Fabco Power

Setting the Standard in Mobile Power

Instruction Manual for Model

HYDRO – 6KCD – 16 - 3

Hydraulic Generator

Manufacturing of: Vehicle Mounted Generators • Hydraulic Generators

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GENERAL INFORMATION
MODEL: HYDRO 6KCD – 16 - 3

GENERATOR..... BRUSHLESS – 3 PHASE

GENERATOR..... 3600 (60 Hz)

GENERATOR VOLTAGE..... 120 or 120/208

MOTOR STARTING..... 300% SURGE

VOLTAGE REGULATOR..... INHERENT

OUTPUT..... 6000 WATTS CONTINUOUS
7000 WATTS PEAK AT
100° F OIL TEMPERATURE

HYDRAULIC MOTOR..... GEAR TYPE WITH CASE DRAIN
PRESSURED BALANCE

FLOW CONTROL (OPTIONAL)..... CARTRIDGE TYPE

MAXIMUM SPEED..... 4200RPM
(3600 RPM IDEAL)

MOTOR SHAFT..... . .750

CONTINUOUS
PRESSURE RATING..... 3000 PSI

PORT SIZE
INLET..... 1 1/16 – 12 (S.A..E. 12)
RETURN..... 1 5/16 - 16 (S.A..E. 16)
CASE DRAIN……... S.A.E. (4)

RECOMMENDATIONS
MODEL: HYDRO 6KCD-16-3

HIGH PRESSURE LINE ..... ¾ 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

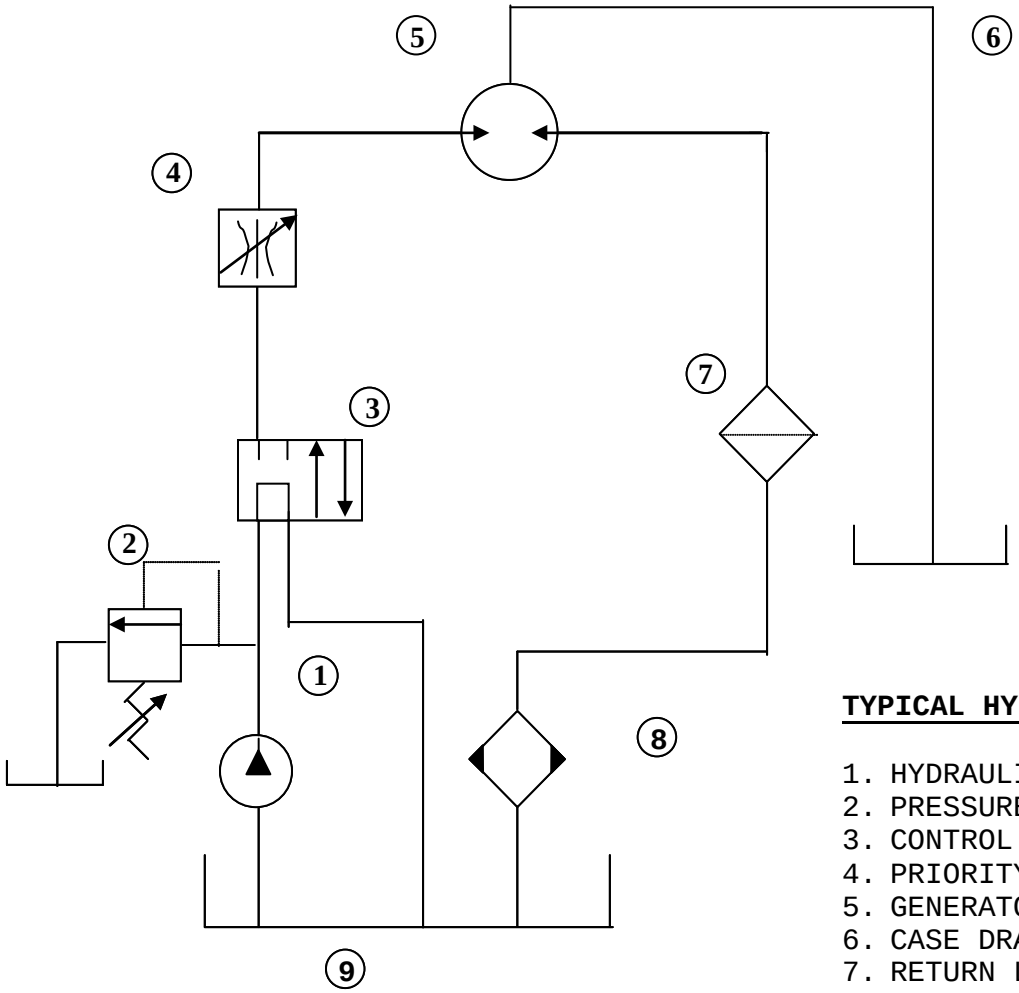
Excessive pressure in your return line will damage the hydraulic motor seal. High back pressure can be caused by "spikes" sent back through the return from other equipment on a common return line. Another potential problem can develop if several pieces of equipment are connected to one "common" return 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

PROBLEMS	CAUSES	REMEDIES
ALTERNATOR EXCITATION FAILURE	1. Low Speed 2. Faulty capacitor 3. Faulty winding	1. Check RPM and set at nominal value. 2. Check and replace. 3. Check that winding resistance is as shown in the tables.
HIGH NO-LOAD VOLTAGE	1. Speed too high..	1. Check and adjust RPM's
LOW NO-LOAD VOLTAGE	1. Speed too low. 2. Faulty rotary diodes. 3. Breakdown in windings.	1. Check and adjust RPM's 2. Check and replace. 3. Check winding resistance, as per tables.
PROPER NO-LOAD BUT LOW LOADED VOLTAGE	1. Low loaded speed. 2. Load too large. 3. Rotary diodes short-circuited	1. Check and regulate RPM. 2. Check and change. 3. Check and replace.
UNSTABLE VOLTAGE	1. Loose contacts. 2. Uneven rotation.	1. Check connections. 2. Check for uniform rotation speed.
NOISY GENERATOR	1. Broken bearings. 2. Poor couplings.	1. Replace. 2. Check and repair.

FIXED DISPLACEMENT TYPE GEAR PUMP



TYPICAL HYDRAULIC SCHEMATIC

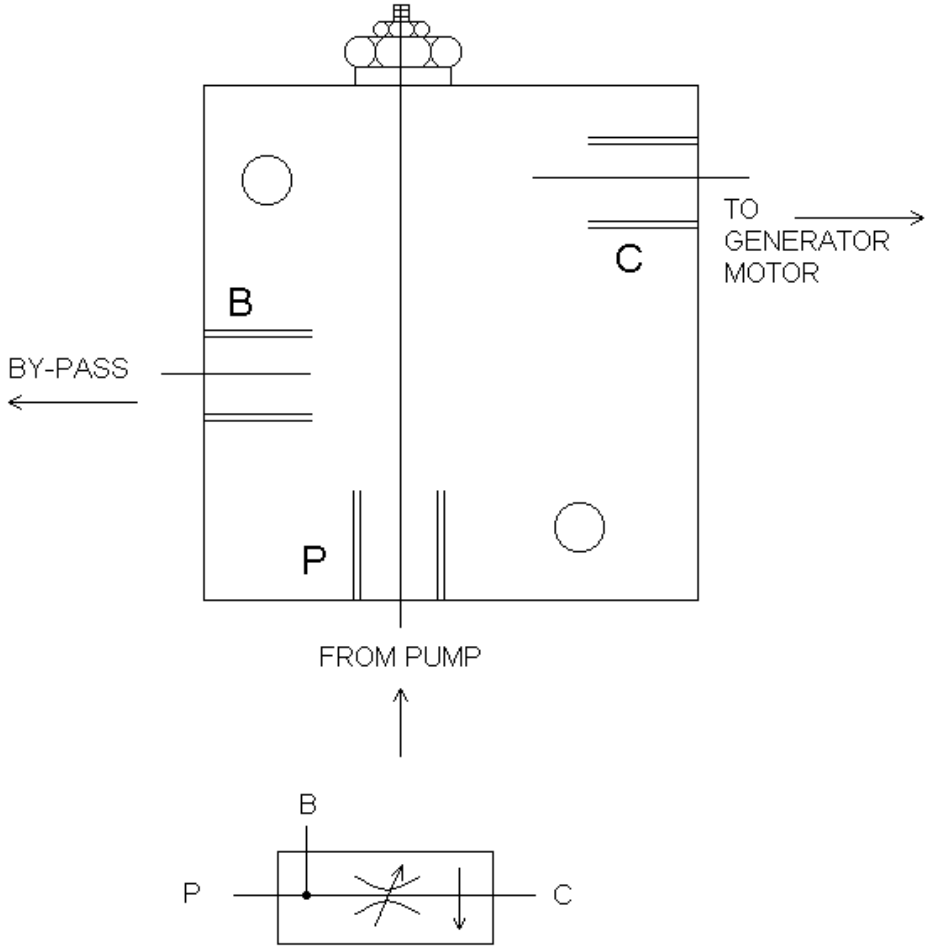
1. HYDRAULIC PUMP
2. PRESSURE RELIEF VALVE
3. CONTROL VALVE
4. PRIORITY FLOW CONTROL*
5. GENERATOR HYRAULIC MOTOR
6. CASE DRAIN LINE**
7. RETURN LINE FILTER
8. OIL COOLER
9. HYDRAULIC FLUID RESERVOIR

* 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

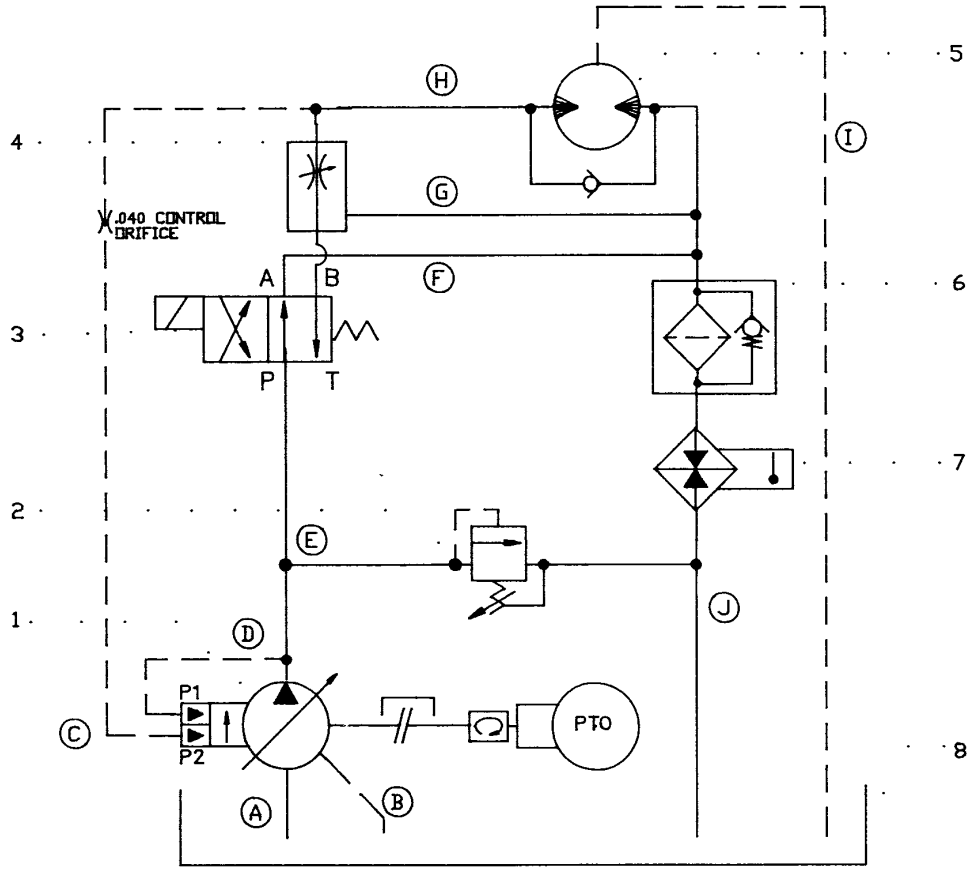


FABCO PN 572233

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

TYPICAL HYDRAULIC SCHEMATIC

PISTON TYPE, LOAD SENSING



REVISIONS			
LTR	DESCRIPTION	DATE	INITIALS

ITEM	QTY	ITEM	DESCRIPTION
1	1	HYDRAULIC PUMP	PISTON TYPE W/LOAD SENSE
2	1	RELIEF VALVE	SET AT 3000 PSI
3	1	DIRECTIONAL VALVE	(SEE NOTE "A")
4	1	FLOW CONTROL	(SEE NOTE "A")
5	1	HYDRAULIC MOTOR	WITH EXTERNAL CASE DRAIN
6	1	FILTER	RETURN LINE W/BYPASS
7	1	HEAT EXCHANGER	
8	1	HYDRAULIC RESERVOIR	

	CUSTOMER CONNECTIONS & LINE SIZES		
	DES	SIZE	DESCRIPTION
	A	1-1/4	SUCTION LINE
*	B	3/8	PUMP CASE DRAIN
*	C	1/4	EXTERNAL SENSE LINE
	D	N/A	INTERNAL SENSE LINE
	E	1"	MAIN SUPPLY LINE
*	F	3/4	PRESSURE LINE
*	G	3/4	PRESSURE LINE
	H	3/4	PRESSURE LINE
*	I	3/8	MOTOR CASE DRAIN
	J	1"	RETURN LINE

* REQUIRED ON SOME MODELS. REFER TO SPECIFIC MODEL NUMBER.

NOTE "A"

SUPPLIED ON SOME MODELS. REFER TO SPECIFIC MODEL NUMBER.

FOR SPECIFIC INSTALLATION RECOMMENDATIONS CONSULT FACTORY

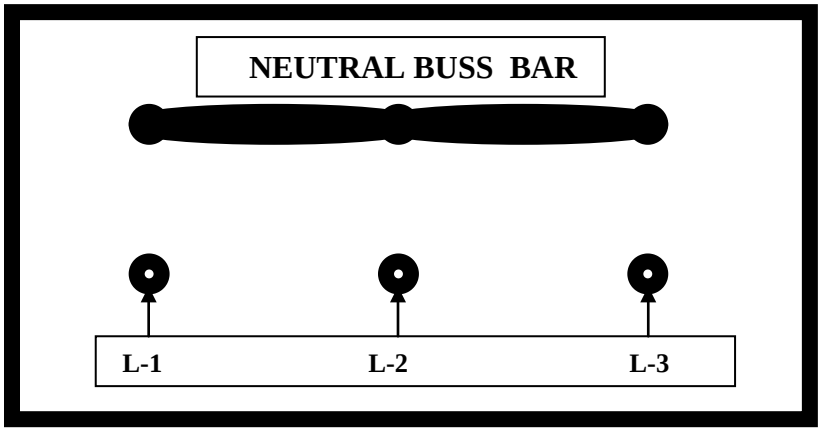
FABCO POWER

CHESTER, NY

MAX FLOW:	MAX PRESSURE:	DATE:
TITLE:		

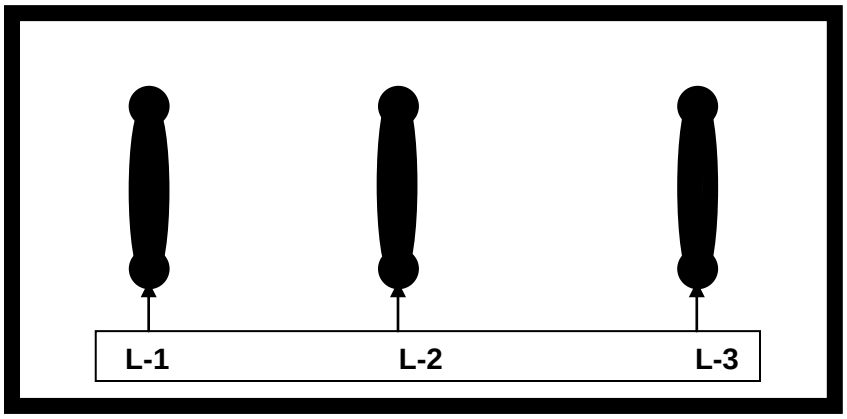
THREE PHASE (Y) CONNECTED 120/208 60 HZ

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 △ 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