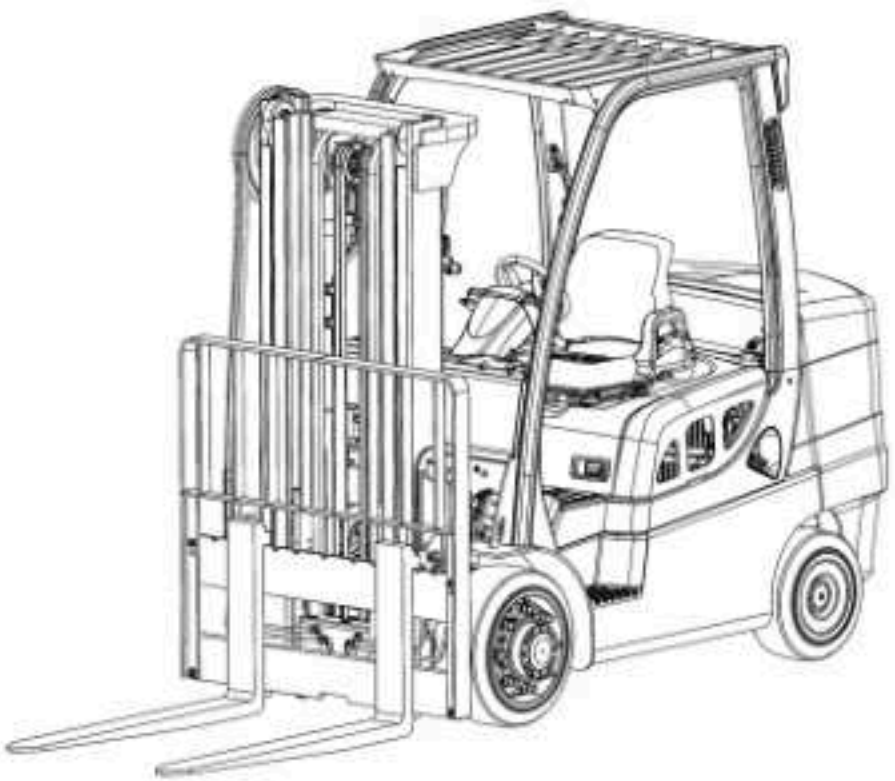
SERVICE MANUAL

R005 (H80-H120FT)



Rev. 07/14

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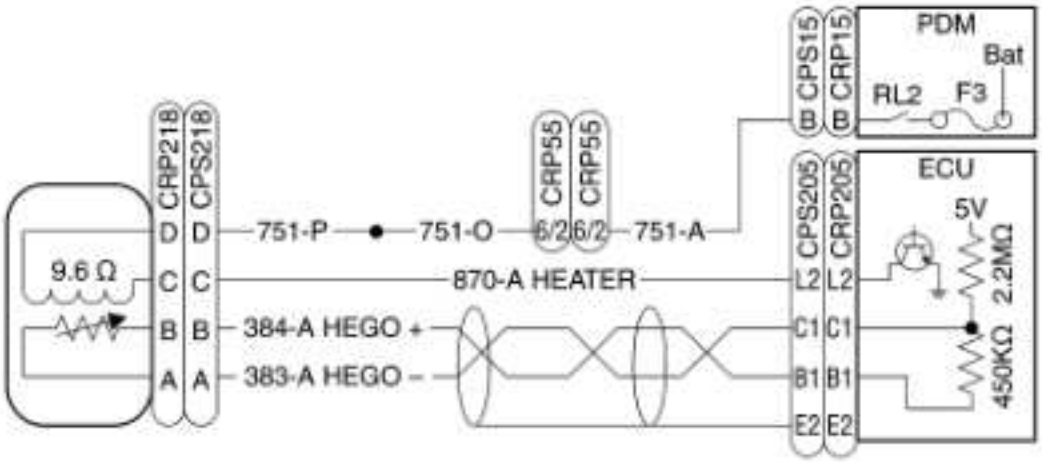
This section is for the following models:

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(Cont)

DIAGRAMS

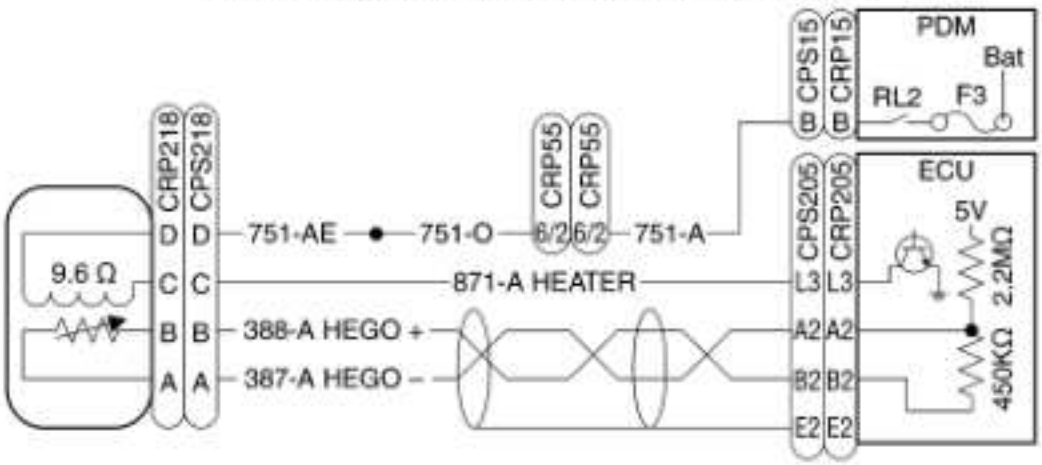


BT080126

WIRE # 383 = SENSOR SIGNAL (−)
WIRE # 384 = SENSOR SIGNAL (+)

WIRE # 751 = SENSOR HEATER POWER
WIRE # 870 = SENSOR HEATER RETURN

Single Oxygen (O_2) Sensor Heater Circuit Schematic



BT080271

WIRE # 383, 387 = SENSOR SIGNAL (−)
WIRE # 384, 388 = SENSOR SIGNAL (+)

WIRE # 751 = SENSOR HEATER POWER
WIRE # 870, 871= SENSOR HEATER RETURN

Dual Oxygen (O_2) Sensor Heater Circuit Schematic

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Secondary Function (Tilt orAux) Delay in Actuation

POSSIBLE CAUSE

A. MAX FUNCTION SPEED SETTING TOO LOW.
B. AIR TRAPPED IN CIRCUIT.
C. CALIBRATION OF OUTPUT THRESHOLD IS TOO HIGH.
D. STUCK SPOOL IN CONTROL VALVE.
E. TILT CONTROL SPOOL PISTON STICKING (TILT FORWARD ONLY)

CAUSE A - MAX FUNCTION SPEED SETTING TOO LOW.

PROCEDURE OR ACTION:

1. Adjust function speed setting on DSC. See **User Interface** 2200SRM1131. If symptom is still present, go to Cause B.

CAUSE B - AIR TRAPPED IN CIRCUIT.

PROCEDURE OR ACTION:

1. Remove air from circuit by cycling Tilt or Auxiliary functions fully for 5 - 10 times. If symptom is still present, go to Cause C.

CAUSE C - CALIBRATION OF OUTPUT THRESHOLD IS TOO HIGH.

PROCEDURE OR ACTION:

1. Check calibration threshold at DSC. See **Calibration Procedures** 8000SRM1134.
   Does setting meet specifications for your lift truck?
   YES: Go to Cause D.
   NO: Decrease setting to specification or until operation is acceptable to operator.

CAUSE D - STUCK SPOOL IN CONTROL VALVE.

PROCEDURE OR ACTION:

1. Remove and inspect spool for contamination and damaged or broken components. See **Main Control Valve** 2000SRM1457.
   Is the spool clean, undamaged, and moves freely in bore?
   YES: Go to Cause E.
   NO: Clean contaminated spool or replace Tilt or Auxiliary section. See **Main Control Valve** 2000SRM1457. **Resident Service Approval Required prior to control valve assembly replacement for Trucks under warranty.** Make sure to indicate an accurate problem description leading to the control valve assembly replacement.

CAUSE E - TILT CONTROL SPOOL PISTON STICKING (TILT FORWARD ONLY)

PROCEDURE OR ACTION:

1. Inspect tilt control piston. See **Main Control Valve** 2000SRM1457.
   Does piston move freely in bore and are the tilt spool orifices clean?
   YES: Resume operation.
   NO: Clean spool or replace tilt section. See **Main Control Valve** 2000SRM1457.

END SYMPTOM

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For repair procedures for the Mazda 2.0L and 2.2L water pump, refer to the section **Mazda Engine, 2.0L and 2.2L** 600 SRM 1122.

For replacement procedures for the Yanmar 2.6L and 3.3L water pump, refer to the section **Yanmar Diesel Engines, 2.6L, 3.0L and 3.3L** 600 SRM 1205.

For replacement procedures for the GM 4.3L water pump, refer to the section **GM Engines, 4.3 Liter V-6** 600 SRM 1251.

For replacement procedures for the GM 5.7L water pump, refer to the section **GM Engines, 5.7 Liter V-8 LPG** 600 SRM 1432.

For replacement procedures for the Kubota water pump, refer to the section

- **Kubota Diesel 3.8L Engines** 600 SRM 1557
- **Kubota Diesel 3.6L Engine** 600 SRM 1579
- **Kubota Diesel 3.8L Engines, with Diesel Particulate Filter (DPF)** 600 SRM 1590

For replacement procedures for the Cummins 4.5L and QSB 3.3L water pump, contact your local **Hyster** dealer or see **Hyster Hypass Online**.

Flushing the Cooling System

COOLING SYSTEM, CLEAN

WARNING

Compressed air can move particles so that they cause injury to the user or to other personnel. Make sure the path of the compressed air is away from all personnel. Wear protective goggles or a face shield to prevent injury to the eyes.

WARNING

The radiator fins on the radiator are very sharp and can cause serious injury. Wear gloves while checking the radiator fins.

1. Check radiator fins. Clean exterior of radiator with compressed air or water as needed.

WARNING

DO NOT remove the radiator cap from the radiator when the engine is hot. When the radiator cap is removed, the pressure is released from the system. If the system is hot, the steam and boiling coolant can cause burns.

WARNING

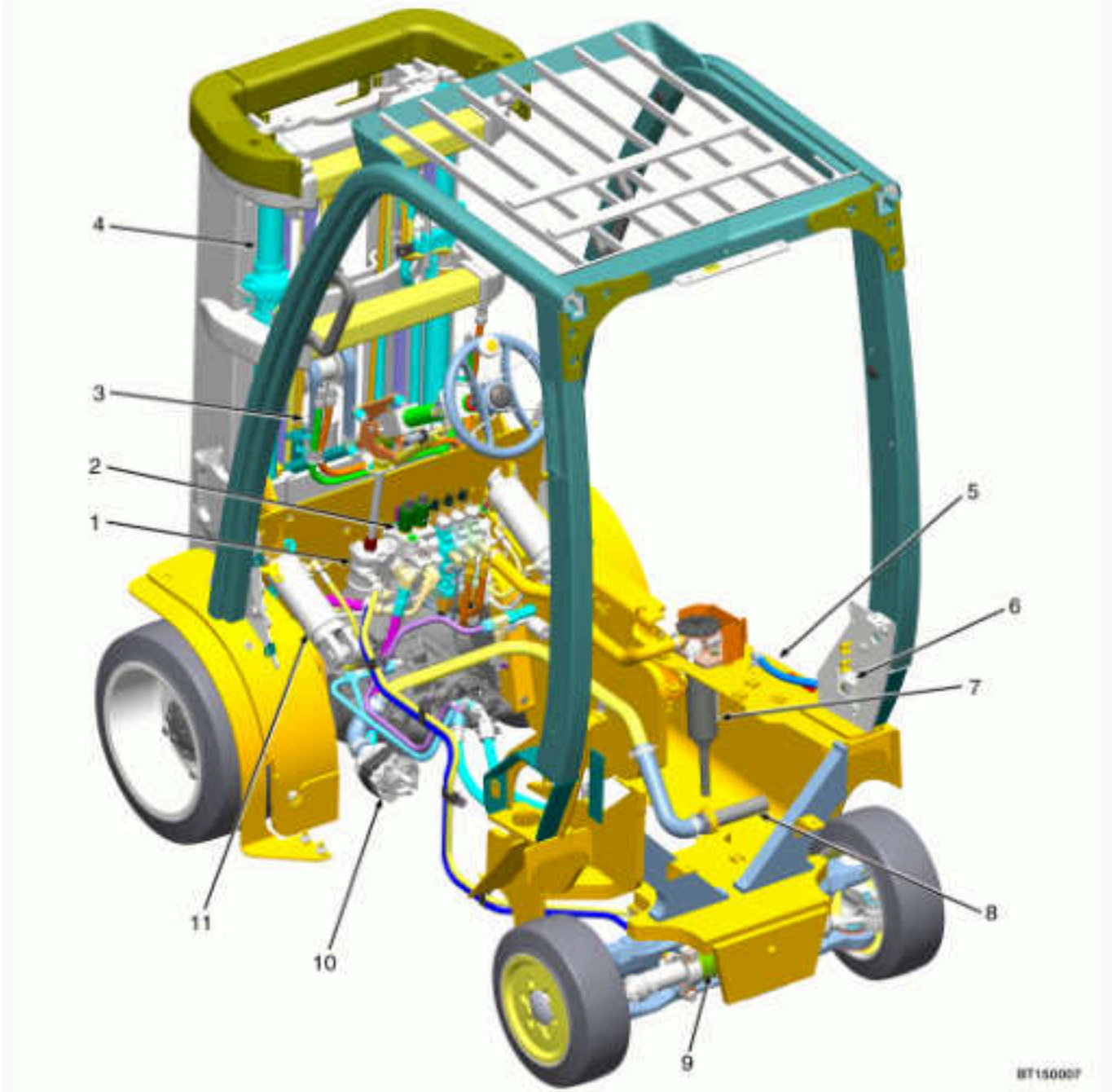
The radiator or other parts of the cooling system may be hot or under pressure and can cause serious injury. Wait 30 minutes for the radiator to cool. Do a touch test by touching the radiator with your hand. If the radiator is still hot to the touch, wait another 30 minutes before attempting to check or fix any part of the cooling system.

CAUTION

Disposal of lubricants and fluids must meet local environmental regulations.

2. Drain cooling system. Fill cooling system with clean water. See sections below for more information:
   - Radiator, Remove for Lift Trucks Models S30FT, S35FT, S40FTS (E010); H1.6FT, H1.8FT, 2.0FTS (H30FT, H35FT, H40FTS) (F001); S2.0-3.5FT (S40-70FT, S55FTS) (F187); S50CT (A267); H2.0-3.5FT (H40-70FT) (L177); H2.0-2.5CT (H50CT) (A274); S4.0, 4.5, 5.5FT, S5.5FTS, (S80, 100, 120FT; S80, 100FTBCS; S120FTS; S120FTPRS) (G004, H004) and H4.0FT5/FT6, H4.5FTS5, H4.5FT6, H5.0-5.5FT (H80, 90, 100, 110, 120FT) (N005, P005, R005, S005)
   - Radiator, Remove for Lift Truck Models S6.0FT, S7.0FT (S135FT, S155FT) (D024, E024, F024, G024)
   - Radiator, Remove 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)
3. Install radiator cap. Run engine until top radiator hose is hot. Stop engine and let engine cool.
4. Drain water from radiator. If water is dirty, fill system with water and repeat procedure until water is clean.

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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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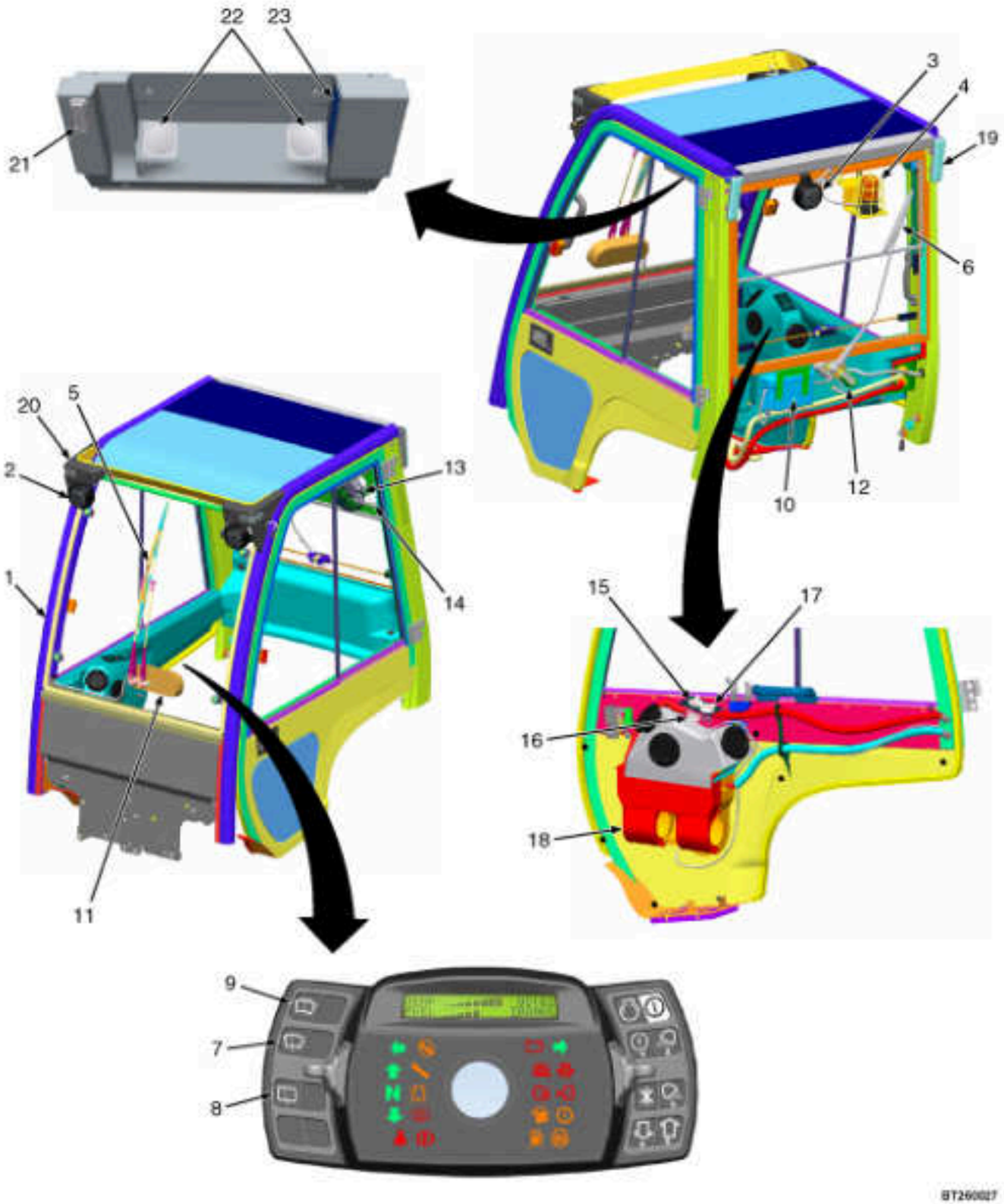


Figure 9060-10-25. Cab Component Locations

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