

**Service Information System**

Shutdown SIS

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◀Product: COMPACT TRACK LOADER

Model: 279C COMPACT TRACK LOADER MBT

Configuration: 279C Compact Track Loader MBT00001-UP (MACHINE) POWERED BY 3044C Engine

Testing and Adjusting**279C, 279C2, 289C, 289C2 and 299C Compact Track Loaders Machine Systems**

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Pilot System Pressure - Test

SMCS - 5050-032-PS

Table 1

REQUIRED TOOLS		
Part Number	Description	Qty
177-7861	Hose	2
6V-4143	Coupler Assemblies	4
8T-0855	Pressure Gauge 0 to 4000 kPa	2
6V-3989	Unvalved Nipple	2
7X-2444	Tee	1
6V-3965	Nipple	1
6V-5049	O-Ring Seal	1
3J-1907	O-Ring Seal	1

**WARNING****Personal injury or death can result from escaping fluid under pressure.****Escaping fluid under pressure, even a very small pin-hole size leak, can penetrate body tissue and cause serious injury and possible death. If fluid is injected into your skin, it must be treated immediately by a doctor familiar with this type of injury.**

Always use a board or cardboard when checking for a leak.

NOTICE

Care must be taken to ensure that fluids are contained during performance of inspection, maintenance, testing, adjusting, and repair of the product. Be prepared to collect the fluid with suitable containers before opening any compartment or disassembling any component containing fluids.

Refer to Special Publication, NENG2500, "Dealer Service Tool Catalog" for tools and supplies suitable to collect and contain fluids on Cat products.

Dispose of all fluids according to local regulations and mandates.

Before any tests are performed, prepare the machine for troubleshooting. Refer to Testing and Adjusting, "Machine Preparation". Before any tests are performed, visually inspect the machine for oil leaks and damaged parts. Refer to Testing and Adjusting, "Visual Inspection".

Note: The oil in the hydraulic system must be at an operating temperature of $50^{\circ} \pm 10^{\circ}\text{C}$ ($122^{\circ} \pm 18^{\circ}\text{F}$). In order to increase the oil temperature, start the engine and operate all the cylinders for at least five cycles. Also, drive the machine forward and drive the machine rearward for a few minutes.

The pilot system pressure test determines the pilot control pressure to the electrohydraulic controls. The pilot oil is supplied by the charge pump section of the gear pump. The pilot system pressure test determines if the control pressure that is supplied to the work tool control valve is within the specification.

1. Engage the parking brake. Stop the engine.
 2. Release the hydraulic system pressure. Refer to Testing and Adjusting, "Hydraulic System Pressure - Release" for the correct procedure.
 3. Block the tracks of the machine.
 4. Raise the cab.
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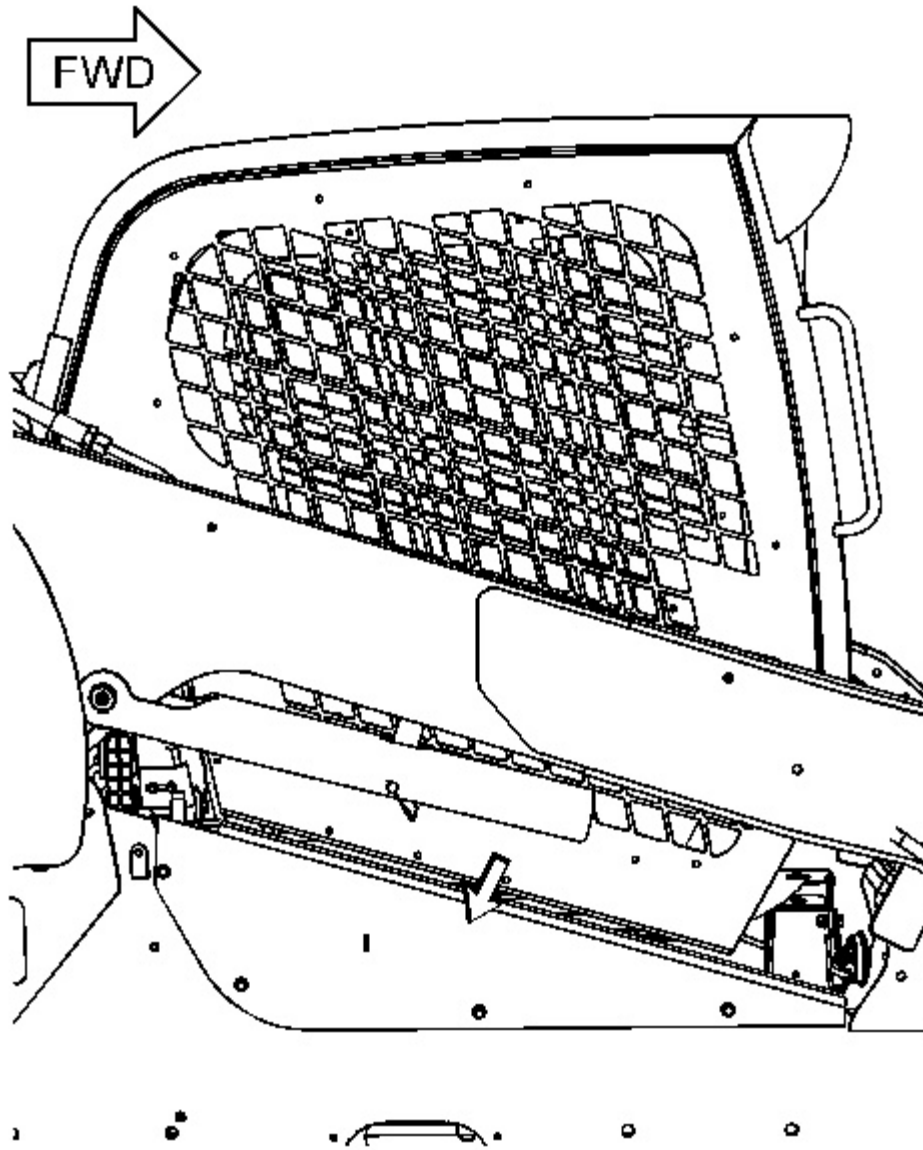


Illustration 1

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5. Remove four bolts in order to remove the cover plate on the right-hand side of the machine. Removing this plate will allow safe routing of the hydraulic test hoses when the cab is lowered. Refer to Illustration 1.

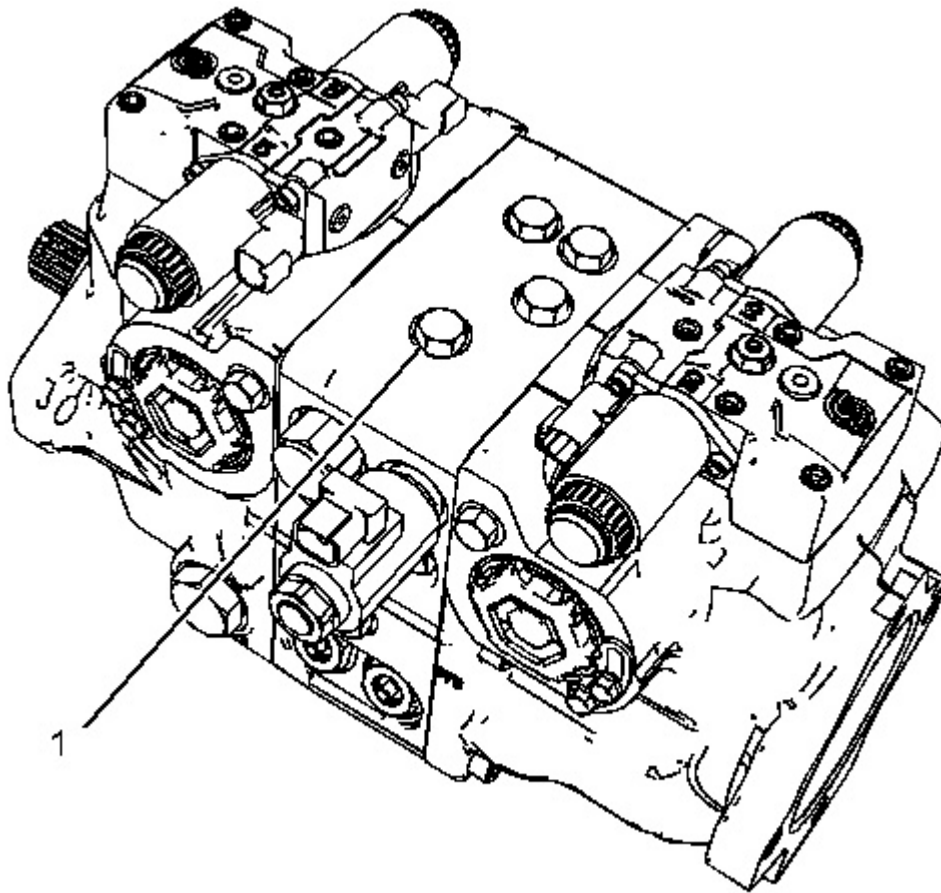


Illustration 2

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(1) Charge pressure test port

6. Install one **8T-0856** Pressure Gauge to the charge pressure test port (1) with one **177-7861** Hose .

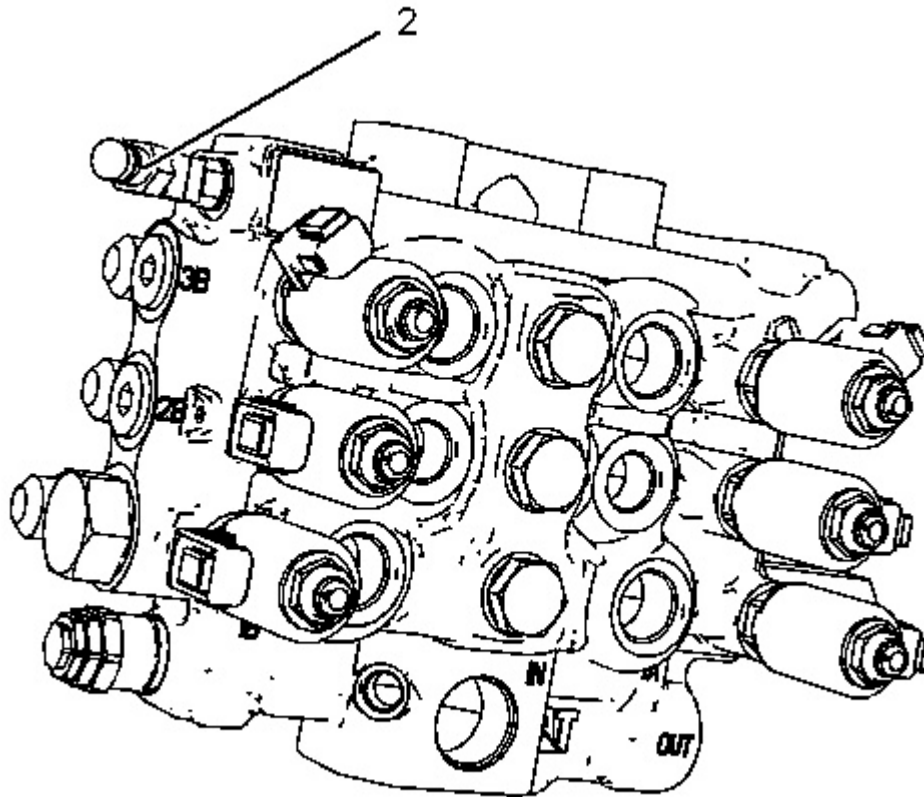


Illustration 3

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(2) Pressure test port for the pilot system pressure test

7. Install the remaining **8T-0856** Pressure Gauge and the **177-7861** Hose As to the pilot pressure test port (2) on the electrohydraulic operated control (work tool).
8. Secure the two hydraulic lines so that the pressure gauges can be viewed by the operator during the test. The hoses should not be pinched when the cab is lowered.
9. Lower the cab.
10. Sit in the operator seat. Fasten the seat belt and lower the armrest.
11. Start the engine. Disengage the parking brake.
12. Run the engine at LOW idle. Record the charge pressure.
13. Run the engine at HIGH idle. Record the charge pressure and the pilot pressure.

Table 2

<p>PILOT SYSTEM PRESSURES for the 277C / 277C2 / 279C / 279C2 / 287C / 287C2 / 289C / 289C2 / 299C MACHINES</p>
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Pilot Pressure	Low Idle	High Idle
Charge Pressure	2750 ± 200 kPa (399 ± 29 psi)	3300 ± 200 kPa (479 ± 29 psi)
Pilot Pressure for the Work Tool	2750 ± 200 kPa (399 ± 29 psi)	3300 ± 200 kPa (479 ± 29 psi)

If no pilot pressure is recorded, the pilot shut off valve for the work tool may not be functioning correctly.

Note: If the pilot pressure is not within specifications, refer to Testing and Adjusting, "Hydrostatic System - Test and Adjust".

14. Reduce the engine to LOW idle. Stop the engine.
15. Raise the cab. Remove the test equipment.
16. Lower the cab. Remove the blocks.