

621C Hydraulic Performance Improvement

(18% More Lift and Breakout Power)



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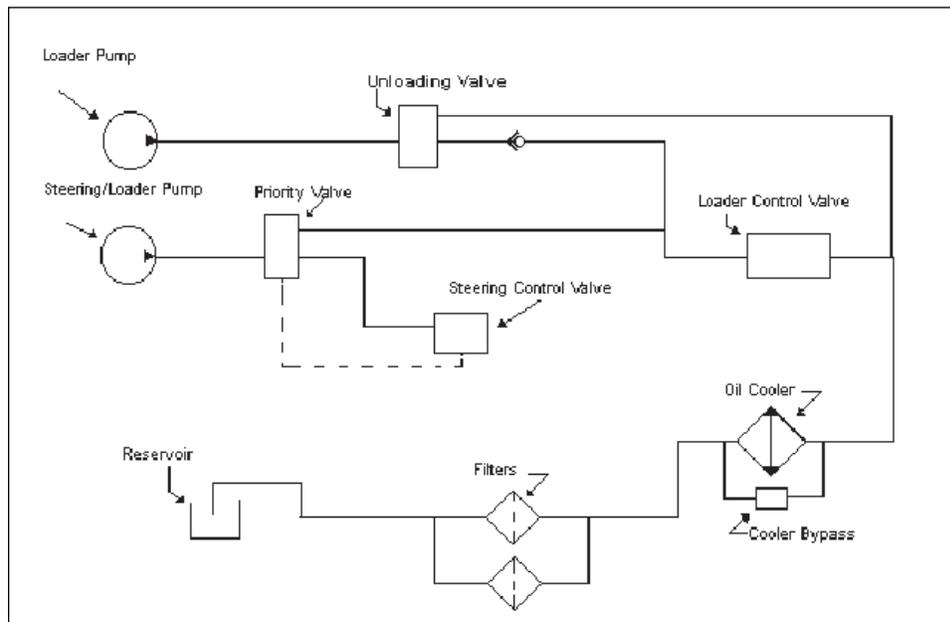
INTRODUCTION

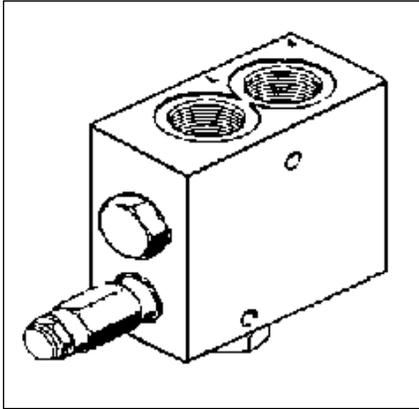
The Case 621 wheel loaders are very versatile machines that are used in a wide variety of applications. The size and power of the unit are matched to obtain optimum performance. Case Corporation has gone a step further improving the 621C Z-Bar, 621C XR, and 621C XT wheel loader performance.

The 621C Wheel Loader has as standard equipment a new hydraulic unloading valve and increased main relief pressure providing 18% more lift and breakout power. These new features provide the 621C the hydraulic flow and relief pressure required to lift the toughest material. The unloading valve and increased relief pressure will be on all 621C Wheel Loaders built starting in September 1999 with PIN No. JEE0122501.

UNLOADING VALVE

The unloading valve senses the power requirements of the hydraulic system and automatically increases or decreases the flow requirements as needed. The hydraulic pressure rises as the unit pushes into a pile and lifts the bucket through the pile. When the hydraulic system pressure is approximately 2200 PSI (15,169 kPa) the unloading valve opens and dumps the loader pump directly to the reservoir. This allows the steering pump to send oil directly to the loader valve providing the necessary tractive effort and lifting capability of the loader through the pile. As the pressure goes down, the unloading valve closes and the oil from the loader pump merges with the oil from the steering pump providing the flow to the loader valve increasing the speed of the loader.





The 621C hydraulic system is one of the most efficient, productive and cost effective system available today. This system provides the customer the benefits of having power, tractive effort and speed when required.

- The 621C hydraulic system uses only the engine horsepower necessary based on the amount of hydraulic flow required. This reduces fuel consumption, maintenance cost and improves productivity.
- By concentrating only on the amount of hydraulic flow required, the engine can distribute more horsepower to the wheels providing the machine more pushing capability into the pile.
- This “smart” system does not have to be told when to increase or decrease hydraulic flow, nor does the operator have to monitor, switch or adjust the system.
- The unloading valve reduces the engine power consumed by the loader hydraulic pump when the hydraulic system is at high-pressure., Therefore, the main relief pressure increases from 2400 psi. (16,547 kPa) to 2700 psi. (18,603 kPa). The 12% increase in main relief pressure provides the 621C extra horsepower to lift dense material out of a pile. Note the difference in the hydraulic lifting capacity at all levels, and breakout force with the tilt cylinder.

	2.25 yd ³ bucket w/ edge		2.25 yd ³ bucket w/ teeth		2.50 yd ³ bucket w/ edge		2.50 yd ³ bucket w/ teeth	
Lift Capacity @	621B/C without unloading valve	621C with unloading valve	621B/C without unloading valve	621C with unloading valve	621B/C without unloading valve	621C with unloading valve	621B/C without unloading valve	621C with unloading valve
Full height	10056 lb (4560 kg)	11991 lb (5439 kg)	10254 lb (4650 kg)	12190 lb (5529 kg)	9648 lb (4375 kg)	11583 lb (5254 kg)	9931 lb (4504 kg)	11866 lb (5382 kg)
Max reach	15985 lb (7249 kg)	18950 lb (8595 kg)	16180 lb (7339 kg)	19145 lb (8684 kg)	15583 lb (7067 kg)	18550 lb (8414 kg)	15870 lb (7197 kg)	18836 lb (8544 kg)
Ground	25156 lb (11409 kg)	29681 lb (13463 kg)	25300 lb (11474 kg)	29822 lb (13527 kg)	24772 lb (11235 kg)	29306 lb (13293 kg)	25106 lb (11386 kg)	29644 lb (13446 kg)
Breakout	23692 lb (10745 kg)	27120 lb (12301 kg)	24561 lb (11139 kg)	28143 lb (12766 kg)	22712 lb (10300 kg)	26033 lb (11808 kg)	24178 lb (10965 kg)	27684 lb (12557 kg)

NOTE: Prior 621C models (without unloading valve), an unloading valve kit (part # 357116A1) is available through NAPO. The unloading valve kit **will not** be added as a warranty item and there will be no PUP on the unloading valve kit.

NOTE: Valve kit 357116A1 WILL NOT work on 621B models!

SUMMARY With the new unloading valve and the increased main relief pressure, productivity and profit are increased by:

- Providing the operator quicker cycle times
- Reducing the need for constant movement of the bucket when lifting through a pile
- Providing more hydraulic power through the pile to increase bucket fill in tough conditions

During a formal walkaround of the machine with the customer, be sure to point out how this feature improves their operation.

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