Operation Manual

Nuvair Q-5120

Diesel/Electric

0601.2012

If you have any questions on this equipment please contact Technical Support at:

Nuvair
2949 West 5th St.
Oxnard, CA 93030

Phone: 1-805-815-4044
FAX: 1-805-815-4196
Email: info@nuvair.com

Hours: Monday through Friday
8:00 AM to 5:00 PM PST USA

⚠ Warning

This Operation Manual contains important safety information and should always be available to those personnel operating this equipment. Read, understand, and retain all instructions before operating this equipment to prevent injury or equipment damage.

Every effort was made to ensure the accuracy of the information contained within. Nuvair, however, retains the right to modify its contents without notice. If you have problems or questions after reading the manual, stop and call Nuvair at 1-805-815-4044 for information.

Table of Contents

Introduction

1.0 Introduction 4
2.0 Safety Warnings System Components 5
3.0 Safety and Operation Precautions 6
4.0 Legal Precautions 7
5.0 System Components and Overview 8
6.0 System Components Identification Diesel 9
7.0 System Components Identification Electric 11

Setup, Operation, and Maintenance

8.0 Theory Of Operation 12
9.0 Assembly Preparation 12
10.0 Set-Up and Assembly 12
10.1 Power Connections 12
10.2 Proper Rotation 12
11.0 Operation 13

11.1 Shutdown 13
12.0 Operation Notes 14
13.0 Maintenance 14
13.1 Routine Maintenance 15
13.2 Compressor Lubricant 15
13.3 LP Filtration 16
13.4 Filtration Inspection 16
13.5 Changing Filtration Elements 17
13.6 Changing Air Intake Filters 17
13.7 Air Intake Housing Extension 17
14.0 Spare Parts List 18
15.0 Service Record Log 19

Appendix

Material Safety Data Sheets 20
Warranty 21
Additional Records of Change 22
Quincy Instructions for Pilot Valve 23

Separate Manuals Included:

Quincy 5120 Compressor Operation & Maintenance Instructions
Engine or Motor manual from:
Duetz F2L2011 Diesel Engine Manual
Kubota M- Series D1703 or D1803 Diesel Engine Manual
WEG Electric Motor Manual

1.0 Introduction

Nuvair has taken extreme care in providing you with the information you will need to operate this system. However, it is up to you to carefully read this manual and make the appropriate decisions about system safety.

This manual will assist you in the proper set-up, operation and maintenance of the Nuvair Q5120 Compressor System. Be sure to read the entire manual and included Quincy 5120 manual and Kubota or Deutz or WEG motor manuals included.

Throughout this manual we will use certain words to call your attention to conditions, practices or techniques that may directly affect your safety. Pay particular attention to information introduced by the following signal words:

⚠ Danger

Indicates an imminently hazardous situation, which if not avoided, will result in serious personal injury or death.

⚠ Warning

Indicates a potentially hazardous situation, which if not avoided, could result in serious personal injury or death.

⚠ Caution

Indicates a potentially hazardous situation, which if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

⚠ Notice

Notifies people of installation, operation or maintenance information which is important but not hazard-related.

2.0 Safety Warnings

⚠ Warning

This equipment is used to provide breathing gas for the purpose of underwater life support. Read this manual in its entirety. Failure to heed the warnings and cautions contained in this document may result in severe injury or death.

⚠ Warning

The equipment you will be using to manufacture air will expose you to both low and high-pressure gas. Gas, even under moderate pressures, can cause extreme bodily harm. Never allow any gas stream to be directed at any part of your body.

⚠ Warning

Any pressurized hose can cause extreme harm if it comes loose or separates from its restraint (or termination) while under pressure and strikes any part of your body. Use appropriate care in making and handling all gas connections.

⚠ Warning

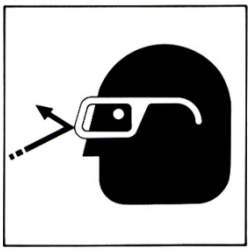
Never mix the Compressor Lubricant with other lubricants. If unsure of compressor lubricant remove all existing lubricant and replace with the proper breathing air compressor lubricant prior to use. The use of improper lubricants can lead to un-safe air quality, which may cause serious personal injury or death.

Warnings Graphics Defined:

Moving belts

Electrocution

Fire



Eye protection

Gas inhalation

Skin damage

Explosion

Explosion

Electrocution

Machinery

Abbreviations commonly used in this manual:

P.S.I.	Pounds Per Square Inch	C.F.M.	Cubic Feet Per Minute
R.P.M.	Rotations Per Minute	L.P.	Low Pressure
L/min	Liters Per Minute	CO	Carbon Monoxide
CO2	Carbon Dioxide		

3.0 Safety And Operation Precautions

Because a compressor is a piece of machinery with moving and rotating parts, the same precautions should be observed as with any piece of machinery of this type where carelessness in operations or maintenance is hazardous to personnel. In addition to the many obvious safety precautions, those listed below must also be observed:

1) Read all instructions completely before operating any compressor.
2) For installation, follow all local electrical and safety codes, as well as the National Electrical Code (NEC) and the Occupational Safety and Health Administration (OSHA) standards.
3) Electric motors must be securely and adequately grounded. This can be accomplished by wiring with a grounded, metal-clad raceway system to the compressor starter; by using a separate ground wire connected to the bare metal of the motor frame; or other suitable means.
4) Protect all power cables from coming in contact with sharp objects. Do not kink power cables and never allow the cables to come in contact with oil, grease, hot surfaces, or chemicals.
5) Make certain that power source conforms to the requirements of your equipment.
6) Pull main electrical disconnect switch and disconnect any separate control lines, if used, before attempting to work or perform maintenance. “Tag Out” or “Lock Out” all power sources.
7) Do not attempt to remove any parts without first relieving the entire system of pressure.
8) Do not attempt to service any part while System is in an operational mode.
9) Do not operate the System at pressures in excess of its rating.
10) Do not operate compressor at speeds in excess of its rating.
11) Periodically check all safety devices for proper operation. Do not change pressure setting or restrict operation in any way.
12) Be sure no tools, rags or loose parts are left on the Compressor System.
13) Do not use flammable solvents for cleaning the Air Inlet Filters or elements and other parts.
14) Exercise cleanliness during maintenance and when making repairs. Keep dirt away from parts by covering parts and exposed openings with clean cloth or Kraft paper.
15) Do not operate the compressor without guards, shields, and screens in place.
16) Do not install a shut-off valve in the compressor discharge line, unless a pressure relief valve, of proper design and size, is installed in the line between the compressor unit and shut-off valve.
17) Do not operate in areas where there is a possibility of inhaling carbon monoxide, carbon dioxide, nitrogen, or flammable or toxic fumes.
18) Be careful when touching the exterior of a recently run electric, gasoline, or diesel motor - it may be hot enough to be painful or cause injury. With modern motors this condition is normal if operated at rated load - modern motors are built to operate at higher temperatures.
19) Inspect unit daily to observe and correct any unsafe operating conditions found.
20) Do not “play around” with compressed air, or direct air stream at body, this can cause injuries.
21) Compressed air from this machine absolutely must not be used for food processing or breathing air without the properly maintained downstream filters, purifiers, controls and periodic air quality testing.
22) Always use an air pressure-regulating device at the point of use, and do not use air pressure greater than marked maximum pressure.
23) Check hoses for weak or worn conditions before each use and make certain that all connections are secure.

The user of any Compressor System manufactured by Nuvair is hereby warned that failure to follow the preceding Safety and Operation Precautions can result in injuries or equipment damage. However, Nuvair does not state as fact or does not mean to imply that the preceding list of Safety and Operation Precautions is all-inclusive, and further that the observance of this list will prevent all injuries or equipment damage.

4.0 Legal Precautions

It is highly recommended that a Dive log be maintained when using an air compressor on a job site to document the following information. This log must be of permanent binding style with no loose pages.

- Date and time of day
- Job Name & Number
- Supplier's check of air quality plus signature and date
- MOD (Maximum Operating Depth) in user's handwriting

Proper air analysis tested on a quarterly basis and comprehensive maintenance is the best way to assure proper, safe, and economical air production.

⚠ Notice

While Nuvair manufactures LP compressors for commercial diving use, Nuvair does not determine the regulations and or standards governing the use of "Air Compressor Systems". Operators of Nuvair compressors should consult your local and or national government and or managing bodies to determine the regulation obligations necessary to operate a Nuvair Compressor for divers and breathing air use.

In the U.S. and Canada regulators include, but are not limited to:
OSHA
US Coast Guard
US Military- Army, Navy, Marines, Air Force
CSA International
ANSI
ACDE
ADCI
USACE
ACDE
AAUS
NFPA

Some of the regulations in print pertain to the actual compressor equipment and others pertain to the Contractors and Dive Team.

You should be clear of any regulations, standards and requirements that are present for your use of a Nuvair Compressor before operating the compressor.

Nuvair can manufacture your Compressor package to meet any regulatory standards. Please provide us with the standards you operate under and we can provide you with the proper equipment to meet those standards or regulations.

5.0 System Overview

The Nuvair Q5120 system is designed to be open with good access to components and provide protection while it is running. This package is for supplying low pressure air direct to divers. The operator should be able to produce Air with a minimum of start-up hassles.

Quincy 5120:

- Air Supply and Regulated Air Input Gauges
- 2 Air Intake Filters
- Hankison Series 24 LP Filtration to .003 PPM Oil Vapor for divers
- NUVAIR 455 FDA Approved Food Grade Compressor Lubricant
- Heavy Duty Steel Frame with: Lifting Eyes, and Fork Lift Slots
- Vibration Isolation Mounts
- 1 x Low-pressure Two Stage Compressor Pump
- 2 x 60 Gallon ASME LP Volume Tank with Drain & Gauges
- Duetz 2011 L03I Diesel 48.8 Gross hp @2800 RPM with Hayes Bearing Block Tier IV Emissions Compliant.
  or
- Kubota M series Diesel D1703-M or D1803-M 36.7 Brake hp @2800
  or
- WEG TEFC Electric Motor 25hp

Air Compressor Technical Data:

- LP Compressor 46.2HP 95cfm@200psi

Maximum Block Output Pressure:	200 PSI
Final System Discharge Pressure:	200 PSI
Dual Control Head Unloaders	
Number of Stages:	2
Number of Cylinders:	2
Package Free Air Delivered Max:	95 CFM (2690 L/Min)
Lubricant:	NUVAIR 455
Condensate Drain	Manual

♦ Weight (varies with motor):	Diesel 3100 lbs.	Electric 2700 lb.
♦ Dimensions*:*	53″H X 96″L X 55″D	

Suggested Maintenance Intervals (see page 14 for entire schedule):

Replace Nuvair 455 Lubricant: in Q5120	200 Hours or yearly
LP Filtration Elements	100 Hours or yearly
Compressor Air Intake Filter:	40 Hours or yearly

(Nuvair recommends checking filter elements for moisture and proper operation daily.)

Typical Specification For Grade-D Air:

• O2 Percentage:	20-22
• CO2:	1000 PPM
• CO:	10 PPM
• Hydrocarbons:	25 PPM
• Odor:	None

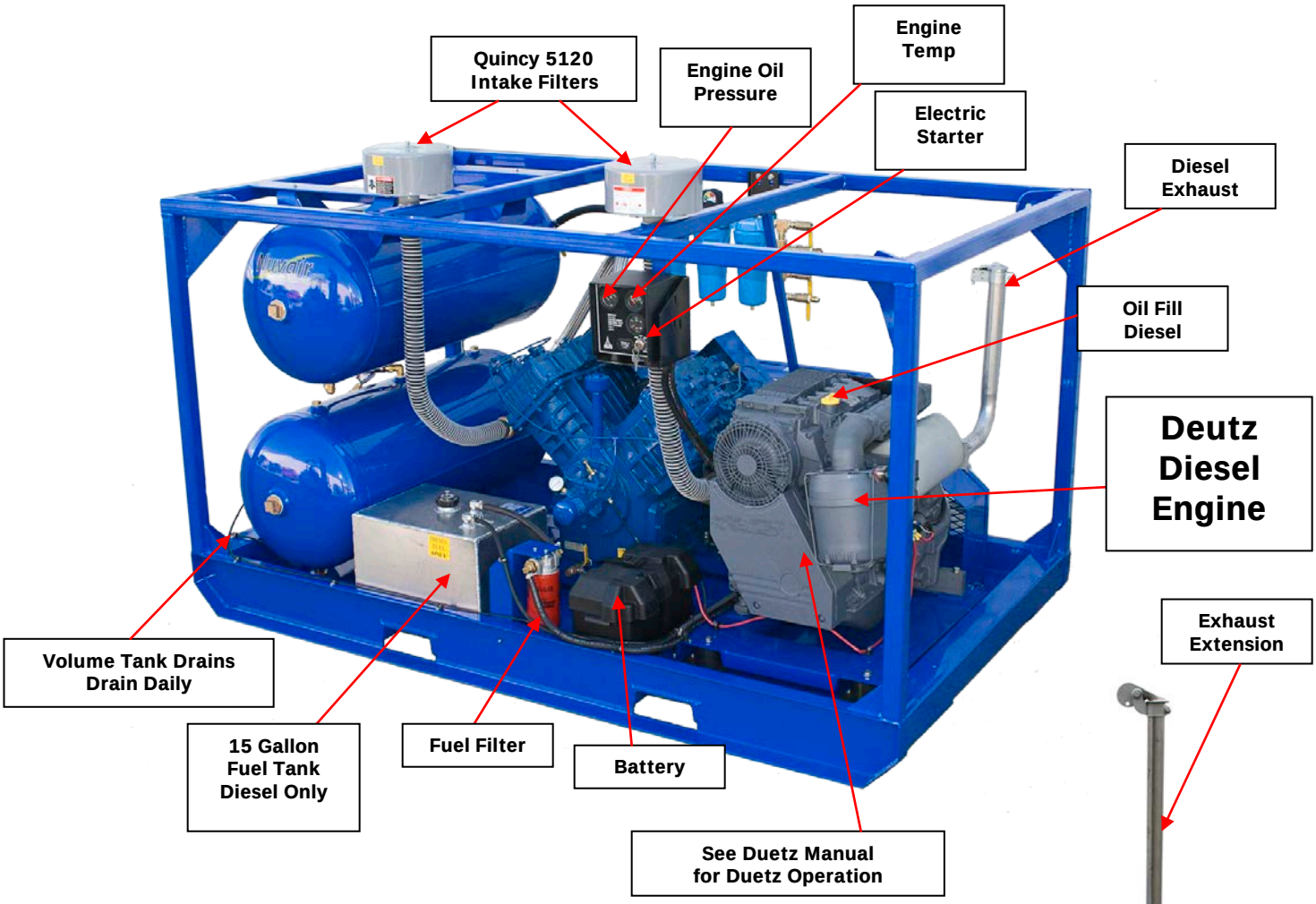
6.0 System Component Identification:

The **Qunicy 5120** system is a self-contained low pressure delivery package capable of supplying Air for the divers use.

The system utilizes a Quincy 5120 low-pressure compressor that is mounted together with a Duetz or Kubota Diesel Engine or 25hp WEG electric Motor in a rigid, steel frame. The system components include: low pressure air filtration, air intake filters, 2 volume tanks, and 4- Outlet Manifold. All of the component assemblies and parts are mounted inset and facilitate easy set-up, operation, and transport.

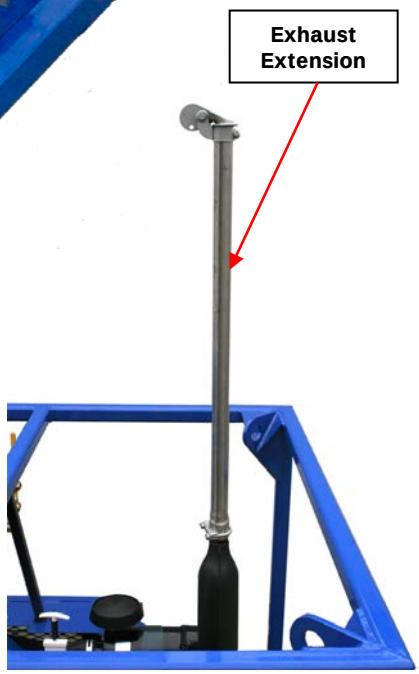
Q5120 Diesel Compressor System Components:

(Deutz Pictured for Q5120D in manual, refer to included Kubota engine manual for Kubota specs and operation)

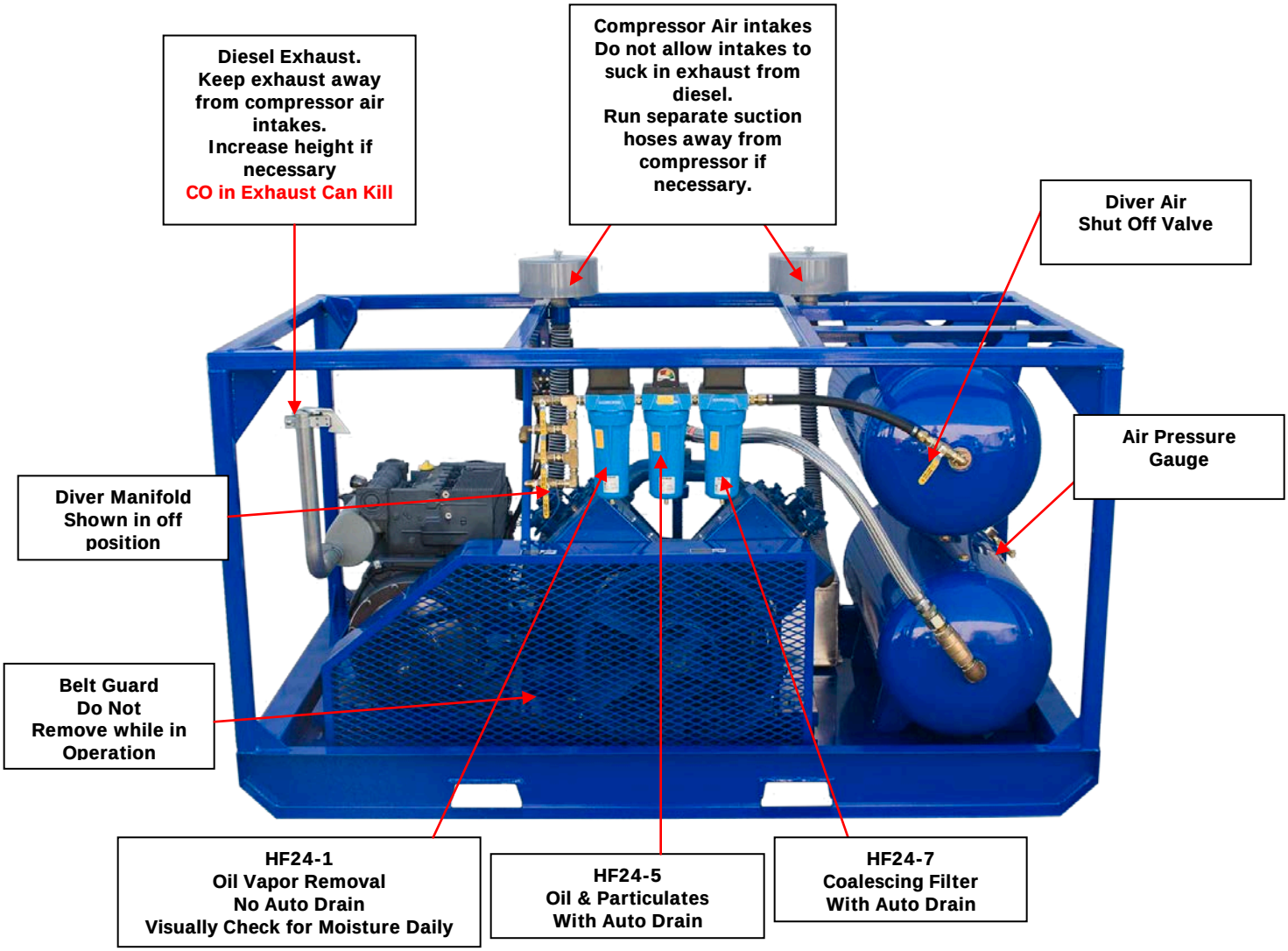


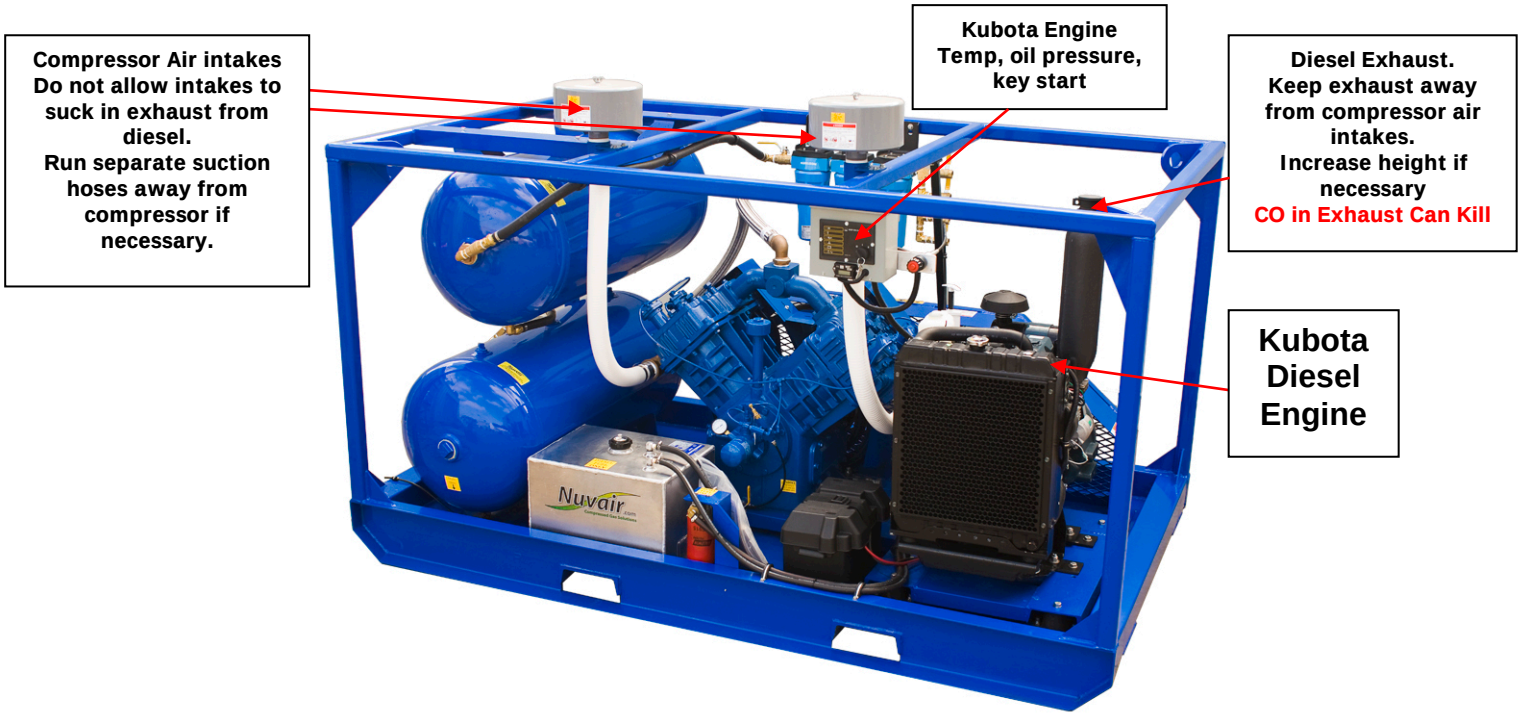
Nuvair diesel exhaust extension:

An exhaust extension has been provided for our Diesel Q-5120 packages. The exhaust extension should be used when conditions exist that could possibly lead to exhaust entering into the compressor intake filters.
To be sure air is free of CO we recommend the use of a CO analyzer.
More info on the Nuvair Pro CO can be found on page 23.



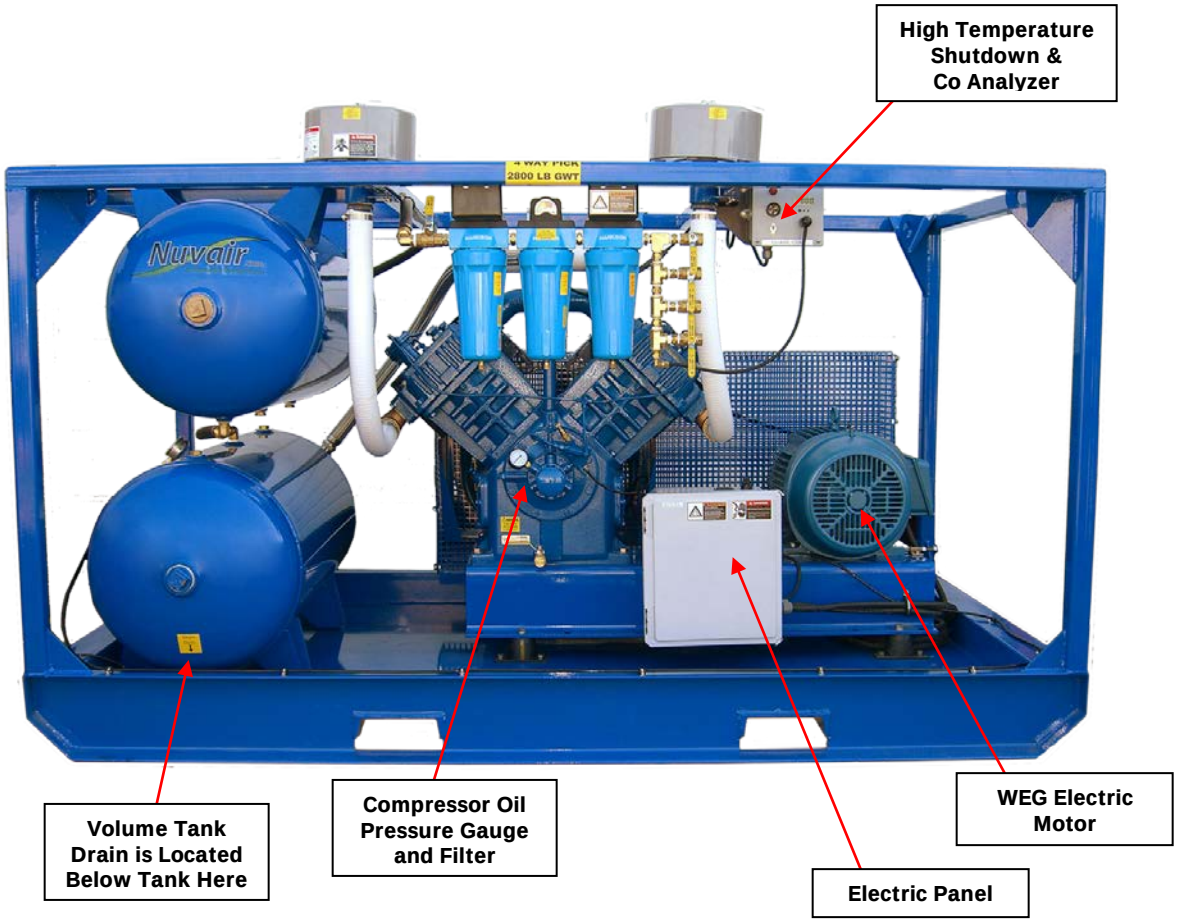
Q5120D Compressor System Component Identification



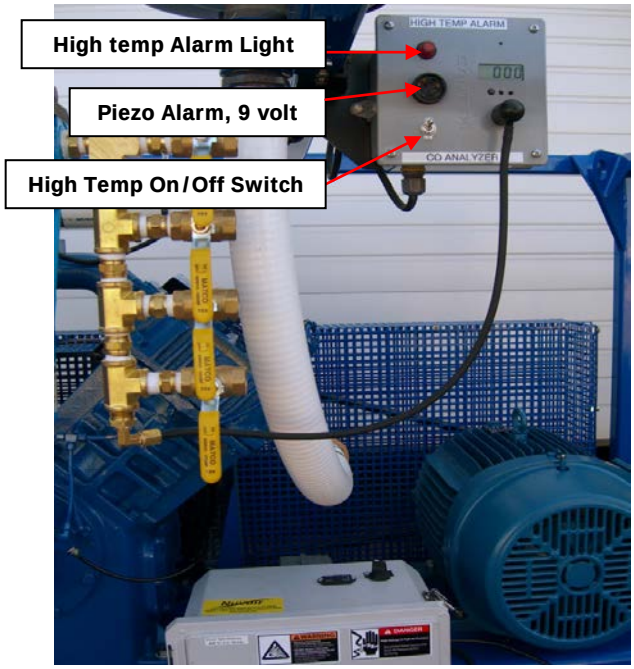


7.0 Q5120E Compressor System Component Identification

(only parts that differ from Diesel are labeled)



Optional (9620) Pro Co Analyzer with High Temp Alarm
(See page 23 for more information on the Nuvair Pro CO)



CO Monitor and High Temp Alarm:
Many government, associations and regulatory bodies require a CO Monitor and High Temp alarm be installed on a breathing air compressor.
Refer to your local regulations for this information.

CO Monitor Operation:
See Manual provided with CO Analyzer.

High Temp Alarm: Switch turns alarm on and off and light indicates High temperature warning. This alarm is activated by the compressor exceeding 350 degrees F. User replaceable 9 volt battery in case for High Temp Alarm.

8.0 Theory of Operation:

Before Starting the Nuvair Q5120 system follow the procedures outlined in this operation manual.

⚠ Notice

If any information in this manual conflicts with any of the other manuals call Nuvair before proceeding.

9.0 Assembly Preparation:

1. First familiarize yourself with the components of the system in the first section of the manual.
2. Please read and follow instructions for compressor and motor provided in additional manuals.
3. Unpack the system and remove from the pallet.
4. Make sure compressor is placed at least 24in. away from any walls or structures that will prevent proper air flow.
5. Visually inspect the system to make sure there has been no damage* during shipping.

6. Follow the remaining step by step instructions for initial set up and operation.

*If damaged, please call Nuvair to file a damage report. Please take photos and supply detailed information about the damage.

10.0 Set-up and Assembly

10.1 Power Connection

This package comes with a 12 volt battery for the Duetz or Kubota electric start to function properly**.**
Red Is Positive! Connecting the wrong leads may damage circuitry.

Electric Option:

A WEG 25hp electric motor is supplied with the current and voltage specified at time of purchase.

⚠ Warning

The system must be properly wired according to national and local electrical codes by a qualified electrician. Improper wiring may lead to fires, which can cause serious personal injury or death.

10.2 Proper Rotation:

When the Weg electric motor is used to drive the system it is important that the power supply is properly connected to prevent improper motor rotation. Running the compressor in the wrong direction will damage the compressor and void warranty.

A. Duetz Engine Operation:
See included Manual

B. Kubota Engine Operation:
See included Manual

C. WEG Motor Operation:
See WEG Motor Manual and Electrical Schematic on page 30 of this manual.

11.0 Operation

Once you have read through all manuals and made the necessary set-up connections; follow the steps below to operate the system:

1. Always check fluid levels before starting compressor and engine.
2. Open Diver tank on/off valve and Volume Tank valves for Air
3. Make sure manual kill switch is open – pulled out
4. Start diesel or electric motor as per instructions
5. Turn off diver Air Valves
6. Warm for a few minutes (Diesel engine)
7. Adjust throttle to run position (Diesel engine)

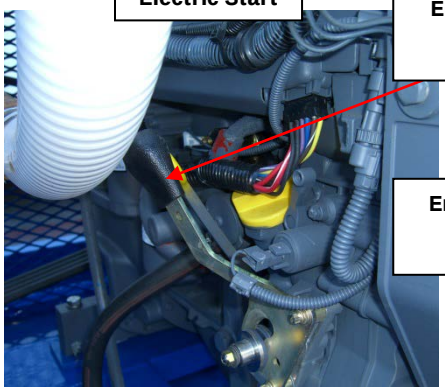
⚠ Warning

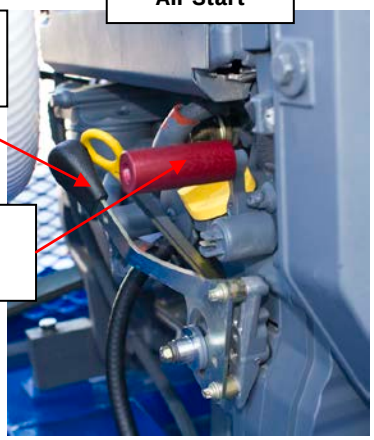
OSHA Regulations require an emergency backup source of breathing gas for the diver in case of an emergency or compressor malfunction.

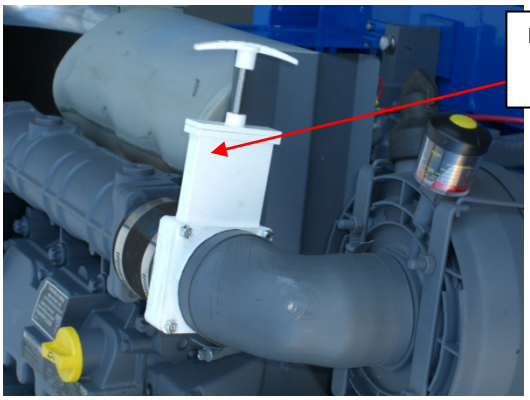
11.1 Shutdown:

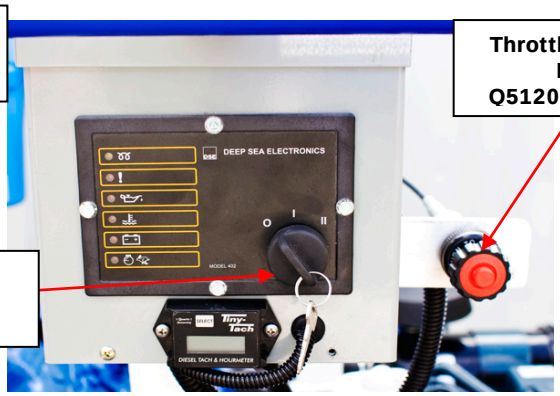
Before shutting down any compressor, make sure all divers are no longer using the compressor this includes in water divers and decompressing divers.

Electric & Diesel: The engine can be shut off by turning the power key to the off position.
Deutz engine with Air Start is shutdown manually.
Diesel: Emergency Manual kill switch for diesel.









12.0 Operation Notes:

- During the running of a Nuvair Q5120 you should hear air escaping from fittings, belt slap from a loose belt, knocking noise or any other audible concerns switch the diver to back up source and stop operation of the compressor to prevent damage to the compressor or faulty operation.
- The Nuvair Q-5120 utilizes Hankison series 24 air filtration, Do NOT use any substitutes.
- Bleed condensate drain on the volume tanks daily or every 8 hours of operation.
- Use only NUVAIR 455 compressor lubricant in the Q5120 piston compressor.

  Do NOT substitute or Mix Lubricants.

13.0 Maintenance

⚠ Warning

Use only the specified Nuvair Lubricants in this system. The use of incompatible lubricants presents a risk of fire and/or explosion, and may result in system damage. This can lead to severe personal injury and death.

⚠ Warning

Be sure that all pressure has been relieved from the system prior to opening any filtration canister. Failure to vent pressure from the system prior to opening the canister can lead to serious personal injury or death.

⚠ Caution

If system is located in an area where there is high humidity and high heat, the life of all Filtration Elements may be as little as 35% of rated operating capacity. Check the compressor manual and Appendix for details on Filter Element Life Factors.

⚠ Warning

Do not carry out any maintenance tasks if the compressor has just shut down. Wait for the compressor to cool to avoid skin burns.

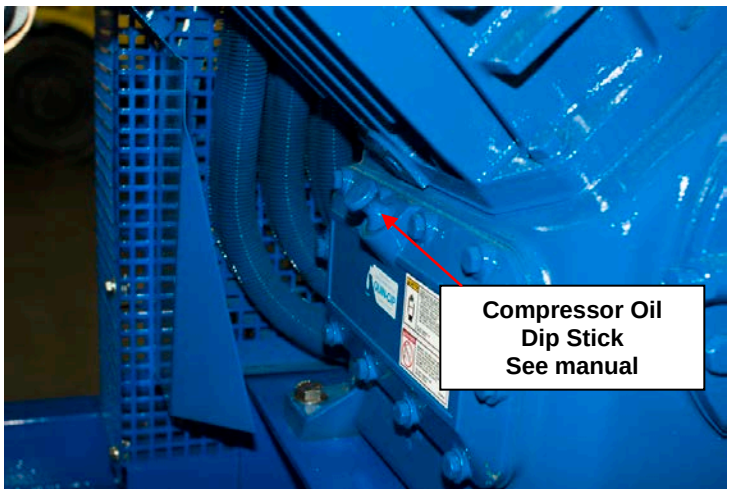
13.1 Routine Maintenance

1) Q5120 Compressor Lubricant: Change compressor lubricant after the first 100 hour break in period and every 200 hours thereafter on the Q5120. Only use lubricants rated for use with breathing Air systems such as NUVAIR 455 ™. Never mix Compressor Lubricants.
2) LP Filtration Inspection: On a daily basis, inspect each Filter Bowl for the presence of moisture and each Element for any unusual degradation or wetness.
3) LP Filtration Elements: Change LP Filter Elements every 100 hours to maintain CGA Grade D air standards. Visual differential pressure (DP) indicators on the HF7 and HF5 filters assist with monitoring replacement intervals. See Section 13.5 for details. If the Compressor System is operated in high humidity and/or high temperature, Filter Elements must be changed more often.
4) Low Volume tanks should be drained of moisture daily or every 8 hours of operation.

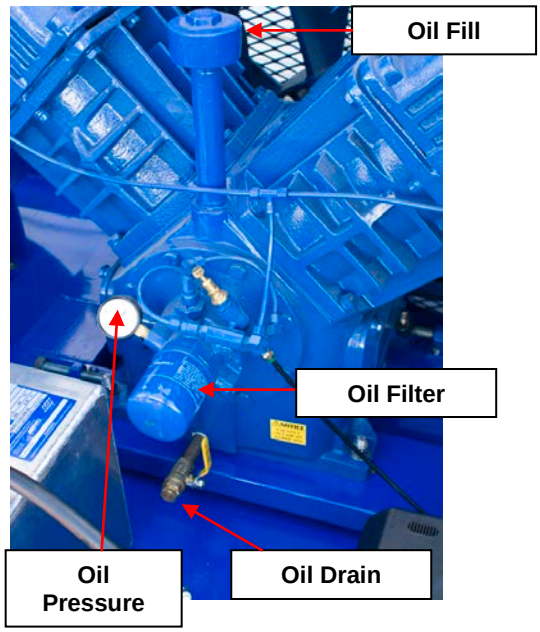
13.2 Compressor Lubricant:

Change Q5120 with NUVAIR 455 rated lubricant every 200 hours or minimum once per year. Do not mix brands.

1) Check oil and diesel levels before operation and every 8 hours during continuous use.
2) Drain Volume tanks daily or every 8 hours during continuous use.
3) Check filters for moisture daily.

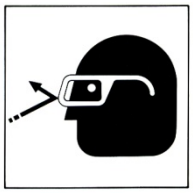


Refer to Supplied Engine manual for proper oil and maintenance.



⚠ Warning

Any oil spilled during the oil and oil filter change could cause personnel to slip and fall. Wear anti-slip footwear. Remove any traces of spilled oil immediately. Slips and falls may cause severe personal injury or death.



⚠ Caution

Wear eye protection, gloves, and skin protection when performing oil changes. Although the oil is not classified as a dangerous substance, the oil can be irritating to your eyes and skin.

⚠ Caution

Both oil and oil filter are classified as "special wastes" and must be disposed of properly according to applicable national and local laws. Failure to dispose of these wastes properly can lead to death of wildlife as well as government

⚠ Caution

Special attention needs to be given to the arrangement of the four LP Air Filtration Elements and Bowls. Properly reinstall each Element and Bowl to the correct Housing. Improper sequence can cause damage to downstream components

13.3 LP Filtration

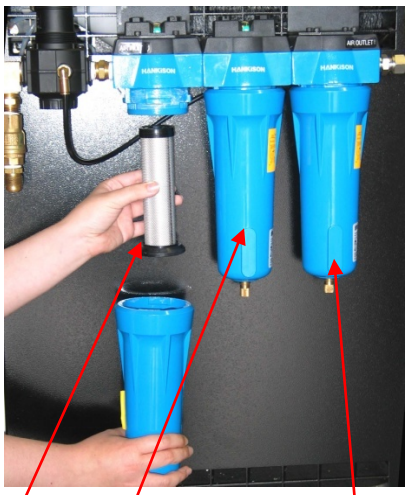
Three stages of Hankison LP filtration are used to produce Grade D air:

1) Particle Removal to 1 micron
2) Coalescing & Water/Oil Vapor Removal to 0.01 micron
3) Oil Vapor Removal to 0.003 PPM

13.4 Filtration Inspection

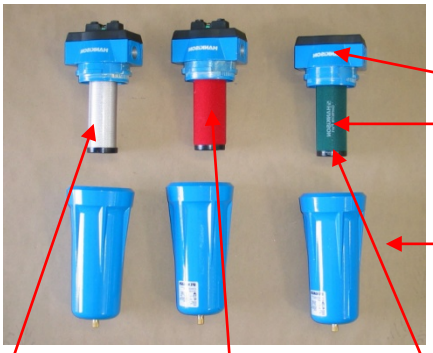
Open each Filter and inspect as follows:

1. Inspect Bowl for the presence of moisture. A high level of moisture build-up in the HF7 or HF5 Filter indicates improper operation of auto-drain floats. Any evidence of moisture in the HF1 Filter indicates the air is not cooling properly and moisture is not properly being removed. Excess moisture will prevent the final filter from operating properly.
2. Inspect Elements for any unusual degradation or wetness. Element degradation can indicate more serious problems. Contact Nuvair for assistance.



HF7 & HF5 Filters with Auto-Drain Floats & DP Indicators.

HF1 Filter with Manual Drain – Should not Contain Moisture

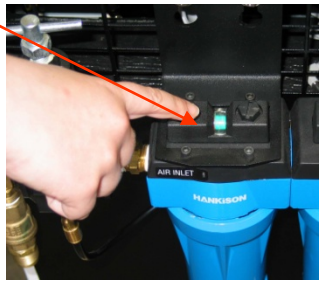


13.5 Changing Filtration Elements

Change the LP Filter Elements every 100 hours or once per year*. If the Compressor System is operated in high humidity and/or high temperature, Filter Elements must be changed more often. Visual DP indicators on the HF7 and HF5 filters assist with monitoring replacement intervals.

1) Push up on the Bowl, rotate CCW, and lower to remove.
2) Gently rotate Filter Element and pull down off mounting post.
3) Replace Element and reassemble in reverse order.

DP Indicator Changes from Green to Red. Yellow indicates filter needs to be replaced. Do Not Use When Red.



⚠ Notice

The interior of the Filter Bowls can be cleaned with a diluted solution of Simple Green™ and flushed thoroughly with clean water. This will assist to prolong the life of the element, bowl, and auto drain.

13.6 Changing Air Intake Filtration

Inspect and or change the air intake Filter Elements every 40 hours or once per year. If the Compressor System is operated in high humidity or a dusty dirty environment, Filter Elements must be changed more often. Inspect elements periodically to determine if the elements should be changed sooner than recommended.

13.7 Air Intake Extension

The air intake filter housings are mounted on 2in. couplings. In the event that the compressor will be used in a windy environment that may cause the diesel engine exhaust to be blown into the intake filters it may be necessary to extend the elements vertically to prevent engine exhaust from entering the elements. 2in. reinforced hose tubing can be purchased from Nuvair to extend the height of the elements. By using a Nuvair PRO CO monitor you will notice changes in CO immediately and the use of a CO monitor is highly recommended by Nuvair.

⚠ Danger

Carbon Monoxide "CO" is a colorless, odorless, tasteless gas that will not support life. Breathing gas mixtures containing CO will lead to unconsciousness and may cause death.

14.0 Spare Parts List

See Compressor manual for LP Compressor parts list. Other System components and related items are listed below.

System Components	Type	Part Number
Compressor Lubricant, Food Grade	Nuvair 455, 1 Gal (Other Sizes Available)	9406
LP Filtration Element	Hankison HF 7-24	E7-24
	Hankison HF 5-24	E5-24
	Hankison HF 1-24	E1-24
Air Intake Filter Element	Quincy Air Intake Element	31p
Oil filter Quincy 5120	Baldwin Oil filter	B474
Belt for Diesel		4B112
Belt for Electric		3B112
Kubota Air Filter	Kubota D1703/D1803	70000-11801
Kubota Fuel Filter	Kubota D1703/D1803	16631-43560
Kubota Oil Filter	Kubota D1703/D1803	70000-74035
Fuel Filter for System	Baldwin	BF915
Nuvair Pro CO Analyzer with High Temp	CO Alarm Analyzer	9620
	Related Equipment Components	
Air Quality Analysis Kit	Specify: (1) CGA Grade Required	
	(2) Single Use or Program Use	

15.0 Service Record Log

Date	Technician Name	Service Performed

Material Safety Data Sheets

Nuvair™ 455 Premium Synthetic Food Grade Air Compressor Lubricant

Effective Date: 03/19/2010

I. Product Identification:

Trade Name: ……. Nuvair 455
Chemical Name: ……..... Polyalphaolefin
Chemical Family: ……..….. Synthetic hydrocarbons/Esters

II. Components & Hazard Statement:

This product is non-hazardous. This material is not considered hazardous by the OHSA Hazard Communication Standard (29 CFR 1910.1200).

III. Physical Data:

Viscosity: ..... 100 cst. @40°C
Specific Gravity (Water = 1.0): 0.85
Boiling Point: ..... N.A.
Vapor Pressure: ..... Negligible
Appearance & Odor: ..... Clear – with Mild odor
Solubility in Water: ..... Negligible

IV. Fire & Explosion Hazard Data:

Flash point: ..... 464°F / 24°0C/ COC
Auto ignition Temperature: ..... Not Established
Flammability Limits: ..... Not Established
Extinguishing Media: ..... Dry Chemical; CO2 Foam; Water Spray
Special Fire Fighting Procedure: …….. Burning may produce irritating/noxious fumes. Firefighters should use NIOSH/MNSA approved self-contained breathing apparatus. Use water to cool fire-exposed containers to prevent pressure build-up.

V. Reactivity Data:

Stability: …….. This product is stable and will not react with water.
Materials to Avoid: ..... Avoid strong oxidizers
Hazardous Decomposition Products: …..... Carbon monoxide, Carbon dioxide

VI. Health Information:

Eye Contact: ..... Flush eyes with water for 15 minutes. Call physician if irritation develops.
Skin Contact: ..... Wash skin with soap and water.
Inhalation: ..... Remove to fresh air.
Ingestion: ..... First aid not normally required. If uncomfortable, call physician.

VII. Health Hazard Data:

Exposure Limit: ..... Not Applicable
Effects of Overexposure: ……. Low oral and dermal toxicity. Prolonged or repeated exposure may cause irritation, nausea, and vomiting.

VIII. Employee Protection:

For general personal hygiene, wash hands thoroughly after handling material. Avoid contact with skin and eyes. Chemical impervious gloves are not required, but may be recommended for prolonged exposure. Use in a well ventilated area.

IX. Storage, Spill, & Disposal Procedures:

Storage: ……. Store in clean, dry area.
Spills: ……. Use absorbent materials to soak up fluid.
Disposal: ……. Incinerate this product and all associated wastes in a licensed facility in accordance with Federal, state, and local regulations.

X. Hazard Rating Information:

NFPA Health: …….. 0
Flammability: ……..... 1
Reactivity: …….. 0
Personal Protection: …….. B

This information contained herein is based on the data available to us and is believed to be true and accurate. Nuvair makes no warranty, expressed or implied, regarding the accuracy of this data or the results to be obtained from the use thereof. Nuvair assumes no responsibility for injury from the use of this product.

NUVAIR SYSTEM WARRANTY

NUVAIR extends a limited warranty, which warrants the System to be free from defects in materials and workmanship under normal use and service for a limited period. All other Original Equipment Manufacturer (OEM) components used in the system are warranted only to the extent of the OEM's warranty to NUVAIR. NUVAIR makes no warranty with respect to these OEM components, and only warrants the workmanship that NUVAIR has employed in the installation or use of any OEM component. This warranty is not transferable.

NUVAIR will, at it's discretion and according to the terms as set forth within, replace or repair any materials which fail under normal use and service and do not exhibit any signs of improper maintenance, misuse, accident, alteration, weather damage, tampering, or use for any other than the intended purpose. Determination of failure is the responsibility of NUVAIR, which will work together with the customer to adequately address warranty issues. When any materials are repaired or replaced during the warranty period, they are warranted only for the remainder of the original warranty period. This warranty shall be void and NUVAIR shall have no responsibility to repair or replace damaged materials resulting directly or indirectly from the use of repair or replacement parts not approved by NUVAIR.

A warranty registration card, supplied with system documentation, must be filled out and submitted to NUVAIR for the warranty to be in full effect. If the warranty registration card is not received within thirty (30) days of installation, the thirty-six (36) month warranty will begin with the date of shipment from NUVAIR.

Maintenance Items:

Any materials which are consumed, or otherwise rendered not warrantable due to processes applied to them, are considered expendable and are not covered under the terms of this policy. This includes maintenance and consumable items listed as part of a suggested maintenance program included with system documentation.

Return Policy:

Application for warranty service can be made by contacting NUVAIR during regular business hours and requesting a Return Material Authorization number. Materials that are found to be defective must be shipped, freight pre-paid, to the NUVAIR office in Oxnard, California. Upon inspection and determination of failure, NUVAIR shall exercise its options under the terms of this policy. Warranty serviced materials will be returned to the customer via NUVAIR's preferred shipping method, at NUVAIR's expense. Any expedited return shipping arrangements to be made at customer's expense must be specified in advance.

Limitation of Warranty and Liability:

Repair, replacement or refund in the manner and within the time provided shall constitute NUVAIR'S sole liability and the Purchaser's exclusive remedy resulting from any nonconformity or defect. NUVAIR shall not in any event be liable for any damages, whether based on contract, warranty, negligence, strict liability or otherwise, including without limitation any consequential, incidental or special damages, arising with respect to the equipment or its failure to operate, even if NUVAIR has been advised of the possibility thereof. NUVAIR makes no other warranty or representation of any kind, except that of title, and all other warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, are hereby expressly disclaimed. No salesman or other representative of NUVAIR has authority to make any warranties.

Additional Record of Changes

It is the responsibility of the owner of this product to register their ownership with Nuvair by sending the warranty card provided. This card is to establish registration for any necessary warranty work and as a means of communication that allows Nuvair to contact the user regarding this product.

The user must notify Nuvair of any change of address by the user or sale of the product. All changes or revisions to this manual must be recorded in this document to ensure that the manual is up to date.

Change Date		Description of Change
07.26.11		**Addition of exhaust warnings**
07.28.11		**Exhaust extension and Pro CO information added in description.**
06.01.12		**Addition of pilot valve instructions**

NOTES:

PILOT VALVE ADJUSTMENTS

All adjustments made to the pilot valve must be performed by a qualified technician. The adjustments must be made while the unit is operating, therefore, extreme caution must be taken while working on the unit. Observe all necessary precautions. Always use a back-up wrench and make all differential and unload pressure adjustments in very small increments (1/8 turn).

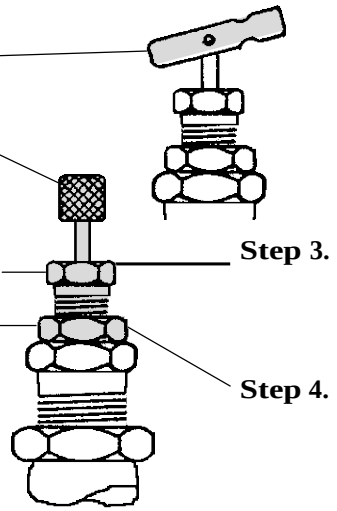
⚠ Warning

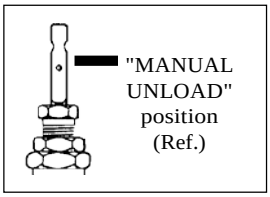
The pressure switch and / or pilot valve are set at the factory for maximum efficiency. Adjustments to either component must be performed by a qualified technician. Exceeding the factory recommended maximum pressure will void the warranty and may cause personal injury.

Setting Unload Pressure

Step 1. Flip the toggle to the "RUN" position as shown, or turn the knurled knob (if so equipped) counter-clockwise until it stops.

Step 2. Loosen locknut (counterclockwise). * **Stabilize with back-up wrench!**

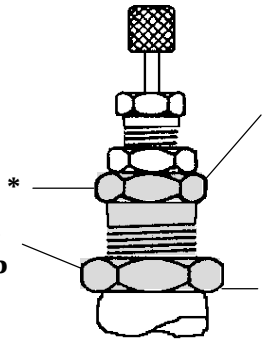




Step 3. Turn clockwise to increase unload pressure, turn counterclockwise to decrease unload pressure. Hold position with wrench and proceed to Step 4.

Step 4. Tighten locknut (clockwise) with wrench. *** Stabilize with back-up wrench!**

Setting Differential Pressure



Step 5. Loosen locknut (counterclockwise). *** Stabilize with back-up wrench!**

Step 6. Turn clockwise to decrease the differential pressure and counterclockwise to increase the differential pressure. Hold position with wrench and proceed to Step 7.

Step 7. Tighten locknut (clockwise) with wrench. *** Stabilize with back-up wrench!**

Nuvair™ 2011 All Rights Reserved
Phone 1-805-815-4044
Fax 1-805-815-4196
2949 West 5th Street
Oxnard, CA 93030 USA
Email : info@nuvair.com
Web : www.nuvair.com
rev.070111