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# Compressor



Serial No.

### IMPORTANT

Please make certain that the person who is to use this equipment carefully reads and understands these instructions before starting operations.

The Model and Serial No. plate is located on the frame. Record these numbers in the spaces below and retain for future reference.

Part No. D22677-0012-1

# **SAFETY GUIDELINES - DEFINITIONS**

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 symbols below. Please read the manual and pay attention to these sections.

<b>ADANGER</b> DANGER indicates an imminently hazardous situation which, if not avoided, will result in <u>death or</u> <u>serious injury</u> .	<b>ACAUTION</b> <b>CAUTION</b> indicates a potentially hazardous situation which, if not avoided, <u>may</u> result in <u>minor or</u> <u>moderate injury</u> .	
<b>WARNING</b> WARNING indicates a potentially hazardous situation which, if not avoided, <u>could</u> result in <u>death or</u> <u>serious injury</u> .	<b>CAUTION</b> CAUTION used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, <u>may</u> result in <u>property</u> damage.	
Call our <b>Toll Free Number 1-888-559-8550,</b> to obtain the location of the nearest Authorized Service Center for ordering repair parts and for warranty repairs.		
When ordering repair parts from your local Authorized Service Center, always give the following information:		
Model number of your compressor		
<ul> <li>Part number and description of the item you wish to purchase</li> </ul>		
Retain Original Sales Receipt as Proof of Purchase for Warranty Repair Work.		

# **IMPORTANT SAFETY INSTRUCTIONS**

**AWARNING** When using electric tools, basic safety precautions should always be followed to reduce the risk of fire, electric shock and personal injury, including the following:

### **READ AND FOLLOW ALL INSTRUCTIONS.**

This tool was designed for certain applications. Porter-Cable strongly recommends that this tool NOT be modified and/or used for any application other than for which it was designed. If you have any questions relative to its application DO NOT use the tool until you have written Porter-Cable and we have advised you.

Technical Service Manager Porter-Cable Corporation 4825 Highway 45 North P.O. Box 2468 Jackson, TN 38302-2468





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IMPROPER OPERATION OR MAINTENANCE OF THIS PRODUCT COULD RESULT IN SERIOUS INJURY AND PROPERTY DAMAGE. READ AND UNDERSTAND ALL WARNINGS AND OPERATING INSTRUCTIONS BEFORE USING THIS EQUIPMENT.

### HAZARD

ų, **RISK OF EXPLOSION OR FIRE** WHAT CAN HAPPEN HOW TO PREVENT IT IT IS NORMAL FOR ELECTRICAL CONTACTS ALWAYS OPERATE THE COMPRESSOR IN A WELL WITHIN THE MOTOR AND PRESSURE SWITCH TO VENTILATED AREA FREE OF COMBUSTIBLE MATERIALS, GASOLINE OR SOLVENT VAPORS. SPARK IF ELECTRICAL SPARKS FROM COMPRESSOR COME INTO CONTACT WITH FLAMMABLE VAPORS, THEY MAY IGNITE, CAUSING FIRE OR EXPLOSION. IF SPRAYING FLAMMABLE MATERIALS, LOCATE COMPRESSOR AT LEAST 20 FEET AWAY FROM SPRAY AREA. AN ADDITIONAL LENGTH OF HOSE MAY BE REQUIRED. STORE FLAMMABLE MATERIALS IN A SECURE LOCATION AWAY FROM COMPRESSOR. NEVER PLACE OBJECTS AGAINST OR ON TOP RESTRICTING ANY OF THE COMPRESSOR VENTILATION OPENINGS WILL CAUSE SERIOUS OF COMPRESSOR. OPERATE COMPRESSOR IN AN OPEN AREA AT LEAST 12 INCHES AWAY FROM OVERHEATING AND COULD CAUSE FIRE. ANY WALL OR **OBSTRUCTION** THAT WOULD RESTRICT THE FLOW OF FRESH AIR TO THE VENTILATION OPENINGS OPERATE COMPRESSOR IN A CLEAN, DRY, WELL VENTILATED AREA. DO NOT OPERATE UNIT INDOORS OR IN ANY CONFINED AREA. UNATTENDED OPERATION OF THIS PRODUCT ALWAYS REMAIN IN ATTENDANCE WITH THE COULD RESULT IN PERSONAL INJURY OR PRODUCT WHEN IT IS OPERATING. PROPERTY DAMAGE.

### **RISK OF BURSTING**



AIR TANK: THE FOLLOWING CONDITIONS COULD LEAD TO A WEAKENING OF THE TANK, AND RESULT IN A VIOLENT TANK EXPLOSION AND COULD CAUSE PROPERTY DAMAGE OR SERIOUS INJURY.

WHAT CAN HAPPEN		HOW TO PREVENT IT	
1.	FAILURE TO PROPERLY DRAIN CON- DENSED WATER FROM THE TANK, CAUSING RUST AND THINNING OF THE STEEL TANK.	DRAIN TANK DAILY OR AFTER EACH USE. IF TANK DEVELOPS A LEAK, REPLACE IT IMMEDIATELY WITH A NEW TANK OR REPLACE THE ENTIRE COMPRESSOR.	
2.	MODIFICATIONS OR ATTEMPTED REPAIRS TO THE TANK.	NEVER DRILL INTO, WELD, OR MAKE ANY MODIFICATIONS TO THE TANK OR ITS	
3.	UNAUTHORIZED MODIFICATIONS TO THE UNLOADER VALVE, SAFETY VALVE, OR ANY OTHER COMPONENTS WHICH CONTROL TANK PRESSURE.	ATTACHMENTS. THE TANK IS DESIGNED TO WITHSTAND SPECIFIC OPERATING PRESSURES. NEVER MAKE ADJUSTMENTS OR PARTS SUBSTITUTIONS TO	
4.	EXCESSIVE VIBRATION CAN WEAKEN THE AIR TANK AND CAUSE RUPTURE OR EXPLOSION.	PRESSURES.	
ATTACHMENTS & ACCESSORIES: EXCEEDING THE PRESSURE RATING OF AIR TOOLS, SPRAY GUNS, AIR OPERATED ACCESSORIES, TIRES AND OTHER INFLATABLES CAN CAUSE THEM TO EXPLODE OR FLY APART, AND COULD RESULT IN SERIOUS INJURY.		FOR ESSENTIAL CONTROL OF AIR PRESSURE, YOU MUST INSTALL A PRESSURE REGULATOR AND PRESSURE GAUGE TO THE AIR OUTLET OF YOUR COMPRESSOR. FOLLOW THE EQUIPMENT MANUFACTURERS RECOMMENDATION AND NEVER EXCEED THE MAXIMUM ALLOWABLE PRESSURE RATING OF ATTACHMENTS. NEVER USE COMPRESSOR TO INFLATE SMALL LOW- PRESSURE OBJECTS SUCH AS CHILDREN'S TOYS, FOOTBALLS, BASKETBALLS. ETC.	

# **IMPORTANT SAFETY INSTRUCTIONS (cont'd)**

**RISK FROM FLYING OBJECTS** 



WHAT CAN HAPPEN	HOW TO PREVENT IT
THE COMPRESSED AIR STREAM CAN CAUSE SOFT TISSUE DAMAGE TO EXPOSED SKIN AND CAN PROPEL DIRT, CHIPS, LOOSE PARTICLES AND SMALL OBJECTS AT HIGH SPEED, RESULTING IN PROPERTY DAMAGE OR PERSONAL INJURY.	ALWAYS WEAR ANSI Z87.1 APPROVED SAFETY GLASSES WITH SIDE SHIELDS WHEN USING THE COMPRESSOR. NEVER POINT ANY NOZZLE OR SPRAYER TOWARD ANY PART OF THE BODY OR AT OTHER PEOPLE OR ANIMALS.
	ALWAYS TURN THE COMPRESSOR OFF AND BLEED PRESSURE FROM THE AIR HOSE AND TANK BEFORE ATTEMPTING MAINTENANCE, ATTACHING TOOLS OR ACCESSORIES.

**RISK TO BREATHING** 



WHAT CAN HAPPEN	HOW TO PREVENT IT
THE COMPRESSED AIR DIRECTLY FROM YOUR COMPRESSOR IS NOT SAFE FOR BREATHING. THE AIR STREAM MAY CONTAIN CARBON MONOXIDE, TOXIC VAPORS, OR SOLID PARTICLES FROM THE TANK. BREATHING THESE CONTAMINANTS CAN CAUSE SERIOUS INJURY OR DEATH.	AIR OBTAINED DIRECTLY FROM THE COMPRESSOR SHOULD NEVER BE USED TO SUPPLY AIR FOR HUMAN CONSUMPTION. IN ORDER TO USE AIR PRODUCED BY THIS COMPRESSOR FOR BREATHING, SUITABLE FILTERS AND IN-LINE SAFETY EQUIPMENT MUST BE PROPERLY INSTALLED. IN-LINE FILTERS AND SAFETY EQUIPMENT USED IN CONJUNCTION WITH THE COMPRESSOR MUST BE CAPABLE OF TREATING AIR TO ALL APPLICABLE LOCAL AND FEDERAL CODES PRIOR TO HUMAN CONSUMPTION.
SPRAYED MATERIALS SUCH AS PAINT, PAINT SOLVENTS, PAINT REMOVER, INSECTICIDES, WEED KILLERS, CONTAIN HARMFUL VAPORS AND POISONS.	WORK IN AN AREA WITH GOOD CROSS- VENTILATION. READ AND FOLLOW THE SAFETY INSTRUCTIONS PROVIDED ON THE LABEL OR SAFETY DATA SHEETS FOR THE MATERIAL YOU ARE SPRAYING. USE A NIOSH/MSHA APPROVED RESPIRATOR DESIGNED FOR USE WITH YOUR SPECIFIC APPLICATION.

**RISK OF ELECTRICAL SHOCK** 



WHAT CAN HAPPEN	HOW TO PREVENT IT	
YOUR AIR COMPRESSOR IS POWERED BY ELECTRICITY. LIKE ANY OTHER ELECTRICALLY POWERED DEVICE, IF IT IS NOT USED PROPERLY IT MAY CAUSE ELECTRIC SHOCK.	NEVER OPERATE THE COMPRESSOR OUTDOORS WHEN IT IS RAINING OR IN WET CONDITIONS. <b>NEVER OPERATE COMPRESSOR WITH COVER</b> COMPONENTS <b>REMOVED</b> OR DAMAGED.	
REPAIRS ATTEMPTED BY UNQUALIFIED PERSONNEL CAN RESULT IN SERIOUS INJURY OR DEATH BY ELECTROCUTION.	ANY ELECTRICAL WIRING OR REPAIRS REQUIRED ON THIS PRODUCT SHOULD BE PERFORMED BY AUTHORIZED SERVICE CENTER PERSONNEL IN ACCORDANCE WITH NATIONAL AND LOCAL ELECTRICAL CODES.	
ELECTRICAL GROUNDING: FAILURE TO PROVIDE ADEQUATE GROUNDING TO THIS PRODUCT COULD RESULT IN SERIOUS INJURY OR DEATH FROM ELECTROCUTION. SEE GROUNDING INSTRUCTIONS.	MAKE CERTAIN THAT THE ELECTRICAL CIRCUIT TO WHICH THE COMPRESSOR IS CONNECTED PROVIDES PROPER ELECTRICAL GROUNDING, CORRECT VOLTAGE AND ADEQUATE FUSE PROTECTION.	

# IMPORTANT SAFETY INSTRUCTIONS (cont'd) K FROM MOVING PARTS

**RISK FROM MOVING PARTS** 



WHAT CAN HAPPEN	HOW TO PREVENT IT	
MOVING PARTS SUCH AS THE PULLEY, FLYWHEEL, AND BELT CAN CAUSE SERIOUS INJURY IF THEY COME INTO CONTACT WITH YOU OR YOUR CLOTHING.	NEVER OPERATE THE COMPRESSOR WITH GUARDS OR COVERS WHICH ARE DAMAGED OR REMOVED.	
ATTEMPTING TO OPERATE COMPRESSOR WITH DAMAGED OR MISSING PARTS OR ATTEMPTING TO REPAIR COMPRESSOR WITH PROTECTIVE SHROUDS REMOVED CAN EXPOSE YOU TO MOVING PARTS AND CAN RESULT IN SERIOUS INJURY.	ANY REPAIRS REQUIRED ON THIS PRODUCT SHOULD BE PERFORMED BY AUTHORIZED SERVICE CENTER PERSONNEL.	
RISK OF BURNS	Taihi a	
WHAT CAN HAPPEN	HOW TO PREVENT IT	
TOUCHING EXPOSED METAL SUCH AS THE COMPRESSOR HEAD OR OUTLET TUBES, CAN RESULT IN SERIOUS BURNS.	NEVER TOUCH ANY EXPOSED METAL PARTS ON COMPRESSOR DURING OR IMMEDIATELY AFTER OPERATION. COMPRESSOR WILL REMAIN HOT FOR SEVERAL MINUTES AFTER OPERATION. DO NOT REACH AROUND PROTECTIVE SHROUDS OR ATTEMPT MAINTENANCE UNTIL UNIT HAS BEEN ALLOWED TO COOL.	
RISK OF FALLING		
WHAT CAN HAPPEN	HOW TO PREVENT IT	
A PORTABLE COMPRESSOR CAN FALL FROM A TABLE, WORKBENCH OR ROOF CAUSING DAMAGE TO THE COMPRESSOR AND COULD RESULT IN SERIOUS INJURY OR DEATH TO THE OPERATOR OR BYSTANDERS.	ALWAYS OPERATE COMPRESSOR IN A STABLE SECURE POSITION TO PREVENT ACCIDENTAL MOVEMENT OF THE UNIT. NEVER OPERATE COMPRESSOR ON A ROOF OR OTHER ELEVATED POSITION. USE ADDITIONAL AIR HOSE TO REACH HIGH LOCATIONS.	
RISK OF PROPERTY DAMAGE WHEN TRANSPORTING COMPRESSOR (Fire, Inhalation, Damage to Vehicle Surfaces)		
WHAT CAN HAPPEN	HOW TO PREVENT IT	
OIL CAN LEAK OR SPILL AND COULD RESULT IN FIRE OR BREATHING HAZARD, SERIOUS INJURY OR DEATH CAN RESULT. OIL LEAKS WILL DAMAGE CARPET, PAINT OR OTHER SURFACES IN VEHICLES OR TRAILERS.	ALWAYS PLACE COMPRESSOR ON A PROTECTIVE MAT WHEN TRANSPORTING TO PROTECT AGAINST DAMAGE TO VEHICLE FROM LEAKS. REMOVE COMPRESSOR FROM VEHICLE IMMEDIATELY UPON ARRIVAL AT YOUR DESTINATION.	
RISK OF LIFTING		
WHAT CAN HAPPEN	HOW TO PREVENT IT	
SERIOUS INJURY CAN RESULT FORM ATTEMPTING TO LIFT TOO HEAVY AN OBJECT.	THE UNIT IS TOO HEAVY TO BE LIFTED BY ONE PERSON. OBTAIN ASSISTANCE FROM OTHERS BEFORE YOU TRY TO MOVE IT.	

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### GLOSSARY

CFM: Cubic feet per minute.

**SCFM:** Standard cubic feet per minute; a unit of measure of air delivery. **PSIG:** Pounds per square inch gauge; a unit of measure of pressure.

**ASME:** American Society of Mechanical Engineers; made, tested, inspected and registered to meet the standards of ASME.

**California Code:** Unit may comply with California Code 462 (*ℓ*) (2)/(M) (2). Specification/model label is on the side of the tank on units that comply with California Code.

**Cut-In Pressure:** While the motor is off, air tank pressure drops as you continue to use your accessory or air tool. When the tank pressure drops to a certain low level the motor will restart automatically. The low pressure at which the motor automatically restarts is called "cut-in pressure."

**Cut-Out Pressure:** When you turn on your air compressor and it begins to run, air pressure in the air tank begins to build. It builds to a certain high pressure before the motor automatically shuts off - protecting your air tank from pressure higher than its capacity. The high pressure at which the motor shuts off is called "cut-out pressure."

**Code Certification:** Products that bear one or more of the following marks: UL, CUL, ETL, CETL, have been evaluated by OSHA certified independent safety laboratories and meet the applicable Underwriters Laboratories Standards for Safety.

# DUTY CYCLE

Porter-Cable air compressors should be operated on not more than a 50% duty cycle. This means an air compressor that pumps air 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.

### SPECIFICATIONS

Model No.	CPFC2TV3520W
Bore	2.375"
Stroke-High Pressure	.54"
Low Pressure	1.45"
* Voltage/Hertz/Phase	120/60/1
** Minimum Branch Circuit Requirement	15 amps
* Fuse Type	Time Delay
Amperage at Max. Load	15 Amp
Air Tank Capacity (Gallon)	20
Approximate Cut-in Pressure	145 PSIG
Approximate Cut-out Pressure	175 PSIG
SCFM @ 90 PSIG	5.1

\* **ACAUTION** This air compressor can be operated on a 15 amp circuit if:

1. Voltage supply to circuit is normal.

2. Circuit is not used to supply any other electrical needs (lights, appliances, etc.)

3. Extension cords comply with specifications in owners manual.

4. Circuit is equipped with 15 amp circuit breaker or 15 amp time delay fuse.

If any of the above conditions cannot be met, or if operation of the air compressor repeatedly causes interruption of the power it may be necessary to operate it from a 20 amp circuit. It is not necessary to change the cord set.

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

# **DESCRIPTION OF OPERATION**

**Drain Valve (not shown):** The drain valve is located at the base of the air tank and is used to drain condensation at the end of each use.

**Motor Thermal Overload Protector (not shown):** The electric motor has an automatic thermal overload protector. If the motor overheats for any reason, the thermal overload protector will shut off the motor. The motor must be allowed to cool before restarting.

ON/AUTO - OFF Switch (A) Fig. 1: Turn this switch ON to provide automatic power to the pressure switch and OFF to remove power at the end

of each use. Air Intake Filter (not

**shown):** This filter is

designed to clean air coming into the pump. This filter <u>must</u> always be clean and ventilation openings free from obstructions. See "Maintenance".

Air Compressor Pump (not shown): Compresses air into the air tank.

Fig. 1

**Check Valve (not shown):** When the air compressor is operating, the check valve is "open", allowing compressed air to enter the air tank. When the air compressor reaches "cut-out" pressure, the check valve "closes", allowing air pressure to remain inside the air tank.

**Pressure Release Valve (not shown):** The pressure release valve located on the side of the pressure switch, is designed to automatically release compressed air from the compressor head and the outlet tube when the air compressor reaches "cut-out" pressure or is shut off. The pressure release valve allows the motor to restart freely. When the motor stops running, air will be heard escaping from this valve for a few seconds. No air should be heard leaking when the motor is running, or continuous leaking after unit reaches cut-out pressure.

**Pressure Switch (B) Fig. 1:** The pressure switch automatically starts the motor when the air tank pressure drops below the factory set "cut-in" pressure. It stops the motor when the air tank pressure reaches the factory set "cut-out" pressure.

**Safety Valve (C) Fig. 1:** If the pressure switch does not shut off the air compressor at its cut-out pressure setting, the safety valve will protect against high pressure by "popping out" at its factory set pressure (slightly higher than the pressure switch cut-out setting).

**Outlet Pressure Gauge (D) Fig. 1:** The outlet pressure gauge indicates the air pressure available at the outlet side of the regulator. This pressure is controlled by the regulator and is always less than or equal to the tank pressure. All four outlets operate at this pressure.

**Tank Pressure Gauge (E) Fig. 1:** The tank pressure gauge indicates the reserve air pressure in the tank. The "quadraport" is equipped with an tank pressure gauge to be read at a remote location.

**Regulator (F) Fig. 1:** Controls the air pressure shown on the outlet pressure gauge. Pull the knob out and turn clockwise to increase pressure and counterclockwise to decrease pressure. When the desired pressure is reached push knob in to lock in place.

**Portable "Quadraport" Control Panel (G) Fig. 1:** Permits remote air regulation and control closer to work area, includes four high-flow industrial/automotive style compatible quick-connects, large gauges, and a high-flow regulator.

## INSTALLATION

**AWARNING** THE WHEELS AND HANDLE DO NOT PROVIDE ADEQUATE CLEARANCE, STABILITY OR SUPPORT FOR PULLING THE UNIT UP AND DOWN STAIRS OR STEPS. THE UNIT MUST BE LIFTED, OR PUSHED UP A RAMP.

**ACAUTION** It may be necessary to brace or support one end of the outfit when attaching the wheels and the rubber feet, because the air compressor will have a tendency to tip.

- Place shoulder bolt (C) through wheel (B) and position it into the hole of the mounting bracket (protruding hub to the inside). Thread nut (A) onto shoulder bolt and tighten firmly with a 9/16" wrench. Repeat to install second wheel. See Figure 2.
- Attach the rubber feet (D) to the bottom of the front bracket using the screws (E) provided.
- Rotate handle into operating position as shown in Figure 3.
   NOTE: Handles will lock into place.



Fig. 2



Fig. 3

### Location of the Air Compressor

Locate the air compressor in a clean, dry, and well-ventilated area. The air filter must be kept clear of obstructions which could reduce air flow to the air compressor. The air compressor should be located at least 12" away from the wall or other obstructions that will interfere with the flow of air. The air compressor head and shroud are designed to allow for proper cooling. If humidity is high, an air filter can be installed on the air outlet adapter to remove excessive moisture. Follow the instructions packaged with the air filter for proper installation.

### Lubrication and Oil

This unit needs no lubrication or oiling.

### Extension Cords

To avoid voltage drop, power loss, and overheating to the motor, use extra air hose instead of an extension cord. Low voltage can cause damage to the motor.

### If an extension cord must be used:

- use only a 3-wire extension cord that has a 3-blade grounding plug and a 3-slot receptacle that will accept the plug on the extension cord.
- make sure the extension cord is in good condition.
- the extension cord should be no longer than 50 feet.
- the minimum wire size is 12 gauge (AWG). (Wire size increases as gauge number decreases. 10 AWG and 8 AWG may also be used. DO NOT USE 14 AWG or 16 AWG.)

### **Voltage and Circuit Protection**

Refer to the specification chart for voltage and circuit protection requirements of your compressor. Use only a fuse or circuit breaker that is the same rating as the branch circuit on which the air compressor is operated. If the compressor is connected to a circuit protected by fuses, use only dual element time delay fuses.

### Portable "Quadraport" Control Panel

The "Quadraport" allows remote air regulation and control closer to the work area.



### To operate "Quadraport" attached:

 Attach 3/8" hoses (A) with 1/4" industrial quick-connect fittings (B) to the outlets (C). One to four tools can be used at the same time. See Figure 4.

Note

Always use pipe sealant tape when connecting hoses or fittings to prevent air leaks.

To operate "Quadraport" at a remote location:

AWARNING CAN CAUSE SERIOUS INJURY OR DEATH. TANK MAY CONTAIN

175 PSI OF AIR PRESSURE. NEVER



Fig. 4

CONNECT ACCESSORIES TO UNREGULATED AIR. NEVER OPERATE TOOLS OR ACCESSORIES ABOVE MARKED MAXIMUM PRESSURE.

**ACAUTION** Reduce air pressure in tank to 60 psi maximum before removing or connecting "quadraport" and when connecting hose to tank quick-connect coupler.

1. Hold "quadraport" and pull quick-connect coupler (D) back to release and remove as shown in Figure 5.



Fig. 5

2. Attach one end of a 1/2" hose (E) with 3/8" quick-connect back flow safety check valve (provided in kit) as shown in Figure 5. Make sure quick-connect coupler is secure.

▲ CAUTION To prevent possible injury, <u>ALWAYS use back flow safety</u> <u>check valve</u> included with unit <u>to connect "quadraport" to hose</u> for use at a remote location. If replacement back flow safety check valve is needed refer to the Parts Manual.

### Note

Always use pipe sealant tape when connecting hoses or fittings to prevent air leaks.

3. Attach the other end of the 1/2" hose (E) with 3/8" universal quick connect body to the "quadraport" as shown in figure 5. **NOTE: See Figure below to assemble 3/8" universal quick connect body to hose.** 



- Attach 3/8" hoses (A) with 1/4" industrial quick-connect plugs (B) to the outlets (C). One to four tools can be used at the same time. See figure 4.
- 5. The "quadraport" can be temporarily or permanently mounted at the work site using the three mounting holes (F). See Figure 6.

### **GROUNDING INSTRUCTIONS**

3/8" Universal quick Hose connect body



Fig. 6

**ADANGER** 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.

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. 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 Fig. 7. **DO NOT USE AN ADAPTER.** 



# ADANGER Improper grounding can result in electrical shock!

Do not modify the plug that has been provided. If it

GROUNDEN GROUNDEN GROUNDEN Fig. 7

120 Volt Models

White

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.

# **BREAK-IN PROCEDURES**

# **ACAUTION** Serious damage may result if the following break-in instructions are not closely followed.

This procedure is required before the air compressor is put into service. (before the hose is installed), the check valve is replaced, or a complete compressor pump is replaced.

### The procedure:

- 1. Make sure the pressure switch lever is in the "OFF" position. **NOTE:** Your unit could be damaged if the pressure swich lever is in the ON/AUTO position.
- 2. Plug the power cord into the correct branch circuit receptacle.
- 3. Open the drain valve fully to permit air to escape and prevent air pressure build up in the air tank during the break-in period.
- 4. Move the pressure switch lever to "ON/AUTO". The compressor will start.
- 5. Run the compressor for 15 minutes. Make sure the drain valve is open and there is minimal air pressure build-up in tank.
- 6. After 15 minutes, close the drain valve.
- 7. The air receiver will fill to cut-out pressure and the motor will stop. The compressor is now ready for use.

# **OPERATING PROCEDURES**

### **Daily Start-Up Checklist**

- Make sure the ON/AUTO lever is set to "OFF" and the air regulator is closed. NOTE: Your unit could be damaged if the pressure swich lever is in the ON/ AUTO position.
- 2. Plug the power cord into the correct branch circuit receptacle.
- 3. Attach hose and accessories. See the **Portable "Quadraport" Control Panel** paragraph on page 9.

AWARNING TOO MUCH AIR PRESSURE CAUSES A HAZARDOUS RISK OF BURSTING. CHECK THE MANUFACTURER'S MAXIMUM PRESSURE RATING FOR AIR TOOLS AND ACCESSORIES. THE REGULATOR OUTLET PRESSURE MUST NEVER EXCEED THE MAXIMUM PRESSURE RATING.

- 4. Turn the ON/AUTO lever to "AUTO" and allow tank pressure to build. Motor will stop when tank pressure reaches "cut-out" pressure.
- 5. Open the regulator by turning it clockwise. Adjust the regulator to the correct pressure setting. Your compressor is ready for use.
- Always operate the air compressor in well-ventilated areas free of gasoline or other combustible vapors. If the compressor is being used to operate a sprayer DO NOT use near the spray area.

### When you are finished:

- 7. Set the "ON/AUTO" lever to "OFF".
- 8. Turn the regulator counterclockwise and set the outlet pressure to zero.
- 9. Remove the air tool or accessory.

# AWARNING TANK CAN CONTAIN 175 PSI OF AIR PRESSURE. ALWAYS STAND CLEAR WHEN BLEEDING AIR THROUGH SAFETY VALVE.

- 10. Pull ring on safety valve allowing air to bleed from the tank until tank pressure is approximately 20 psi. Release safety valve ring.
- 11. Drain water from air tank by opening drain cock valve on bottom of tank.

# **AWARNING** WATER WILL CONDENSE IN THE AIR TANK. IF NOT DRAINED, WATER WILL CORRODE AND WEAKEN THE AIR TANK CAUSING A RISK OF AIR TANK RUPTURE.

12. After the water has been drained, close the drain cock or drain valve. The air compressor can now be stored.

### NOTE

If drain cock valve is plugged, release all air pressure. The valve can then be removed, cleaned, then reinstalled.

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## MAINTENANCE

**AWARNING** Unit cycles automatically when power is on. During maintenance, you could be exposed to voltage sources, compressed air, moving parts, or hot surfaces. Personal injuries can occur. Unplug the unit and bleed off all air tank pressure and allow unit to cool before doing any maintenance or repair.

To ensure efficient operation and longer life of the air compressor outfit, a routine maintenance schedule should be prepared and followed. The following routine maintenance schedule is geared to an outfit in a normal working environment operating on a daily basis. If necessary, the schedule should be modified to suit the conditions under which your compressor is used. The modifications will depend upon the hours of operation and the working environment. Compressor outfits in an extremely dirty and/or hostile environment will require a greater frequency of all maintenance checks.

### ROUTINE MAINTENANCE SCHEDULE Daily:

# AWARNING TANK CAN CONTAIN 175 PSI OF AIR PRESSURE. ALWAYS STAND CLEAR WHEN BLEEDING AIR THROUGH SAFETY VALVE.

- 1. Pull ring on safety valve allowing air to bleed from the tank until tank pressure is approximately 20 psi. Release safety valve ring.
- 2. Drain water from the air tank by opening drain cock valve on bottom of tank. Also drain water from any moisture separators or transformers.
- 3. Check for any unusual noise and/or vibration.
- 4. Manually check safety valve to make sure of proper operation.
- 5. Inspect air filter and replace if necessary.
- 6. Inspect air lines and fittings for leaks and correct as necessary.

### Each Year of Operation or if a Problem is Suspected:

Check condition of air compressor pump intake and exhaust valves. Replace if damaged or worn out.

## SERVICE INSTRUCTIONS

### Air Filter - Inspection and Replacement

# **AWARNING** Hot surfaces. Risk of burn. Compressor heads are exposed when filter cover is removed. Allow compressor to cool prior to servicing.

Keep the air filter clean at all times. Do not operate the compressor with the air filter removed. A dirty air filter will not allow the compressor to operate at full capacity. Before you use the compressor, check the air filter to be sure it is clean. If it is dirty wash it with mild detergent and warm water, or replace it.



### Safety Valve - Inspection

Fig. 8

AWARNING IF THE SAFETY VALVE DOES NOT WORK PROPERLY, OVER-PRESSURIZATION MAY OCCUR, CAUSING AIR TANK RUPTURE OR AN EXPLOSION. DAILY PULL THE RING ON THE SAFETY VALVE TO MAKE SURE THAT THE SAFETY VALVE OPERATES FREELY. IF THE VALVE IS STUCK OR DOES NOT OPERATE SMOOTHLY, IT MUST BE REPLACED WITH THE SAME TYPE OF VALVE.

### **Check Valve Replacement**

- 1. Release all air pressure from air tank and unplug outfit.
- 2. Remove shroud.
- 3. Loosen the top and bottom nuts and remove the outlet tube.
- 4. Remove the pressure release tube and fitting.
- 5. Unscrew the check valve using a socket wrench.
- 6. Check that the valve disc moves freely inside the check valve and that the spring holds the disc in the upper, closed position. The check valve may be cleaned with a strong solvent.
- 7. Apply sealant to the check valve threads. Reinstall the check valve.
- 8. Replace the pressure release tube and fitting.
- 9. Replace the outlet tube and tighten top and bottom nuts.
- 10. Replace the shroud.

### Motor

The motor has an automatic reset thermal overload protector. If the motor overheats for any reason, the overload protector will shut off the motor. The motor must be allowed to cool down before restarting. The compressor will automatically restart after the motor cools.

If the overload protector shuts the motor off frequently, check for a possible voltage problem. Low voltage can also be suspected when:

- 1. The motor does not get up to full power or speed.
- 2. Fuses blow out when starting the motor; lights dim and remain dim when motor is started and/or is running.

### Motor - Wiring Diagram

The motor connection diagram is located on the side of motor.

# STORAGE AND TRANSPORTATION

Before you store the air compressor, make sure you do the following:

- 1. Review the "Maintenance" section on the preceding pages and perform scheduled maintenance as necessary.
- 2. Set the "ON/AUTO" lever to "OFF".
- 3. Turn the regulator counterclockwise and set the outlet pressure to zero.
- 4. Remove the air tool or accessory.

# AWARNING TANK CAN CONTAIN 175 PSI OF AIR PRESSURE. ALWAYS STAND CLEAR WHEN BLEEDING AIR THROUGH SAFETY VALVE.

- 5. Pull ring on safety valve allowing air to bleed from the tank until tank pressure is approximately 20 psi. Release safety valve ring.
- 6. Drain water from air tank by opening drain cock valve on bottom of tank.

# **AWARNING** WATER WILL CONDENSE IN THE AIR TANK. IF NOT DRAINED, WATER WILL CORRODE AND WEAKEN THE AIR TANK CAUSING A RISK OF AIR TANK RUPTURE.

7. After the water has been drained, close the drain cock or drain valve.

### NOTE

If drain cock valve is plugged, release all air pressure. The valve can then be removed, cleaned, then reinstalled.

- 8. Protect the electrical cord and air hose from damage (such as being stepped on or run over).
- 9. While lifting tab (A) rotate handle (B) into storage position. See Figure 9.
- 10. Store the air compressor in a clean and dry location.

### To Transport unit

1. Fold handles into storage position.



# The unit is too heavy to be lifted by one person. Use two people to lift unit.

- 2. Locate the lift handles (C) on each side of the unit.
- With a person on each side, carefully lift unit using handle (B) and lift handle (C). See Figure 10.









Fig. 10

# **TROUBLESHOOTING GUIDE**

### AWARNING PERFORMING REPAIRS MAY EXPOSE VOLTAGE SOURCES, MOVING PARTS OR COMPRESSED AIR SOURCES. PERSONAL INJURY MAY OCCUR. PRIOR TO ATTEMPTING ANY REPAIRS, UNPLUG THE AIR COMPRESSOR AND BLEED OFF ALL AIR TANK AIR PRESSURE.

PROBLEM	CAUSE	CORRECTION
Excessive tank pressure - safety valve pops off.	Pressure switch does not shut off motor when compressor reaches "cut-out" pressure.	Move the pressure switch lever to the "OFF" position. If the unit doesn't shut off, and the electrical contacts are welded together, replace the pressure switch.
	Pressure switch "cut-out" too high.	Contact an authorized service center to check and replace pressure switch.
Air leaks at fittings.	Tube fittings are not tight enough.	Tighten fittings where air can be heard escaping. Check fittings with soapy water solution. <b>DO NOT</b> <b>OVER-TIGHTEN.</b>
Air leaks at or inside check valve.	Malfunctioning or dirty check valve.	A malfunctioning check valve results in a constant air leak at the pressure release valve when pressure is in the tank and the compressor is shut off. Drain tank then remove and clean or replace check valve. <b>DO NOT OVER-</b> <b>TIGHTEN.</b>
Air leaks at pressure switch release valve.	Malfunctioning pressure switch release valve.	Remove and replace the release valve.
	Malfunctioning check valve.	A malfunctioning check valve results in a constant air leak at the pressure release valve when pressure is in the tank and the compressor is shut off. Drain tank then remove and clean or replace check valve. <b>DO NOT OVER-</b> <b>TIGHTEN.</b>
Air leaks in air tank or at air tank welds.	Damaged air tank.	AWARNING DO NOT DRILL INTO, WELD OR OTHERWISE MODIFY AIR TANK OR IT WILL WEAKEN. THE TANK CAN RUPTURE OR EXPLODE. TANK MUST BE RE- PLACED.
Air leaks between head and valve plate.	Leaking o-ring.	Torque head screws to 8 ftlbs. If this does not stop leak, replace o-ring.

PROBLEM CAUSE		CORRECTION
Pressure reading on the regulated pressure gauge drops when an accessory is used.	It is normal for "some" pressure drop to occur.	If there is an excessive amount of pressure drop when the accessory is used, adjust the regulator following the instructions on page 7. <b>NOTE:</b> Adjust the regulated pressure under flow conditions (while accessory is being used).
Motor will not run or restart.	Motor overload protection switch has tripped.	Let motor cool off and overload switch will automatically reset.
	Tank pressure exceeds pressure switch "cut-in" pressure.	Motor will start automatically when tank pressure drops below "cut-in" pressure of pressure switch.
	Wrong gauge wire or length of extension cord.	Check for proper gauge wire and cord length.
	Check valve stuck open.	Remove and clean, or replace.
	Loose electrical connections.	Check wiring connection inside pressure switch and terminal box area.
	Possible defective motor or starting capacitor.	Contact an Authorized Warranty Service Center for inspection or replacement, if necessary.
	Paint spray on internal motor parts.	Have checked by an Authorized Warranty Service Center. Do not operate the compressor in the paint spray area. See flammable vapor warning.
	Fuse blown, circuit breaker tripped.	<ol> <li>Check fuse box for blown fuse and replace, if necessary. Reset circuit breaker. Do not use a fuse or circuit breaker with higher rating than that specified for your particular branch circuit.</li> </ol>
		2. Check for proper fuse; only time delay fuses are acceptable.
		<ol> <li>Check for low voltage conditions and/or proper extension cord.</li> </ol>
		<ol> <li>Disconnect the other electrical appliances from circuit or operate the compressor on its own branch circuit.</li> </ol>
	Pressure release valve on pressure switch has not unloaded head pressure.	Bleed the line by pushing the lever on the pressure switch to the "off" position; if the valve does not open, replace it.

PROBLEM	CAUSE	CORRECTION
Air leak from safety valve.	Possible defect in safety valve.	Operate safety valve manually by pulling on ring. If valve still leaks, it should be replaced.
Knocking Noise.	Defective check valve.	Remove and clean, or replace.
Compressor is not	Prolonged excessive use of air.	Decrease amount of air usage.
supplying enough air to operate accessories.	Compressor is not large enough for air requirement.	Check the accessory air requirement. If it is higher than the SCFM or pressure supplied by your air compressor, you need a larger compressor.
	Restricted air intake filter.	Clean or replace air intake filter. Do not operate the air compressor with the filter removed. See page 11.
	Hole in hose.	Check and replace if required.
	Check valve restricted.	Remove and clean, or replace.
	Air leaks.	Tighten fittings. (See Air Leaks Section of Troubleshooting Guide.)
Regulator knob has continuous air leak. Regulator will not shut off air outlet.	Pressure release valve on pressure switch has not unloaded head pressure. Damaged regulator.	Contact an Authorized Warranty Service Center for replacement.
Gauge is not registering air pressure reading.	Malfunctioning or damaged gauge	Contact an Authorized Warranty Service Center for replacement.

### ACCESSORIES

Accessories can be found at the store the unit was purchased or at a local hardware store.

## FILTERS, REGULATORS, LUBRICATORS



3/8" I.D. HOSE Ideal for increasing working distance in high CFM applications.

1/4" COIL HOSE Self-retracting and lightweight. Less bulk than regular hoses. Ideal secondary hose line in lower CFM applications. BODIES & PLUGS Together they provide quick and easy attachment/separation of components within the air line. Do not mix different styles of bodies/plugs. NOTES

# LIMITED WARRANTY

**PORTER-CABLE CORPORATION** warrants to the original purchaser that each new air compressor and service part is free from defects in material and workmanship and agrees to repair or replace under this warranty any defective product or part as follows from the original date of purchase.

**5 YEARS** – Limited warranty on 2-stage oil-free air compressor **pumps** that operate at 1725 RPM and 1 year limited warranty on all other parts.

**3 YEARS** – Limited warranty on oil-lubricated air compressor **pumps** and 1 year limited warranty on all other parts.

1 YEAR - Limited warranty on all other air compressor products.

90 Day - Service parts

Engine warranties are the responsibility of the engine manufacturer. Warranties of merchandise sold by Porter-Cable which has been manufactured by and identified as the product of another company are the responsibility of the manufacturer of that product.

### THIS WARRANTY IS NOT TRANSFERABLE AND DOES NOT COVER

- Products sold damaged or incomplete, sold "as is", sold reconditioned or used as rental equipment.
- · Delivery, installation or normal adjustments explained in the owner's manual.
- Damage or liability caused by shipping, improper handling, improper installation, incorrect voltage or improper wiring, improper maintenance, improper modification, or the use of accessories and/or attachments not specifically recommended by PORTER-CABLE for the tool.
- Repairs necessary because of operator abuse or negligence, or the failure to install, operate, maintain and store the product according to the instructions in the owner's manual.
- Damage caused by cold, heat, rain, excessive humidity, corrosive environments and materials, or other contaminants.
- Expendable items that become worn during normal use such as drain valves, fuses, filters, belts, air cleaners, spark plugs, engine oil and pump oil.
- Cosmetic defects that do not interfere with tool functionality.
- Freight costs from customer to Porter-Cable.
- Repair and transportation costs of products or parts determined not to be defective.
- 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 WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR 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 you.

**WARRANTY SERVICE** is available by delivering or shipping the defective product or part to any Porter-Cable authorized warranty service location. To determine the nearest authorized warranty service location, call the toll free number, 1-888-559-8550, 24 hours a day, 7 days a week. Specific instructions regarding servicing arrangements and scheduling may vary depending on the type and size of the product and the availability of repair parts.

- DO NOT return the defective product to the retailer.
- Retain the original cash register sales receipt as proof of purchase for warranty work.
- Only Air compressors with 60 and 80 gallon tanks will be inspected at the site of installation.
- The customer should contact Porter-Cable directly if the purchaser does not receive satisfactory results from the authorized warranty service center.



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