



# Service Information Letter

**S.I.L. NUMBER:** HK 99 – 01 Rev. 2/02

**DATE:** September, 1999

**PRODUCT:** Hydraulic Installation Kits

**MODEL:** Ho-Pac's, Hy-Ram's, and Street Hammers

**SUBJECT:** Adjusting Input Oil Flow and Pressure

**PURPOSE:** To advise of the approved method for conducting a flow and pressure check on an attachment circuit.

**EFFECTIVE POINT:** All Field Units

**DETAIL:** All Allied hydraulic attachments have a published range of input values. Failure to maintain an input within this range will greatly affect both the performance and longevity of the attachment.

The only accurate way to set the operating parameters for a hydraulic implement is with a variable load flow meter. This is a diagnostic tool that can measure the volume of oil being supplied under varying system pressures. A variable load flow meter can be locally sourced or purchased through Allied as referenced below.

Because pressure is the result of flow restriction, it is imperative that flow be set within the pressure range specified for the attachment. For example, the AS 380 Street Hammer has a hydraulic input range of 16 to 24 gpm (60 to 90 lpm) for oil flow, and a pressure range of 1750 to 2200 psi (120 to 150 bar). When adjusting the hydraulic input for this model, the flow meter load should be increased until a pressure rating of 2200 psi (150 bar) is achieved. The oil flow should now be adjusted to provide as close to the maximum given value as possible. The AS 380 will offer full performance at these settings.

If the input values to the attachment cannot be adjusted to maintain a value within the given range, the performance and operating life will be greatly compromised. The inability to produce the required flow and pressure may indicate that the hydraulic pump is of an insufficient capacity or in need of repair. Refer to the carrier's hydraulic specifications for the pump output ratings.

Use the attached information as a step-by-step guide to adjusting hydraulic oil flow and pressure.

**MATERIAL REQUIREMENTS:** P/N 100743 Variable load flow meter (7-200 gpm capable), with fittings.

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### Conducting a Flow and Pressure Check

- ⚡ Identify the valve that supplies the attachment with oil and determine where the adjustments for flow and pressure are located.
- ⚡ Connect a flow meter with variable load to the attachment circuit, and open the loading valve to remove all restriction.
- ⚡ Activate the circuit and record the free flow value on a chart like the one shown below in Fig. 1.
- ⚡ Load the flow meter to 1000 psi. and allow the oil to reach operating temperature of approximately 150°F (65.5°C). Record the flow while maintaining 1000 psi.
- ⚡ Increase the load in 500 psi. increments until maximum attachment pressure has been achieved. Record the results.
- ⚡ Adjust the flow output to the value required by the attachment.
- ⚡ Adjust the relief to begin opening at the attachments maximum operating pressure.

<b>PRESSURE</b>	<b>FLOW</b>
0 psi.	32 gpm.
1000 psi.	30 gpm.
1500 psi.	29 gpm.
2000 psi.	25 gpm.
2200 psi.	24 gpm.
Relief begins to open.	

Fig. 1



KL  MC  JJ  RE  KB  DK

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**Flow and Pressure Check:**      DATE: \_\_\_\_\_

EQUIP. MFR	MODEL	SERIAL NO.	HOURS

PRESSURE (PSI)	FLOW (GPM)	BACK PRESSURE
0		
500		
1000		
1500		
2000		
2300		
2500		
2600		
2900		
3000		

HYDRAULIC RESERVOIR       FULL  ¾  ½      \_\_\_\_\_

ENGINE RPM                       FULL  ¾  OTHER      \_\_\_\_\_

COMPUTER MODE                      \_\_\_\_\_

CRACKING PRESSURE              \_\_\_\_\_ PSI

FULL RELIEF (0 GPM)              \_\_\_\_\_ PSI

OIL TEMP. (°F)                      \_\_\_\_\_ °F

NITROGEN PRE-CHARGE              \_\_\_\_\_ PSI  COLD  HOT

Allied Kit <input type="checkbox"/> YES <input type="checkbox"/> NO	Allied Valve <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> A2W30 <input type="checkbox"/> AC40 <input type="checkbox"/> AC75 <input type="checkbox"/> XL120	Tube Size (Note if return is different) <input type="checkbox"/> 8 <input type="checkbox"/> 12 <input type="checkbox"/> 16 <input type="checkbox"/> 20 <input type="checkbox"/> 24
Kit Part No. _____	OEM Auxiliary Valve <input type="checkbox"/> Port Relief <input type="checkbox"/> YES <input type="checkbox"/> NO	QD <input type="checkbox"/> Ball Valve <input type="checkbox"/> 8 <input type="checkbox"/> 12 <input type="checkbox"/> 16 <input type="checkbox"/> 20 <input type="checkbox"/> 24 <input type="checkbox"/>
Return oil routed through (Check all that apply) <input type="checkbox"/> Auxiliary valve <input type="checkbox"/> oil cooler <input type="checkbox"/> Filter		
Accumulator(s) installed in PRESSURE line <input type="checkbox"/> YES <input type="checkbox"/> NO		
Accumulator(s) installed in RETURN line <input type="checkbox"/> YES <input type="checkbox"/> NO		

REMARKS: \_\_\_\_\_

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