

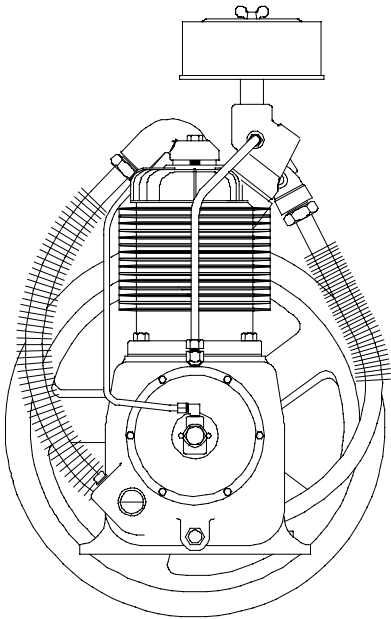


**OPERATION/MAINTENANCE
MANUAL & PARTS LIST**

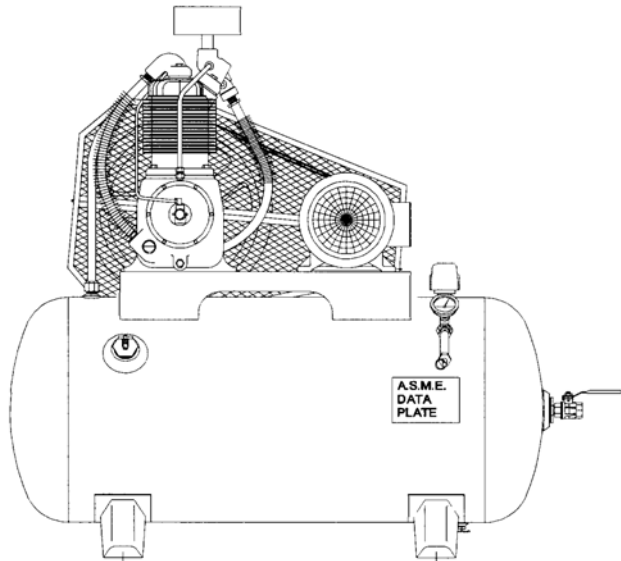
**TWO STAGE/TWO CYLINDER AIR COMPRESSORS & UNITS
FEATURING THE R10 & R15 PUMPS**



**THIS MANUAL CONTAINS IMPORTANT SAFETY INFORMATION AND SHOULD
ALWAYS BE AVAILABLE TO THOSE PERSONNEL OPERATING THIS UNIT.
READ, UNDERSTAND AND RETAIN ALL INSTRUCTIONS BEFORE OPERATING THIS
EQUIPMENT TO PREVENT INJURY OR EQUIPMENT DAMAGE.**



R15B



HR3-6

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SAFETY AND OPERATION PRECAUTIONS

Because an air compressor is a piece of machinery with moving and rotating parts, the same precautions should be observed as with any piece of machinery of this type where carelessness in operation or maintenance is hazardous to personnel. In addition to the many obvious safety rules that should be followed with this type of machinery, the additional safety precautions as listed below must be observed:

1. Read all instructions completely before operating air compressor or unit.
2. For installation, follow all local electrical and safety codes, as well as the National Electrical Code (NEC) and the Occupational Safety and Health Act (OSHA).
3. Electric motors must be securely and adequately grounded. This can be accomplished by wiring with a grounded, metal-clad raceway system to the starter; by using a separate ground wire connected to the bare metal of the motor frame; or other suitable means.
4. Protect the power cable from coming in contact with sharp objects. Do not kink power cable and never allow the cable to come in contact with oil, grease, hot surfaces, or chemicals.
5. Make certain that the power source conforms to the requirements of your equipment.
6. Pull main electrical disconnect switch and disconnect any separate control lines, if used, before attempting to work or perform maintenance on the air compressor or unit. "Lock out" or "Tag out" all power sources.
7. Do not attempt to remove any compressor parts without first relieving the entire system of pressure.
8. Do not attempt to service any part while machine is in an operational mode.
9. Do not operate the compressor at pressures in excess of its rating.
10. Do not operate compressor at speeds in excess of its rating.
11. Periodically check all safety devices for proper operation. Do not change pressure setting or restrict operation in any way.
12. Be sure no tools, or rags or loose parts are left on the compressor or drive parts.
13. Do not use flammable solvents for cleaning the air inlet filter or element and other parts.
14. Exercise cleanliness during maintenance and when making repairs. Keep dirt away from parts by covering parts and exposed openings with clean cloth or Kraft paper.
15. Do not operate the compressor without guards, shields and screens in place.
16. Do not install a shut-off valve in the discharge line, unless a pressure relief valve, of proper design and size, is installed in the line between the compressor unit and shut-off valve.
17. Do not operate compressor in areas where there is a possibility of ingesting flammable or toxic fumes.
18. Be careful when touching the exterior of a recently run motor - it may be hot enough to be painful or cause injury. With modern motors this condition is normal if operated at rated load - modern motors are built to operate at higher temperatures.
19. Inspect unit daily to observe and correct any unsafe operating conditions found.
20. Do not "play around" with compressed air, nor direct air stream at body, because this can cause injuries.
21. Compressed air from this machine absolutely must not be used for food processing or breathing air without adequate downstream filters, purifiers and controls.
22. Always use an air pressure regulating device at the point of use, and do not use air pressure greater than marked maximum pressure of attachment.
23. Check hoses for weak or worn condition before each use and make certain that all connections are secure.
24. Always wear safety glasses when using compressed air gun.

The user of any air compressor package manufactured by **Champion** – A Gardner Denver Co., is hereby warned that failure to follow the preceding Safety and Operation Precautions can result in injuries or equipment damage. However, **Champion** – A Gardner Denver Co., does not state as fact or does not mean to imply that the preceding list of Safety and Operating Precautions is all inclusive, and further that the observance of this list will prevent all injuries or equipment damage.

EXPLANATION OF SAFETY INSTRUCTIONS SYMBOLS AND DECALS



DANGER

Indicates immediate hazards which will result in severe injury or death.



WARNING

Indicates hazards or unsafe practice which could result in severe injury or death.



CAUTION

Indicates hazards or unsafe practice which could result in damage to the Champion compressor or minor injury.

OBSERVE, UNDERSTAND, AND RETAIN THE INFORMATION GIVEN IN THE SAFETY PRECAUTION DECALS AS SHOWN IN THE PARTS LIST SECTION.



DANGER

This Oil-Less compressor must not be used for breathing air, unless proper downstream filtration and purification is added. To use for breathing air without proper downstream equipment will cause serious injury whether air is supplied direct from the compressor source or to the breathing tanks for later use. Any and all liabilities for damage or loss due to injuries, death and/or property damage including consequential damages stemming from the use of this compressor to supply breathing air, without proper downstream filtration and purification, will be disclaimed by the manufacturer.



WARNING

The use of this compressor as a booster pump and/or to compress a medium other than atmospheric air is strictly non-approved and can result in equipment damage and/or injury. Non-approved uses will also void the warranty.



CAUTION

This unit may be equipped with special options which may not be included in this manual. User must read, understand and retain all information sent with special options.

INTRODUCTION

Your new Champion Reciprocating Air Compressor is constructed to exacting standards of material and workmanship.

The instructions in this manual have been prepared to ensure that the Champion air compressor will give long and satisfactory service.

A copy of this manual must be given to the personnel responsible for installing and operating the Champion air compressor or unit.

Although precautions have been taken to prevent damage to your compressor or unit by freight carrier, the unit must be carefully examined and the carrier notified within 24 hours in the event of mishandling.

Champion Five Year Warranty "R" Series Compressors

CHAMPION warrants each new compressor pump manufactured by **CHAMPION**, mounted on a factory assembled unit, to be free from defects in material and workmanship under normal use and service for a period of sixty (60) months from date of installation or sixty-six (66) months from date of shipment by **CHAMPION** or **CHAMPION** distributor, whichever may occur first. **Applies to the compressor pump only, excluding head valves. Valves, controls and accessories are warranted for the first year only.** Compressor pumps purchased separately would carry a one year warranty.

This five year extended warranty will be prorated over the 5 years as follows:

First Year	-	100% Allowance, Parts and Labor
Second Year	-	90% Allowance, Parts and Labor
Third Year	-	80% Allowance, Parts and Labor
Fourth Year	-	70% Allowance, Parts and Labor
Fifth Year	-	60% Allowance, Parts and Labor

Applies to CHAMPION logo, tank or base mounted complete compressors only.

Express Limited Warranty

CHAMPION warrants each new air compressor unit manufactured by **CHAMPION** to be free from defects in material and workmanship under normal use and service for a period of twelve (12) months from date of installation or eighteen (18) months from date of shipment by **CHAMPION** or **CHAMPION** distributor, whichever may occur first.

CHAMPION makes no warranty in respect to components and accessories furnished to **CHAMPION** by third parties, such as **ELECTRIC MOTORS, GASOLINE ENGINES** and **CONTROLS**, which are warranted only to the extent of the original manufacturer's warranty to **CHAMPION**. To have warranty consideration, electric motors must be equipped with thermal overload protection.

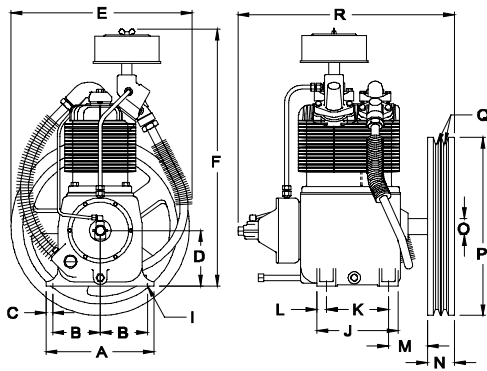
The extended five year warranty will apply to ASME air receivers provided they are installed on rubber vibro isolator pads.

When a compressor pump, or component is changed or replaced during the warranty period, the new/replaced item is warranted for only the remainder of the original warranty period.

Repair, replacement or refund in the manner and within the time provided shall constitute **CHAMPION'S** sole liability and your exclusive remedy resulting from any nonconformity or defect. **CHAMPION** SHALL NOT IN ANY EVENT BE LIABLE FOR ANY DAMAGES, WHETHER BASED ON CONTRACT, WARRANTY, NEGLIGENCE, STRICT LIABILITY OR OTHERWISE, INCLUDING WITHOUT LIMITATION ANY CONSEQUENTIAL, INCIDENTAL OR SPECIAL DAMAGES, ARISING WITH RESPECT TO THE EQUIPMENT OR ITS FAILURE TO OPERATE, EVEN IF **CHAMPION** HAS BEEN ADVISED OF THE POSSIBILITY THEREOF.

CHAMPION MAKES NO OTHER WARRANTY OR REPRESENTATION OF ANY KIND, EXCEPT THAT OF TITLE, AND ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OR MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY EXPRESSLY DISCLAIMED. NO SALESMAN OR OTHER REPRESENTATIVE OF **CHAMPION** HAS AUTHORITY TO MAKE ANY WARRANTIES.

TWO STAGE AIR COMPRESSORS - MODELS R-10D & R-15B DIMENSIONS



	ITEM	R-10 & R-15
A	Base-Width	10
B	Bolt Down-Width	4-3/8
C	Bolt Down to Edge	5/8
D	Base to Crank Ctr	5 1/2
E	Overall Width	18
F	Overall Height	23-1/4
I	Bolt Down Hole Dia.	15/32
J	Base-Depth	7 1/2
K	Bolt Down Depth	5-3/4
L	Bolt Down to Edge	7/8
M	Bolt Hole to Wheel (Max.)	3-5/8
N	Flywheel Width	2 1/2
O	Crank Diameter	1-5/16
P	Flywheel Diameter	16 1/2
Q	Flywheel Grooves	2VB
R	Overall Depth	20

NOTE: H.P. Exhaust Opening 3/4" Tubing.

PERFORMANCE

PUMP	OUTPUT PRESS. PSIG	MOTOR H.P.	DISPL. CFM	COOLING AIR FLOW CFM	HEAT REJECTION BTU/HR	PUMP RPM	APPROX. PULLEY O.D. INCHES
R-10D	125	1-1/2	11.0	660	3360	570	5.55
R-10D	175	1-1/2	10.5	625	3360	542	5.25
R-10D	125	2	14.8	875	4480	760	7.35
R-10D	175	2	14.1	835	4480	725	7.0
R-15B	125	3	14.5	565	6700	490	4.75
R-15B	175	3	12.8	505	6700	440	4.31
R-15B	125	5	21.9	868	12,000	750	7.35
R-15B	175	5	20.7	820	12,000	710	7.00
R-15B	175	7-1/2	30.2	1195	16,800	1035	9.75

All data is based on 1725 RPM electric motors as a power source.

Flywheel Rotation; Clockwise When
Viewed From Front - Flywheel to Rear

Min. RPM 400
Max. RPM 1050

SPECIFICATIONS

MODEL	BORE & STROKE INCHES	NO. CYLS.	OIL CAPY.	WT. (LBS)	MAX. PRESS.	CU FT./REV.
R-10D	4-5/8 & 2-1/2 x 2	2	2 QT.	107	175 PSIG	.01942*
R-15B	4-5/8 & 2-1/2 x 3	2	2 QT.	109	175 PSIG	.02914

* Clearance Volume Modified to Effective .014 Cu. Ft./Rev.

ELECTRIC WIRING (BASED ON 1999 NEC)

Wire Size (Rubber Covered) AWG NO.
Copper Conductor -- 75°C Temp Rating -- 30°C Ambient

MOTOR HP	3 PHASE				1 PHASE		
	200/208V	230V	460V	575V	115V	208V	230V
1-1/2	14	14	14	14	10	14	14
2	14	14	14	14	8	12	12
3	14	14	14	14	8	10	10
5	10 (8)	12 (8)	14 (12)	14	-	8 (6)	8 (6)
7-1/2	8 (6)	10 (6)	14 (10)	14 (10)	-	-	6 (4)

Values in () for Duplex Unit w/one incoming power line to both motors.

PIPE SIZES FOR COMPRESSED AIR LINES - R-10D & R-15B

(Based on Clean, Smooth Schedule 40 Pipe)

	LENGTH OF PIPE LINES IN FEET							
	25	50	75	100	150	200	250	300
R-10D	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
R-15B	3/4 (1)	3/4 (1)	3/4(1)	3/4 (1)	1 (1-1/4)	1 (1-1/4)	1 (1-1/4)	1 (1-1/4)

Values in () for Duplex Unit.



Never use plastic pipe or improperly rated metal pipe. Improper piping materials can burst and cause injury or property damage.

INSTALLATION

1. Permanently installed compressors must be located in a clean, well ventilated dry room so compressor receives adequate supply of fresh, clean, cool and dry air. It is recommended that a compressor, used for painting, be located in a separate room from that area wherein body sanding and painting is done. Abrasive particles or paint, found to have clogged the air intake filters and intake valves, shall automatically void warranty.
2. Compressors should never be located so close to a wall or other obstruction that flow of air through the fan bladed flywheel, which cools the compressor, is impeded. Permanently mounted units should have flywheel at least 12" from wall.
3. Place stationary compressors on firm level ground or flooring. Permanent installations require bolting to floor. Bolt holes in tank or base feet are provided. Before bolting or lagging down, shim compressor level. Avoid putting a stress on a tank foot by pulling it down to floor. This will only result in abnormal vibration, and possible cracking of Air Receiver. It is recommended that optional vibro-isolator pads be installed on unit. Tanks bolted directly to a concrete floor without padding will not be warranted against cracking. Champion vibro-isolators must be used for extended warranty to apply to ASME air receivers.
4. If installing a bare pump or a base mounted unit, make certain the system has adequate pressure limiting controls. Controls could be a pressure switch for start/stop operation or a pilot valve for continuous operation. If a pilot valve is used, the compressor must be equipped with head unloaders. Control air must be piped from the air receiver to the pilot valve.



DANGER

Do not install isolating valves between compressor outlet and air receiver. This will cause excessive pressure if valve is closed, and cause injury and equipment damage.



WARNING

Always use an air pressure regulating device at the point of use. Failure to do so can result in injury or equipment damage.



CAUTION

- **Do not install in an area where ambient temperature is below 32 degrees F or above 100 degrees F.**
- **Do not install unit in an area where air is dirty and/or chemical laden.**
- **Unit is not to be installed outdoors.**

ELECTRICAL POWER SUPPLY

It is essential that the power supply and the supply wiring are adequately sized and that the voltage correspond to the unit specifications.

All wiring should be performed by a licensed electrician or electrical contractor. Wiring must meet applicable codes for area of installation.

Recommended electrical wiring specifications are listed in "Specifications" section.

If ordered with a mounted starter, compressor unit is pre-wired at factory. It is necessary only to bring lines from properly sized disconnect switch to magnetic starter mounted on compressor, and attach to terminals as indicated on schematic diagram located inside cover of control. Be sure that power circuit and voltage correspond with the specifications.



CAUTION

Wiring must be such that when viewing compressor from opposite shaft end, rotation of shaft is clockwise as shown by arrow on guard. Wrong direction rotation for any length of time will result in damage to compressor.

INSTALLATION (CONT'D)

GROUNDING INSTRUCTIONS

This product should be connected to a grounded, metallic, permanent wiring system, or an equipment-grounded terminal or lead on the product.

AIR LINE PIPING

Connection to air system should be of the same size, or larger, than discharge pipe out of unit. See recommended piping sizes listed in "Specifications" section. A union connection to the unit and water drop leg is recommended. Install a flexible connector between the discharge of the unit and the plant air piping. Plant air piping should be periodically inspected for leaks using a soap and water solution for detection on all pipe joints. Air leaks waste energy and are expensive.

PREPARATION FOR INITIAL START-UP AND OPERATION

1. Pull main disconnect switch to unit and tag out to assure that no power is coming into the unit. Connect power leads to starter.



WARNING

Do not attempt to operate compressor on voltage other than that specified on order or on compressor motor.

2. Check compressor oil level. Add oil as required. See section on "Oil Specifications".
3. Inspect unit for any visible signs of damage that would have occurred in shipment or during installation.
4. Activate main disconnect switch.
5. "Jog" motor and check for proper rotation by direction of arrow. If rotation is wrong, reverse input connections on the magnetic starter.
6. Close receiver outlet hand valve and start unit.
7. With receiver hand valve closed, let machine pump up to operating pressure. At this stage the automatic controls will take over. Check for proper cycling operation.
8. Check for proper operation of any options, e.g. LOSC or head unloaders with pilot valve. Refer to individual option instruction sheet.
9. When the initial run period has shown no operating problems, shut unit down and recheck oil level.
10. Open receiver hand valve. The air compressor unit is now ready for use.

GUIDE TO MAINTENANCE

To obtain reliable and satisfactory service, this unit requires a consistent preventive maintenance schedule. Maintenance schedule pages are included in the back of this manual to aid in keeping the proper records.



WARNING

Before performing any maintenance function, switch main disconnect switch to "off" position to assure no power is entering unit. "Lock Out" or "Tag Out" all sources of power. Be sure all air pressure in unit is relieved. Failure to do this may result in injury or equipment damage.

DAILY MAINTENANCE

1. Check oil level of both compressor and engine if so equipped. Add quality lubricating oil as required. See Section on "Oil Specifications".
2. Drain moisture from tank by opening tank drain valve located in bottom of tank. Do not open drain valve if tank pressure exceeds 25 PSIG.
3. Turn off compressor at the end of each day's operation. Turn off power supply at wall switch.

WEEKLY MAINTENANCE

1. Clean dust and foreign matter from cylinder head, motor, fan blade, air lines, intercooler and tank.
2. Remove and clean intake air filters.



WARNING

Do not exceed 15 PSIG nozzle pressure when cleaning element parts with compressed air. Do not direct compressed air against human skin. Serious injury could result. Never wash elements in fuel oil, gasoline or flammable solvent.

3. Check V-belts for tightness. The V-belts must be tight enough to transmit the necessary power to the compressor. Adjust the V-belts as follows:

Remove bolts and guard to access compressor drive.

Loosen mounting hardware which secures motor to base. Slide motor within slots of baseplate to desired position.

Apply pressure with finger to one belt at midpoint span. Tension is correct if top of belt aligns with bottom of adjacent belt. Make further adjustments if necessary.

Check the alignment of pulleys. Adjust if necessary.

Tighten mounting hardware to secure motor on base.

Re-install guard and secure with bolts.



WARNING

Never operate unit without belt guard in place. Removal will expose rotating parts which can cause injury or equipment damage.

EVERY 90 DAYS OR 500 HOURS MAINTENANCE

1. Change crankcase oil. Use type and grade oil as specified in the section on "Compressor Oil Specifications".
2. Check entire system for air leakage around fittings, connections, and gaskets, using soap solution and brush.
3. Tighten nuts and capscrews as required.
4. Check and clean compressor valves, replace springs, discs and seats when worn or damaged.



CAUTION

Valves must be reinstalled in original position. Valve gaskets should be replaced each time valves are serviced.

5. Pull ring on all pressure relief valves to assure proper operation.

GENERAL MAINTENANCE NOTES

PRESSURE RELIEF VALVE: The pressure relief valve is an automatic pop valve. Each valve is properly adjusted for the maximum pressure permitted by tank specifications and working pressure of the unit on which it is installed. If it should pop, it will be necessary to drain all the air out of the tank in order to reseal properly. Do not readjust.

TANK DRAIN VALVE: Drain valve is located at bottom of tank. Open drain valve daily to drain condensation. Do not open drain valve if tank pressure exceeds 25 PSIG. The automatic tank drain equipped compressor requires draining manually once a week.

PRESSURE SWITCH: The pressure switch is automatic and will start compressor at low pressure and stop when the maximum pressure is reached. It is adjusted to start and stop compressor at the proper pressure for the unit on which it is installed. Do not readjust.

BELTS: Drive belts must be kept tight enough to prevent slipping. If belts slip or squeak, see V-belt maintenance in preceding section.



CAUTION

If belts are too tight, overload will be put on motor and motor bearings.

COMPRESSOR VALVES: If compressor fails to pump air or seems slow in filling up tank, disconnect unit from power source and remove valves and clean thoroughly, using compressed air and a soft wire brush. After cleaning exceptional care must be taken that all parts are replaced in exactly the same position and all joints must be tight or the compressor will not function properly. When all valves are replaced and connections tight, close hand valve at tank outlet for final test. Valve gaskets should be replaced each time valves are removed from pump.

GENERAL MAINTENANCE NOTES (CONT'D)

CENTRIFUGAL UNLOADER AND UNLOADER PRESSURE RELEASE VALVE:

The centrifugal unloader is operated by two governor weights. It is totally enclosed and lubricated from the crankcase of the compressor. When the compressor starts, the governor weights automatically open compressing the main spring, allowing the unloader pressure release valve to close. When the compressor stops, the main spring returns the governor weights to normal position opening the unloader pressure release valve and unloading the compressor. This prevents overloading the motor when starting. If air continues to escape through the governor or unloader pressure release valve while operating, this is an indication that the unloader pressure release valve is not closing tightly and may be held open by foreign substance which has lodged on the seat. In order to correct this, remove the governor release valve cap, giving access to unloader pressure release valve spring and ball. Clean thoroughly and return parts in the same order in which they were removed. Loose drive belts can also cause unloader to leak by preventing the compressor from reaching proper speed. (See "BELTS" above.)

CHECK VALVE:

The check valve closes when the compressor stops operating, preventing air from flowing out of the tank through the pressure release valve. After the compressor stops operating, if air continues to escape through the release valve, it is an indication that the check valve is leaking. This can be corrected by removing check valve and cleaning disc and seat. If check valve is worn badly, replace same.



WARNING

Before removing check valve be sure all air pressure in unit is relieved and power is disconnected. Failure to do so may result in injury or equipment damage.

THE INTERSTAGE PRESSURE RELIEF VALVE is provided to protect against interstage over pressure and is factory set for maximum pressure of 75 PSIG.

DO NOT RESET

If the pressure relief valve pops, it indicates trouble. Shut down the unit immediately and determine and correct the malfunction. Inspect the head valves. Serious damage can result if not corrected and can lead to complete destruction of the unit. Tampering with the interstage pressure relief valve, or plugging the opening destroys the protection provided and voids all warranty.

LUBRICATION OF COMPRESSOR:

Fill crankcase to proper level as indicated by oil sight gauge. Keep crankcase filled as required by usage.

COMPRESSOR OIL SPECIFICATIONS

1. AIR COMPRESSOR

Compressors shipped on units are factory filled with ISO 100 reciprocating compressor oil. Compressors shipped as basic (pump only) do not have any oil in the crankcase. Be sure to add oil to these pumps prior to start-up.

It is recommended that this compressor be maintained using the ISO 100 recip oil for ambient temperatures above 32 degrees F. This is a 30 weight, non-detergent industrial oil with rust and oxidation inhibitors specially formulated for reciprocating compressors. Contact your distributor for information and purchase of this oil. For temperatures below 32 degrees F, use an ISO 68 compressor oil. A separate list of acceptable oils can be obtained from the distributor's Service Department.

NOTES:

1. Do not mix oil types, weights, or brands. Consult factory for the use of synthetic lubricants.
2. For the first 100 hours of compressor operation, a careful and regular check of the oil level should be made. Maintain oil level at the full line.

2. ELECTRIC MOTORS

Electric motors are equipped with sealed-for-life bearings and require no additional lubrication.

TROUBLE SHOOTING CHART FOR COMPRESSOR



WARNING

Always disconnect unit from power supply and relieve all pressure from air tank before performing any maintenance. Failure to do so may result in equipment damage or injury. "Lock Out" or "Tag Out" all power sources.

Never operate unit without belt guard in place.

Never use gasoline or flammable solvent on or around compressor unit. Explosion may result.

SERVICE PROBLEM

A	Motor will not Start
B	Motor is Noisy or Overheats
C	Motor Stops
D	Compressor Runs Hot
E	Compressor Pumps Too Slowly
F	Compressor Won't Shut Off
G	Noisy Check Valve
H	Excessive Belt Wear
I	Abnormal Pressure Fluctuation
J	Air Escapes From Unloader Muffler When Running
K	Air Escapes From Unloader Muffler When Stopped
L	Interstage Pressure Relief Valve Pops Off Continuously
M	Compressor Cycles (runs) too Often
N	Starter Kicks Out

POSSIBLE CAUSE OF PROBLEM

	N	M	L	K	J	I	H	G	F	E	D	C	B	A	
1												■		■	1
2															2
3															3
4									■						4
5		■							■			■		■	5
6	■												■		6
7													■		7
8		■													8
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19			■			■									19
20							■								20
21										■	■				21
22											■				22

FOR EXPLANATION SEE NEXT PAGE

N	M	L	K	J	I	H	G	F	E	D	C	B	A
---	---	---	---	---	---	---	---	---	---	---	---	---	---

EXPLANATION OF TROUBLE SHOOTING GUIDE

- 1/2. Check all fuses and switches on lines to motor to be sure it is receiving power. Check for loose or faulty wires.
3. A magnetic starter embodies a reset button which may be used to place the motor back in service after some unusual power conditions.
- 4/5. A pressure switch uses a diaphragm to open and close a set of points. Points may become pitted or dirty through use. Clean by "touching up" with sandpaper or replace. See instructions in pressure switch cover.



WARNING

Disconnect unit from power source before checking pressure switch.

6. Low voltage is prime cause of motor trouble. Ask your power company to test for low voltage.
7. Most electric motors are of the sealed bearing type. Check motor manufacturer's recommendation.
8. Water in the form of vapor is compressed along with incoming air and condenses in tank. Tank must be drained daily so that full storage capacity of tank may be used. To drain, relieve tank pressure, open valve at bottom of horizontal or vertical tank. If compressor is equipped with automatic tank drain, drain manually once a week.



WARNING

Do not open drain valve if tank pressure exceeds 25 PSIG.

9. The fins on the cylinder and tubing should be free of dirt which acts as an insulation. This is easily done by periodically blowing them clean or through the use of a wire brush.
9. "V" belts must be tight enough to transmit the necessary power to the compressor. If too tight they will overload the motor. If, by pushing down on one belt, its top lines up with the bottom of the belt next to it, the tension is correct. Should it be necessary to change the tension, slide the engine or motor in slots provided in tank baseplate to desired position.



WARNING

Disconnect unit from power source before checking or adjusting belts. Always reinstall belt guard after adjusting belts.

11. The fan blade flywheel must rotate in the direction shown by the arrows.
12. Compressor valves may become fouled by carbon or other foreign matter. To service, remove manifold and extract valve. Remove screw in center of valve and clean all parts. Seat and disc may be lapped in on fine sandpaper if badly carboned. If a smooth finish cannot be obtained, replace with new parts. Reassemble and install, taking caution that all parts are returned to their original position with screw head up.
13. All air lines from compressor to tank and from tank to air operated devices should be tight. A soap solution will show bubbles when put on a leaky joint. At 175 PSIG a 1/32" hole will allow almost 3 cubic feet per minute of air to escape.
14. Pilot Valve adjustment is found on page 23.
15. Check pilot valve for loose connections.
16. The centrifugal unloader valve may become fouled by foreign matter. To clean, unscrew hex cap on end of unloader, remove spring and ball, to remove ball, you may need to "rock" flywheel. Clean or replace if necessary.

EXPLANATION OF TROUBLE SHOOTING GUIDE (CONT'D.)

- 17/18. Before servicing check valve, be sure pressure in tank is ZERO. Replace check valve.
19. Badly worn compressors which are pumping oil may deposit carbon within after-cooler tube and check valve, restricting flow of air and possibly plugging these parts completely. These parts should be cleaned or replaced.



WARNING

Disconnect unit from power source and relieve tank pressure before servicing these components.

20. Motor pulley and flywheel must be in line to prevent wear on sides of belts. If misaligned, disconnect unit from power source and move pulley in or out by loosening set screw on key and tapping pulley in appropriate direction.



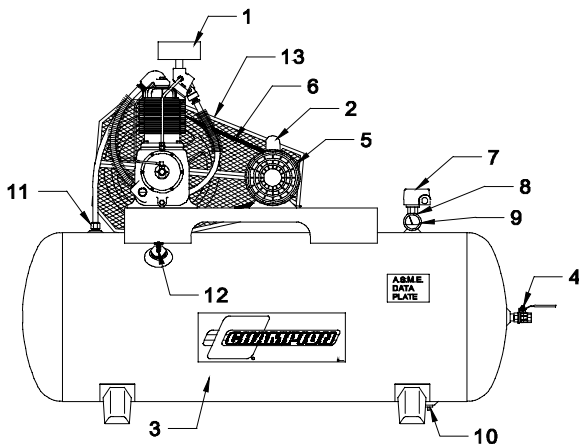
WARNING

Disconnect power source before adjusting pulley.

21. Intake filter should be cleaned periodically to allow unrestricted flow of entering air. To service filter, remove wing nut, metal cover and filter element. Element may be blown clean with an air nozzle if moderately dusty. Heavily fouled elements should be replaced. **Never** clean element with fuel oil, gasoline or flammable solvent.
22. Cool running and long life can be assured by careful attention to crankcase oil. Check frequently and change as indicated on compressor data sheet.

PARTS LIST

MAJOR COMPRESSOR UNIT COMPONENTS



Parts common to all models except base mounted :

- | | | | |
|-----|-----------------------|---|-------------------------|
| 7) | Pressure Switch | - | M1227 |
| 8) | Pressure Relief Valve | - | M2843 |
| 9) | Pressure Gauge | - | M519C |
| 10) | Drain Valve | - | M2684 |
| 11) | Check Valve | - | P05822A |
| 12) | Tank Drain | - | Z1542 - Horizontal Tank |
| | | - | Z1541 - Vertical Tank |
| 13) | Belt Guard | - | Z-307 |
- (All units except those equipped with air-cooled aftercoolers)

Additional parts for Duplex Unit (Not Shown)

- Alternator Class 47, 208V, 3 Phase; P10043A
230V, 3 Phase; P05814A
460V, 3 Phase; P05815A

- Magnetic Starter (2), Specify Voltage & Phase

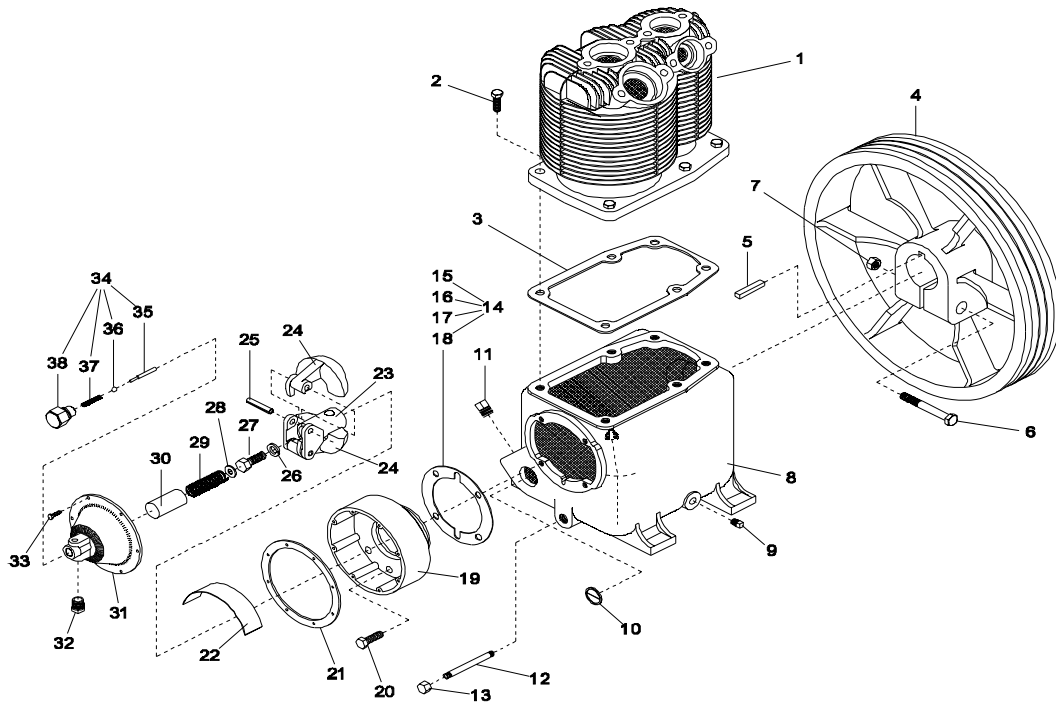
PARTS LIST CONT'D

HORIZONTAL TANK MODEL ILLUSTRATED (See Preceding Page)

Model Number	1 Pump	2 Elec. Motor	3 Air Tank	4 Hand Valve	5 Motor Pulley (Not Shown)		6 V-Belts		
					1 Phase			3 Phase	
					1 Phase	3 Phase		1 Phase	3 Phase
HR1-3	R-10D	12 HP	P04390D	M3590	P09315B	P09315B	4L-650		
HR1-6	R-10D	12 HP	P01136D	M3590	P09315B	P09315B	4L-650		
HR1-8	R-10D	12 HP	P01164D	M3590	P09315B	P09315B	4L-650		
HR2-3	R-10D	2 HP	P04390D	M3590	M7009D	P11703A Pulley P09423A Bushing	4L-680		
HR2-6	R-10D	2 HP	P01136D	M3590	M7009D	P11703A Pulley P09423A Bushing	4L-680		
HR2-8	R-10D	2 HP	P01164D	M3590	M7009D	P11703A Pulley P09423A Bushing	4L-680		
HR3-6	R-15B	3 HP	P01136D	M3590	M4309D	M4309D	5L-650		
HR3-8	R-15B	3 HP	P01164D	M3590	M4309D	M4309D	5L-650		
HR3-12	R-15B	3 HP	P01596D	M2686	M4309D	M4309D	5L-650		
HR5-6	R-15B	5 HP	P01136D	M3590	M7009D	M7009D	5L-680		
HR5-8	R-15B	5 HP	P01164D	M3590	M7009D	M7009D	5L-680		
HR5-12	R-15B	5 HP	P01596D	M2686	M7009D	M7009D	5L-680		
HR5D-12	R-15B (2)	5 HP (2)	P02080D	M2686	M7009D	M7009D	5L-680 (4)		
VR1-6	R-10D	1-1/2HP	P01161D	M3590	P09315B	P09315B	4L-650		
VR1-8	R-10D	1-1/2HP	P01217D	M3590	P09315B	P09315B	4L-650		
VR2-6	R-10D	2 HP	P01161D	M3590	M7009D	P11703A Pulley P09423A Bushing	4L-680		
VR2-8	R-10D	2 HP	P01217D	M3590	M7009D	P11703A Pulley P09423A Bushing	4L-680		
VR3-6	R-15B	3 HP	P01161D	M3590	M4309D	M4309D	5L-650		
VR3-8	R-15B	3 HP	P01217D	M3590	M4309D	M4309D	5L-650		
VR3-12	R-15B	3 HP	P02212D	M2686	M4309D	M4309D	5L-680		
VR5-6	R-15B	5 HP	P01161D	M3590	M7009D	M7009D	5L-680		
VR5-8	R-15B	5 HP	P01217D	M3590	M7009D	M7009D	5L-680		
VR5-12	R-15B	5 HP	P02212D	M2686	M7009D	M7009D	4L-650		
BR-1	R-10D	12 HP	*	*	P09315B	P09315B	5L-680		
BR-2	R-10D	2 HP	*	*	M7009D	P11703A Pulley P09423A Bushing	5L-650		
BR-3	R-15B	3 HP	*	*	M4309D	M4309D	5L-680		
BR-5	R-15B	5 HP	*	*	M7009D	M7009D	5L-680		
HR7F-8	R-15B	7-1/2 HP	P01164D	M3590	P07981A - Pulley P05607A - Bushing	P07981A - Pulley P05607A - Bushing	B68		
HR7F-12	R-15B	7-1/2 HP	P01596D	M2686	P07981A - Pulley P05607A - Bushing	P07981A - Pulley P05607A - Bushing	B68		
HR7DF-25	R-15B(2)	7-1/2 HP (2)	P05763D	M2686	P07981A - Pulley P05607A - Bushing	P07981A - Pulley P05607A - Bushing	B68 (4)		
VR7F-8	R-15B	7-1/2 HP	P01217D	M3590	P07981A - Pulley P05607A - Bushing	P07981A - Pulley P05607A - Bushing	B68		
VR7F-12	R-15B	7-1/2 HP	P02212D	M2686	P07981A - Pulley P05607A - Bushing	P07981A - Pulley P05607A - Bushing	B68		
BRF-7	R-15B	7-1/2 HP	*	*	P07981A - Pulley P05607A - Bushing	P07981A - Pulley P05607A - Bushing	B68		

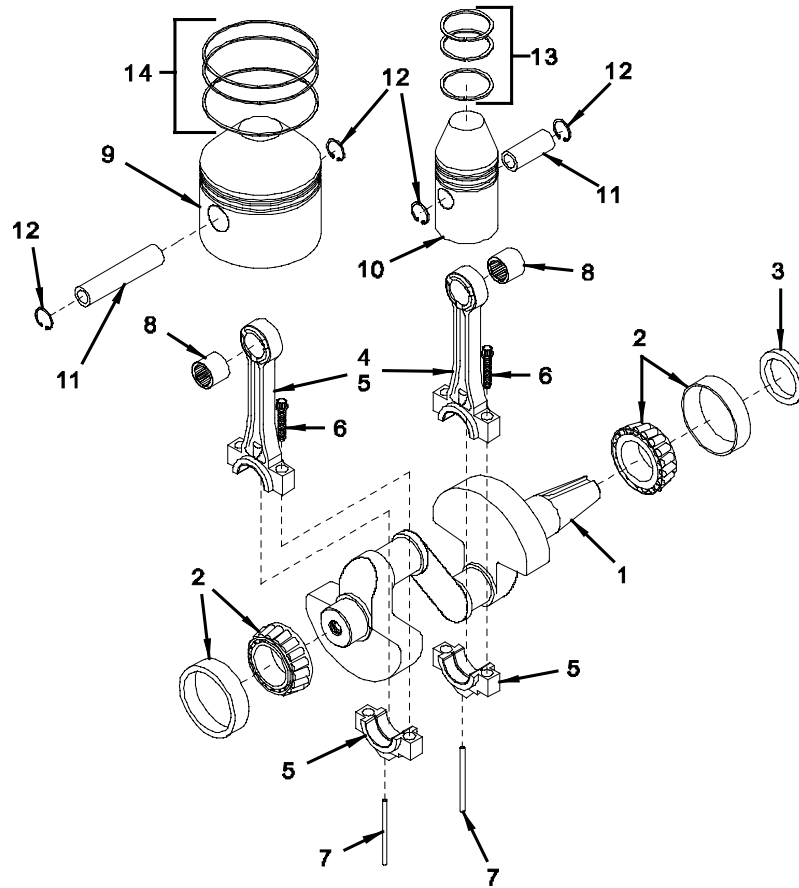
* "BR" units are not supplied with tanks. Baseplate P09195C is common to all models.

R-10D AND R-15B FLYWHEEL, CYLINDER, CRANKCASE & UNLOADER ASSEMBLY



ITEM	PART NO.	NAME	REQ.	ITEM	PART NO.	NAME	REQ.
1	P12237D	Cylinder	1	19	NR80A	Gov. Housing	1
2	M2345	Screw, Hex Head Cap	6	20	M2343	Screw, Hex Head Cap	4
3	NR29A	Gasket, Cylinder	1	21	SE1489	Gasket, Gov Housing Cover	1
4	NR7A	Flange	1	22	NR104	Plate, Gov Baffle	1
5	U8	Flywheel	1	23	SE583B	Spindle, Gov. Wt.	1
6	M738	Key	1	24	SE582	Gov. Wt.	2
7	M465	Screw, Hex Head Cap	1	25	SE 592A	Pin. Gov. Wt.	2
8	M1820	Nut, Hex	1	26	M466	Washer, Spring Lock	1
9	M2326	Crankcase	1	27	M2345	Screw, Hex Head Cap	1
10	RE714	Pipe Plug	1	28	M912A	Washer, Flat	1
11	M459	Gauge, Oil Level	1	29	SE590	Spring, Gov. Main	1
12	M492	Pipe Plug (Oil Fill)	1	30	SE587	Sleeve, Spring	1
13	M461	Pipe, Oil Drain	1	31	RE10100A	Cover, Gov. Housing	1
14	Z130	Cap, Oil Drain	1	32	Z4593	MUFFLER ASSY, UNLOADER	1
15	SE1430	Gasket Set, Gov. Housing	1	33	M3473	Screw, Hex Head Machine	6
16	SE1430A	Gasket, Gov. Housing (.030" Thick)	1	34	Z12414A	RELEASE VALVE ASSY. KIT	1
17	SE1430B	Gasket, Gov. Housing (.005" Thick)	1	35	SE586B	Plunger, Release Valve	1
18	SE1430C	Gasket, Gov. Housing (.010" Thick) Gasket, Gov. Housing (.015" Thick)	1	36	P07841A	Ball Release Valve	1
				37	SE591	Spring, Release Valve	1
				38	NR101	Body, Release Valve	1
					Z764	GASKET SET, COMPLETE PUMP	1

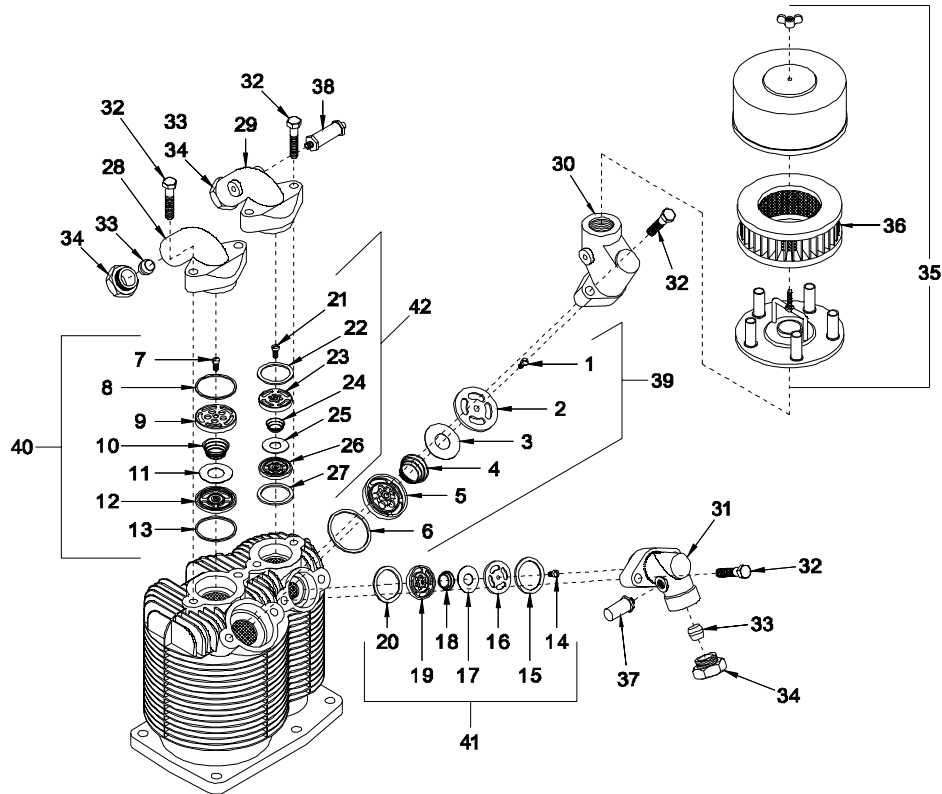
R-10D AND R-15B CRANKSHAFT, PISTONS, CONNECTING ROD ASS'YS.



ITEM	PART NO.	NAME	REQ	ITEM	PART NO.	NAME	REQ
1	R105	Crankshaft (R-10D only)	1	8	R1037	Bearing, Piston Pin	2
	R155	Crankshaft (R-15B only)	1	9	ZR154	Piston, Low Pressure w/Pin	1
	ZNR16	ASSY; Main Bearing	2	10	ZP2709C	Piston, High Pressure w/Pin	1
3	OSN4	Oil Seal	1	11	R1021	Pin, Piston	2
4	Z750	KIT, CONNECTING ROD ASSY. (Items 5,6,7 & 8)	1	12	R10102	Ring, Piston Pin Retaining	4
		R-15B, Low Pressure & High Pressure	2	13	Z797	RING SET, HIGH PRESSURE PISTON	1
		R-10D, Low Pressure	1	14	Z798	RING SET, LOW PRESSURE PISTON	1
	Z752	KIT, CONNECTING ROD ASSY. (Items 5,6,7 & 8)	1		Z9100	KIT, HIGH PRESSURE PISTON ASSY. (Items 10, 11, 12 & 13)	1
		R-10D, High Pressure (side only)	1		Z9101	KIT, LOW PRESSURE PISTON ASSY. (Items 9, 11, 12 & 14)	1
5	NSS	Connecting Rod			Z799	KIT, COMPLETE RING SET (Items 13 & 14)	1
6	M1583	Bolt, Connecting Rod	4				
7	R1024	Dipper, Oil (R-10D only)	2				
	R1524	Dipper, Oil (R-15B only)	2				

NOTE: NSS= Not Sold Separately

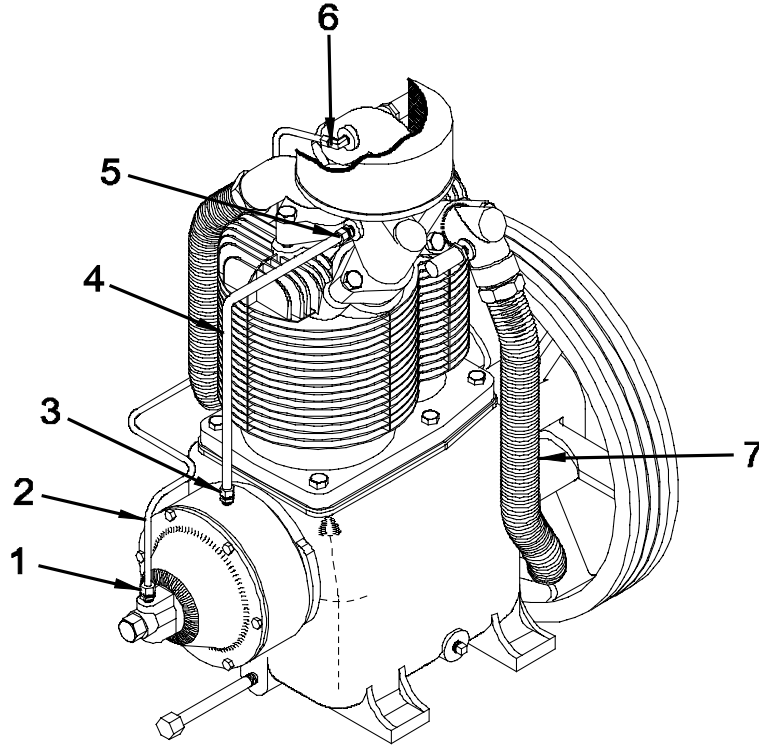
R-10D AND R15B VALVES & FILTER, MANIFOLD ASS'YS.



ITEM	PART NO.	NAME	REQ.	ITEM	PART NO.	NAME	REQ.
1	P04544A	Screw, Hex Head Machine	1	23	M2100	Cage, Exhaust Valve	1
2	RE1471A	Seat, Intake Valve	1	24	RE760	Spring, Valve	1
3	RE1470	Disc, Valve	1	25	RE1062	Disc, Valve	1
4	RE1458	Spring, Valve	1	26	RE757A	Seat, Exhaust Valve	1
5	M2098	Cage, Intake Valve	1	27	P04136	Gasket, Valve	1
6	P04134A	Gasket, Valve	1	28	RE102E	Manifold, LP Exhaust	1
7	M3220	Screw, Hex Head Machine	1	29	P12303B	Manifold, HP Exhaust	1
8	P04135A	Gasket, Valve	1	30	P09669C	Manifold, LP Intake	1
9	M2099	Cage, Exhaust Valve	1	31	P12302B	Manifold, HP Intake	1
10	RE1059	Spring, Exhaust Valve	1	32	P05005A	Screw, Hex Head Cap (All Manifolds)	8
11	RE1061	Disc, Valve	1	33	SE542	Ferrule	3
12	M2097	Seat, Exhaust Valve	1	34	SE541	Nut, compression	3
13	P04135A	Gasket, Valve	1	35	P04999A	Intake Filter	1
14	M3220	Screw, Hex Head Machine	1	36	P05050A	Filter Element	1
15	P09191A	Gasket, Valve	1	37	P03592A	Interstage Pressure Relief Valve	1
16	P09172B	Seat, Intake Valve	1	38	P09704A	Pressure Relief Valve	1
17	RE1062	Disc, Valve	1	39	Z812	VALVE ASSY, LP INTAKE*	1
18	RE760	Spring, Valve	1	40	Z813	VALVE ASSY, LP EXHAUST	1
19	M2101	Cage, Intake Valve	1	41	Z5117	VALVE ASSY, HP INTAKE*	1
20	P09170A	Gasket, Valve	1	42	Z115	VALVE ASSY, HP EXHAUST	1
21	M3220	Screw, Hex Head Machine	1		Z5155	COMPLETE VALVE SET w/GASKETS*	
22	P04137A	Gasket, Valve	1		Z5156	COMPLETE VALVE GASKET SET	

* See page 18, Unloader Kit, for intake valves for head unloader pumps. Use Z6795 - Complete Valve Set for Head Unloader Pumps.

R10D AND R-15B INTERCOOLER & TUBING



ITEM	PART NO.	NAME	REQ.
1	M2863	Compression Fitting	1
2	ZSB250A	Tube, Unloading w/Fittings	1
3	M2864	Compression Fitting	1
4	ZUB375	Breather Tube w/Fittings	1
5	M2864	Compression Fitting	1
6	M2868	Compression Fitting	1
7	Z9140	Intercooler w/Fittings	1

CONSTANT SPEED HEAD UNLOADER KIT Z9144 For Air Compressor Pump Models R-10D and R-15B

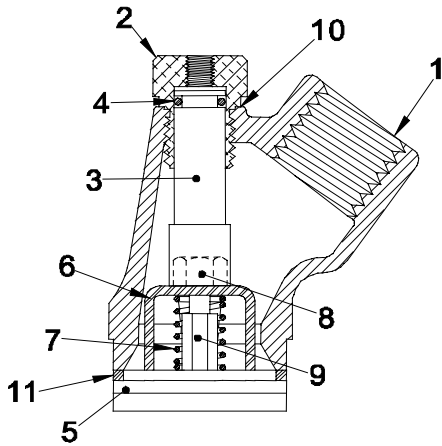
NOTE: This is optional equipment and may not be included on your unit.

The purpose of constant speed unloading is to provide a means of stopping or starting the compression of air by the compressor without stopping or starting the electric motor or gasoline engine after each cycle.

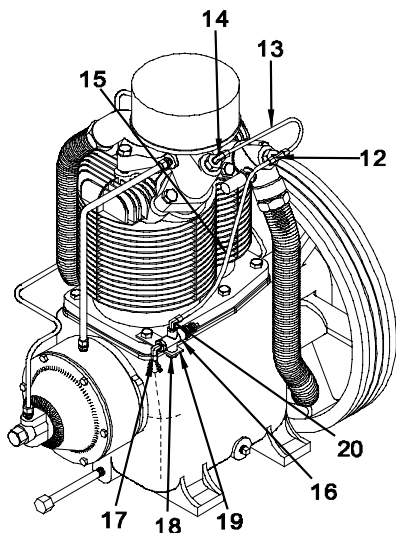
To accomplish this, an air pilot valve is used to replace the pressure switch used for stop-start operation. The pilot valve senses storage tank pressure, and when the pressure is raised to a predetermined setting, this air is released to an intake valve hold-open mechanism. The compressor stops compressing air and runs free until the pilot valve senses that the pressure in the tank has dropped to the predetermined setting. At this time the air is released from the intake valve hold-open mechanism, and the compressor starts compressing air again.

The parts called out below replace or are substituted for those found in the regular parts list.

Z9144 - CAPTURED UNLOADER VALVE R-10D, R-15B

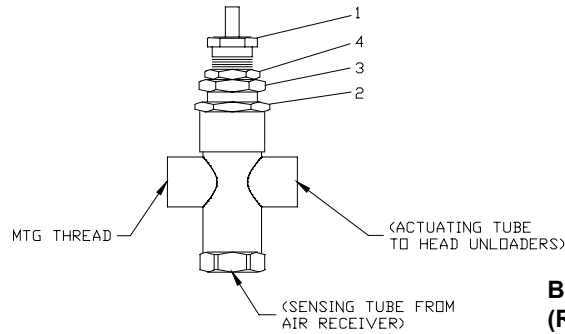


**TYPICAL MANIFOLD ASSEMBLY
FOR HEAD UNLOADERS**



REF. NO.	TOTAL REQ'D	PART NO.	LOW PRESSURE
-	1	Z6312	LP Intake Manifold Group (includes 1,2,3,4)
1	1	P09670C	LP Intake Manifold
2	1	P02306B	Cylinder
3	1	P09923A	Unloader Piston
4	1	P02547A	O-Ring
5	1	Z4877	LP Valve Assembly (includes 6,7,8,9)
6	1	P09085A	Unloader Finger
7	1	P09084A	Unloader Spring
8	1	P09086A	Locknut
9	1	P09083A	Guide Stem
REF. NO.	TOTAL REQ'	PART NO.	HIGH PRESSURE Z9143 HP
-	1	Z9143	HP Intake Manifold Goup (Includes items 1,2,3,4,10)
1	1	P12304B	HP Intake Manifold
2	1	P02306B	Cylinder
3	1	P09923A	Unloader Piston
4	1	P02547A	O-Ring
5	1	Z6308	HP Valve Assembly (includes 6,7,8,9)
6	1	P09297A	Unloader Finger
7	1	P01882A	Unloader Spring
8	1	P09086A	Locknut
9	1	P09296A	Guide System
10	1	P00746A	Cylinder Gasket
11	1	P09171A	Valve Gasket (not included)
REF. NO.	TOTAL REQ'D	PART NO.	HIGH & LOW PRESSURE
12	1	M2879	Compression Fitting
13	1	Z9172	Manifold Tube
14	1	M2868	Compression Fitting
15	1	P12323A	Actuating Tube
16	1	M2853	Pilot Valve
17	1	M2881	Compression Fitting
18	1	M3465	Screw, Hex Head Cap
19	1	M807	Mounting bracket
20	1	M2868	Compression Fitting

OPERATION AND ADJUSTMENT OF PILOT VALVES



PILOT VALVES

ASSEMBLY PART NO.	PRESSURE RANGE, PSIG
M2855	75 - 95
M2854	90-120
M2853	140 - 170

The Pilot Valve is designed to act as an automatic "on" and "off" air switch. When in the "on" position it allows air to flow from the tank through the valve to some device such as a compressor suction unloader, thus actuating it. In the "off" position this valve stops the flow of air through the valve and releases the pressure in the line to the device.

The Pilot Valve works as follows: Tank air pressure acts on the bottom of the valve. When pressure is great enough to overcome spring force holding valve down on lower seat, it lifts off seat and allows air to flow around valve and out through side opening in Pilot Valve. When valve lifts off lower seat it moves up and seats on upper seat where it is held by tank pressure. When pressure in tank and on valve drops, spring forces valve back down on lower seat. Air in line to device being actuated can then escape through upper seat and out vent hole. The pressure at which the Pilot Valve is "on" or "off" is controlled by the spring which has been installed at the factory. A small adjustment can be made in the field by changing the spring force by compressing the spring more or less with the adjusting screw provided on the Pilot Valve.

COMPRESSOR PILOT VALVE PRESSURE ADJUSTMENT

Proceed with the following instructions while compressor is running:

1. Loosen locknut (4) and back off several turns. Do not turn differential adjuster (3).
2. Check reading on the tank pressure gauge. Set the compressor maximum pressure at 170 psig. Turn threaded cap clockwise to increase pressure or counterclockwise to decrease pressure.
3. After pressure is set, tighten locknut (4). Be careful not to move the threaded cap (1).

COMPRESSOR PILOT VALVE DIFFERENTIAL PRESSURE ADJUSTMENT

Proceed with the following instructions while compressor is running:

1. Loosen locknut (2) and back off several turns.
2. Check reading on the tank pressure gauge. Set the pressure to 30 psig differential (unload at 170 psig, reload at 140 psig). Turn nut (3) clockwise to increase differential pressure or counter-clockwise to decrease differential pressure.
3. After pressure is set, tighten locknut (2). Be careful not to move nut (3).

UNIT HAZARD DECAL LISTING

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>PART NO.</u>
A	Retain Labels	P09879A
B	DANGER - Breathing Air	P09376B
C	DANGER - Drain Tank Daily	P09430B
D	DANGER - Valve Maintenance	P09750B
E	DANGER - High Voltage	P04934A
F	DANGER - Auto Start	P09384B
G	WARNING - Pressure/Safety Valve	P09752B
H	WARNING - Rotating Parts	P09373B
I	WARNING - Hot Surfaces	P09758A
J	WARNING - Tank Pressure	P04983A
K	CAUTION - Clean Filters	M1736
L	Unit Location	P04518A
M	Rotation Direction	M422
N	Pressure Setting: Master	P09388A
O	Pressure Setting: 140-175 psig	P04988A
P	Maintenance Instructions	P09755B
Q	*Dual Control Valve	P05381A
R	*Low Oil Safety Control	P02134A
S	*Automatic Tank Drain	M653
T	Service Information	P04995A

*For Optional Parts

UNIT HAZARD TAG LISTING

U	IMPORTANT - Electrical Specs	P05257A
V	DANGER - Valve Instructions	P09852A
W	WARNING - Read Owners Guide	P04996A

PUMP HAZARD DECAL & TAG LISTING

1	DECAL - Retain Labels	P09879A
2	DECAL - DANGER- Adequate Filtering	P08586A
3	DECAL - Rotation Direction	M442
4	DECAL - Service Filter	M1736
5	TAG - DANGER - Valve Instructions	P09852A
6	TAG - WARNING - Read Owners Guide	P04996A

UNIT HAZARD DECALS & TAGS

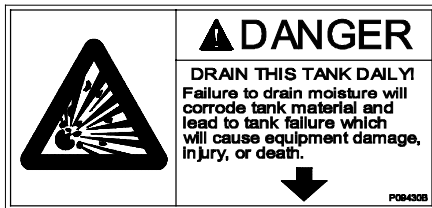
A



B



C



D

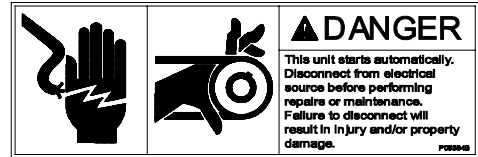


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F

G



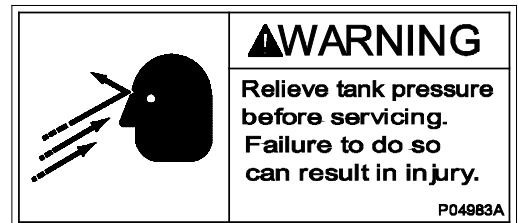
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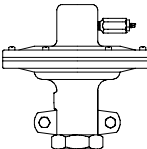
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K

**CAUTION, SERVICE FILTER
ELEMENTS WEEKLY
MORE OFTEN IN DUSTY CONDITIONS M1736**

S



THIS UNIT IS EQUIPPED WITH AN
AUTOMATIC TANK DRAIN
Moisture is drained from the air
storage tank every time the
compressor stops.

M-853A

L

UNIT LOCATION

When mounting or installing,
do not block air flow to
flywheel/fan. Maintain a min.
of 12 in. from wall or other
solid obstruction.

P04518A

T

SERVICE INFORMATION
FOR SERVICE CALL "SERVICE DEPARTMENT" AT
PHONE 815-875-3321 FAX 815-872-0421
E-MAIL Champion@VNET.com OR WRITE TO:
CHAMPION A GARDNER DENVER COMPANY
1301 NORTH EUCLID AVE.
PRINCETON, ILLINOIS 61356

P04995A

M



U

IMPORTANT NOTICE!
THIS UNIT IS WIRED FOR AN AC CIRCUIT OF

115 VOLT 60 CYCLE 1 PHASE
 230 VOLT OTHER 3 PHASE
 480 VOLT
OTHER ELECTRICAL SPECS: _____

CHAMPION PNEUMATIC MACHINERY CO., INC. P-5257A

N

UNIT PRESSURE SETTING

UNIT PRESSURE FACTORY SET AT

140-175 PSIG

P08388A

O

FRONT SIDE
BACK SIDE

IMPORTANT

MOTOR BURN-OUTS ARE NOT COVERED BY
WARRANTY - Unless motor is equipped with
Factory installed thermal overload protection
(in either motor or starting device)

P-5257A

P

MAINTENANCE INSTRUCTIONS

▲ WARNING Turn off power and relieve tank pressure before servicing to avoid possible injury and/or property damage.

The following instructions are based on normal operation. Always refer to owners manual for detailed instructions. If the unit is in an excessively dusty area, increase frequency of all maintenance.

DAILY:

- Maintain proper oil level in compressor.
- Drain any condensate from receiver.
- Listen and look for any unusual noise or vibration and service as required.

WEEKLY:

- Service air filter.
- Clean all external parts of compressor and driver.
- Retighten loose V-belts and replace if worn.

MONTHLY:

- Inspect and repair entire air system for leaks.

EVERY 3 MONTHS:

- Change oil.
- Remove valve assemblies and clean as required.
- Pull ring on pressure relief valve to see that it is operational and replace if sticking.

P08755B

V

Q

**INSTRUCTIONS
DUAL CONTROL**

This unit is equipped with a dual control valve. Open valve completely for continuous run operation. Close valve completely for start-stop operation.

P05381A

▲ DANGER

DO NOT INSTALL ISOLATING VALVES BETWEEN THIS COMPRESSOR OUTLET AND THE AIR RECEIVER.

INSTALL A PROPERLY SIZED PRESSURE RELIEF VALVE BETWEEN THE COMPRESSOR OUTLET AND THE FIRST IN-LINE COMPONENT, E.G. CHECK VALVE, DRIER, AFTERCOOLER.

FAILURE TO FOLLOW THESE INSTRUCTIONS WILL CAUSE EQUIPMENT DAMAGE OR PERSONAL INJURY OR DEATH.

DO NOT REMOVE THIS TAG

P09862A

W

R

**INSTRUCTIONS
LOW OIL SAFETY CONTROL**

1. If motor fails to start, verify oil level in crankcase of compressor.
2. If oil level is low, turn power off and add oil.
3. Depress reset button on low oil control and turn power on.
4. Consult service data chart for detailed instructions.

P02134A

▲ WARNING

Do not operate unit before reading, understanding and retaining owners guide for installation, assembly, and operation of this equipment. Failure to comply can cause injury and/or property damage.

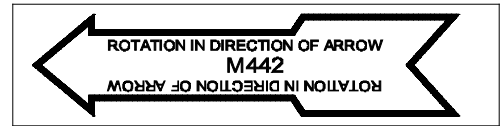
P04896A

PUMP HAZARD DECALS & TAGS

1



3



2



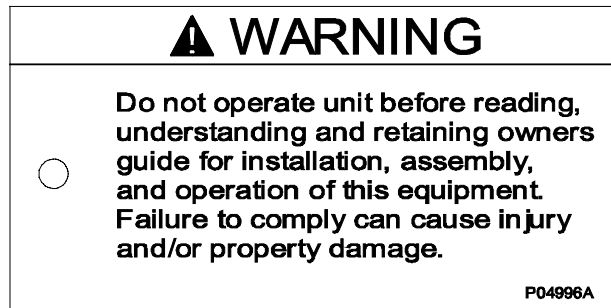
4



5



6



**FOR PARTS: REFER TO PARTS DEPOT LIST
ACCOMPANYING THIS MANUAL.**



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Champion
1301 North Euclid Avenue
Princeton, Illinois 61356 USA
Phone (815) 875-3321
Fax (815) 872-0421
E-mail: champion@championpneumatic.com
Plants in Princeton, IL, and Manteca, CA

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