

# INSTALLATION AND MAINTENANCE MANUAL

for

## SERIES SS875 TURBINE STARTERS

The Ingersoll-Rand SS875 Turbine Starter is a precision piece of equipment intended to give efficient, economical performance over a long period of time. However, as with any product, performance, economy and durability are determined for the most part by a few simple common sense procedures that can be recommended only by the manufacturer and adhered to only by the customer.

The recommendations outlined in this manual are based on 35 years of experience in the air and gas starter field. Study these recommendations and follow them. They can save you considerable time and expense.

**FOR TOP PERFORMANCE AND MAXIMUM DURABILITY OF PARTS, DO NOT OPERATE SERIES SS875 TURBINE STARTERS AT PRESSURES OVER THE PRESSURE RATING STAMPED ON THE NAMEPLATE. USE ADEQUATE SIZE SUPPLY LINES AS DIRECTED IN THE INSTALLATION INSTRUCTIONS IN THIS MANUAL.**

### WARNING

Series SS875 Turbine Starters are designed for gas operation. They are not totally sealed in dynamic operation since the exhaust must be vented or piped away and there is a possibility of leakage around the output shaft when rotating.

Caution should be taken when operating these Starters on gas because of the danger of fire, explosion, or inhalation.

After reassembling an SS875 Turbine Starter, always test it in accordance with the procedures outlined in this manual. Never install a reassembled Starter that has not been tested in accordance with the procedures outlined in this manual.

**Notice:** The use of other than genuine Ingersoll-Rand replacement parts may result in decreased Starter performance and increased maintenance, and may invalidate all warranties.

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**INGERSOLL-RAND®**  
**ENGINE STARTING SYSTEMS**



## LUBRICATION

We cannot too strongly emphasize the importance of proper lubrication of the Starter. It is the prime requisite for top performance and maximum durability.

If the cranking cycle is more than 10 seconds, we recommend the Ingersoll-Rand Lubricator No. NL-24-8 installed as shown in the piping diagram or a line from the high pressure oil area of the engine. Oil pressure must exceed the air inlet pressure. Lubrication must meet MIL-L-23699B or SAE 10W nondetergent oil. Set the lubricator for 200 to 500 cc/min.

## INSTALLATION

### General Information

1. Always make certain your Starter is properly installed. A little extra time and effort spent in doing a top quality job will contribute considerably toward a reliable starting system that does a superior job of starting your engine quickly under all conditions.
2. We strongly recommend that on all stationary engines subject to vibration, you use hoses of the specified diameter instead of rigid pipe connections. Engine vibration will soon loosen rigid pipe connections, whereas hoses will absorb the vibration, and connections will remain tight.
3. In the actual mounting of the Starter, it is best to have the hose connections already made at the receiver, and to have the Starter end of the hose handy for attaching to the Starter.
4. The efficiency of a Starter can be greatly impaired by an improper hook-up. Hoses smaller than those recommended will reduce the volume of air to the motor, and the use of reducers in the exhaust port will restrict the exhaust and choke the motor. The number of tees and elbows, and the length of the supply line should be kept to a minimum. Use 1-1/2" hose or pipe for supply lines up to 15 feet long; use 2" hose or pipe if the supply line is over 15 feet long.
5. A leak in any of the connections cannot be allowed. **Make your connections right the first time to avoid unnecessary costs and delays.**

On all threaded connections throughout the system, use Ingersoll-Rand No. SMB-441 Sealant, non-hardening No. 2 Permatex or Loctite® \* Pipe Sealant.

Always run your air supply line from the side or top of the receiver—never at or near the bottom. Moisture in the air collects at the bottom of the receiver and could cause corrosion in the starter motor or, worse yet, freeze solid in cold weather so that the Starter would be inoperative.

After all connections have been made, check each joint with a soap bubble test. **There must be no leaks.**

6. Whenever a flammable gas is being used to operate the Starter, all discharges should be piped away to a safe area.
7. Whenever possible, always mount the Starter so that the exhaust port is downward. This will help prevent any accumulation of water in the starter motor.

### Orientation of the Starter

If the factory orientation will not fit your engine due to radial location of the drive housing, or location of the inlet and/or exhaust ports, reorient the Starter as follows:

1. Look at the dimension illustration and note that the drive housing can be located in any one of sixteen radial positions relative to the gear case. The exhaust port (motor housing) can be located in any one of four radial positions relative to the gear case, and the air inlet (motor housing cover) can be located in any one of four radial positions relative to the exhaust port.
2. Study the engine mounting requirements, and determine the required orientation of the drive housing relative to the gear case. If the drive housing has to be reoriented relative to the gear case in order to mount it with the drain plug down, remove the eight drive housing cap screws and rotate the drive housing to its required position. Be sure that the oil circulation ports for the clutch are 30° above center on one side and 30° below center on the other side. **Note: Do not separate the drive housing from the gear case.** Reinstall the drive housing cap screws and tighten them to 28 ft-lb (38 N m) torque.
3. Now that you have the drive housing properly oriented relative to the gear case, notice whether or not the exhaust port will be at the bottom, and whether or not the inlet port will be favorably located for hose installation. If either or both of these members must be reoriented, remove the four motor housing cover cap screws, and rotate the motor housing and/or motor housing cover to its desired position. **Note: Do not separate these members from each other or from the gear case.** Reinstall the motor housing cover cap screws and alternately tighten them to 60 ft-lb (81.4 N m) torque.

\* Registered trademark of Loctite Corporation.

## Mounting the Starter

1. Study the piping diagram on page 2. We recommend that the Starter be connected as shown.
2. The air or gas for a Starter installation must have a working pressure capability equal to or greater than the maximum pressure at which the Starter will be operated.
3. Use a 1-1/2" NPT close nipple and install the NL-24-8 Lubricator and Pressure Regulator together. If the installation is such as to use the high pressure oil line, be sure that the oil pressure is higher than the pressure at the starter inlet.
4. Using a piece of heavy duty garden hose, or some other similar large diameter hose, run the hose from the Lubricator or the Regulator to the Starter location on the engine so as to determine the exact length of 1-1/2" air hose required.
5. Attach the air hose to the outlet of the Lubricator or Regulator and run it through the frame, etc. to its final position at the Starter location.
6. At this point, determine whether or not it is feasible or practical to attach the hose to the Starter before or after the Starter is actually mounted. In some cases, it may be necessary to attach the hose before mounting.
7. Grease both ends of the Splined Shaft (41) with a good quality gear grease. This will help promote the life of the spline.
8. **Note:** When using the Splined Shaft with **one** O-ring groove, insert the O-ring groove end into the Starter. When using the Splined Shaft with **two** O-ring grooves, insert either end into the Starter.
9. Hoist or jack the Starter into position and mount it on the engine. Tighten the mounting nuts to 30 ft-lb (41 N m) torque.
10. Install the exhaust system.
11. There are four holes on the Motor Housing Cover (2). These are tapped M10-1.50 and are for additional support if required.
12. Install the pressurized oil line, if used, to the 3/8" NPT inlet on the side of the Motor Housing Cover.
13. Pressurize the complete starting system and check every connection with a soap bubble test. **There must be no leaks.**
14. Install the special orifice fitting (.050 dia.) in the clutch oil supply port in the Drive Housing (45) (30° above center) and connect it to the engine oil supply at approximately 50 psi. Install a standard fitting and the hose to the return point (30° below center) and run the hose to the engine sump.
15. Connect an oil drain hose from the oil drain plug in the bottom of the mounting flange to the engine sump. (optional)

## DISASSEMBLY OF THE STARTER

### General Information

1. Always mark adjacent parts on the Motor Housing Cover (2), Motor Housing (1), Gear Case (23) and Drive Housing (45) so these members can be located in the same relative position when the Starter is reassembled.
2. Do not disassemble the Starter any further than necessary to replace a worn or damaged part.
3. Do not remove any part which is a press fit in or on a subassembly unless the removal of that part is necessary for replacement or repairs.
4. Always have a complete set of vanes, seals and O-rings on hand before starting any overhaul of an SS875 Starter. **Never reuse old seals or O-rings.**
5. When grasping a part in a vise, always use leather-covered or copper-covered vise jaws to protect the surface of the part and help prevent distortion. This is particularly true of threaded members.

### Drive Housing

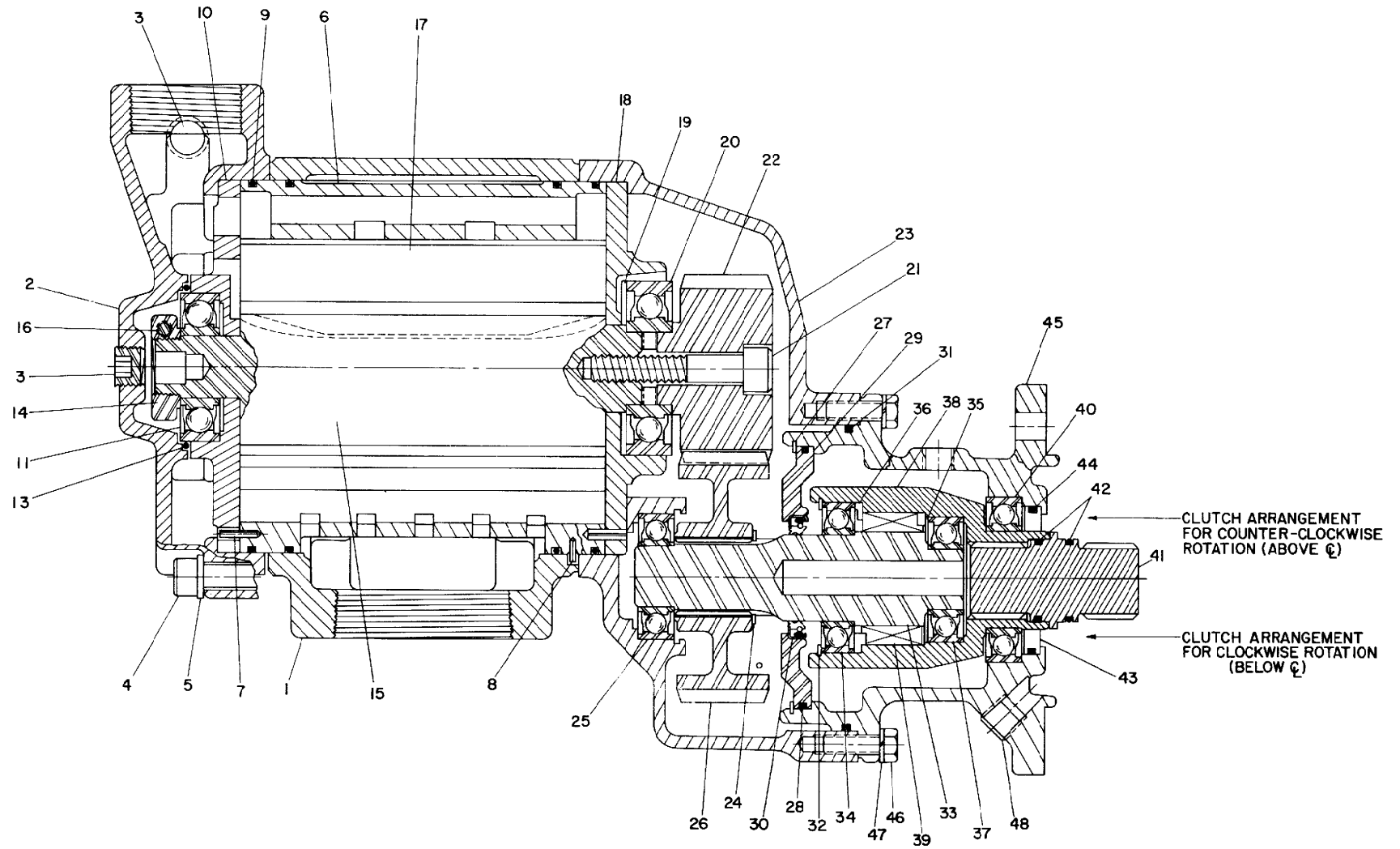
1. Unscrew and remove the Drive Housing Cap Screws (46). Remove the Drive Housing Lock Washers (47).
2. Tap the Drive Housing (45) with a plastic hammer to help dislodge it from the Gear Case (23).
3. Remove the Drive Housing. **Note:** The entire drive assembly will come out of the Gear Case along with the Drive Housing.
4. Remove the Rear Drive Gear Bearing (25), Drive Gear (26) and the Drive Gear Retaining Ring (24).
5. Remove the Bulkhead Retaining Ring (27) and the Bulkhead (29) from the Drive Housing.
6. Turn the Drive Housing and Drive Assembly over with the shaft down. Very carefully, press the Drive Assembly out of the Drive Housing.
7. **For Models SS875G074L and SS875G135L**, remove the Clutch Bearing Retaining Ring (32) from the Clutch Shaft (38). With the Drive Gear Shaft (33) down, very carefully press the Drive Gear Shaft, Rear Clutch Bearing (34), Rear Clutch Spacer (36), Clutch (39), Front Clutch Spacer (35) and Front Drive Shaft Bearing (37) from the Clutch Shaft (38). **Note:** The two Bearings and/or the Clutch may be damaged during disassembly. Inspect each part very carefully for wear or damage.  
**For Model SS875G135R**, remove the Clutch Bearing Retaining Ring (32) from the Clutch Shaft (38). With the Drive Gear Shaft (33) down, very carefully press the Drive Gear Shaft, Rear Clutch Bearing (34), Rear Clutch Spacer (36A), Clutch (39) and Front Drive Shaft Bearing (37) from the Clutch Shaft (38). **Note:** The two Bearings and/or the Clutch may be damaged during disassembly. Inspect each part very carefully for wear or damage.
8. **Note:** Do not remove the Front Clutch Shaft Bearing (40) or the Drive Housing Seal (43) unless replacement is necessary and new parts are available. The Bearing and/or the Seal will always be damaged when removed from the Drive Housing.

## **Motor Housing**

1. Unscrew and remove the Motor Housing Cover Cap Screws (4).
2. Pull the Motor Housing Cover (2) from the Motor Housing (1). It may be necessary to dislodge the Motor Housing Cover by tapping it with a plastic hammer.
3. Tap the Gear Case (23) with a plastic hammer to dislodge it from the Motor Housing.
4. Grasp the Rotor Pinion in a vise and using a wrench, remove the Rotor Pinion Retaining Screw (21).
5. Remove the Rotor Pinion (22) from the rotor shaft.
6. Slide the Front End Plate (18), Front Rotor Bearing (20) and Motor Wave Washers (19) off the rotor shaft.
7. Remove the Rotor (15) and Rear End Plate (10) from the Cylinder (6).
8. Remove and examine each Vane (17). Install a new set of Vanes if any Vane is cracked, spalled or worn to the extent that its width is  $15/16''$  (24 mm) or less at either end.
9. Grasp the Rotor in a vise. Using a  $5/32''$  (4 mm) hex wrench, loosen the Rotor Clamp Nut Screw (16). Unscrew and remove the Rotor Clamp Nut (14).
10. Remove the Rear End Plate (10) from the rotor shaft.
11. If the Rear Rotor Bearing (11) needs to be replaced, remove it from the Rear End Plate.
12. Push the Cylinder out of the Motor Housing.
13. Remove the Cylinder O-rings (9) from the Cylinder.

## **Gear Case**

1. Place the Gear Case (23) on a workbench.
2. Remove the Rear Drive Gear Bearing (25) from the Gear Case.



Series SS875 Turbine Starter

## ASSEMBLY OF THE STARTER

### General Information

1. Always press on the inner ring of a ball-type bearing when installing the bearing on a shaft.
2. Always press on the outer ring of a ball-type bearing when pressing the bearing in a bearing recess.
3. Whenever grasping a part in a vise, always use leather-covered or copper-covered vise jaws to protect the surface of the part and help prevent distortion. This is particularly true of threaded members.
4. Always clean every part, and wipe every part with a thin film of oil before installation.

### Drive Housing

1. Turn the Drive Housing (45) so that the mounting flange is facing downward.
2. Coat the Housing Seal O-ring (44) with O-ring lubricant, mount the O-ring on the Drive Housing Seal (43) and insert the Seal into the front end of the Drive Housing.
3. Using an arbor press, press the Front Clutch Shaft Bearing (40) onto the Clutch Shaft (38).
4. Press the smaller Front Drive Shaft Bearing (37) onto the Drive Gear Shaft (33).
5. **For Models SS875G074L and SS875G135L**, check the Rear Clutch Spacer (36) fit on the Clutch. It must rotate freely.  
**For Model SS875G135R**, check the Rear Clutch Spacer (36A) fit on the Clutch. It must turn freely.
6. **For Models SS875G074L and SS875G135L**, insert the Front Clutch Spacer (35) into the Clutch Shaft. This must be a slip fit. Remove the Front Clutch Spacer from the clutch shaft bore and place it on the Drive Gear Shaft until it butts against the Front Drive Shaft Bearing.
7. **For Models SS875G074L and SS875G135L**, slide the Clutch (39) onto the Drive Gear Shaft, hub end first, into the Front Clutch Spacer.  
**For Model SS875G135R**, slide the Clutch (39) onto the Drive Gear Shaft, hub end trailing.
8. Using a .210 (5.33 mm) cross-section O-ring and having an inside diameter smaller than the outside diameter of the Clutch, stretch the O-ring over the Clutch to compress the clutch sprags.
9. Carefully insert the Clutch and Drive Gear Shaft into the Clutch Shaft (38). **Note:** As the Clutch and Drive Gear Shaft are inserted into the Clutch Shaft, the O-ring will fall off the Clutch. Remove the O-ring.
10. Install the Rear Clutch Spacer (36), flat side first, onto the Drive Gear Shaft until it butts against the Clutch.
11. Press the Rear Clutch Bearing (34) onto the Drive Gear Shaft until it butts against the shaft shoulder.
12. Install the Clutch Bearing Retaining Ring (32).
13. Press the Bulkhead Seal (30) into the Bulkhead (29) with the garter spring of the Seal facing upward.
14. Smear some O-ring lubricant onto the Bulkhead O-ring (28) and install the O-ring into the groove of the Bulkhead.
15. Place the Bulkhead over the Drive Gear Shaft and push it into the Drive Housing (45) until it butts against the shoulder of the Drive Housing.
16. Install the Bulkhead Retaining Ring (27).
17. Install the Drive Gear Retaining Ring (24).
18. Slide the Drive Gear (26) onto the Drive Gear Shaft until it butts against the Drive Gear Retaining Ring. **Note:** Be sure it is facing as shown in illustration on page 6.
19. Press the Rear Drive Gear Bearing (25) onto the Drive Gear Shaft until it butts against the shoulder of the Drive Gear Shaft.
20. Position the Gear Case (23) on a workbench, small open end facing upward.
21. Smear some O-ring lubricant onto the Drive Housing O-ring (31) and install the O-ring into the groove of the Drive Housing.
22. Lubricate the Drive Gear with 8 oz. (240 mL) of Ingersoll-Rand No. 28 Grease.
23. Position the Drive Housing onto the Gear Case and using a plastic hammer, seat the Rear Drive Gear Bearing into the Gear Case by tapping the Drive Housing.
24. Align the punch marks of the Drive Housing and Gear Case. Install the Drive Housing Lock Washers (47) and Drive Housing Cap Screws (46). Tighten the Cap Screws to 28 ft-lb (38 N m) torque.

### Motor Housing

1. Clamp the Rotor in a vise threaded end up.
2. Install the Rear Rotor Bearing (11) into the Rear End Plate.
3. Install the Rear End Plate (10), bearing end up, onto the rotor shaft.
4. Screw the Rotor Clamp Nut (14) onto the rotor shaft with the shoulder toward the bearing. Tighten the nut until there is .001" (.02 mm) to .003" (.07 mm) clearance between the Rear End Plate and Rotor.
5. Using a 5/32" (4 mm) hex wrench, tighten the Rotor Clamp Nut Screw (16). Recheck the clearance between the Rear End Plate and Rotor, after tapping the End Plate away from the rotor face with a plastic hammer.

6. Check the two End Plate Alignment Pins (7). If they are bent or broken, remove them from the Cylinder and press in a new pin or pins.
  7. Check the Cylinder Alignment Pin (8). If it is bent or broken, remove it from the Cylinder and press in a new pin.
  8. Using O-ring lubricant, lubricate and install the two inside Cylinder O-rings (9).
  9. Position the Motor Housing (1) vertically, on two blocks of wood, locating slot up.
  10. Using a plastic hammer, tap the Cylinder (6) into the Motor Housing making sure the Cylinder Alignment Pin seats into the slot of the Motor Housing.
  11. Using O-ring lubricant, lubricate and install the two outside Cylinder O-rings (9).
  12. Insert the Rotor (15) into the Cylinder, pinion end toward the Cylinder Alignment Pin. **Note:** Make sure the protruding End Plate Alignment Pin (7) in the Cylinder aligns with the dowel hole in the Rear End Plate. Make sure the air ports of both the Cylinder and the Rear End Plate align.
  13. Lightly lubricate each Vane (17) and insert one in each of the rotor vane slots.
  14. Slide the Front End Plate (18) over the pinion end of the Rotor. The other protruding End Plate Alignment Pin (7) in the face of the Cylinder should align with the dowel hole in the Front End Plate.
  15. Insert the two Motor Wave Washers (19) into the Front End Plate well.
  16. Install the Front Rotor Bearing (20) into the Front End Plate well.
  17. Install the Rotor Pinion (22) on the rotor shaft so that the lugs on the Pinion engage those on the shaft.
  18. Screw the Rotor Pinion Retaining Screw (21) into the rotor shaft and tighten to 90 ft-lb (122 N m) torque.
  19. Using O-ring lubricant, lubricate and install the Rear Rotor Bearing O-ring (13) onto the Rear Rotor Bearing.
  20. Check freeness of the motor by turning the Rotor Pinion. If necessary, tap the Front End Plate with a soft hammer to align the motor.
  21. Align the punch marks on the Gear Case (23), Motor Housing (1) and Motor Housing Cover (2) and assemble as follows:
    - (a) Insert the pinion end of the motor into the Gear Case. Using a soft hammer, tap the Motor Housing (1) until it seats.
    - (b) Position the Motor Housing Cover on the Motor Housing. Using a soft hammer, tap the Motor Housing Cover until it is seated on the Motor Housing. **Note:** Screw a 12" (305 mm) piece of 1-1/2" (38 mm) pipe into the air inlet to act as a handle to help align the Motor Housing with the Motor Housing Cover and Gear Case.
    - (c) Lubricate the threads and install the Motor Housing Cover Cap Screws (4) and Lock Washers (5), alternately tightening each a little at a time to a final torque of 60 ft-lb (81.4 N m).
- Install two of the Housing Cover Plugs (3) into the Motor Housing Cover inlet boss and tighten securely.

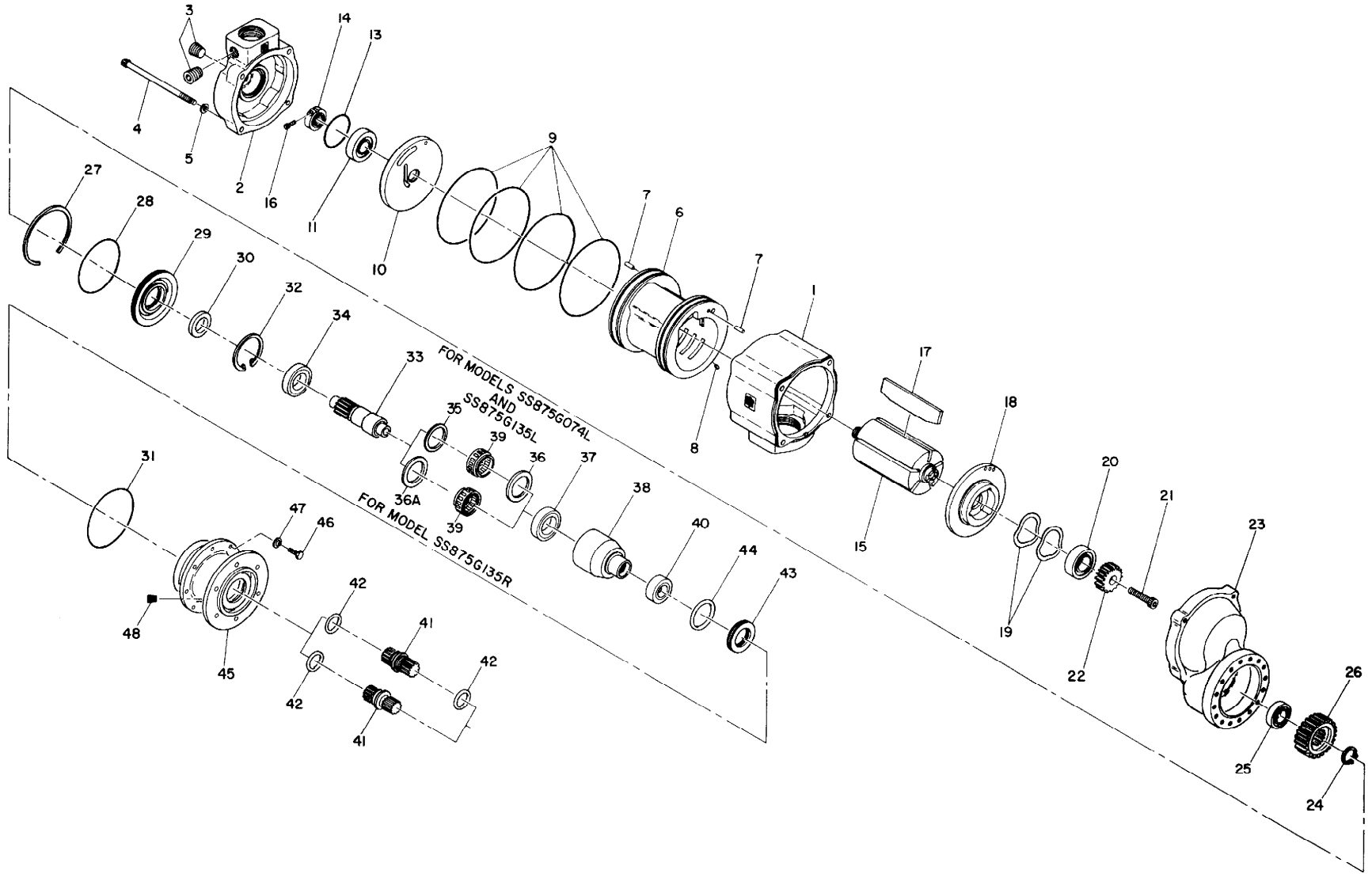
### TEST AND INSPECTION PROCEDURE

1. **Clutch:** Insert the Splined Shaft (41) into the Clutch Shaft (38). Turn the Splined Shaft counterclockwise (left-hand rotation or clockwise for right-hand rotation starters). The shaft should turn freely.
2. **Motor and Gearing Freeness:** Turn the Splined Shaft clockwise (right-hand rotation). The Shaft should turn by hand.
3. **Motor Vane Action:** Using a 3/8" (9 mm) supply line to the inlet of the motor, apply 90 psig (6.2 bar/620 kPa) pressure. The Starter should run smoothly.
4. **Motor Seals:** Plug the exhaust and apply 30 psig (2.1 bar/207 kPa) pressure to the inlet of the motor. Immerse the Starter for 30 seconds in a nonflammable solvent. If the Starter is properly sealed, **no bubbles will appear.**



## TROUBLESHOOTING GUIDE

Trouble	Probable Cause	Solution
Loss of Power	Worn Motor Parts	<p>Remove the motor from the Motor Housing (1) and disassemble the motor. Examine all parts and replace any that are worn or damaged. Use the following guidelines for determining unserviceable parts:</p> <ol style="list-style-type: none"> <li>1. <b>Vanes (17)</b> - Install a set of new vanes if any vane is cracked, spalled or worn to the extent that its width is 15/16" (24 mm) at either end.</li> <li>2. <b>Rotor Bearings (11 or 20)</b> - Replace if any roughness or looseness is apparent.</li> <li>3. <b>Rotor (15)</b> - Replace if the body has deep scoring that cannot be removed by polishing with emery cloth.</li> <li>4. <b>Cylinder (6)</b> - Replace if there are any cracks or deep scoring.</li> <li>5. <b>End Plates (10 or 18)</b> - Clean up scoring by rubbing it with emery cloth placed on a flat surface.</li> </ol>
	Inadequate Lubrication	<p>Check the Lubricator, inlet hose, fitting and oil supply hose to make sure they are vacuum tight and free of leaks. Tighten all joints and replace the Lubricator if necessary.</p>
Air or Gas Leakage	Worn Seals	<p>Check the Motor Seals (9 or 31). Plug the exhaust. Apply 30 psig (2.7 bar/207 kPa) air to the inlet and immerse the unit for 30 seconds in nonflammable solvent. If bubbles appear, replace the Seals.</p>
Motor runs, but the Shaft does not turn	<ol style="list-style-type: none"> <li>1. Broken Shaft, gears or Clutch</li> <li>2. Clutch installed backward.</li> </ol>	<p>Refer to disassembly of the Drive Housing on pages 4 and 5.</p>



(Dwg. TPA1150)

Series SS875 Turbine Starter

PART NUMBER FOR ORDERING

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1	Motor Housing (with 2-1/2" SAEJ518C Flanged Exhaust) . . . . .	SS800-140	● 28	Bulkhead O-ring . . . . .	SS800-152
2	Motor Housing Cover Assembly (with 1-1/2" SAEJ518C Flanged Inlet). . . . .	SS800-A202	29	Bulkhead . . . . .	SS875-150
3	Housing Cover Plug (3). . . . .	GA57-95	● 30	Bulkhead Seal . . . . .	SS875-272
4	Motor Housing Cover Cap Screw (4). . . . .	SS800-25	● 31	Drive Housing O-ring . . . . .	SS800-244
5	Cap Screw Lock Washer (4) . . . . .	SS800-26	32	Clutch Bearing Retaining Ring . . . . .	SS875-366
6	Cylinder Kit . . . . .	SS800-K3	33	Drive Gear Shaft. . . . .	SS875-8
7	End Plate Alignment Pin (2) . . . . .	510-669A	34	Rear Clutch Bearing	
8	Cylinder Alignment Pin . . . . .	SS800-99		for 0.74:1 ratio. . . . .	SS875-399
● 9	Cylinder O-ring (4) . . . . .	SS800-67		for 1.35:1 ratio. . . . .	C6H20A-518
10	Rear End Plate		35	Front Clutch Spacer (for left-hand rotation) . .	SS875-369
	for Models SS875G074L and		36	Rear Clutch Spacer (for left-hand rotation) . .	SS875-368
	SS875G135L . . . . .	SS800L-12	36A	Rear Clutch Spacer (for right-hand rotation) . .	SS875-367
	for Model SS875G135R . . . . .	SS800R-12	37	Front Drive Shaft Bearing	
11	Rear Rotor Bearing. . . . .	SS800-24		for 0.74:1 ratio. . . . .	SS875-363
● 13	Rear Rotor Bearing O-ring . . . . .	HRA20A-990		for 1.35:1 ratio. . . . .	R4800-97
14	Rotor Clamp Nut . . . . .	SS800-65	38	Clutch Shaft . . . . .	SS875-14
15	Rotor. . . . .	SS825-53	39	Clutch . . . . .	SS875-587
16	Rotor Clamp Nut Screw. . . . .	SS800-63	40	Front Clutch Shaft Bearing	
● 17	Vane Packet (set of 5 Vanes) . . . . .	M800-42-5		for 0.74:1 ratio. . . . .	SS875-278
18	Front End Plate . . . . .	SS800G-11		for 1.35:1 ratio. . . . .	G7-24
19	Motor Wave Washer (2) . . . . .	SS800-224	41	Splined Shaft	
20	Front Rotor Bearing . . . . .	SS800-22		24 teeth (for 0.74:1 ratio). . . . .	SS875-13
21	Rotor Pinion Retaining Screw. . . . .	SS800-732		24 teeth (for 1.35:1 ratio). . . . .	SS875-13A
22	Rotor Pinion			14 teeth (for 12/24 dia. pitch) . . . . .	SS875-13B
	for 0.74:1 ratio. . . . .	SS875-17	42	Splined Shaft O-ring (2). . . . .	HLK-103
	for 1.35:1 ratio. . . . .	M800A-17	● 43	Drive Housing Seal . . . . .	SS875-271
23	Gear Case . . . . .	SS800-37	● 44	Housing Seal O-ring. . . . .	SS875-270
24	Drive Gear Retaining Ring . . . . .	M800-632	45	Drive Housing . . . . .	SS875-300
25	Rear Drive Gear Bearing. . . . .	SS800-359	46	Drive Housing Cap Screw (8) . . . . .	SS800-744
26	Drive Gear		47	Drive Housing Lock Washer (8) . . . . .	TE223A-415
	for 0.74:1 ratio. . . . .	SS875-9	48	Drive Housing Plug . . . . .	R0H-377
	for 1.35:1 ratio. . . . .	M800A-9	*	Lubricator. . . . .	NL-24-8
27	Bulkhead Retaining Ring . . . . .	SS800-181	*	Nameplate. . . . .	SS800-301
			*	Nameplate Drive Screw (4). . . . .	R4K-302

\* Not illustrated.

● To keep downtime to a minimum, it is desirable to have on hand certain repair parts. We recommend that you stock one (pair or set) of each part indicated by a bullet (●) for every four Starters in service.

