POWEREX

PURE AIR TECHNOLOGY

Climate Control Simplex

Please read and save these instructions. Read carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply with instructions could result in personal injury and/or property damage! Retain instructions for future reference.

Features

- Guaranteed low oil carryover rate of less than 2 PPM
- Three year warranty on compressor pump
- Isolation pads
- Optional R134 dryer
- ASME tank
- UL listed controls

The AS-XXX Series Powerex Simplex Air Compressors have been designed, broken-in and tested to meet the most demanding specifications in the pneumatic climate control industry for low oil carryover and long life.

All Powerex air compressors have reliable operation and feature high quality construction and components. An unloading feature is included on all compressors to provide loadless starting. Oil entrainment is minimized by the use of lap joint piston rings, low compressor speeds and a special lubricating oil with a high flash point and low carbon content.

All 1/2 through 10 hp models are also equipped with an auxiliary cooling fan and air control shroud to achieve low head temperatures and further minimize oil carryover.

Powerex compressor motors are NEMA Class B design. Single-phase motors have built-in overload protection and a DPST disconnect switch. Three-phase motors require a manual or magnetic starter and three overload heater coils which may be ordered as a factory mounted and wired option.

Figure 1 - AS-XXX 1 Hp Simplex Air Compressor

Specifications		
Product		AS-XXX Series Powerex Simplex Air Compressors
Performance Specifications		See Table 1
Models & Options		See Table 2
Lubrication	1/2 Through 10	Splash Lubrication System
Operating Voltages	1Ø	115 - 208/230 Volts, 60 Hz
	3Ø	208-230/460 Volts, 60 Hz
Compression Cycle	1/2 Through 10 Hp Models	Single-Stage
Motor Overload Protection	1Ø	Built-In Thermal Overload (Standard)
	3Ø	Magnetic Starter and Three Thermal Overload Switches (Optional)
Pressure Settings		Cut-In: Factory Set at Approximately 70 psig (490kPa) Cut-out: Factory Set at Approximately 90 psig (630 kPa)
Overpressure Protection		ASME Safety Valve Factory Set and Sealed at Approximately 115 psig (805 kPa)
Outlet Air Connections		1/2" NPT on 30, 60 and 80 Gallon Tanks; 1" NPT on 120 and 200 Gallon Tanks
Tank Sizes		See Table 2
California Ordinance 462 (L) (2)		Meets Requirements of this Ordinance
Tank Isolation		Standard All Units
Manuals		200 Page Service Manual Available

The performance specifications are nominal and conform to acceptable industry standards. For application at conditions beyond these specifications, consult the local Powerex office. Powerex shall not be liable for damages resulting from misapplication or misuse of its products.

TABLE 1: AS-XXX SERIES POWEREX SIMPLEX AIR COMPRESSORS

PERFORMANCE SPECIFICATIONS

Base Model	Actual Hp 1Ø	Actual Hp 3Ø	Motor Rating Hp	Motor Rating RPM	Compressor RPM	Compressor Capacity ACFM* 100% Runtime	50% Runtime	33% Runtime
AS-105	.54	—	—	1725	800	1.8	0.9	0.6
AS-005	—	.54	.54	1720				
AS-107	.73	—	—	1725	1040	2.5	1.25	0.83
AS-007	—	.73	.73					
AS-110	1.07	—	—	1725	625	3.8	1.9	1.25
AS-010	—	1.07	1.07					
AS-015	—	1.54	1.54	1750	955	6.4	3.2	2.11
AS-020	—	2.0	2.0	1750	800	8.6	4.3	2.84
AS-030	—	3.1	3.1	1745	775	12.0	6.0	4.0
AS-050	—	5.6	5.6	1745	690	22.0	11.0	7.33
AS-075	—	8.2	8.2	1745	795	28.5	14.3	9.44
AS-100	—	10.3	10.3	1750	685	43.0	21.5	14.2

Mounted and Connected Options

MAGNETIC MOTOR STARTER

An optional magnetic motor starter which has been selected and wired for the intended input voltage is available for all units. All starters are furnished with properly sized overload heaters.

REFRIGERATED AIR DRYER

A factory mounted Model Hankinson HPR 5-10 Series refrigerated air dryer with automatic condensate drain trap assembly, bypass valve is available as an option on all 1/2 through 3 Hp Powerex Simplex air compressors. Piping for air dryer is done at the factory. Wiring to power source must be done in the field using integral cord and plug which fits into a standard 120 volt receptacle. Refer to Table 2 for ordering details.

AUTOMATIC TANK DRAIN

Powerex air compressors are ordered with either a manual or electric type automatic tank drain. This unit is furnished with a manual drain attachment.

VIBRATION DAMPENING PADS

Waffle type design vibration pads are provided as standard equipment.

Operation

Factory calibrated snap-acting DPST pressure electric switches provide automatic cut-in and cut-out. Overpressure protection is provided by an ASME safety relief valve. Receiver tanks have a condensate drain valve with an extension for easy access. All mounting bases are slotted for V-belt tension adjustment to aid in maintaining proper compressor and motor alignment.

All units are run through the factory break-in and are tested for air delivery, leakage and power consumption.

Units are shipped with a proper fill of compressor oil in the crankcase and are furnished with an intake filter/silencer with a replaceable cartridge. This filter/silencer combination is designed to remove contaminates in the inlet air and provide quieter operation. The 5 through 10 Hp models are complimented by this design utilizing dual element filtration which consists of a pleated element and a foam element for filtration against larger particles from the atmosphere.

LUBRICATION

Check lubricating oil level at gauge. Refill if necessary.

Change oil according to maintenance schedule. Before draining oil, remove oil supply cap and loosen oil drain cap to release trapped air. Use Mobil Rarus 427® or Mobil DTE heavy oils.

⚠WARNING ***Dispose of oil in accordance with state or local codes.***

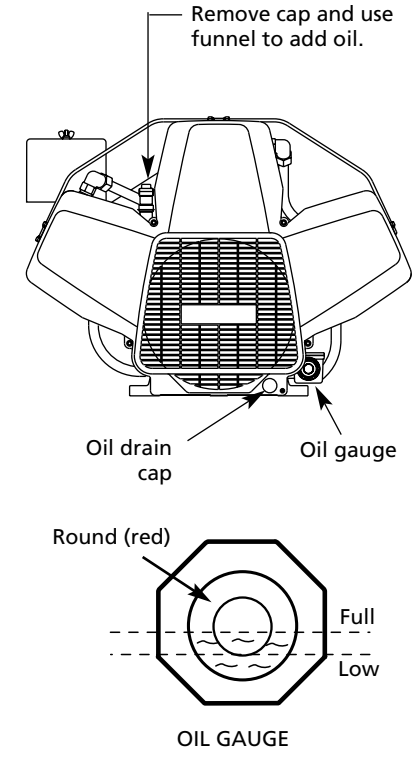


Figure 2 - Lubrication

AUTO E-DRAIN ASSEMBLY (See Figure 3)

NOTE: The automatic E-drain is assembled to tank.

1. Plug E-drain into 115V power outlet supply.
2. Adjust times accordingly.

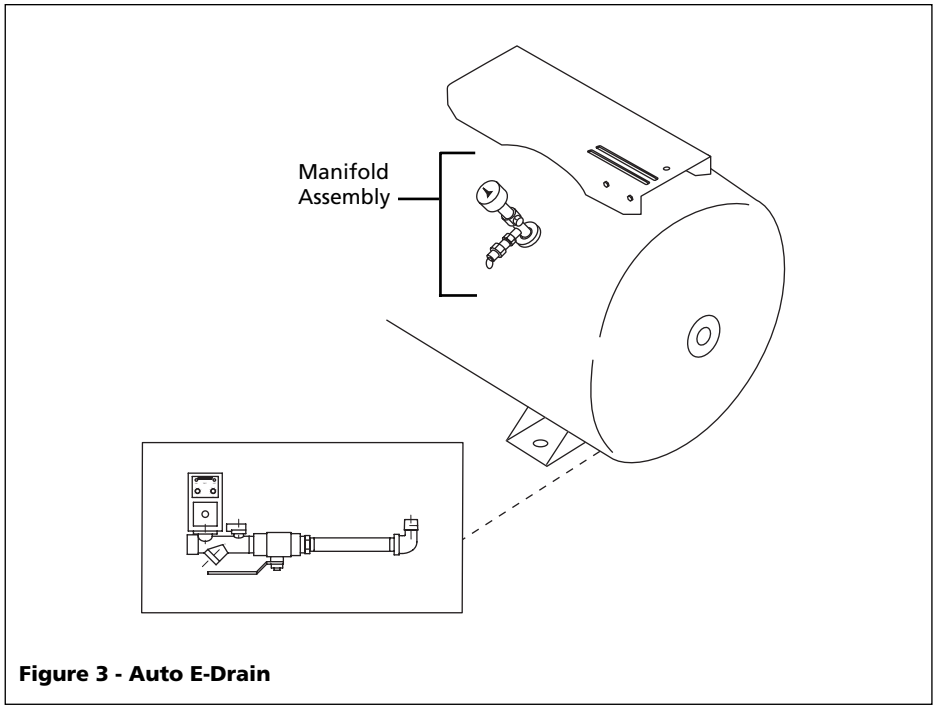
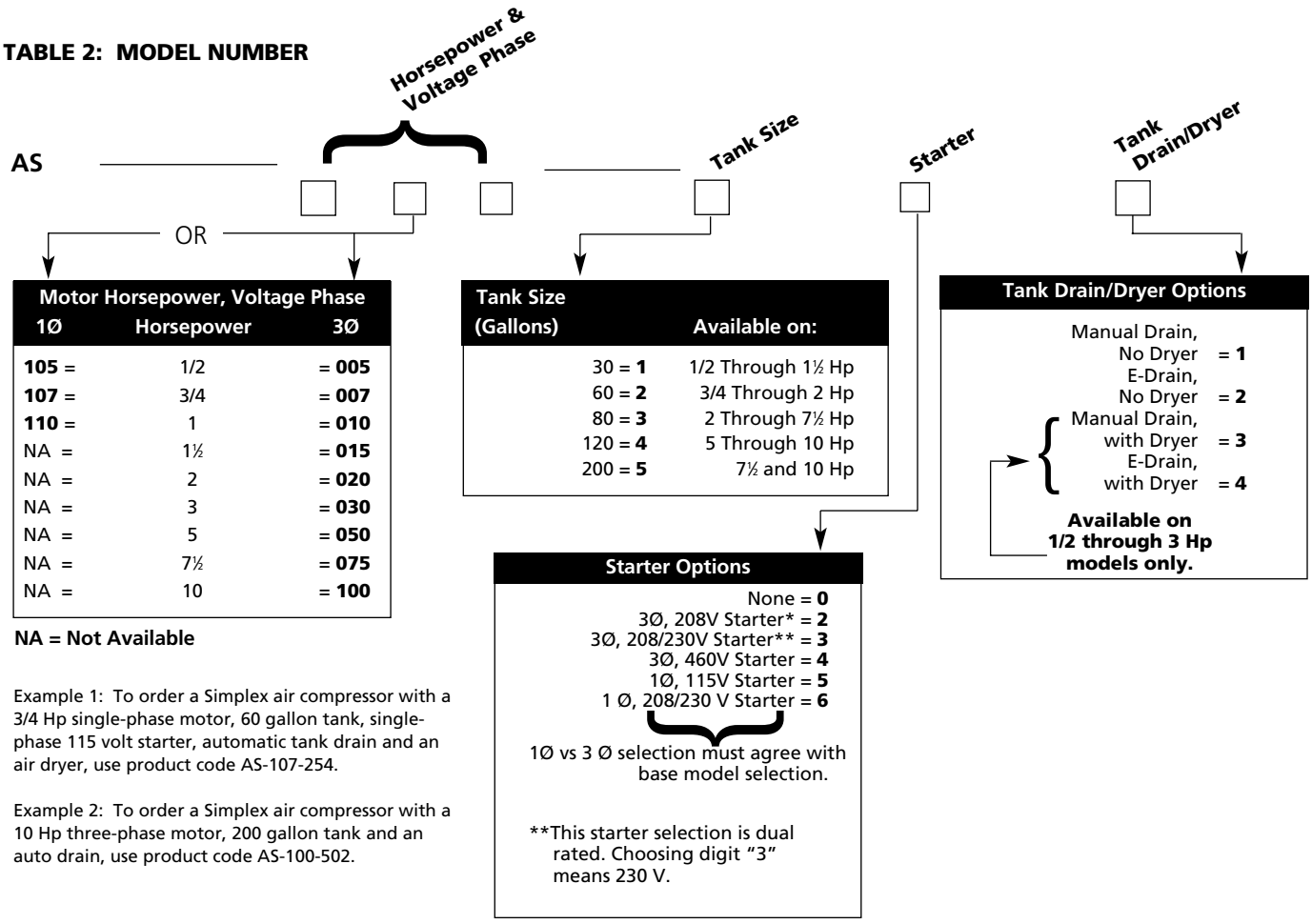


Figure 3 - Auto E-Drain

TABLE 2: MODEL NUMBER



Motor Horsepower, Voltage Phase		
1Ø	Horsepower	3Ø
105 =	1/2	= **005**
107 =	3/4	= **007**
110 =	1	= **010**
NA =	1½	= **015**
NA =	2	= **020**
NA =	3	= **030**
NA =	5	= **050**
NA =	7½	= **075**
NA =	10	= **100**

NA = Not Available

Tank Size (Gallons)	Available on:
30 = **1**	1/2 Through 1½ Hp
60 = **2**	3/4 Through 2 Hp
80 = **3**	2 Through 7½ Hp
120 = **4**	5 Through 10 Hp
200 = **5**	7½ and 10 Hp

Starter Options

None = **0**
3Ø, 208V Starter* = **2**
3Ø, 208/230V Starter** = **3**
3Ø, 460V Starter = **4**
1Ø, 115V Starter = **5**
1 Ø, 208/230 V Starter = **6**

1Ø vs 3 Ø selection must agree with base model selection.

**This starter selection is dual rated. Choosing digit "3" means 230 V.

Tank Drain/Dryer Options

Manual Drain, No Dryer = **1**
E-Drain, No Dryer = **2**
Manual Drain, with Dryer = **3**
E-Drain, with Dryer = **4**

Available on 1/2 through 3 Hp models only.

Example 1: To order a Simplex air compressor with a 3/4 Hp single-phase motor, 60 gallon tank, single-phase 115 volt starter, automatic tank drain and an air dryer, use product code AS-107-254.

Example 2: To order a Simplex air compressor with a 10 Hp three-phase motor, 200 gallon tank and an auto drain, use product code AS-100-502.

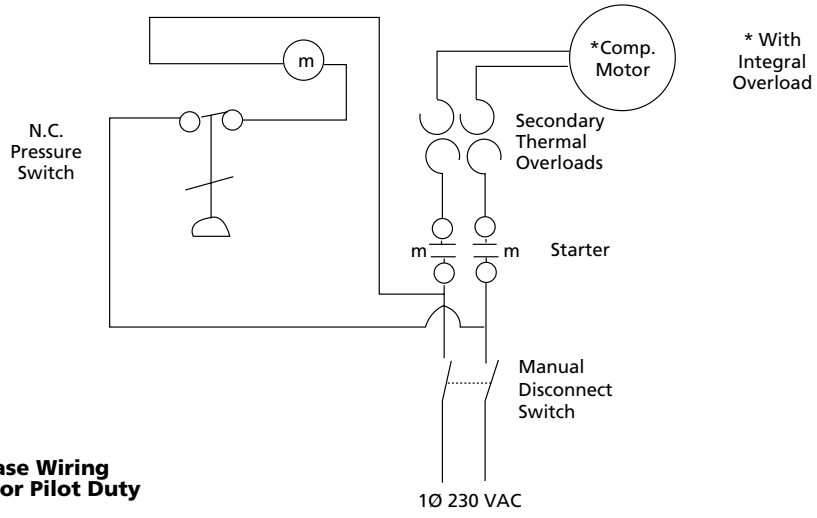


Figure 4 - AS-XXX Single-Phase Wiring With Pressure Switch Used for Pilot Duty

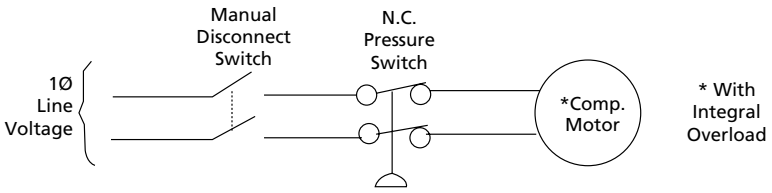


Figure 5 - AS-XXX Single-Phase Wiring With Pressure Switch Used as Contactor

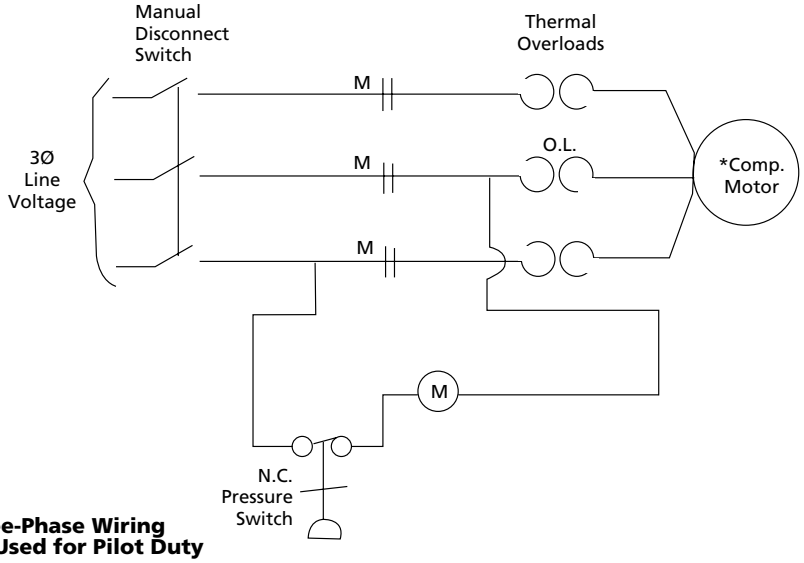


Figure 6 - AS-XXX Three-Phase Wiring With Pressure Switch Used for Pilot Duty

NOTE: "M" = Magnetic Contactor

Figure 7 - Dimensions (See Table 3)

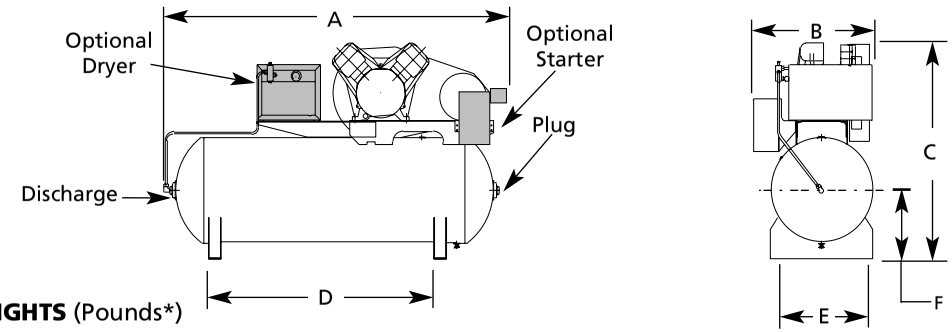
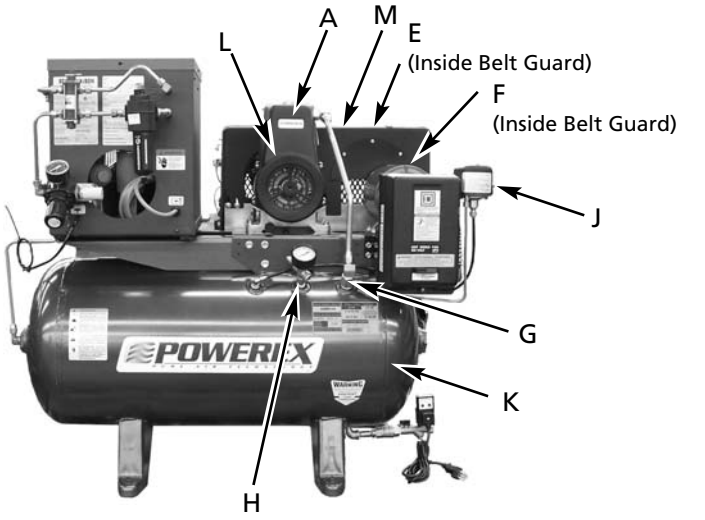


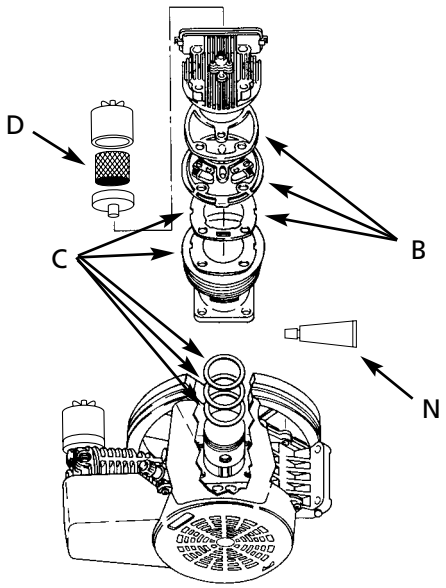
TABLE 3: DIMENSIONS (Inches*) **AND SHIPPING WEIGHTS** (Pounds*)

Base Model	A				B				C	D	E	F	Shipping Weight**	
	w/Starter w/oDryer	w/o Starter or Dryer	w/Starter and Dryer	w/o Starter w/Dryer	w/Starter w/o Dryer	w/o Starter or Dryer	w/Starter and Dryer	w/o Starter w/Dryer					with Starter	without Starter
AS-105-1XX AS-005-1XX	42 ½	40	43 19/32	42	21 ¼	17 ¾	21 13/16	18 ¾	35 ½	18	15 ¾	12 ¼	209	200
AS-107-1XX AS-007-1XX	42 ½	40	43 19/32	42	21 ¼	17 ¾	21 13/16	18 ¾	36	18	15 ¾	12 ¼	209	200
AS-107-2XX AS-007-2XX	50 ¾	50 ¾	51 27/32	52 ¾	22 ¼	20	22 5/16	21	40	29	18	14	339	330
AS-110-1XX AS-010-1XX	42 ½	40	43 19/32	42	21 ¼	17 ¾	21 13/16	18 ¾	36	18	15 ¾	12 ¼	219	210
AS-110-2XX AS-010-2XX	50 ¾	50 ¾	51 27/32	52 ¾	22 ¼	20	22 5/16	21	40	29	18	14	349	340
AS-015-1XX	42 ½	40	43 1/32	42	21 ¼	17 ¾	21 13/16	18 ¾	36	18	15 ¾	12 ¼	219	210
AS-015-2XX	50 ¾	50 ¾	51 27/32	52 ¾	22 ¼	20	22 5/16	21	40	29	18	14	349	340
AS-020-2XX	51 ½	50 ¾	52 19/32	52 ¾	23 ¼	20	23 5/16	21	42	29	18	14	349	340
AS-020-3XX	65	64	66 23/32	66	23 ¼	20	23 5/16	21	41	40	18 ½	13	384	375
AS-030-3XX	65 ½	64	66 23/32	66	23 ¼	20	23 5/16	21	41	40	18 ½	13	509	500
AS-050-3XX	64	64	—	—	23 ¼	20	—	—	46	43 ¾	18 ½	13	609	600
AS-050-4XX	70 ¾	70 ¾	—	—	26 ¼	24	—	—	49 ¼	42	22	15 ¾	714	705
AS-075-3XX	64	64	—	—	23 ¼	20	—	—	46	43 ¾	18 ½	13	621	610
AS-075-4XX	70 ¾	70 ¾	—	—	26 ¼	24	—	—	49 ¼	42	22	15 ¾	725	714
AS-075-5XX	81 ¾	81 ½	—	—	30	30	—	—	55 ½	42	22	18 ¾	951	940
AS-100-4XX	79	76 ½	—	—	27 ¼	24	—	—	51	42	22	15 ¾	915	904
AS-100-5XX	81 ¾	79 ¼	—	—	30	30	—	—	58	42	22	18 ¾	1141	1130

*Inches x 2.54 = Centimeters, Pounds x 0.454 = Kilograms
**Add 60.0 lbs. for units equipped with a factory mounted air dryer

Climate Control Simplex





REPLACEMENT PARTS LIST

Item	Description		Quantity Required	Shipping Weight (lbs.)	Code Number
A	**PUMP AND FLYWHEEL:**				
	Motor Hp	1/2, 3/4	1	19.5	A-005-6001
		1, 1½	1	35	A-010-6001NP
		2	1	59	A-020-6001NP
		3	1	66	A-030-6001NP
		5	1	115	A-050-6001NP
		7½	1	121	A-075-6001NP
		10	1	180	A-100-6001NP
B	**VALVE KIT:** Includes valve plate, spacer and head gasket				
	Motor Hp	1/2	1	0.4	A-005-6002
		3/4	1	0.4	A-005-6002
		1, 1½	1	0.5	A-010-6002NP
		2	2	0.5	A-010-6002NP
		3	2	0.7	A-030-6002NP
		5	2	1.2	A-050-6002NP
		7½	2	1.2	A-075-6002NP
		10	3	1.2	A-075-6002NP
C	**RING/CYLINDER KIT:** Includes all compression rings, oil control rings, cylinder, gasket and sealant				
	Motor Hp	1/2	1	3.6	A-005-6004
		3/4	1	3.6	A-005-6004
		1, 1½	1	4.8	A-010-6004NP
		2	2	4.8	A-010-6004NP
		3	2	5.5	A-030-6004NP
		5	2	10	A-050-6004NP
		7½	2	10	A-075-6004NP
		10	3	10	A-075-6004NP
D	**INTAKE FILTER ELEMENT:**				
	Motor Hp	1/2	1	0.1	A-005-6023
		3/4	1	0.1	A-005-6023
		1, 1½	1	0.2	A-010-6023NP
		2	1	0.2	A-030-6023NP
		3	1	0.2	A-030-6023NP
		5	2	0.2	A-030-6023NP
		7½	2	0.2	A-030-6023NP
		10	3	0.2	A-030-6023NP
E	**BELT:** **Motor Hp**	**Size**			
	1/2	AX-42	1	0.3	A-005-6006
	3/4	AX-42	1	0.3	A-005-6006
	1	A-43	1	0.3	A-010-6006
	1½	A-46	1	0.3	A-015-6006NP
	2	A-65	1	0.4	A-020-6006NP
	3	A-62	1	0.4	A-030-6006NP
	5	A-65	2	1.6	A-050-6006NP
	7½ (120 gal tank)	A-67	2	2.0	A-075-6046NP
	7½ (200 gal tank)	A-75	2	2.0	A-075-6056NP
	10	A-84	2	2.4	A-100-6006NP

REPLACEMENT PARTS LIST *(Continued)*

Item	Description		Quantity Required	Shipping Weight (lbs.)	Code Number
F	**MOTOR PULLEY:**				
	Motor Hp	**Type**			
	1/2	1A-4.4" P.D., 5/8" Bore	1	3.8	A-005-6007
	3/4	1A-5.8" P.D., 5/8" Bore	1	3.9	A-007-6037
	1 (1 Ø)	1A-4.0" P.D., 5/8" Bore	1	3.2	A-110-6007
	1 (3 Ø)	1A-4.0" P.D., 7/8" Bore	1	3.2	A-010-6007
	1½	1A-6.0" P.D., 7/8" Bore	1	5.6	A-020-6007
	2	1A-6.0" P.D., 7/8" Bore	1	5.2	A-020-6007
	3	1A-6.0" P.D., 1⅛" Bore	1	6.3	A-030-6007NP
	5	2A-5.6" P.D., 1⅛" Bore	1	7.6	A-050-6007NP
	7½	2A-7.6" P.D., 1⅜" Bore	1	12.5	A-075-6007NP
	10	2A-7.6" P.D., 1⅜" Bore	1	13.5	A-100-6007NP
G	**IN-TANK CHECK VALVE:**				
	Motor Hp	**Size**			
	1/2 Through 3	1/2" MPT x 1/2" FPT	1	0.3	A-010-6008
	5 Through 10	3/4" MPT x 3/4" FPT	1	0.4	A-075-6008
H	**SAFETY RELIEF VALVE:** Set at approximately 115 psig (805 kPa)				
	1/2 Through 5 Hp Models		1	0.1	A-050-6009
	7½ Through 10 Hp Models		1	0.2	A-200-6009
J	**PRESSURE ELECTRIC SWITCHES:** (For all models)				
	Lead Switch: Set at approximately 70 psig (490 kPa) cut-in and 90 psig (630 kPa) cut-out		1	0.9	A-100-6010
	Lag Switch: Set at approximately 60 psig (420 kPa) cut-in and 80 psig (560kPa) cut-out		1	0.9	A-100-6011
K	**TANK:**				
	Motor Hp	**Tank Size**			
	1/2 Through 1½	30 gallon	1	134.0	A-010-6030NP**
	1/2 Through 1½	60 gallon	1	175.0	A-010-6060NP
	2 & 3	60 gallon	1	184.0	A-020-6060NP
	1/2 Through 1½	80 gallon	1	235.0	A-010-6080NP**
	2 & 3	80 gallon	1	243.0	A-020-6080NP**
	2 & 3	120 gallon	1	398.0	A-020-6120NP**
	5 & 7½	120 gallon	1	415.0	A-050-6120NP**
	5 Through 10	200 gallon	1	677.0	A-100-6200NP**
L	**COOLING SHROUD:**				
	Motor Hp				
	1/2		1	1.0	A-005-6013
	3/4		1	1.0	A-005-6013
	2		1	1.7	A-020-6013NP
	3		1	1.7	A-030-6013NP
	5		1	1.9	A-050-6013NP
	7½		1	1.9	A-075-6013NP
	10		1	4.5	A-100-6013NP
M	**BELT GUARD:**				
	Motor Hp				
	1/2 Through 1½		1	2.4	A-010-6012
	2 & 3		1	12.5	A-020-6012
	5 & 7½		1	12.5	A-050-6012
	10		1	18.5	A-100-6012
N	**LIQUID GASKET:**				
	Motor Hp				
	1/2 Through 10		1	0.1	A-999-6000

**This replacement tank is also the replacement tank used on duplex air compressors and will include mounting hardware for a second pump.

Maintenance Schedule

Item	Action needed	Operating Hours 500	2500	5000	10,000	15,000	20,000	Remarks
Tank	Drain moisture	Daily	2500					
Inlet air filter	Replace	●	▲	*(Every 2,500 hrs or less)*				
Blower fan	Clean			●	●	●	●	
Fan duct	Clean			●	●	●	●	
Compressor fins	Clean		●	*(Every 2,500 hrs or less)*				
Oil change	Replace	*(Every 1,500 hrs)*						
Compression rings	Replace					▲		
Check oil	Inspect	Daily						
Piston set	Replace					●		
V-belt	Inspect, replace	*Note 3	●	▲	▲	▲	▲	
Pressure switch	Confirm operation				●		●	
Magnetic starter	Inspect				●		●	Replace if contact points deteriorated
Safety valve	Confirm operation		●	*(Every 2,500 hrs or less)*				
Pressure gauge	Inspect		●	*(Every 2,500 hrs or less)*				

(●) Inspect
(▲) Replace

NOTES:

1. Inspect and perform maintenance periodically according to maintenance schedule.
2. The maintenance schedule relates to the normal operating conditions. If the circumstances and load condition are adverse, shorten the cycle time and do maintenance accordingly.
3. * The tension of the V-belt should be adjusted during initial start up and inspected every 1,500 hours afterwards. Proper belt tension for 1/2 to 3 HP units is 2-3 lbs./.5" deflection; for 5 to 10 Hp units, 4-6 lbs./.5" deflection.

Powerex Limited Warranty

Powerex 3 Year / 10,000 Hour Extended Parts Limited Warranty - Powerex warrants each Compressor Pump or Scroll Air-End against defects in material or workmanship from the date of purchase for a period of **Three years or 10,000 hours**, whichever may occur first. This warranty applies to the exchange of part(s) of the compressor pump or air-end found to be defective by an Authorized Powerex Service Center.

Powerex 1 Year / 5,000 Hour Inlet to Outlet Limited Warranty - Powerex warrants each Compressor Unit, System, Pump, or Air-End against defects in material or workmanship from the date of purchase for a period of **One Year or 5,000 Hours,** whichever may occur first. This warranty applies to the exchange of defective component part(s) and labor performed by an Authorized Powerex Service Center.

The above mentioned warranty applies to POWEREX manufactured units or systems only.

Items listed in the operator's manual under routine maintenance are not covered by this or any other warranty.

THERE IS NO OTHER EXPRESS WARRANTY. IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED TO ONE YEAR FROM THE DATE OF PURCHASE: AND TO THE EXTENT PERMITTED BY LAW, ANY AND ALL IMPLIED WARRANTIES ARE EXCLUDED. THIS IS THE EXCLUSIVE REMEDY AND LIABILITY FOR CONSEQUENTIAL DAMAGES UNDER ANY AND ALL WARRANTIES IS EXCLUDED TO THE EXTENT EXCLUSION IS PERMITTED BY LAW.

All claims pertaining to the merchandise in this schedule, with the exception of warranty claims, must be filed with POWEREX within 6 months of the invoice date, or they will not be honored. Prices, discounts and terms are subject to change without notice or as stipulated in specific product quotations. All agreements are contingent upon strikes, accidents, or other causes beyond our control. All shipments are carefully inspected and counted before leaving the factory. Please inspect carefully any receipt of merchandise noting any discrepancy or damage on the carrier's freight bill at the time of delivery. Discrepancies or damage which obviously occurred in transit are the carrier's responsibility and related claims should be made promptly directly to the carrier. Returned merchandise will not be accepted without prior written authorization by POWEREX and deductions from invoices for shortage or damage claims will not be allowed. **UNLESS OTHERWISE AGREED TO IN WRITING, THESE TERMS AND CONDITIONS WILL CONTROL IN ANY TRANSACTION WITH POWEREX** any different or conflicting terms as may appear on any order form now or later submitted by the buyer. All orders are subject to acceptance by POWEREX.

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POWEREX
PURE AIR TECHNOLOGY

Climate Control Duplex

Please read and save these instructions. Read carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply with instructions could result in personal injury and/or property damage! Retain instructions for future reference.

Features

- Guaranteed low oil carryover rate of less than 2 PPM
- Three year warranty on compressor pump
- High efficiency motors
- UL listed controls
- R134A Air Dryer (Optional)

The AD-XXX Series Powerex Duplex Air Compressors have been designed, broken-in and tested to meet the most demanding specifications for low oil carryover and long life in the pneumatic climate control industry.

The units consist of two equally rated motor-compressor assemblies mounted on a single ASME tank. The compressor motors are NEMA Class B design. The AD-XXX Series Compressors are ideal for instrumentation systems requiring an alternate compressor for standby or overload capacity. See Table 1 for motor sizes and air delivery capacities available.

Compressor assemblies are available with or without a factory mounted basic or deluxe alternator/motor starter package. An unloading feature is included on all compressors to provide loadless starting. Models with an alternator are prewired and ready for operation. Internal wiring allows for shutdown of either compressor for repair while the other compressor is running.

An alternating type operation is desirable for many reasons. When a duplex air compressor is alternated, the temperature of both units is kept above the ambient dew point to minimize moisture deterioration and corrosion. Also, the reduction in on-time provides a lower average head temperature with reduced oil entrainment potential and improves the motor life by holding down the average heat rise.

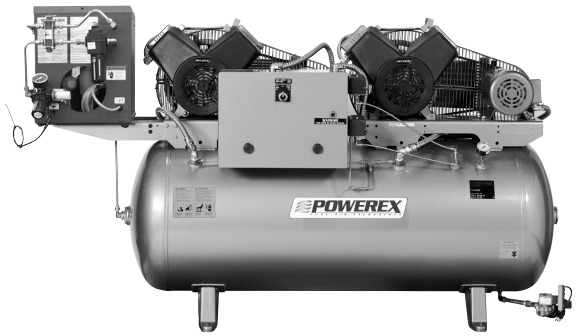


Figure 1 - AD-XXX Series 2 Hp Duplex Air Compressor with Optional Deluxe Alternator Package

Specifications

Product		AD-XXX Series Powerex Duplex Air Compressors
Performance Specifications		See Table 1
Models & Options		See Table 2
Lubrication	1/2 Through 10 Hp Models	Splash Lubrication System
Operating Voltages	1Ø	115/230 Volts, 60 Hz
	3Ø	208-230/460 Volts, 60 Hz
Compression Cycle	1/2 Through 10 Hp Models	Single-Stage
Motor Overload Protection	1Ø and 3Ø	Overloads (Supplied with all Factory Mounted Alternators; Otherwise Field Supplied)
Pressure Switch Settings	Lead	Cut-In: Factory Set at Approximately 70 psig (490kPa) Cut-Out: Factory Set at Approximately 90 psig (630 kPa)
	Lag	Cut-In: Factory Set at Approximately 60 psig (420kPa) Cut-Out: Factory Set at Approximately 80 psig (560 kPa)
Overpressure Protection		ASME Safety Valve Factory Set and Sealed at Approximately 115 psig (805 kPa)
Outlet Air Connections		1/2" NPT on 30 and 80 Gallon Tanks; 1" NPT on 120, and 200 Gallon Tanks
Tank Sizes		See Table 2
California Ordinance 462 (L)(2)		Meets requirements of this Ordinance
Isolation Mounts		Vibration pads are included with each unit

TABLE 1: AD-XXX SERIES POWEREX DUPLEX AIR COMPRESSORS

PERFORMANCE SPECIFICATIONS

Base Model	Actual Hp 1Ø	Actual Hp 3Ø	Motor Rating Hp	Motor Rating RPM	Compressor RPM	Compressor Capacity SCFM 100% Runtime	Compressor Capacity SCFM 50% Runtime	Compressor Capacity SCFM 33% Runtime
AD-105	.54	—	—	1725	800	1.8	0.9	0.6
AD-005	—	.54	.50	1720				
AD-107	.73	—	—	1725	1040	2.5	1.25	0.83
AD-007	—	.73	.75					
AD-110	1.07	—	—	1725	625	3.8	1.9	1.25
AD-010	—	1.07	1.0					
AD-015	—	1.54	1.5	1750	955	6.4	3.2	2.11
AD-020	—	2.0	2.0	1750	800	8.6	4.3	2.84
AD-030	—	3.1	3.0	1745	775	12.0	6.0	4.0
AD-050	—	5.6	5.0	1745	690	22.0	11.0	7.33
AD-075	—	8.2	7.5	1745	795	28.5	14.3	9.44
AD-100	—	10.3	10.0	1750	685	43.0	21.5	14.2

All units are run through a factory break-in and are tested for air delivery, leakage and power consumption. Units are shipped with a proper fill of compressor oil in the crankcase and are furnished with an intake filter/silencer with a replaceable cartridge. This filter/silencer combination is designed to remove contaminates in the inlet air, as well as provide quieter operation.

All models have conveniently located oil drain and filler ports to facilitate routine maintenance. Tanks have a condensate drain valve with an extension for easy access. Mounting bases are slotted to allow tension adjustments to aid in maintaining proper compressor and motor alignment while adjusting tension.

Mounted and Connected Options

DELUXE ALTERNATOR PACKAGE

All Powerex Duplex air compressors may be ordered with an optional deluxe alternator package consisting of two magnetic motor starts with thermal overloads, an alternating coil, a 120 VAC control transformer and a three-position selector switch. The three-position switch allows for automatic alternation or only running one unit at a time. This will allow for service on one unit while other unit is running. Refer to Table 2 for ordering details and figure 4 for wiring diagram.

BASIC ALTERNATOR PACKAGE

All Powerex duplex air compressors may be ordered with a simplified line voltage basic alternator package. The basic alternator package consists of an alternating coil and two magnetic motor starters. Motor starters are selected and wired for intended input voltage and are furnished with properly sized overload heaters. Refer to Table 2 for ordering details and figure 5 for wiring diagram.

REFRIGERATED AIR DRYER

A factory mounted, Hankinson HPR 5-10 series refrigerated air dryer with automatic condensate drain trap assembly, bypass valve is on all 1/2 through 3 Hp Powerex duplex air compressors. Piping for air dryer is done at the factory. Wiring to power source must be done in the field using integral cord and plug which fits into a standard 120 volt receptacle. Refer to Table 2 for ordering details.

AUTOMATIC TANK DRAIN

Powerex air compressors may be ordered with a manual or electric type automatic tank drain. A manual drain attachment is furnished with each unit. Refer to Table 2 for ordering details. (Order electric drains separately.)

VIBRATION DAMPENING PADS

Waffle type design vibration pads are provided as standard equipment.

Operation

Refer to Installation Data AS/AD-XXX for detailed installation instructions.

Factory calibrated DPST pressure switches provide lead and lag settings. When using an alternator-starter package, the lead switch energizes the alternator and the alternator activates the compressor that was on standby during the previous cycle. If the demand exceeds the capacity of one compressor, the lag switch will cause both compressors to run simultaneously. Upon failure of either compressor, the lag switch will continue to activate the workable compressor.

Single-phase motors have built-in overload protection with automatic reset. Three-phase motors require a manual or magnetic starter and three overload heaters. Heaters are included with three-phase compressors that have a factory mounted alternator.

LUBRICATION

Check lubricating oil level at gauge. Refill if necessary.

Change oil according to maintenance schedule. Before draining oil, remove oil supply cap and loosen oil drain cap to release trapped air. Use Mobil Rarus 427® or Mobil DTE heavy.

⚠WARNING ***Dispose of oil in accordance with state or local codes.***

LUBRICATION *(Continued)*

AUTO E-DRAIN ASSEMBLY (See Figure 3)

NOTE: The automatic E-drain is assembled to tank.

1. Plug E-drain into 115V power outlet supply.
2. Adjust timer accordingly.

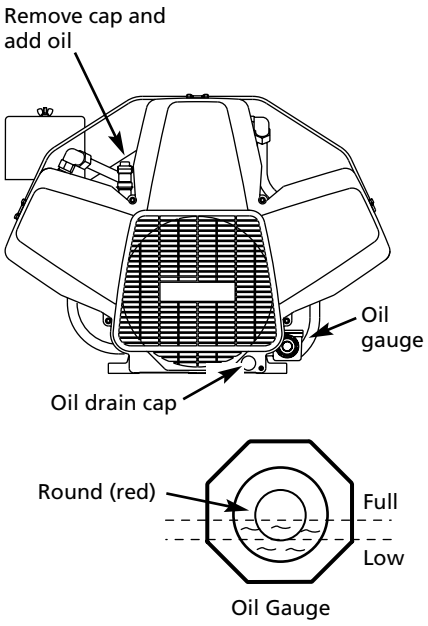


Figure 2

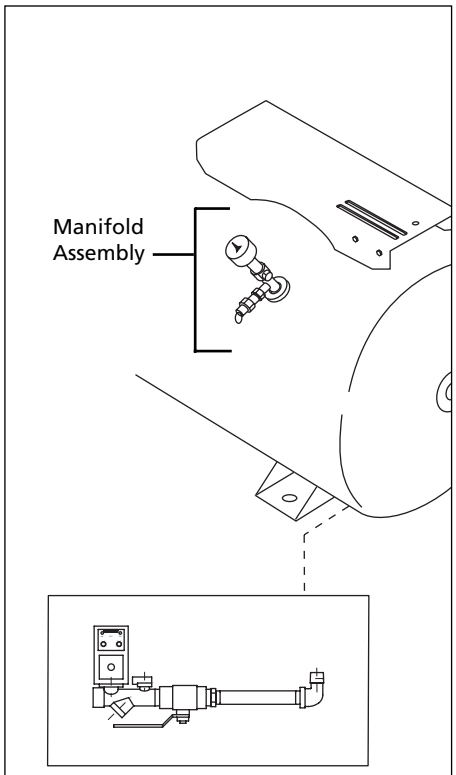


Figure 3 - E-Drain

TABLE 2: MODEL NUMBER

AD — OR

Horsepower & Voltage Phase

Motor Horsepower, Voltage Phase		
1Ø	Horsepower	3Ø
105 =	1/2	= **005**
107 =	3/4	= **007**
110 =	1	= **010**
NA =	1½	= **015**
NA =	2	= **020**
NA =	3	= **030**
NA =	5	= **050**
NA =	7½	= **075**
NA =	10	= **100**

Tank Size

Tank Size (Gallons)	Available on:
30 = **1**	1/2 Through 1-1/2 Hp
80 = **3**	1/2 Through 3 Hp
120 = **4**	3 Through 7-1/2 Hp
200 = **5**	5 Through 10 Hp

Alternator

Starter Options

Basic		Deluxe
0=	None	= **0**
2=	3Ø, 208V	= **A**
3=	3Ø, 230V	= **B**
4=	3Ø, 460V	= **C**
5=	1Ø, 115V	= **E**
6=	1 Ø, 208V	= **N/A**
7=	1 Ø, 230V	= **G**

1Ø vs 3 Ø selection must agree with base model selection

Tank Drain/Dryer

Tank Drain/Dryer Options

Manual Drain, No Dryer = **1**
E-Drain, No Dryer = **2**
Manual Drain, with Dryer = **3**
E-Drain, with Dryer = **4**

Available on 1/2 through 3 Hp models only.

Example 1: To order a Duplex air compressor with a 3/4 Hp single-phase motor, 80 gallon tank, deluxe 230 volt alternator package, automatic tank drain and an air dryer, use product code AD-107-3G4.

Example 2: To order a Duplex air compressor with a 10 Hp three-phase motor, 200 gallon tank and an auto drain, use product code AD-100-502.

Figure 4
Deluxe Alternator Package Wiring Diagram for Three-Phase Units

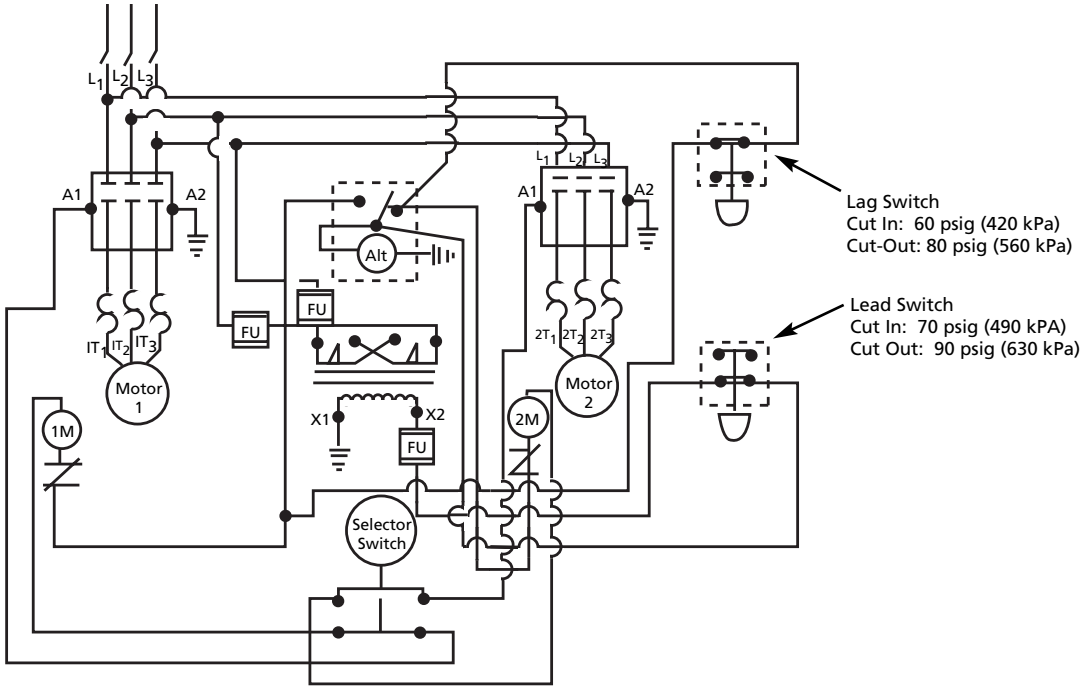
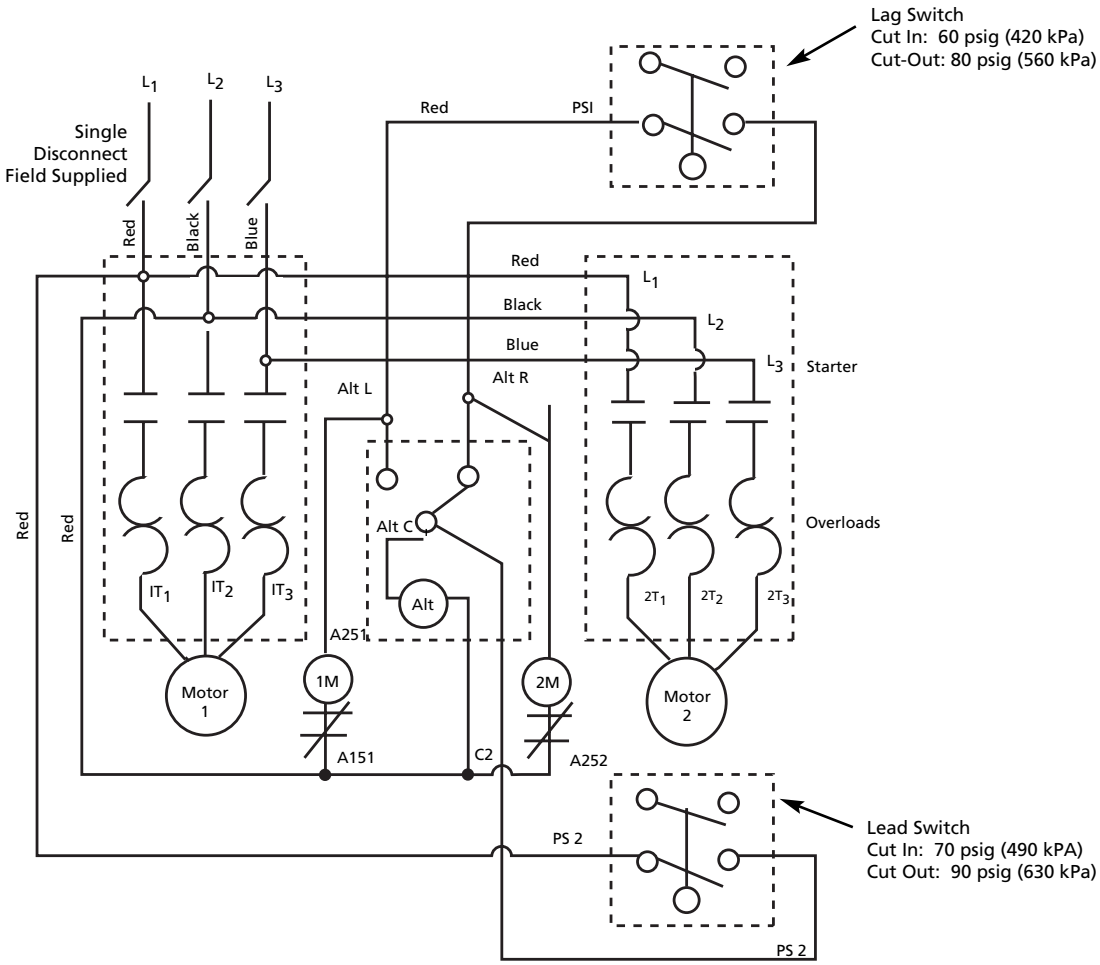
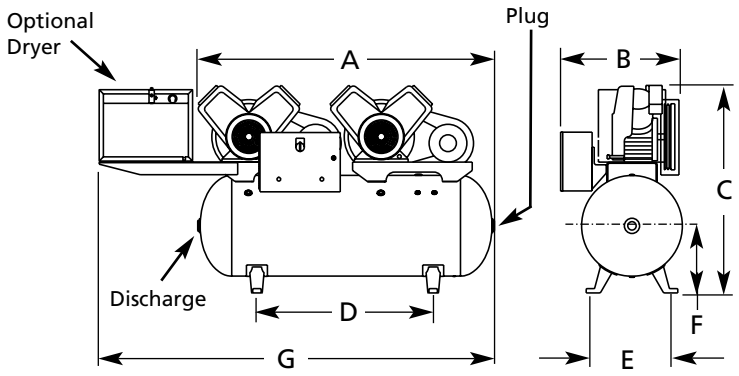


Figure 5
Basic Alternator Package Wiring Diagram For Three-Phase Units





1/2 Through 10 HP Models

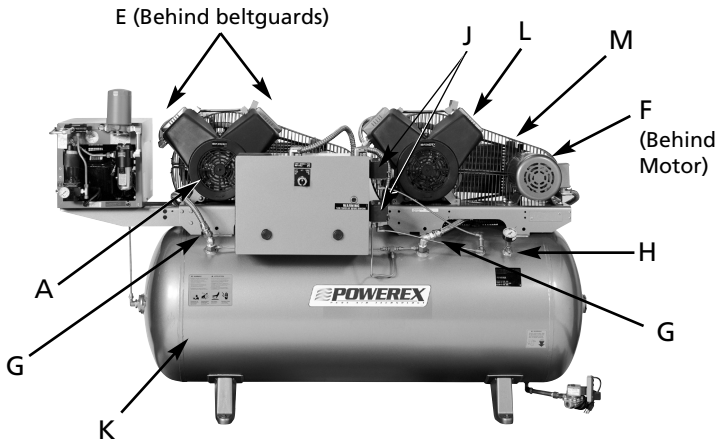
Figure 6 - Dimensions (in./cm)

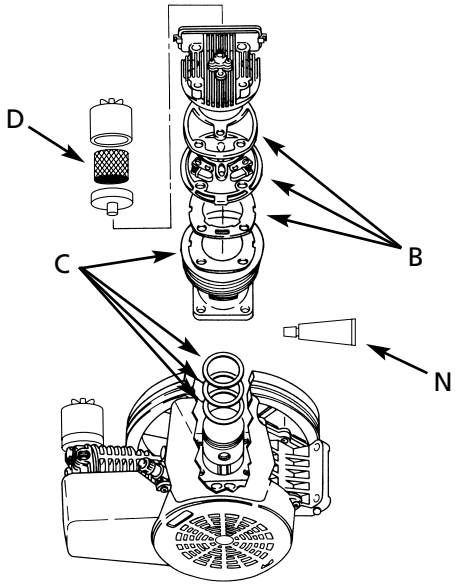
TABLE 3: DIMENSIONS (INCHES) AND SHIPPING WEIGHTS (POUNDS*)

Base Model	A	B with Alternator	B without Alternator	C	D	E	F	G	Shipping Weight** with Alternator	Shipping Weight** without Alternator
AD-105-1XX AD-005-1XX	41 ½	21 ¼	17 ¾	35 ¼	18	15 ¾	12 ¼	68 ½	260	240
AD-105-3XX AD-005-3XX	64 ¼	22 ¼	20	39	40	18 ½	13	77 ¾	420	400
AD-107-1XX AD-007-1XX	41 ½	21 ¼	17 ¾	36	18	15 ¾	12 ¼	68 ½	260	240
AD-107-3XX AD-007-3XX	64 ¼	22 ¼	20	39	40	18 ½	13	77 ¾	425	405
AD-110-1XX AD-010-1XX	41 ½	21 ¼	17 ¾	36	18	15 ¾	12 ¼	68 ½	270	250
AD-110-3XX AD-010-3XX	64 ¼	22 ¼	20	39	40	18 ½	13	77 ¾	435	415
AD-015-1XX	41 ½	21 ¼	17 ¾	36	18	15 ¾	12 ¼	68 ½	270	250
AD-015-3XX	64 ¼	22 ¼	20	39	40	18 ½	13	77 ¾	435	415
AD-020-3XX	65 ¼	23 ¼	20	41	40	18 ½	13	90 ¾	500	480
AD-030-3XX	65 ¼	23 ¼	20	41	40	18 ½	13	90 ¾	650	630
AD-030-4XX	70 ¾	25 ¾	24	44	42	22	15 ¾	96 ¼	780	760
AD-050-4XX	71 ¼	26 ¼	24	49 ¼	42	22	15 ¾	—	930	910
AD-050-5XX	81 ½	30	30	55 ½	42	22	18 ¾	—	1155	1135
AD-075-4XX	71 ¼	26 ¼	24	49 ¼	42	22	15 ¾	—	950	925
AD-075-5XX	81 ½	30	30	55 ½	42	22	18 ¾	—	1175	1150
AD-100-5XX	84	30	30	58	42	22	18 ¾	—	1440	1415

*Inches x 2.54 = Centimeters, Pounds x 0.454 = Kilograms
**Add 60.0 lbs. for units equipped with a factory mounted air dryer

Climate Control Duplex





REPLACEMENT PARTS LIST

Item	Description		Quantity Required	Shipping Weight (lbs.*)	Code Number
A	**PUMP AND FLYWHEEL:**				
	Motor Hp 1/2, 3/4		2	19.5	A-005-6001
	1, 1½		2	35	A-010-6001NP
	2		2	59	A-020-6001NP
	3		2	66	A-030-6001NP
	5		2	115	A-050-6001NP
	7½		2	121	A-075-6001NP
	10		2	180	A-100-6001NP
B	**VALVE KIT:** Includes valve plate, spacer and head gasket				
	Motor Hp 1/2		2	0.4	A-005-6002
	3/4		2	0.4	A-005-6002
	1, 1½		2	0.5	A-010-6002NP
	2		4	0.5	A-010-6002NP
	3		4	0.7	A-030-6002NP
	5		4	1.2	A-050-6002NP
	7½		4	1.2	A-075-6002NP
	10		6	1.2	A-075-6002NP
C	**RING/CYLINDER KIT:** Includes all compression rings, oil control rings, cylinder, gaskets and sealant				
	Motor Hp 1/2		2	3.6	A-005-6004
	3/4		2	3.6	A-005-6004
	1, 1½		2	4.8	A-010-6004NP
	2		4	4.8	A-010-6004NP
	3 (Kit includes piston)		4	5.5	A-030-6004NP
	5		4	10	A-050-6004NP
	7½		4	10	A-075-6004NP
	10		6	10	A-075-6004NP
D	**INTAKE FILTER ELEMENT:**				
	Motor Hp 1/2		2	0.1	A-005-6023
	3/4		2	0.1	A-005-6023
	1, 1½		2	0.2	A-010-6023NP
	2		4	0.2	A-030-6023NP
	3		4	0.2	A-030-6023NP
	5		4	0.2	A-030-6023NP
	7½		4	0.2	A-030-6023NP
	10		6	0.2	A-030-6023NP
E	**BELT:**	**Motor Hp** **Size**			
	1/2	AX-42	2	0.3	A-005-6006
	3/4	AX-42	2	0.3	A-005-6006
	1	A-43	2	0.3	A-010-6006
	1½	A-46	2	0.3	A-015-6006NP
	2	A-65	2	0.4	A-020-6006NP
	3	A-62	2	0.4	A-030-6006NP
	5	A-65	4	1.6	A-050-6006NP
	7½ (120 gal tank)	A-67	4	2.0	A-075-6046NP

*lb. x 0.454 = kg

REPLACEMENT PARTS LIST

Item	Description			Quantity Required	Shipping Weight (lbs.*)	Code Number
E	**BELTS:**	7½ (200 gal tank)	A-75	4	2.0	A-075-6056NP
	(Continued)	10	A-84	4	2.4	A-100-6006NP
F	**MOTOR**	**Motor Hp**	**Type**			
	PULLEY:	1/2	1A-4.4" P.D., 5/8" Bore	2	3.8	A-005-6007
		3/4	1A-5.8" P.D., 5/8" Bore	2	3.9	A-007-6037
		1 (1 Ø)	1A-4.0" P.D., 5/8" Bore	2	3.2	A-110-6007
		1 (3 Ø)	1A-4.0" P.D., 7/8" Bore	2	3.2	A-010-6007
		1½	1A-6.0" P.D., 7/8" Bore	2	5.6	A-020-6007
		2	1A-6.0" P.D., 7/8" Bore	2	5.2	A-020-6007
		3	1A-6.0" P.D., 1⅛" Bore	2	6.3	A-030-6007NP
		5	2A-5.6" P.D., 1⅛" Bore	2	7.6	A-050-6007NP
		7½	2A-7.6" P.D., 1⅜" Bore	2	12.5	A-075-6007NP
		10	2A-7.6" P.D., 1⅜" Bore	2	13.5	A-100-6007NP
G	**IN-TANK CHECK VALVE:**					
		Motor Hp	**Size**			
		1/2 Through 3	1/2" MPT x 1/2" FPT	2	0.3	A-010-6008
		5 Through 10	3/4" MPT x 3/4" FPT	2	0.4	A-075-6008
H	**SAFETY RELIEF VALVE:** Set at approximately 115 psig (805 kPa)					
	1/2 Through 5 Hp Models			1	0.1	A-050-6009
	7½ Through 10 Hp Models			1	0.2	A-200-6009
J	**PRESSURE ELECTRIC SWITCHES:** (For all models)					
	Lead Switch: Set at approximately 70 psig (490 kPa) cut-in and 90 psig (630 kPa) cut-out			1	0.9	A-100-6010
	Lag Switch: Set at approximately 60 psig (420 kPa) cut-in and 80 psig (560kPa) cut-out			1	0.9	A-100-6011
K	**TANK:**	**Motor Hp**	**Tank Size**			
		1/2 Through 1½	30 gallon	1	134.0	A-010-6030NP
		1/2 Through 1½	80 gallon	1	235.0	A-010-6060NP
		2 & 3	80 gallon	1	243.0	A-020-6060NP
		2 & 3	120 gallon	1	398.0	A-020-6080NP
		5 & 7½	120 gallon	1	415.0	A-050-6120NP
		5 Through 10	200 gallon	1	677.0	A-100-6200NP
L	**COOLING**	**Motor Hp**				
	SHROUD:	1/2		2	1.0	A-005-6013
		3/4		2	1.0	A-005-6013
		2		2	1.7	A-020-6013NP
		3		2	1.7	A-030-6013NP
		5		2	1.7	A-050-6013NP
		7½		2	1.9	A-075-6013NP
		10		2	4.5	A-100-6013NP
M	**BELT GUARD:**	**Motor Hp**				
		1/2 Through 1½		2	2.4	A-010-6012
		2 & 3		2	12.5	A-020-6012
		5 & 7½		2	12.5	A-050-6012
		10		2	18.5	A-100-6012
N	**LIQUID GASKET:** 1 through 10 Hp			1	0.4	A-999-6000

*lb. x 0.454 = kg

Climate Control Duplex

Maintenance Schedule

Item	Action needed	Operating Hours 500	2500	5000	10,000	15,000	20,000	Remarks
Tank	Drain moisture	Daily						
Inlet air filter	Replace	●	▲	*(Every 2,500 hrs or less)*				
Blower fan	Clean			●	●	●	●	
Fan duct	Clean			●	●	●	●	
Compressor fins	Clean		●	*(Every 2,500 hrs or less)*				
Oil change	Replace	*(Every 1,500 hrs)*						
Compression rings	Replace					▲		
Check oil	Inspect	Daily						
V-belt	Inspect, replace	*Note 3	●	▲	▲	▲	▲	
Pressure switch	Confirm operation				●		●	
Magnetic starter	Inspect				●		●	Replace if contact points deteriorated
Safety valve	Confirm operation		●	*(Every 2,500 hrs or less)*				
Pressure gauge	Inspect		●	*(Every 2,500 hrs or less)*				

● Inspect
▲ Replace

NOTES:
1. Inspect and perform maintenance periodically according to maintenance schedule.
2. The maintenance schedule relates to the normal operating conditions. If the circumstances and load condition are adverse, shorten the cycle time and do maintenance accordingly.
3. *The tension of the V-belt should be adjusted during initial start up and inspected every 1,500 hours afterwards. Proper belt tension for 3/4 to 3 Hp units is 2-3 lbs./5" deflection; for 5 to 10 Hp units, 4-6 lbs./.5" deflection.

Powerex Limited Warranty

Powerex 3 Year / 10,000 Hour Extended Parts Limited Warranty - Powerex warrants each Compressor Pump or Scroll Air-End against defects in material or workmanship from the date of purchase for a period of **Three years or 10,000 hours**, whichever may occur first. This warranty applies to the exchange of part(s) of the compressor pump or air-end found to be defective by an Authorized Powerex Service Center.

Powerex 1 Year / 5,000 Hour Inlet to Outlet Limited Warranty - Powerex warrants each Compressor Unit, System, Pump, or Air-End against defects in material or workmanship from the date of purchase for a period of **One Year or 5,000 Hours,** whichever may occur first. This warranty applies to the exchange of defective component part(s) and labor performed by an Authorized Powerex Service Center.

The above mentioned warranty applies to POWEREX manufactured units or systems only.

Items listed in the operator's manual under routine maintenance are not covered by this or any other warranty.

THERE IS NO OTHER EXPRESS WARRANTY. IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED TO ONE YEAR FROM THE DATE OF PURCHASE: AND TO THE EXTENT PERMITTED BY LAW, ANY AND ALL IMPLIED WARRANTIES ARE EXCLUDED. THIS IS THE EXCLUSIVE REMEDY AND LIABILITY FOR CONSEQUENTIAL DAMAGES UNDER ANY AND ALL WARRANTIES IS EXCLUDED TO THE EXTENT EXCLUSION IS PERMITTED BY LAW.

All claims pertaining to the merchandise in this schedule, with the exception of warranty claims, must be filed with POWEREX within 6 months of the invoice date, or they will not be honored. Prices, discounts and terms are subject to change without notice or as stipulated in specific product quotations. All agreements are contingent upon strikes, accidents, or other causes beyond our control. All shipments are carefully inspected and counted before leaving the factory. Please inspect carefully any receipt of merchandise noting any discrepancy or damage on the carrier's freight bill at the time of delivery. Discrepancies or damage which obviously occurred in transit are the carrier's responsibility and related claims should be made promptly directly to the carrier. Returned merchandise will not be accepted without prior written authorization by POWEREX and deductions from invoices for shortage or damage claims will not be allowed. **UNLESS OTHERWISE AGREED TO IN WRITING, THESE TERMS AND CONDITIONS WILL CONTROL IN ANY TRANSACTION WITH POWEREX** any different or conflicting terms as may appear on any order form now or later submitted by the buyer. All orders are subject to acceptance by POWEREX.

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Fax: 513-367-3125

POWEREX
PURE AIR TECHNOLOGY

General Product Manual — *Lubricated Compressor Pumps*

Please read and save these instructions. Read carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply with instructions could result in personal injury and/or property damage! Retain instructions for future reference.

Descriptions

GENERAL

The Powerex reciprocating air compressor has advanced compressor technology. The Powerex reciprocating compressor is available in single stage model. Individually precision machined cylinders and lap joint rings provide the lowest oil carryover in the industry. The onboard cooling fan and finned flywheel create lower operating temperatures.

DRY TYPE INLET FILTER

The inlet filter on the Powerex compressor assures 99% of particulate free air is admitted to the unit. Change every 500 hours or more often in dirty locations.

PISTON RINGS AND CYLINDERS

The Powerex reciprocating compressor cylinder is made of a 390R cast alloy construction machined with the most advanced technology available. These heat reducing cylinders eliminate the effect of excessive ring and cylinder wear. Piston rings should be replaced every 15,000 hours of operation.

VALVING

Low lift Swedish stainless steel valves resist carbon build-up and offer outstanding durability. The reduced number of valves lessens the risk of failure.

Installation

INSTALLATION SITE

1. The compressor must be located in a clean, well lit and well ventilated area.
2. The area should be free of excessive dust, toxic or flammable gases and moisture.
3. Never install the compressor where the ambient temperature is higher than 104° F or where humidity is high.
4. Clearance must allow for safe, effective inspection and maintenance.
5. If necessary, use metal shims or leveling pads to level the compressor. Never use wood to shim the compressor.

⚠DANGER

Breathable Air Warning

This compressor/pump is NOT equipped and should NOT be used "as is" to supply breathing quality air. For any application of air for human consumption, you must fit the compressor/pump with suitable in-line safety and alarm equipment. This additional equipment is necessary to properly filter and purify the air to meet minimal specifications for Grade D breathing as described in Compressed Gas Association Commodity Specification G 7.1 - 1966, OSHA 29 CFR 1910. 134, and/or Canadian Standards Associations (CSA).

DISCLAIMER OF WARRANTIES
In the event the compressor/pump is used for the purpose of breathing air application and proper in-line safety and alarm equipment is not simultaneously used, existing warranties are void, and Powerex disclaims any liability whatsoever for any loss, personal injury or damage.

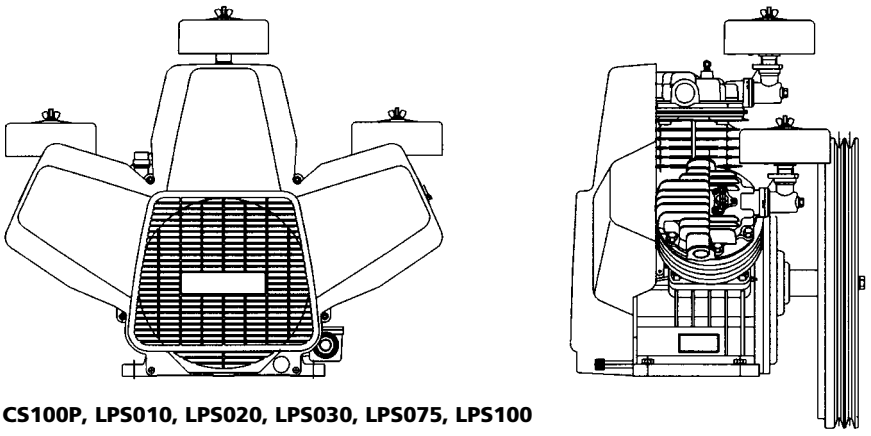


Figure 1 - Models CS100P, LPS010, LPS020, LPS030, LPS075, LPS100

VENTILATION

1. If the compressor is located in a totally enclosed room, an exhaust fan with access to outside air must be installed.
2. Never restrict the cooling fan exhaust air.
3. Never locate the compressor where hot exhaust air from other heat generating units may be pulled into the unit.

Minimum Clearances	
Above	24"
Drive belt side	12"
Other sides	20"

WIRING

Refer to the general product manual. All electrical hook-ups must be performed by a qualified electrician. Installations must be in accordance with local and national electrical codes.

Use solderless terminals to connect the electric power source.

PIPING

Refer to the general product manual.

1. Make sure the piping is lined up without being strained or twisted when assembling the piping for the scroll compressor.
2. Appropriate expansion loops or bends should be installed at the compressor to avoid stresses caused by changes in hot and cold conditions.
3. Piping supports should be anchored separately from the compressor to reduce noise and vibration.
4. Never use any piping smaller than the compressor connection.
5. Use flexible hose to connect the outlet of the compressor to the piping so that the vibration of the compressor does not transfer to the piping.

SAFETY VALVES

Tank mounted compressors are shipped from the factory with safety valves installed in the tank manifold. The flow capacity of the safety valve is equal to or greater than the capacity of the compressor.

1. The pressure setting of the safety valve must be no higher than the maximum working pressure of the tank.
2. Safety valves should be placed ahead of any possible blockage point in the system, i.e. shutoff valve.
3. Avoid connecting the safety valve with any tubing or piping.
4. Manually operate the safety valve every six months to avoid sticking or freezing.

Operation

Powerex single stage compressors operate at a maximum pressure of 140 PSIG. Compressor RPM's are established by Powerex based on horsepower and operating pressure.

BEFORE START UP

1. Make sure all safety warnings, labels and instructions have been read and understood before continuing.
2. Remove any shipping materials, brackets, etc.
3. Confirm that the electric power source and ground have been firmly connected.
4. Be sure all pressure connections are tight.
5. Check to be certain all safety relief valves, etc., are correctly installed.
6. Check that all fuses, circuit breakers, etc., are the proper size.
7. Make sure the inlet filter is properly installed.
8. Confirm that the drain valve is closed.
9. Visually check the rotation of the compressor pump. If the rotation is incorrect, have a qualified electrician correct the motor wiring.

START-UP AND OPERATION

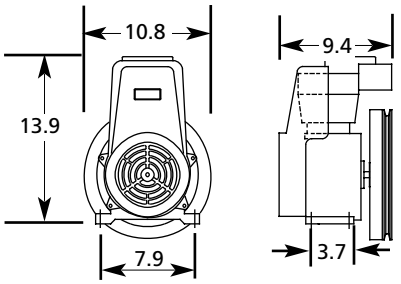
1. Follow all the procedures under "Before start-up" before attempting operation of the compressor.
2. Switch the electric source breaker on.
3. Open the tank discharge valve completely.
4. Check that the compressor operates without excessive vibration, unusual noises or leaks.
5. Close the discharge valve completely.
6. Check the discharge pressure. Also make sure the air pressure rises to the designated pressure setting by checking the discharge pressure gauge.
7. Check the operation of the pressure switch or the pilot valve for continuous run units by opening the stop valve and confirming the compressor starts or reloads as pressure drops.

Switch the breaker OFF if the compressor is not to be used for a long period of time.

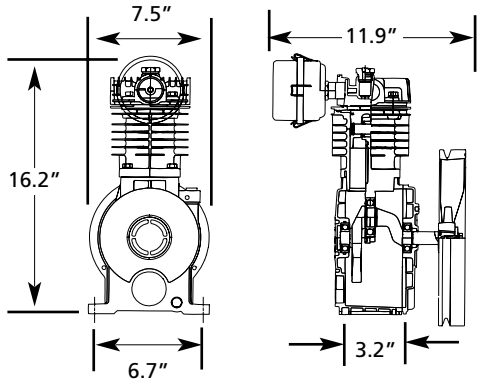
NOTICE ***Two stage units are equipped with head unloaders for continuous operation.***

Dimensions (Refer to Figure 2)

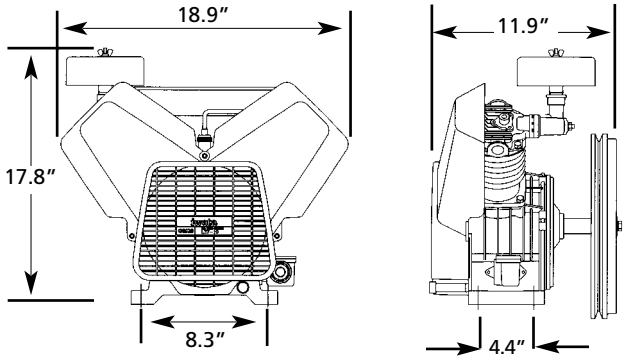
Model	HP	Max psig	SCFM @ 100 psig	RPM @ 100 PSIG	Number/ Cylinders	Bore	Stroke	Flywheel Outer Diam.	Drive	Weight (lbs.)
CS100P	.75/.5	140	2.3/1.7	990/805	1	1.9	2.2	11.2	1GR-A	28
LPS010	1.5/1	140	5.1/3.4	900/665	1	2.6	2.6	10.5	1GR-A	34
LPS020	2	140	7.7	720	2	2.6	2.4	13.7	1GR-B	65
LPS030	5/3	140	15.4/11.5	1050/765	2	3.0	2.9	14.6	1GR-B	76
LPS075	7.5	140	29.2	790	2	4.1	3.35	18.3	2GR-B	116
LPS100	15/10	140	62.1/41.3	1080/695	3	4.1	3.35	19.7	2GR-B	137



CS100P



LPS 010



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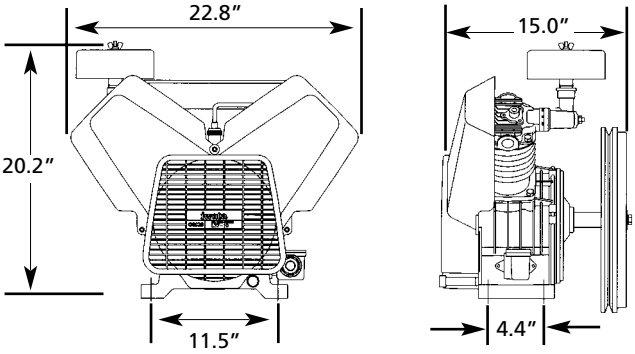

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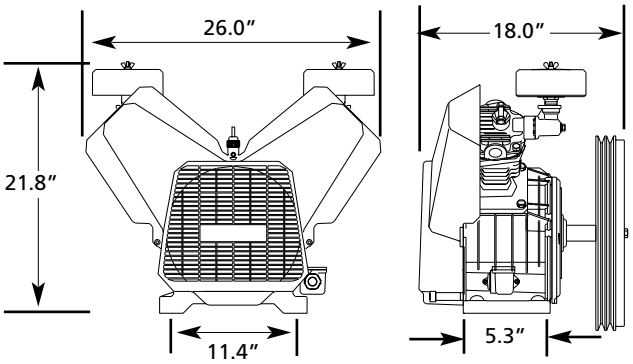

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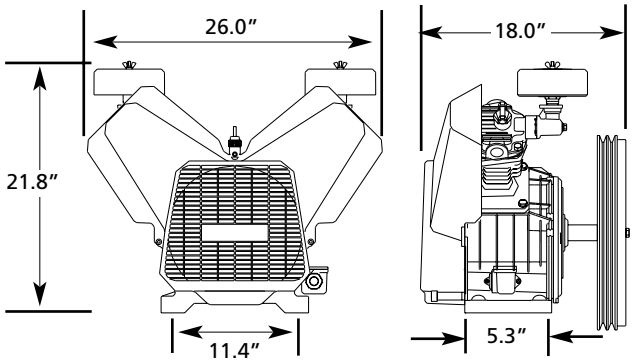

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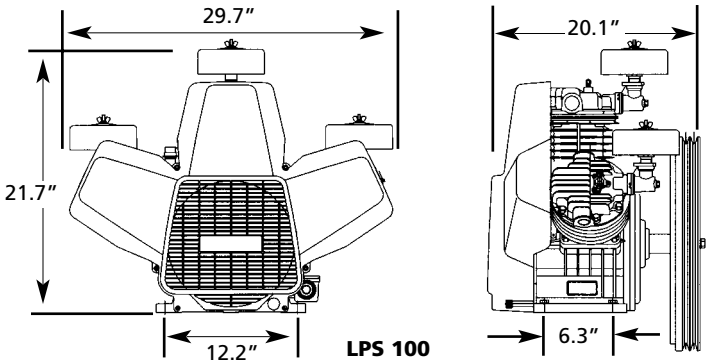


LPS 100

Figure 2 - Dimensional Drawings

Reciprocating Air Compressor Pumps

Maintenance Schedule

Item	Action needed	Operating Hours 500	2,500	5,000	10,000	15,000	20,000	Remarks
Tank	Drain moisture	Daily						
Inlet air filter	Replace	●	▲	*(Every 2,500 hrs or less)*				
Blower fan	Clean			●	●	●	●	
Fan shroud	Clean			●	●	●	●	
Compressor fins	Clean		●	*(Every 2,500 hrs or less)*				
Oil change	Replace	*(Every 1,500 hrs)*						
Compression rings	Replace					▲		
Check oil	Inspect	Daily						
V-belt	Inspect, replace	*Note 3	●	▲	▲	▲	▲	
Pressure switch	Confirm operation				●		●	
Magnetic starter	Inspect				●		●	Replace if contact points deteriorated
Safety valve	Confirm operation		●	*(Every 2,500 hrs or less)*				
Pressure gauge	Inspect		●	*(Every 2,500 hrs or less)*				

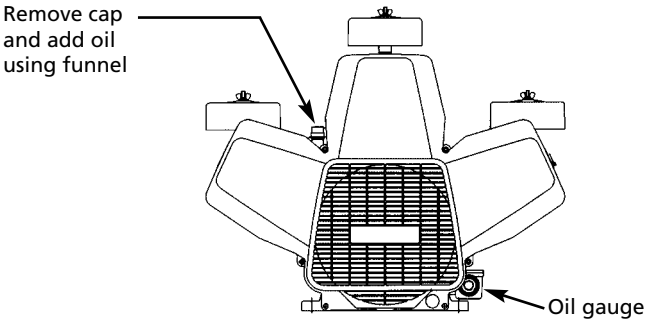
● Inspect
▲ Replace

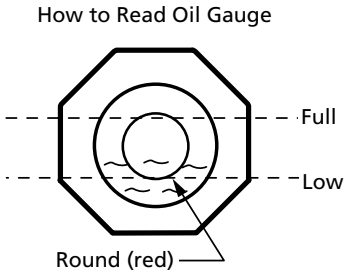
NOTES:

1. Inspect and perform maintenance periodically according to maintenance schedule.
2. The maintenance schedule relates to the normal operating conditions. If the circumstances and load condition are adverse, shorten the cycle time and do maintenance accordingly.
3. * The tension of the V-belt should be adjusted during initial start up and inspected every 1,500 hours afterwards. Proper belt tension for 3/4 to 3 HP units is 2-3 lbs./.5" deflection; for 5 to 10 HP units, 4-6 lbs./.5" deflection.

Oil Level

To check lubricating oil, see oil gauge. Refill if necessary.





Oil Change

Replace lubricating oil fully within designated time. Before draining oil, remove oil supply cap and then oil drain cap in order to release air.

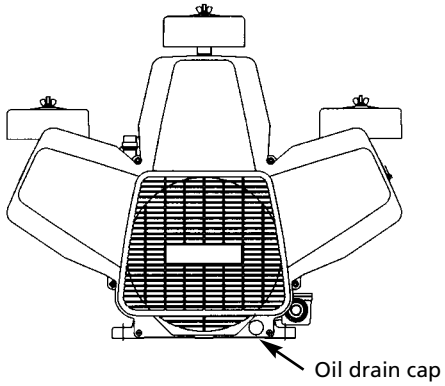
RECOMMENDED OIL

Mobil Rarus 427, Shell Turbo T68, Exxon Esstic T68 and Texaco Rando T68.

CLIMATE CONTROL APPLICATIONS

Mobil DTE Heavy and Mobil Rarus 427

⚠WARNING ***Dispose of oil in accordance with state or local codes.***



Air Filter Replacement

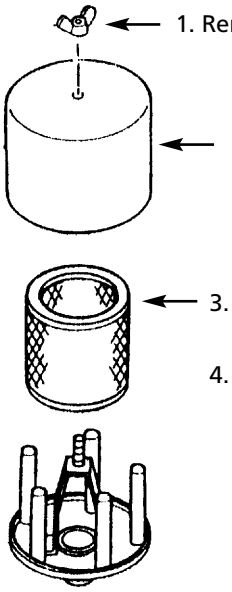


Figure 3 - Air Filter Replacement

Cylinder Bolt Torque

Model	Torque (in. lb.)
CS100P	156
LPS010	156
LPS020	156
LPS030	156
LPS050	295
LPS075	295
LPS100	295

Head Bolt Torque

Model	Torque (in. lb.)
CS100P	156
LPS010	156
LPS020	156
LPS030	156
LPS050	295
LPS075	156
LPS100	156

Ring Replacement Every 15,000 Hours

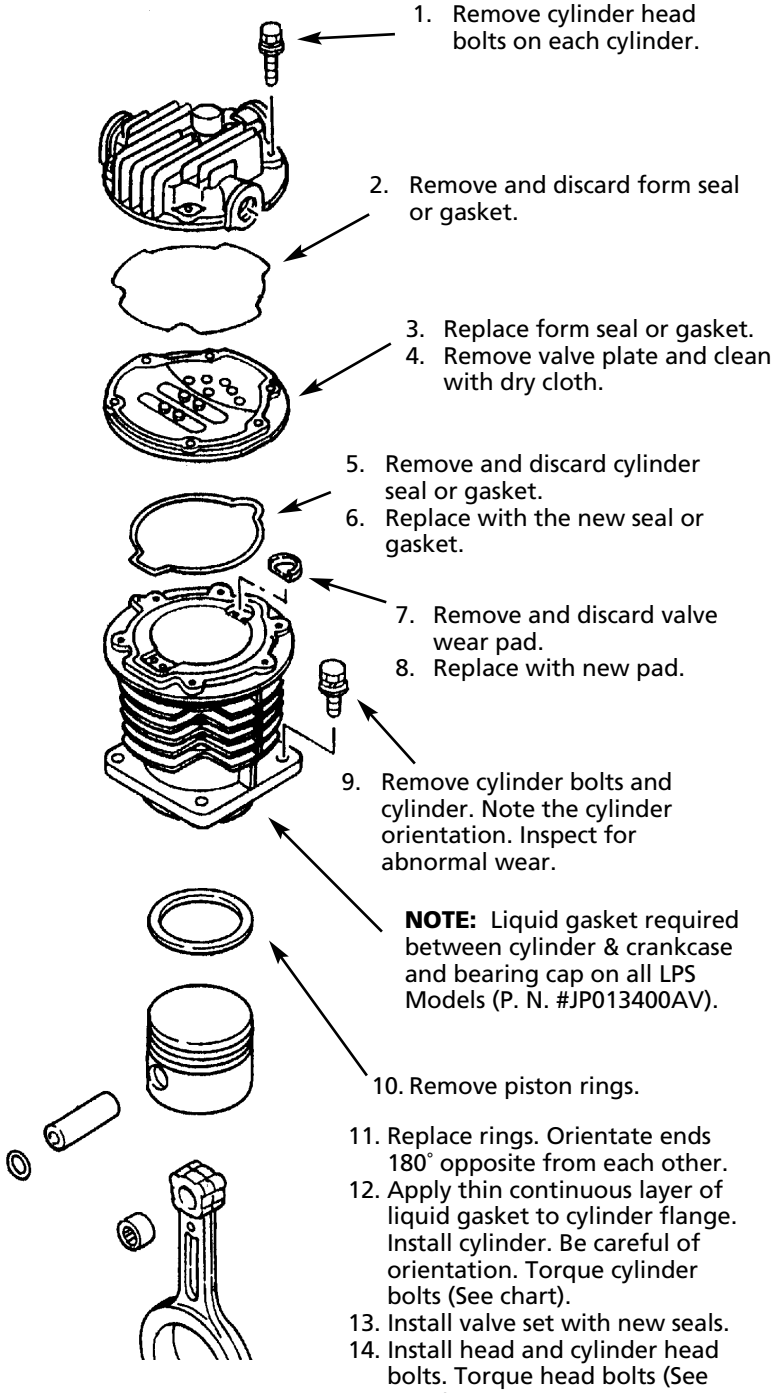


Figure 4 - Ring Replacement

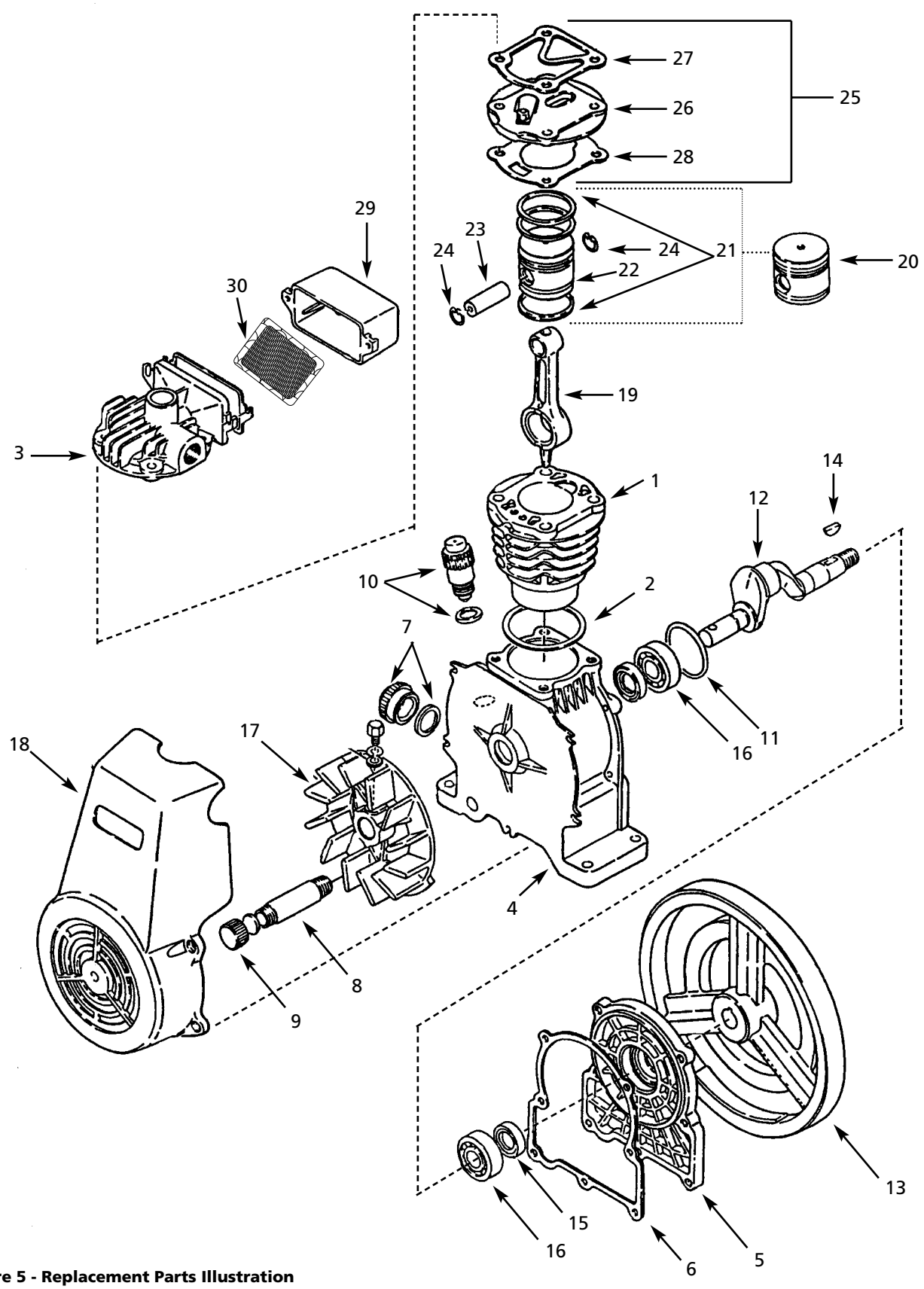
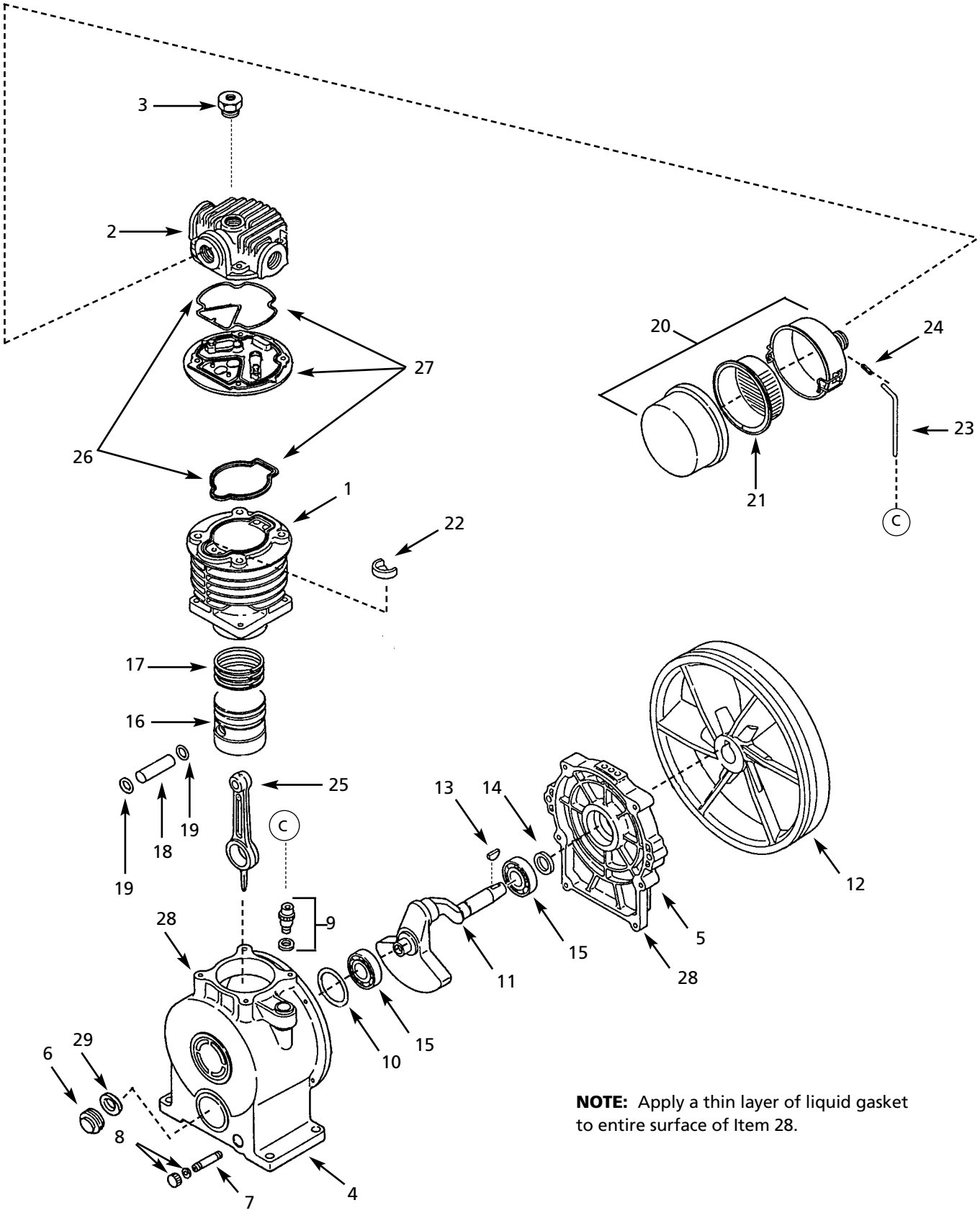


Figure 5 - Replacement Parts Illustration

Ref. No.	Description	Part Number	Qty
1	Cylinder	IP036000AV	1
2	Cylinder gasket	IP035901AV	1
3	Cylinder head	IP035800AV	1
4	Crank case	▲	1
5	Bearing case	▲	1
6	Bearing case gasket	IP035301AV	1
7	Oil gauge set	91117120	1
8	Oil drain pipe	IP031701AV	1
9	Oil drain cap with gasket	IP001900AV	1
10	Breather assembly with gasket	IP002100AV	1
11	Fan side rubber seal	IP035200AV	1
12	Crank shaft	IP035100AV	1
13	Flywheel	IP035000AV	1
14	Woodruff key	IP002700AV	1
15	Oil seal	IP003000AV	2
16	Ball bearing	IP031300AV	2
17	Fan	IP034900AV	1
18	Fan shroud	IP034800AV	1
19	Connecting rod	IP033800AV	1
20	Piston Assembly (Includes items 22 - 24)	IP033700AV	1
21	Piston ring set	IP033600AV	1
22	Piston	IP033500AV	1
23	Piston pin	IP033300AV	1
24	Stop ring	IP033200AV	2
25	Valve assembly (Includes items 27 - 28)	IP305000AV	1
26	Valve plate	IP032800AV	1
27	Cylinder head gasket	IP032701AV	1
28	Valve spacer gasket	IP032601AV	1
29	Air intake filter cover	IP032500AV	1
30	Air intake filter element	IP630100AV	1
▲	Replace Pump		



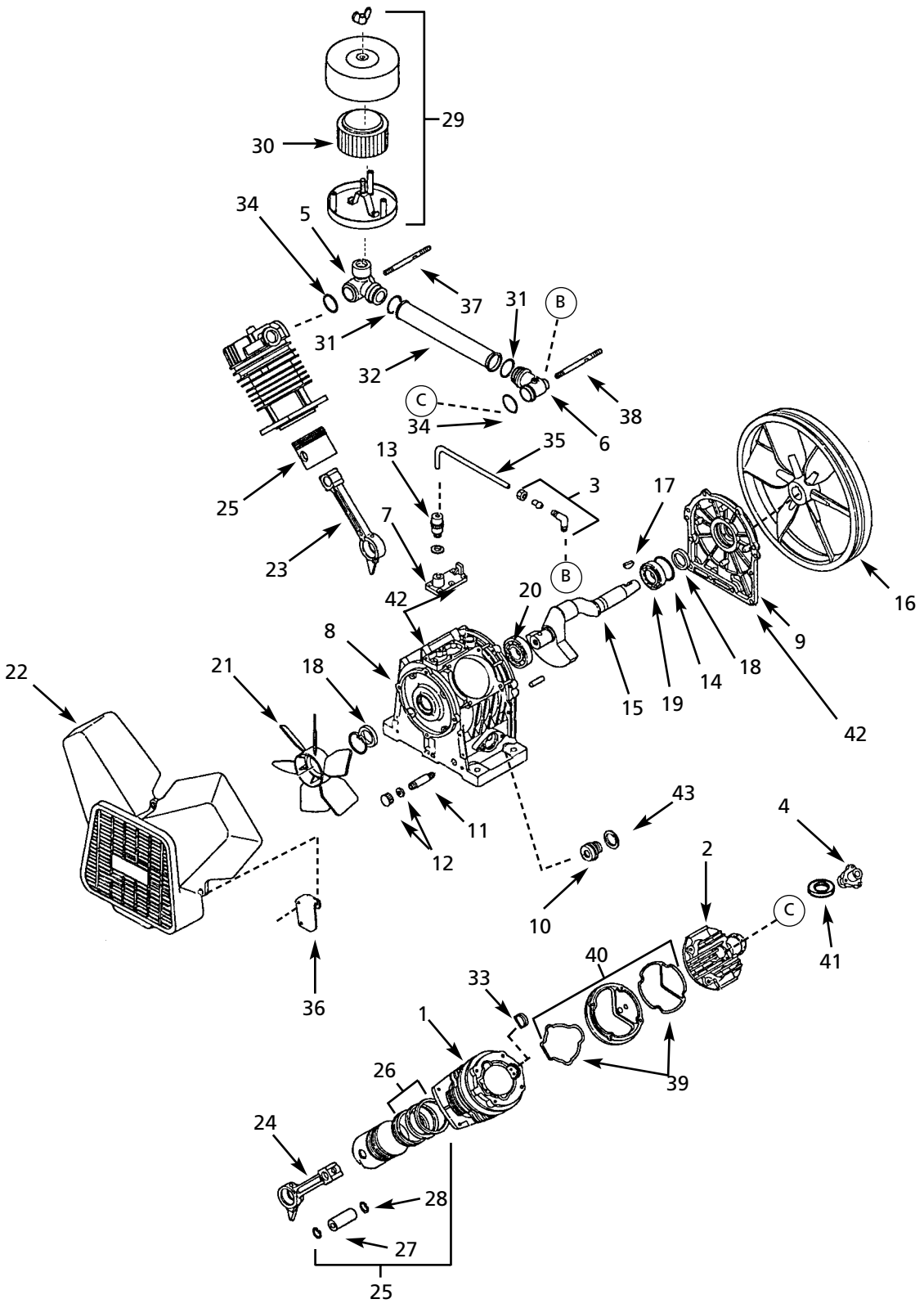
NOTE: Apply a thin layer of liquid gasket to entire surface of Item 28.

Figure 6 - Replacement Parts Illustration

Ref. No.		Description	Part Number	Qty
1		Cylinder	91000560	1
2		Cylinder head	91003550	1
3		Unloader cap	01052041	1
4		Crank case	▲	1
5		Bearing cap	▲	1
6		Oil gauge	01909600	1
7		Oil drain pipe	01119400	1
8		Oil drain cap set	01120023	1
9		Breather assembly and gasket	01919470	1
10		Bearing cap rubber seal	01146550	1
11		Crankshaft	91223551	1
12		Pulley flywheel	91201551	1
13		Key woodruff	06600008	1
14		Bearing cap oil seal	07192201	1
15		Bearing cap ball bearing	07112200	2
16		Piston	91902560	1
17		Piston ring set	91924120	1
18		Wrist pin	01232120	1
19		Retainer	06613160	2
20		Intake filter set	91906550	1
21		Intake filter	91348550	1
22		Intake valve seat	01301560	1
23		Tube	01909400	1
24		Return tube nipple	01161470	1
25		Connecting rod	91251550	1
26		Valve gasket set	91935560	1
27		Valve set with gasket	91933560	1
28	Δ	Liquid gasket	JP013400AV	1
29		Oil gauge gasket	01120600	1

Δ Not shown

▲ Replace Pump



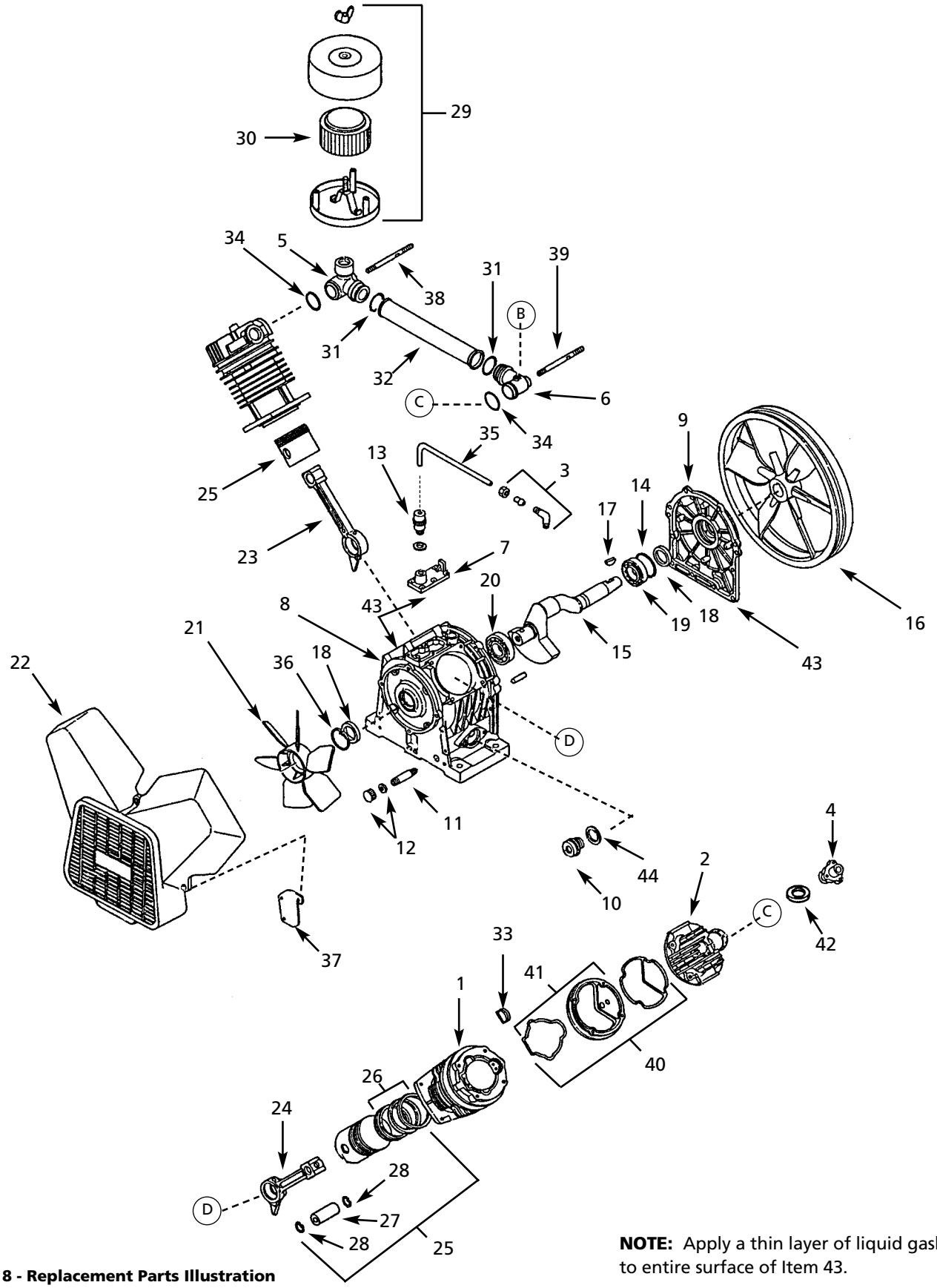
NOTE: Apply a thin layer of liquid gasket to entire surface of Item 42.

Figure 7 - Replacement Parts Illustration

Ref. No.	Description	Part Number	Qty
1	Cylinder	91000560	2
2	Cylinder head	91003560	2
3	Intake return pipe elbow	06800261	1
4	Unloader cap	01052041	2
5	Intake joint (1)	91345561	1
6	Intake joint (2)	91346571	1
7	Breather flange	91176580	1
8	Crankcase	▲	1
9	Bearing cap	▲	1
10	Oil gauge	01909600	1
11	Oil drain pipe	01119400	1
12	Oil drain cap assembly	91908600	1
13	Breather assembly and gasket	01919470	1
14	Bearing cap rubber seal	01146560	1
15	Crank shaft	91214560	1
16	Flywheel pulley	91202560	1
17	Key woodruff	0660013	1
18	Bearing cap oil seal	07192252	2
19	Bearing cap ball bearing	07112250	1
20	Crank case ball bearing	07112300	1
21	Fan	91220560	1
22	Fan cover	91134560	1
23	Right connecting rod (Facing flywheel)	91251560	1
24	Left connecting rod (Facing flywheel)	91224560	1
25	Piston set with rings	91902560	2
26	Piston ring set	91924120	2
27	Wrist pin	01232120	2
28	Retainer	06613160	4
29	Intake filter set	91907570	1
30	Intake filter	91353660	1
31	Intake pipe o-ring	06630032	2
32	Intake pipe	91407560	1
33	Intake valve seat	01301560	2
34	Intake joint o-ring	06639906	2
35	Tube	01909400	1
36	Fan guard	91135560	2
37	Intake joint bolt	01095570	1
38	Intake joint bolt	01095560	1
39	Valve gasket set	91935560	2
40	Valve set with gasket	91933560	2
41	Rubber seal (Unloader piston)	01471452	2
42	Δ Liquid gasket	JP013400AV	1
43	Oil gauge gasket	01120600	1

Δ Not shown.

▲ Replace Pump



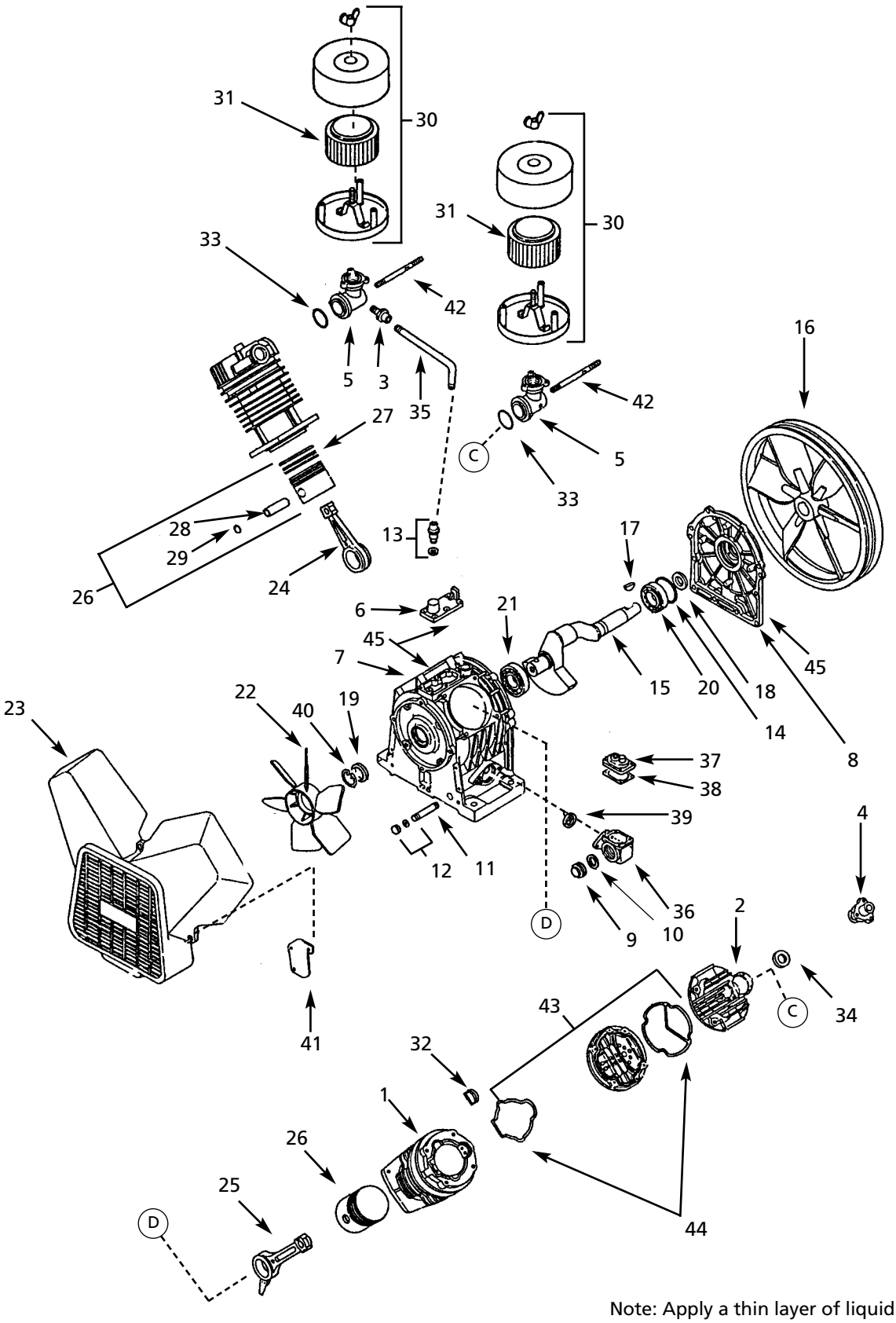
NOTE: Apply a thin layer of liquid gasket to entire surface of Item 43.

Figure 8 - Replacement Parts Illustration

Ref. No.		Description	Part Number	Qty
1		Cylinder	91033570	2
2		Cylinder head	91004600	2
3		Intake return pipe elbow	06800281	1
4		Unloader cap	01052451	2
5		Intake joint (1)	91345570	1
6		Intake joint (2)	91346571	1
7		Breather flange	91176580	1
8		Crankcase	▲	1
9		Bearing cap	▲	1
10		Oil gauge	01909600	1
11		Oil drain pipe	01119430	1
12		Oil drain cap set	91908600	1
13		Breather assembly and gasket	01919600	1
14		Bearing cap rubber seal	06634062	1
15		Crankshaft	91214570	1
16		Pulley flywheel	91201570	1
17		Key woodruff	06600013	1
18		Bearing cap oil seal	07192302	2
19		Bearing cap ball bearing	07112300	1
20		Crankcase ball bearing	07113300	1
21		Fan	91220570	1
22		Fan cover	91134570	1
23		Right connecting rod (Facing flywheel)	91224570	1
24		Left connecting rod (Facing flywheel)	91936570	1
25		Piston set with rings	91903571	2
26		Piston ring set	91946571	2
27		Wrist pin	01232041	2
28		Retainer	01240581	4
29		Intake filter set	91907570	1
30		Intake filter	91353660	1
31		Intake pipe o-ring	06630032	2
32		Intake pipe	91407570	1
33		Intake valve seat	01301692	2
34		Intake joint o-ring	06639906	2
35		Return pipe	91162570	1
36		Fan retainer oil seal	91240570	1
37		Fan shield	91144570	2
38		Intake joint bolt	01095570	1
39		Intake joint bolt	01344690	1
40		Valve set with gasket	91936601	2
41		Valve gasket set	91934603	2
42		Rubber seal (Unloader piston)	01471452	2
43	Δ	Liquid gasket	JP013400AV	1
44		Oil gauge gasket	01120600	1

Δ Not shown.

▲ Replace Pump



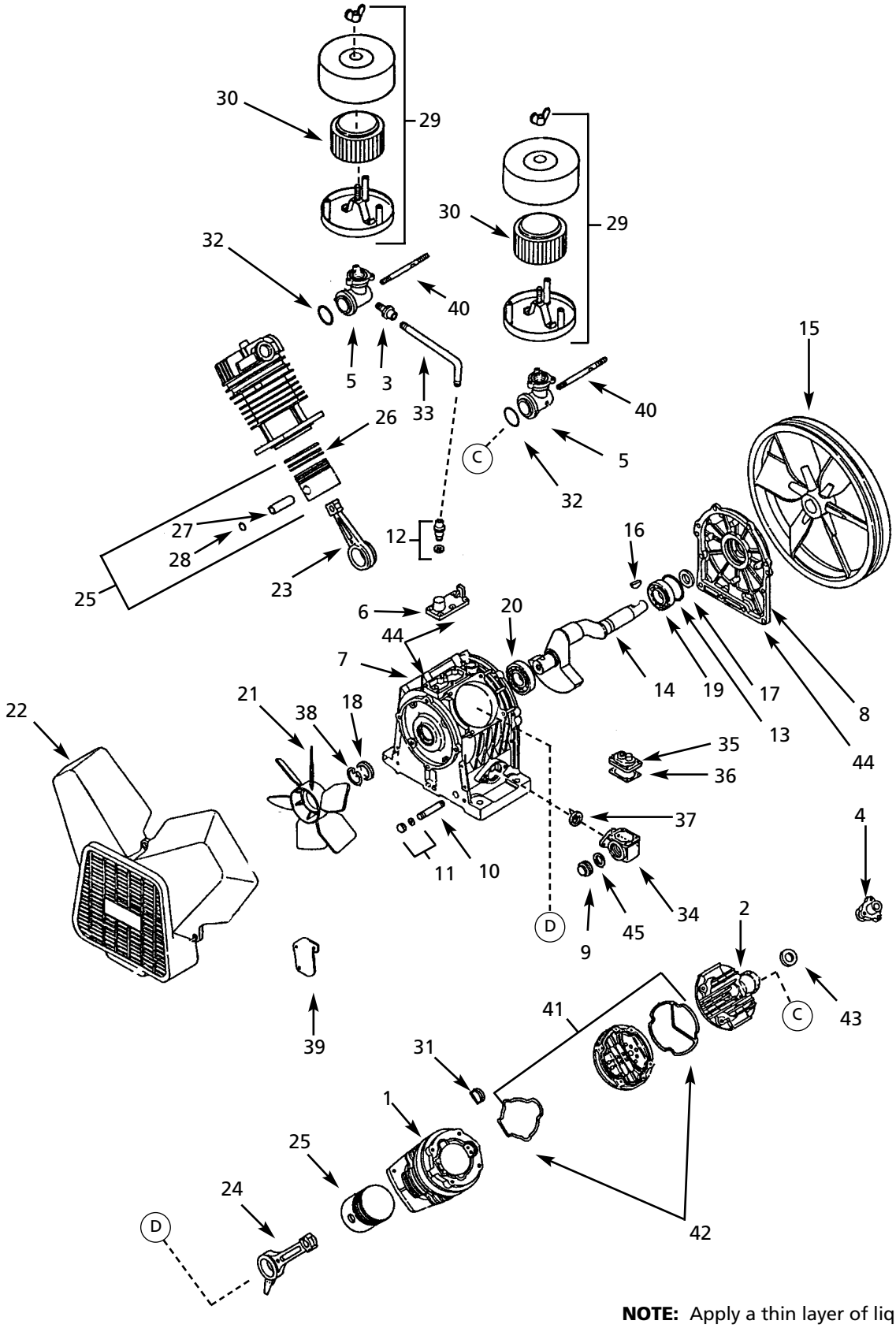
Note: Apply a thin layer of liquid gasket to entire surface of item #45.

Figure 9 - Replacement Parts Illustration

Ref. No.		Description	Part Number	Qty
1		Cylinder	91000590	2
2		Cylinder head	91005580	2
3		Intake return pipe fitting	06801281	1
4		Unloader cap	01052451	2
5		Intake joint	91345660	2
6		Breather flange	91176580	1
7		Crank case	▲	1
8		Bearing case	▲	1
9		Oil gauge	91909600	1
10		Packing-oil gauge	01120600	1
11		Oil drain pipe	91119430	1
12		Oil drain cap set	91908600	1
13		Breather set	91919600	1
14		Bearing cap rubber seal	01146430	1
15		Crank shaft	91200580	1
16		Flywheel pulley	91201580	1
17		Woodruff key	06600016	1
18		Oil seal	07192355	1
19		Oil seal	07192405	1
20		Bearing cap ball bearing	07112350	1
21		Crack case ball bearing	07113400	1
22		Fan	91220690	1
23		Fan cover	91134660	1
24		Right connecting rod (facing flywheel)	91207600	1
25		Left connecting rod (facing flywheel)	91901600	1
26		Piston set	91902590	2
27		Piston ring set	91924590	2
28		Piston pin	01232060	2
29		Retainer	01240040	4
30		Intake filter set	91907660	2
31		Filter set	91353660	2
32		Seat	01301691	2
33		Intake joint o-ring	06639906	2
34		Unloader cap seal	01471452	2
35		Return pipe	01909400	1
36		Oil gauge adapter	01117600	1
37		Oil gauge adapter lid	01118600	1
38		Gasket	01121600	1
39		Adapter packing	01123601	1
40		Retainer	01148600	1
41		Fan guard	91144660	2
42		Intake joint bolt	01344690	2
43		Valve set with gasket	91933591	2
44		Valve gasket set	91936590	2
45	Δ	Liquid gasket	JP013400AV	1

Δ Not shown.

▲ Replace Pump



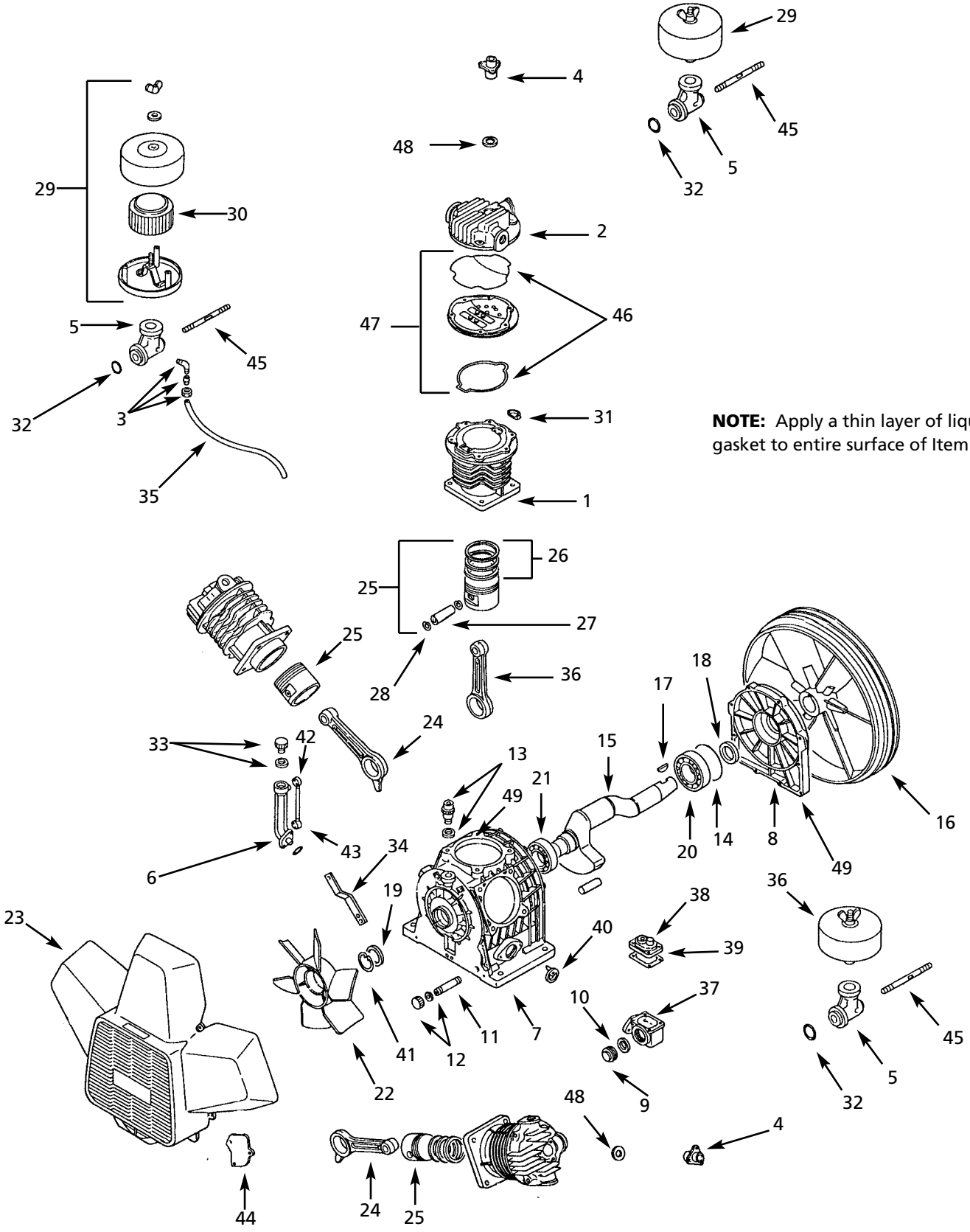
NOTE: Apply a thin layer of liquid gasket to entire surface of Item 44.

Figure 10 - Replacement Parts Illustration

Ref. No.		Description	Part Number	Qty
1		Cylinder	91000600	2
2		Cylinder head	91005600	2
3		Intake return pipe fitting	06801281	1
4		Unloader cap	01052451	2
5		Intake joint	91345660	2
6		Breather flange	91176580	1
7		Crankcase	▲	1
8		Bearing cap	▲	1
9		Oil gauge	01909600	1
10		Oil drain pipe	01119430	1
11		Oil drain cap set	91908600	1
12		Breather assembly and gasket	01919600	1
13		Bearing cap rubber seal	01146430	1
14		Crank shaft	91200580	1
15		Pulley flywheel	91201580	1
16		Key woodruff	06600016	1
17		Bearing cap oil seal	07192355	1
18		Crank case oil seal	07192405	1
19		Bearing cap ball bearing	07112350	1
20		Crankcase ball bearing	07113400	1
21		Fan	91220690	1
22		Fan cover	91134660	1
23		Right connecting rod (Facing flywheel)	91207600	1
24		Left connecting rod (Facing flywheel)	91901600	1
25		Piston set	91902600	2
26		Piston ring set	91946600	2
27		Wrist pin	01232060	2
28		Retainer	01240040	4
29		Intake filter set	91907660	2
30		Intake filter	91353660	2
31		Intake valve seat	01301692	2
32		Intake joint o-ring	06639906	2
33		Return pipe	91162580	1
34		Oil gauge case	01117600	1
35		Oil gauge cap	01118600	1
36		Oil gauge case gasket	01121600	1
37		Oil gauge crank case gasket	01123601	1
38		Retainer fan oil seal	01148600	1
39		Fan guard	91144660	2
40		Intake joint bolt	01344690	2
41		Valve set with gasket	91937600	2
42		Valve gasket set	91933601	2
43		Rubber seal (Unloader cap)	01471452	3
44	Δ	Liquid gasket	JP013400AV	1
45		Oil gauge gasket	01120600	1

Δ Not shown.

▲ Replace Pump



NOTE: Apply a thin layer of liquid gasket to entire surface of Item 49.

Figure 11 - Replacement Parts Illustration

Ref. No.		Description	Part Number	Qty
1		Cylinder	91000600	3
2		Cylinder head	91005600	3
3		Intake return pipe elbow	06801281	1
4		Unloader cap	01052451	3
5		Intake joint	91345660	3
6		Oil cap joint	01122600	1
7		Crank case	▲	1
8		Bearing cap	▲	1
9		Oil gauge	01909600	1
10		Gasket	01120600	1
11		Oil drain pipe	01119430	1
12		Oil drain cap set	91908600	1
13		Breather assembly and gasket	01919600	1
14		Bearing cap rubber seal	01146690	1
15		Crank shaft	91200600	1
16		Pulley flywheel	01201600	1
17		Key woodruff	06600016	1
18		Bearing cap oil seal	07192452	1
19		Crank case oil seal	07192405	1
20		Bearing cap ball bearing	07113450	1
21		Crank case ball bearing	07112500	1
22		Fan	91220690	1
23		Fan cover	91134690	1
24		Left and right connecting rods	91901600	2
25		Piston set	91902600	3
26		Piston ring set	91946600	3
27		Wrist pin	01232060	3
28		Retainer	01240040	6
29		Intake filter set	91907660	3
30		Intake filter	91353660	3
31		Intake valve seat	01301692	3
32		Intake joint o-ring	06639906	3
33		Oil cap	01918600	1
34		Cover bracket	01413690	2
35		Return pipe	91162580	1
36		Center connecting rod	91207600	1
37		Oil gauge case	01117600	1
38		Oil gauge cap	01118600	1
39		Oil gauge case gasket	01121600	1
40		Oil gauge crank case gasket	01123601	1
41		Oil seal fan retainer	01148600	1
42		Bypass joint	01138600	2
43		Bypass pipe	01139600	1
44		Fan guard	01135690	2
45		Intake joint bolt	01344690	3
46		Valve gasket set	91937600	3
47		Valve set with gasket	91933601	3
48		Rubber seal (Unloader piston)	01471452	3
49	Δ	Liquid gasket	JP013400AV	1

Δ Not shown.

▲ Replace Pump

Powerex Limited Warranty

Powerex 3 Year / 10,000 Hour Extended Parts Limited Warranty - Powerex warrants each Compressor Pump or Scroll Air-End against defects in material or workmanship from the date of purchase for a period of **Three years or 10,000 hours**, whichever may occur first. This warranty applies to the exchange of part(s) of the compressor pump or air-end found to be defective by an Authorized Powerex Service Center.

Powerex 1 Year / 5,000 Hour Inlet to Outlet Limited Warranty - Powerex warrants each Compressor Unit, System, Pump, or Air-End against defects in material or workmanship from the date of purchase for a period of **One Year or 5,000 Hours,** whichever may occur first. This warranty applies to the exchange of defective component part(s) and labor performed by an Authorized Powerex Service Center.

The above mentioned warranty applies to POWEREX manufactured units or systems only.

Items listed in the operator's manual under routine maintenance are not covered by this or any other warranty.

THERE IS NO OTHER EXPRESS WARRANTY. IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED TO ONE YEAR FROM THE DATE OF PURCHASE: AND TO THE EXTENT PERMITTED BY LAW, ANY AND ALL IMPLIED WARRANTIES ARE EXCLUDED. THIS IS THE EXCLUSIVE REMEDY AND LIABILITY FOR CONSEQUENTIAL DAMAGES UNDER ANY AND ALL WARRANTIES IS EXCLUDED TO THE EXTENT EXCLUSION IS PERMITTED BY LAW.

All claims pertaining to the merchandise in this schedule, with the exception of warranty claims, must be filed with POWEREX within 6 months of the invoice date, or they will not be honored. Prices, discounts and terms are subject to change without notice or as stipulated in specific product quotations. All agreements are contingent upon strikes, accidents, or other causes beyond our control. All shipments are carefully inspected and counted before leaving the factory. Please inspect carefully any receipt of merchandise noting any discrepancy or damage on the carrier's freight bill at the time of delivery. Discrepancies or damage which obviously occurred in transit are the carrier's responsibility and related claims should be made promptly directly to the carrier. Returned merchandise will not be accepted without prior written authorization by POWEREX and deductions from invoices for shortage or damage claims will not be allowed. **UNLESS OTHERWISE AGREED TO IN WRITING, THESE TERMS AND CONDITIONS WILL CONTROL IN ANY TRANSACTION WITH POWEREX** any different or conflicting terms as may appear on any order form now or later submitted by the buyer. All orders are subject to acceptance by POWEREX.

Limited warranty applies in the U.S. and Canada only and gives you specific legal rights. You may also have other rights which vary from state to state or country to country.