SERVICE MANUAL

U80C
Tier 4B (final)
Tractor Loader

Part number 47821918
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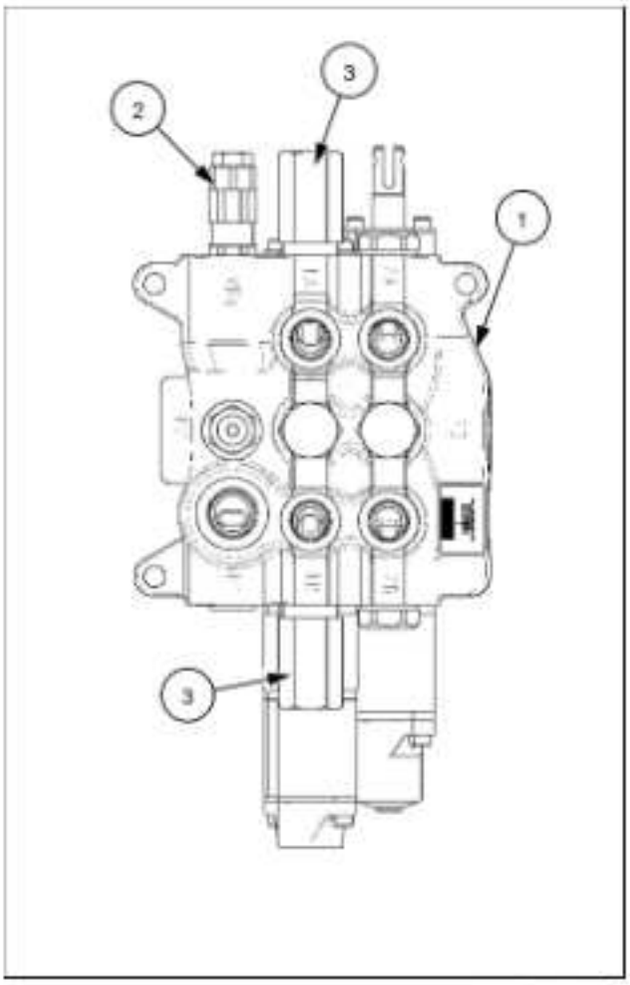
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Safety and main relief valves - Pressure test Circuit Relief Valve

1. Connect a pressure gauge with a capacity of **345 bar** (**5000 psi**) to a CAS1205 test block.
2. Connect a CAS10090 hand pump or similar device to the CAS1205 test block.
3. Install the circuit relief valve into the CAS1205 test block.
4. Actuate the hand pump and record the highest pressure reading. Perform this step several times to verify the accuracy of the reading.
5. Compare the readings with the specification found in **Hydraulic systems - General specification (35.000)** .
6. If the pressure setting is not correct, adjust the circuit relief valve. Refer to **Safety and main relief valves - Adjust Circuit Relief Valve (35.350)** .



RAIL12UTL0343CA 1

(1)	Loader control valve	(3)	Circuit relief valves for bucket A and B ports.
(2)	Loader relief valve		

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CONNECTOR X-150 - TO FRONT (X-040)

CONNECTOR X-150 - TO FRONT (X-040)			
PIN NUMBER	**WIRE NUMBER**	**CIRCUIT REFERENCE**	**ELECTRICAL SCHEMATIC FRAME**
1	2103 (YE)	FNR LEVER KEY ON	**Wiring harnesses - Electrical schematic sheet 06 (55.100)**
2	64A1 (RD)	HORN B+	**SHEET 18**
3	AP35 (OR)	BRAKE LIGHTS KEY-ON	**SHEET 16**
4	4601 (VT)	HAZARD LIGHT SWITCH	**SHEET 08**
5	AP29 (OR)	SIGNAL LIGHTS KEY-ON	**SHEET 08**
6	45R0 (VT)	RIGHT INDICATOR LIGHT	**SHEET 08**
7	4408 (VT)	BRAKE LIGHT	**SHEET 16**
8	AP28 (OR)	HAZARDS KEY-ON	**SHEET 08**
9	45L0 (VT)	LEFT INDICATOR LIGHT	**SHEET 08**
10	21C4 (YE)	NEUTRAL SIGNAL	**Wiring harnesses - Electrical schematic sheet 06 (55.100)**
11	25B2 (YE)	REVERSE SIGNAL	**Wiring harnesses - Electrical schematic sheet 06 (55.100)**
12	7004 (YE)	COMFORT STEER	**Wiring harnesses - Electrical schematic sheet 19 (55.100)**
13	25A2 (LB)	FORWARD SIGNAL	**Wiring harnesses - Electrical schematic sheet 06 (55.100)**
14	-	-	
15	-	-	
16	-	-	
17	E172 (YE)	CRANK ENABLE FROM ECU	**SHEET 02**
18	2162 (YE)	FOOT THROTTLE SIGNAL	**SHEET 11**
19	E372 (YE)	CRANK ENABLE FROM ECU	**SHEET 02**
20	2202 (BL)	FOOT THROTTLE GROUND	**SHEET 11**
21	E082 (YE)		**SHEET 02**
22	-	-	
23	64B2 (WH)	HORN OUTPUT	**SHEET 18**
24	7012 (WH)	COMFORT STEER	**Wiring harnesses - Electrical schematic sheet 19 (55.100)**
25	-	-	
26	-	-	
27	2182 (PK)	FOOT THROTTLE 5V	**SHEET 11**
28	-	-	
29	1202 (BL)	FOOT THROTTLE IDEL VALIDATION	**SHEET 11**
30	E243 (YE)	CAN 1 HIGH	**SHEET 23**
31	E253 (GN)	CAN 1 LOW	**SHEET 23**
32	150C (OR)		**SHEET 02**
33	-	-	
34	-	-	
35	-	-	
36	-	-	
37	60B2 (BR)	A/C LOW PRESSURE SWITCH SIGNAL	**SHEET 14**
38	47R1 (VT)	RIGHT TURN SIGNAL INDICATOR	**SHEET 08**
39	47L1 (VT)	LEFT TURN SIGNAL INDICATOR	**SHEET 08**
40	7027 (YE)	COMFORT STEER	**Wiring harnesses - Electrical schematic sheet 19 (55.100)**
41	-	-	
42	-	-	

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1063-Timeout of CAN message EEC2

Context:
CAN bus communications between the modules on the bus have been lost. The instrument cluster did not receive the EEC2 message from the ECU. This fault code may be displayed with other CAN bus  faults. The instrument cluster will illuminate the danger lamp  and will continually sound the audible alarm.

Cause:
The instrument cluster has stopped receiving CAN messages from the ECU. CAN bus communications between the instrument cluster and the ECU have been lost.

Possible failure modes:

1. CAN data link wiring or circuits open.
2. CAN data link wiring or circuits shorted.
3. Faulty instrument cluster.
4. Faulty ECU.

Solution:

1. Verify that the fault code is active.

   (1) Connect the Electronic Service Tool to the service tool connector.

   (2) To check for fault code: Start and operate machine.

   Continue with this procedure if three or more fault codes are active, such as 3096, 3334, 3339, 3358, 3652, or 1051 through 1059. This is an indication of a problem in the CAN Data Link circuit.
   If one or two CAN bus fault codes are active, check all CAN bus wires and connectors to verify they are secure and free of damage, corrosion, abrasion and incorrect attachment. This may be an indication of an intermittent connection in the CAN bus.

   A. CAN Data Link fault codes are not recorded again and are no longer ACTIVE. OK to return the machine service.

   B. CAN Data Link fault codes are present and ACTIVE. Continue with **1051-Timeout of CAN message EEC1, 5 seconds without message (55.015)** .

Wiring harnesses - Electrical schematic sheet 04 Engine Control (55.100.DP-C.20.E.04)
Wiring harnesses - Electrical schematic sheet 11 Instrument Cluster (55.100.DP-C.20.E.11)
Wiring harnesses - Electrical schematic sheet 23 Can Bus/ Diagnostics (55.100.DP-C.20.E.23)
Wiring harnesses - Electrical schematic sheet 24 Telematics (55.100.DP-C.20.E.24)

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speed Remove the sensor. The sensor is submerged in oil, care should be taken when removing the sensor so minimal fluid is lost. Inspect the sensor for damage Remove all metal shaving from the sensor.

A. The sensor is free of damage. Reinstall the speed sensor. Go to step **4**.

B. The sensor is damaged. Replace the sensor. Return to step **1** to confirm elimination of fault.

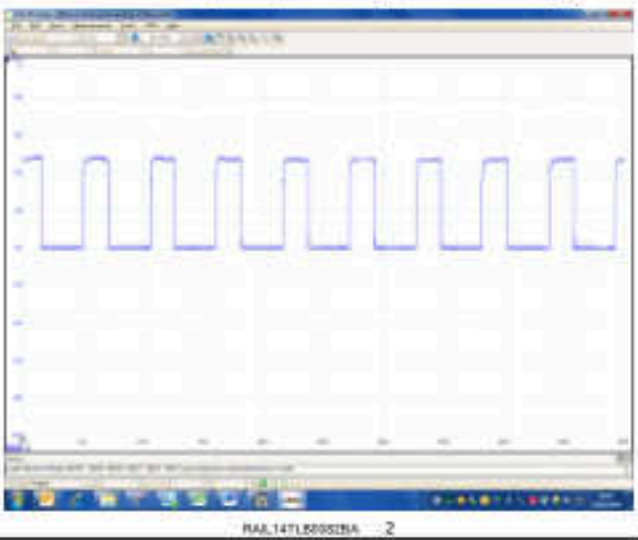
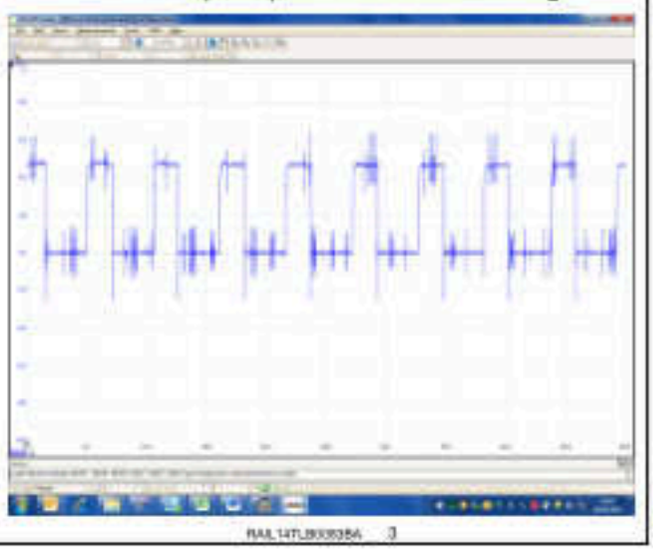
4. Measure the sensor signal.

Turn the ignition switch OFF.

Reinstall the sensor. Disconnect the sensor from the harness.

Start the engine.

Use the DATAR oscilloscope function to monitor the sensor signal.

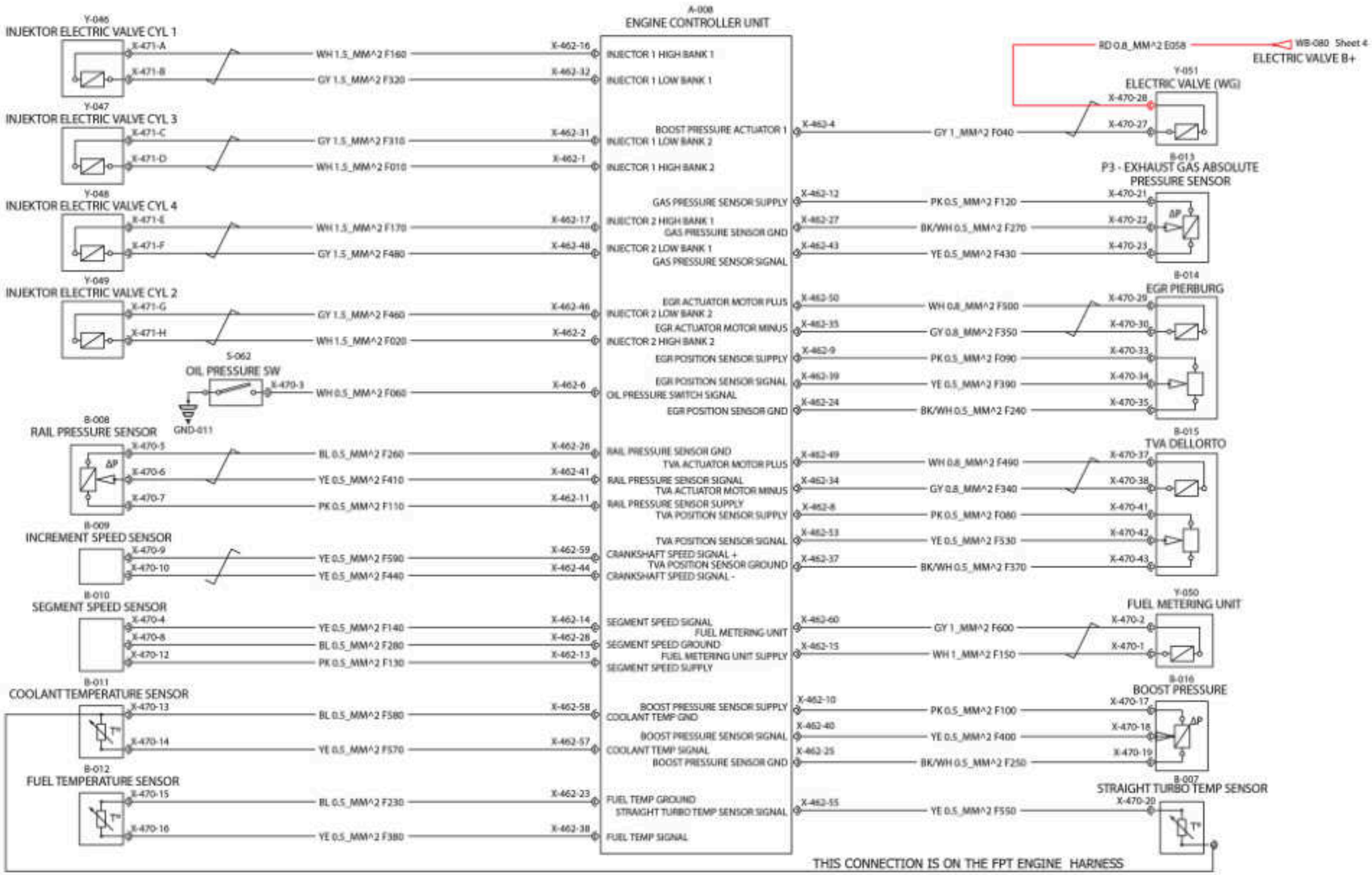
DATAR oscilloscope capture of a good sensor signal.	DATAR oscilloscope capture of a bad sensor signal.
	

A. The data capture of sensor signal is good. Install the latest software in the VCM. Recturn to step **1** to confirm elimination of the fault.

B. The data capture of the sensor signal is bad. There is a problem in the wiring to the sensor. Repair as required. Return to step **1** to confirm elimination of the fault.

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ENGINE CONTROL



SHEET 5

RAIL14TL60492.IA 1

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