

# Fabco Power



*Setting the Standard in Mobile Power*

*Instruction Manual for Model*  
**HYDRO – 12KCD – 16 - 3**  
*Hydraulic Generator*

*Manufacturing of: Vehicle Mounted Generators • Hydraulic Generators*

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# **RECOMMENDATIONS** **MODEL: HYDRO 12KCD-16-3**

*HIGH PRESSURE LINE ..... 3/4 inch*

*LOW PRESSURE LINE..... 1 inch*

*FLOW RATE ..... 16 GPM*

*FOR BEST RESULTS KEEP HYDRAULIC OIL  
TEMPERATURE BETWEEN 80°F AND 120°F.  
DO NOT EXCEED 175°F.*

*AN OIL COOLER IS RECOMMENDED.*

*MAXIMUM BACK PRESSURE ..... 150 PSI*

*OPEN CENTER 2500 PSI SYSTEMS.*

*RECOMMEND FILTER ..... 10m*

*RECOMMEND HYDRAULIC OIL ..... DEXTRON III A.T.F.*

*RECOMMEND RESERVOIR SIZE ..... MINIMUM 30 GAL.*

## **Initial Installation and Start-Up**

**Be sure you set the hydraulic flow (GPM) to the generator at Approximately 62.5 HZ or 3750 RPM with NO electrical load on the generator.**

**By using this setting you will have approximately 60HZ (cycles) or 3600 RPM when you are running at full rated load.**

**One way this can be accomplished is by using a Photo Tachometer on our generator coupling or generator cooling fan.**

*A Photo Tachometer is an inexpensive tool that can be purchased at McMasters, Grainger, Sears or any other electrical supplier.*

## **INSTALLATION TIPS**

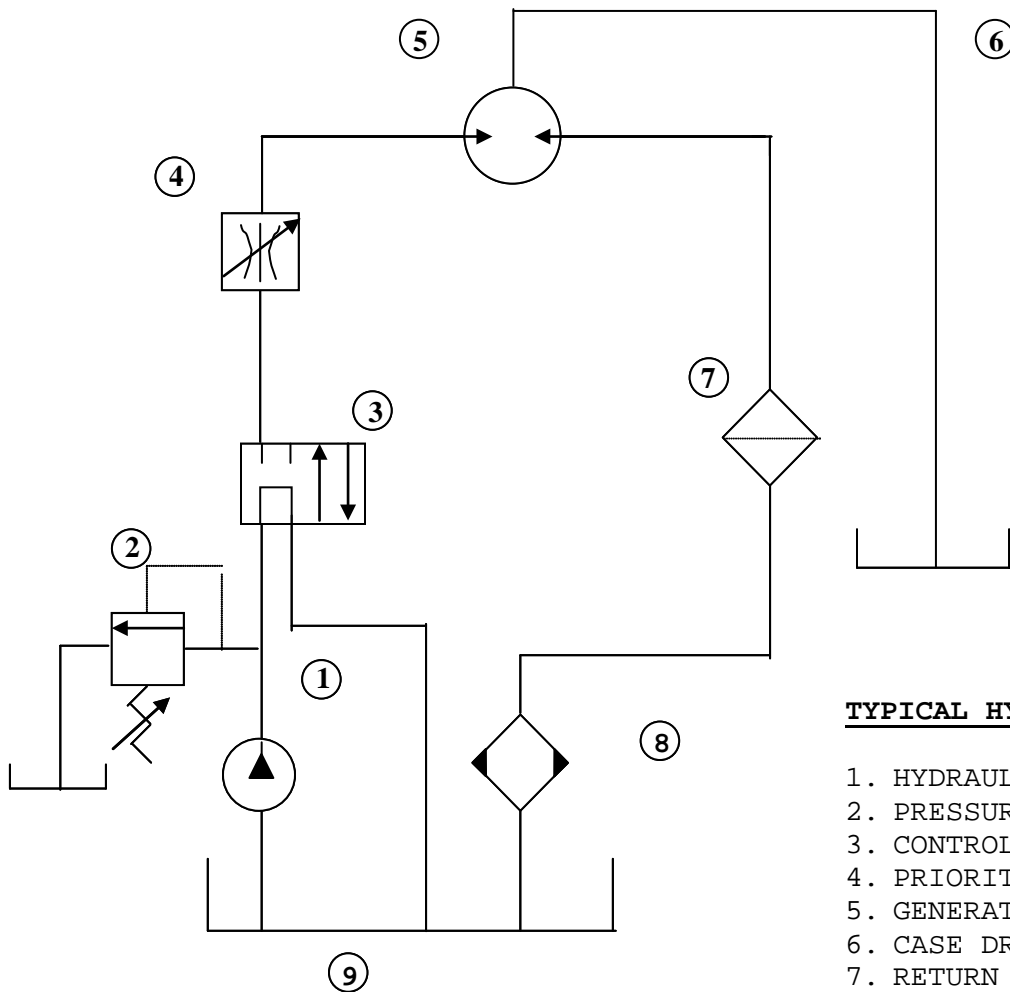
Excessive pressure in your return line will damage the hydraulic motor seal. High back pressure can be caused by “spikes” sent back through the return from other equipment on a common return line. Another potential problem can develop if several pieces of equipment are connected to one “common” return line causing a high back pressure (150 PSI is the maximum). We recommend you run the return line from the generator back to the cooling tank with a separate line.

If our hydraulic generator is to be used on a truck or system that will be changing speeds, such as, in a fire truck (pumping water) we suggest you use a load sensing piston type pump rather than a fixed displacement gear type. The system will run much cooler and more efficient.

## **TROUBLE SHOOTING**

<b>PROBLEMS</b>	<b>CAUSES</b>	<b>REMEDIES</b>
<b>ALTERNATOR EXCITATION FAILURE</b>	<ol style="list-style-type: none"> <li>1. Low Speed</li> <li>2. Faulty capacitor</li> <li>3. Faulty winding</li> </ol>	<ol style="list-style-type: none"> <li>1. Check RPM and set at nominal value.</li> <li>2. Check and replace.</li> <li>3. Check that winding resistance is as shown in the tables.</li> </ol>
<b>HIGH NO-LOAD VOLTAGE</b>	<ol style="list-style-type: none"> <li>1. Speed too high..</li> </ol>	<ol style="list-style-type: none"> <li>1. Check and adjust RPM's</li> </ol>
<b>LOW NO-LOAD VOLTAGE</b>	<ol style="list-style-type: none"> <li>1. Speed too low.</li> <li>2. Faulty rotary diodes.</li> <li>3. Breakdown in windings.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check and adjust RPM's</li> <li>2. Check and replace.</li> <li>3. Check winding resistance, as per tables.</li> </ol>
<b>PROPER NO-LOAD BUT LOW LOADED VOLTAGE</b>	<ol style="list-style-type: none"> <li>1. Low loaded speed.</li> <li>2. Load too large.</li> <li>3. Rotary diodes short-circuited</li> </ol>	<ol style="list-style-type: none"> <li>1. Check and regulate RPM.</li> <li>2. Check and change.</li> <li>3. Check and replace.</li> </ol>
<b>UNSTABLE VOLTAGE</b>	<ol style="list-style-type: none"> <li>1. Loose contacts.</li> <li>2. Uneven rotation.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check connections.</li> <li>2. Check for uniform rotation speed.</li> </ol>
<b>NOISY GENERATOR</b>	<ol style="list-style-type: none"> <li>1. Broken bearings.</li> <li>2. Poor couplings.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace.</li> <li>2. Check and repair.</li> </ol>

# FIXED DISPLACEMENT TYPE GEAR PUMP



**TYPICAL HYDRAULIC SCHEMATIC**

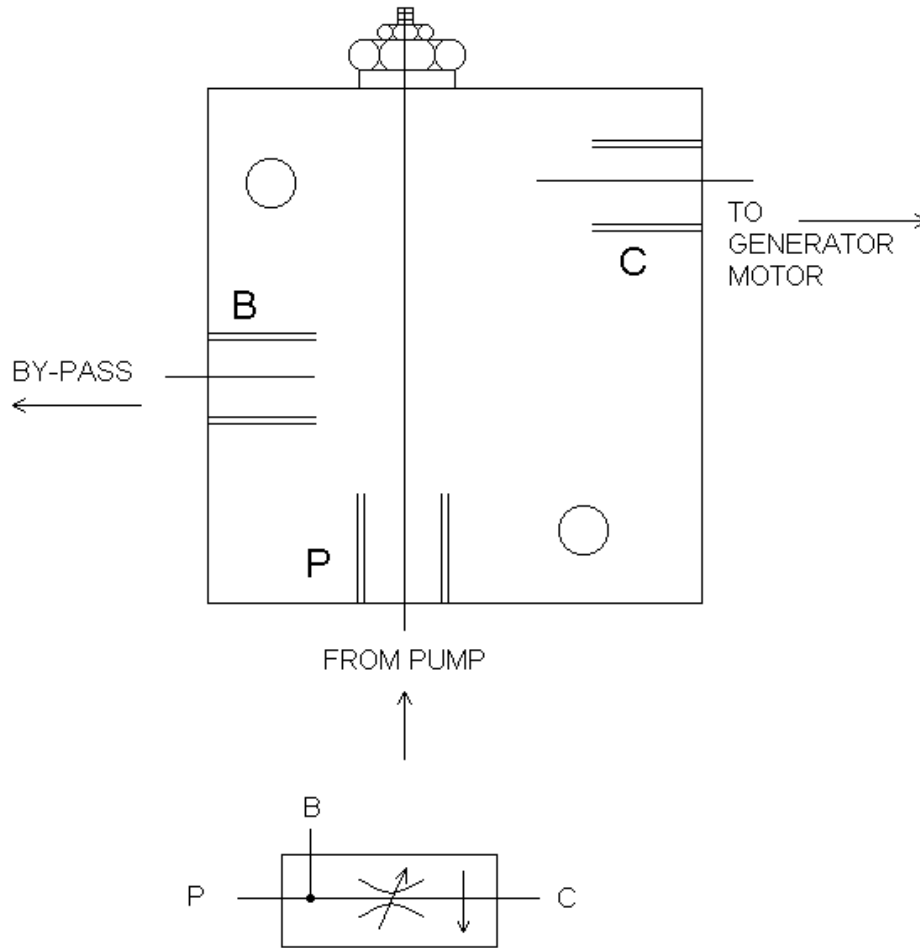
1. HYDRAULIC PUMP
2. PRESSURE RELIEF VALVE
3. CONTROL VALVE
4. PRIORITY FLOW CONTROL\*
5. GENERATOR HYRAULIC MOTOR
6. CASE DRAIN LINE\*\*
7. RETURN LINE FILTER
8. OIL COOLER
9. HYDRAULIC FLUID RESERVOIR

\* Some units may be equipped with integral priority flow control, refer to specific model number.

\*\* External case drain line may be required on some units refer to specific model number.  
When external case drain is required it should be unobstructed direct return to reservoir with a minimum I.D. no less than that of case drain port on generator motor.

**FOR SPECIFIC INSTALLATION RECOMMENDATIONS CONSULT FACTORY**

# FABCO BY-PASS FLOW CONTROL



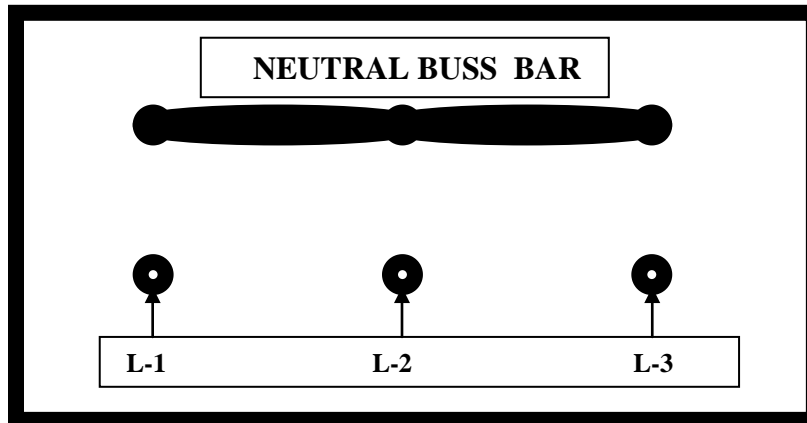
FABCO PN 572233

**NOTE: THIS ASSEMBLY ONLY NEEDED  
WITH FIXED DISPLACEMENT TYPE  
GEAR PUMP.**



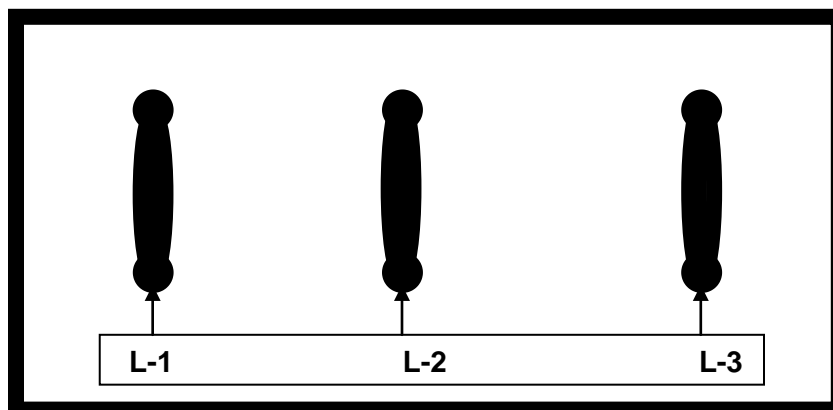
**THREE PHASE (Y) CONNECTED 120/208 60 HZ**

L-1, L-2 AND L-3 TO NEUTRAL = 120 VOLTS



L-1 TO L-2 = 208 VOLTS L-2-TO L-3 = 208 VOLTS L-3 TO L-1 = 208 VOLTS

**THREE PHASE DELTA  $\Delta$  120 VOLT 60 HZ**



L-1 TO L-2 = 120 VOLTS L-2 TO L-3 = 120 VOLTS L-3 TO L-1 = 120 VOLTS