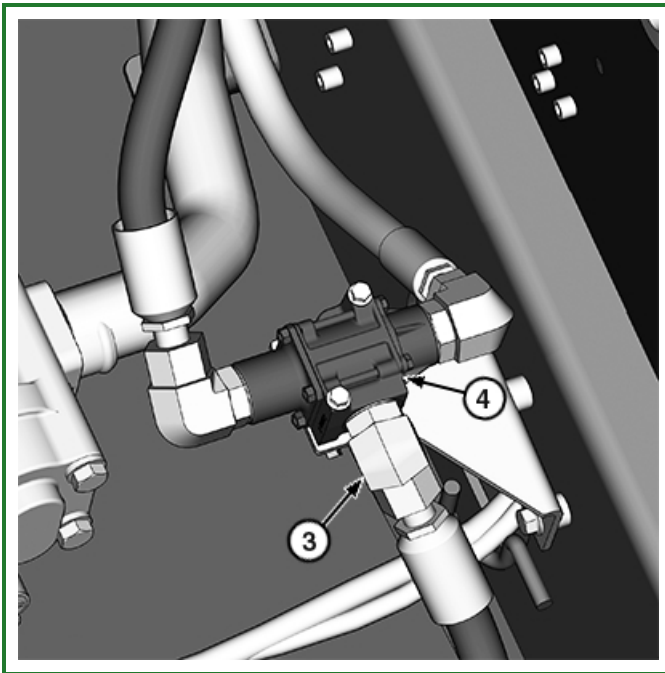


XJ1278075A-UN: Hydraulic Oil Cooler Hoses (components removed for clarity)



XJ1280271-UN: Hydraulic Oil Cooler Bypass Valve Hoses

LEGEND:

- 1 - Hydraulic Oil Cooler Outlet
- 2 - Hydraulic Oil Cooler Inlet
- 3 - Hydraulic Oil Cooler Bypass Valve Inlet
- 4 - Hydraulic Oil Cooler Bypass Valve

Measure and record temperature at hydraulic oil cooler inlet (2), hydraulic oil cooler outlet (1), and hydraulic oil cooler bypass valve inlet (3) using JT07253 Non-Contact Temperature Measuring Gun.

8. IMPORTANT:

Avoid machine damage. When the fan is removed, the engine coolant temperature can raise quickly. Monitor engine coolant temperature gauge and the engagement and monitor unit (EMU) for diagnostic trouble codes (DTCs).

Set engine speed to specification.

Item	Measurement	Specification
Engine Speed		Slow Idle

9. IMPORTANT:

Avoid machine damage. Maximum operating temperature of hydraulic oil cooler bypass valve is 116°C (240°F). Do not allow hydraulic oil temperature to exceed 116°C (240°F) at the hydraulic oil cooler bypass valve.

As hydraulic oil cooler bypass valve opens, warm oil will be routed to hydraulic oil cooler inlet (2). Measure temperature at hydraulic oil cooler inlet. The temperature increase will be same as observed at hydraulic oil cooler bypass valve inlet. Compare temperature to specification.

Item	Measurement	Specification
Hydraulic Oil Cooler Bypass Valve Begins to Open	Temperature	70—78°C 158—172°F

10. Continue to perform the hydraulic warm-up procedure. As the oil warms up, hydraulic oil cooler bypass valve will continue to open until the oil temperature reaches specification.

Item	Measurement	Specification
Hydraulic Oil Cooler Bypass Valve Fully Open	Temperature	88°C 190°F

11. Measure temperature at hydraulic oil cooler outlet (1). As oil passes through hydraulic oil cooler, temperature differential should be observed between hydraulic oil cooler inlet and outlet.

Observations:

- If hydraulic oil cooler bypass valve is stuck in open position, temperature measured at hydraulic oil cooler inlet will be below hydraulic oil cooler bypass valve opening temperature. In this condition, it will take a relatively long period of time to warm hydraulic oil.
- If hydraulic oil cooler bypass valve is stuck in closed position, temperature measured at the thermal bypass valve will rise above hydraulic oil cooler bypass valve full-open temperature. In such condition, it will take a relatively short period of time to warm hydraulic oil.

If hydraulic oil cooler bypass valve does not meet specifications, repair or replace as necessary and repeat test.

Go to [Section_9025:Group_25](#)

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Section 9026: Hydrostatic System

Group 05: Theory of Operation

- Hydrostatic System Operation**
- Hydrostatic Pump Operation**
- Charge Pump Operation**
- Hydrostatic Motor Operation—Two-Speed**
- Hydrostatic Control Valve Operation**
- Park Brake System Operation**

Group 10: System Diagrams

- Hydrostatic System Schematic**
- Hydrostatic System Component Location**

Group 15: Diagnostic Information

- Machine Does Not Move In Either Direction**
- Hydrostatic Pump Or Hydrostatic Motor Noise**
- Slow Response To Changes In Speed**
- Low Power**
- Tracks Powered On One Side, Not The Other**
- Machine Will Not Shift Into or Out of High Speed**
- Mistracking**
- Park Brakes Do Not Hold**
- Park Brakes Do Not Release**
- Grinding Noise While Operating Machine**

Group 25: Tests

- Engine Speed Control for Testing**
- Multi-Function Valve Pressure Relief Test**
- Hydrostatic Pump Flow Test**
- Hydrostatic Pump Mechanical Neutral Adjustment**
- Hydrostatic Pump Control Neutral Adjustment**
- Track Speed Test**
- Park Brake Release Pressure Test**