

Open Frame Reciprocating Gas/Diesel Engine Driven Compressor

Installation Guide

Notice: Air compressors should only be installed trained installation personnel call 800-531-9656 to find a local trained air compressor service technician.

Warning: Read all installation steps, compressor package operation manual, notices and warnings prior to beginning compressor package installation. Failure to do so can result in personal injury or damage to compressor package.

Warning: Always wear proper protective eye wear, hearing protection, and other mandated safety clothing and devices when installing compressor packages

Notice: Compressor package should not be mounted to a moving piece of equipment that will be moving while the compressor package is in operation. The compressor package should not be mounted to a piece of equipment that adds additional vibration to the compressor package. The compressor package is only designed to handle its own organic vibration during operation. Failure to follow either one of these guidelines may result in pre-mature failure of compressor package, components and/or personal injury.

ATTENTION: All incoming electrical power connections are to be made on the main motor contactor(s) DO NOT attach incoming power wires to package pressure switch. This will result in electrical component damage not covered under warranty.

NOTICE: To ensure full compressor tank warranty all tank mounted compressor packages must be mounted on factory supplied vibration isolation pads.

Warning: Before beginning steps 6-17 verify power supply is off to compressor disconnect, and compressor package

Notice: All compressor air receivers should be inspected by a certified pressure vessel technician at least once per year, to check for leaks, weak points in the metal or any other deformity of the air receiver. If at any time a receiver appears out of conformance with ASME/CRN certification or a deformity is believed to have developed no matter how minor it may appear the tank should be locked out of service immediately

KNIGHT COMPRESSORS

Air Compressors At Their Finest.

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Warning: Always wear proper protective eye ware, hearing protection and safety clothing when working around the compressor package. No loose or baggy clothing should be worn around compressor package at any time.

Warning: On Electric motor powered air compressors make sure electrical system is up to National Electric Code (NEC) prior to installing compressor system. Failure to install a compressor with a proper NEC electrical system can cause personal injury, compressor package damage and void compressor package warranty.

Notice: To ensure full compressor tank warranty all tank mounted compressor packages must be mounted on factory approved vibration isolation pads. A compressor should NEVER be installed while still on or in its original packaging. Failure to properly install the compressor system with approved vibration isolation pads will result in the compressor tank warranty being void.

Notice: Compressed Air Systems compressors can operate at pressures from 0-250psi depending on the compressor package design and build specifications. Always verify that the system the compressor is installed into can handle the maximum operational pressure the compressor. NEVER install a compressor in a system that can not handle the compressors maximum operating pressure.

Notice: Compressed air is extremely dangerous when not properly used or installed. Always make sure a trained compressed air professional has looked over the air system prior to use. Improper installation or use of compressed air can cause bodily injury or death. NEVER pressurize an object that was not designed to be pressurized. Pressurizing objects not properly engineered for the maximum operating pressure of the compressor system can cause bodily injury or death.

Step 1

Verify compressor package install site can handle weight load of compressor package

Note: this should have been done prior to the sale of the compressor package

Notice: Installing compressors on a steel floor, wood floor or other structure not mounted to the ground may require additional mounting apparatus to handle weight and vibration

Step 2

Make sure compressor installation area is clear of debris and has adequate space around where the compressor will sit for service (minimum of 18in.) and ventilation

A. It is critical to the operating of the compressor package to be installed in an area that has adequate air flow to the compressor package.

B. It is critical that the compressor be installed level to ensure proper oil flow to drive engine and compressor package.

Step 3

On single cylinder engines with the fuel tank on the OEM engine verify tank is clean and free of debris. On engines with auxiliary or fuel tanks not part of the OEM engine make sure tank is installed properly and fuel line is clean and free of debris.

A. On applications requiring an auxiliary fuel tank if more than 5ft of fuel line is ran between the drive engine and compressor package an auxiliary fuel pump will be needed to ensure adequate fuel supply is delivered to the drive engine.

B. On auxiliary fuel pumps make sure the pump is installed in the proper direction. Failure to install the fuel pump properly will result in the driven engine running lean or no running at all.

Step 4

Uncrate compressor package (verify package is intact and not missing parts)

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Step 5

Remove compressor shipping pallet

Warning: Only use forklift or approved lifting device to remove compressor from shipping pallet

Step 6

Set compressor into place on vibration isolation pads, in mounting location

Step 7

Drill holes in floor, substructure through vibration pads and mounting location on compressor package.

Step 8

Tighten compressor package mounting bolts or anchors. Bolts should be firm no distortion should be seen in the mounting vibration pad. If distortion is seen loosening mounting hardware.

Step 9

Connect airline to compressor package air discharge. (Note: It is recommended to use a flexible line between the compressor package and the system piping to avoid damage due to compressor vibration) (NOTICE: On base mount compressor packages with separate compressor tanks make sure compressor discharge line is installed with check valve in place. Also make sure control air line is installed)

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Step 10

In an open and ventilated area pour fuel into driven engines fuel tank. (It is recommended for initial start to use premium octane 91 or higher on gas engines for premium diesel on diesel engines for initial start).

Step 11

Verify compressor tank discharge ball valve is open to system

Step 12

Verify tank and system pressure is less than 10PSI

Step 13

On engine equipped with a choke function make sure choke is in proper starting setting

Step 14

Turn engine key to start to bring engine ignition

Step 15

Replace choke function to run position on engines equipped with choke function

On days with ambient temperatures below 42F steps 13-15 may need to be repeated 3-4 times

Step 16

Once engine is running and operational check for proper air flow around compressor package.

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Step 17

Close ball valve on compressor storage tank discharge.

Step 18

Allow compressor package to reach maximum operating pressure

Engine will throttle down once maximum operating pressure has been reached

Step 19

Open tank discharge ball valve to pressurize air system

Step 20

Warning: When releasing air from compressor safety relief valve or tank drain DO NOT look at valve or drain.

Using either compressor tank safety relief valve or tank discharge drain, release air pressure until compressor package re-loads and begins compressing air again. You will also hear the drive engine speed up when the package re-loads and begins compressing again

Note: In most cases pressurizing the air piping system releases enough air from the system to cause package to re-load and begin compressing again

Step 21

Perform function test on compressor package operating system. Using STEP 27, allow the compressor package to build up to maximum operating pressure and unload. Once unloaded release air from the system to cause the compressor package to re-load and compress air. Repeat this process a minimum of 6 times.

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Step 22

Check all compressor air lines for leaks, tighten fittings as needed.

Step 23

Make sure compressor installation sheet is properly & completely filled out to be sent in for warranty registration.

Step 24

Go over general operation and maintenance instructions of compressor package with owner and other personal that work around the compressor package. Verify if a maintenance agreement has already been set up or if one needs to be established.

Step 25

Check compressor package for proper oil level

Step 26

Turn compressor back on, wipe down surfaces and make sure installation sheet is complete. Compressor is now ready for full operation.

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Notes

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COMPRESSED AIR SYSTEMS, LLC.

WARRANTY

CERTIFICATE OF LIMITED WARRANTY

Reciprocating Compressors

All component parts on this compressor installed by the manufacturer are warranted to be free of defects, workmanship and material for a period of one year. Transportation charges are the responsibility of the purchaser. This warranty extends to the original purchaser of the compressor only. The purchaser must use Compressed Air Systems synthetic reciprocating compressor oil in the compressor for the duration of the compressor warranty.

There are NO express warranties except other than those contained in this limited warranty statement

Covered in the one year period of the warranty are defective parts due to defects in the original part only.

The compressor warranty is void in the case of abuse, lack of proper service, in correct application, in correct installation, and neglect

Standard compressor warranty covers defective parts and labor for the one year period.

Industrial Electric stationary compressors may be repaired on site as long as the compressor is not located further than 50 miles from the service center. The purchaser is responsible for any additional travel expense past 50 miles from the service center.

Gas/Diesel engine driven, Single stage stationary, and Contractor series compressors must be repaired at the closest service center to the compressor. The purchaser is responsible for any travel expense if they do not wish to bring the compressor to the service center.

ALL "SPECIALTY COMPRESSOR" WARRANTY SERVICE MUST BE PERFORMED AT THE CLOSEST SERVICE CENTER TO THE COMPRESSOR

Specialty compressor-any compressor package with options other than those that apply to the standard model number in the catalog

**BEFORE WARRANTY SERVICE IS PERFORMED
CONTACT MANUFACTURER TECH SUPPORT
FOR FASTEST SOLUTION**

Warranty labor for the first year is only covered for work performed Monday-Friday 8am-5pm excluding all major US holidays

Optional 6 year Industrial reciprocating pump only warranty

To be applicable for this option purchaser must purchase the Full Year reciprocating compressor maintenance kit at the same time as the compressor. A subsequent kit must be purchased every 12 months from the date of the original purchase for a total of 6 kits during the warranty of the period of the pump. The purchaser must use only Compressed Air Systems synthetic reciprocating compressor oil in the compressor for the duration of the compressor warranty.

The warranty covers the Industrial reciprocating pump for a period of 6 years parts replacement only for any part with a defect from the manufacturer, excluding the compressor valves which carry the same 1 year standard warranty. The warranty does not cover standard wear and tear on parts, abuse, neglect, improper service, misapplication, and improper installation. The purchaser is responsible for any freight/shipping expense incurred.

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Gas-Diesel Engine Reciprocating Installation Sheet

Date of Installation _____ Compressor Model# _____

Installation Company _____ Compressor Serial # _____

Installation Technician _____

Drive Engine: ☐ Gasoline ☐ Diesel ☐ Natural Gas

Location of Install: ☐ Truck Body Open ☐ Van ☐ Trailer ☐ Box Truck ☐ Other _____

Auxiliary fuel Tank needed _____ Auxiliary Fuel pump needed _____

Wiring extension added: ☐ Yes ☐ No

Wiring extension Technician _____

Compressor package inspected for air leaks : ☐ Yes ☐ No

Compressor tank drain checked for function: ☐ Yes ☐ No

Unit install location in weather proof enclosure: ☐ Yes ☐ No

Unit tank fill time 0-125psi _____ (Put N/A if pressure not applicable to installed unit)

Unit tank fill time 0-150psi _____ (Put N/A if pressure not applicable to installed unit)

Unit tank fill time 0-175psi _____ (Put N/A if pressure not applicable to installed unit)

Belt tension checked after startup: ☐ Yes ☐ No _____

Vibration Pads properly installed: ☐ Yes ☐ No

All installation steps completed: ☐ Yes ☐ No If no, reason: _____

Send copy of completed installation sheet to manufacturer to begin warranty

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