

# VIAIR®

*Your Vital Air Source*

325C AIR COMPRESSOR KIT  
PART NO. 32530 - 32533 - 32534 - 32538

350C AIR COMPRESSOR KIT  
PART NO. 35030 - 35033

400C AIR COMPRESSOR KIT  
PART NO. 40040

450C AIR COMPRESSOR KIT  
PART NO. 45040



325C



350C



400C



450C

### **IMPORTANT:**

It is essential that you and any other operator of this product read and understand the contents of this manual before installing and using this product.

**SAVE THIS MANUAL FOR FUTURE REFERENCE**

**USER MANUAL**



## IMPORTANT SAFETY INSTRUCTIONS

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### **CAUTION** - To reduce risk electrical shock:

- Do not disassemble. Do not attempt repairs or modifications. Refer to qualified service agencies for all service and repairs.
- Do not use this product in or area where it can fall or be pulled into water or other liquids.
- Do not reach for this product if it has fallen into liquid.
- Use this compressor with 12-volt DC systems only.
- This product should never be left unattended during use.

### **WARNING** - To prevent injury:

- Never allow children to operate this compressor. Close supervision is necessary when this compressor is being used near children.
- This compressor will become very HOT during and immediately after use. Do not touch any part of this compressor with bare hands other than the ON/OFF switch, during and immediately after use.
- Do not use this product near flames or explosive materials or where aerosol products are being used.
- Do not operate this product where oxygen is being administered.
- Do not pump anything other than atmospheric air.
- Never use this product while sleepy or drowsy.
- Do not use any tools or attachments without first determining maximum air pressure for that tool or attachment.
- Never point any air nozzle or air sprayer toward another person or any part of the body.
- This air compressor is equipped with an Automatic Reset Thermal Protector, and can automatically restart after the thermal protector resets. Always cut off power source when thermal protector becomes activated.
- Wear safety glasses or goggles when operating this product.
- Use only in well ventilated areas.

## INSTALLATION

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Please read and follow the installation instructions carefully to avoid injury or damage to the compressor or your vehicle.

Each of our air compressors and parts have been carefully produced and packaged. Before you begin installation, please familiarize yourself with Installation Parts List (Fig. 1) of this manual.

### **Guidelines for Selecting Mounting Location:**

The selection of proper mounting location for your air compressor will help ensure a long and trouble free compressor service life. Please pay close attention to the following guidelines:

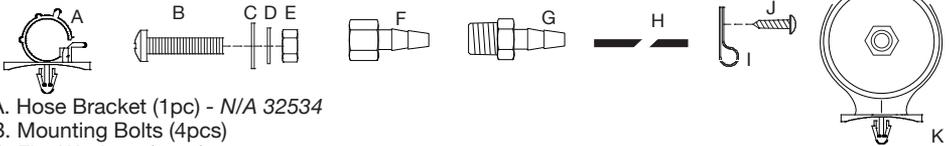
1. Select a FLAT, UPRIGHT AND SECURE location where the compressor can be mounted.
2. To maximize air compressor performance, locate compressor as CLOSE TO THE BATTERY as possible so that length of positive lead wire required is at a minimum.
3. Choose mounting location that is as cool as possible and AWAY FROM HEAT SOURCES. The cooler the ambient temperature, the less chance the compressor will overheat.
4. This compressor is moisture & dust resistant, but NOT DIRT OR WATERPROOF. Do not mount compressor in locations where the unit is likely to come in contact with the elements.
5. For compressor with remote filter mounting, select compressor's mounting location where air line can be routed from compressor air inlet to remote inlet air filter. Make sure that the remote inlet air filter is located in a dry location, away from the elements.
6. You will also want to select a compressor mounting location where the leader hose bracket can be mounted to leader hose. (*Not applicable to P/N 32534*)
7. If it is necessary to mount the air compressor further away from the battery, such as inside your vehicle or in the bed of your pickup, use a minimum 10 AWG positive lead wire for remote installation.
8. Do not mount compressor near areas where flammable liquids are stored.
9. Use thread sealant for proper fitting installation. Teflon tape is not recommended. Properly sealed, recommended torque is 12 to 15 ft. lbs

## 325C - 350C - 400C - 450C COMPRESSOR KIT

### MOUNTING AND WIRING

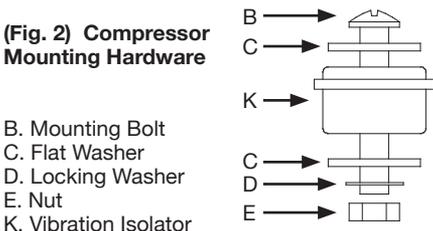
1. Disconnect ground cable from vehicle's battery.
2. Temporarily position the air compressor in the location where it will be mounted.
3. Route ground wire to the negative post of the battery or to an appropriate grounding point and cut ground wire to length as needed.
4. Mount air compressor with the four sets of bolts, nuts, washers, and locking washers provided. (See Fig. 2 for Mounting Instructions) Use of thread sealant recommended.
5. **NOTE:** For remote inlet air filter installation, refer to instructions included in the Remote Inlet Air Filter Pack.
6. This air compressor may be equipped with a heavy duty heat resistant leader hose. This leader hose is designed to prolong the life of your air line. Do not remove this leader hose from air compressor. (*Not applicable to P/N 32534*)
7. **IMPORTANT:** Please note, the leader hose that may be equipped with your compressor may also have a built-in inline check valve. Do not remove inline check valve from leader hose if so equipped.
8. Select a proper location to mount leader hose with hose bracket provided. Avoid locations where leader hose may become tangled with wires and other hoses.
9. To mount hose bracket, drill hole with 3/16" drill bit and push self-anchoring hose bracket pin into hole. Route leader hose through hose bracket and secure hose by pressing bracket clamp into locked position.
10. To remove hose from the hose bracket, simply press down on the hose clamp release tab to release bracket clamp. (Fig. 3)
11. Connect compressor's positive lead wire to one of the leads of your pressure switch.
12. Make sure that your compressor setup is properly fused. For appropriate fuse size, refer to amp draw of compressor in the specifications section of this manual.
13. Always locate fuse as close as possible to power source.
14. Before connecting to power source, re-check to make sure that all connections are made properly.
15. Connect and test compressor system by running the compressor for a short time to build up pressure in your air tank.
16. Once air pressure reaches preset cut out pressure of your pressure switch, the compressor will shut off. Inspect all air line connections for leaks with soap and water solution. If a leak is detected, the air line may not be cut squarely or pushed all the way in.

**(Fig. 1) 325C / 350C / 400C / 450C Compressor Installation Parts List:**



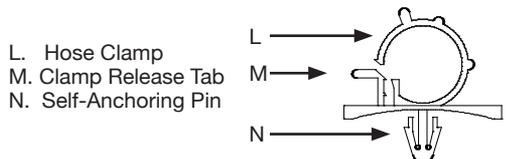
- A. Hose Bracket (1pc) - N/A 32534
- B. Mounting Bolts (4pcs)
- C. Flat Washers (8pcs)
- D. Locking Washers (4pcs)
- E. Nuts (4pcs)
- F. 1/4" NPT F x 3/8" Barbed Fitting (1pc) - N/A 32534
- G. 1/4" NPT M x 3/8" Barbed Fitting (1pc) - N/A 32534
- H. 3/8" Air Line - N/A 32534
- I. Air Line Clips (3pcs) - N/A 32534
- J. Screws (3pcs) - N/A 32534
- K. Remote Inlet Air Filter with Filter Element (1pc) - N/A 32534

**(Fig. 2) Compressor Mounting Hardware**



- B. Mounting Bolt
- C. Flat Washer
- D. Locking Washer
- E. Nut
- K. Vibration Isolator

**(Fig. 3) Leader Hose Bracket (N/A 32534)**



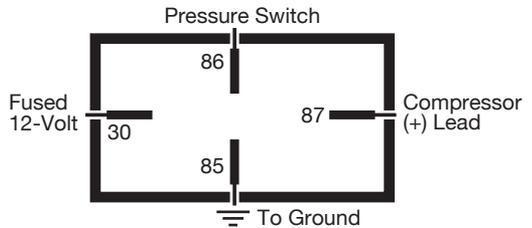
- L. Hose Clamp
- M. Clamp Release Tab
- N. Self-Anchoring Pin

## 325C - 350C - 400C - 450C COMPRESSOR KIT

### OPERATING INSTRUCTIONS

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1. **IMPORTANT:** Always operate the compressor at or below the MAXIMUM PRESSURE RATING of the compressor. Please refer to Application & Specifications Sections of this manual for details.
2. Always observe the MAXIMUM DUTY CYCLE of the air compressor. Refer to Compressor Applications and Specifications Sections of this manual for details. Operation exceeding maximum pressure ratings and/or duty cycle will result in damage to the air compressor.
3. Your air compressor is equipped with an AUTOMATIC THERMAL OVERLOAD PROTECTOR. This feature is designed to protect the air compressor from overheating and causing permanent damage to your air compressor. The thermal overload protector will automatically cut power to your air compressor should the internal operating temperature of the air compressor rise above safe levels during excessive use.
4. Should at any time during use, your air compressor automatically shuts off; do not attempt to restart it. Turn off power and allow unit to cool for about 30 minutes. This will allow the Thermal Overload Protector to reset so you can safely resume use of the air compressor.
5. To prevent discharge of your vehicle's battery, and enhance performance, keep the vehicle's engine running while using the compressor.
6. Only operate compressor in well ventilated areas.
7. The use of a relay is strongly recommended for installation of this compressor, but not included. (40-amp relay value or higher per compressor recommended).



**RELAY WIRING SCHEMATIC**

### MAINTENANCE & REPAIRS

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1. Periodically check all electrical and fittings connections. Clean and tighten as needed.
2. Periodically check all mounting screws. Tighten as needed.
3. Replace Air Filter Element periodically. Replacement frequency depends on operating frequency and operating environment. For frequent use in dusty environment, we recommend that you replace air filter element at least once a month.
4. Regularly clean dust and dirt from compressor cooling fins and motor housing.
5. Your air compressor is equipped with a permanently lubricated, maintenance-free motor. Never try to lubricate the compressor.
6. All repairs should be performed by Manufacturer or Manufacturer's Authorized Service Agencies only.

#### **CAUTION:**

Never touch the air compressor or fittings connected to the air compressor, with bare hands during or immediately after use. The leader hose and fittings connected to leader hose will become very HOT during and after use. If necessary, wear heat resistant gloves to handle fittings, air line, and leader hose.

## 325C - 350C - 400C - 450C COMPRESSOR KIT

### SPECIFICATIONS

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• Part No. 32530 / 32533 / 32534 / 32538 / 325C Air Compressor Kit / Silver & Chrome (CE Spec.)

Motor Voltage:	12 volts 24 volts (32538)
Max. Current Consumption:	21 amps - 12v 12 amps - 24v
Motor Type:	Permanent Magnetic
Horsepower:	1/4
Max. Working Pressure:	150 PSI
Max. Duty Cycle (@72°F & 100 PSI):	33%
Minutes On/Off (@72°F & 100 PSI):	15 On/30 Off
Max. Restart Pressure:	200 PSI
Max. Ambient Temperature:	158°F
Min. Ambient Temperature:	-40°F
Auto. Reset Thermal Protection:	Yes
Dimensions:	7.4"L x 3.9"W x 6.75H"
Net Weight:	7.50 Lbs.

• Part No. 35030 & 35033 / 350C Air Compressor Kit / Silver & Chrome (CE Spec.)

Motor Voltage:	12 Volts
Max. Current Consumption:	17 Amps
Motor Type:	Permanent Magnetic
Horsepower:	1/4
Max. Working Pressure:	150 PSI
Max. Duty Cycle (@ 72°F & 100 PSI):	100%
Minutes On/Off (@ 72°F & 100 PSI):	Continuous
Max. Restart Pressure:	200 PSI
Max. Ambient Temperature:	158°F
Min. Ambient Temperature:	-40°F
Auto. Reset Thermal Protection:	Yes
Dimensions:	7.4"L x 3.9"W x 6.75H"
Net Weight:	8.55 Lbs.

• Part No. 40040 / 400C Air Compressor Kit / Silver (CE Spec.)

Motor Voltage:	12 Volts
Max. Current Consumption:	30 Amps
Motor Type:	Permanent Magnetic
Horsepower:	1/4
Max. Working Pressure:	150 PSI
Max. Duty Cycle (@ 72°F & 100 PSI):	33%
Minutes On/Off (@ 72°F & 100 PSI):	15 On/30 Off
Max. Restart Pressure:	200 PSI
Max. Ambient Temperature:	158°F
Min. Ambient Temperature:	-40°F
Auto. Reset Thermal Protection:	Yes
Dimensions:	8.8"L x 3.9"W x 6.75H"
Net Weight:	8.65 Lbs.

• Part No. 45040 / 450C Air Compressor Kit / Silver (CE Spec.)

Motor Voltage:	12 Volts
Max. Current Consumption:	23 Amps
Motor Type:	Permanent Magnetic
Horsepower:	1/4
Max. Working Pressure:	150 PSI
Max. Duty Cycle (@ 72°F & 100 PSI):	100%
Minutes On/Off (@ 72°F & 100 PSI):	Continuous
Max. Restart Pressure:	200 PSI
Max. Ambient Temperature:	158°F
Min. Ambient Temperature:	-40°F
Auto. Reset Thermal Protection:	Yes
Dimensions:	10.43"L x 3.9"W x 6.75H"
Net Weight:	10.80 Lbs.

## 325C - 350C - 400C - 450C COMPRESSOR KIT

### COMPRESSOR APPLICATION GUIDE

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To ensure that you get the highest level of satisfaction from your compressor's performance, refer to information below:

#### VIARIA COMPRESSOR REFERENCE CHART

COMPRESSOR SERIES	DUTY CYCLE	WORKING PRESSURE
100 SERIES	15%	130 PSI
200 SERIES	20%	150 PSI
215 SERIES	17%	150 PSI
225 SERIES	20%	150 PSI
265 SERIES	22%	150 PSI
275 SERIES	25%	150 PSI
280 SERIES	30%	150 PSI
325 SERIES	33%	150 PSI
350 SERIES	100%	150 PSI
380 SERIES	100%	200 PSI
400 SERIES	33%	150 PSI
450 SERIES	100%	150 PSI
490 SERIES	40%	150 PSI
490 SERIES	100%	150 PSI

#### ABOUT COMPRESSOR DUTY CYCLE:

Compressor Duty Cycle refers to amount of time a compressor can be operated in a given time period, at 100 PSI and at a standard ambient temperature of 72°F. Duty Cycle is commonly expressed in percentile as:

Compressor On Time/ (Compressor On Time + Off Time)%

As an example, a compressor that is rated for 25% duty cycle means that compressor can be operated at:

100 PSI @ 72°F for 10 Minutes ON and 30 Minutes OFF  
10 Min. On / (10 Min. On + 30 Min. Off) = 10 Min. / 40 Min.  
=25% Duty Cycle

#### DUTY CYCLE REFERENCE CHART

DUTY CYCLE @100PSI / 72°F	MINUTES ON / OFF
15%	6 Min. On / 34 Min. Off
20%	8 Min. On / 32 Min. Off
25%	10 Min. On / 30 Min. Off
30%	13 Min. On / 30 Min. Off
33%	15 Min. On / 30 Min. Off
100%	Continuous Duty

#### ABOUT RATED WORKING PRESSURE:

To ensure trouble free service life of your compressor, always operate compressor within rated working pressure of the compressor. Never use a pressure switch with a higher cut-off pressure than compressor's rated working pressure.

#### WIRE GAUGE GUIDE 12-VOLT:

Amp Draw	Length of wire from battery to compressor				
	10	15	20	25	30
10	14	12	10	10	10
15	12	10	10	8	8
20	10	10	8	6	6
25	10	8	6	6	6
30	10	8	6	6	4
40	8	6	6	4	4
50	6	6	4	4	2
60	6	4	4	2	2

#### WIRE GAUGE GUIDE 24-VOLT:

Amp Draw	Length of wire from battery to compressor				
	10	15	20	25	30
10	18	16	14	12	12
15	16	14	12	12	10
20	14	12	10	10	10
25	12	12	10	10	10
30	12	10	10	8	8
40	10	10	8	6	6
50	10	8	6	6	6
60	10	8	6	6	4

## 325C - 350C - 400C - 450C COMPRESSOR KIT

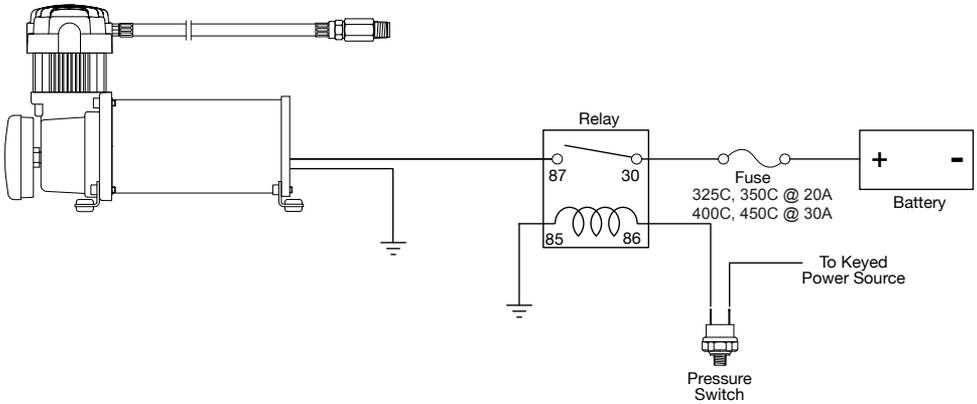
### TROUBLESHOOTING GUIDE:

PROBLEM:	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
Tank pressure drops when compressor(s) shut off	<ol style="list-style-type: none"><li>1. Loose drain cock</li><li>2. Check valve leaking</li><li>3. Loose connections</li></ol>	<ol style="list-style-type: none"><li>1. Tighten drain cock</li><li>2. Replace check valve or compressor</li><li>3. Check all connections with soap and water solution and tighten</li></ol>
Compressor runs continuously and air flow lower than normal	<ol style="list-style-type: none"><li>1. Excessive air usage</li><li>2. Loose connections</li><li>3. Worn piston ring or inlet valve.</li><li>4. Clogged air filter element</li></ol>	<ol style="list-style-type: none"><li>1. Decrease air usage</li><li>2. Check all connections with soap and water solution and tighten.</li><li>3. Replace compressor</li><li>4. Replace air filter element</li></ol>
Compressor runs continuously causing safety valve (if equipped) to open	<ol style="list-style-type: none"><li>1. Faulty pressure switch</li><li>2. Defective safety valve</li></ol>	<ol style="list-style-type: none"><li>1. Replace pressure switch</li><li>2. Replace safety valve</li></ol>
Excessive moisture in discharge	<ol style="list-style-type: none"><li>1. Excessive water in air tank</li><li>2. High humidity</li></ol>	<ol style="list-style-type: none"><li>1. Drain tank, tilt tank to drain. Drain tank more frequently</li><li>2. Move compressor to area with less humidity, or use air line filter</li></ol>
Compressor will not run	<ol style="list-style-type: none"><li>1. No power, or power switch in OFF position</li><li>2. Blown fuse</li><li>3. Motor overheats</li><li>4. Faulty pressure switch (if hooked up to a pressure switch).</li></ol>	<ol style="list-style-type: none"><li>1. Make sure compressor switch is ON</li><li>2. Disconnect compressor from power source, replace fuse. (Refer to Specifications section for correct fuse amperage)</li><li>3. Let compressor cool off for about 30 minutes to allow thermal overload switch to reset.</li><li>4. Replace pressure switch</li></ol>
Thermal overload protector cuts out repeatedly	<ol style="list-style-type: none"><li>1. Lack of proper ventilation or ambient temperature is too high</li><li>2. Compressor valves failed</li></ol>	<ol style="list-style-type: none"><li>1. Move compressor to well ventilated area, or area with lower ambient temperature</li><li>2. Replace compressor</li></ol>
Excessive knocking or rattling	<ol style="list-style-type: none"><li>1. Loose mounting bolts</li><li>2. Worn bearing on eccentric or motor shaft</li><li>3. Cylinder or piston ring is worn</li></ol>	<ol style="list-style-type: none"><li>1. Tighten bolts</li><li>2. Replace bearing or piston assembly</li><li>3. Replace piston or compressor</li></ol>

**CAUTION: NEVER DISASSEMBLE COMPRESSOR WHILE COMPRESSOR IS PRESSURIZED.**

## 325C - 350C - 400C - 450C COMPRESSOR KIT

### Wiring Diagram: (Fuse Not Included)



### VIAIR CORPORATION MANUFACTURER DEFECT WARRANTY:

VIAIR Corporation warrants this product, when properly installed and/or under normal conditions of use, to be free from defects in workmanship and materials for a period of one year from provided date of purchase. To receive a warranty inspection, please contact VIAIR Corporation. A valid, dated sales receipt must accompany your request. Returns should be made within one year of the date of purchase, after a Return Goods Authorization (RGA) number has been assigned by VIAIR Corporation. To obtain an RGA number, fax a copy of your receipt to (949) 585-0188.

For complete warranty details, visit: [www.viaircorp.com/warranty](http://www.viaircorp.com/warranty)

#### IMPORTANT:

THIS WARRANTY COVERS PRODUCT DEFECTS ONLY; IT DOES NOT COVER INCIDENTAL OR CONSEQUENTIAL DAMAGES AS RESULT OF MISUSE OR ABUSE.



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