



Harsco Track Technologies

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SERVICE BULLETIN MAINTENANCE OF WAY EQUIPMENT

DATE: 12-15-2004 **BULLETIN NO:** 04-012

TITLE: SURFACE TRANSDUCER CONVERSIONS

RATING:

<input type="checkbox"/>	DIRECTIVE (Action Is Required)	<input type="checkbox"/>	ALERT (Potential Problem)
<input checked="" type="checkbox"/>	INFORMATION (Action Is Optional)	<input type="checkbox"/>	PRODUCT IMPROVEMENT (Enhance Product)

PRODUCT SERIES / MODEL: 6700S Tampers

SERIAL NO: All Models with Fast Jack Transducers Starting Approximately 1997 and Later

SUMMARY: Over the years, the linear surfacing transducers have presented reliability problems related mainly to moisture. Various attempts have been made by the vendor to combat this problem. The vendor has now implemented a feature which separates the internal atmosphere of the transducer from the external ambient atmosphere. A vent hole is provided so that any air entering the transducer is stored in a bladder within the transducer itself. Extending and retracting the transducer rod causes air to move in and out of the bladder. Two machines have been equipped with these new style transducers for over a year operating in the Pacific Northwest with no moisture related problems.

OPERATIONAL IMPACT: To improve machine reliability and extend the service life of the transducers.

ACTION: All previous transducers part #2002940 and #350531-1 are obsolete and will be replaced by the new transducer part #2010198. See Identifying Instructions and Ordering Instructions in this Service Bulletin. Follow the Instructions in this Service Bulletin to install the new transducer on the machine.

CONTACT: To order the Transducer Conversion, please contact the HTT Parts Department at the Ludington, MI. facility, (231) 843-3431.
If you have any questions or if we can be of any service, please contact Barry Rader at the Ludington, MI. facility, (231) 843-3431.

SAFETY INFORMATION



- FOLLOW APPLICABLE RAILROAD LOCKOUT - TAGOUT PROCEDURE TO REMOVE ALL ENERGY SOURCES FROM MACHINE. FAILURE TO COMPLY COULD RESULT IN SEVERE BODILY INJURY.

ORDERING INFORMATION

TO REPLACE OLD:	ORDER NEW HTT #:	ACTION:
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#2002940 Transducer	#2010198 Transducer	Existing electrical cable quick connect plug will attach to the new transducer electrical connector receptacle
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#350531-1 Transducer.	#2010232 Conversion.	Existing electrical cable quick connect plug must be replaced by the new quick connect plug in order to attach to the new transducer electrical connector receptacle
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TRANSDUCER IDENTIFICATION - See Figure 1

The new #2010198 transducer includes a male threaded M12 electrical connector receptacle on the body of the transducer. Also included is a mating 90 degree M12 electrical quick connect plug #2010223 for the electrical cable. This quick connect plug is used when replacing the old #350531-1 transducer. This quick connect plug is not used when replacing either style of the old #2002940 transducers.

TRANSDUCER IDENTIFICATION

FIGURE 1
VARIOUS TRANSDUCER MODELS



#2002940 TRANSDUCER REPLACEMENT

There are two different styles of the old #2002940 transducers. Both styles employ a small round threaded electrical connector receptacle with 4 pins. On one style, the electrical connector receptacle is at the end of a pigtail cable coming from the body of the transducer as shown in Figure 2. On the other style, the pigtail cable was eliminated and the electrical connector receptacle was mounted directly onto the transducer body as shown in Figure 3. The connector pin out for the new #2010198 transducer is the same for both styles of the old #2002940 transducer.

Note: The supplied 90 degree M12 mating electrical quick connect plug #2010223 is not used when replacing either style of the old #2002940 transducers.

The action required for replacing either style of the old #2002940 transducer is:

1. Disconnect the electrical cable quick connect plug from the electrical connector receptacle on the old transducer.
2. Remove the old transducer.
3. Install the new transducer.
4. Reconnect the electrical cable quick connect plug to the electrical connector receptacle on the new transducer.

FIGURE 2
#2002940 TRANSDUCER w/ PIGTAIL



FIGURE 3
#2002940 TRANSDUCER w/o PIGTAIL



#350531-1 TRANSDUCER REPLACEMENT

The old #350531-1 transducer has a small, right angled square electrical connector receptacle mounted directly onto the transducer body and a bellows on the rod end as shown in Figure 4.

Note: The supplied 90 degree M12 mating electrical cable quick connect plug #2010223 must be used when replacing the old #350531-1 transducer. See Conversion Print #2010232 as a guide.

The action required for replacing the old #350531-1 transducer is:

1. Verify the machine is wired per the “old square transducer electrical cable quick connect plug” to start with.
2. Disconnect the electrical cable quick connect plug from the electrical connector receptacle on the old transducer.
3. Remove the old transducer.
4. Cut the electrical cable from the existing quick connect plug as shown in Figure 5 and per the instructions on Conversion Print #2010232.
5. Strip back the jacket insulation and shielding from the electrical cable as shown in Figure 6 and per the instructions on Conversion Print #2010232.
6. Strip back the wire insulation from the electrical cable wires as shown in Figure 6 and per instructions on Conversion Print #2010232.
7. Assemble the new 90 degree M12 mating quick connect plug #2010223 onto the end of the electrical cable as shown in Figure 6 and Figure 7, and per the instructions on Conversion Print #2010232.
8. Install the new transducer.
9. Connect the new electrical cable quick connect plug to the electrical connector receptacle on the new transducer as shown in Figure 7 and Figure 8.
10. Insert the Conversion Print #2010232 into the Parts Book for future reference.

FIGURE 4
#350531-1 TRANSDUCER w/ BELLOWS



#350531-1 TRANSDUCER REPLACEMENT

FIGURE 5
CUTTING ELECTRICAL CABLE

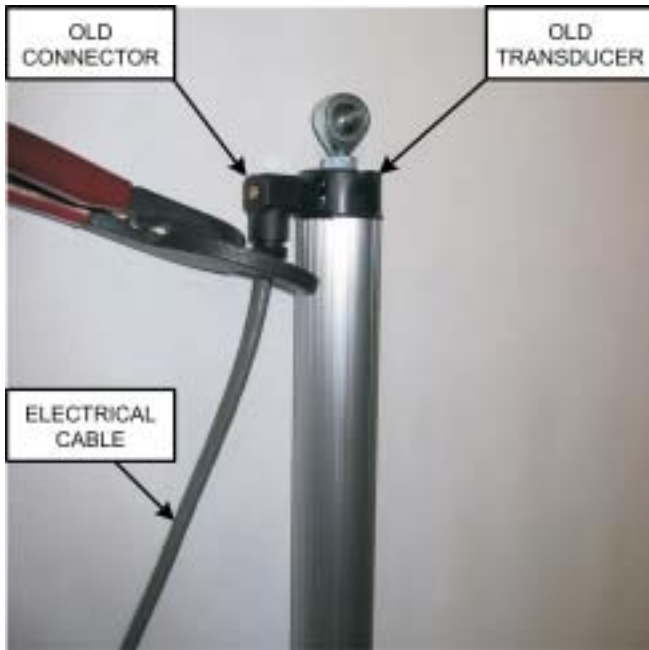


FIGURE 6
NEW CONNECTOR DISASSEMBLED



FIGURE 7
NEW CONNECTOR ASSEMBLED



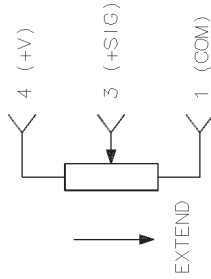
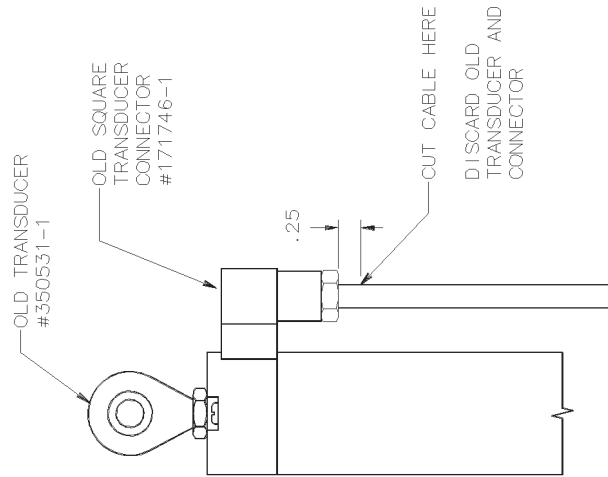
FIGURE 8
NEW TRANSDUCER INSTALLED



SIDE	FUNCTION	WIRE #	OVERHEAD	OLD SQUARE TRANSDUCER CONNECTOR	NEW ROUND TRANSDUCER CONNECTOR	COLOR
LEFT	+12V	2307A	TB2:149	1	4	RED
LEFT	SIG	2318A	TB2:153	2	3	WHT
LEFT	COM	2301A	TB2:86	3	1	BLK
RIGHT	+12V	2307A	TB2:149	1	4	RED
RIGHT	SIG	2323A	TB2:154	2	3	WHT
RIGHT	COM	2301A	TB2:87	3	1	BLK

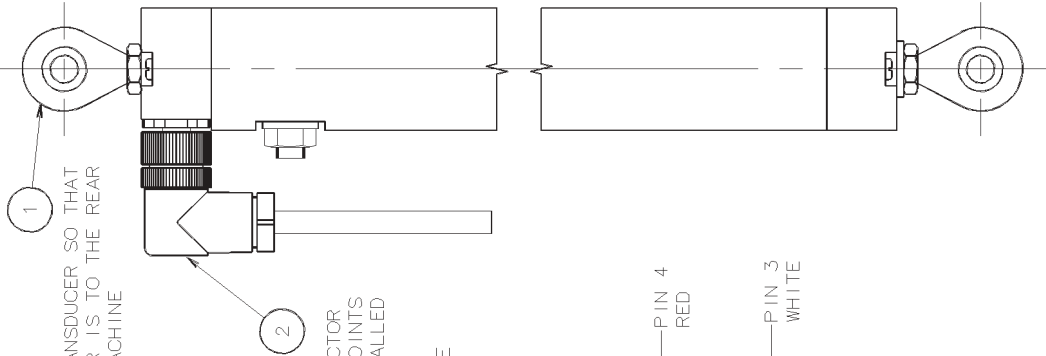
NOTES:

1. VERIFY MACHINE IS WIRED PER "OLD SQUARE TRANSDUCER CONNECTOR"
2. CUT OFF CABLE AT THE SQUARE CONNECTOR
3. STRIP BACK JACKET AND SHIELDING .50"
4. STRIP BACK WIRE INSULATION .12"
5. ASSEMBLE PER DETAIL "A"
6. CONNECT NEW CONNECTOR PER CHART



WIRING DIAGRAM

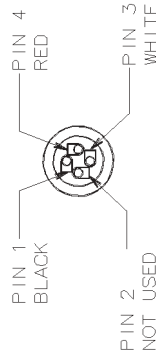
NEW TRANSDUCER #2010198



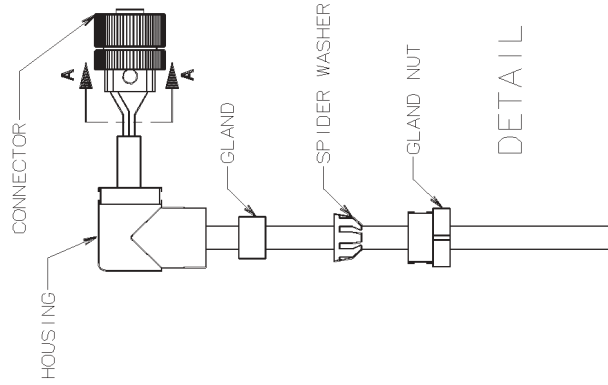
MOUNT TRANSDUCER SO THAT CONNECTOR IS TO THE REAR OF THE MACHINE

ASSEMBLE CONNECTOR SO THE CABLE POINTS DOWN WHEN INSTALLED ON TRANSDUCER

FOR SERVICE USE #2010223



SECTION A-A



DETAIL "A"

STEP 1

NOTES 1 AND 2

STEP 2

NOTES 3, 4, 5 AND 6

STEP 3

INSTALL THIS PAGE IN PARTS BOOK

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