SERVICE MANUAL

J006 (H135FT, H155FT)



Rev. 06/14

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TABLE OF CONTENTS

General 1
Threaded Fasteners 1
Nomenclature, Threads 1
Strength Identification 2
Cotter (Split) Pins 2
Fastener Torque Tables 7
Conversion Table 9

This section is for the following models:

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Position Sensor OORL (Cont)

CAUSE B - SENSOR SIGNAL OPEN CIRCUIT

PROCEDURE OR ACTION:

1. Ensure truck power is **OFF**.
2. Disconnect indicated sensor connector.
3. Change DMM to ohms scale. Verify DMM zero reading.
4. At sensor harness connector, measure resistance between sensor signal pin (+) and sensor ground pin (-).
   Is resistance approximately equal to the resistor value shown in applicable schematic?
   YES: Go to Cause F.
   NO: If resistance measurement is infinite, sensor signal wire has open circuit. Locate and repair/replace open wire/connection. See **Wire Harness Repair** 2200SRM1128. If resistance measurement is less than 0.5 ohms, go to Cause C.

CAUSE C - SENSOR SIGNAL SHORTED TO SENSOR GROUND

PROCEDURE OR ACTION:

1. Disconnect indicated sensor connector and VSM/ECU/GCU connector.
2. At the sensor harness connector, measure resistance between sensor signal pin (+) and sensor ground pin (-).
   Is resistance less than 0.5 ohms?
   YES: Sensor signal wire is shorted to sensor ground wire. Locate and repair/replace shorted wire/connector. See **Wire Harness Repair** 2200SRM1128.
   NO: Go to Cause D.

CAUSE D - SENSOR SIGNAL SHORTED TO FRAME GROUND

PROCEDURE OR ACTION:

1. At the sensor harness connector, measure resistance between sensor signal pin and a clean frame ground on truck.
   Is resistance less than 0.5 ohms?
   YES: Sensor signal wire is shorted to frame ground. Locate and repair/replace shorted wire/connector. See **Wire Harness Repair** 2200SRM1128.
   NO: Go to Cause E.

CAUSE E - SENSOR FAILURE

PROCEDURE OR ACTION:

1. Ensure truck power is **OFF**.

NOTE: Do not discard original sensor after removal.

2. Replace sensor.
3. Ensure that all connections are completely inserted.
4. Turn truck power **ON**.
   Does reported DTC reoccur?
   YES: Reinstall original sensor and go to Cause F. See **Electrical System** 2200SRM1142.
   NO: Problem has been corrected. Resume operation. Discard faulty sensor.

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Injector Driver Circuit Open

Injector Driver Circuit Is Open

CODES

DTC 651-3 - Injector 1 Open Circuit (Kubota)
DTC 651-5 - GM Gas Drive Injector 1 Open Circuit
DTC 651-5 - Cummins-Code 322. See QSB 3.3L Troubleshooting and Repair
DTC 652-3 - Injector 2 Open Circuit (Kubota)
DTC 652-5 - GM Gas Drive Injector 2 Open Circuit
DTC 652-5 - Cummins-Code 331. See QSB 3.3L Troubleshooting and Repair
DTC 653-3 - Injector 3 Open Circuit (Kubota)
DTC 653-5 - GM Gas Drive Injector 3 Open Circuit
DTC 653-5 - Cummins-Code 324. See QSB 3.3L Troubleshooting and Repair
DTC 654-3 - Injector 4 Open Circuit (Kubota)
DTC 654-5 - GM Gas Drive Injector 4 Open Circuit
DTC 654-5 - Cummins-Code 332. See QSB 3.3L Troubleshooting and Repair
DTC 655-5 - GM Gas Drive Injector 5 Open Circuit
DTC 656-5 - GM Gas Drive Injector 6 Open Circuit
DTC 1347-4 - SCV Internal Circuit Open Or Shorted To Ground
DTC 522721-5 - GM LPG Drive Injector 1 Current Low or Open Circuit
DTC 522722-5 - GM LPG Drive Injector 2 Current Low or Open Circuit
DTC 522723-5 - GM LPG Drive Injector 3 Current Low or Open Circuit
DTC 522724-5 - GM LPG Drive Injector 4 Current Low or Open Circuit
DTC 522725-5 - GM LPG Drive Injector 5 Current Low or Open Circuit
DTC 522726-5 - GM LPG Drive Injector 6 Current Low or Open Circuit
DTC 523523-2 - Common 1 Actuation Open Circuit
DTC 523524-2 - Common 2 Actuation Open Circuit
DTC 523574-3 - EGR Actuator Coil Open

POSSIBLE CAUSE

A. FUEL INJECTOR OPEN CIRCUIT
B. SUCTION CONTROL VALVE (SCV) OPEN CIRCUIT (KUBOTA ONLY)
C. SUCTION CONTROL VALVE (SCV) SHORTED TO GROUND (KUBOTA ONLY)
D. INJECTOR DRIVER MODULE FAILURE
E. FUNCTIONAL FAILURE IN CONTROLLER
F. BAD SUCTION CONTROL VALVE (SCV) (KUBOTA ONLY)
G. WIRING HARNESS SHORT

NOTE

Please refer to the end of this procedure for supporting diagrams.

COMPONENT OPERATIONAL CHECK

PROCEDURE OR ACTION:

NOTE: Watch for codes similar to 157-0, 633-7, 1347-3, 1347-7, 33023-0, 49407-0, 57599-0, 61695-0, and 63743-0.

1. Turn power to **OFF** for no less than 30 seconds, and then to **ON** to clear displayed DTC.
   Does reported DTC reoccur?

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Legend for Figure 23

A. LOWER HOSE (CUMMINS 4.5L/KUBOTA 3.8L DIESEL)
B. LOWER HOSE (GAS AND LPG)
C. UPPER HOSE (GAS AND LPG)
D. UPPER HOSE (CUMMINS 4.5L/KUBOTA 3.8L DIESEL)

1. RADIATOR (WITH EXTERNAL OIL COOLER)
2. SHROUD
3. WASHER
4. SCREW
5. CLIP NUT
6. CLIP SPRING
7. CLAMP
8. UPPER RADIATOR BRACKET
9. CAPSCREW
10. INSERT
11. ISOLATOR
12. RESERVOIR
13. BRACKET (COOLANT FILL)
14. OUTLET ASSEMBLY
15. OUTLET
16. CAP
17. BUSHING
18. HOSE
19. HOSE
20. REMOTE FILL HOSE
21. REMOTE FILL
22. RADIATOR CAP
23. SCREEN
24. COOLANT LEVEL SENSOR
25. DRAIN PLUG

RADIATOR, INSTALL FOR LIFT TRUCK MODELS H6.0FT, H7.0FT (H135FT, H155FT) (H006, J006, K006) AND H8.0FT, H8.0FT9, H9.0FT (H170FT, H175FT36, H190FT) (A299, B299)

1. If necessary, install coolant level sensor.

NOTE: Installing the radiator into lift truck frame requires two people.

2. Install radiator into lift truck frame.

3. For lift trucks equipped with GM 5.7L LPG engine, use capscrews and install baffles to radiator assembly. See Figure 14. Use capscrews and attach radiator assembly to cooling baffle.

4. Install upper radiator bracket and four capscrews.

   See Figure 25 for lift truck models
   - H6.0FT, H7.0FT (H135FT, H155FT) (H006, J006, K006)

   See Figure 13 for lift truck models below equipped with Cummins QSB 3.3L diesel engine
   - H8.0FT, H8.0FT9, H9.0FT (H170FT, H175FT36, H190FT) (A299, B299)

   See Figure 14 for lift truck models below equipped with GM 5.7L LPG engine
   - H8.0FT, H8.0FT9, H9.0FT (H170FT, H175FT36, H190FT) (A299, B299)

   See Figure 15 for lift truck models equipped with Kubota 3.8L Diesel engine
   - H8.0FT, H8.0FT9, H9.0FT (H170FT, H175FT36, H190FT) (B299)

5. Install coolant reservoir bracket and coolant reservoir assembly onto upper bracket and tighten capscrews.

   See Figure 25 for lift truck models
   - H6.0FT, H7.0FT (H135FT, H155FT) (H006, J006, K006)

   See Figure 13 for lift truck models below equipped with Cummins QSB 3.3L diesel engine
   - H8.0FT, H8.0FT9, H9.0FT (H170FT, H175FT36, H190FT) (A299, B299)

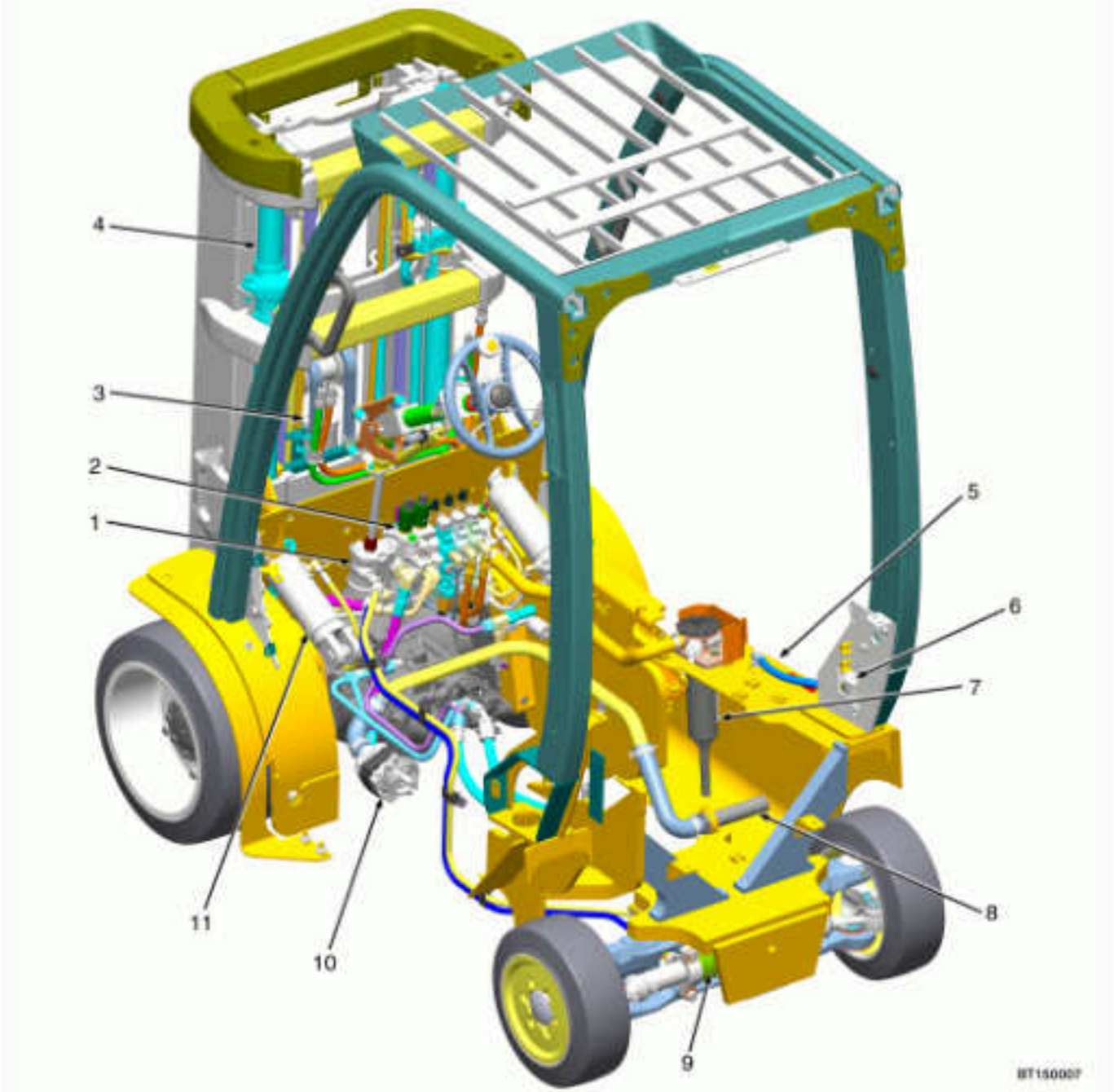
   See Figure 14 for lift truck models below equipped with GM 5.7L LPG engine
   - H8.0FT, H8.0FT9, H9.0FT (H170FT, H175FT36, H190FT) (A299, B299)

   See Figure 15 for lift truck models equipped with Kubota 3.8L Diesel engine
   - H8.0FT, H8.0FT9, H9.0FT (H170FT, H175FT36, H190FT) (B299)

6. Uncap and connect auxiliary coolant reservoir hose and tighten clamp.

7. Remove caps from the oil cooler and transmission lines and connect lines into oil cooler.

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1. STEERING CONTROL UNIT (SCU)
2. MAIN HYDRAULIC CONTROL VALVE
3. FREE LIFT CYLINDER (CENTER)
4. LIFT CYLINDERS (2 USED)
5. HYDRAULIC TANK
6. BREATHER
7. RETURN FILTER
8. SUCTION SCREEN
9. STEERING CYLINDER
10. GEAR PUMP
11. TILT CYLINDERS (2 USED)

Figure 9050-10-1. Hydraulic Component Locator (1.0-5.5 Ton Shown)

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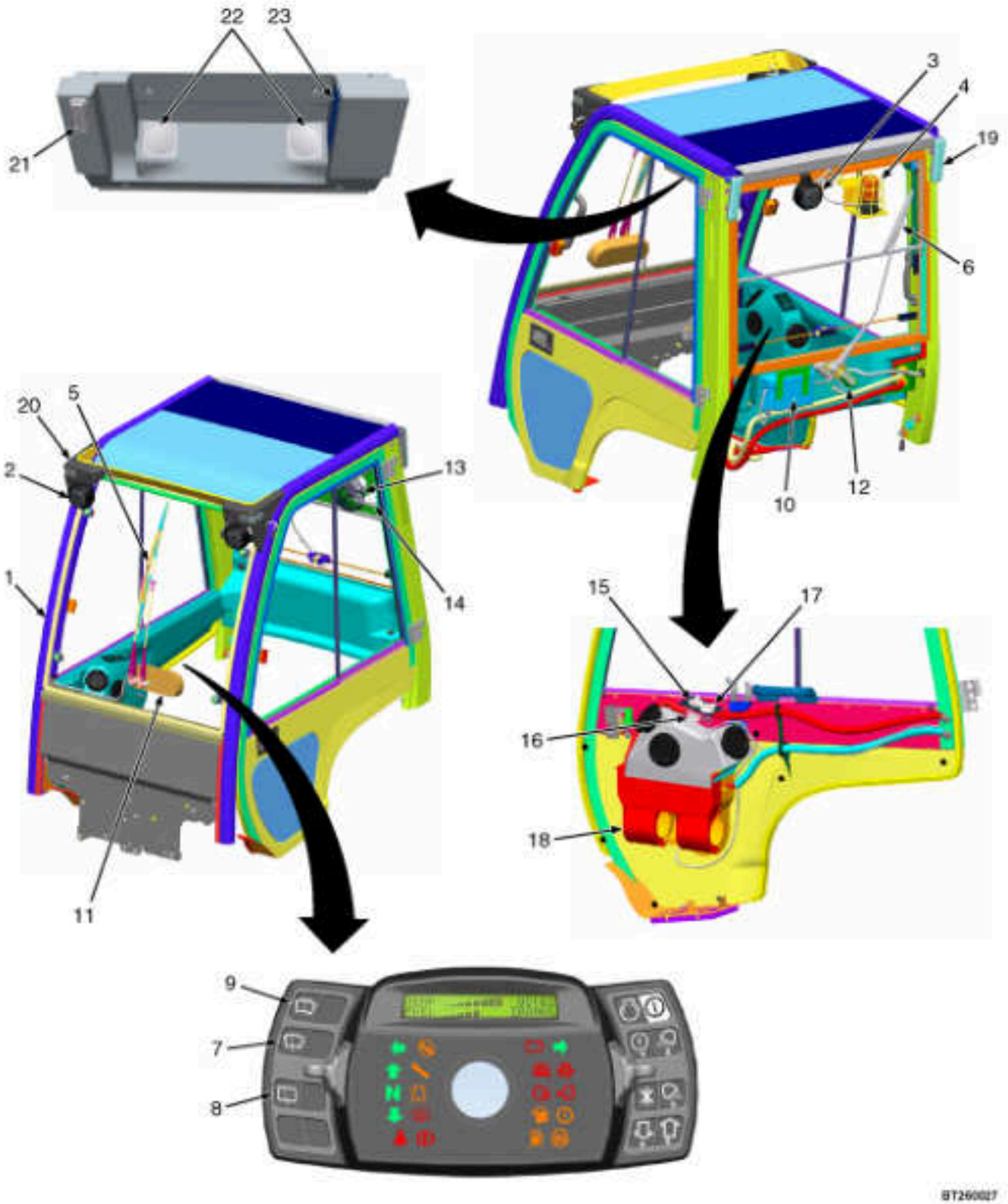


Figure 9060-10-25. Cab Component Locations

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