

# OWNERS MANUAL FOR PERMANENTLY LUBRICATED AIR COMPRESSOR

**MODEL NO. IR102D-1**  
**(For Home Use Only)**

## **SPECIFICATION CHART**

Model No.	102D-1	C102D-1
Horsepower	3/4	---
SCFM @ 40 psig	3.0	3.0
SCFM @ 90 psig	2.2	2.2
Displacement CFM	4.0	4.0
Bore	1 3/4"	1 3/4"
Stroke	1 1/4"	1 1/4"
Voltage-Single Phase	110-120	110-120
Minimum Branch Circuit Requirement	15AMPS	15AMPS
*Fuse Type	Quick Acting	Quick Acting
Tank Size	2 Gallon	2 Gallon

\*A circuit breaker is preferred. Use only a fuse or circuit breaker that is the same rating as the branch circuit the air compressor is operated on. If the air compressor is connected to a circuit protected by fuses, use quick acting fuses.

**This unit is a continuous run unit. It does not start and stop automatically.**

### **NOTE:**

For identification of Repair Parts,  
see separate Parts List Manual.

### **IMPORTANT:**

Read and Retain the Safety  
Guidelines and All Instructions  
Carefully Before Operating.

### **WARRANTY:**

For Warranty Information  
see page 3 of this manual.

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In the unlikely event you should have a problem with this product or if you are missing any parts, it is not necessary to return it to the store where you purchased it. Simply call our toll free number and talk with our Service Representative.

**OUR OFFICE HOURS ARE FROM  
8 a.m. to 4:30 p.m. (CST)  
MONDAY THROUGH FRIDAY**

**CALL TOLL FREE 1-800-888-2468, Ext. 2**

# **LIMITED WARRANTY ONE YEAR FROM DATE OF PURCHASE**

*All merchandise manufactured by DeVilbiss Air Power Company is warranted to be free of defects in workmanship and material which occur during the first year from the date of purchase by the original purchaser (initial user). Products covered under this warranty include: air compressors, \*air tools, accessories and service parts.*

*DeVilbiss Air Power will repair or replace, at DeVilbiss's option, products or components which have failed within the warranty period. Repair or replacement, and service calls on 60 and 80 gallon air compressors, will be handled by Authorized Warranty Service Centers and will be scheduled and serviced according to the normal work flow at the service center location, and depending on the availability of replacement parts.*

*All decisions of DeVilbiss Air Power Company with regard to this policy shall be final.*

*This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.*

## **RESPONSIBILITY OF ORIGINAL PURCHASER (Initial User):**

- Retain original sales receipts as proof of purchase for warranty work.
- Use reasonable care in the operation and maintenance of the product as described in the Owners Manual(s).
- Deliver or ship the product to the nearest DeVilbiss Air Power Authorized Warranty Service Center. Freight costs, if any, must be paid by the purchaser.
- Air compressors with 60 and 80 gallon tanks only will be inspected at the site of installation. Contact the nearest Authorized Warranty Service Center, that provides on-site service calls, for service call arrangement.
- If the purchaser does not receive satisfactory results from the Authorized Warranty Service Center, the

## **THIS WARRANTY DOES NOT COVER:**

- Merchandise sold as, reconditioned, floor models and/or display models sold "as is", any damaged or incomplete equipment sold "as is".
- Merchandise used as "rental" equipment.
- Merchandise that has become inoperative because of ordinary wear, misuse, negligence, accident, improper and/or unauthorized repair or alterations including failure to operate the product in accordance with the instructions provided in the Owners Manual (s) supplied with the product.
- An air compressor that pumps air more than 50% during a one hour period is considered misuse because the air compressor is undersized for the required air demand. Maximum compressor pumping time per hour is 30 minutes.
- Merchandise sold by DeVilbiss Air Power which has been manufactured by and identified as the product of another company. The product manufacturer's warranty will apply.
- Repair and transportation costs of merchandise determined not to be defective.
- Cost associated with assembly, required oil, adjustments or other installation and start-up cost.
- ANY INCIDENTAL, INDIRECT OR CONSEQUENTIAL LOSS, DAMAGE, OR EXPENSE THAT MAY RESULT FROM ANY DEFECT, FAILURE OR MALFUNCTION OF THE PRODUCT. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

**IMPLIED WARRANTY**  
Form SP-100-C  
PARTICULAR  
6/4/95

**DEVILBISS** Air Power Company

NESS FOR A

213 Industrial Drive • Jackson, TN 38301-9615 • Telephone: 1-800-888-2468, Ext. 2 • FAX: 1-800-888-  
PURPOSE ARE LIMITED TO ONE YEAR FROM THE DATE OF ORIGINAL PURCHASE. Some

states do not

allow limitations on how long an implied warranty lasts, so the above limitations may not apply to

# SAFETY GUIDELINES

This manual contains information that is important for you to know and understand. This information relates to protecting YOUR SAFETY and PREVENTING EQUIPMENT PROBLEMS. To help you recognize this information, we use the following symbols. Please read the manual and pay attention to these sections.

## ! DANGER

**URGENT SAFETY INFORMATION - A HAZARD THAT WILL CAUSE SERIOUS INJURY OR LOSS OF LIFE.**

## ! WARNING

**IMPORTANT SAFETY INFORMATION - A HAZARD THAT *MIGHT* CAUSE SERIOUS INJURY OR LOSS OF LIFE.**

## CAUTION

Information for preventing damage to equipment.

## NOTE

Information that you should pay special attention to.

## ! WARNING

**HAZARDS CAN OCCUR IF EQUIPMENT IS NOT USED PROPERLY.  
PLEASE READ THE FOLLOWING CHART.**

WHAT TO LOOK FOR	WHAT COULD HAPPEN	HOW TO PREVENT IT
Hot Parts	<p>When operated continuously, the air hose gets hot, especially near the compressor. If you maintain contact by grasping you may suffer minor burns or discomfort.</p> <p>On tank mounted units, the plumbing between the pump and tank gets hot.</p>	<p>Never touch the air compressor head during or immediately after operation.</p> <p>On tank mounted units, avoid prolonged contact with the pump to tank plumbing.</p>
Flammable Vapors	<p>It is normal for the motor and pressure switch to spark. A spark can ignite flammable vapors from gasoline or solvents, causing a fire or explosion.</p>	<p>The air compressor must only be used in well ventilated areas, free of gasoline or solvent vapors.</p> <p>Do not operate the compressor while you are carrying it, or in the spray area.</p>
Compressed Air	<p>Compressed air can propel dust, dirt or loose particles it comes in contact with. These propelled particles may cause serious injury or damage.</p> <p>Too much air pressure applied to air tools or accessories can cause damage or risk of bursting.</p>	<p>Never point any nozzle or sprayer toward a person or any part of the body.</p> <p>Always wear safety goggles or glasses when using the air compressor.</p> <p>Always turn the air compressor off before attaching or removing accessories.</p> <p>Check the manufacturer's pressure rating for air tools and accessories. Regulator outlet pressure must never exceed the maximum pressure rating.</p>

WHAT TO LOOK FOR	WHAT COULD HAPPEN	HOW TO PREVENT IT
Electricity	Your air compressor is powered by electricity. Like any other electrically powered device, if it is not used properly it may cause electrical shock.	Always unplug the air compressor prior to maintenance or repair.  Never use the air compressor in the rain.  Always plug the cord into an electrical outlet with the specified voltage and adequate fuse protection.
Toxic Vapors	It is normal for compressed air to contain toxic or irritating vapors. Such vapors are harmful if inhaled.  Certain materials you are spraying (like paint, weed killer, sand or insecticide) can be harmful if you inhale them.	Never directly inhale the compressed air produced by this unit.  Read labels and safety data for all materials you spray. Follow all safety precautions.  Read and follow the safety instructions provided on the label or safety data sheet for the material you are spraying. Use a respirator mask if there is a chance of inhaling anything you are spraying. Read all instructions . . . be sure that the respirator mask is suitable for your application.
Unsuitable Solvents	The solvents 1,1,1 - Trichloroethane and Methylene Chloride can chemically react with aluminum used in paint spray guns, paint pumps, etc., and cause an explosion. These solvents can also react with galvanized components and cause corrosion and weakening of parts. This does not affect your air compressor - but it may affect the equipment being used.	Read the label or data sheet supplied with the material you intend to spray. If it contains the solvents listed do not use accessories that contain aluminum or galvanized parts. You must either change the material you intend to spray, or use only stainless steel spray equipment.

## GLOSSARY

**SCFM or CFM:** Standard Cubic Feet per Minute; a unit of measurement of air delivery.

**PSIG or PSI:** Pounds per square inch gauge.

**U.L. Listed:** Products with the U.L. mark are listed by Underwriters Laboratories, Inc. (U.L.). Samples of these products have been evaluated by U.L. and meet the applicable U.L. Standards of Safety.

## UNPACKING INSTRUCTIONS

Grasp the handle and lift the air compressor out of the carton. Remove the styrofoam and/or cardboard and discard.

## STORAGE

*When you have finished using the air compressor:*

1. Set the "ON/OFF" switch to "OFF" and unplug the cord.
2. Relieve all pressure from the air compressor head and air hose by setting the adjustable pressure valve to 10 P.S.I.
3. Protect the electrical cord and air hose from damage by winding them loosely around the air compressor.
4. Store the air compressor in a clean and dry location.

## DUTY CYCLE

All DeVilbiss Air Power manufactured air compressors should be operated on not more than a 50% duty cycle. This means an air compressor that pumps more than 50% of one hour, is considered misuse, because the air compressor is undersized for the required air demand. Maximum compressor pumping time per hour is 30 minutes.

## DESCRIPTION OF OPERATION

**Air Compressor Pump:** To compress air, the piston moves up and down in the cylinder. On the downstroke, air is drawn in through the air intake muffler (valves). The exhaust valve remains closed. On the upstroke of the piston, air is compressed. The intake valves close and compressed air is forced out through the exhaust valve and then through the air hose.

**Adjustable Pressure Valve:** The pressure valve controls the amount of pressure going from the air compressor to the accessory. The pressure adjusting valve can be used to set approximate pressure between 10 and 125 P.S.I. (125 P.S.I. is the highest pressure this compressor will deliver). It is normal for the adjustable pressure valve to release air during operation.

**Accumulator Tank:** Your accumulator tank is equipped with a relief (pop-off) valve to prevent an over pressure condition in the tank. This 2 gallon tank is *not* designed to store air, but rather to provide the additional volume of compressed air necessary to operate a wide variety of air tools. When starting your compressor, attach the tool to the hose, set the pressure adjusting valve at the required pressure, wait a few moments until the tank fills with air. You will know the tank is filled when you hear air bleeding through the pressure adjusting valve. Depending on the type and size of tool being used, you will occasionally need to wait for the tank to refill before continuing. When you are finished or changing tools, turn the compressor switch off and set the pressure adjusting valve to 10 PSI and wait for the tank to discharge completely.

### ⚠ WARNING

ALWAYS SET THE PRESSURE VALVE AT OR BELOW THE REQUIRED PRESSURE FOR THE ACCESSORY BEING USED BEFORE STARTING YOUR COMPRESSOR. FOR INFLATION OR OTHER USES REQUIRING ACCURATE PRESSURE, USE A PRESSURE GAUGE.

## INSTALLATION AND BREAK-IN PROCEDURES

### Location of the Air Compressor

Your compressor comes to you completely assembled and ready for use. Operate the air compressor in a dry, clean, cool and well ventilated area. The air compressor pump and case are designed to allow for proper cooling. Clean or blow off dust or dirt that collects on the air compressor. A clean air compressor runs cooler and provides longer service. The ventilation openings on your air compressor are necessary to maintain proper operating temperature. Do not place rags or other containers on or near these openings.

### Extension Cords

Use extra air hose instead of an extension cord to avoid voltage drop and power loss to the motor.

If an extension cord must be used, be sure it is:

- a 3-wire extension cord that has a 3-blade grounding plug, and a 3-slot receptacle that will accept the plug on the compressor
- in good condition
- no longer than 50 feet
- 14 gauge (AWG) or larger. (Wire size increases as gauge number decreases.) 12 AWG, 10 AWG and 8 AWG may also be used. **DO NOT USE 16 OR 18 AWG.**

### GROUNDING INSTRUCTIONS

### ⚠ WARNING

**RISK OF ELECTRICAL SHOCK!** In the event of a short circuit, grounding reduces the risk of shock by providing an escape wire for the electric current. This air compressor must be properly grounded.

The air compressor is equipped with a cord having a grounding wire with an appropriate grounding plug. The plug must be used with an outlet that has been installed and grounded in accordance with all local codes and ordinances. The outlet must have the same configuration as the plug. See illustration. **DO NOT USE AN ADAPTER.**

Inspect the plug and cord before each use. Do not use if there are signs of damage.

### ⚠ DANGER

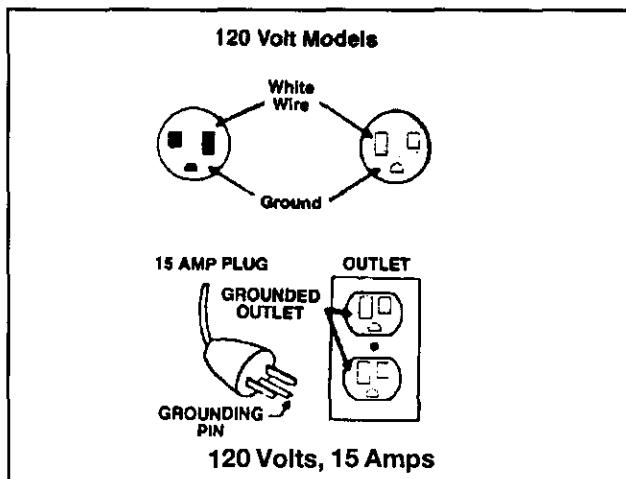
**IMPROPER GROUNDING CAN RESULT IN ELECTRICAL SHOCK.**

## INSTALLATION AND BREAK-IN PROCEDURES

Do not modify the plug that has been provided. If it does not fit the available outlet, the correct outlet should be installed by a qualified electrician.

If repairing or replacing cord or plug, the grounding wire must be kept separate from the current-carrying wires. Never connect the grounding wire to a flat blade plug terminal. The grounding wire has insulation with an outer surface that is green - with or without yellow stripes.

If these grounding instructions are not completely understood, or if in doubt as to whether the compressor is properly grounded, have the installation checked by a qualified electrician.



### Air Hose

The air hose attached to your comporessor has an integral pressure adjusting valve at the working end of the hose. Should service or replacement be required, make sure that the pressure adjusting valve is present in the air hose line. **DO NOT REPLACE THE HOSE WITH STANDARD HOSE**

### WARNING

THAT IS NOT EQUIPPED WITH THE PRESSURE ADJUSTING VALVE.

### CAUTION

Do not allow hose to become kinked or pinched at any time. This is important to avoid damage to your compressor and to maintain pressure adjusting valve control.

## OPERATING PROCEDURES

1. Before plugging in the air compressor, set the adjustable pressure valve to "10" PSI. Make sure the "ON/OFF" switch is in the "OFF" position.
2. Connect the air tool or accessory to the air hose. Tighten securely.
3. Plug the power cord into the grounded outlet.
4. Start the compressor by setting the "ON/OFF" switch to the "ON" position.
5. Check the manufacturer's maximum pressure rating for the air tool, accessory or vehicle tire being used. The air compressor outlet pressure must never exceed the maximum pressure rating.
6. Slowly increase the pressure setting of the adjustable pressure valve. You should be able to hear and feel air pressure being relieved by the adjustable pressure valve. If pressure is not being relieved, turn the air compressor off immediately. The pressure valve must be replaced.

### WARNING

TOO MUCH AIR PRESSURE COULD CAUSE AN AIR TOOL OR VEHICLE TIRE TO RUPTURE OR EXPLODE. CAREFULLY FOLLOW STEPS 5 AND 6 EACH TIME YOU USE YOUR COMPRESSOR.

### CAUTION

Compressed air from the outfit may contain water condensation. Do not spray unfiltered air at an item that could be damaged by moisture. Some air operated tools or devices may require filtered air. Read the instructions for the air tool or device.

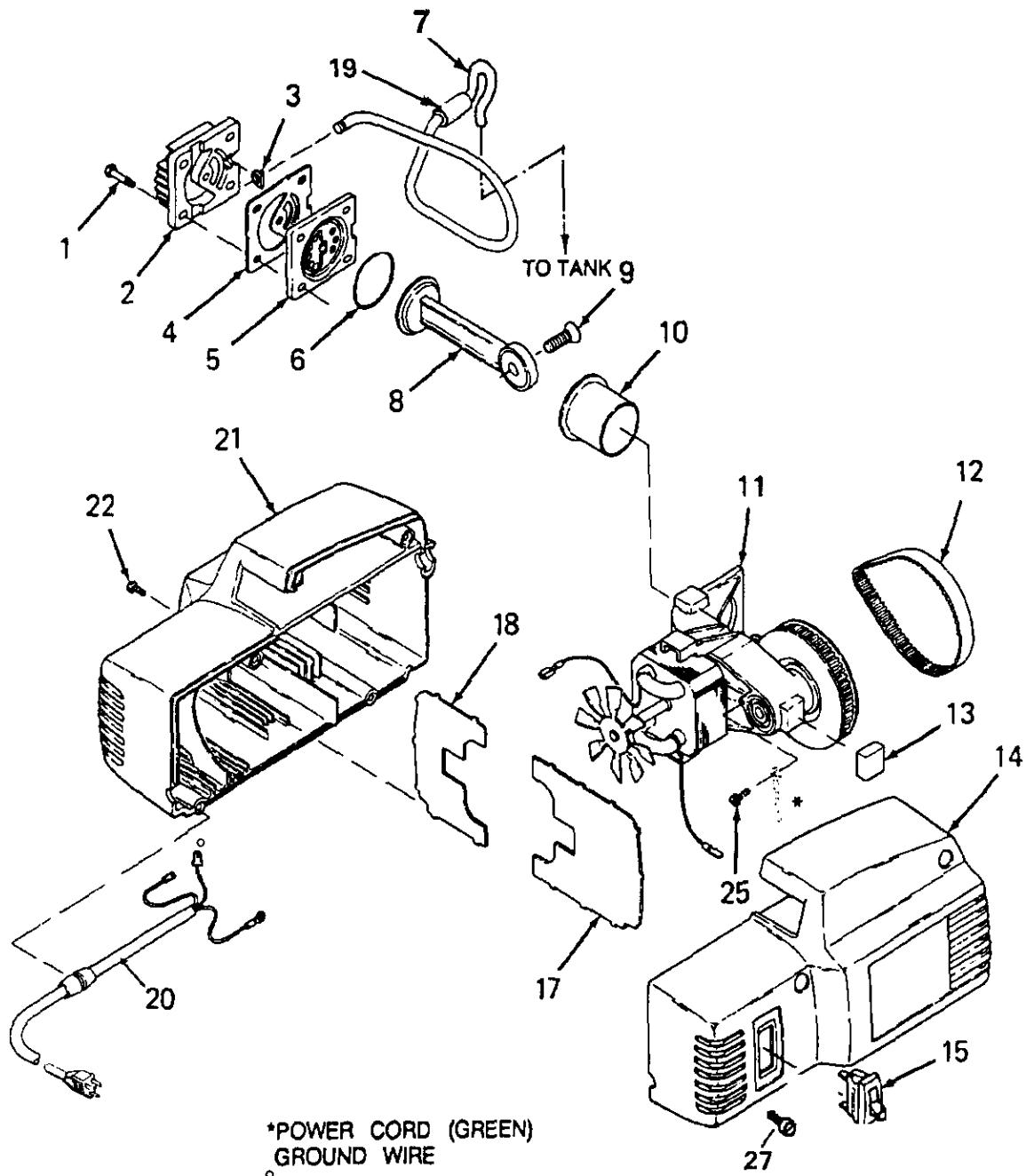
## TROUBLESHOOTING GUIDE

### WARNING

**VOLTAGE SOURCES, MOVING PARTS OR COMPRESSED AIR SOURCES ARE EXPOSED WHEN REPAIRING THE COMPRESSOR. PERSONAL INJURY CAN OCCUR. UNPLUG THE COMPRESSOR BEFORE ATTEMPTING ANY REPAIRS.**

PROBLEM	CAUSE	SOLUTION
Air Leaks	Hose fitting loose.	Tighten fitting.
Compressor is not delivering enough air.	Prolonged excessive use of air.  Hole in hose.  Air leaks.	Decrease the amount of air usage. Your compressor is not large enough for the air requirement.  Replace the hose.  Tighten fittings.
Motor will not run.	Fuse blown, circuit breaker tripped.  Extension cord is wrong length or gauge.  Loose electrical connections.  Faulty motor.	<ol style="list-style-type: none"><li>1. Check fuse box for blown fuse and replace as necessary. Reset circuit breaker. Do not use a fuse or circuit breaker with higher rating than that specified for your particular branch circuit.</li><li>2. Check for proper fuse. You should be using a Quick Acting fuse.</li><li>3. Check for low voltage problem.</li><li>4. Check the extension cord.</li><li>5. Disconnect the other electrical appliances from circuit or operate the compressor on its own branch circuit.</li></ol> Check the extension cord.  Check wiring connection inside terminal box  Have checked at a local Service Center.
High discharge pressure. Cannot be adjusted lower.	Adjustable pressure valve not functioning.	 <b>WARNING</b>  <b>RISK OF BURSTING. DO NOT OPERATE THE COMPRESSOR IF THIS PROBLEM EXISTS. ADJUSTABLE PRESSURE VALVE MUST BE REPLACED.</b>

# Air Compressor Diagram



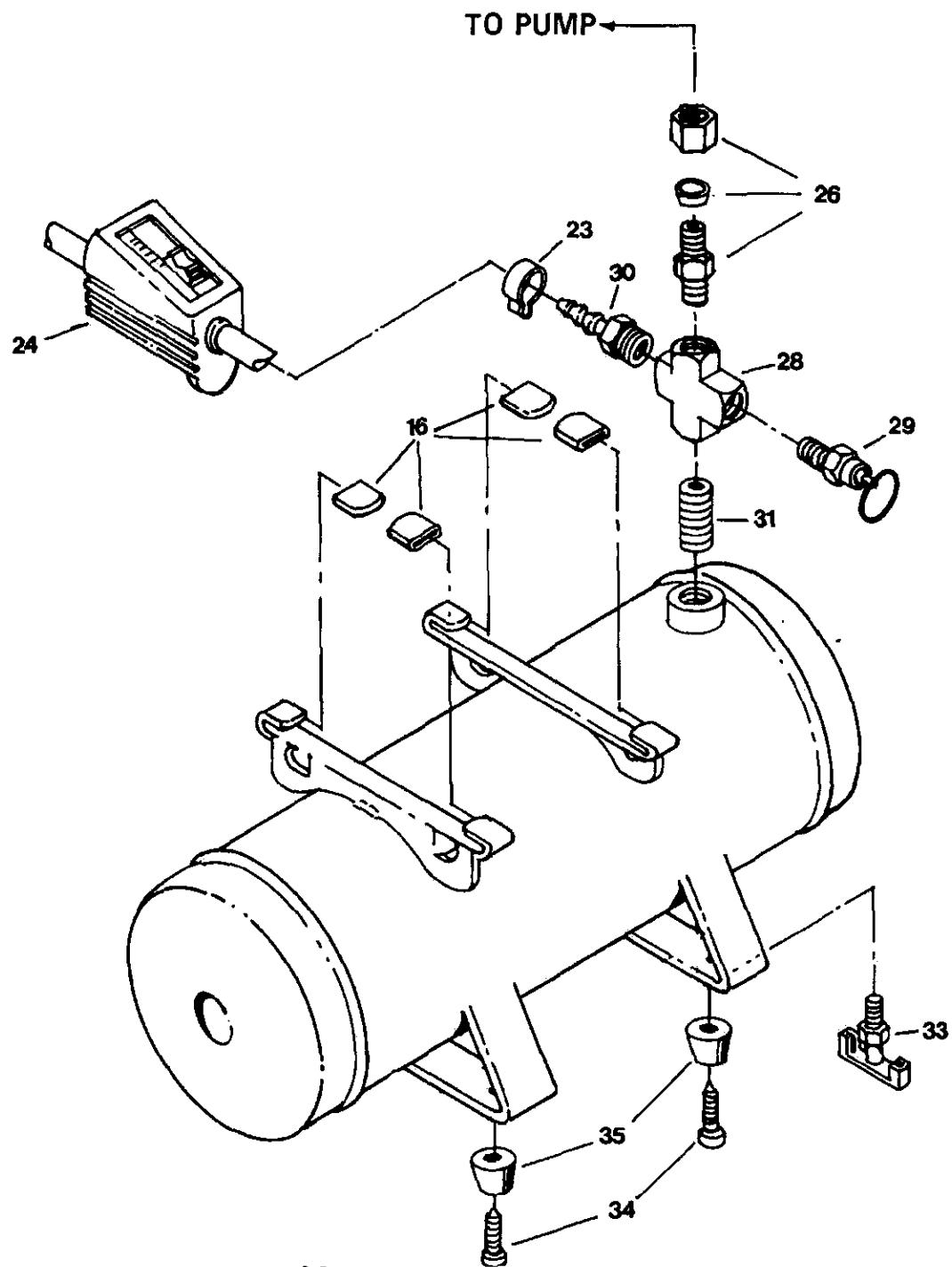
Slide #19 over #7 as shown. Make sure that no part of #7 tube touches #21 or #14 shroud when assembled.

# Parts List

KEY NO.	PART NUMBER	DESCRIPTION
/ 1	----	Screw #10-24 x 7/8 LG hex head thd. forming (4 required)
2	CAC-1196	Cylinder Head
* 3	----	Tube Seal
* 4	----	Head Gasket
5	CAC-4323	Valve Plate Assembly
* 6	----	"O" Ring
7	CAC-1289	Outlet Tube
+ 8	----	Rod Assembly
/ 9	----	Screw 3/8-16 x 1/25 LG hex socket flat head (torque to 350 in/lb)
+ 10	----	Cylinder Sleeve
11	CAC-4111	Endbell Assembly
12	CAC-1342	Timing Belt
* 13	----	Pump Isolator (5 required)
14	DAC-163	Shroud (right) for 102D-1
	DAC-168	Shroud (right) for C102D-1
15	SSS-16	Switch
* 16	----	Tank Isolator (4 required)
> 17	----	Motor Baffle (right)
> 18	----	Motor Baffle (left)
19	CAC-1285	Isolator (tube)
20	CAC-4322-1	Cord Assembly
21	DAC-162	Shroud (left) for 102D-1
	DAC-167	Shroud (left) for C102D-1
/ 22	----	Screws (5 used)

- \* KK-4949 Isolator Kit includes Items 3, 4, 6, 13, 16, 34, 35, 27
- / KK-4929 Fastener Kit includes items 1, 9, 22, 25.
- > KK-4980 Baffle Kit includes items 17, 18.
- + KK-4926 Connecting Rod Kit includes items 8, 10.

## Compressor Pump Diagram



# Parts List

KEY NO.	PART NUMBER	DESCRIPTION
23	CAC-1206	Clamp(2 used)
24	CAC-4324	Pressure Valve Assembly for 102D-1
	CAC-4076	Pressure Valve Assembly for C102D-1
25	----	Ground Screw
26	SSP-6102	Male Connector
* 27	----	Screw (tank retention) (as required)
28	SSP-3305-NI	Pipe Cross
29	TIA-4150	Safety Valve
30	H-2105	Hose Connection
31	SS-1286	Nipple
33	SS-2707	Drain Cock
* 34	----	Screw, self tapping
* 35	----	Recess Bumper
<u>NOT ILLUSTRATED</u>		
	SSH-8	Air Chuck
	H-2099	Adapter

\* KK-4949 Isolator Kit includes items 3, 4, 6, 13, 16, 34, 35, 27

## **Service Notes**

## **Service Notes**

## **Service Notes**

# **OWNERS MANUAL FOR PERMANENTLY LUBRICATED AIR COMPRESSOR**

**MODEL NOS.  
102D-1**

**(For Home Use Only)**

**Attach Sales Receipt Here.**  
Retain Original Sales Receipt as  
Proof of Purchase for Warranty  
Repair Work.

## **WARRANTY**

This product is covered by the  
DeVilbiss one year limited  
warranty (SP-100-C). The  
warranty can be found in the  
General Manual or is available  
upon request.

An "Authorized Warranty Service Center Directory" is included with your  
unit.

When ordering repair parts from your local Authorized Service Center,  
always give the following information:

- Model number of your compressor
- Part number and description of the item  
you wish to purchase

If you have any questions or need the location of the nearest Authorized  
Service Center call our Customer Service Hotline (Toll Free) 1-800-888-  
2468, Ext 2, Monday thru Friday 8:00 a.m. to 4:30 p.m. (CST) and talk with  
our Trained Customer Service Representatives.

The Model number can be  
found on the maintenance  
label on the side of the tank.

The Date Code number can  
be found on the foil label on  
the air tank.

The Manufactures  
Number (ASME code  
compressors only) is  
located on the metal data  
plate which is welded on  
to the backside of the air  
tank.

Model  
No. \_\_\_\_\_

Date  
Code  
No.

MFG  
No.