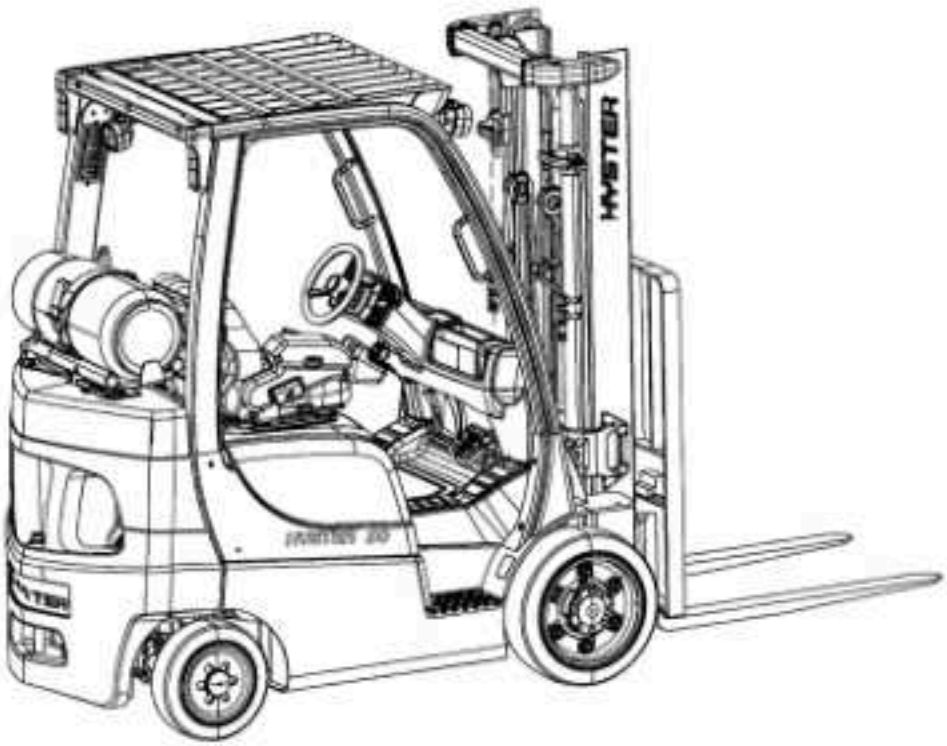
SERVICE MANUAL

N177 (H40-70FT)



Rev. 08/14

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This section is for the following models:

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SECTION 9010

OPERATIONAL DIAGNOSTIC PROCEDURES

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Legend for Figure 9030-03-17

1. CRP 68, AIR RESTRICTION
2. CPS 155, TO REAR HARNESS
3. CPS 69, FUEL LEVEL
4. CPS 160, TO ALTERNATOR HARNESS
5. CPS 83, TO ALTERNATOR HARNESS
6. CPS 52, SEAT HARNESS
7. CPS 205, ECM CONNECTOR
8. CPS 204, ECM CONNECTOR
9. CPS 65, HYDRAULIC FILTER
10. CPS 18 ACC 2
11. T243, CONTACTOR SIGNAL
12. T244, CONTACTOR GROUND
13. CPS 180, FUSE, (IN-LINE IGN)
14. CPS 130, FUSE, (IN-LINE BATT)
15. CPS 161, TO TRANSMISSION HARNESS
16. CPS 85, TO TRANSMISSION HARNESS
17. CPS 179 (MANUAL) HYDRAULIC SOLENOID
18. CPS 131, FUSE, (IN-LINE IGN)
19. CPS 148, IMPACT SENSOR CONNECTOR
20. CPS 179, (E-HYD) HYDRAULIC SOLENOID
21. CPS 13, PDM
22. CPS 14, PDM
23. CPS 16, PDM
24. CPS 15, PDM
25. CPS 89, HORN
26. CPS 1, VSM CONNECTOR
27. CPS 9, VSM CONNECTOR
28. CPS 10, VSM CONNECTOR
29. CPS 12, VSM CONNECTOR
30. CPS 7, VSM CONNECTOR
31. CPS 5, VSM CONNECTOR
32. CPS 84, COWL HARNESS CONNECTOR
33. CRP 88, COWL HARNESS CONNECTOR
34. CPS 17, TO LIGHT/CAB HARNESS
35. CPS 21, ACC 1
36. CPS 78, BUS TERM 2
37. CPS 79, ALTERNATE HORN BUTTON

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DTC 522592-1
EPR Pressure Less Than Commanded

POSSIBLE CAUSE

A. LOW SECONDARY FUEL PRESSURE DUE TO A FUEL RESTRICTION
B. FAULTY OR CONTAMINATED REGULATOR
C. EPR FAILURE

NOTE

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

COMPONENT OPERATIONAL CHECK

PROCEDURE OR ACTION:

1. Turn power to **OFF** for no less than 30 seconds, and then to **ON** to clear displayed DTC.
   Does reported DTC reoccur?
   YES: Go to Step 2.
   NO: Problem not verified. Resume operation.
2. Conduct a quick visual inspection of all connectors/wiring associated with the displayed fault code.
   Are any faults detected/observed?
   YES: Repair/replace connector or wiring associated with faults found. See **Electrical System** 2200SRM1142.
   NO: Go to Cause A.

CAUSE A - LOW SECONDARY FUEL PRESSURE DUE TO A FUEL RESTRICTION

PROCEDURE OR ACTION:

1. Turn truck power **ON**.
2. Run fuel pressure diagnostic test.
   Does the pressure meet the test specification?
   YES: Go to Cause B.
   NO: Go to Step 3.
3. Run the EPR pressure test in the fuel system diagnostic section.
   Does the pressure meet the test specification?
   YES: Go to Cause B.
   NO: Go to Step 4.
4. Follow the EPR service recommendations from the fuel pressure test chart.

CAUSE B - FAULTY OR CONTAMINATED REGULATOR

PROCEDURE OR ACTION:

1. Ensure truck power is **OFF**.
2. Disconnect EPR connector and inspect harness connector for corrosion or contamination.
   Is EPR harness connection corroded or contaminated?
   YES: Clean, repair, or replace connector if necessary. See **Wire Harness Repair** 2200SRM1128.
   NO: Go to Cause C.
3. Inspect EPR connection.
   Is EPR connection corroded or contaminated?
   YES: Clean connector and retest connector per this step.
   NO: Go to Cause C.

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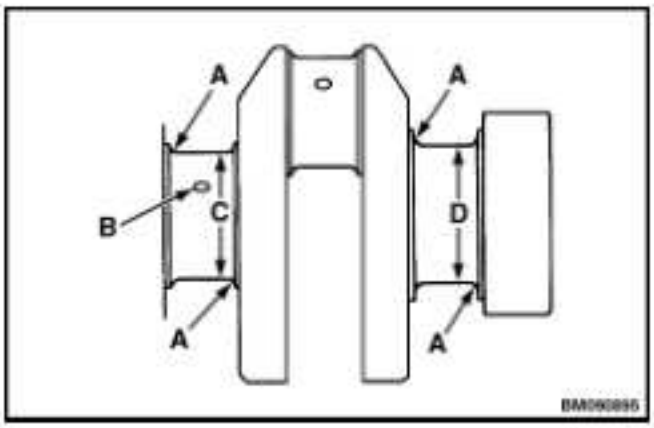


Figure 76. Undersize Journal 2 Specifications

Table 12. Undersize Dimension of Crankshaft Journal 2

DIMENSION	0.2 mm (0.008 in.)	0.4 mm (0.02 in.)
A	2.8 to 3.2 mm (0.11 to 0.12 in.) radius	2.8 to 3.2 mm (0.11 to 0.12 in.) radius
*D,B	1.0 to 1.5 mm (0.040 to 0.059 in.) relief	1.0 to 1.5 mm (0.040 to 0.059 in.) relief.
C, D	59.721 to 59.740 mm (2.3513 to 2.3519 in.) diameter	59.521 to 59.540 mm (2.3434 to 2.3440 in.) diameter
The crankshaft journal must be fine-finished to higher than Rmax = 0.4S *Holes to be de-burred and edges rounded with 1.0 to 1.5 mm (0.040 to 0.059 in.) relief.		

Crankshaft Bend

1. Hold the two end journals of crankshaft with V-blocks on surface plate.
2. Set a dial indicator with measurement plunger on journal midsection.
3. Slowly rotate crankshaft while observing variation displayed on dial indicator. See Figure 77.

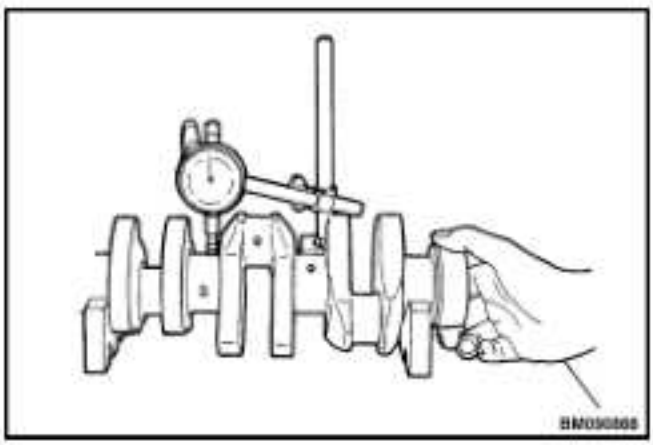
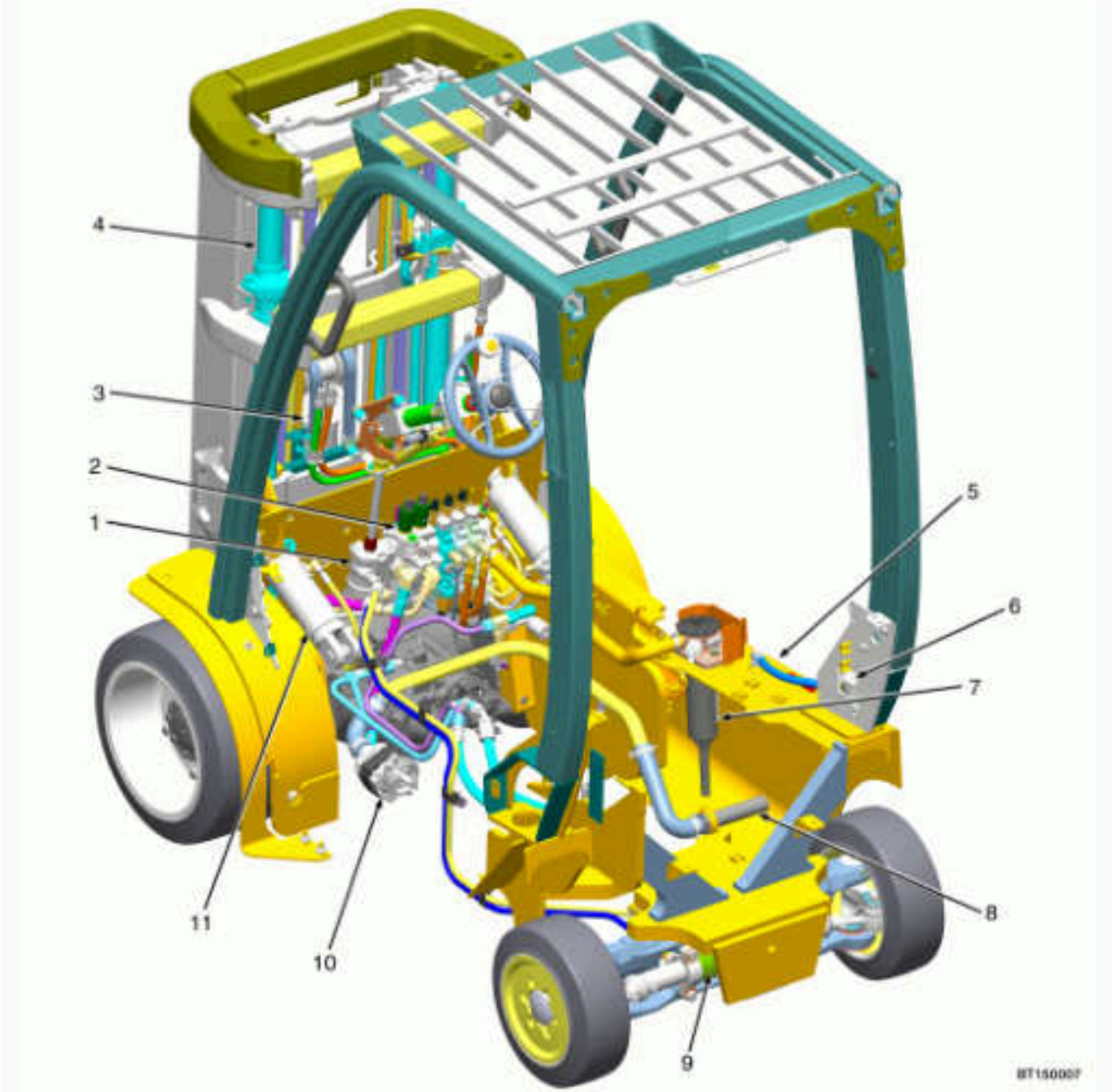


Figure 77. Crankshaft Bend

4. Record crankshaft journal variation:
   - Allowable limit: 0.03 mm (0.001 in.)
5. If measurement is more than allowable limit, replace crankshaft.

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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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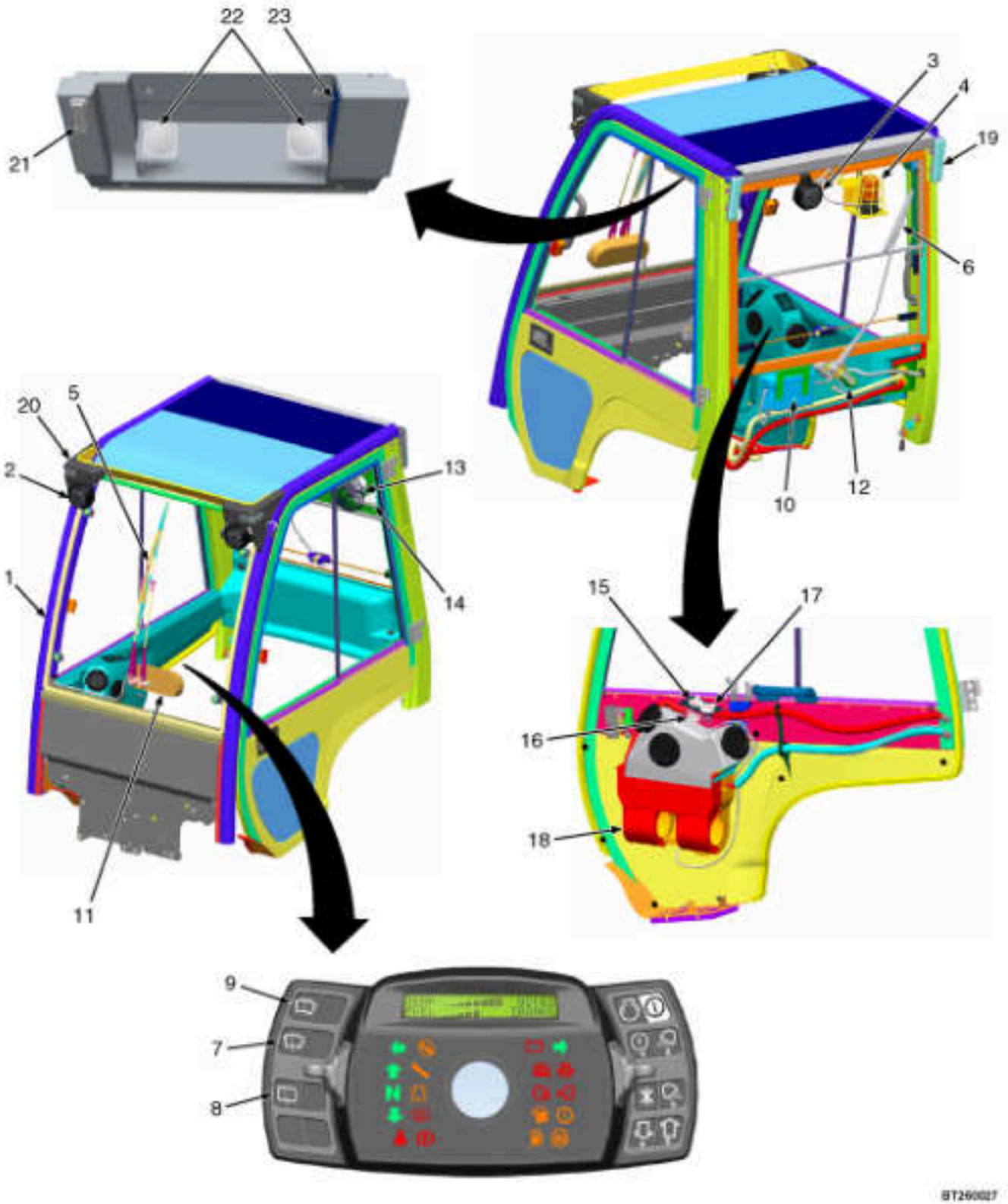


Figure 9060-10-25. Cab Component Locations

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