

INSTRUCTION MANUAL

SS25

Industrial Air Compressor (415V)
150 Litre / 5.5hp, 23.6cfm Displacement



C330

SUPER SERIES COMPRESSORS

OPERATING & INSTRUCTION MANUAL

COMPRESSORS

On taking delivery of your compressor, please do the following:-

- Check for shipping damage, and if any, report to the dealer.
- Read this manual.
- Put the correct amount of oil into the crankcase.
- Ensure the motor is compatible with the line voltage.
- Run the compressor without load for 10 minutes to lubricate rings and bearings.
- Do not make alterations to the pressure switch, as this is pre-set.
- If placing the compressor in a permanent position, ensure there is 500 mm clearance between the wall and the flywheel for cooling purposes.
- If a three phase unit, ensure the fan is running in the correct direction.
- Do not override the motor over current protection.

SAFETY POINTS

- ⇒ If working on the unit, discharge air from the pressure vessel and unplug the power.
- ⇒ Don't run the unit without the belt guard.

DO'S AND DON'TS

DO'S

- ◆ Attend immediately to any unusual noise or vibration coming from the compressor.
- ◆ Clean the compressor regularly.
- ◆ Drain the condensate daily by opening the drain valve.
- ◆ Keep the air filters clean.
- ◆ Maintain correct belt tension.
- ◆ Maintain correct oil level in the crankcase.
- ◆ Read the manual in detail and follow the instructions.
- ◆ Use only clean recommended lubricants.
- ◆ Use only genuine spares.
- ◆ Use the proper tools.
- ◆ Turn off air compressor at pressure switch during power failure.
- ◆ Check safety valve for normal operation weekly.

DON'TS

- ◆ Allow any leakage in the system.
- ◆ Do any repair work while the unit is running.
- ◆ Keep any tools or loose items on the compressor.
- ◆ Meddle with any adjustments or settings.
- ◆ Neglect routine inspection and maintenance.
- ◆ Overfill the crankcase with oil.
- ◆ Overload the compressor.
- ◆ Run the compressor without the belt guard.
- ◆ Use cleaning agents, when changing oil.
- ◆ Alter the pump speed.
- ◆ Tamper with safety valve.
- ◆ Adjust pressure settings above maximum working pressure of air receiver stamped on compliance plate.
- ◆ Run air compressor on underated extension cable.
- ◆ Run air compressor on angles greater than 5 degree.
- ◆ Position air compressor near explosive or inflammable gas.

INSTALLATION AND PRE-OPERATION

Foundations

The range of air compressors are available as either stationary or wheel mounted compressors. The stationary model requires good ground conditions and is best mounted on anti-vibration pads. The wheel models absorb vibration but should be positioned on level ground.

Ventilation

Ample access should be provided around the compressor for servicing. Adequate protection from the weather must be provided. Good ventilation is vital for maximum efficiency and air should be as cold, clean and dry as possible.

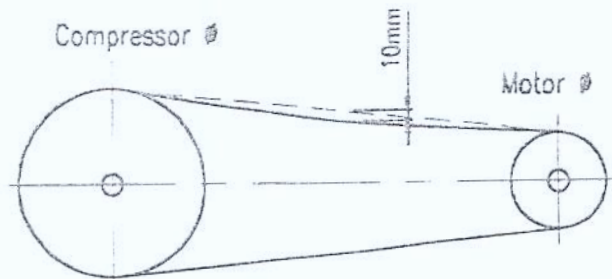
Installation

Consult an electrician who can provide an adequate supply cable and ensure the correct run voltage.

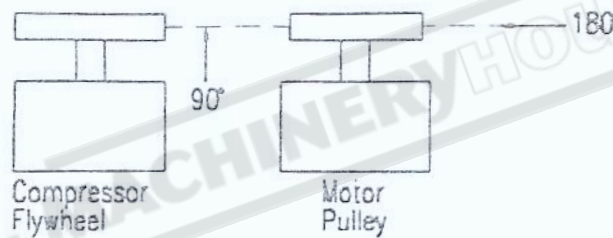
1. Check for any transit damage. In the event of damage, contact your Authorized Dealer.
2. Place compressor on level ground.
3. Situate portable compressors at least 500mm from any obstruction to ensure ample cooling air from all directions. For stationary compressors, allow 750mm for maintenance.
4. Check compressor oil level.
5. For 415 volt motors: All wiring must be carried out by a qualified electrician. Check correct rotation.
6. For 240 volt motors: Models are pre-wired.
7. Check the electrical supply for voltage, phase and frequency to see that they match the name plate stamping on the compressor motor.
**Electric units: Motor rotation must comply with directional arrow on the pump flywheel/fan.*

Installation and Pre-Operation (continuation)

8. **Check belt tension:** The V-belt(s) should be so adjusted that a movement of about 10mm will be obtained when it is pushed by a finger at the middle point as shown in Figure 1.



Pulley and flywheel should be in line as shown in Figure 2.



CAUTION

Over tightening of the V-belt(s) will result in overloading of the motor while a loose belt will slip and result in an unstable speed. The belt life will be seriously reduced in either case.

To achieve correct belt tension loosen the motor hold down bolts and slide the motor on the base, using a lever if necessary. Re-tighten the motor hold down bolts.

WARNING!!! Do not operate compressor with belt guards removed.

OPERATION PROCEDURE

CHECK DAILY:-

- Compressor oil level.
- That area surrounding compressor and motor is kept clear of all obstructions
- That air filters are not obstructed.
- Drain air receiver of moisture via the drain valve, twice per day in humid areas.
- That petrol engines are operating in accordance with the manufacturer's recommendations.

START-UP PROCEDURES

THE COMPRESSOR SHOULD BE OPERATED FROM THE PRESSURE SWITCH, NOT THE MAINS SUPPLY.

Close the drain valve and start the compressor. Confirm the direction of rotation, which is indicated on the crankcase or flywheel. For single-phase units, the direction of rotation is determined by the motor name plate instructions, and is adjusted at the factory. For three-phase units, if the rotation is incorrect, stop the unit and reverse the direction of rotation of the motor. This should be done by an electrician.

IMPORTANT: SHOULD 240 VOLT COMPRESSOR FAIL TO START, CHECK:-

- (I) POWER SUPPLY TO COMPRESSOR.
- (II) RESET MOTOR OVERLOAD BUTTON (ON TOP OF REAR MOTOR COVER).

ADJUSTMENT OF PRESSURE CONTROL SYSTEM

The pressure control system is preset at the factory at:-

Cut off pressure : 110 PSI Cut in pressure : 80 PSI

This may be varied for specific models. Any adjustment should be made by a qualified electrician.

100 HOUR SERVICE

- Change compressor oil, and use air compressor oil VCL100 or equivalent. Oil level should remain at centre of sightglass.
- Clean or replace air filters regularly (depends on environment).
- Check V-belt tension in accordance with instructions.
- Check compressor thoroughly for loose or worn fittings. Replace as necessary.
- When working pressure is reached, operate safety valve manually to ensure its correct operation.

PREVENTIVE MAINTENANCE

Cleanliness: Always make sure that the compressor unit is clean and free from oil, dirt and foreign matter build-up. Foreign matter etc. will reduce the heat flow from the unit thus making the unit run hotter.

Air Cleaners: Regular attention should be given to the maintenance of the air cleaners. The elements should be removed and cleaned using high pressure air or if oily, a soap and water solution, however, as the elements are of utmost importance to the long life of the compressor, our advice would be to change them regularly. These items are available from your local Globe dealer.

Water: It should be drained from the air receiver by means of the drain valve located underneath the receiver. Simply unscrew the knurled ring to release the water, and re-tighten finger tight. Remember that excess water will build up in humid conditions.

Leaks: Check for leaks from the compressor, fittings, delivery lines and couplings and re-seal as necessary. Even small leaks can cause significant wastage of compressed air causing extra energy usage..

Non-Return Valve: The non-return valve can be checked by stopping the machine at the pressure switch. If the air continues to escape after the initial hiss, then the non-return valve may require attention or replacement. **DO NOT REMOVE THE NON-RETURN VALVE UNLESS THE PRESSURE VESSEL HAS BEEN COMPLETELY DRAINED OF COMPRESSED AIR.**

TURN-OFF POWER BEFORE SERVICING

A good maintenance program will add years of service to your air compressor. The following is recommended as a minimum maintenance program.

(I) Maintenance Daily

- (a) Check and maintain oil level at centreline of sightglass and add oil as necessary (see Page 9 for recommended oil type).
- (b) Drain air tank every 8 to 10 hours, depending upon the moisture content of the atmosphere.
- (c) Check for unusual noise or vibration.

(II) Maintenance Weekly

- (a) Clean the air filters. A clogged air filter can seriously affect the efficiency of the compressor and cause overheating and oil usage. Change if necessary. Do not run the unit without air filters.
- (b) Check the safety valve manually (by pulling ring or lever) to see that it moves freely.
- (c) Clean all external parts of the compressor and power source. Be sure to clean the intercooler finned surface on two-stage compressors. A dirty compressor will cause abnormally high discharge temperature which results in severe compressor damage.

PREVENTIVE MAINTENANCE (continuation)

(III) Maintenance Monthly

- (a) Inspect condition of oil and change if necessary.
- (b) Check V-belt tension.
- (c) Inspect the entire air system for leaks.
- (d) Check non-return valve operation.

(IV) Every 3 months or 500 hours of operation

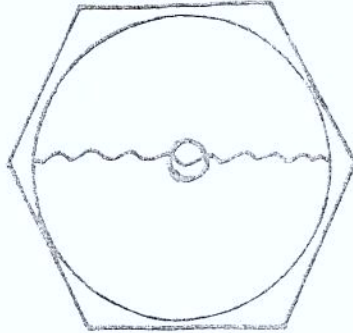
- (a) Change oil.
- (b) Inspect valves. Clean the carbon from valves and head if necessary.
- (c) Check unloader operation.

(V) Lubrication

- (a) Stop compressor and check or add oil. Do not overfill.
- (b) Use VCL 100 oil, or equivalent.
- (c) For proper lubrication, the compressor should not be operated below the minimum or above the maximum r.p.m. recommended for the various models.

PREVENTIVE MAINTENANCE (continuation)

- (d) Maintain oil level at or close to the centre of sight glass.



DO NOT OVERFILL

- (e) Change oil at the first 100 hours of operation and then every 500 hours thereafter, or as required. The frequency of oil changes will to a large extent depend on the operating environment.

IMPORTANT

- * CHANGE OIL AFTER FIRST 100 HOURS OF OPERATION.
- * USE VCL 100 OIL, OR EQUIVALENT.

COMPRESSORS

WARRANTY

RECIPROCATING COMPRESSORS 2500 HOURS OR ONE YEAR

Compressors manufactured or supplied by Hare & Forbes are warranted to be free from any defects in workmanship and material under normal use and preventive maintenance service, our obligation under this warranty being limited to replacing or repairing at Hare & Forbes any part or parts returned to us with transportation charges prepaid which on our examination shall disclose to our satisfaction to have been thus defective, within the first year or 2500 hours of operation, whichever shall first occur, from the date of delivery of the compressor to the original purchaser, this Warranty being expressly in lieu of all other warranties expressed or implied and including warranties of merchantability or fitness for a particular purpose, regarding our compressors except the warranty against defects in workmanship and material specified herein. We neither assume nor authorize any other person to assume for us any other liability in connection with the sale of our compressors. This Warranty does not include compressor removal and reinstallation expenses.

This Warranty does not apply to:-

- Any compressor that has been subject to overspeeding, misuse, negligence or accident.
- Any compressor that has been repaired or altered outside of our factory or by anyone who is not authorized by us in such a way that, in our sole judgment, its performance and reliability are adversely affected.
- Failures in any way resulting from use of parts not manufactured or approved by us.

WARRANTY (continuation)

- Normal maintenance services, including, but not limited to, compressor tune up and the repair or replacement of filters and other normal maintenance spares.
- Any improper installation or application, or any substitution of parts not manufactured or approved by us shall void all warranties, expressed or implied.
- Consumable parts such as, but not limited to rings, valves, packings, bearings, v-belts and filter elements.

We make no warranty in respect of the electric motor, which is warranted by the respective motor manufacturer.

Compressors manufactured or supplied by Hare & Forbes Machineryhouse are warranted to be free of defects in material and workmanship for a period of the first 12 months from the date of delivery or first 2500 hours operation, whichever occurs first. The warranty period commences from the date of delivery by the company to the original purchaser.

CONDITIONS PRECEDENT TO WARRANTY

Hare & Forbes recommends every compressor owner to be familiar with these warranty conditions. The warranty is explicitly subject to certain conditions being met by the purchaser/owner to the satisfaction of Hare & Forbes, without which the warranty claims, if any, would involve inordinate delays for settlement and sometimes even rejection. These are summarized here for the benefit of the owners.

The warranty is subject to fulfillment inter alia of the following obligations by the purchaser/owner of the compressor.

Proper installation of the compressor. This is the sole responsibility of the purchaser.

CONDITIONS PRECEDENT TO WARRANTY (continuation)

Normal use and preventive maintenance as recommended by the compressor owner's operating manual supplied along with the compressor.

In the event of any defects arising, it is recommended that the owner ensure that the defect could be reasonably deemed to be of workmanship or material and that the compressor was never subject to conditions in respect of which the warranty has been expressly negated.

Any part claimed to be defective should be returned Hare & Forbes with the two way freight prepaid.

No warranty is made in respect of normal wear and tear, loss of time to users while the compressor is out of commission, nor for any labour or other expense, damage or loss occasioned by any such defective parts. Any improper installation or application, or any substitution of parts not manufactured or approved by the company shall void all warranties, expressed or implied on the company's part.

GENERAL WARRANTY PRACTICES

The company's warranty practice with respect to allowances made for material, labour, or miscellaneous expenses associated with the repair of a failure involving genuine replacement parts is beyond the company's legal obligation.

COMPRESSORS

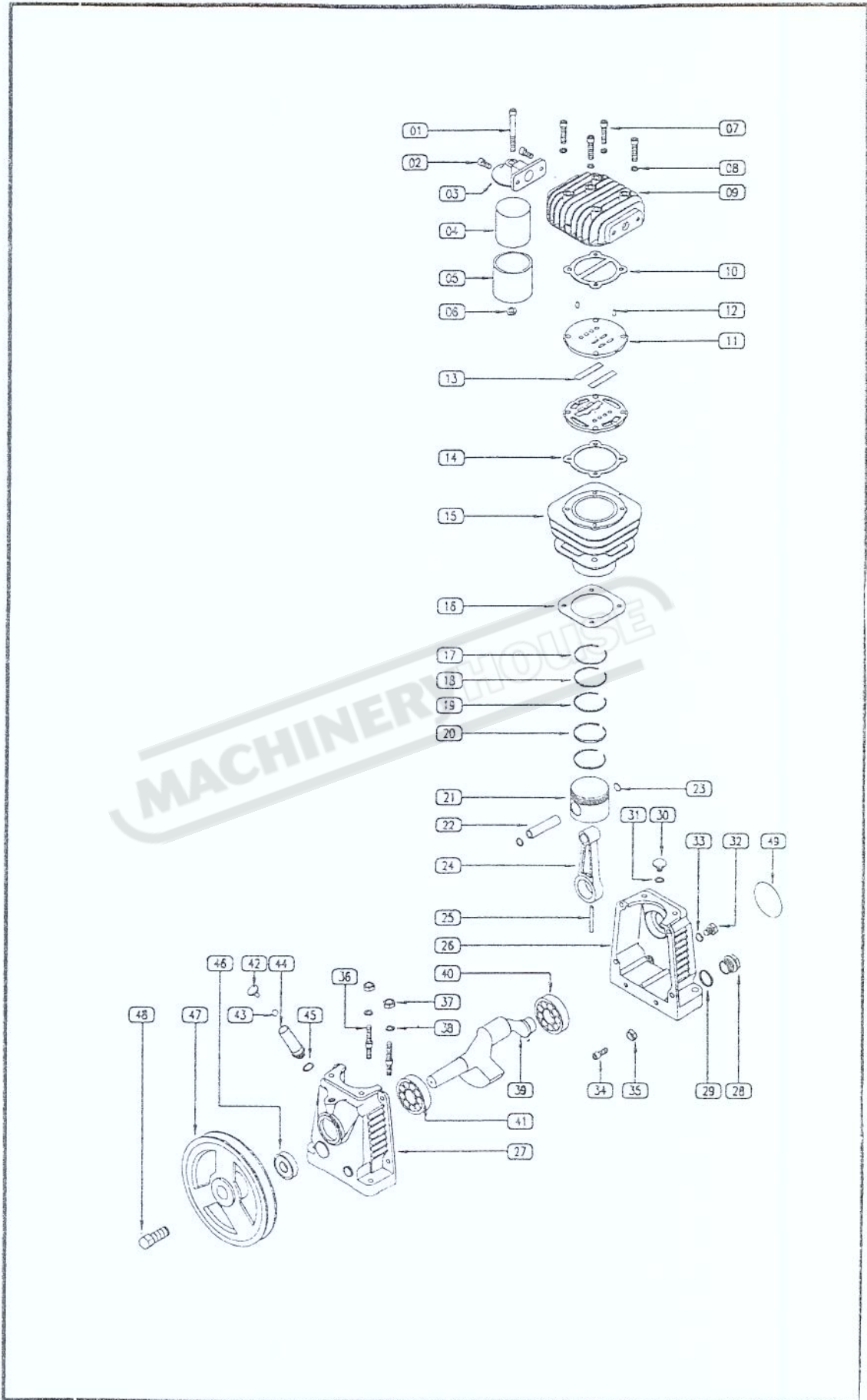
TROUBLE SHOOTING

WHEN COMPRESSOR CAN BE STARTED		
SYMPTOMS	CAUSES	REMEDIES
Abnormal noise	<ol style="list-style-type: none"> 1. Loose valve assembly 2. Piston hits valve plate 3. Worn bearing 4. Loose pulleys 	<ol style="list-style-type: none"> 1. Tighten head. 2. Return to factory for repairs. 3. Return to factory for repairs. 4. Tighten fittings.
Excessive oil consumption	<ol style="list-style-type: none"> 1. Worn piston ring 2. Worn piston 3. Worn cylinder 4. Blocked intake 5. Oil leak 	<ol style="list-style-type: none"> 1. Replace with new ones. 2. Replace with new ones. 3. Replace with new ones. 4. Clear filter. 5. Check for leakage & rectify.
Flywheel revolves in wrong direction	Incorrect connection of motor terminal	Consult an electrician.
Inaccuracy of pressure gauge	Pressure gauge faulty	Replace with new one.
Overheating of electric motor	<ol style="list-style-type: none"> 1. Overloading of motor due to excessive working pressure (higher than anticipated) 2. Burnt piston, pump seized or tight 	<ol style="list-style-type: none"> 1. Lower working pressure. 2. Rebuild compressor.
Overheating of bearings	<ol style="list-style-type: none"> 1. Insufficient lubrication 2. Bad lubrication system 3. Crankshaft placed wrongly 4. Dipper broken 	<ol style="list-style-type: none"> 1. Add lubrication oil. 2. Return to factory for repairs. 3. Return to factory for repairs. 4. Return to factory for repairs.
Full cut out pressure can not be reached	<ol style="list-style-type: none"> 1. Worn valve plate 2. Valves have lost their temper 3. Dirt on valve plate 4. Leaks from safety valve 5. Leaks from bolt holes 6. Uneven valve seat surface 7. Leaks from piston rings 8. Gasket blown 9. Fittings leaking 	<ol style="list-style-type: none"> 1. Repair or replace valve plate. 2. Replace valve. 3. Remove and clean it. 4. Replace safety valve. 5. Tighten the nuts evenly with thread sealant. 6. Remove and lap the surface. 7. Replace with new ones. 8. Replace gasket. 9. Replace with new ones or reseal.

TROUBLE SHOOTING (continuation)

WHEN COMPRESSOR CAN BE STARTED		
SYMPTOMS	CAUSES	REMEDIES
Compressor constantly cuts in and out	<ol style="list-style-type: none"> 1. Pressure switch faulty 2. Air receiver full of water 	<ol style="list-style-type: none"> 1. Replace switch. 2. Drain air receiver.
Revolution slows down	<ol style="list-style-type: none"> 1. Heavy lubrication oil 2. Worn motor condenser 	<ol style="list-style-type: none"> 1. Refill with recommended oil. 2. Return to factory for repairs.
Slipping of belts	<ol style="list-style-type: none"> 1. Working pressure too high 2. Improper belt tension 3. Worn belt 	<ol style="list-style-type: none"> 1. Correct and lower working pressure. 2. Adjust belt tension. 3. Replace with new ones.
Excessive oil coming out of breather	<ol style="list-style-type: none"> 1. Too much oil in crankcase 2. Non-return valve not seating 	<ol style="list-style-type: none"> 1. Reduce level. 2. Check non-return valve.
WHEN COMPRESSOR CANNOT BE STARTED		
SYMPTOMS	CAUSES	REMEDIES
Fuse tends to blow	<ol style="list-style-type: none"> 1 Fuse underated 2 Wrong connections 3 Overloading of motor 	<ol style="list-style-type: none"> 1 Replace with correct rated fuse. 2 Contact electrician. 3 Contact electrician.
Fuse O.K. but still cannot start	<ol style="list-style-type: none"> 1 Power not switched on 2 Power failure 3 Malfunction of motor 4 Pressure switch malfunction 5 Motor overload 	<ol style="list-style-type: none"> 1 Plug in and switch on. 2 Contact power company. 3 Contact electrician. 4 Check pressure switch. 5 Reset overload, switch on motor.

* All electrical work should be carried out by a qualified electrician.



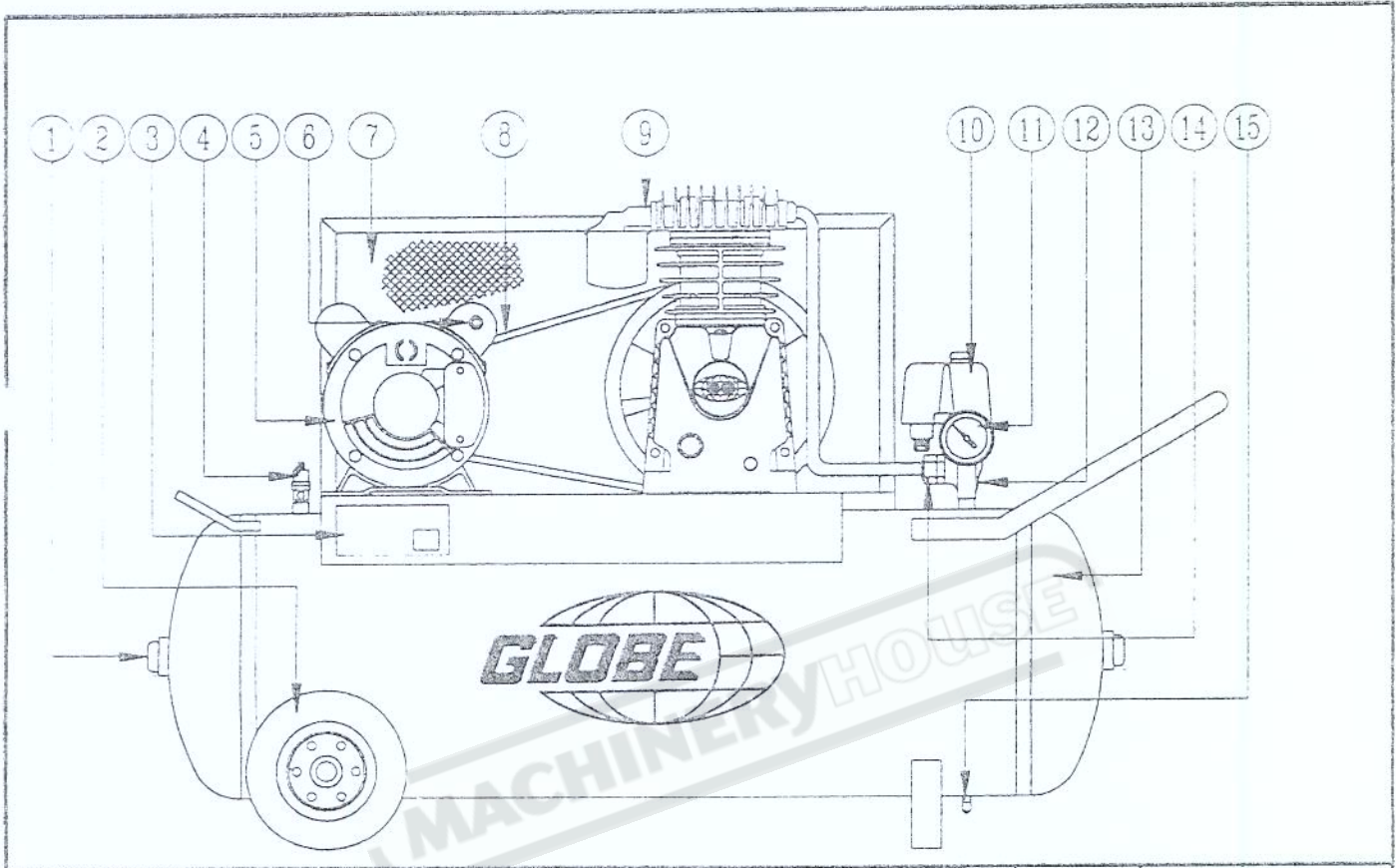
GENERAL ARRANGEMENT OF BARE BLOCK MODEL GC 08 (1.0 HP)

Legend	Designation	Size	Qty	Part No.
01 *	Bolt - Air Filter Mounting	M6 x 75 (Pan Head)	1	GC-201
02 *	Bolt - Air Filter/Head	M6 x 12 (Phillip)	2	GC-202
03 *	Air Filter Top		1	GC-203
04 *	Air Filter Foam	OD 60 x ID 5 x 60	1	GC-204
05 *	Air Filter Base		1	GC-205
06 *	Nut - Air Filter Mounting	Flange Nut M6	1	GC-206
07	Bolt - Cylinder/Head	M8 x 60 (Hex)	4	GC-207
08	Washer - Head	M8 (8 x 15 x 1.5)	4	GC-208
09	Casting - Cylinder Head		1	GC-109
10 #	Gasket - Valve Plate/Head		1	GC-210
11	Casting - Valve Plate		2	GC-211
12	Self Lock Spring	M3 x 10	2	GC-212
13	Reed Valve Plate		2	GC-213
14 #	Gasket - Cylinder/Valve Plate		1	GC-214
15	Casting - Cylinder		1	GC-215
16 #	Gasket - Cylinder/Crankcase		1	GC-216
17 **	Compression Rings - Top		1	GC-220
18 **	Compression Rings - Bottom		1	GC-221
19 **	Oil Control Ring - Rail		2	GC-222
20 **	Oil Control Ring - Middle		1	GC-223
21	Casting - Piston		1	GC-224
22	Gudgeon Pin		1	GC-225
23	Gudgeon Circlips		2	GC-226
24	Casting - Conrod Knife		1	GC-127
25	Conrod Dipper/Rivet	1/8" x 1/4"	1	GC-228
26	Casting - Crankcase Front		1	GC-130
27	Casting - Crankcase Back		1	GC-131
28 °	Oil Sight Glass		1	GC-232
29 °	O-Ring ~ Oil Sight Glass	3 x 20 ID x 26 OD	1	GC-233
30 °°	Oil Filler Cap		1	GC-234
31 °°	O-Ring ~ Oil Filler Cap	2.5 x 14 ID x 19 OD	1	GC-235
32 °°°	Drain Plug		1	GC-236
33 °°°	O-Ring ~ Drain Plug	2.5 x 10.55 ID x 15.5 OD	1	GC-237
34	Bolt - Crankcase	M8 x 20 (Socket Head)	6	GC-238
35	Nut - Crankcase (F/B)	Hex Nut M8	6	GC-239
36	Stud - Cylinder/Crankcase	M8 (12 x 5 x 21)	4	GC-240
37	Nut - Cylinder/Crankcase	M8	4	GC-241
38	Washer - Cylinder/Crankcase	M8 (8 x 18 x 1.2)	4	GC-242
39	Casting - Crankshaft		1	GC-143
40	Crankshaft Bearing - Front	6205	1	GC-244
41	Crankshaft Bearing - Back	6205 - Z	1	GC-245
42 ***	Oil Breather Top		1	GC-246
43 ***	Oil Breather Ball		1	GC-247
44 ***	Oil Breather Base		1	GC-248
45 ***	O-Ring ~ Oil Breather	2.5 x 10.55 ID x 15.5 OD	1	GC-249
46	Crankshaft Oil Seal	RST/TC 25 x 38 x 7	1	GC-250
47	Casting - Flywheel		1	GC-151
48	Bolt - Flywheel	M8 x 25 (Socket Head)	1	GC-252
49	Sticker - Globe	OD 58 (Globe 08)	1	GC-154

Items to be supplied as an assembly only :

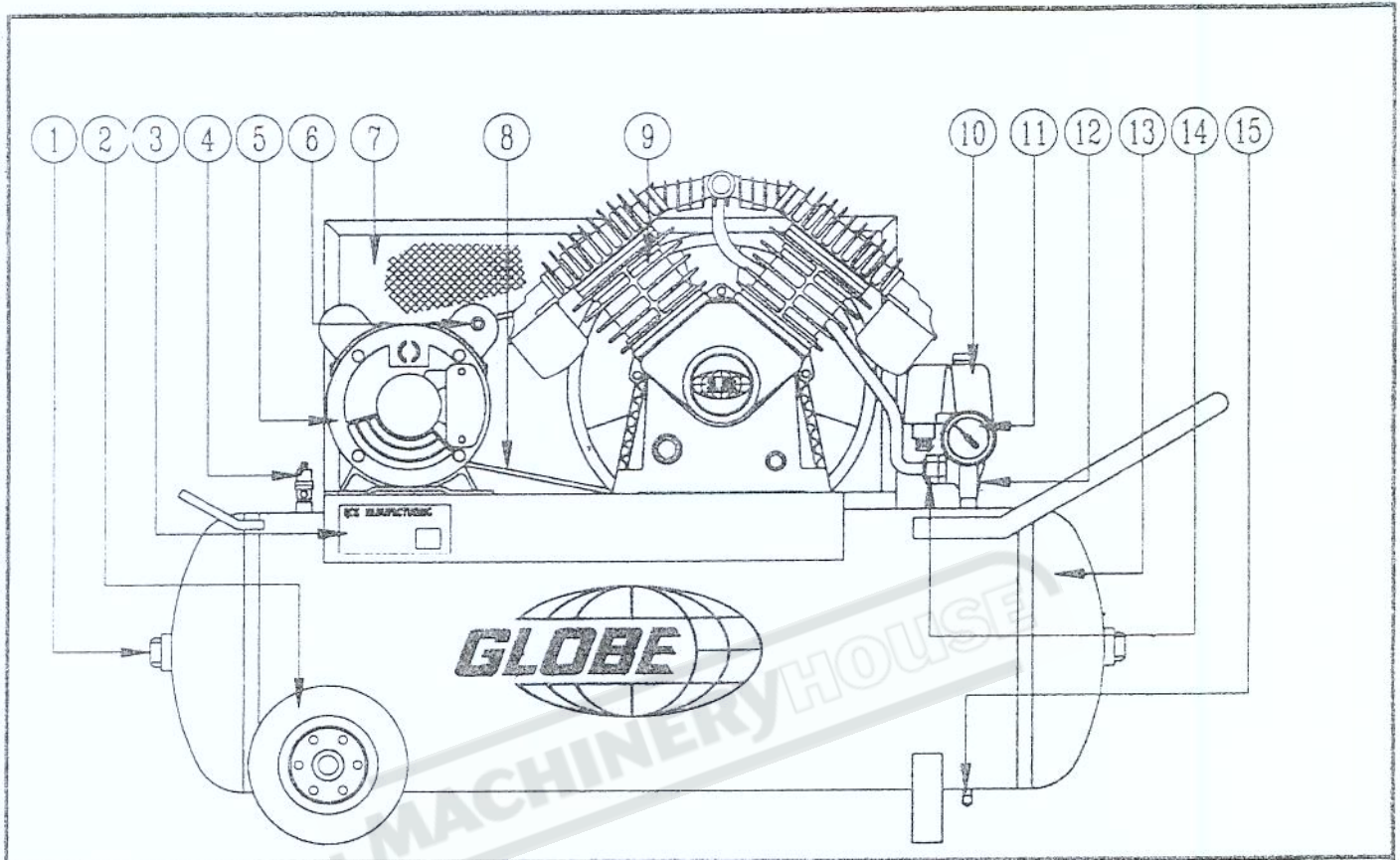
* Air Filter Assembly Set	GC-001	° Oil Sight Glass Set	GC-005
** Compressors Rings Set	GC-002	** Oil Filler Cap Set	GC-006
*** Oil Breather Set	GC-003	°°° Drain Plug Set	GC-007
# Gaskets Set	GC-008		

GLOBE COMPRESSOR MODEL GC 08 (1.0 HP)

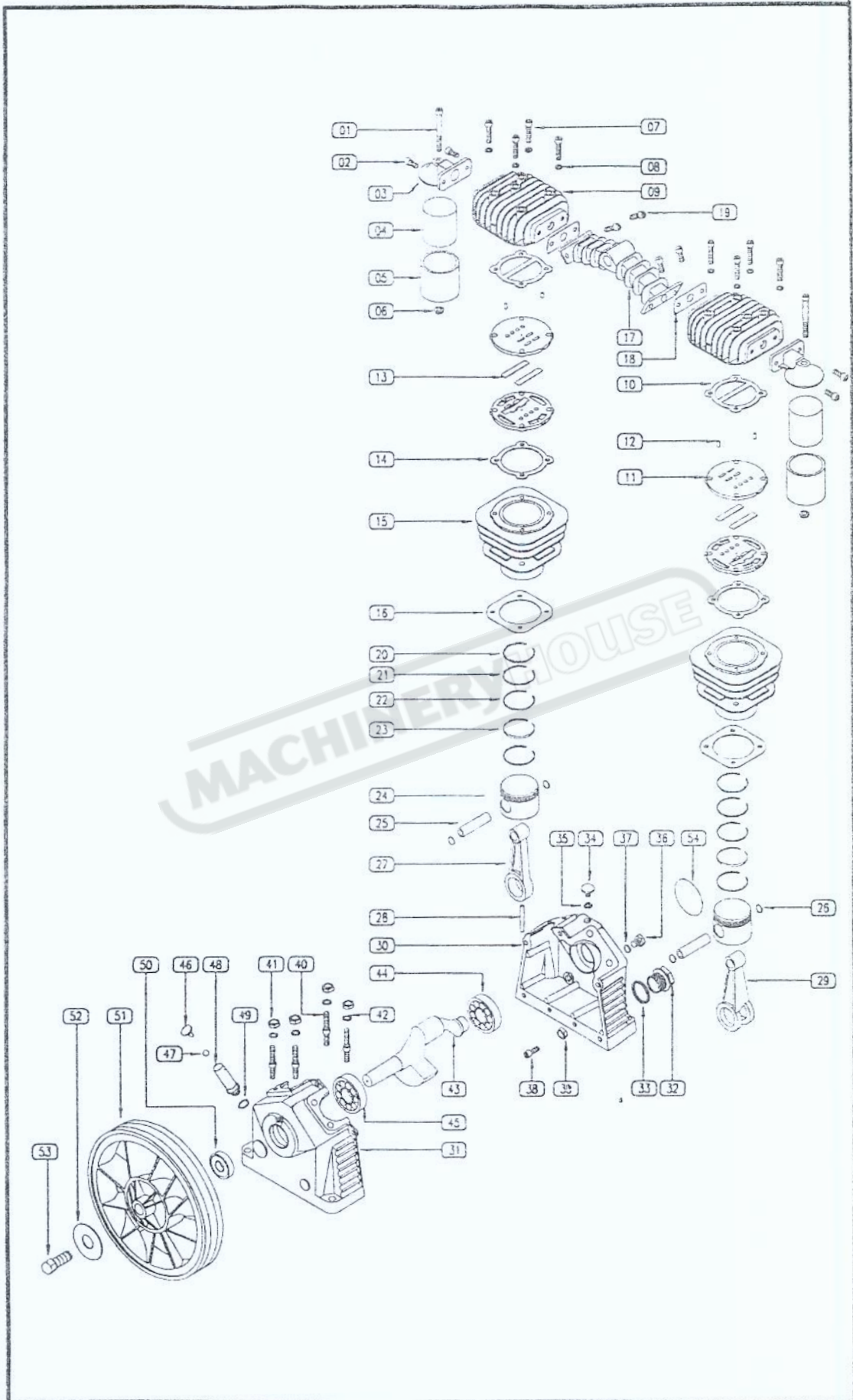


LEGEND	PARTS DESCRIPTION	LEGEND	PARTS DESCRIPTION
1	Inspection plug	9	Compressor pump & flywheel
2	Wheel	10	Pressure switch
3	Model code/tank serial no.	11	Pressure guage
4	Non-return valve	12	Steel riser
5	Motor and pulley	13	Air receiver tank
6	Thermal overload switch	14	Check valve
7	Fully enclosed belt guard	15	Drain valve
8	V-belt		

GLOBE COMPRESSOR MODEL GC 12 (2.0 HP) & GC 16 (3.0 HP)



LEGEND	PARTS DESCRIPTION	LEGEND	PARTS DESCRIPTION
1	Inspection plug	9	Compressor pump & flywheel
2	Wheel	10	Pressure switch
3	Model code/tank serial no.	11	Pressure guage
4	Non-return valve	12	Steel riser
5	Motor and pulley	13	Air receiver tank
6	Thermal overload switch	14	Check valve
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8	V-belt		

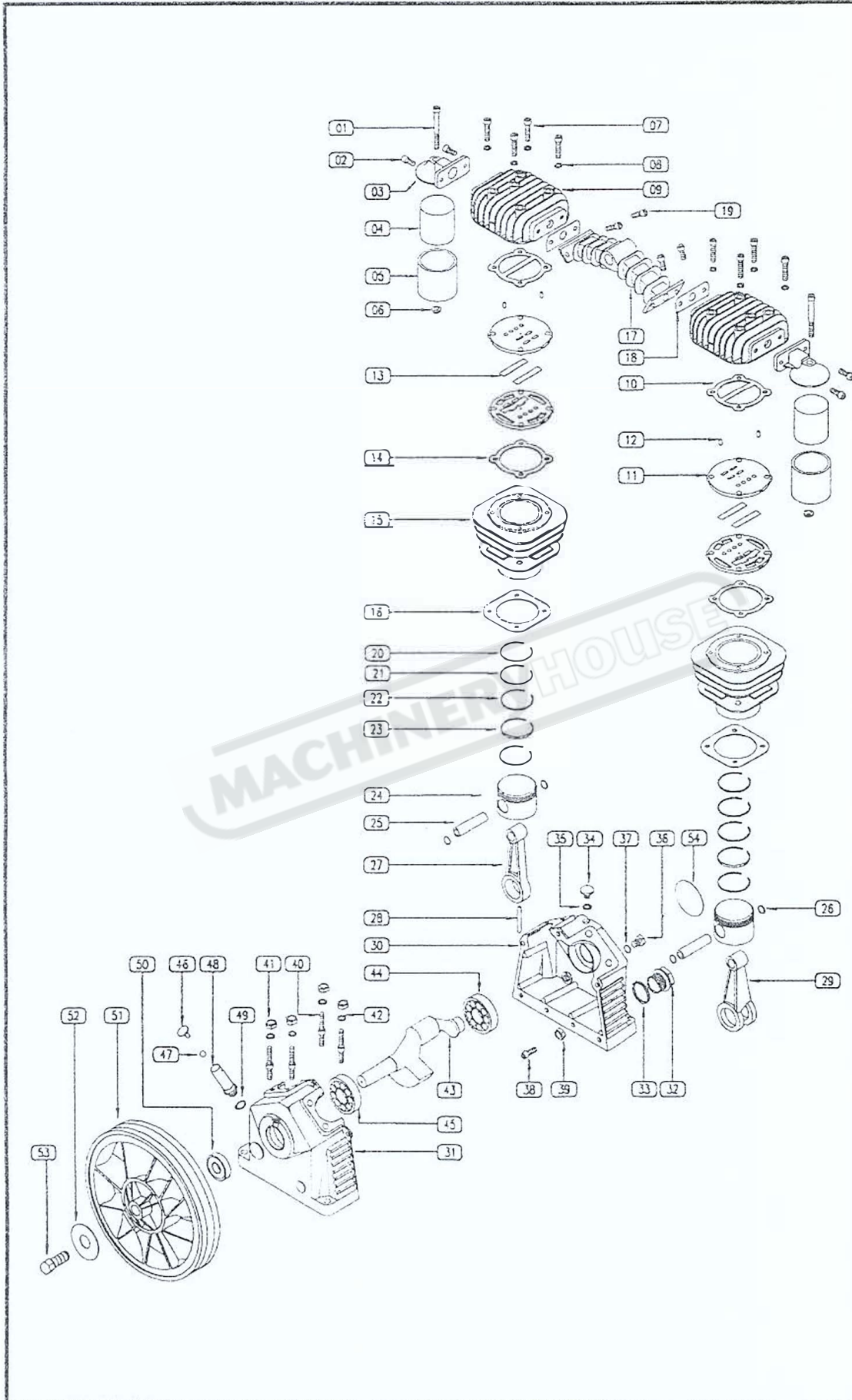


GENERAL ARRANGEMENT OF BARE BLOCK MODEL GC 12 (2.0 HP)

Legend	Designation	Size	Qty	Part No.
01 *	Bolt - Air Filter Mounting	M6 x 75 (Pan Head)	2	GC-201
02 *	Bolt - Air Filter/Head	M6 x 12 (Phillip)	4	GC-202
03 *	Air Filter Top		2	GC-203
04 *	Air Filter Foam	OD 60 x ID 5 x 60	2	GC-204
05 *	Air Filter Base		2	GC-205
06 *	Nut - Air Filter Mounting	Flange Nut M6	2	GC-206
07	Bolt - Cvylinder/Head	M8 x 60 (Hex)	8	GC-207
08	Washer - Head	M8 (8 x 15 x 1.5)	8	GC-208
09	Casting - Cvylinder Head		2	GC-209
10 #	Gasket - Valve Plate/Head		2	GC-210
11	Casting - Valve Plate		4	GC-211
12	Self Lock Spring	M3 x 10	4	GC-212
13	Reed Valve Plate		4	GC-213
14 #	Gasket - Cvylinder/Valve Plate		2	GC-214
15	Casting - Cvylinder		2	GC-215
16 #	Gasket - Cvylinder/Crankcase		2	GC-216
17	Casting - Manifold		1	GC-217
18 #	Gasket - Manifold		2	GC-218
19	Bolt - Manifold	M8 x 16 (Socket Head)	4	GC-219
20 **	Compression Rings - Top		2	GC-220
21 **	Compression Rings - Bottom		2	GC-221
22 **	Oil Control Ring - Rail		4	GC-222
23 **	Oil Control Ring - Middle		2	GC-223
24	Casting - Piston		2	GC-224
25	Gudgeon Pin		2	GC-225
26	Gudgeon Circlips		4	GC-226
27	Casting - Conrod Knife		1	GC-227
28	Conrod Dipper/Rivet	1/8" x 1/4"	1	GC-228
29	Casting - Conrod Fork		1	GC-229
30	Casting - Crankcase Front		1	GC-230
31	Casting - Crankcase Back		1	GC-231
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35 °°	O-Ring ~ Oil Filler Cap	2.5 x 14 ID x 19 OD	1	GC-235
36 °°°	Drain Plug		1	GC-236
37 °°°	O-Ring ~ Drain Plug	2.5 x 10.55 ID x 15.5 OD	1	GC-237
38	Bolt - Crankcase	M8 x 20 (Socket Head)	7	GC-238
39	Nut - Crankcase (F/B)	Hex Nut M8	7	GC-239
40	Stud - Cvylinder/Crankcase	M8 (12 x 5 x 21)	8	GC-240
41	Nut - Cvylinder/Crankcase	M8	8	GC-241
42	Washer - Cvylinder/Crankcase	M8 (8 x 18 x 1.2)	8	GC-242
43	Casting - Crankshaft		1	GC-243
44	Crankshaft Bearing - Front	6205	1	GC-244
45	Crankshaft Bearing - Back	6205 - Z	1	GC-245
46 ***	Oil Breather Top		1	GC-246
47 ***	Oil Breather Ball		1	GC-247
48 ***	Oil Breather Base		1	GC-248
49 ***	O-Ring ~ Oil Breather	2.5 x 10.55 ID x 15.5 OD	1	GC-249
50	Crankshaft Oil Seal	RST/TC 25 x 38 x 7	1	GC-250
51	Casting - Flywheel		1	GC-251
52	Washer - Flywheel	M10 (10.5 x 32 x 4.5)	1	GC-252
53	Bolt - Flywheel	3/8" x 25 H/Tensile (L/H)	1	GC-253
54	Sticker - Globe	OD 64 (Globe 12)	1	GC-254

Items to be supplied as an assembly only :

* Air Filter Assembly	GC-001	° Oil Sight Glass Set	GC-005
** Compressors Rings Set	GC-002	°° Oil Filler Cap Set	GC-006
*** Oil Breather Set	GC-003	°°° Drain Plug Set	GC-007
# Gaskets Set	GC-004		



GENERAL ARRANGEMENT OF BARE BLOCK MODEL GC 16 (3.0 HP)

Legend	Designation	Size	Qty	Part No.
01 *	Bolt - Air Filter Mounting	M6 x 75 (Pan Head)	2	GC-201
02 *	Bolt - Air Filter/Head	M6 x 12 (Phillip)	4	GC-202
03 *	Air Filter Top		2	GC-203
04 *	Air Filter Foam	OD 60 x ID 5 x 60	2	GC-204
05 *	Air Filter Base		2	GC-205
06 *	Nut - Air Filter Mounting	Flange Nut M6	2	GC-206
07	Bolt - Cylinder/Head	M8 x 60 (Hex)	8	GC-207
08	Washer - Head	M8 (8 x 15 x 1.5)	8	GC-208
09	Casting - Cylinder Head		2	GC-309
10 #	Gasket - Valve Plate/Head		2	GC-210
11	Casting - Valve Plate		4	GC-211
12	Self Lock Spring	M3 x 10	4	GC-212
13	Reed Valve Plate		4	GC-213
14 #	Gasket - Cylinder/Valve Plate		2	GC-214
15	Casting - Cylinder		2	GC-315
16 #	Gasket - Cylinder/Crankcase		2	GC-216
17	Casting - Manifold		1	GC-217
18 #	Gasket - Manifold		2	GC-218
19	Bolt - Manifold	M8 x 16 (Socket Head)	4	GC-219
20 **	Compression Rings - Top		2	GC-220
21 **	Compression Rings - Bottom		2	GC-221
22 **	Oil Control Ring - Rail		4	GC-222
23 **	Oil Control Ring - Middle		2	GC-223
24	Casting - Piston		2	GC-224
25	Gudgeon Pin		2	GC-225
26	Gudgeon Circlips		4	GC-226
27	Casting - Conrod Knife		1	GC-227
28	Conrod Dipper/Rivet	1/8" x 1/4"	1	GC-228
29	Casting - Conrod Fork		1	GC-229
30	Casting - Crankcase Front		1	GC-230
31	Casting - Crankcase Back		1	GC-231
32 °	Oil Sight Glass		1	GC-232
33 °	O-Ring ~ Oil Sight Glass	3 x 20 ID x 26 OD	1	GC-233
34 °°	Oil Filler Cap		1	GC-234
35 °°	O-Ring ~ Oil Filler Cap	2.5 x 14 ID x 19 OD	1	GC-235
36 °°°	Drain Plug		1	GC-236
37 °°°	O-Ring ~ Drain Plug	2.5 x 10.55 ID x 15.5 OD	1	GC-237
38	Bolt - Crankcase	M8 x 20 (Socket Head)	7	GC-238
39	Nut - Crankcase (F/B)	Hex Nut M8	7	GC-239
40	Stud - Cylinder/Crankcase	M8 (12 x 5 x 21)	8	GC-240
41	Nut - Cylinder/Crankcase	M8	8	GC-241
42	Washer - Cylinder/Crankcase	M8 (8 x 18 x 1.2)	8	GC-242
43	Casting - Crankshaft		1	GC-343
44	Crankshaft Bearing - Front	6205	1	GC-244
45	Crankshaft Bearing - Back	6205 - Z	1	GC-245
46 ***	Oil Breather Top		1	GC-246
47 ***	Oil Breather Ball		1	GC-247
48 ***	Oil Breather Base		1	GC-248
49 ***	O-Ring ~ Oil Breather	2.5 x 10.55 ID x 15.5 OD	1	GC-249
50	Crankshaft Oil Seal	RST/TC 25 x 38 x 7	1	GC-250
51	Casting - Flywheel		1	GC-251
52	Washer - Flywheel	M10 (10.5 x 32 x 4.5)	1	GC-252
53	Bolt - Flywheel	3/8" x 25 H/Tensile (L/H)	1	GC-253
54	Sticker - Globe	OD 64 (Globe 16)	1	GC-354

Items to be supplied as an assembly only :

* Air Filter Assembly	GC-001	° Oil Sight Glass Set	GC-005
** Compressors Rings Set	GC-002	°° Oil Filler Cap Set	GC-006
*** Oil Breather Set	GC-003	°°° Drain Plug Set	GC-007
# Gaskets Set	GC-004		