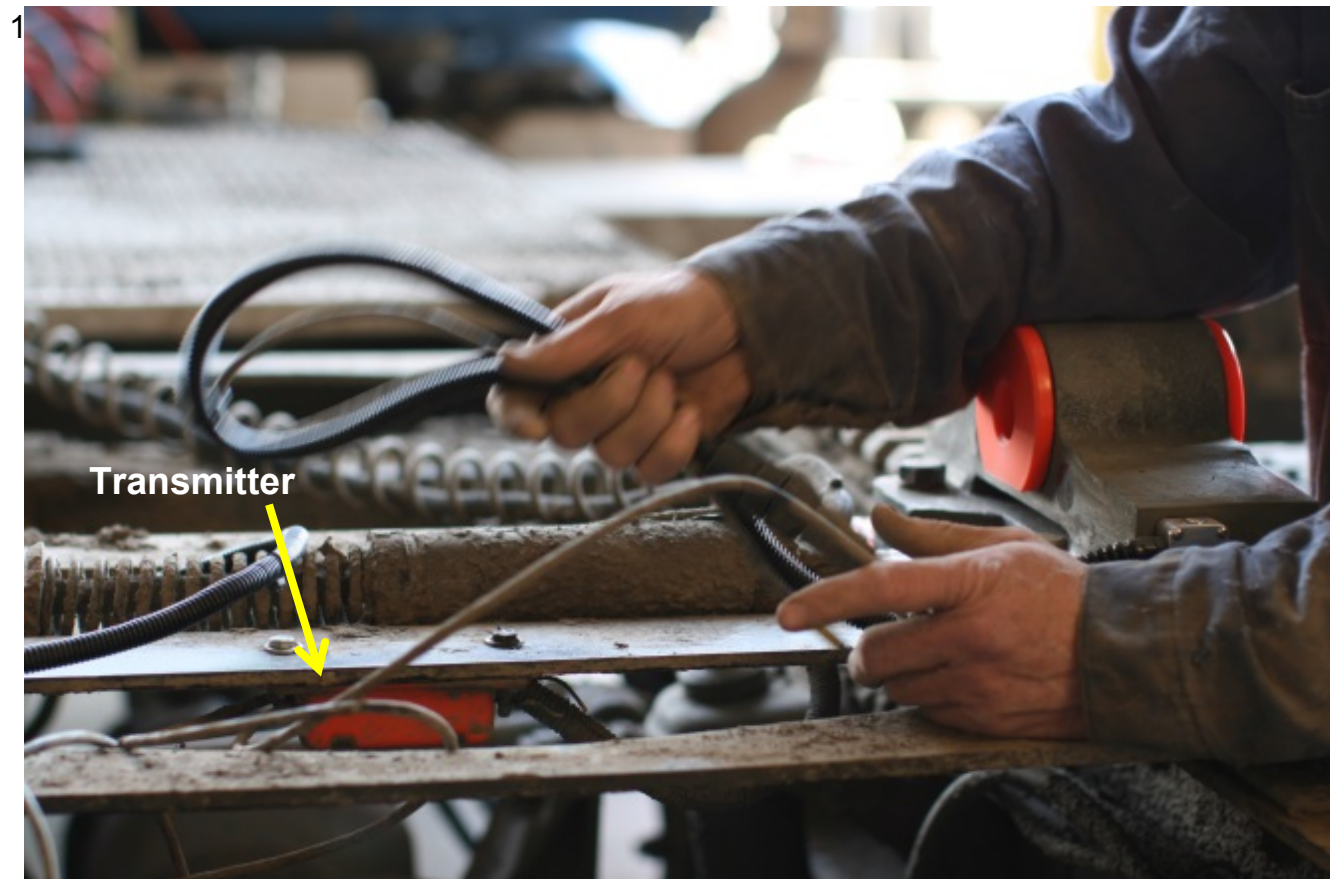


Figure 11.

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Wrap load cell black signal cable in split loom and secure in place, Figure 12.



Figure 12.

Route the black load cell cable to the black transmitter cable. Do not trim these black cables to length. Route and secure cables so they will not be damaged by slide plate travel. Inspect the connectors to make sure they are clean and dry. Do not allow moisture, contact cleaner or any other substance to get inside these connectors. Your manufacturer's warranty does not cover the failure of SI components due to contamination (use of grease or other conductive substance) in either of these component connectors. Check the black cable coming from the transmitter and verify there is an O-ring or flat rubber gasket. Connect the transmitter connectors to the load cell connectors. Make sure they are finger tight plus 1/8 of a turn more, with channel lock pliers.

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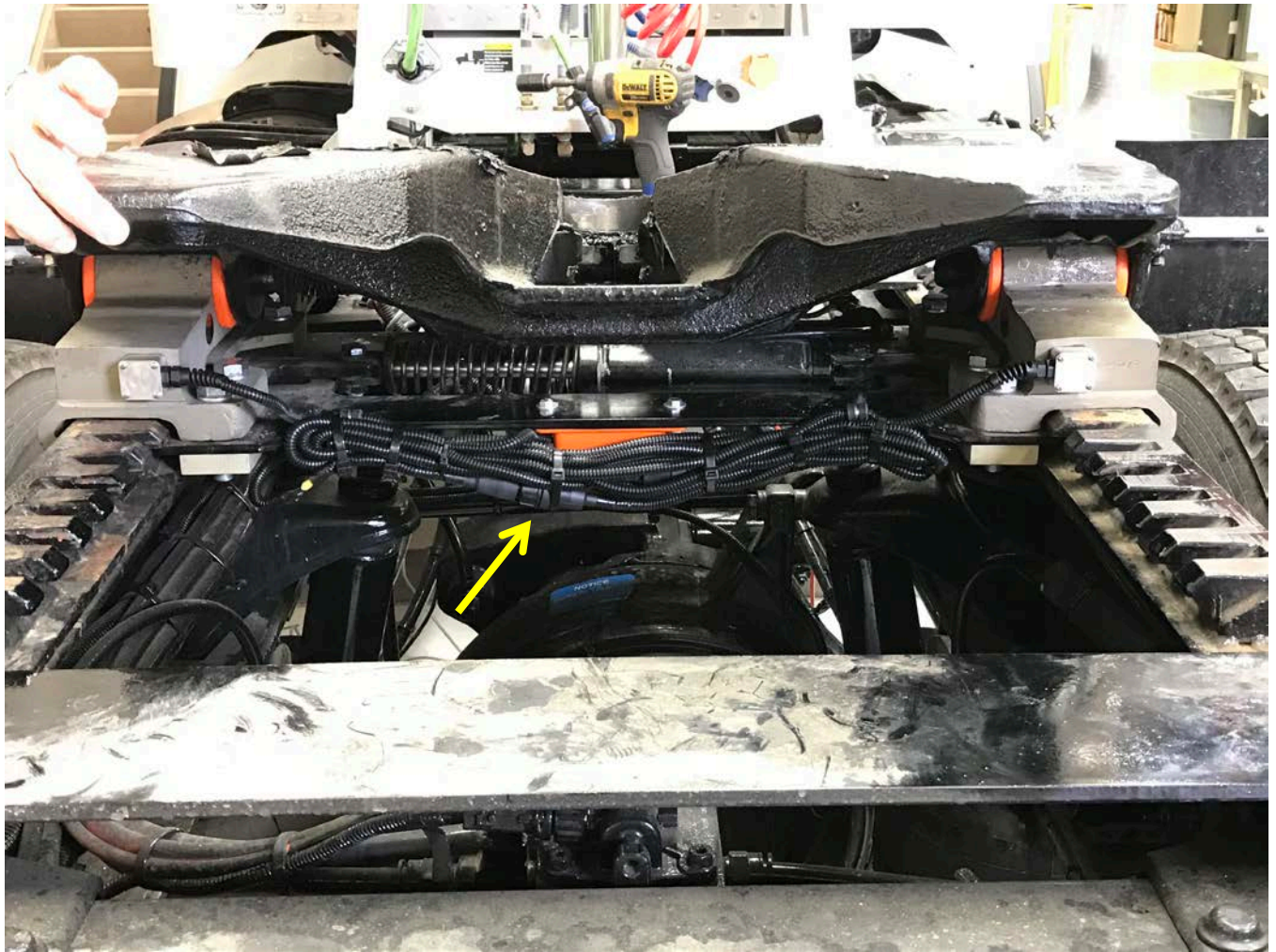


Figure 13.

Secure Load Cell and transmitter cable to the underneath of the slide plate near the mounted transmitter per Figure 13.

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Connect the black 2-wire cable to the VSL cable routed to the cab. Splice each color coded wire using the SI supplied 3M connectors. Do not strip the insulation for each wire, insert wires completely into the 3M connector and check their position by looking through the translucent connector body. Crimp the connector cap down flush with the top edge of the connector body to ensure a good connection. After verifying the load cells have a connection with the meter, tape the connection and wire tie the splice so it is strain relieved. See the SI Meter Owner's Manual for complete electronics system installation instructions and installation of other system components. This includes assigning channels to axle groups and calibration settings and meter operation.

INSPECTION AND PAINTING THE LOAD CELL

SI load cells are plated for increased rust protection. Certain minimum maintenance will be necessary to claim warranty of the load cells. Apply high quality paint to the load cells. For environments where high concentrations of salts are used on road surfaces, undercoating is recommended (3M, Universal Rubberized Undercoating, 3M P/N: 8883). Spray undercoating when load cells are fully assembled and connected to electronics.

Load cell mounting cap screws must be checked periodically for proper torque.

M16 X 2	
(3 EA) METRIC HEX CAP SCREW	TORQUE TO 195 lb-ft