GARDNER DENVER

ENERGY STAR PARTNER

1-1-605
Version: 08
May 12, 2011

A-SERIES
COMPRESSOR

MODELS

ATLE6A
&
ATLE6B

7-7/8” & 7-7/8” x 3”

PARTS LIST
OPERATING AND
SERVICE MANUAL

MAINTAIN COMPRESSOR RELIABILITY AND PERFORMANCE WITH GENUINE GARDNER DENVER® COMPRESSOR PARTS AND SUPPORT SERVICES

Gardner Denver® Compressor genuine parts, manufactured to design tolerances, are developed for optimum dependability – specifically for Gardner Denver compressor systems. Design and material innovations are the result of years of experience with hundreds of different compressor applications. Reliability in materials and quality assurance is incorporated in our genuine replacement parts.

Your authorized Gardner Denver Compressor distributor offers all the backup you'll need. A worldwide network of authorized distributors provides the finest product support in the air compressor industry. Your local authorized distributor maintains a large inventory of genuine parts and he is backed up for emergency parts by direct access to the Gardner Denver Compressor Division, in Quincy, Illinois..

Your authorized distributor can support your Gardner Denver air compressor with these services:

1. Trained parts specialists to assist you in selecting the correct replacement parts.
2. A full line of factory tested AEON™ compressor lubricants specifically formulated for use in Gardner Denver compressors.
3. Repair and maintenance kits designed with the necessary parts to simplify servicing your compressor.

Authorized distributor service technicians are factory trained and skilled in compressor maintenance and repair. They are ready to respond and assist you by providing fast, expert maintenance and repair services.

For the location of your local authorized Gardner Denver Air Compressor distributor, refer to the yellow pages of your phone directory or contact:

Factory:
Gardner Denver
1800 Gardner Expressway
Quincy, IL 62301

Phone: (217) 222-5400

Fax: (217) 224-7814

INSTRUCTIONS FOR ORDERING REPAIR PARTS

When ordering parts, specify Compressor MODEL, Method of Cooling, HORSEPOWER and SERIAL NUMBER (see nameplate on unit). The Serial Number is also stamped on top of the discharge bearing carrier casting.

All orders for Parts should be placed with the nearest authorized distributor.

Where NOT specified, quantity of parts required per compressor or unit is one (1); where more than one is required per unit, quantity is indicated in parenthesis. SPECIFY EXACTLY THE NUMBER OF PARTS REQUIRED.

DO NOT ORDER BY SETS OR GROUPS.

To determine the Right-Hand and Left-Hand side of a compressor, stand at the drive end and look toward the compressor. Right-Hand and Left- Hand are indicated in parenthesis following the part name, i.e. (RH) and (LH), when appropriate.

TABLE OF CONTENTS

INDEX

FOREWARD

Gardner Denver compressors are the result of advanced engineering and skilled manufacturing. To be assured of receiving maximum service form this machine the owner must exercise care in its operation and maintenance. This book is written to have the operator and maintenance department essential information for day-to-day operation, maintenance and adjustment. Careful adherence to these instructions will result in economical operation and minimum downtime.

DANGER

Danger is used to indicate the pressure of a hazard which will cause severe personal injury, death, or substantial property damage if the warning is ignored.

WARNING

Warning is used to indicate the presence of a hazard which can cause severe personal injury, death, or substantial property damage if the warning is ignored.

CAUTION

Caution is used to indicate the presence of a hazard which will or can cause minor personal injury or property damage if the warning is ignored.

NOTICE

Notice is used to notify people of installation, operation or maintenance information which is important but not hazard-related.

SAFETY PRECAUTIONS

Safety is everybody's business and is based on your use of good common sense. All situations or circumstances cannot be predicted and covered by established rules. Therefore, use your past experience, watch out for safety hazards and be cautions. Some general safety precautions are given below:

DANGER

Failure to observe these notices could result in injury to or death of personnel.

- **Do not operate unit if safety devices are not operating properly. Check periodically. Never bypass safety devices.**
- **Keep fingers and clothing away from revolving fan, belts and sheaves.**
- **Do not use the air discharge from this unit for breathing – not suitable for human consumption.**
- **Do not loosen or remove the oil filter plug, drain plugs, covers, or break any connections, etc. In the compressor air or oil system until the unit is shut down and the air pressure has been relieved.**
- **Electrical shock will result in injury or death to personnel. Open main disconnect switch before working on the control**
- **Compressor unit must be grounded in accordance with the National Electrical Code.**
- **Disconnect the compressor unit from its power source, tag and lockout before working on the unit – this machine is automatically controlled and may start at any time.**
- **Do not modify unit without written permission from Manufacturer's Engineering Department.**

WARNING

Failure to observe these notices could result in damage to equipment.

- **Stop the unit if any repairs or adjustments on or around the compressor are required**
- **An Excess Flow Valve should be on all compressed air supply hoses exceeding 1/2 inch inside diameter. (OSHA Regulation, Section 1926-302)**
- **Do not exceed the rated maximum pressure values shown on the nameplate.**
- **Bearings can be damaged by passage or current. Do not electric weld on the compressor or base.**
- **Inspect all pipe and tube connections for looseness or leakage on at least an annual basis.**

INSTALLATION AND OPERATING INSTRUCTIONS

The Installation and Operating Instructions should be read carefully before starting the unit.

LOCATION - The compressor should be installed in a clean well-lighted place, with plenty of space around it, and in such a manner as to be accessible from all sides. Do not place unit too near other machinery or too close to the wall. Unit should be set on a firm foundation, with the feet shimmed to eliminate rocking and undue stresses when bolted to foundation.

AIR FILTER - The intake of every compressor should be equipped with an air filter to prevent dust and other abrasives from being drawn into the cylinders.

In cases where no air filter is installed, the company will assume no responsibility for excessive wear of the pistons, piston rings, cylinder bore or valve details, even though such wear occurs very soon after the compressor is installed. To operate properly, filters must be kept clean.

INLET LINE - Where an inlet line is used between the air filter and the compressor, it must be thoroughly cleaned on the inside to prevent dirt or scale from entering the compressor. **If welded construction is used, the line must be shot blasted and cleaned to remove welding scale.** In either case, the inlet line must be coated internally by galvanizing or painting with a moisture and oil-proof sealing lacquer. Up to ten (10) feet in length, the inlet line should be the full size of the inlet opening on the compressor. If an extra-long line is necessary, the pipe size should be increased according to chart below.

Accessibility for inlet air filter servicing must be considered when relocating the filters from the unit to a remote location.

PIPING - Air discharge pipe must be full size of discharge opening on air cylinder. The discharge pipe should be as short and direct as possible, eliminating short bends and fittings and avoiding pockets. A **Pressure Relief Valve** must be placed in the discharge line between the compressor and any shutoff valve, check valve or aftercooler. The discharge line should be piped to the lowest opening in the air receiver.

DANGER

Discharge air used for breathing will cause injury or death.

Consult filtration specialists for additional filtration equipment to meet health and safety standards.

DANGER

Do not operate the compressor without the proper pressure relief valve. Overpressure operation may cause severe damage to equipment and personal injury.

As the air cools in being carried through the distributing lines to the point at which it is to be used, it deposits moisture mixed with a small amount of oil. This moisture is objectionable in pneumatic tools, sand blasting, paint spray work and similar operations. Much of the trouble with water in the air lines can be overcome if small receivers to act as collecting tanks are put in the lines at frequent intervals, otherwise suitable moisture traps should be used.

LUBRICATING SYSTEM - The ATL compressor is lubricated by an oil pump driven by the compressor crankshaft.

INLET LINE LENGTHS

0 to 10 Feet	Same As Compressor Inlet Opening
10 to 17 Feet	One Size Larger Than Inlet Opening
17 to 38 Feet	Two Sizes Larger Than Inlet Opening

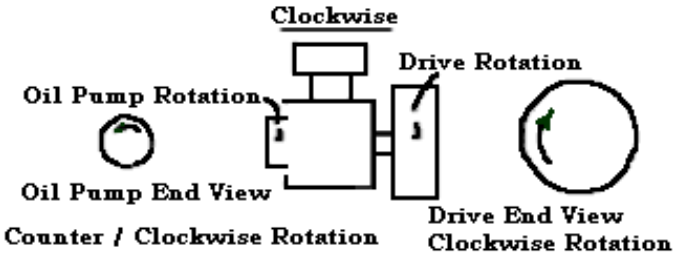


FIGURE 1 – ROTATION ILLUSTRATION

COVERS AND GUARDS

DANGER

To avoid personal injury or death from moving parts all compressor covers and guards must be securely fastened in their proper positions at all times when the compressor is operating.

In addition, all moving parts on the entire compressor package, including but not limited to engine or motors, drive shafts, belts, pulleys, etc., must be equipped with guards or covers, which must be securely fastened in proper position at all times when equipment is operating. Covers and guards are intended to not only protect against personal injury or death, but to also protect the equipment from damage from foreign objects.

STORAGE - After completing test of the compressor, a protective type oil to retard rust and corrosion is sprayed into the suction intake to protect interior of heads, valves and upper cylinder section. This is done with unit running.

This treatment gives the compressor sufficient protection against corrosion for approximately four months under average conditions. The protective oil in the unit need not be removed, as it will mix with lubricating oils.

If a compressor is stored or not put into use for a period longer than four months, the following procedure is recommended:

Remove valves and handhold plates. Inspect interior for signs of corrosion. Rotate unit to inspect cylinder walls. Use a protective type oil to retard corrosion and rust and spray inside crankcase through handhold plates. Spray cylinder bores. Spray valves and reassemble.

CAUTION

This protective oil spray treatment is only sufficient for a short period of time and should not be confused with long term storage.

PRESTART CHECK - (New or Overhauled Unit).

1. Check all bolts and nuts for tightness. Bolt torque specifications can be found .
2. Inspect air filter and air intake line for dirt and loose connections.
3. Service air filter per instructions in “Air Filter”, page 11.
4. Check oil level - oil level must be to full mark on dipstick. New unit is supplied with break in oil in crankcase.
5. Open valve in discharge line between compressor and air receiver, where used.
6. Make sure proper pressure relief valve is between compressor and any line shutoff valve, check valve or aftercooler.
7. Open the valve in the air line to unloading control (customer supplied), where used (ATLE6B units only). The unloading control device must be connected to the unloader tube. Minimum operating pressure required is 17 pisg.
8. Check V-belt drive alignment and proper tension.
9. Check compressor for proper rotation.

CAUTION

Break-in oil supplied in crankcase from factory. Change oil and oil filter after 50 hours and refill the crankcase with lubricating oil. See lubrication section on previous page.

INITIAL STARTING - When starting for the first time, be certain that all items in the prestart have been complied with.

On initial start or after the compressor has been overhauled, run the compressor with the receiver outlet valves wide open for about ten minutes so that oil will be distributed over all wearing surfaces. When sure that the unit is operating satisfactorily, partly close the receiver valve and gradually bring the pressure up to normal working pressure. To ensure proper ring seating on a new or overhauled unit, run fully loaded for the first 40 hours.

COLD WEATHER STARTING - In addition to the normal starting procedure, make sure the weight of the oil in crankcase is suitable for existing temperatures. Refer to "Lubrication" section. Start unit under no load and stop before gaining full speed. Repeat this operation until pressure registers on oil gauge or until oil has a chance to reach all moving parts. After unit is started, proceed as under normal starting.

LUBRICATION - Oil level in crankcase must be maintained. Add oil as required to maintain the correct level. The viscosity required for various operating temperature ranges are listed in FIGURE 3, page 9. Correct weight of oil for existing temperatures is most important. Oil, which is too heavy, cannot splash freely and will cause bearing damage and subsequent failure. Approximately 9 quarts of oil are required to fill the crankcase.

DAILY MAINTENANCE

1. Air filter - see "Air Filter", for complete details.
2. Check oil pressure and level. Unit must be stopped for proper oil level check.
3. Listen to compressor valves for unusual noise, indicating worn or leaking valves.
4. Observe if control is normally loading and unloading unit (where used).
5. Drain condensate from air receiver, moisture traps and drop legs if used. Local humidity conditions will govern frequency condensate must be drained.
6. Inspect for air or oil leaks.
7. Check relief valve by manual operation.

Although the compressor is designed for unattended operation, frequent inspection may reveal some malfunction and save serious damage

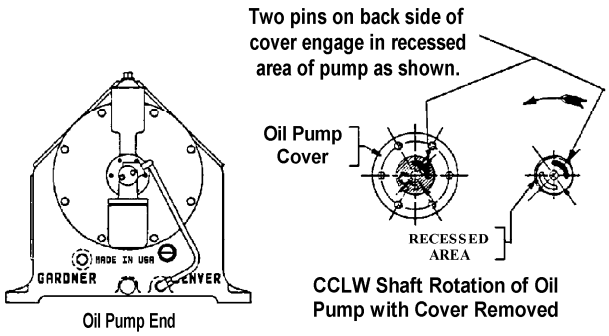


FIGURE 2 - OIL PUMP ROTATION

MAINTENANCE

Compressor efficiency and life depend on the quality of maintenance the unit receives. Maintenance must be done regularly and with care. Clean workspace, tools, cleaning solvents and wiping rags are necessary to avoid transferring dirt into the unit. Clean the exterior of the unit before starting work to prevent dirt from entering the suction manifold, valve pockets, crankcase, etc. A maintenance chart listing the unit and scheduling regular maintenance is valuable. A good program well executed is less costly than major repairs and down time.

⚠ **WARNING**
Oil pump rotation is preset. Ensure correct rotation of compressor.

Warm Weather Operation: 32°F to 90°F. Ambient –
Gardner Denver AEON 500 Lubricant.....ISO Viscosity Grade 68*

Warm Weather Operation: Above 90°F. Ambient –
Gardner Denver AEON 500 Lubricant.....ISO Viscosity Grade 100**

* AEON ™ 500 Spec GDP87A (SAE20) available in 6 pack of 1 Gallon Containers – Part Number 28H60
or 5 Gallon Pail – Part Number 28H58
or 55 Gallon Drum – Part Number 28G12

** AEON ™ 500 Spec GDP88B (SAE30) available in 6 pack of 1 Gallon Containers – Part Number 28G22
or 5 Gallon Pail – Part Number 28G19
or 55 Gallon Drum – Part Number 28G13

FIGURE 3 – VISCOSITY REQUIREMENTS

LUBRICATING SYSTEM - All models are equipped with a gear type oil pump driven by the crankshaft for pressure lubrication to the crankpin bearings. Oil pressure of 15 to 20 pounds is maintained with unit operating at maximum rated speed and operating temperature. Cylinders, piston pins and main bearings are spray lubricated.

RECOMMENDED LUBRICANTS - The recommended lubricant for these compressors is ChampLub™.

Lubricant of the correct viscosity should be used for existing temperature ranges according to FIGURE 3, above. Correct weight of oil for existing temperatures is most important. Oil, which is too heavy, cannot be picked up by the oil pump or splash freely and will cause bearing damage and subsequent failure. For extreme cold weather operation it is very important that pour point of the oils is suitable for the existing temperatures and in some cases, heating the oil in the crankcase prior to starting the unit may be necessary.

⚠ DANGER

Before and during maintenance work be absolutely sure these rules are followed:

A. Main electrical switch for motor driven units is off and marked so it cannot be accidentally turned on.

B. Pressure in air system is completely released.

C. Never reach hand into crankcase without being conscious of the fact that the crankshaft can rotate due to the position of the counter weights.

D. Proper equipment and tools are used.

Failure to observe these precautions will result in injury or death.

OIL CHANGE - When a new or overhauled unit is placed in service, the oil should be drained at the end of the first 50 hours operation and the crankcase thoroughly flushed with flushing oil. The oil should be changed again after the next 100 hours operation so that all polishing residue from working parts will be removed from the crankcase. Subsequent oil change periods must be determined by checking the discoloration and physical condition of the oil in the crankcase. Due to dust, dirt and atmospheric conditions being different at various locations, it is not practical to definitely state how often the lubricating oil in the crankcase should be changed. Service given to air filter and crankcase breather also has a direct bearing on oil change interval, as does high humidity conditions which contribute to formation of varnish deposits through oxidation of the oil. The period for changing oil is therefore regulated by local conditions. The oil, however, should not be used for more than 500 hours. Oil filter should be changed every time oil is changed.

Always provide clean containers, funnels and clean storage of oil and cleaning fluids. Changing oil will be of little benefit if done improperly.

Fill the crankcase through the opening on top of the crankcase until oil is to the dipstick FULL mark. Wipe away all dirt before removing the oil filler plug. After unit has operated for several minutes, shut down compressor, check oil level and add if necessary.

When starting unit after an oil change, start under no-load until assured that oil has reached all moving parts. Condensate accumulation in the crankcase will often occur as a result of high humidity conditions wide temperature range and intermittent service.

CRANKCASE BREATHER - The crankcase breather should be washed each time the oil is changed. Inspect the element and replace if it shows signs of wear. Maintain the breather in first class repair to prevent dirt from entering the oil system.

AIR FILTER - Servicing the air filter is one of the most important maintenance operations to be performed to insure long compressor life. Study these instructions carefully and plan maintenance accordingly. Servicing frequency is dependent on the dirt and vapor content of the atmosphere, as well as type of filter used, and must be determined by the user. Daily maintenance is not uncommon in extremely dusty conditions. The best method is to service very frequently until a proper routine is established for existing conditions. In many cases filter service can be greatly reduced by a careful selection of location.

Not only is the timing of service important, but also the manner in which it is done. Service with care so parts are not damaged and be sure to assemble the filter correctly. Many air borne dirt particles and other materials are extremely abrasive and cause rapid wear or corrosion if allowed to enter the compressor. It is therefore important to use clean rags and cleaning fluids for cleaning, and to be sure dirt doesn't enter the compressor intake while the filter is off. Inspect the intake opening for dirt, and if found, determine the cause before continuing to operate the unit. Inspect flange connections, suction lines, hose connections, etc., for leaks. Make sure all filter gaskets and clamps are tight. A small leak will offset the most rigid maintenance program.

NOTICE
Never operate the compressor with a damaged filter or while servicing the filer.

Unless otherwise specified dry type filter silencers with replaceable elements are furnished. If other makes or type of filter is used, specific instructions for maintenance must be obtained from the manufacturer or Champion.

DRY TYPE FILTER SILENCER - Service every 1 to 30 days, as established for existing conditions:

1. Stop compressor and wipe dirt from exterior of filter.
2. Remove filter and disassemble. Clean cover and base.
3. Replace dirty filter element with a new element. See parts list for replacement element part number.
4. Reassemble filter on compressor.

NOTICE
While servicing filter, examine all parts for damage. Do not operate unit with damaged filter parts.

VALVES - The concentric valves are vital working parts of the compressor and must be inspected and cleaned at regular intervals. Factors regulating cleaning intervals are filter service, prevailing dust and atmospheric conditions, quality and carbon-forming tendency of oil used, and operating temperature.

Until experience indicates the proper cleaning interval, inspect and clean the valves every 1000 hours or every four months, whichever occurs first. If compressor output drops, valves become noisy or heat; stop the unit and inspect all valves. DO NOT CONTINUE TO RUN UNIT, AS SERIOUS DAMAGE MAY RESULT. Never operate unit with badly worn or broken valve part. Keep a supply of valve assemblies, valve parts and O-rings on hand to reduce down time.

One concentric suction and discharge valve is a located in pocket in the head over each cylinder bore. Refer to parts list for sectional views of various type valve assemblies used in these machines. When disassembling the valves note the manner in which the various parts are arranged to assure proper assembly.
With a screwdriver inserted through the seat porting check the disc action for free movement. When installing the valve assembly in the cylinder head use new seat and clamp O-rings. A small amount of grease will hold seat O-ring on valve while lowering into place. The nut holding the valve assembly together must go up, away from the piston. Refer to parts list of assembly views.

⚠ **DANGER**
Never run the compressor with a valve that does not operate properly as a leaky valve will cause excessive temperatures and may cause an explosion in the air receiver or discharge line.

SUCTION VALVE UNLOADING MECHANISM (ATLE6B units only) - Unloading the compressor is accomplished by a plunger holding all suction valves off their seats when the predetermined air pressure, for which the unloading control is set, is reached. When air is applied above the plunger piston, the entire assembly moves as a unit until the valve is forced wide open against the bumper. When air is released by the control, a spring returns the plunger to its uppermost position allowing free action of the valves and loading of the compressor. Refer to parts list for assembly views.

Clean and inspect all parts when the valves are serviced. Replaced any weak or broken springs. Replace the “O”-ring on the unloader plunger when worn. The “O”-ring must be lubricated with a high temperature “O”-ring grease.

UNLOADING CONTROLS – Unloading controls of two types may be supplied: all pneumatic, commonly referred to as “Unloader Pilot” or “Electro-Pneumatic”. It is impractical to give specific information in this manual because of the many types of controls available. Instruction sheets for each model control are supplied, giving installation and operating data. If additional instructions are required, contact the nearest Gardner Denver Distributor.

PISTONS - When installing pistons in the cylinder make sure there are no burrs or dirt to affect running clearances.

PISTON RINGS - Piston rings must always be properly installed for proper break-in and controlled oil carry-over. Rings having a “pip” mark on one side near the ring gap must be installed with the mark up towards the top of the piston; if rings are installed up-side-down, oil consumption will result. See parts list for piston ring arrangement.

Cleanliness precautions must be observed when assembling the parts to avoid possible scoring of the rings, piston and cylinder. Install the rings with care to avoid burrs and deep scratches. Oil the rings and cylinder wall during assembly. Stagger the ring gaps.

At the bottom of the cylinder is a large chamfer to aid the installation of the rings and piston in the cylinder. The suggested method of assembly is to have piston assembled to conn rod with piston pin. Center the rings on the piston as you guide piston into bottom of cylinder. With piston in cylinder, reassemble the cylinder to the crankcase and then assemble the connecting rod to the crankshaft.

PISTON PIN BUSHINGS - The bronze piston pin bushings are a press fit in the piston and bored for proper running clearance with the pin. The suggested method for installing new bushings is to “freeze” the bushing in dry ice or cold storage box until it shrinks enough to slip in the bore. Using a press may damage the bushing.
After the bushings are installed, they must be checked for proper running clearance. The bushing bore must be square with piston so piston will run true in the cylinder. It is not recommended that the bushing be honed as grit will embed in the bushing, causing rapid wear of the parts

PISTON PINS - Piston pins are clamped by the connecting rod for proper positioning. Make sure the clamp screw is tight.

CRANKPIN BEARINGS - Crankpin bearings are of the renewable insert type. When installing new inserts the bore of the rod and the back of the insert must be absolutely free of dirt and burrs. Dirt or burrs under the insert will cause early insert failure. Coat the crankpin with oil to prevent a dry start. The small projection on the insert must fit in the corresponding recess in the rod and cap. Do not file ends of inserts or rod caps. Assemble the rod and cap with cast timing marks on the same side. Tighten bolts evenly until proper torque is attained.

! CAUTION

Do not torque each bolt to rating separately as this will cause the rod bore to deform to an out- of-round condition.

CRANKSHAFT OIL SEAL - The crankshaft oil seal must be installed with the lips of the seal facing in toward the oil side to retain oil in the crankcase. Double lip seals should be packed with grease between the lips.

O-RINGS AND GASKETS - All assembled joints are sealed with properly selected heat resistant O-rings except for the crankcase inspection plate and manifold joints which are sealed with gaskets. If it is necessary to break any of these joints, be sure that both metal surfaces are clean and smooth and use new O-rings or gaskets before reassembling. See the parts list for proper O-ring and gasket part numbers. O-rings must be lubricated with suitable O-ring grease to ensure proper performance.

MAIN BEARINGS - Main bearings are tapered roller type. They are correctly adjusted at the factory by means of shims between the bearing housing and the crankcase. Correct crankshaft end play is 0 to .001”.

TROUBLE SHOOTING

AIR PRESSURE SLOW TO BUILD UP:

1. Air filter clogged.
2. Leaks in air system.
3. Compressor too small.
4. Worn suction or discharge valves – the valve cover feeling the hottest will indicate leaky valve.
5. Broken unloader plunger spring – retards valve action (ATLE6B only).
6. Unloading plunger stuck (ATLE6B only).
7. Blown valve seat O-rings.
8. Worn piston rings.
9. Suction valve unloader plunger O-ring leaking (ATLE6B only).

UNIT WON'T UNLOAD (ATLE6B only):

1. Air to control shut off.
2. Control improperly wired.
3. Filter in control line clogged (where used).
4. Filter in pilot clogged (where used).
5. Unloader line leaking.
6. Control stuck – check for dirt or varnish.
7. Differential of pilot adjusted to jam valve piston (where used).
8. Control coil burned out.
9. Control pressure switch diaphragm ruptured.
10. O-ring on suction unloader plunger leaking.

NOISY VALVES:

1. Loose assembly.
2. Unloader spring broken.
3. Broken valve spring(s).
4. Weak valve spring(s).
5. Badly worn parts.

SHORT VALVE LIFE:

1. Dirt entering unit.
2. Heavy carbon deposits.
3. Corrosive vapors entering unit.
4. Uneven or worn valve seat.
5. Weak or collapsed valve spring(s).
6. Compressor over-speed.
7. Very rapid loading and unloading (ATLE6B only).
8. Broken unloader plunger spring (ATLE6B only).

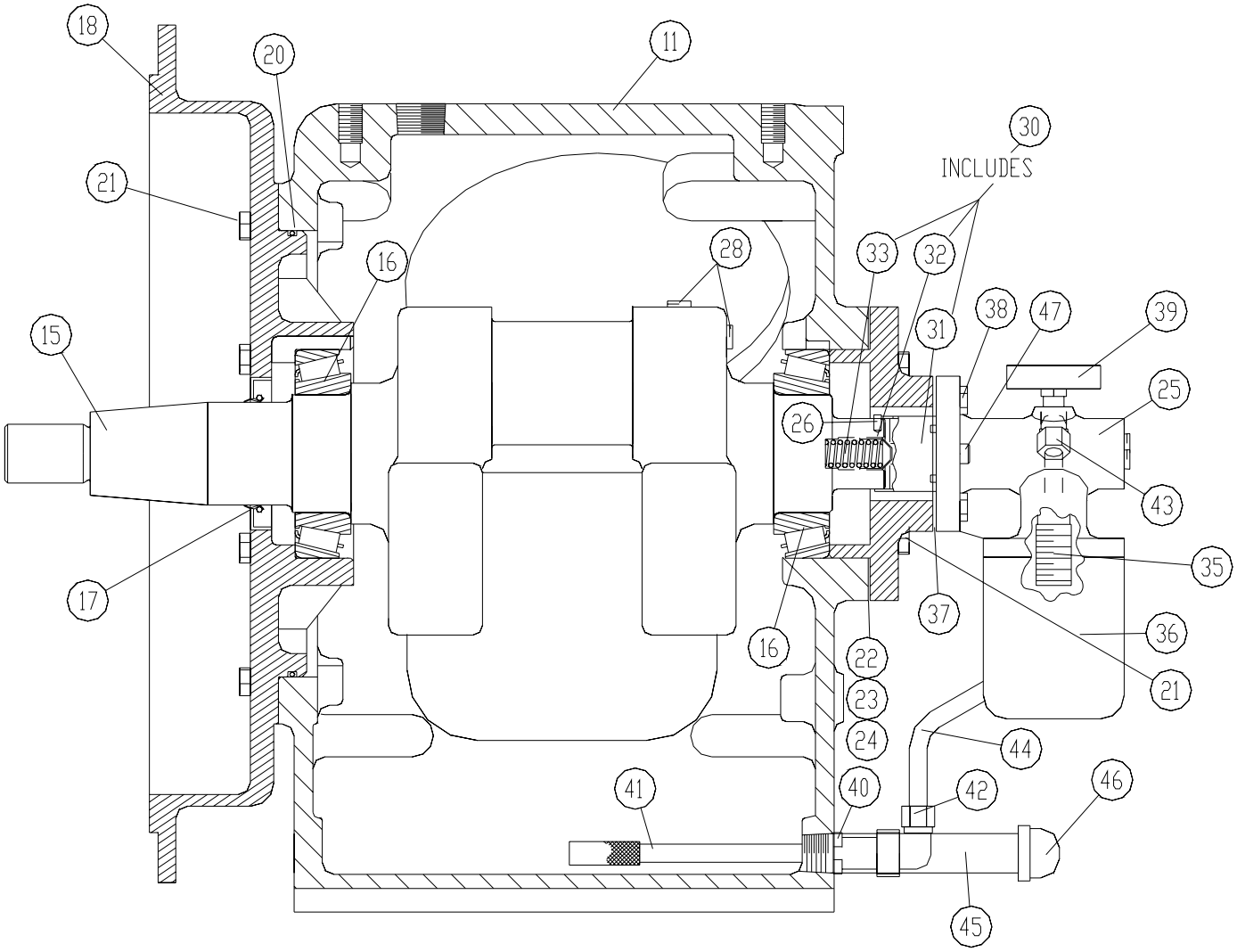
COMMON CAUSES OF CONTROL MALFUNCTION:

1. Air line to control too small.
2. Dirt, moisture or varnish deposit.
3. Vibration.
4. Air leaks in control line.
5. Line filters clogged (where used).
6. Pilot misadjustment (where used).
7. Pilot filter clogged (where used).
8. Seating faces of pilot parts nicked (where used).
9. Control improperly wired.
10. Pressure switch diaphragm ruptured.
11. Coil burned out.
12. Contact points burnt.

LOW OIL PRESSURE:

1. Check pressure gauge.
2. Low on oil.
3. Clogged pump suction.
4. Clogged oil filter.
5. Worn inserts.
6. Worn oil pump.
7. Weak oil pump plunger spring.
8. Oil filter seal leaking.

CRANKCASE GROUP



247ALS810
(Ref. Drawing)

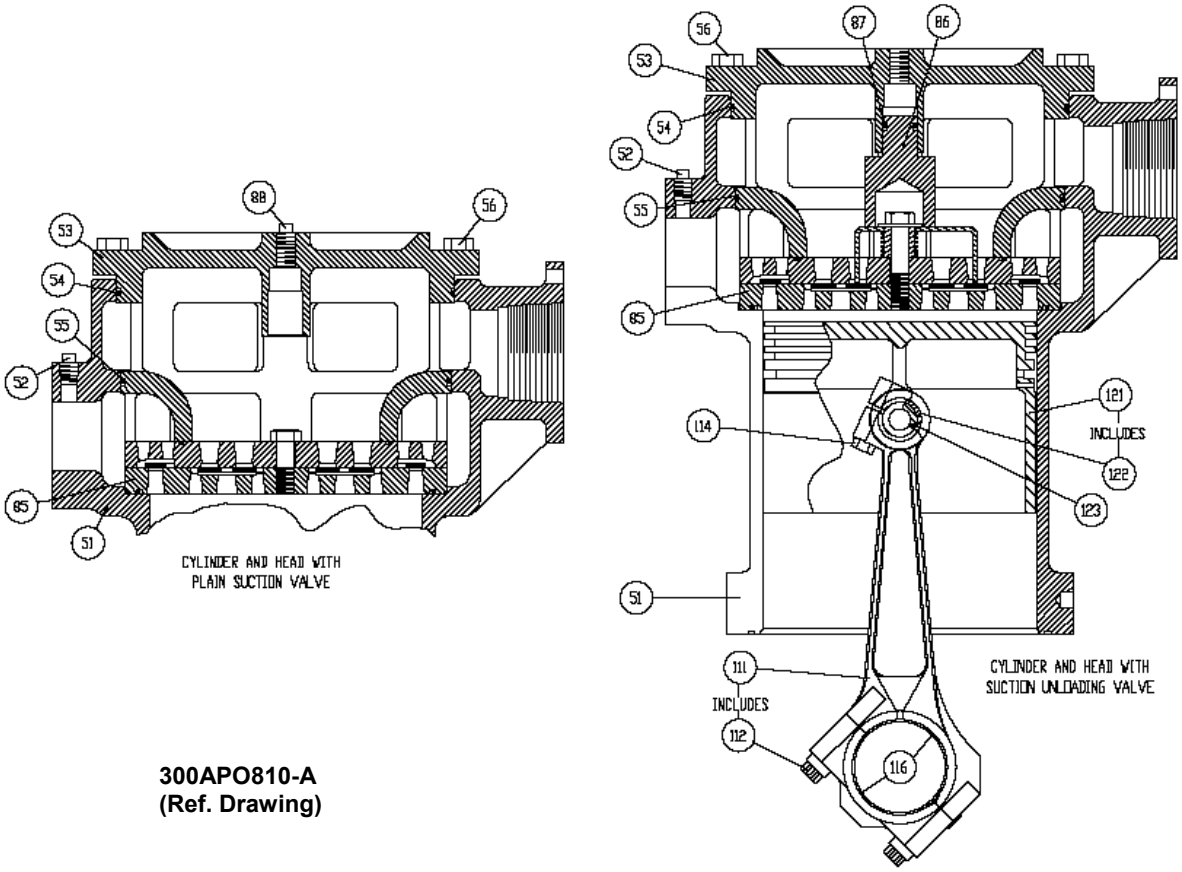
Order by Part Number and Description. Reference Numbers are for your convenience only.

CRANKCASE GROUP

Ref. No.	Name of Part	Qty.	Part No.
11	CRANKCASE-FLYWHEEL HOUSING	1	204ASL013
15	CRANKSHAFT	1	205ASL004
16	BEARING-ROLLER	2	12C67
17	SEAL-OIL	1	60G262
18	HOUSING-BEARING	1	207ASL006
19	BEARING COVER PLATE	1	200ASL315
20	O-RING	1	25AH49
21	SCREW	12	655ED050
22	SHIM (.005)	2	209ASL732
23	SHIM (.0075)	2	210ASL732
24	SHIM (.020)	1	211ASL732
25	ADAPTOR-FILTER	1	201ASL070
26	PIN-GROOVED	1	62V35
28	PLUG	2	64AC2
30	OIL PUMP KIT (Includes Reference Numbers 31, 32, & 33)	1	200ASL188
31	OIL PUMP	1	2010242
32	PLUNGER	1	2010244
33	SPRING	1	2010245
35	FILTER ADAPTOR	1	200ESF070
36	FILTER-OIL	1	26C28
37	SHIM (Oil Pump Housing), Includes next three items	1	208ASL732
	SHIM (.005)	3	205ASL732
	SHIM (.0075)	3	206ASL732
	SHIM (.020)	1	207ASL732
38	SCREW	4	75A186
39	GAUGE-PRESSURE	1	2009741
40	BUSHING-PIPE	1	2009296
41	SCREEN-OIL	1	200ADD019
42	ELBOW-TUBE	1	86E83
43	ELBOW-TUBE	1	VP1077654
44	TUBE-OIL PUMP	1	211ASL857
45	NIPPLE	1	63F8
46	CAP-PIPE	1	64AD4
47	SCREW	2	75LM222

Order by Part Number and Description. Reference Numbers are for your convenience only.

CYLINDER GROUP
(Two Required Per Unit)

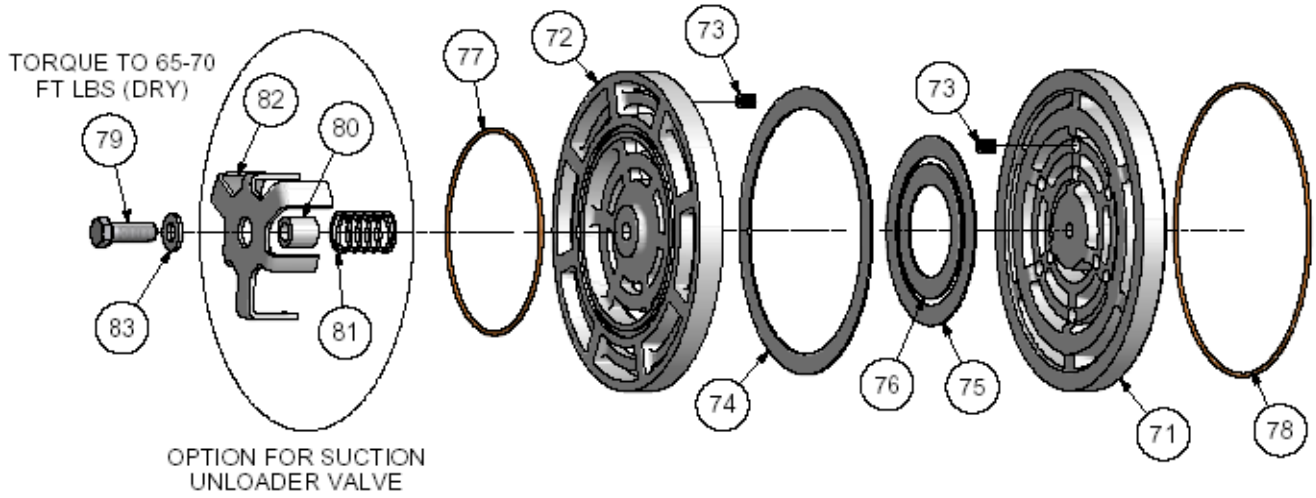


300APO810-A
(Ref. Drawing)

Ref. No.	Name of Part	Qty. Per Cylinder	ATLE6A Part No.	ATLE6B Part No.
51	CYLINDER-LOW PRESSURE	1	202ASL002	202ASL002
52	PLUG	1	64AA5	64AA5
53	HEAD-CYLINDER	1	207ASL007	207ASL007
54	O-RING	1	25BC422	25BC422
55	O-RING	1	25BC433	25BC433
56	SCREW	6	655EE060	655EE060
85	VALVE-COMBINATION 7-7/8" (See Page 18)	1	210ASL529	212ASL529
86	PLUNGER-UNLOADER	1	N/A	203ASL184
87	O-RING, PLUNGER	1	N/A	25BC118
88	PLUG	1	64AA5	N/A
-	PISTON RING KIT (SEE PAGE 21)	1	201ASL6012	201ASL6012
121	PISTON-AIR, 7-7/8"	1	204ASL015	204ASL015
122	BEARING SLEEVE BRONZE	2	12BA135	12BA135
123	PIN-PISTON	1	62F63	62F63
	CONNECTING ROD KIT, Includes Ref. Numbers 111 thru 116	1	201ASL6001	201ASL6001
111	CONNECTING ROD	1	203ASL003	203ASL003
112	SCREW	2	75LM195	75LM195
114	SCREW	1	75LM255	75LM255
116	BEARING INSERT (HALF)	2	200ADL174	200ADL174

Order by Part Number and Description. Reference Numbers are for your convenience only.

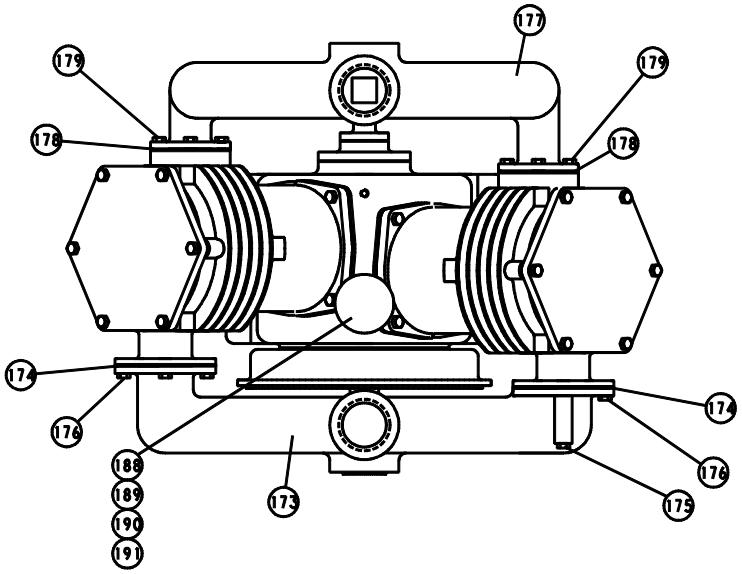
VALVE GROUP
(Two Required Per Unit)



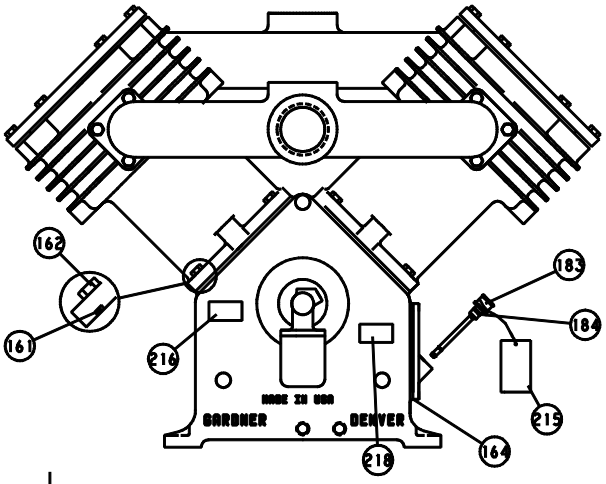
241ASL810-A
(Ref. Drawing)

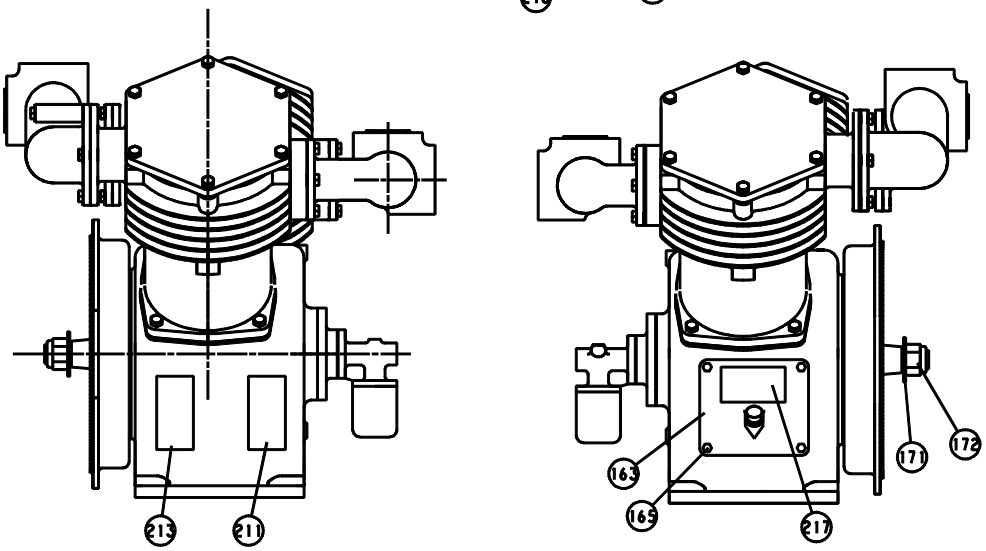
Ref. No.	Name of Part	Qty.	ATLE6A Part No.	ATLE6B Part No.
	VALVE ASSEMBLY, Includes the following items ...		210ASL529	212ASL529
71	SEAT-DISCHARGE VALVE	1	202WLA203	202WLA203
72	SEAT-SUCTION VALVE	1	200WLA202	200WLA202
73	SPRING-VALVE	17	202ASL105	202ASL105
74	VALVE-DISC	1	90V57	90V57
75	VALVE-DISC	1	90V56	90V56
76	VALVE-DISC	1	90V54	90V54
77	O-RING	1	25BC205	25BC205
78	O-RING	1	25BC110	25BC110
79	SCREW	1	655EE060	655EE090
80	SPACER	1	N/A	201VEG144
81	SPRING	1	N/A	78A174
82	FINGER-UNLOADER	1	N/A	202ASL183
83	WASHER	1	95F5	95F5

COMMON PARTS GROUP



248ASL810-A
(Ref. Drawing)



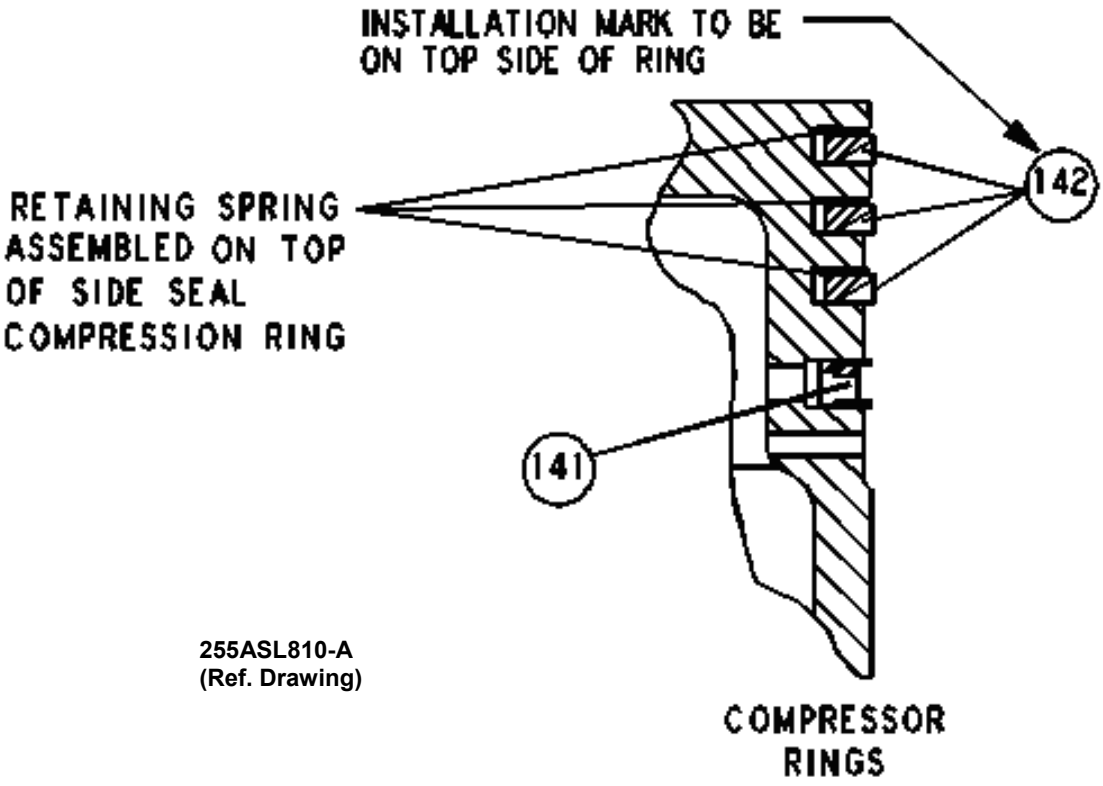


Order by Part Number and Description. Reference Numbers are for your convenience only.

COMMON PARTS GROUP

Ref. No.	Name of Part	Qty.	Part No.
161	O-RING	2	25BC425
162	SCREW	8	655EE060
163	INSPECTION PLATE	1	201ASL052
164	GASKET-INSPECTION PLATE	1	204ATS715
165	SCREW	4	75A33
169	PLUG	1	64AA7
171	WASHER	1	95A11C
172	LOCKNUT	1	50V9
173	MANIFOLD-SUCTION	1	204ASL069
174	GASKET	2	25C1801N
175	SCREW	2	655EE180
176	SCREW	6	655EE050
177	MANIFOLD-DISCHARGE	1	202ASL071
178	GASKET	2	206WLA715
179	SCREW	8	655EE050
183	OIL LEVEL ROD	1	201ASL491
184	O-RING	1	25AM18
188	NIPPLE	1	63F21G
189	BUSHING-PIPE	1	64E5
190	REDUCER-PIPE	1	64N46
191	BREATHER-CRANKCASE	1	5C17
211	DECAL-DANGER	1	206EAQ077
213	DECAL-WARNING	1	200ASL077
215	TAG-INSTRUCTION	1	200ATS304
216	DECAL (QUALITY)	1	251EAQ077
217	NAMEPLATE	1	201ASL496
218	NAMEPLATE, MADE IN THE USA	1	69F64

PISTON RING ARRANGEMENT

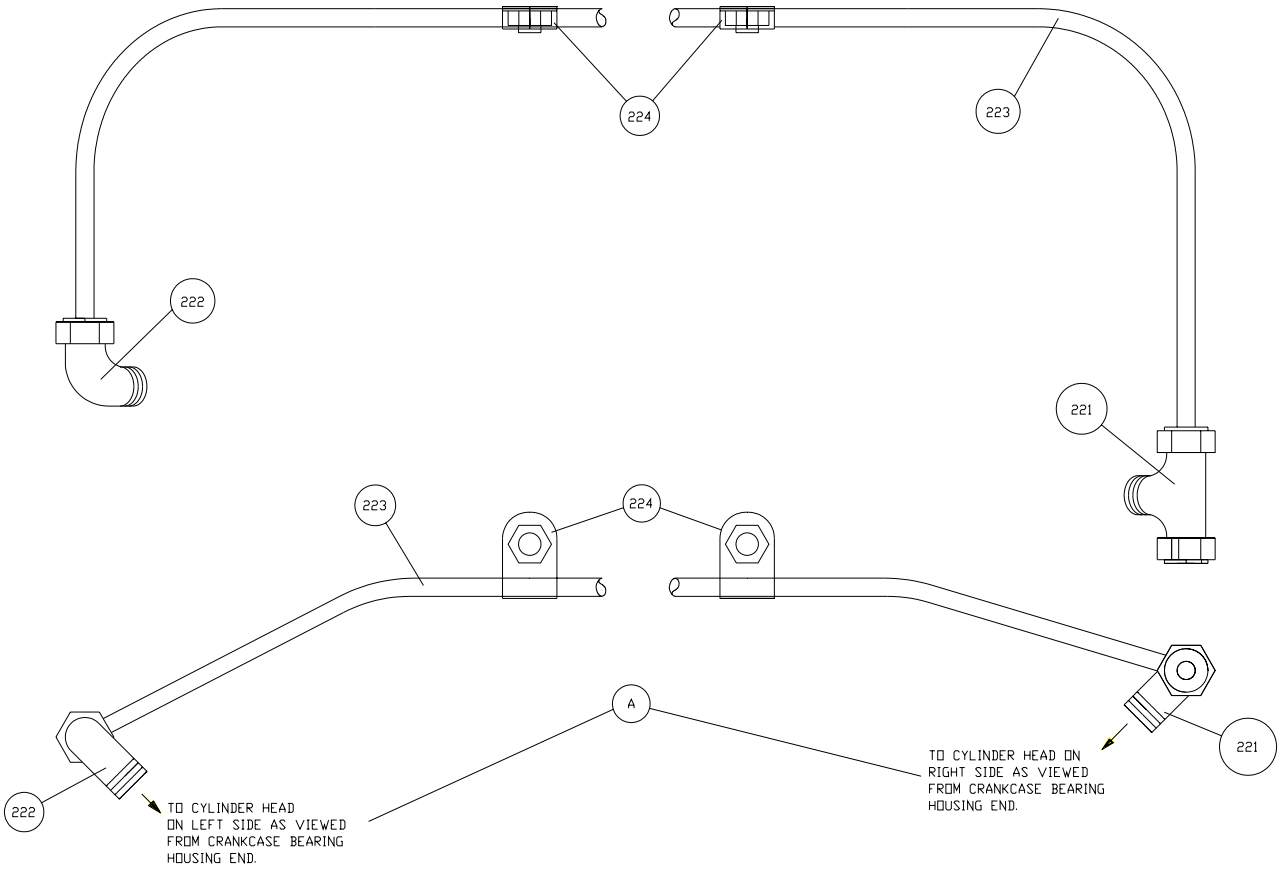


Ref. No	Name of Part	Qty.	Part No.
141	OIL CONTROL RING	1	65AM280
142	PISTON RING	3	65AA20

Order by Part Number and Description. Reference Numbers are for your convenience only.

UNLOADER PIPING

(ATLEGB ONLY)



208ASL810 - A
(Ref. Drawing)

Ref. No.	Name of Part	Qty.	Part No.
221	TEE TUBE	1	86E119
222	TUBE ELBOW	1	86E60
223	UNLOADER TUBE	1	216ASL857
224	CLAMP	2	98A27

STANDARD DIMENSIONS & RUNNING CLEARANCES
UNIT COLD - NEW COMPONENTS

	Inches	mm
CYLINDER BORE	7.875/7.876	200.03/200.05
PISTON - RING LAND DIAMETER	7.839/7.835	199.11/199.01
PISTON TO CYLINDER - AT RING LAND	.036/.041	.914/1.04
PISTON - SKIRT DIAMETER	7.865/7.864	199.77/199.74
PISTON TO CYLINDER - AT SKIRT	.010/.012	.254/.305
RING GAP - COMPRESSION	.010/.020	.254/.508
RING SIDE CLEARANCE - COMPRESSION	.0020/.0045	.051/.114
RING GAP - OIL	.030/.070	.762/1.78
RING SIDE CLEARANCE - OIL	.002/.008	.051/.203
PISTON - PIN BUSHING BORE LP	1.0095/1.0100	25.64/25.65
PISTON PIN DIAMETER	1.0082/1.0080	25.61/25.60
PISTON PIN TO BUSHING	.0013/.0020	.033/.051
CONNECTING ROD - CRANKSHAFT PIN INSERT BORE	2.750/2.749	69.85/69.82
CRANKSHAFT - CRANKPIN DIAMETER	2.6230/2.6225	66.62/66.61
INSERT THICKNESS	.06250/.06225	1.59/1.58
INSERT TO CRANKSHAFT PIN	.001/.003	.0254/.0762
CONNECTING RODS SIDE CLEARANCE ON CRANKSHAFT PIN	.010/.025	.254/.635
CRANKSHAFT DIAMETER - AT MAIN BEARING	2.5015/2.5025	63.538/63.564
MAIN BEARING I.D.	2.5000/2.5005	63.50/63.51
MAIN BEARING HOUSING BORE		
CRANKCASE	4.4385/4.4395	112.74/112.76
BEARING HOUSING	4.4355/4.4365	112.66/112.69
MAIN BEARING (Outside Diameter)	4.4375/4.4385	112.71/112.74
CONNECTING ROD PISTON PIN BORE	1.010/1.008	25.654/25.603
MAIN BEARING END CLEARANCE	0 TO .001	0/.0254

TORQUE SPECIFICATIONS

LUBRICATED TORQUE VALUES

	Foot Pounds	Newton Meters
BEARING HOUSING TO CRANKCASE SCREWS (3/8”-16 UNC)	23 - 25	31 - 35
OIL PUMP FILTER ADAPTOR TO BEARING HOUSING SCREWS (1/4”-20 UNC)	6 - 7	8 - 9
INSPECTION PLATE TO CRANKCASE SCREWS (5/16”-18 UNC)	13 - 15	17 - 20
CYLINDERS TO CRANKCASE (1/2”-13 UNC)	55 - 60	74 - 81
SHEAVE NUT (1-1/4”-12 UNC)	500 - 550	678 - 746
CYLINDER HEAD TO CYLINDER (1/2”-13 UNC)	55 - 60	74 - 81
VALVE CENTER SCREW (1/2”-13 UNC)	55 - 60	74 - 81
CONNECTING ROD-CRANKSHAFT PIN SCREWS (1/2”-13 UNC)	55 - 60	74 - 81
CONNECTING ROD-PISTON PIN SCREW (3/8”-16 UNC)	35	47

REPAIR KITS AND SPARE PARTS

Your Gardner Denver compressor is designed and manufactured for many years of reliable operation. All components are engineered to exacting specifications, which will function together as a system to provide maximum efficiency. To insure the continuing integrity of compressor operation, use only original quality genuine Gardner Denver replacement parts and accessories.

Name of Part	Qty.	Part No.
LOW PRESSURE CYLINDER KIT, Includes next six items		**200ASL6002**
CYLINDER 7-7/8" (200.03 mm)	1	202ASL002
O-RING	1	25BC422
O-RING	1	25BC433
O-RING	1	25BC205
O-RING	1	25BC110
O-RING	1	25BC425
GASKET KIT, Includes next ten items		**ASL81706**
SEAL-OIL	1	60G262
O-RING	1	25AH49
SHIM .0075" (.1905 mm)	3	202ASL732
SHIM .005" (.127 mm)	3	203ASL732
SHIM	1	204ASL732
SHIM	1	208ASL732
O-RING	2	25BC425
GASKET-INSPECTION PLATE	1	204ATS715
GASKET SQUARE	2	25C1801N
GASKET	2	206WLA715
LOW PRESSURE PLAIN VALVE KIT (ATLE6A), Includes next three items		**201ASL6017**
O-RING	1	25BC422
O-RING	1	25BC433
VALVE-COMBINATION 7-7/8" (200.03 mm)	1	210ASL529
LOW PRESSURE PLAIN VALVE REBUILD KIT(ATLE6A), Incl. next eight items		**205ASL6017**
O-RING	1	25BC422
O-RING	1	25BC433
SPRING-VALVE ASSEMBLY	17	202ASL105
DISC-VALVE	1	90V57
DISC-VALVE	1	90V56
DISC-VALVE	1	90V54
O-RING	1	25BC205
O-RING	1	25BC110
LOW PRESSURE SUCTION VALVE KIT(ATLE6B), Incl. next five items		**208ASL6017**
O-RING	1	25BC422
O-RING	1	25BC433
O-RING	1	25BC118
O-RING	1	25BC100
VALVE-COMBINATION 7-7/8" (200.03mm).	1	212ASL529

Name of Part	Qty.	Part No.
LOW PRESSURE SUCTION VALVE REBUILD KIT(ATLE6B), Incl. next thirteen items		**209ASL6017**
O-RING	1	25BC422
O-RING	1	25BC433
SPRING-VALVE ASSEMBLY	17	202ASL105
DISC-VALVE	1	90V57
DISC-VALVE	1	90V56
DISC-VALVE	1	90V54
0-RING	1	25BC205
O-RING	1	25BC110
SPRING	1	78A174
FINGER-UNLOADER	1	202ASL183
WASHER-PLAING	1	95F5
O-RING	1	25BC118
O-RING	1	25BC100
CONNECTING ROD KIT - PRESSURE LUBE, Includes next four items		**201ASL6001**
ROD-CONNECTING	1	203ASL003
SCREW	2	75LM195
SCREW	1	75LM255
BEARING	2	200ADL174
PISTON RING KIT - COMPRESSION, Includes next four items		**201ASL6012**
PISTON RING ASSEMBLY	1	65AM280
RING-PISTON, Includes next two items	3	65AA20
RINGS	3	65AB17
SPRINGS	3	78T3
OIL FILTER (ALL PRESSURE LUBE UNITS)	1	26C28

GENERAL PROVISIONS AND LIMITATIONS

Gardner Denver (the "Company") warrants to each original retail purchaser ("Purchaser") of its new products from the Company or its authorized distributor that such products are, at the time of delivery to the Purchaser, made with good material and workmanship. No warranty is made with respect to:

1. Any product which has been repaired or altered in such a way, in the Company's judgment, as to affect the product adversely.
2. Any product which has, in the Company's judgment been subject to negligence, accident, improper storage, or improper installation or application.
3. Any product which has not been operated or maintained in accordance with the recommendations of the Company.
4. Components or accessories manufactured, warranted and serviced by others.
5. Any reconditioned or prior owned product.

Claims for items described in (4) above should be submitted directly to the manufacturer.

WARRANTY PERIOD

The Company's obligation under this warranty is limited to repairing or, at its option, replacing, during normal business hours at an authorized service facility of the Company, any part which in its judgment proved not to be as warranted within the applicable Warranty Period as follows.

1. The power end is warranted for 24 months from date of start up, or 27 months from date of shipment to the Purchaser, whichever occurs first.
2. Expendable wear parts such as, but not limited to rings, valves, packing and filters are warranted for material conformance and workmanship only. Normal wear or corrosion is specifically excluded. Nonconforming material must be identified to the Gardner Denver Factory Warranty Department within twelve months of machine startup or 15 months from date of shipment.
3. All other components are warranted for 12 months from date of startup or 15 months from date of shipment to the Purchaser, whichever occurs first.

LABOR TRANSPORTATION AND INSPECTION

The Company will provide labor, by Company representative or authorized service personnel, for repair or replacement of any product or part thereof which in the Company's judgment is proved not to be as warranted. Labor shall be limited to the amount specified in the Company's labor rate schedule.

Labor costs in excess of the Company rate schedule amounts or labor provided by unauthorized service personnel is not provided for by this warranty.

All costs of transportation of product, labor or parts claimed not to be as warranted and, of repaired or replacement parts to or from such service facilities shall be borne by the Purchaser. The Company may require the return of any part claimed not to be as warranted to one of its facilities as designated by Company, transportation prepaid by Purchaser, to establish a claim under this warranty.

Replacement parts provided under the terms of the warranty are warranted for the remainder of the Warranty Period of the product upon which installed to the same extent as if such parts were original components.

WARRANTY REGISTRATION VALIDATION

A warranty registration form is provided with each machine. The form must be completed by the Purchaser and mailed within ten days after machine startup to validate the warranty.

DISCLAIMER

THE FOREGOING WARRANTY IS EXCLUSIVE AND IT IS EXPRESSLY AGREED THAT, EXCEPT AS TO TITLE, THE COMPANY MAKES NO OTHER WARRANTIES, EXPRESSED, IMPLIED OR STATUTORY, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY.

THE REMEDY PROVIDED UNDER THIS WARRANTY SHALL BE THE SOLE, EXCLUSIVE AND ONLY REMEDY AVAILABLE TO PURCHASER AND IN NO CASE SHALL THE COMPANY BE SUBJECT TO ANY OTHER OBLIGATIONS OR LIABILITIES. UNDER NO CIRCUMSTANCES SHALL THE COMPANY BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, EXPENSES, LOSSES OR DELAYS HOWSOEVER CAUSED.

No statement, representation, agreement, or understanding, oral or written, made by any agent, distributor, representative, or employee of the Company which is not contained in this Warranty will be binding upon the Company unless made in writing and executed by an officer of the Company.

This warranty shall not be effective as to any claim which is not presented within 30 days after the date upon which the product is claimed not to have been as warranted. Any action for breach of this warranty must be commenced within one year after the date upon which the cause of action occurred.

Any adjustment made pursuant to this warranty shall not be construed as an admission by the Company that any product was not as warranted.

1-1-605VER08

Gardner Denver

ENERGY STAR PARTNER

Specifications subject to change without notice.

http://www.gardnerdenver.com mktg@gardnerdenver.com

For additional information contact your local representative or

Gardner Denver Compressor and Pump Division,
1800 Gardner Expressway, Quincy, Illinois 62301
Customer Service Department Telephone:
(800) 682-9868 FAX: (217) 224-7814

Sales and Service in all major cities.