



Scroll Tankmount/Basemount Air Compressors

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 Oilless Rotary Scroll Air Compressor has advanced scroll compressor technology through the development of a completely oilless unit. The Powerex Scroll Compressor offers a dynamically balanced air end which insures vibration-free operation. The rotary design permits a continuous 100% duty cycle. No oil separation, oil filtration, or inlet valves are required on the Powerex Scroll unit.

COMPRESSION CYCLE

The Powerex oilless rotary scroll air compressor is based on the theory of scroll compression. A scroll is a free standing, intricate spiral bounded on one side by a solid, flat plane or base. A scroll set, the basic compression element of a scroll compressor, is made up of two identical spirals which form right and left hand parts. One of these scroll components is indexed or phased 180° with respect to the other so the scrolls can mesh. Crescent-shaped gas pockets are formed and bounded by the spirals and the base plate of both scrolls. As the moving scroll is orbited around the fixed scroll, the pockets formed by the meshed scrolls follow the spiral toward the center and diminish in size. The moving scroll is prevented from rotating during this process so the 180° phase relationship of the scrolls is maintained. The compressor's inlet is at the outer boundary of the scrolls. The compressed gas is discharged through the outlet at the center of the fixed scroll so no valves are needed.

TIP SEAL

The tip seal on the scroll compressor is self-lubricated and allows the unit to operate efficiently without oil and expensive filtration. The tip seal should be replaced every 10,000 hours of operation.

BEARINGS

The bearings on the scroll compressor are regreaseable to allow extended compressor life. Service should be performed every 10,000 hours of operation.

DRY TYPE INLET FILTER (P/N 91348550)

Order P/N 91348550 for both the 3 HP and 5HP units. Change every 2,500 hours or more often in dirty locations.

HOURLY METER

The hourmeter on the scroll compressor indicates the actual number of hours the unit has been in operation. The hourmeter is also used to determine maintenance and service timing. **An hourmeter must be installed with every Scroll compressor.**

CONDENSATE DRAIN VALVE

A condensate drain valve must be installed on any tank used to allow removal of the liquid which will collect during compressor operation.

NOTICE

Drain liquid from tank daily.

⚠ 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 air 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 IS USED FOR THE PURPOSE OF BREATHING AIR APPLICATION AND PROPER IN-LINE SAFETY AND ALARM EQUIPMENT IS NOT SIMULTANEOUSLY USED, EXISTING WARRANTIES ARE VOIDED, AND POWEREX DISCLAIMS ANY LIABILITY WHATSOEVER FOR ANY LOSS, PERSONAL INJURY OR DAMAGE.

Scroll Air Compressors Tankmount/Basemount

Installation

RECEIVING THE UNIT

Immediately upon receipt of the scroll compressor, the unit should be inspected for any damage which may have occurred in shipment. Any shipping damage must be immediately filed with the freight carrier.

The compressor nameplate should be checked to see if the unit is the correct model and voltage as ordered.

APPLICATION

When the scroll compressor is to be used in applications other than the compressing of atmospheric air, please contact a Powerex representative for engineering and warranty information at 1-888-769-7979.

INSTALLATION SITE

1. The scroll 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, moisture, water and direct sunlight.
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.

Minimum Clearances

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

5. If necessary, use metal shims or leveling pads to level the compressor. Never use wood to shim the compressor.

VENTILATION

1. If the scroll 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.

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. 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

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. If the pressure does not rise on a three phase unit, turn the unit off. Have a qualified electrician switch the breaker OFF and exchange the L1 and L2 connections (two out of three phases of electric source) inside the magnetic starter enclosure.
7. Check the discharge pressure. Also make sure the air pressure rises to the designated pressure setting by checking the discharge pressure gauge.
8. Check the operation of the pressure switch by opening the tank outlet valve and confirming the compressor starts as pressure drops.

Scroll Air Compressors Tankmount/Basemount

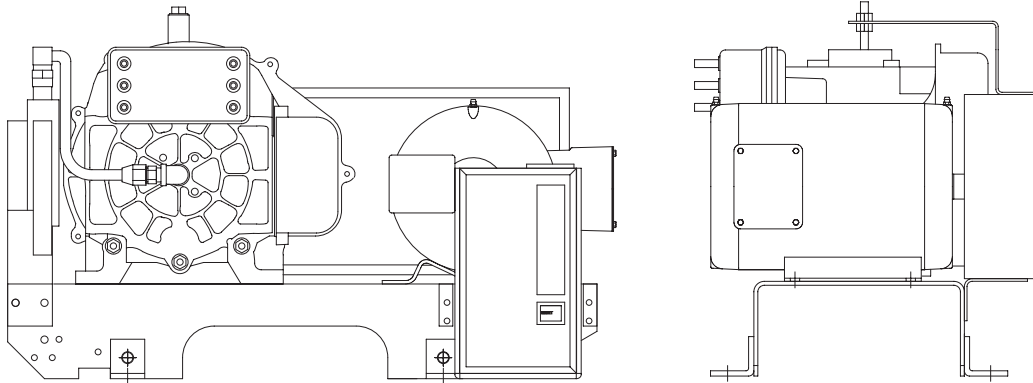


Figure 1 - SBS Scroll Basemount Simplex

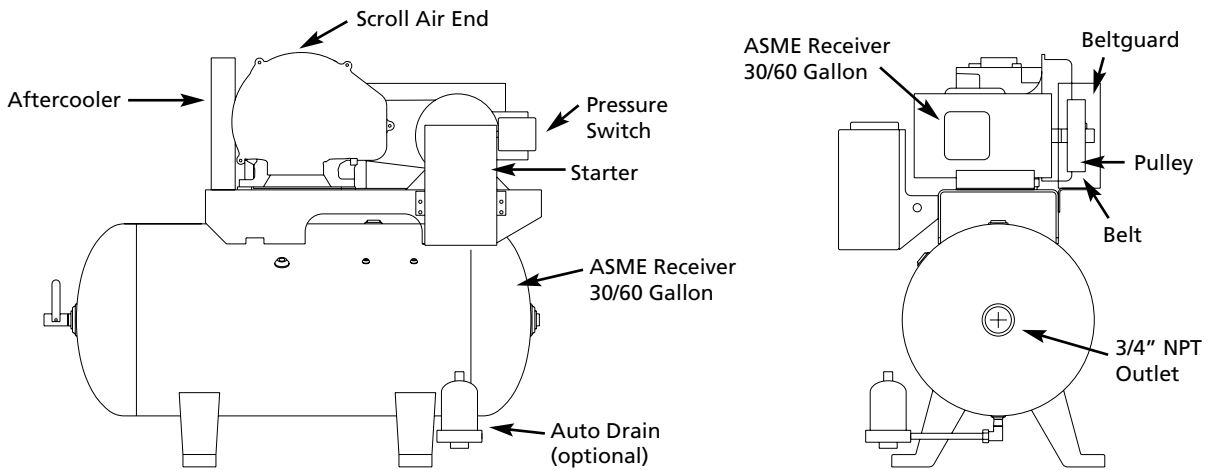


Figure 2 - STS Scroll Tankmount

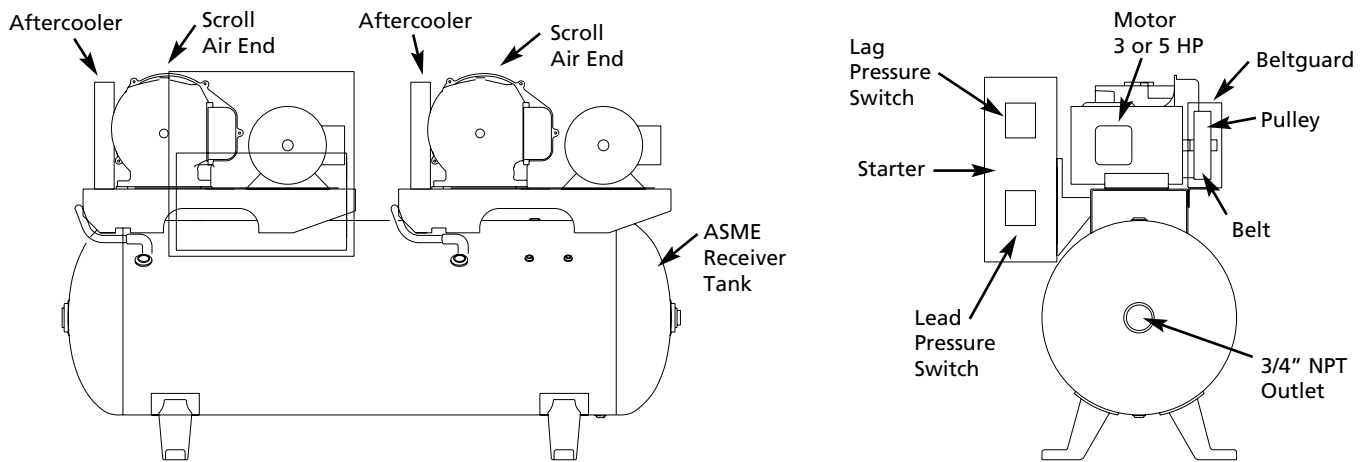


Figure 3 - STD Scroll Tankmount Duplex

Scroll Air Compressors Tankmount/Basemount

Specifications

Scroll Basemount Simplex - Model SBS

Model	HP	Phase	SCFM @100 PSIG	Voltage	Full Load Amperage	Gallon Tank	Dimension LxWxH	Ship Weight (Lbs.)
SBS0307	3	3	8.6	208/230/460	8.7/8.0/4.0	Basemount	29x19x19	160
SBS1307	3	1	8.6	230	17	Basemount	29x19x19	175
SBS0507	5	3	14.7	208/230/460	13.7/13.2/6.6	Basemount	29x19x19	180
SBS1517	5	1	14.7	230	25	Basemount	29x19x19	190

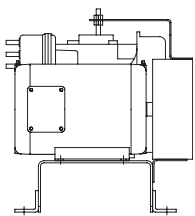
Scroll Tankmount Simplex - Model STS

Model	HP	Phase	SCFM @100 PSIG	Voltage	Full Load Amperage	Gallon Tank	Dimension LxWxH	Ship Weight (Lbs.)
STS030	3	3	8.6	208/230/460	8.7/8.0/4.0	30 / 60	39x22x35 / 51x23x39	280 / 390
STS130	3	1	8.6	230	17	30 / 60	39x22x35 / 51x23x39	295 / 405
STS050	5	3	14.7	208/230/460	13.7/13.2/6.6	30 / 60	39x22x35 / 51x23x39	300 / 410
STS151	5	1	14.7	230	25	30 / 60	39x22x35 / 51x23x39	310 / 420

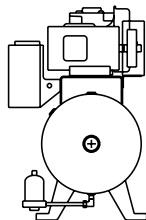
Scroll Tankmount Duplex - Model STD

Model	HP	Phase	SCFM @100 PSIG	Voltage	Full Load Amperage	Gallon Tank	Dimension LxWxH	Ship Weight (Lbs.)
STD030	3 (2)	3	17.2	208/230/460	17.4/16.0/8.0	80	64x26x40	650
STD130	3 (2)	1	17.2	230	34	80	64x26x40	680
STD050	5 (2)	3	29.4	208/230/460	27.4/26.4/13.2	80 / 120	64x26x40 / 71x35x75	690 / 715
STD151	5 (2)	1	29.4	230	50	80 / 120	64x26x40 / 71x35x75	710 / 735

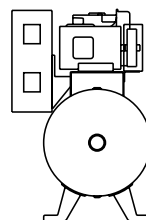
MODEL SBS



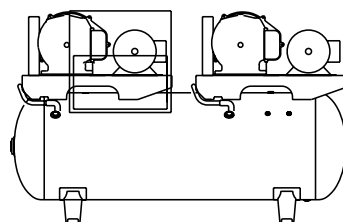
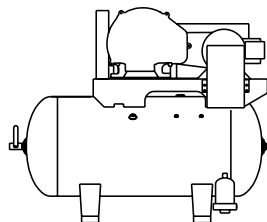
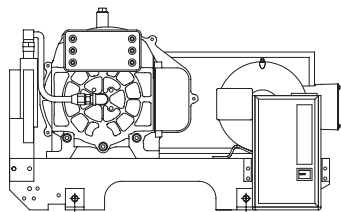
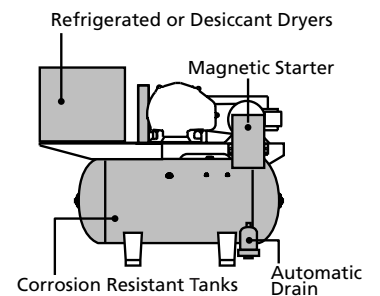
MODEL STS



MODEL STD



OPTIONAL EQUIPMENT



Scroll Air Compressors Tankmount/Basemount

Maintenance Schedule

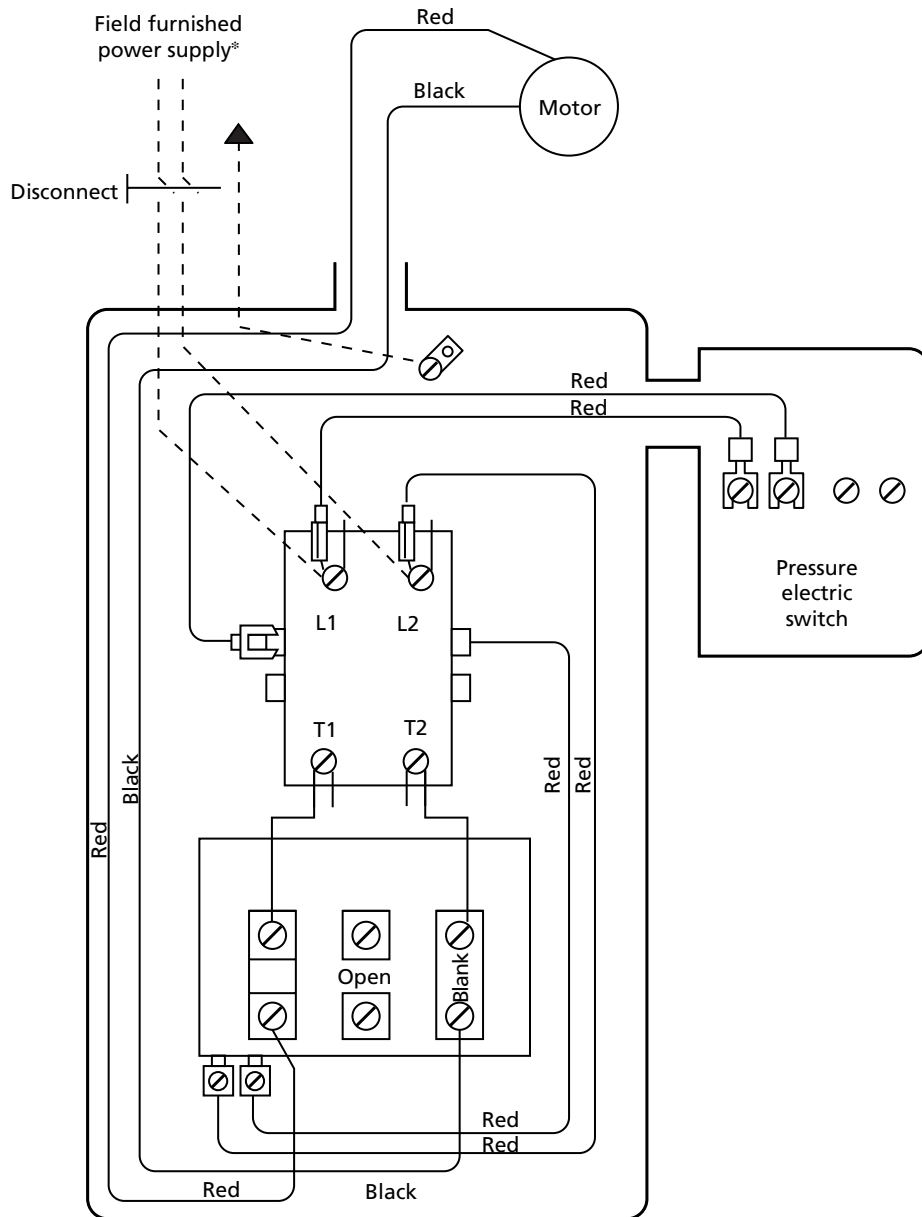
Item	Action needed	500	2500	Operating Hours				Remarks
				5000	10,000	15,000	20,000	
Tank	Drain moisture	Daily						
Inlet air filter	Replace	●	▲	<i>(Every 2,500 hrs or less)</i>				Part #91348550
Blower fan	Clean			●	●	●	●	
Fan Duct	Clean			●	●	●	●	
Compressor Fins	Clean		●	<i>(Every 2,500 hrs or less)</i>				
Bearings	Grease				▲		▲	Service Center Only
Tip seal	Replace				▲		▲	
Dust seal	Replace				▲		▲	
V-belt	Inspect, replace	*Note 3	●	▲	▲	▲	▲	
Pressure Switch	Confirm operation				●		●	
Magnetic starter	Inspect				●		●	Replace if contact points deteriorated
Safety valve	Confirm operation		●	<i>(Every 2,500 hrs or less)</i>				
Pressure gauge	Inspect		●	<i>(Every 2,500 hrs or less)</i>				
●	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 the initial stage and inspected every 2,500 hours afterwards. Proper belt tension for 3 HP units is 7 lbs./16" deflection; for 5 HP units, 7 lbs./19" deflection.
4. See Compressor Pump Manuals for replacement or service procedures.

Scroll Air Compressors Tankmount/Basemount

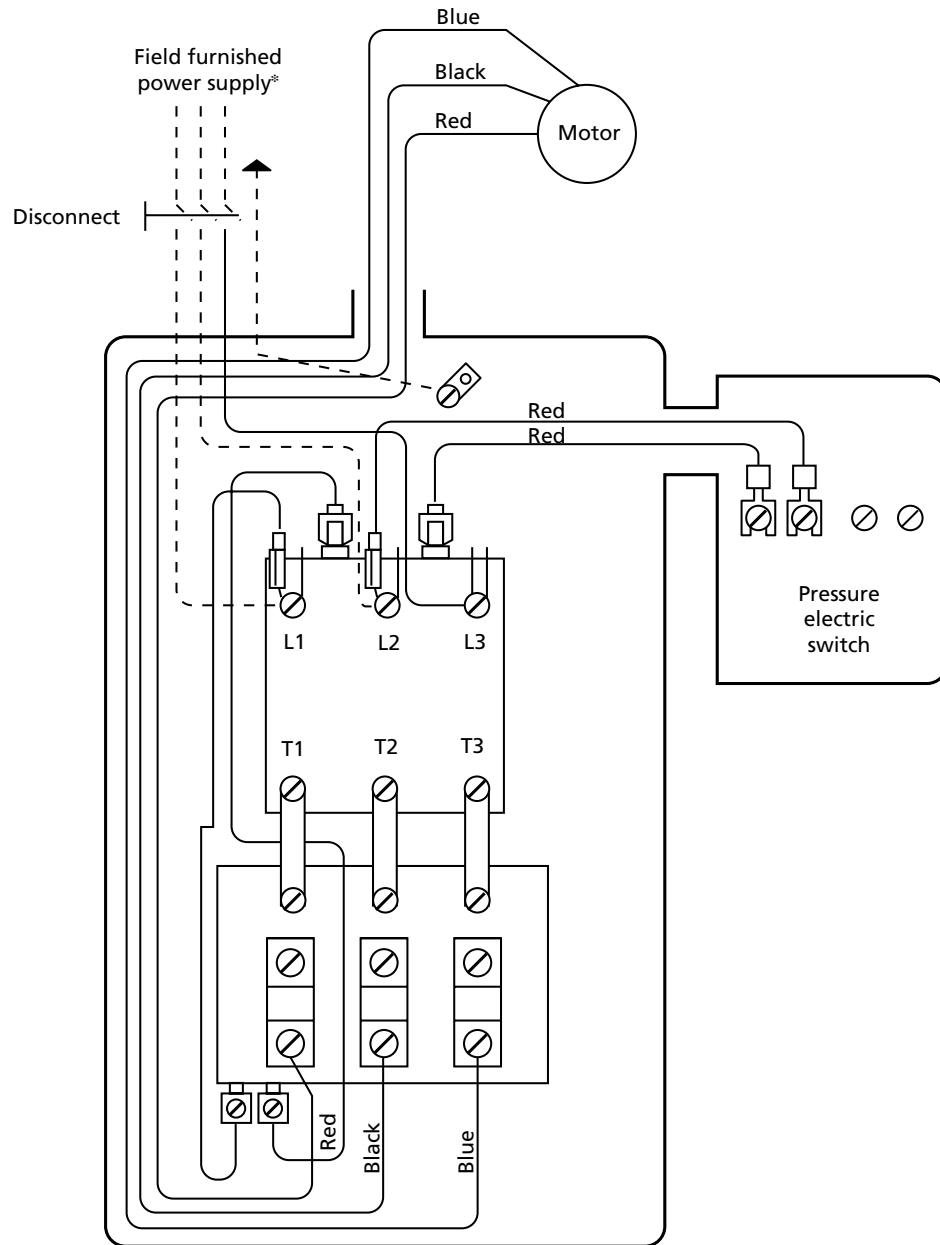
Electrical Wiring Diagram - Simplex



*Main disconnect and branch circuit protection to be installed by a qualified electrician in accordance with national and local codes.

Figure 4 - 3-5 HP Basemount/Simplex Single-Phase 208/230 Volts

Electrical Wiring Diagram - Simplex



*Main disconnect and branch circuit protection to be installed by a qualified electrician in accordance with national and local codes.

Figure 5 - 3-5 HP Basemount/Simplex Three-Phase 208-230/460 Volts

Scroll Air Compressors Tankmount/Basemount

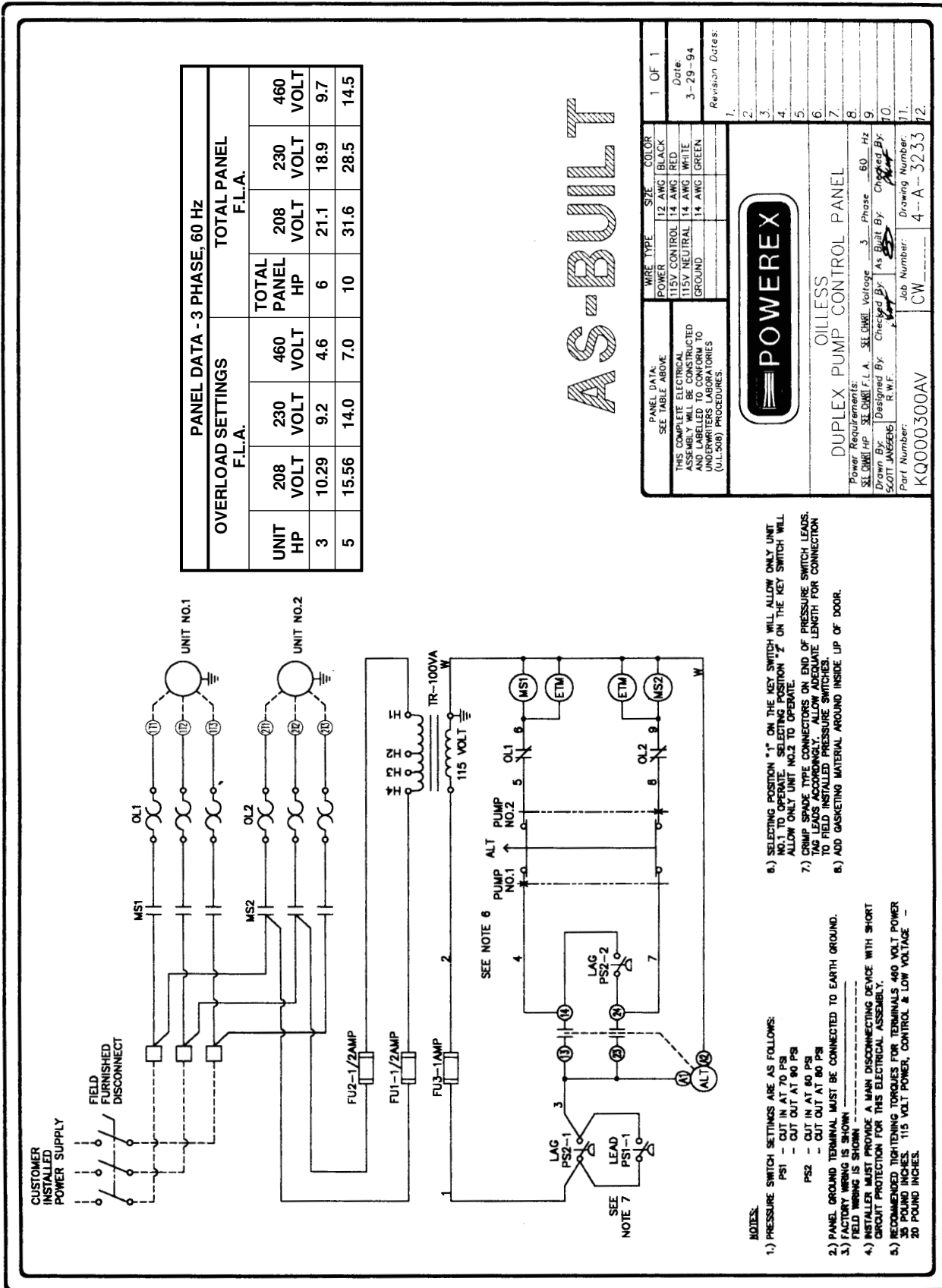
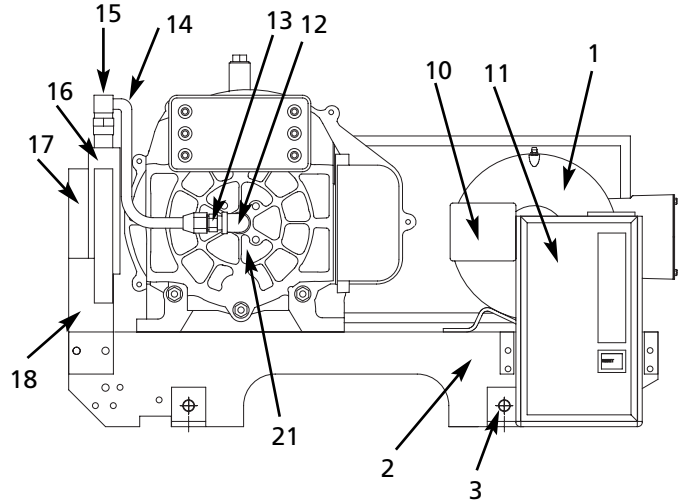
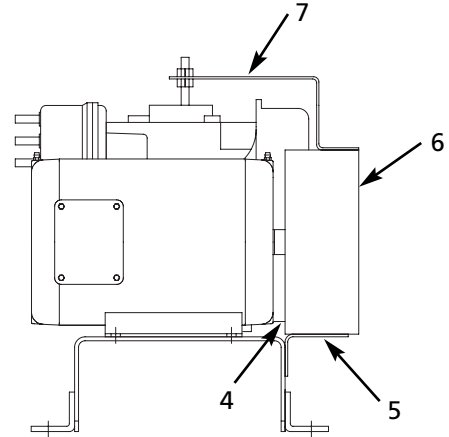


Figure 6 - 3-5 HP Duplex Three-Phase 208-230/460 Volts

Replacement Parts List for SBS Models

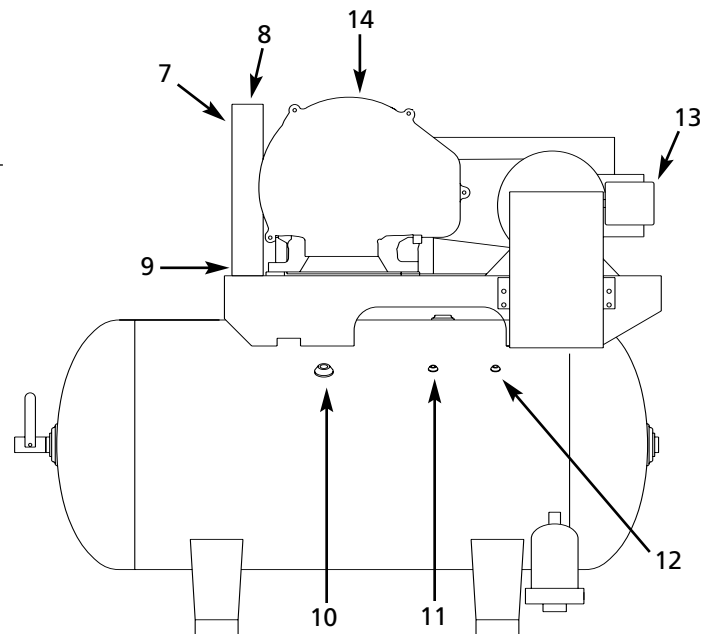
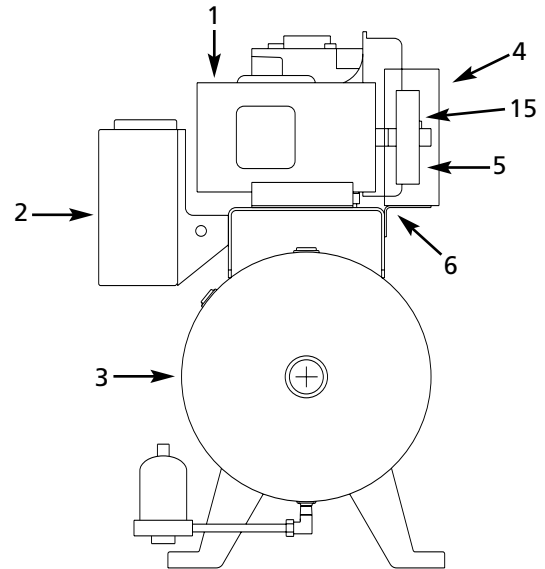
Ref. No.	Description	SBS Model Part Number	Qty.
1	Motor 3 HP 3 Phase	MC022374AV	1
	Motor 3 HP 1 Phase	MC301519AV	1
	Motor 5HP 3 Phase	MC022307AV	1
	Motor 5HP 1 Phase	MC301520AV	1
2	Base	BA000301AV	1
3	Angle bracket	ST185500AV	4
4	Beltguard back	BG303800AV	1
5	Bracket	SL050700AV	1
6	Beltguard front	BG303900AV	1
7	3 HP Beltguard bracket	BG304000AV	1
	5 HP Beltguard bracket	BG304100AV	1
8	Δ Belt:		
	3 HP	BT010700AV	1
	5 HP	BT010700AV	2
9	Δ Motor pulley:		
	3 HP	PU009753AV	1
	5 HP	PU009754AV	1
10	Pressure switch	CW207559AV	1
11	Starter:		
	3 HP 230V 1 Phase	JP001045AV	1
	5 HP 230V 1 Phase	IP001046AV	1
	3 HP 230V 3 Phase	JP001047AV	1
	5 HP 230V 3 Phase	JP001049AV	1
	3 HP 460V 3 Phase	JP001048AV	1
	5 HP 460V 3 Phase	JP001050AV	1
12	90° Elbow	ST074204AV	1
13	1/2" Flare	ST126207AV	1
14	Discharge tube	SL300900AV	1
15	90° Flare elbow	ST126204AV	1
16	Aftercooler	SL300100AV	1
17	Left aftercooler bracket	SL300200AV	1
18	Right aftercooler bracket	SL300300AV	1
19	Δ Check valve	IP087700AV	1
20	Δ Safety valve	V-215100AV	1
21	Scroll air end:		
	3 HP	SL014002AJ	1
	5 HP	SL016502AJ	1

(Δ) Not shown.



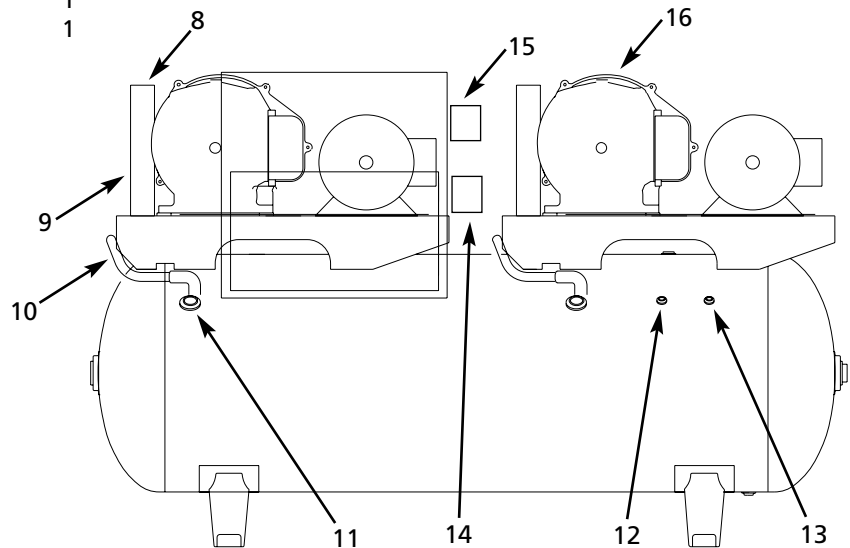
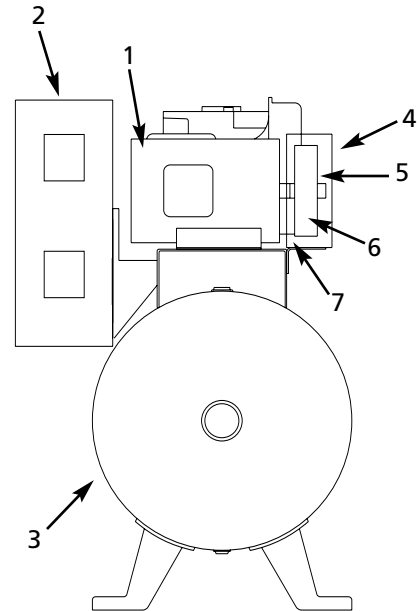
Replacement Parts List for STS Models

Ref. No.	Description	STS Model Part Number	Quantity
1	Motor:		
	3 HP 3 Phase	MC022374AV	1
	3 HP 1 Phase	MC301519AV	1
	5 HP 3 Phase	MC022307AV	1
	5 HP 1 Phase	MC301520AV	1
2	Starter:		
	3 HP 230V 1 Phase	JP001045AV	1
	5 HP 230V 1 Phase	JP001046AV	1
	3 HP 230V 3 Phase	JP001047AV	1
	5 HP 230V 3 Phase	JP001049AV	1
	3 HP 460V 3 Phase	JP001048AV	1
	5 HP 460V 3 Phase	JP001050AV	1
3	Receiver tank:		
	30 gallon	AR024700AJ	1
	60 gallon	AR022500AJ	1
4	Beltguard	BT303900AV	1
5	Motor pulley:		
	3 HP	PU009753AV	1
	5 HP	PU009754AV	1
6	Guard plate	BG217500AV	1
7	Aftercooler	SL300100AV	1
8	Tube air end/aftercooler	SL301000AP	1
9	Tube aftercooler/tank	SL300900AP	1
10	Check valve	IP087700AV	1
11	Pressure gauge	GA016701AV	1
12	Safety valve	V-215100AV	1
	Pressure switch	CW207573AV	1
14	Scroll air end:		
	3 HP	SL014002AJ	1
	5 HP	SL016502AJ	1
15	Belt:		
	3 HP	BT010702AV	1
	5 HP	BT010702AV	2



Replacement Parts List for STD Models

Ref. No.	Description	STD Model Part Number	Quantity
1	Motor:		
	3 HP 3 Phase	MC022374AV	1
	3 HP 1 Phase	MC301519AV	1
	5 HP 3 Phase	MC022307AV	1
	5 HP 1 Phase	MC301520AV	1
2	Starter alternator panel:		
	3 HP 230V 1 Phase	ZZ000435AJ	1
	5 HP 230V 1 Phase	ZZ000436AJ	1
	3 HP 230V 3 Phase	ZZ000418AJ	1
	5 HP 230V 3 Phase	ZZ000419AJ	1
	3 HP 460V 3 Phase	ZZ000420AJ	1
	5 HP 460V 3 Phase	ZZ000421AJ	1
3	Receiver tank:		
	80 gallon	AR022900AJ	1
	120 gallon	AR023600AJ	1
4	Beltguard	BT303900AV	1
5	Belt:		
	3 HP	BT010700AV	2
	5 HP	BT010700AV	4
6	Motor pulley:		
	3 HP	PU009753AV	1
	5 HP	PU009754AV	1
7	Guard plate	BG217500AV	1
8	Aftercooler	SL300100AV	1
9	Tube air end/aftercooler	SL301000AP	1
10	Tube aftercooler/tank	SL300900AP	1
11	Check valve	IP087700AV	1
12	Pressure gauge	GA016701AV	1
13	Safety valve	V-215100AV	1
14	Pressure switch (Lead)	CW207558AV	1
15	Pressure switch (Lag)	CW207559AV	1
16	Scroll air end:		
	3 HP	SL014002AJ	1
	5 HP	SL016502AJ	1



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.

Scroll Air Compressor Service and Maintenance

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The Powerex Scroll Compressor offers a dynamically balanced air end which insures vibration-free operation. The rotary design permits a continuous 100% duty cycle. No oil separation, oil filtration, or inlet valves are required on the Powerex Scroll air compressor.

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Crescent-shaped gas pockets are formed and bounded by the spirals and the base plate of both scrolls. As the moving scroll is orbited around the fixed scroll, the pockets formed by the meshed scrolls follow the spiral toward the center and diminish in size. The moving scroll is prevented from rotating during this process so the 180° phase relationship of the scrolls is maintained. The compressor's inlet is at the outer boundary of the scrolls. The compressed gas is discharged through the outlet at the center of the fixed scroll so no valves are needed.

Dry Type Inlet Filter

2500 HOURS - MAINTENANCE

The inlet filter on the scroll compressor assures 99% particulate free air is admitted to the unit. Order P/N IP032901AV for both the 3 HP and 5HP units. Change every 2,500 hours or more often in dirty locations.

1. Remove filter cover by releasing spring clamps (See Figure 1).
2. Remove wing screw.

CAUTION Do not attempt to clean filter. This filter requires replacement and is to be replaced when contaminated.

3. Clean inlet plate, filter cover and six (6) silencer tubes using an air gun or by wiping dry with a cloth.
4. Install new inlet filter (Part Number IP032901AV) and reassemble cover.

See Service and Maintenance Video for Visual and Audio Instructions (Part Number IP633900AV).

⚠ 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, the air compressor/pump will need to be fitted 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 for air, OSHA, ANSI and/or Canadian Standards Associations (CSA).

DISCLAIMER OF WARRANTIES

In the event the compressor is used for the purpose of breathing air application and proper in-line safety and alarm equipment is not simultaneously used, existing warranties shall be voided, and Powerex disclaims any liability whatsoever for any loss, personal injury or damage.

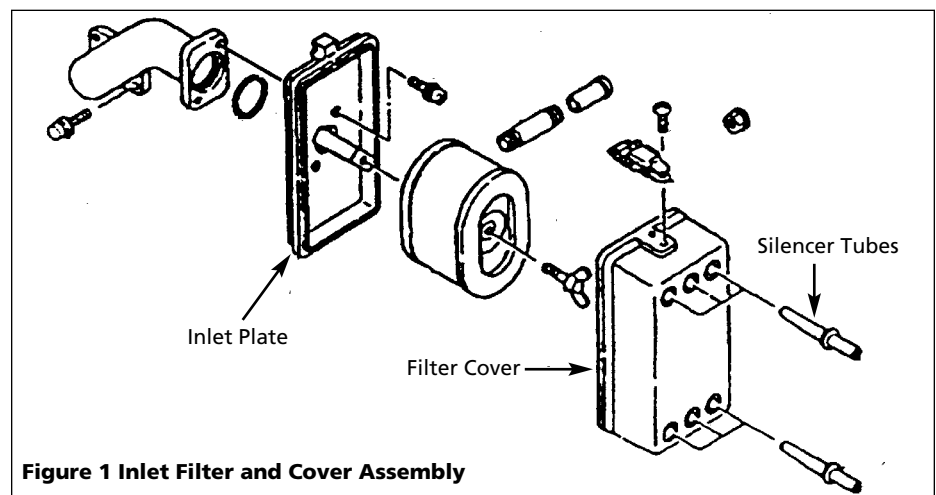


Figure 1 Inlet Filter and Cover Assembly

Scroll Air Compressors

Grease Compressor Bearings

10,000 HOURS - MAINTENANCE

WARNING Per OSHA regulations, ALL power must be locked out before performing any maintenance.

CAUTION This service should be performed by an authorized Powerex Service Center to avoid failure.

MAIN BEARINGS

1. Remove the plastic dust cap. Use only one of two locations found on the air end (See Figure 2).
2. Rotate the compressor pulley until the grease fitting is visible through the dust cap hole (See Figure 2). This will allow regreasing of the main bearings.
3. Use a grease gun extension adaptor to engage the grease fitting and supply the proper volume of grease as indicated on the grease delivery chart (See Grease Delivery chart below & Figure 2).

CAUTION Use only Powerex genuine grease. Pump grease gun before feeding (this eliminates air from the grease passage of the extension adapter. (Complete Grease Kit Part Number IP616200AJ and Grease Tube Part Number IP600000AV).

4. Replace plastic dust cap.

GREASING PIN CRANK BEARINGS

The bearings on the scroll compressor are regreaseable to allow extended compressor life. Service should be performed every 10,000 hours of operation.

1. Remove the V-Belts and the fan cover.
2. Remove the air end pulley and cooling fan with a gear puller (See Figure 3).

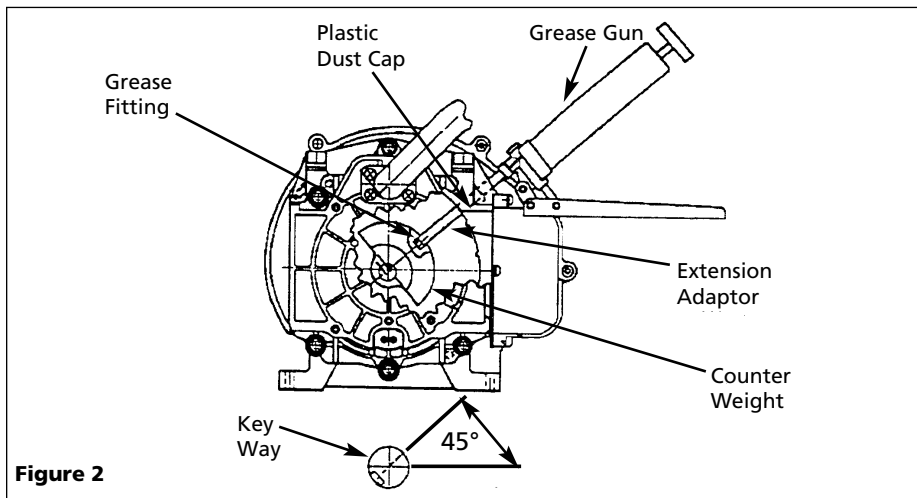


Figure 2

3. Remove the fan duct shroud.
4. Remove the three grease caps. Do not attempt to loosen or tighten the bolt.
5. Grease all three pin crank bearings (See Figures 3, 4 & 5 and Grease Delivery Chart below).

CAUTION The grease fitting, located in the center of the pin crank bearing, feeds only the orbit scroll side bearing. Use a needle adapter to supply grease to the housing side bearing. PUMP GREASE

GUN BEFORE FEEDING TO ELIMINATE AIR FROM GREASE PASSAGE OF THE NEEDLE ADAPTER. Hold grease gun for 5 - 10 seconds after feeding to prevent grease blowback from the grease fitting.

6. Replace grease caps, fan shroud, pulley, etc.

(See Scroll Service and Maintenance Video for Audio and Visual Instructions.)

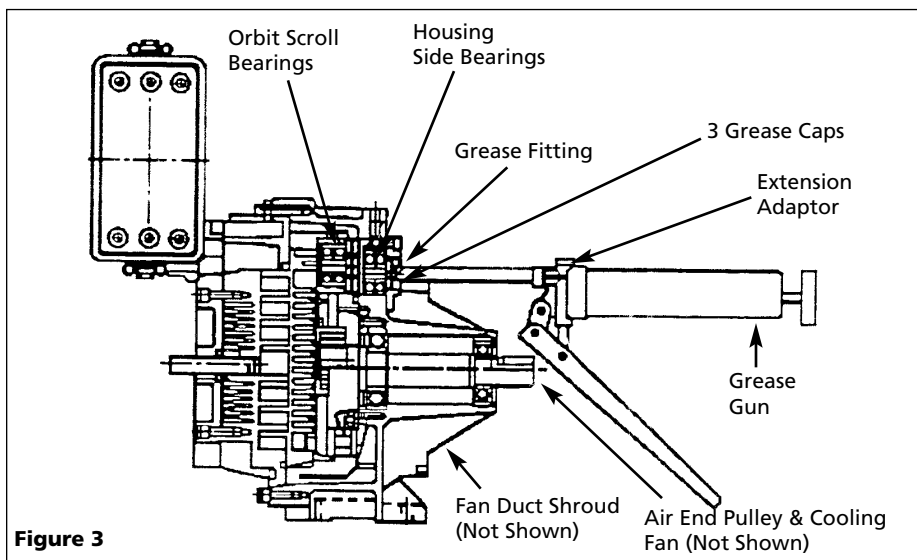
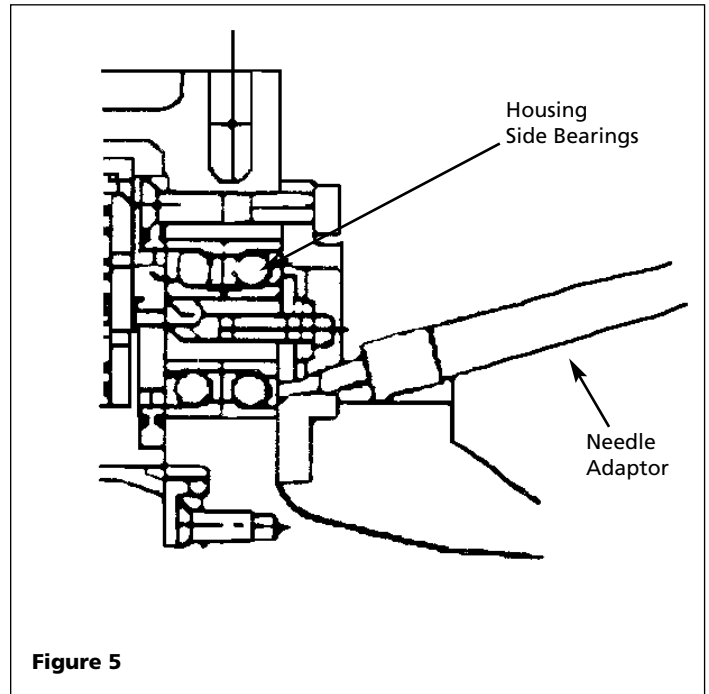
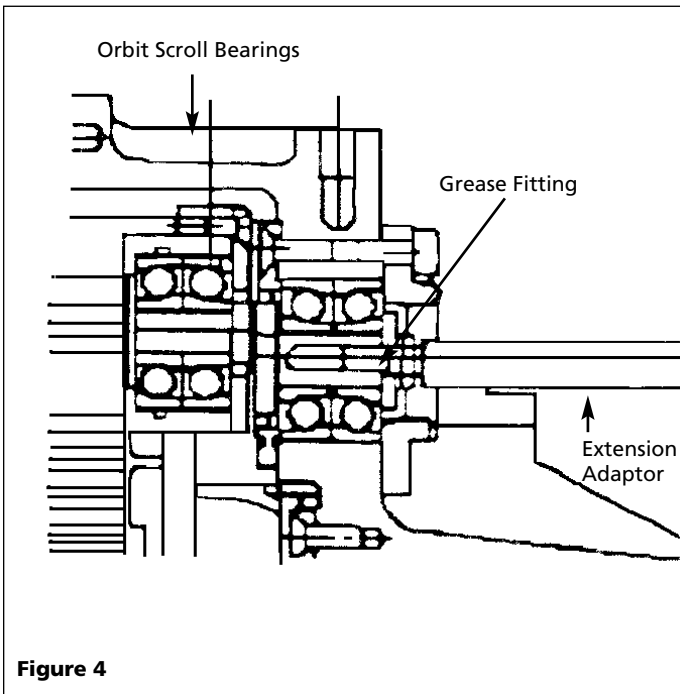


Figure 3

GREASE DELIVERY

Bearing	SLAE03		SLAE05	
	1st Time	2nd Time	1st Time	2nd Time
Orbit Scroll Bearing	5 Times	3 Times	6 Times	4 Times
Pin Crank Bearing Orbit Scroll Side	5 Times	3 Times	6 Times	4 Times
Pin Crank Bearing Housing Side	5 Times	3 Times	6 Times	4 Times

NOTE: Each pump of the grease gun equals 0.65 grams of grease.



Maintenance Schedule

Item	Action needed	Operating Hours						Remarks
		500	2500	5000	10,000	15,000	20,000	
Tank	Drain moisture	Daily						
Inlet air filter	Replace	●	▲	(Every 2,500 hrs or less)				Part #IP032901AV
Blower fan	Clean			●	●	●	●	
Fan Duct	Clean			●	●	●	●	
Compressor Fins	Clean		●	(Every 2,500 hrs or less)				
Bearings	Regrease	(Every 5,000 hours for 145 psig scroll)		●			▲	Service Center Only
Tip seal set	Replace	(Every 5,000 hours for 145 psig scroll)		▲			▲	
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 the initial stage and inspected every 2,500 hours afterwards. Proper belt tension for 3 HP units is 7 lbs./.16" deflection; for 5 HP units, 7 lbs./.19" deflection.
4. See Compressor Pump Manuals for replacement or service procedures.

Scroll Air Compressors

Tip Seal Set Replacement

10,000 HOURS - MAINTENANCE

AWARNING Per OSHA regulations, ALL power must be locked out before performing any maintenance.

The "Tip Seal Set" is a replacement part for SLAE03 and SLAE05 air ends. Please read these instructions thoroughly and carefully to ensure correct replacement.

NOTE: Replace tip seal on SLAE03HP and SLAE50HP at 5,000 hours when operated at 145 psig.

(See Scroll Service and Maintenance Video for Audio and Visual Instructions.)

The tip seal on the scroll compressor is self-lubricated and allows the unit to operate efficiently without oil and

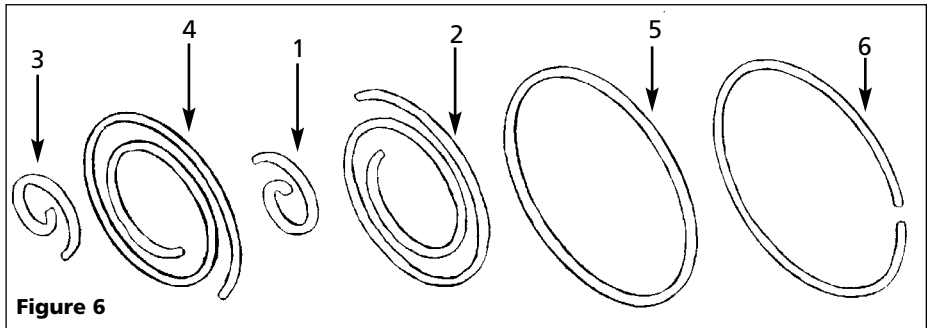


Figure 6

expensive filtration. The tip seal should be replaced every 10,000 hours of operation.

CONFIRMATION OF THE PARTS

1. Confirm if the tip seal you purchased is correct for the air end you are repairing (See Parts Listing below).
2. Confirm if the following parts are included (See Figure 6).

Item No.	Description	Qty.
1	HP tip seal for FS	1
2	LP tip seal for FS	1
3	HP tip seal for OS	1
4	LP tip seal for OS	1
5	Dust Seal	1
6	Backup Tube	1

HP = High Pressure LP = Low Pressure
FS = Fixed Scroll OS = Orbital Scroll

REPLACEMENT

1. Remove six nuts with T-type wrench and then FS set from air end (See Figure 7).
2. Remove LP and HP tip seals from Fixed Scroll set and Orbit set. Using the tip of a ball-point pen at the start will make it much easier (See Figure 7).
3. Remove dust from Scroll with clean cloth or air.

Tip Seal Set	SLAE03	SLAE03HP	SLAE05	SLAE05HP
Air End				
Model	3 hp	3 hp HP	5 hp	5 hp HP
Part No.	92510050	92510050	IP604600AV	92663060

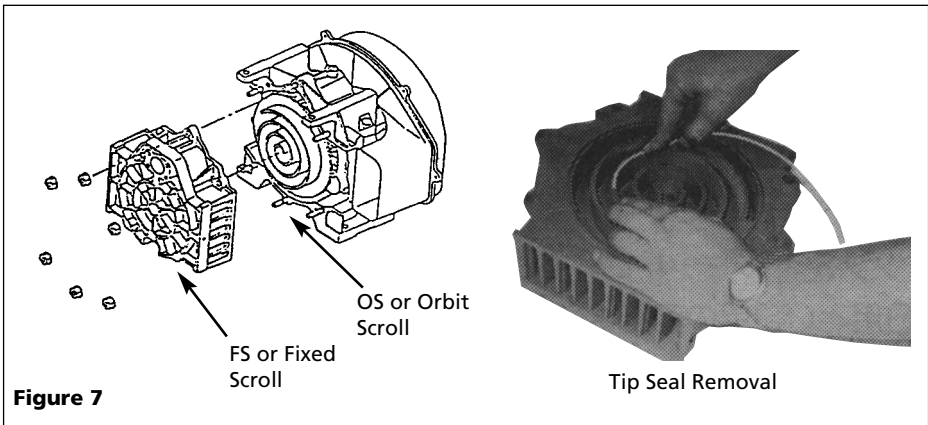
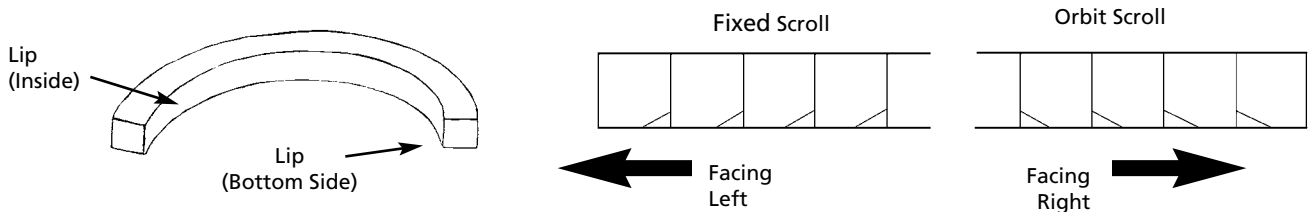


Figure 7

NOTE: In order to distinguish between the tip seal for Fixed Scroll and the tip seal for Orbit Scroll place the tip seal as shown below then view from the arrow direction and refer to the figure on the right.



Tip Seal Set Replacement (Continued)

INSERTING TIP SEALS

NOTE: Tips seals for Fixed Scroll and Orbit Scroll have opposing seal cut angles (See NOTE and explanatory diagram below).

Insert tip seal so that the lip of tip seal is on the bottom of seal groove and inner side of involute and the direction of lip faces the center of involute (curving spiral). See Figure 9. This is to be done for both FS and OS sets.

Use caution not to tear or distort lip.

1. Insert new HP tip seal from the center section for OS or Orbit Scroll so that there will be no clearance at the tip (start) section (See Figure 8 and 9).

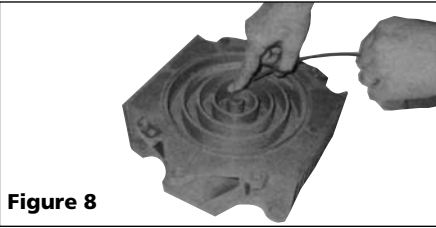


Figure 8

2. Insert so that new LP tip seal will contact closely with HP tip seal inside Scroll Groove (See Figure 7 on page 4).

CAUTION Insert approximately half of the LP tip seal and remove the tip seal to confirm that a notch in the tip seal has been achieved. This will prevent movement during installation (See Figure 11).

3. Repeat the same procedure for FS or Fixed Scroll tip seal set, remove

both the dust seal and backup tube located on outermost side FS set.

4. Insert new backup tube in the FS Scroll in the 6 o'clock position (See Figure 10).
5. Insert new dust seal on the backup tube. Face seamed section of the dust seal in the 3 o'clock position (See Figure 10).
8. After replacing tip seal set, reassemble Fixed Scroll set to the Orbit Scroll. Tighten 6 nuts temporarily and confirm if crankshaft rotates smoothly by hand and tighten them firmly. Tightening torques are:

Bolt Torque	First	Second
SLAE03/SLAE03HP	15 in lb.	175 in lb.
SLAE05/SLAE05HP	15 in lb.	175 in lb.

NOTE: Assemble so that dust seal and tip seal will not drop between Orbit Scroll set and Fixed Scroll set.

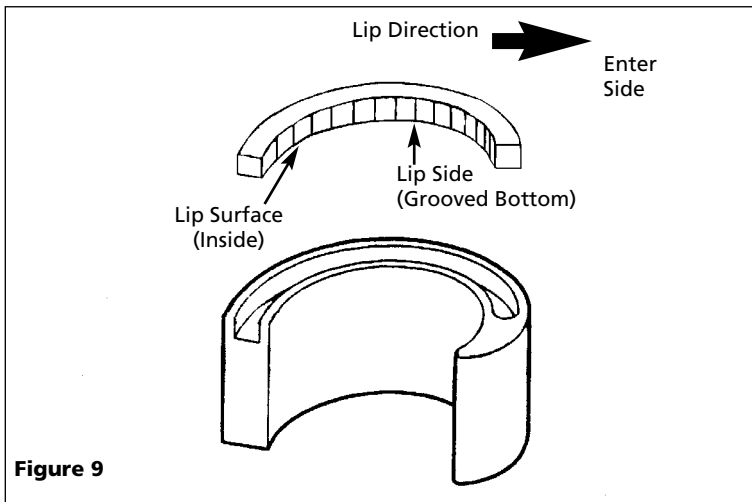


Figure 9

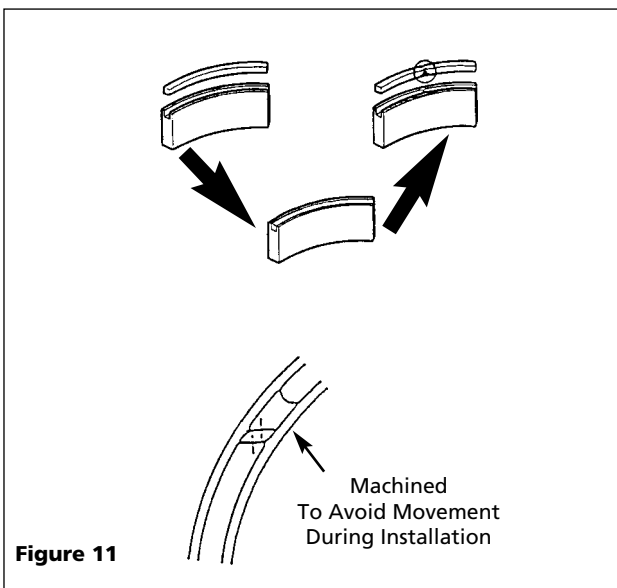


Figure 11

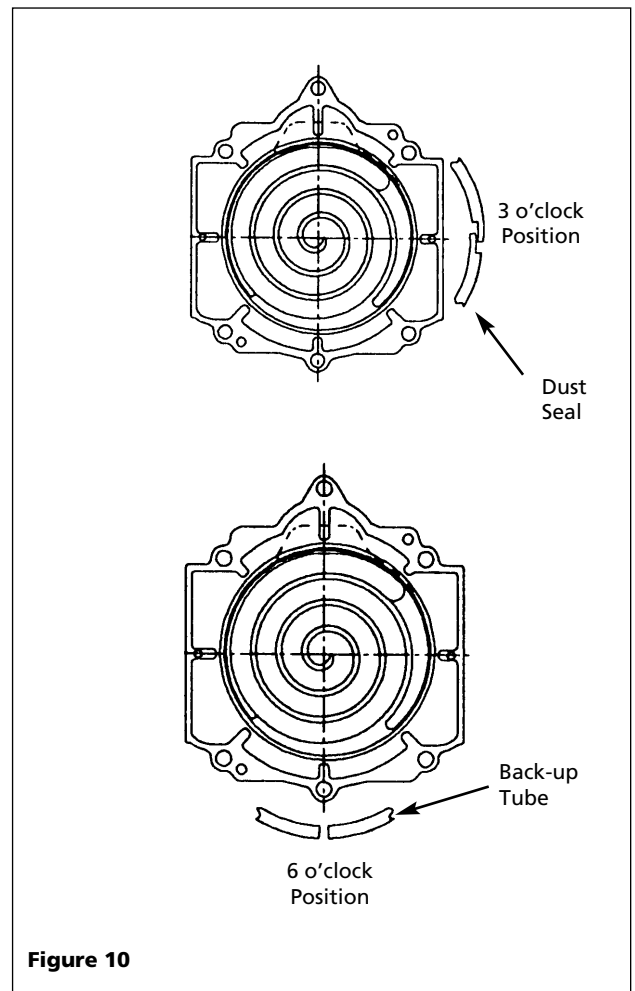


Figure 10

Scroll Air Compressors

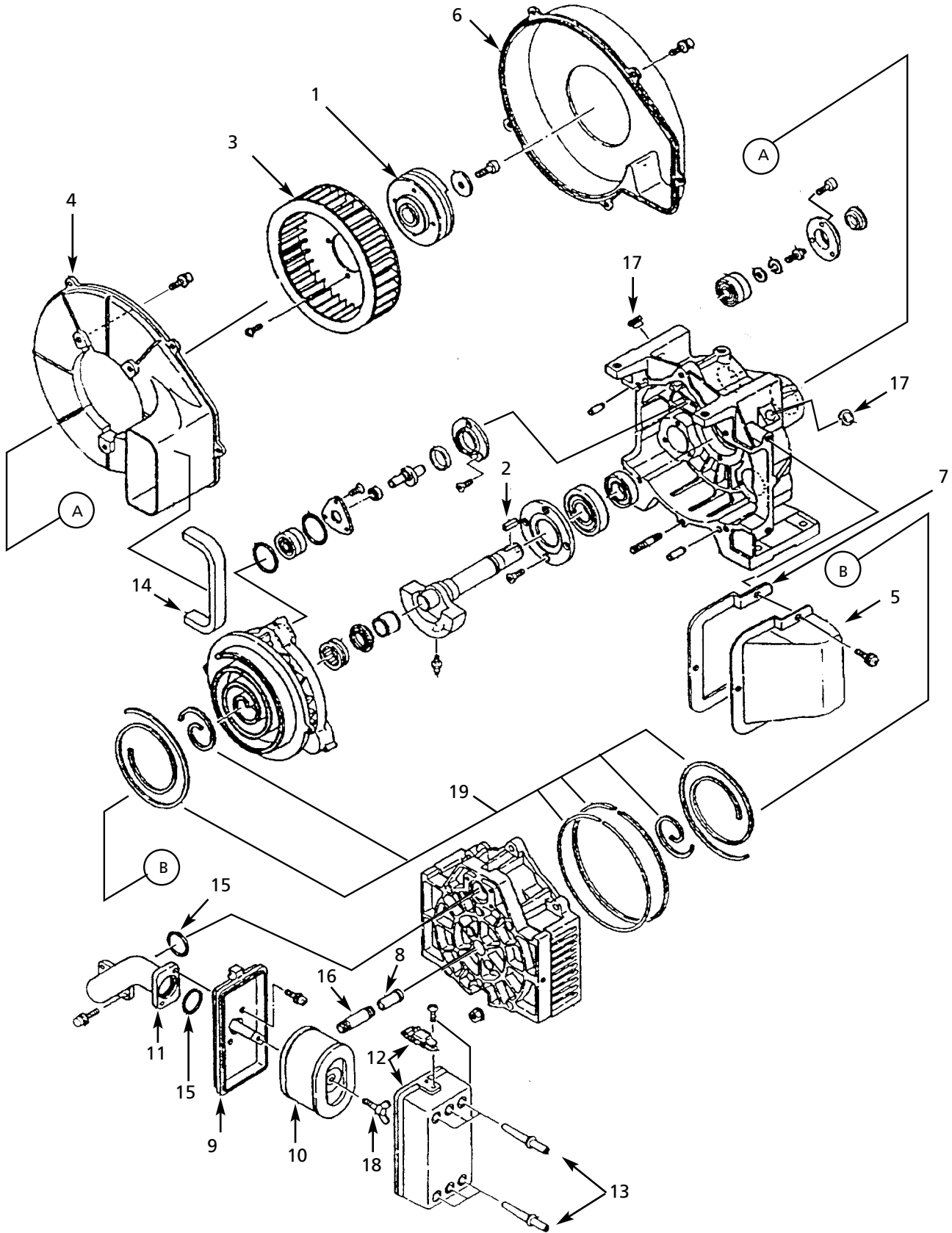


Figure 12 - Compressor Parts

Service Parts List

Ref. No.	Description	Part No. For Models		SLAE03HP	SLAE05HP	Quantity
		SLAE03	SLAE05			
1	Airend Pulley	92805020	IP600400AV	92805020	IP600400AV	1
2	Key	IP600600AV	IP600600AV	IP600600AV	IP600600AV	1
3	Centrifugal Fan	IP601300AV	IP601300AV	IP601300AV	IP601300AV	1
4	Fan Duct (1)	IP601400AV	IP601400AV	IP601400AV	IP601400AV	1
5	Fan Duct (2)	IP601500AV	IP601600AV	IP601500AV	IP601600AV	1
6	Fan Cover	IP601700AV	IP601700AV	IP601700AV	IP601700AV	1
7	Fan Dust Gasket (1)	IP601800AV	IP601900AV	IP601800AV	IP601900AV	1
8	Heat Insulation Pipe	IP602000AV	IP602000AV	IP602000AV	IP602000AV	1
9	Filter Plate	IP602100AV	IP602100AV	IP602100AV	IP602100AV	1
10	Cartridge Filter	IP032901AV	IP032901AV	IP032901AV	IP032901AV	1
11	Intake Pipe	IP602200AV	IP602200AV	IP602200AV	IP602200AV	1
12	Intake Filter Cover	IP016101AV	IP016101AV	IP016101AV	IP016101AV	1
13	Filter Cover Pipe	IP602300AV	IP602300AV	IP602300AV	IP602300AV	6
14	Fan Duct Gasket (2)	IP602400AV	IP602400AV	IP602400AV	IP602400AV	1
15	O-Ring	IP603200AV	IP603200AV	IP603200AV	IP603200AV	2
16	Long Nipple	96647011	96647011	96647011	96647011	1
17	Dust Cap	IP603500AV	IP603500AV	IP603500AV	IP603500AV	2
18	Wing Bolt	IP604200AV	IP604200AV	IP604200AV	IP604200AV	1
19	Tip Seal Set	92510050	IP604600AV	92510050	92663060	1
20 *	Grease Gun Kit	IP616200AJ	IP616200AJ			
21 *	Grease Gun	IP616100AJ	IP616100AJ			
22 *	Grease (80g.)	IP600000AV	IP600000AV			

• Not Shown

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.

Coverage. 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. Failure to complete maintenance as stated in the maintenance schedule will void this warranty.

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