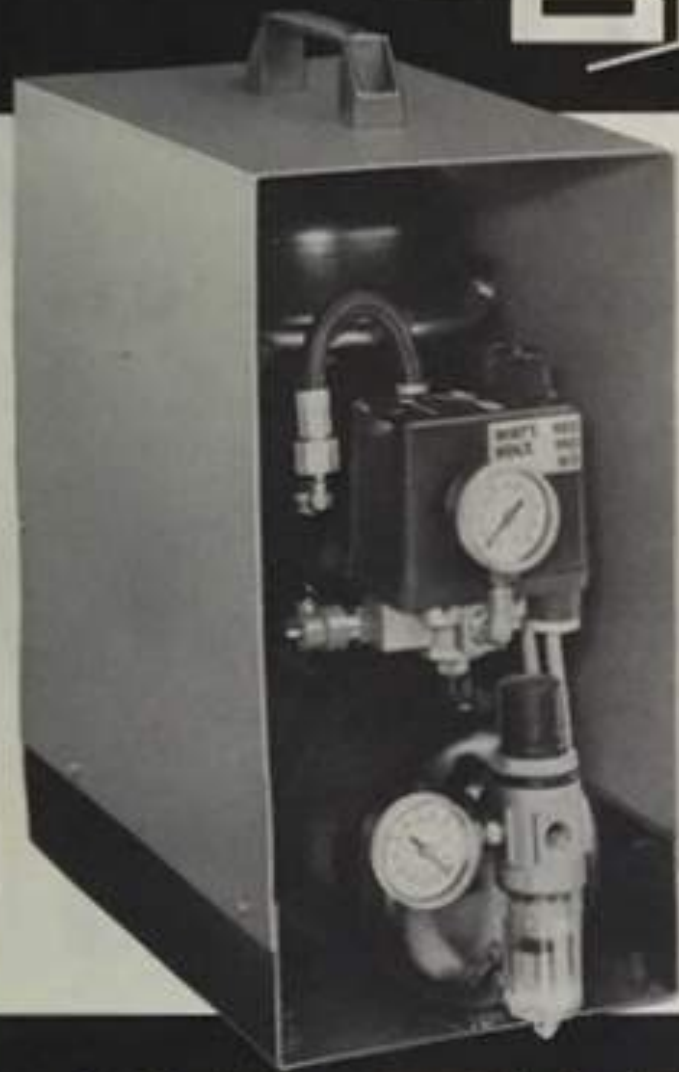




BADGER



Owner's Manual

**for Silent I
and Silent II
Compressors**



SILENT I

SILENT II

INTRODUCTION

Congratulations! When you purchased your Badger compressor, you guaranteed yourself a well built and highly efficient machine which, used properly, will perform every task you assign it, however demanding.

This compressor meets the high quality and performance standards of all Badger equipment. It is designed to be used with any air-brush. The air outlet is 1/4" pipe and will conveniently adapt to almost any air-hose. This compressor has met or exceeded our highest testing procedures.

We suggest that for easy and correct operational assembly, maintenance, and spare parts, you follow the instructions given in this pamphlet. **READ THE ENTIRE MANUAL BEFORE YOU OPERATE THE COMPRESSOR. FAILURE TO FOLLOW DIRECTIONS MAY DAMAGE UNIT AND VOID THE WARRANTY.**

BE SURE TO FILL OUT THE WARRANTY CARD AND RETURN TO THE MANUFACTURER WITHIN 30 DAYS OF THE DATE OF THE ORIGINAL RETAIL PURCHASE!

DO NOT ATTEMPT TO OPERATE THIS COMPRESSOR WITHOUT FIRST FILLING WITH OIL! FILL THE OIL TO THE CENTER BETWEEN MAX. AND MIN. ON OIL LEVEL SIGHT GAUGE. DO NOT OVERFILL!

TECHNICAL FEATURES

The most notable features of your Badger unit are its silent running, reliability, small size, reasonable weight, and ease of use.

The compressor used on the unit is the product of advanced design applied to modern technology. It is, in fact, a compressor with oil bath lubrication, enclosed in a metal casing to reduce noise to a minimum.

The Silent I electric motor develops 1/3 HP. The Silent II motor develops 1/2 HP. Both compressor's electrical power input is 115V at 60 Hz single phase.

Though compact in size and weight, the Silent I & II have all the features of much larger compressors... pressure gauge, filter, pressure regulator, automatic cut-off and safety valve.

The Silent I 1 gallon tank allows you to maintain a reserve air supply at a maximum of 85 PSI. The Silent II has a 1.3 gallon tank and allows you to maintain a reserve air supply at a maximum of 100 PSI. The tank also prevents pulsating sprays during operation and allows the compressor to rest for long periods even under normal working conditions.

Your compressor is equipped with a standard filter regulator which removes all dust particles over 5/1000 mm in size from the compressed air stream.

MACHINE SET UP

Once you have unpacked your compressor, check it for visible signs of shipping damage.

NOTE: your unit is shipped without oil. This is to prevent oil from getting into the compression chamber and thus reducing future operating efficiency. It is not uncommon to have units turned upside down during shipping.

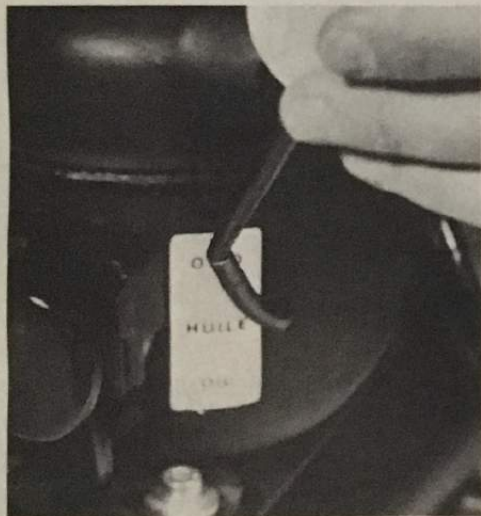
SILENT I

SILENT II

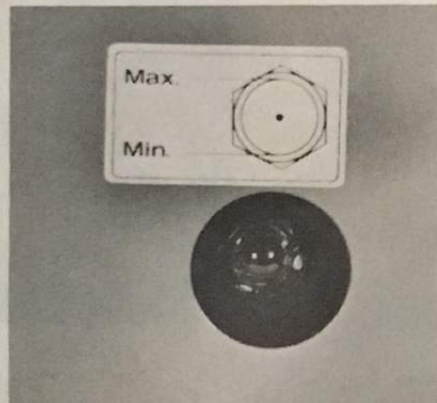
OIL FILLING PROCEDURE

A container of oil is packed with your unit. Remove plug from inside the mouth of the oil container and attach the filler spout to the oil container. Cut end of filler spout. Open drain plug and remove air-intake filter cap. Insert the filler spout into the tube marked oil (fig. 1). Fill to the middle level (between MAX. and MIN. on oil level sight glass, fig. 2) on the side of your Silent I. **DO NOT FILL ABOVE THE MIDDLE LEVEL. THIS WILL DAMAGE YOUR UNIT.** You will need about 12 fl. oz. (.35 ltr.) to fill. Keep the remaining oil to top off the tank later. Close the drain plug (fig. 3) and replace air intake filter cap. Do not operate the Silent I without the air intake filter in place.

USE ONLY THE OIL SUPPLIED AND SOLD BY THE MANUFACTURER. FAILURE TO DO SO WILL VOID YOUR WARRANTY



(fig. 1) Filler tube



(fig. 2) Oil level sight glass



(fig. 3) Drain plug

OIL FILLING PROCEDURE

Inside the shipping carton you will find 2 oil containers. Remove plug from inside the mouth of the larger oil container and attach the filler spout to the oil container. Cut end of filler spout. Remove both caps (shipping oil cap and breather cap). Insert the filler spout into the tube marked oil (fig. 1). Fill to the middle level (between MAX. and MIN. on oil level sight glass) on the side of the motor. **DO NOT FILL ABOVE THE MIDDLE LEVEL. THIS WILL DAMAGE YOUR UNIT.** Keep the remaining oil to top off the oil level later. Replace the oil breather cap. At the tube where you inserted the oil, replace the shipping cap with the air intake filter cap found in the plastic bag. This filter will prevent foreign matter from entering the compression chamber. Do not operate the compressor without the air intake filter in place.

Save the shipping oil cap for use when transporting for short distances when filled with oil. **NEVER TURN COMPRESSOR ON ITS SIDE WHEN IT CONTAINS OIL.**

USE ONLY THE OIL SUPPLIED AND SOLD BY THE MANUFACTURER. FAILURE TO DO SO WILL VOID YOUR WARRANTY!

To prevent oil from spilling out, never turn your unit upside down or position it on a sharp incline. Always drain the oil before transporting the unit. If you transport the unit with oil in it, oil may enter the compression chamber and cause damage. If the unit is accidentally tipped over, use the following procedure to remove oil and prevent damage. Let the unit set for 5 to 10 minutes before attempting to operate. Remove the hose assembly where it attaches to the motor (see illustration of parts No. 26 & 27 on Silent I or parts No. 36 & 37 on Silent II) and run the unit in 15 minute cycles until no more oil comes out. Let the unit cool between cycles.



(fig. 1) Filler tube

SILENT I

Start Up Procedure

Once you have completed these operations, the compressor is ready for operation.

When you activate the on/off switch: (fig. 4)

1 The compressor will turn on and begin to pump air into the tank. (If this does not occur, check that you do not have a faulty outlet, blown fuse or tripped circuit breaker.)



(fig. 4) On/off switch

The compressor operates on a 115V-60 Hz three pronged plug electrical power supply. Make sure that you use a grounded electrical outlet for the unit. If the ground is missing, short circuit could cause electrical discharge in the compressor itself.



2 The Silent I will operate for about 60 seconds, until the air pressure in the tank reaches about 85 P.S.I. When this pressure is achieved, the compressor will automatically stop.

3 After the initial start-up, check the oil level sight gauge. Motor operation may have driven trapped air out of the unit, and slight topping off may be necessary to bring oil back to proper level (between Max. and Min.).

SILENT II

Start Up Procedure

Once you have completed the oil filling procedures, the compressor is ready for operation.

When you turn on the on/off switch located on the upper front section of the compressor (fig. 2) the following should take place:

1 The motor will go on. The compressor will begin to pump air into the tank. (If the motor does not work, check that you do not have a faulty outlet, blown fuse or tripped circuit breaker.)



(fig. 2) On/off switch

2 The Silent II will operate for about 2 minutes, until the air pressure in the tank reaches about 120 P.S.I. When this pressure is achieved, the compressor will automatically stop.

3 After the initial start-up, check the oil level sight gauge. Motor operation may have driven trapped air out of the unit, and slight topping off may be necessary to bring oil to proper level.

The automatic on-off pressure switch on your Silent I has been calibrated to stop when the pressure of the air in the tank reaches approximately 85 P.S.I. It will automatically turn on again when the pressure falls below approximately 60 P.S.I. Should the pressure valve fail to operate, your Silent I is equipped with a safety valve which opens automatically should the pressure on the tank exceed 115 P.S.I.

DO NOT REMOVE OR REPAIR THIS VALVE!

NEVER USE YOUR COMPRESSOR ON AN UNEVEN SURFACE!

The automatic on-off pressure switch on your Silent II has been calibrated to stop when the pressure of the air in the tank reaches approximately 120 P.S.I. It will automatically turn on again when the pressure falls below approximately 80 P.S.I. Should the pressure valve fail to operate, your Silent II is equipped with a safety valve which opens automatically should the pressure on the tank exceed 145 P.S.I.

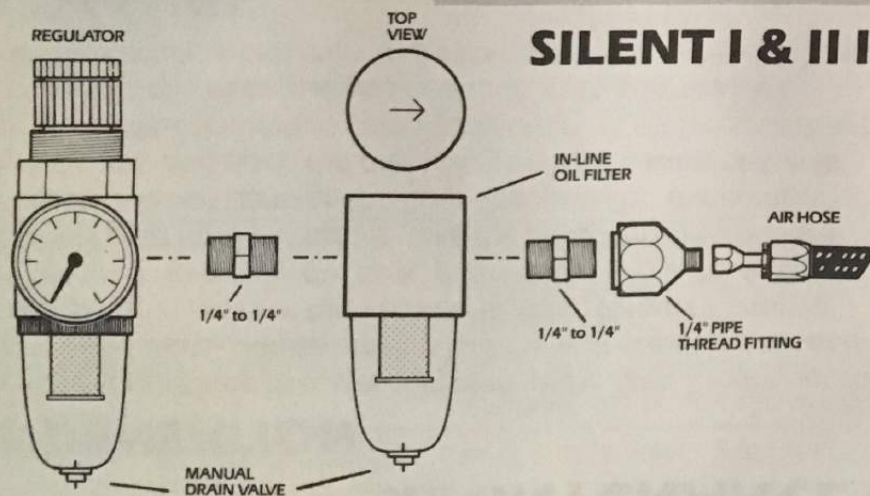
DO NOT REMOVE OR REPAIR THIS VALVE!

NEVER USE YOUR COMPRESSOR ON AN UNEVEN SURFACE!

THIS PROCEDURE REFERS TO BOTH THE SILENT I AND SILENT II.

Once the compressor has completed an operational cycle, the tank is under pressure. Install the 1/4" male pipe thread fitting to the in-line oil filter opening. You may want to put some sealing material, i.e. teflon tape, on the threads to prevent any air leakage. After installing the fitting, attach your air hose and air-brush to this fitting, again sealing the threads. The filter regulator has been set to 0 PSI value by the manufacturer. The filter regulator can now be set to the pressure required. To do this just turn the ring on the filter-regulator clockwise until you can read the pressure you want on the gauge. You are now ready to use your compressor.

SILENT I & II IN-LINE OIL FILTER



Your Silent I or II is furnished with a 99.9% effective in-line oil filter to assure that no oil enters the air-stream.

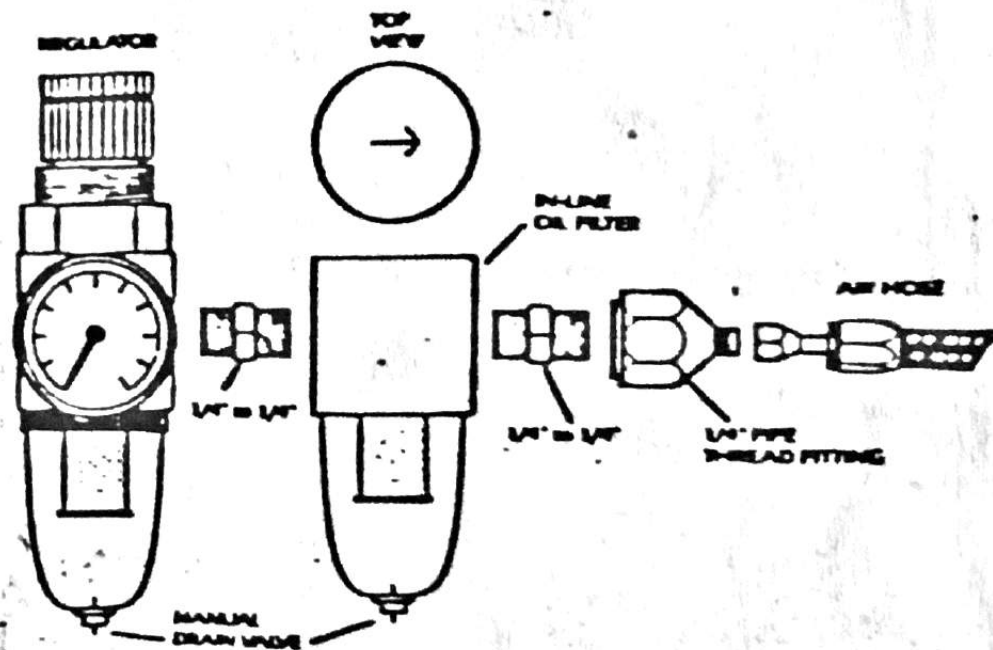
Every time the oil level is checked, inspect the oil filter for oil build-up. Remove accumulated oil by pushing up on the manual drain valve, and letting the oil drain. Do not reuse this oil since it has been contaminated.

PROCEDURES FOR ATTACHING SILENT I IN-LINE OIL FILTER

Silent I Compressor

Your Silent I is furnished with an in-line oil filter to assure that no oil enters the air-stream. After the compressor is filled with oil and before it is pressurized, attach the oil filter. To insure a tight fit, put teflon tape on the threads of all the fittings, regulator and oil removal filter.

Every time the oil level is checked, inspect the oil filter for oil build-up. Remove accumulated oil by pushing up on the manual drain valve, and letting the oil drain. Do not re-use this oil since it has been contaminated.



NOW STANDARD EQUIPMENT ON
380-1

MAINTENANCE FOR THE SILENT I & II

CONDENSATION

Remove the condensate that has collected in the tank. Under normal operating conditions, once a week is sufficient. If the compressor is used constantly, in areas of high humidity, more frequent removal may be required. To empty the tank, put it under pressure, remove the electrical plug from the outlet, take the compressor to an area where water will not damage the floor covering. Tip the compressor slightly forward, and open the drain plug on the bottom of the air storage tank. After the tank is completely drained, replace the drain plug, reconnect the electrical supply, and repressurize the tank. Air-hoses and other accessories should be drained on a regular basis.

OIL CHANGE

Change the oil after every 100 hours of running operation to guarantee adequate lubrication and perfect operating efficiency. To change the oil, remove the air intake filter and tip the unit so that the air intake tube is facing down. Keep the compressor in this position until all the oil has drained out. Refer to the procedure for filling your unit with oil. Add new oil to the required level (fill to middle level between MAX. and MIN.). Begin operation. **USE BADGER REPLACEMENT OIL ONLY!**

OIL LEVEL CHECK

During the first weeks of operation, check the oil level daily. After a break-in period, check the oil level weekly. Visually check the oil level with the sight glass. Add oil when the level falls below minimum. Only use Badger Silent Ones replacement oil #50-052.

FILTER-REGULATOR

Clean any residue in the filter cup after each working day. Push upward on the manual drain located on the bottom of the filter bowl. It may be easier to complete this operation when the tank is pressurized.

ELECTRICAL POWER CABLE

Periodically check the condition of the electrical power cable. If you have to replace the electrical cord, make sure that you use a grounded three prong plug and three wire cord. The cord should be identified with the following colors:

Black—Live

White—Neutral

Green—Ground

If an extension cord is necessary, it should be kept as short as possible. An undersized extension cord will reduce operating voltage and cause power loss to your compressor. The following wire gauge chart has been specified for different lengths when an extension cord is needed.

Cord length	Min. wire size	Note: the smaller the gauge number, the heavier the cord
less than 25 ft.	16	
25 to 50 ft.	14	
50 to 100 ft.	12	

NEVER USE A TWO PRONG PLUG OR TWO WIRE REPLACEMENT CORD.

CASING SCREWS

Periodically check the casing screws. Tighten if necessary.

AIR INTAKE FILTER

Every month, remove the air intake filter and check that the screening is not blocked. If it is, place the screen in a pan of warm soapy water and clean. Flush with clean water, dry completely and replace. If you do an excessive amount of air-brushing, clean the filter every week.

UNDER NO CIRCUMSTANCES ATTEMPT TO FIX THE INTERNAL PARTS OF YOUR COMPRESSOR BY REMOVING THE DOME SHELL. REMOVING THE DOME SHELL WILL VOID YOUR WARRANTY AND RESULT IN ADDITIONAL CHARGES FOR NECESSARY REPAIRS.

HELPFUL HINTS

1 Your Silent I & II is equipped with a motor thermal overload protective device which automatically shuts the unit off in the event of power overload or if the temperature of the compressor reaches 212°F (100°C). If this should happen during normal operations, turn the on/off switch to the off position and wait until the unit has cooled down (about 30 minutes). The motor thermal overload device will automatically reset when the temperature reaches between 130-150°F (60-70°C). Switch the compressor on and check that everything is functioning correctly.

2 Always use the compressor on a flat surface.

3 Never check or repair the compressor when it is plugged into a power source.

4 Keep the unit free from dust and dirt.

5 Use only those replacement parts recommended by the manufacturer.

6 Use only Badger Silent Ones replacement oil, #50-052. Do not substitute or mix the oil in the compressor with oil other than that recommended by the manufacturer. **TO DO SO WILL VOID THE WARRANTY!**

7 Do not expose the compressor to water or excessive humidity.

For any shipment, oil must be drained and filter spout replaced with oil cap. If unit is sent to manufacturer while it contains oil, the warranty may be voided, and a clean-up charge will be assessed.

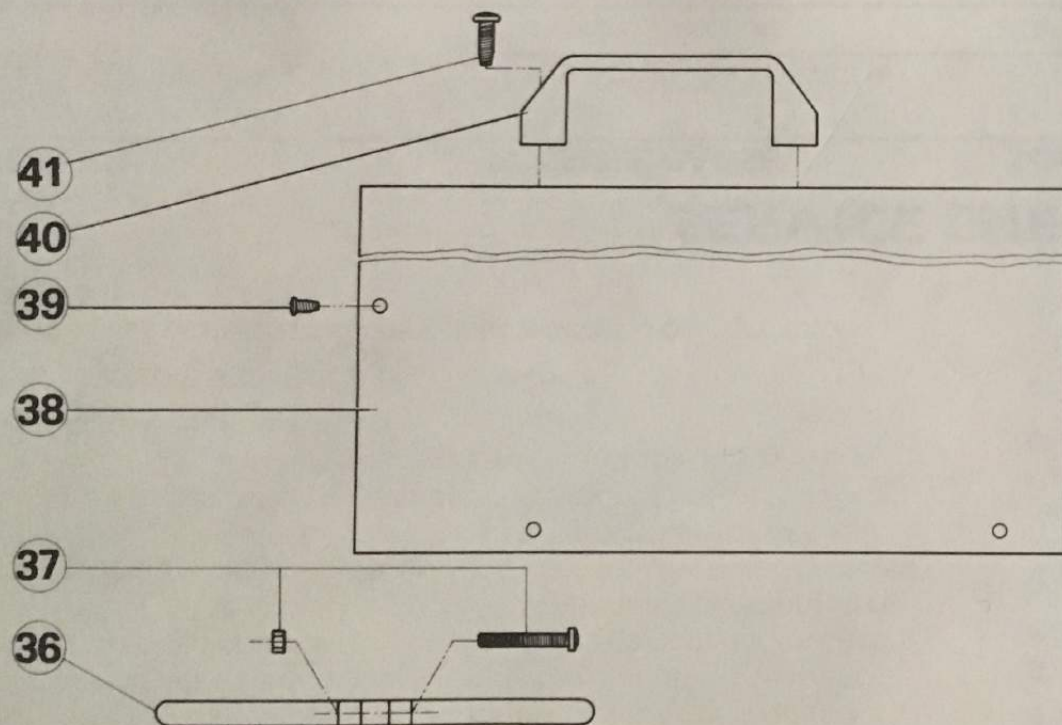
SERVICE CHECK LIST

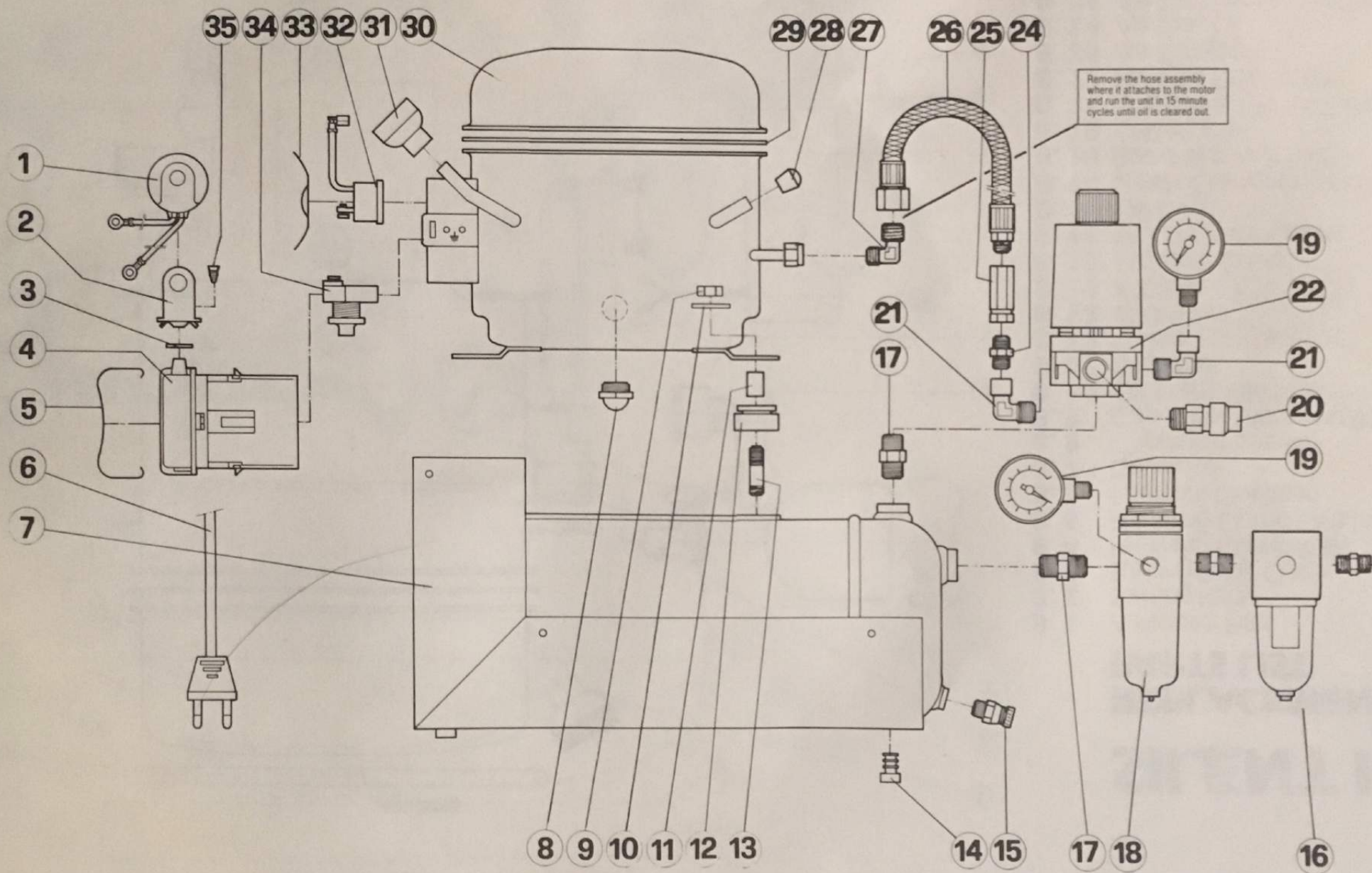
PROBLEM	POSSIBLE CAUSE	SOLUTION
1. Compressor will not run.	No Power.	Check outlet voltage, fuse and circuit breakers. Wait 10 minutes and try starting again. See the "Electrical" section of your manual.
	Thermal overload has tipped.	
	Bad cord connection.	Check cord connection for any visual damage.
2. Compressor runs but will not supply air.	Air filter cap is closed.	Remove protective cap on filter. Remove and clean air filter in mild soap solution.
	Air filter is dirty and clogged.	
3. Air leak.	Leak in safety relief valve.	Safety relief valve is sticking—must replace.
	Loose fittings and hose connections.	Tighten fittings and check hose connections.
4. Rattling noise during operation.	Compressor motor is touching the compressor shell. Lack of oil in compressor.	Operate on a flat or level surface. Periodic checks of the oil level sight glass. Keep oil level no lower than the "Minimum" marking.
5. Milky oil in compressor.	Oil has been contaminated with moisture or other foreign materials.	Complete oil change.
6. Air tank does not hold pressure when compressor is not running.	Faulty check valve. See "Air Leaks"	Disassemble check valve assembly and clean or replace.

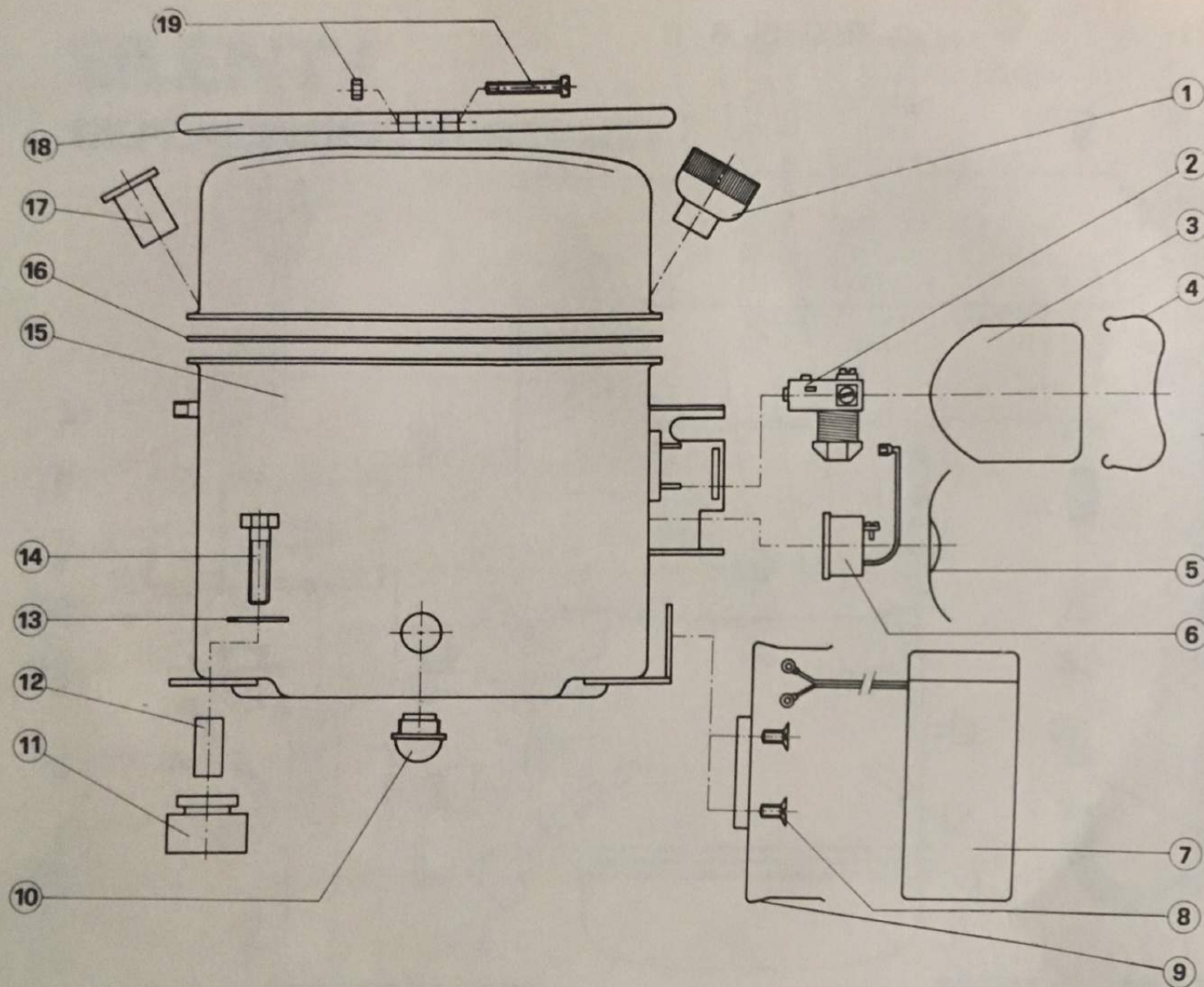
SILENT I

REPLACEMENT PARTS LIST

- | | | | |
|-------|-------------------|-------|-------------------------------|
| C. 1 | Capacitor | C. 12 | Grommet |
| C. 2 | Capacitor Bracket | C. 13 | 1/4" x 1/4" Threaded Rod |
| C. 3 | Washer | C. 14 | Rubber Feet |
| C. 4 | Cover | C. 15 | Drain Plug |
| C. 5 | Retaining Clamp | C. 16 | Inline Oil Filter #50-053 |
| C. 6 | 6' Power Cord | C. 17 | 1/4" Nipple |
| C. 7 | Storage Tank | C. 18 | Air Regulator |
| C. 8 | Oil Sight Glass | C. 19 | Air Gauge |
| C. 9 | 1/4" Nut | C. 20 | Pressure Relief Valve |
| C. 10 | 1" O.D. Washer | C. 21 | 1/4" Male to Female 90° Elbow |
| C. 11 | Sleeve | C. 22 | Pressure Switch |
| | | C. 24 | 1/4" Nipple |
| | | C. 25 | Check Valve |
| | | C. 26 | Hose Assembly |
| | | C. 27 | 90° Elbow 1/4" to 1/4" Male |
| | | C. 28 | Oil Cap |
| | | C. 29 | Motor Cover Gasket |
| | | C. 30 | Motor Cover |
| | | C. 31 | Air Intake Filter |
| | | C. 32 | Thermal Overload |
| | | C. 33 | Retaining Clamp Overload |
| | | C. 34 | Starter Relay |
| | | C. 35 | Capacitor Bracket Screw |
| | | C. 36 | Cover Clamping Band |
| | | C. 37 | Band Screw and Nut |
| | | C. 38 | Compressor Cover |
| | | C. 39 | Compressor Cover Screws |
| | | C. 40 | Handle |
| | | C. 41 | Handle Screw |



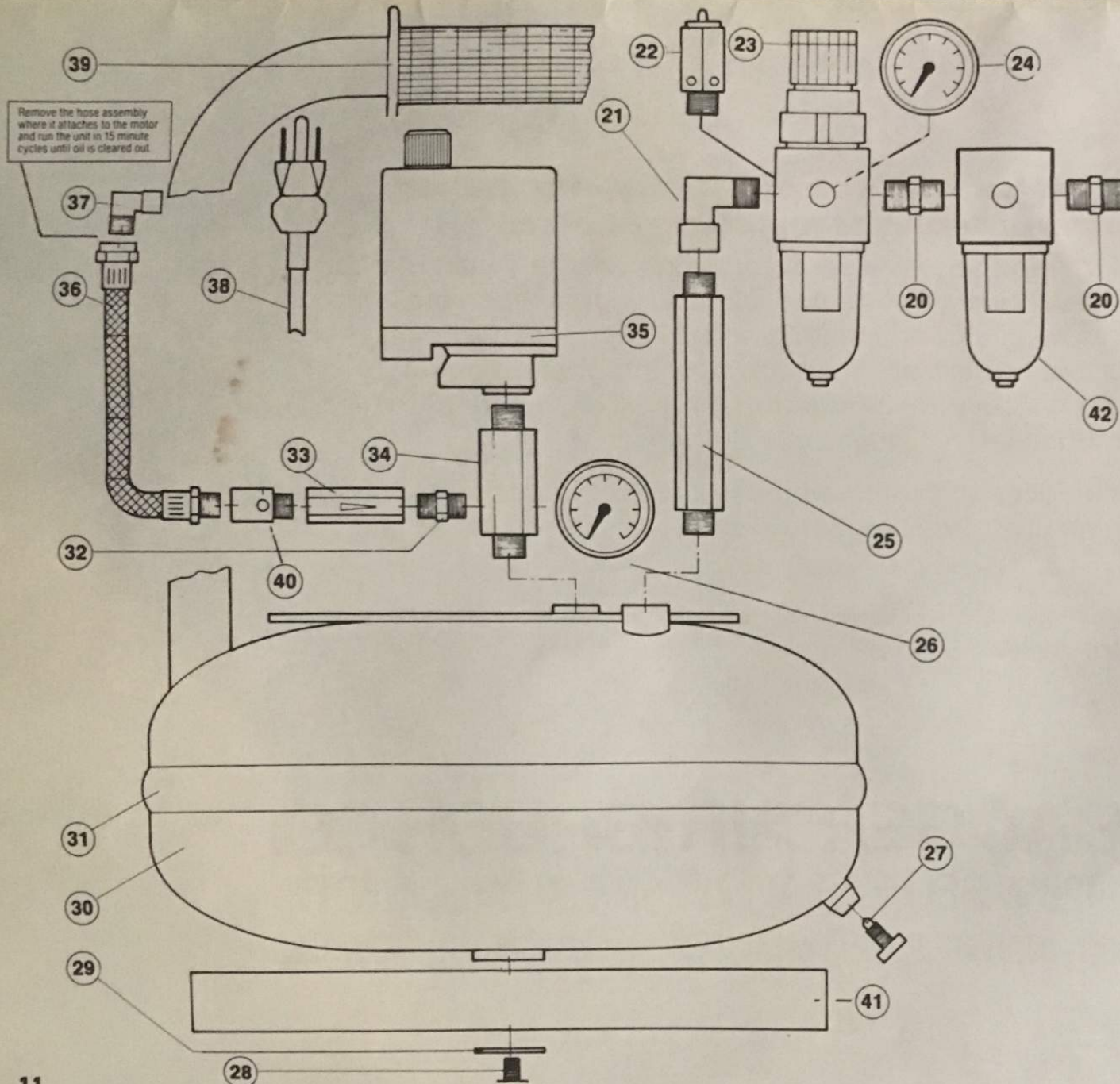




SILENT II

REPLACEMENT PARTS LIST

- B. 1 Air Intake Filter
- B. 2 Starting Relay
- B. 3 Starting Relay Cover
- B. 4 Retaining Clamp Relay
- B. 5 Retaining Clamp Overload
- B. 6 Thermal Overload
- B. 7 Capacitor
- B. 8 Capacitor Screws
- B. 9 Capacitor Mounting Bracket
- B. 10 Oil Sight Glass
- B. 11 Grommet
- B. 12 Sleeve
- B. 13 1" Washer
- B. 14 1/4" Bolt
- B. 15 Motor & Cover
- B. 16 Motor Cover Gasket
- B. 17 Oil Cap
- B. 18 Cover Clamping Band
- B. 19 Band Screw & Nut
- B. 20 1/4" Nipple
- B. 21 1/4" FPT x 1/4" MPT Elbow
- B. 22 Pressure Relief Valve
- B. 23 Air Regulator
- B. 24 Air Gauge
- B. 25 Air Regulator Mounting Bar
- B. 26 Tank Pressure Gauge



- B. 27** Drain Plug
- B. 28** 1/4" Bolt
- B. 29** 1" Washer
- B. 30** Storage Tank
- B. 31** Tank Ring
- B. 32** 1/8" Nipple
- B. 33** Check Valve
- B. 34** Pressure Switch Mounting Bar
- B. 35** Pressure Switch
- B. 36** Hose Assembly
- B. 37** 1/8" MPT x 1/8" FPT
90° Elbow
- B. 38** 6' Power Cord
- B. 39** Handle Grip
- B. 40** Check Valve Adaptor
- B. 41** Tank Base
- B. 42** In-Line Oil Filter #50-053

**Keep this manual with compressor for information
on the ordering of replacement parts**

Always use caution and good sense when air-brushing with any material. You should have an exhaust ventilation system to dilute all vapors when brushing indoors. An open window or a poorly maintained or improperly fitted respirator may not provide adequate protection. For additional information on safety considerations, contact NIOSH, the foundation for the Community of Artists, and the Consumer Product Safety Commission.

Ask your retailer for a booklet on other Badger air-brush accessories and supplies, including a complete line of air-brushes, compressors, hoses, regulators and Foto/Frisket film.

Badger also has the most comprehensive how-to books. For more information send 50¢ for a full color catalog BA-300.



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