

**2HP 4.6 GALLON
AIR COMPRESSOR
MODEL 1106C
USERS' MANUAL**



by **UST** *1928 W. Malvern Ave.*
Ultimate Solution Tools™ *Fullerton, CA 92833*

For warranty and parts services, please call 1-866-797-2738

LEF00

Operating instructions

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.

Portable Air Compressors

4.3 cfm @ 40 PSI

3.5 cfm @ 90 PSI

Description

Portable permanently lubricated air compressors are for home and workshop use. All models are equipped with regulators, needle and ball bearings, and motors with auto overload protection. Draining moisture from the air receivers is required maintenance.

Safety Guidelines

This manual contains information that is very important to know and understand. This information is provided for SAFETY and to PREVENT EQUIPMENT PROBLEMS. To help recognize this information, observe the following symbols.

▲ DANGER Danger indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

▲ WARNING Warning indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

▲ CAUTION Caution indicates a potentially hazardous situation which, if not avoided, MAY result in minor or moderate injury.

NOTICE Notice indicates important information, that if not followed, may cause damage to equipment.

Unpacking

When unpacking unit, inspect carefully for any damage that may have occurred during transit. Make sure any loose fittings, bolts, etc., are tightened before putting unit into service.

General Safety

Air compressors are utilized in a variety of air system applications. Because air compressors and other components (material pump, spray gun, filters, lubrications, hoses, etc.) used make up a high pressure pumping system, the following safety precautions should be observed at all times. Only persons well acquainted with these rules of safe operation should be allowed to use the air compressor.

NOTICE

Extension cords can cause excessive amp draw leading to non-starts and premature motor failure. Use a longer air hose instead of extension cord. For safety reasons, never leave the air compressor plugged in when not in use, or unattended while in use.

▲ WARNING All electrical work should be done by a qualified (licensed or certified) electrician. On a properly wired circuit, the black wires supply a voltage potential even when the unit is off.

1. Read instruction manuals for each component carefully, before attempting to assemble, disassemble or operate your particular system.
2. Do not exceed pressure rating of any component in system.
3. Protect material lines and air lines

▲ WARNING

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 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 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 shall be voided, and disclaims any liability whatsoever for any loss, personal injury or damage.

Portable Air Compressors

General Safety (Continued)

- from damage or puncture. Keep hose and power cord away from sharp objects, chemical spills, solvents, and wet floors.
- Never point a spray gun at oneself or any other person. Accidental discharge may result in serious injury.
 - Check hoses for weak or worn condition, before each use, making certain all connections are secure; do not use if deficiency is found. Notify an authorized service facility for examination or repair.
 - Release all pressures within system slowly; dust and debris may be harmful.
- ⚠ WARNING** *Disconnect power and depressurize system before servicing air compressor! (Turn pressure regulator knob fully clockwise after shutting off compressor).*
- Follow all local electrical and safety codes, as well as the National Electrical Code (NEC) and the Occupational Safety and Health Act (OSHA).
 - Wiring and fuses should follow electrical codes, current capacity, and be properly grounded.
 - Electric motors must be securely and adequately grounded. See grounding instructions and extension cord information, in this manual.
 - Always disconnect power source before working on or near a motor, or its connected load. If power disconnect point is out-of-sight, lock it in the open position and tag to prevent unexpected application of power.
 - Guard all moving parts; keep visitors away. Never allow children in work area.
 - Wear shoes to prevent shock hazards.
 - Be careful when touching exterior of operating motor, it may be hot enough to cause injury.
 - Protect power cord from coming in contact with sharp objects.
 - Clean electrical or electronic equipment with an approved cleaning agent such as dry, nonflammable cleaning solvent.
 - To avoid spontaneous combustion, discard waste rags into approved metal waste cans.
 - Never store flammable liquids or gases in vicinity of compressor.

- When spraying with solvent or toxic chemicals, follow instructions provided by the chemical manufacturer.
- Spray in a well ventilated area, to avoid fumes from collecting and causing health and fire hazards.
- Do not spray in vicinity of open flames or other places where a spark can cause ignition. Do not smoke when spraying paint, insecticides, or other flammable substances.
- Use a respirator when spraying.
- NEVER reset safety valve or pressure switch. Keep safety valve free from paint and other accumulations. This provides safety against over pressure.
- Do regular maintenance; keep all nuts, bolts, and screws tight, to be sure equipment is in safe working condition.
- Keep cleaning rags and other flammable waste materials in a tightly closed metal container and dispose of later in the proper fashion.
- Drain tank of moisture after each day's use. If unit will not be used for a while, it is best to leave drain cock open until such time as it is to be used. This will allow moisture to completely drain out and help prevent corrosion of inside of tank.
- Inspect tank yearly for rust, pin holes or any other imperfections that could cause it to become unsafe. NEVER weld or drill holes in air tank.

Assembly

HOSE

The hose should be assembled to hose connector or manifold and tightened snugly with a wrench.

AIR COMPRESSOR INITIAL START-UP PROCEDURE

- Check to see that all bolts & nuts are tight.
- Check to see if crank case has proper oil (SAE 30 warm weather SAE 20 cold weather non-detergent oil).
- Oil level can be checked by looking at sight glass on compressor crankcase. Oil level should be middle way of red dot on sight glass. Do not over-fill crankcase with oil. (Oil level should not exceed top of red dot on sight glass). If crankcase is over-filled excess oil will be blown out and create a mess on and around compressor.
- Install air filter supplied with compressor into filter hole in pump head. Making sure filter cartridge is inside filter canister. (Some models have plastic filter canisters and others have metal).

BEFORE STARTING AIR COMPRESSOR

- Open air drain cock located on bottom of tank to drain air from tank(s).

- Plug power cord into correct power source. (It is recommended that you plug compressor directly into outlet to insure proper voltage (120 volt) and amperage). The use of extension cords are not recommended but if you use an extension cord to run your compressor make sure cord is of proper size to supply adequate power to compressor.
- Run compressor with out building up pressure in tank (with drain cock open) for 20 minutes to insure proper lubrication of bearings and piston rings.
- After break-in period close air drain cock allowing tank(s) to fill with air. When pressure in tank reaches maximum recommended factory psi setting, compressor will shut off. When air pressure falls below minimum factory setting compressor will re-start and return tank pressure to maximum setting.
- Your air compressor is now ready to use.

WIRING

- Local electrical wiring codes differ from area to area. Source wiring, plug and protector must be rated for at least the amperage and voltage indicated on motor nameplate, and meet all electrical codes for this minimum.
- Use a slow blow fuse type T or a circuit breaker.

⚠ CAUTION *Overheating, short circuiting and fire damage will result from inadequate wiring, etc.*

EXTENSION CORDS

- Use only a 3-wire extension cord that has a 3-blade grounding plug, and a 3-slot receptacle that will accept plug on product.
- Make sure extension cord is in good condition, and heavy enough to carry current product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating.
- To avoid loss of power and overheating, it is better to use additional air hose instead of extension cords to reach work area.
- Table below shows correct size to use depending on cord length and nameplate ampere rating. If in doubt, use next heavier gauge.

NOTE: The smaller the gauge number, the heavier the cord.

- This product is for use on a nominal 120 volt circuit and has a polarized plug. Make sure that the product is connected to an outlet having the same configuration as the plug.

⚠ DANGER *Do not use an adapter with this product!*

GROUNDING INSTRUCTIONS

Installation (Continued)

1. This product should be grounded. In the event of an electrical short circuit, grounding reduces risk of electrical shock by providing an escape wire for electric current. This product is equipped with a cord having a grounding wire with an appropriate grounding plug. Plug must be plugged into an outlet that is properly installed and grounded in accordance with all local codes and ordinances.

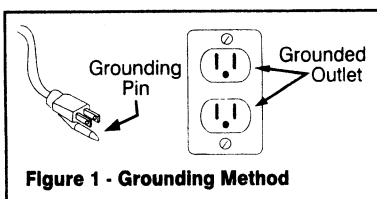


Figure 1 - Grounding Method

⚠ DANGER Improper use of grounding plug can result in a possible risk of electrical shock!

NOTE: Do not use grounding adapter.

2. If repair or replacement of cord or plug is necessary, do not connect grounding wire to either flat blade terminal. The wire with insulation having an outlet surface that is green with or without yellow stripes is the grounding wire.
3. Check with a qualified electrician or serviceman if grounding instructions are not completely understood, or if in doubt as to whether product is properly grounded. Do not modify plug provided; if it will not fit outlet, have proper outlet installed by a qualified electrician.

⚠ WARNING Never connect green (or green and yellow) wire to a live terminal.

Operation

FOR TROUBLE-FREE OPERATION

1. Read instructions; Carefully read through this owner's manual BEFORE OPERATING the new air compressor. It contains information about operation and maintenance of unit.

⚠ CAUTION Do not attach air chuck or other tool to open end of hose until start-up has been completed and unit checks Ok.

2. Turn regulator knob fully clockwise.

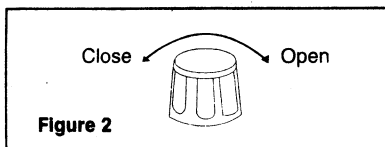


Figure 2

3. Turn switch to OFF position, and plug in power cord.
4. Turn switch to ON position.

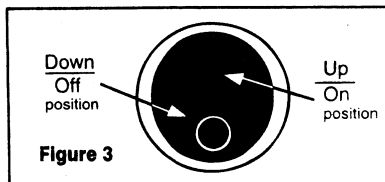


Figure 3

5. Turn regulator knob fully counterclockwise. Compressor will build to maximum preset pressure and shut off.
6. Turn regulator knob clockwise to cause air to bleed off. Compressor will restart at present pressure.
7. Turn regulator knob counterclockwise to shut off air and turn switch to OFF position.
8. Attach air chuck or other tool to open end of hose. Turn regulator fully ON. Apply a soap and water solution around hose fittings and check for signs of leaks (bubbles forming). If there is a leak, tighten connections and check again. When there are no leaks, compressor is ready for operation.

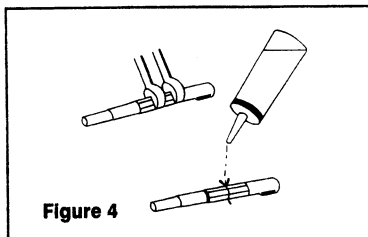


Figure 4

9. Drain tank daily: Open drain cock and drain moisture from tank. Be sure to close cock tightly before operating compressor. This helps prevent tank corrosion and keeps oil and moisture out of air used.

ASME SAFETY VALVE

1. This valve automatically releases air if air receiver pressure exceeds preset maximum.

⚠ DANGER Do not attempt to tamper with this valve!

2. This valve should be checked occasionally by pulling the ring by hand. If air leaks after ring has been released, or valve is stuck and cannot be actuated by ring, it MUST be replaced.

MOISTURE IN COMPRESSED AIR

Moisture in compressed air will form into droplets as it comes from an air compressor pump. When humidity is high or when a compressor is in continuous use for an extended period of time, this moisture will collect in the tank. When using a paint spray or sandblast gun, this water will be carried from the tank through the hose, and out of the gun as droplets mixed with the spray material.

IMPORTANT: This condensation will cause water spots in a paint job, especially when spraying other than water based paints. If sandblasting, it will cause the sand to cake and clog the gun, rendering it ineffective. A filter in the air line, located as near to the gun as possible, will help eliminate this moisture.

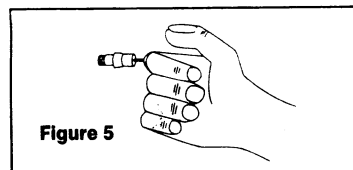


Figure 5

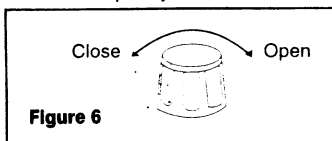
REGULATOR KNOB

1. This knob controls air pressure to an air operated tool, or paint spray gun.
2. Turning knob clockwise increases air pressure at outlet.
3. Turning counterclockwise will lower air pressure at outlet.

Portable Air Compressors

Operation (Continued)

4. Fully counterclockwise will shut off flow of air completely.



REGULATED OUTLET GAUGE

1. This gauge shows at-a-glance, air pressure at outlet. Air pressure is measured in pounds per square inch (psi).
2. Be sure this gauge reads ZERO before changing air tools or disconnecting hose from outlet.

TANK PRESSURE GAUGE

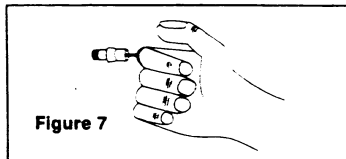
Gauge shows pressure in air receiver indicating compressor is building pressure properly.

Maintenance

WARNING Release all pressure and disconnect power before making any repair.

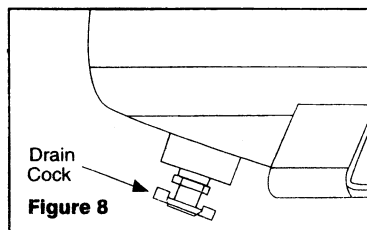
1. Check compressor for any visible problems, especially check air filter to be sure it is clean.

2. Pull ring on safety valve and allow it to snap back to normal position.



WARNING Safety valve must be replaced if it cannot be actuated or it leaks air after ring is released.

3. With compressor shut off reduce tank pressure below 10 psi, then drain moisture from tank daily to avoid tank corrosion. Drain moisture from tank by tilting the tank and opening the drain cock underneath the tank.



4. Turn power OFF and clean dust and dirt from motor, tank, air lines and pump cooling fins.

IMPORTANT: Unit should be located as far from spraying area as hose will allow.

LUBRICATION

This is a compressor that requires lubrication. SAE 30 warm SAE 20 cold rod detergent

THERMAL OVERLOAD PROTECTOR

CAUTION This compressor is equipped with a thermal overload protector which will shut off motor if it becomes overheated.

If thermal overload protector shuts motor OFF frequently look for the following causes.

1. Low voltage.
2. Wrong gauge wire or length of extension cord.
3. Lack of proper ventilation.

CAUTION The motor must be allowed to cool down before start-up is possible. The motor will automatically restart without warning if left plugged into electrical outlet if the motor is turned on.

STORAGE

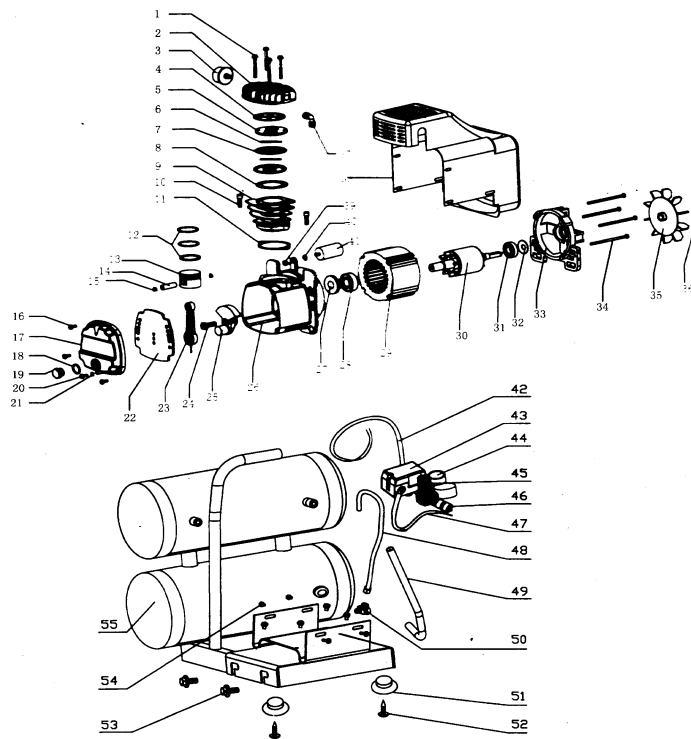
1. When not in use, hose and compressor should be stored in a cool dry place.
2. Tank should be drained of moisture.
3. Hose should be disconnected and hung open ends down to allow any moisture to drain.

Air Compressor Troubleshooting Guide

Symptom	Possible Cause(s)	Corrective Action
Compressor will not run	1. Loss of power or overheated. 2. No electrical power. 3. Breaker opens 4. Thermal overload open. 5. Pressure switch bad. 6. Tank is full of air.	1. Check for proper use of Extension cord. 2. Plugged in? Check fuse /breaker or motor overload 3. Reset, determine why problem happened. 4. Motor will restart when cool 5. Replace pressure switch. 6. Release air pressure in tank compressor will turn when pressure drops to cut in pressure.
Motor hums but cannot run or runs slowly.	1. Low voltage. 2. Wrong gauge wire or length of extension cord. 3. Shorted or open motor winding. 4. Defected check valve or unloader valve.	1. Check with voltmeter 2. Check gauge chart for proper Gauge wire and cord length. 3. Take compressor to service center. 4. Take compressor to service center.
Fuse blow/circuit breaker trips Repeatedly.	1. Incorrect size fuse, circuit overloaded. 2. Wrong gauge wire or length of extension cord. 3. Defective check valve or un-loader valve.	1. Check for proper fuse, use time Delay fuse. Disconnect other Electrical appliances from circuit Or operate compressor on its Own branch circuit. 2. Check gauge chart. 3. Take compressor to service Center.

Symptom	Possible Cause(s)	Corrective Action
Thermal overload protector Cuts out repeatedly.	1. Low voltage. 2. Lack of proper ventilation/ Room temperature too high. 3. Wrong gauge wire or length Of extension cord.	1. Check with voltmeter. 2. Move compressor to well Ventilated area. 3. Check gauge chart.
Air receiver pressure drops whe Compressor shuts off.	1. Loose connections (fittings, Tubing, etc.) 2. loose drain cock. 3. Check valve leaking.	1. Check all connections with soap and water solution and tighten. 2. Tighten 3. Take compressor to service center. DANGER! Do not disassemble Check valve with Air in tank; bleed Tank.
Excessive moisture in discharge Air.	1. Excessive water in air tank. 2. High humidity.	1. Drain tank. 2. Move to area of less humidity; use air line filter.
Compressor runs continuously.	1. Defective pressure switch. 2. Excessive air usage.	1. Take compressor to service Center. 2. Decrease air usage; compressor not large enough for your tool's requirement.
Compressor vibrates.	1. Loose mounting bolts.	1. Tighten mounting bolts.
Air output lower than normal.	1. Broken inlet valves. 2. Connection leaking. 3. Restricted air filter	1. Take to compressor to service Center. 2. Tighten connections. 3. Clean or replace filter.
Oil discharge in air.	1. Improper oil viscosity 2. Too much oil in crankcase 3. Restricted air filter.	1. Replace3 oil with SAE30 or SAE20 weight non-detergent oil 2. Drain oil from crankcase to proper level. 3. Clean or replace filter.

FLSB
PARTS DRAWING



PART LIST

N0	Description	QTY	N0	Description	QTY
1	BoltM6x55	4	31	brearing 6202	1
2	cylinder head	1	32	wave washer D35	1
3	Air filter	1	33	motor cover	1
4	cylinder head gasket	1	34	bolt M5x103	4
5	valve plate	2	35	motor cover	1
6	valve clack	2	36	circlip	1
7	Alum gasket	1	37	connector	1
8	valve plate gasket	1	38	fan cover	1
9	cylinder	1	39	nut M8	1
10	hex bolt M8x25	2	40	dentation washer $\Phi 8$	1
11	cylinder gasket	1	41	capacitance	1
12	piston ring	1	42	powr cord	1
13	piston	1	43	pressure gauge	2
14	piston pin	1	44	pressure switch	1
15	circlip	2	45	regulator valve	1
16	bolt M5x16	4	46	Quick Couplers	1
17	crank case cover	1	47	internal wire	1
18	oil leveler gasket	1	48	release pipe	1
19	oil leveler	1	49	discharge pipe	1
20	bolt M6x10	1	50	unilateralism valve	1
21	O circlip $\Phi 5.6 \times \Phi 1.8$	1	51	washer foot	4
22	rubber gasket	1	52	screw ST3.9	4
23	conncting rod	1	53	bolt M5x14	4
24	hex bolt M8x22(left)	1	54	bolt M8x30	4
25	crank	1	55	tank	1
26	crank case	1	56		
27	sealing ring	1	57		
28	brearing 6204	1	58		
29	stator	1	59		
30	rotor	1	60		