

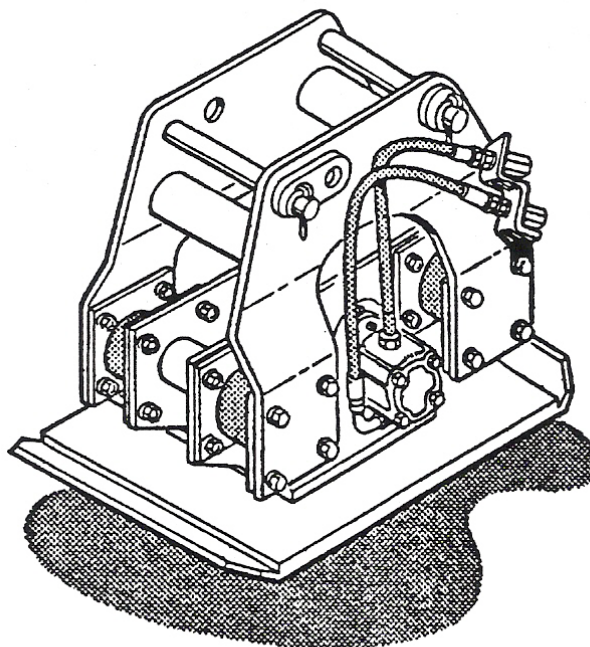
Gentec

www.gentecequipment.com

MODEL GE – 870

**Boom Mounted
Compactor / Driver**

GENPAC



**INSTALLATION
OPERATING
SERVICE AND SAFETY
INSTRUCTIONS**

PARTS LIST

1.0 INTRODUCTION

The Genpac GE-870 is a boom-mounted hydraulic vibrating plate compactor and driver. Primarily, it is used for soil compaction and sheet driving by construction and industry.

CAUTION



Instructions given with this symbol are for personal safety and full service life of the compactor. Follow them carefully.

Operation or service other than in accordance with these instructions may subject the compactor to conditions beyond the design capability. Improper operation or servicing may result in failure or personal injury. Read this manual thoroughly before operating or maintaining the unit.

2.0 DESCRIPTION

The Genpac GE-870 is a high energy impulse tool utilizing three basic forces:

- ★ HIGH IMPULSE FORCE of the eccentric turning at high r.p.m. not only produces impulse force, but also when properly controlled, gives impact force.
- ★ The 2000 r.p.m. frequency produces VIBRATION for maximum effectiveness in the compaction of granular material.
- ★ DOWN PRESSURE of the backhoe or other carrier provides a high static pressure to develop the resistance necessary for compaction. The greater the down pressure or resistance, the higher the developed hydraulic pressure.

3.0 SPECIFICATIONS

U.S. / Metric

Impulse Force	6400lbs
Cycles Per Minute	2 000
Hydraulic Flow Required	13-20
Operating Pressure	1 500 - 2 000 p.s.i. / 103-138 bar
Base plate:	
Dimensions	
Compaction Area	4.7 sq. ft. / 44 m ²
Lift Compaction	
Weight	525 lbs
Height	24 in.
Width	
Boom Pin Diameter	1 ¾ in. / 38.1 mm.
Bracket Spacing	9"
Hose Size:	
Pressure Line	¾ in. / 19 mm.
Return Line	¾ in. / 19 mm.

4.0 PRINCIPLE OF OPERATION

The Genpac GE-870 consists of the following major subassemblies:

- ★ Live Frame – The vibration generator (motor, bearings, eccentric mass and housing) mounted to the base plate.
- ★ Suspension System – Rubber mounts which suspend, stabilize and isolate the “live frame”.
- ★ Mountain Frame – Adapts the “suspension system” of the “live frame” to the boon of the carrier unit.

5.0 INSTALLATION ON CARRIERS

The Model GE-870 Genpac is designed for installation on rubber tire backhoe / loaders and excavators. As a rule, productivity increases as the machine weight increases.

Pressure relief valve should be set no higher than 2 500 p.s.i.

Hydraulic flow should never exceed 20 g.p.m. at 2 000 p.s.i.

6.0 GENERAL CONSTRUCTION SAFETY

The



standard procedures that are expected and required of those working in construction followed including location of existing underground service lines, establishing barriers and personal protective



/ or should be pedestrian equipment,

etc.

7.0 SAFETY PRECAUTIONS

- ✓ Stay clear while in operation.
- ✓ Never activate the compactor unless the operator is in full control of the machine.
- ✓ Never operate an excavator or backhoe except from the operators seat.
- ✓ Do not operate the compactor above 180° F. hydraulic oil temperature.
- ✓ Do not operate the compactor above 1 500 - 2 000 p.s.i. / 103 – 138 bar operating pressure.

- ✓ Use only Gentec replacement parts.
- ✓ All fasteners must be retorqued every day for the first twenty hours of use.
- ✓ Make frequent visual inspections of fasteners, boom pins, hose fittings, ect.
- ✓ Use caution when torquing fasteners. A previously overstressed part may fail.
- ✓ Do not overtorque fasteners. Adhere to specifications only.
- ✓ Install all hydraulic hoses outside of cab.
- ✓ The major Genpac components are heavy.
- ✓ Never mount the Genpac on a machine that cannot adequately handle the weight (900 lbs. or more).
- ✓ When installing or removing keep hands and fingers clear of mounting pin holes and linkage. Instruct operator to touch controls only when instructed.
- ✓ Be caution of possible flying metal particles when striking any hardened surfaces with a hand-held tool. Always protect your eyes when driving boom pins, etc.
- ✓ Wear ear protection if conditions warrant. Consult OSHA regulations.
- ✓ Properly inspect and maintain all reciprocating parts and shock absorbers.
- ✓ Operate mindful of the effect vibration may have on trench walls.
- ✓ Never operate un a trench with construction workers nearby.
- ✓ Never service in an open trench or other unsare area.
- ✓ As with all hydraulic tools clean up oil spills.

8.0 OPERATION

The Model GE-870 will achieve compaction density of 95% Proctor with granular material in 2 to 4 ft. lifts and up to 3 ft. lifts in clay material. Moisture content near optimum increases production rate.

Best results are usually obtained with two passes. For the initial pass, time for each position of the base plate is only as long as visible compaction is apparent (usually 10 to 15 seconds). The second pass should be with greater down-pressure, smoothing or ironing as required. Do not bottom mounting frame arms on base plate.

The Model GE-870 is also a very effective sheet or pile driver. In moist sand or clay, straight down pressure producing vibration perpendicular to the sheeting is sufficient. If excessive driving resistance is encountered, as in dry or rocky material for example, position the base plate 1/4 to 1/3 from the edge of the sheeting. The resulting slapping or impacting of the base plate will improve driving.

Hydraulic pressure during operation is that which is developed by the work resistance. When the compactor is in midair, the pressure will be approximately 500 p.s.i., and when compacting, will rise between that pressure and relief setting.

NOTE : IMPORTANT CONSIDERATIONS

- ★ DO NOT BOTTOM OUT MOUNTING FRAME ON BASE PLATE.
- ★ DO NOT OPERATE THE COMPACTOR WITHOUT BASE PLATE.

9.0 SERVICE AND MAINTENANCE

9.1 GENERAL GUIDELINES

Use standard mechanical technical techniques to disassemble and assemble the Genpac. Observe all safety practices.

- ★ Keep the hoses in a “loop” between motor and top mounting bracket. Angle fittings to maintain 1 ½ inch hose clearance from vertical sides of mounting bracket.
- ★ Keep return line restrictions to a minimum and maintain clear oil. Follow the backhoe manufacturer’s recommendations on hydraulic system maintenance.
- ★ Torque:
 1. Clean fasteners and mating surfaces and apply grease to threads and washer faces.
 2. Draw the surfaces snug tight by exerting medium effort with wrench of normal length.
 3. Preload the fastener by turning the screw head or nut an additional 1/3 turn (2 flats); this should require a “cheater bar”.
- ★ Periodically check fastener tightness, especially during the first few hours use after torquing.
- ★ Limit the reuses of fasteners to two or three times.

9.3 BEARING REPLACEMENT

USE ONLY GENTEC SUPPLIED BEARINGS.
THEY ARE SPECIFICALLY SELECTED FOR THE APPLICATION.

Step 1 – Remove bearing housing assembly from the main housing.

Step 2 – Press the inner race of the bearing from the back side of the bearing housing.

Step 3 – Grease lubricate the replacement bearing before installing. Work grease into all cavities of one side until it appears on the opposite side.

Step 4 – The bearing is a press fit in the housing and must be forced in by pressing on the outer race only.

Step 5 – After complete assembly, grease an additional 20 “shots” to fill bearing cavity.

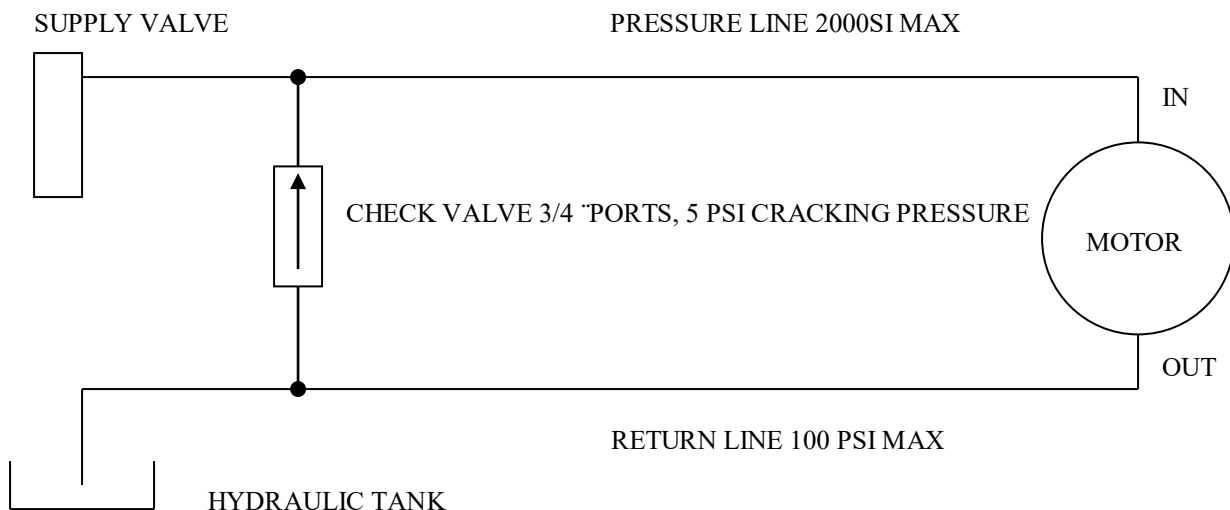
9.4 LUBRIFICATION

Under normal operating conditions, bearings should be lubricated every 2 running hours. Extreme conditions (such as high temperature) require more frequent lubrication. Approximately 10 “shots” per bearing is recommended.

Use these greases or equivalent:

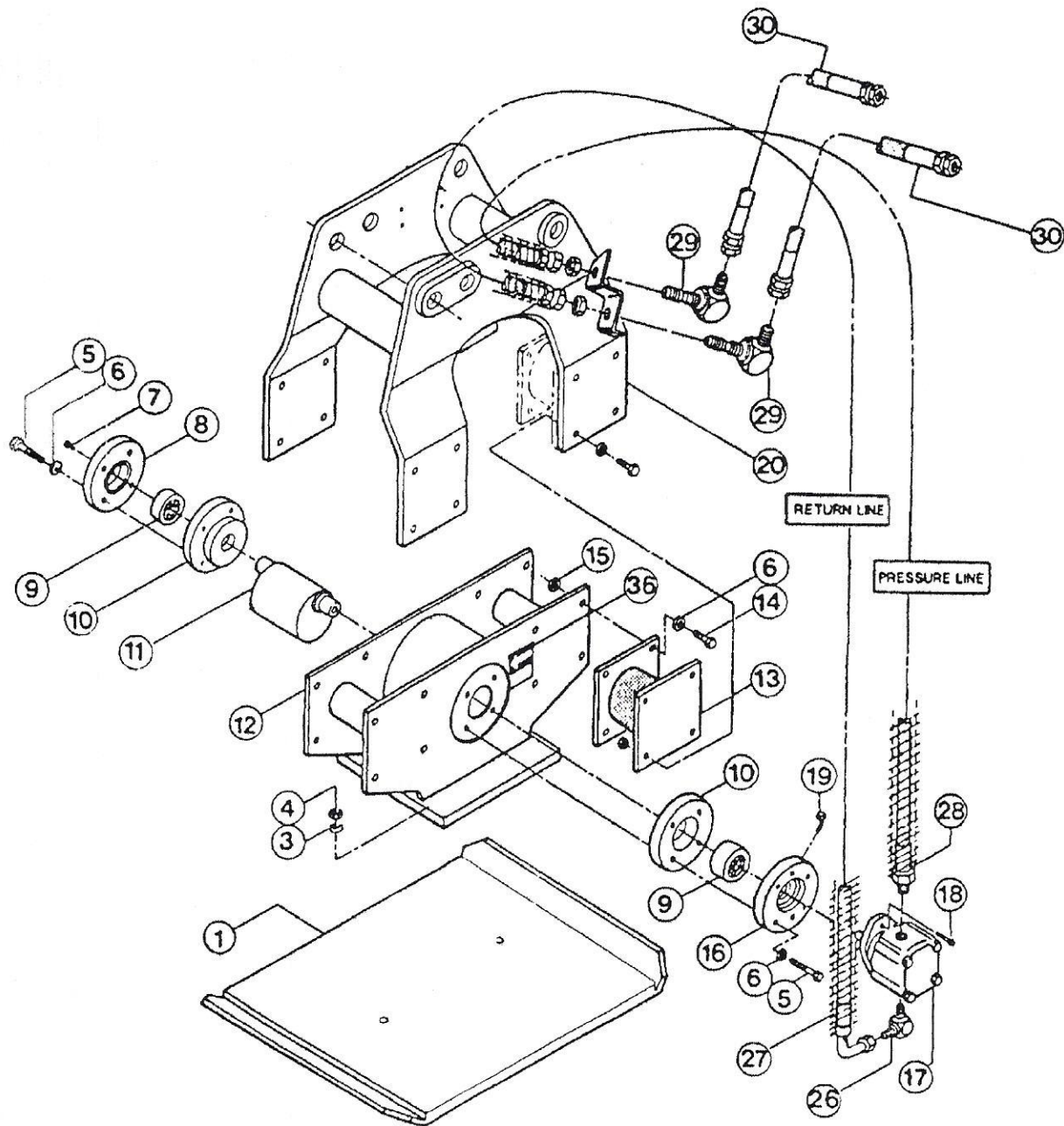
Shell Oil – Alvania EP2; Mobile Oil Co. – Mobilux EP2; Texaco Inc. – RB2

CHECK VALVE INSTALLATION FOR GENPAC GE-870 & GE-970



MODEL GE - 870 GENPAC

BASIC COMPONENTS



MODEL GE – 870 GENPAC
PART NUMBER 0878

PARTS LIST

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	870-110878	BASE PLATE
2	4	870-660851	HEX HEAD CAP SCREW
3	8	870-331900	HARDENED FLAT WASHER
4	4	870-441900	HEX NUT
5	8	110851	HEX HEAD CAP SCREW
7	1	779819	90° GREASE FITTING
8	1	000851	COVER PLATE
9	2	770850	ROLLER BEARING
10	2	880850	BEARING HOUSING
11	1	870-770870	ECCENTRIC
12	1	220878	HOUSING
13	4	870-991974	RUBBER MOUNT
14	32	001973	HEX HEAD CAP SCREW
15	32	770878	ELASTIC STOP NUT
16	1	990877	ADAPTOR PLATE
17	1	870-770877	HYDRAULIC MOTOR
18	2	110879	SCREW
19	1	770871	90° GREASE FITTING
20	1	440878	TOP MOUNTING FRAME
21	1	880877	NAME PLATE
22	4	441703	DRIVE SCREW
26	1	115653	ELBOW
27	1	440399	HOSE ASSEMBLY
28	1	220879	HOSE ASSEMBLY
29	2	330879	90° BULKHEAD UNION
30	2	995682	HOSE ASSEMBLY
31	2	660872	MALE CONNECTOR WITH TEST PORT
32	2	666756	HEX HEAD PIPE PLUG
36	2	111927	LUBRIFICATION DECAL

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