

This Manual is not updated since Dec.31st/2022 Refer to kb.usaircompressor.com for further information and any discrepancies with your compressor and explanations here.



Owner's Manual X Series



Please read this manual first, before making any phone calls requesting technical support



This manual is intended for digital use, as it includes links and URLs to external resources, such as step by step "how to" instructions and video tutorials. Printing this document makes those links unusable.

This Manual is not updated since Dec.31st/2022 Refer to kb.usaircompressor.com for further information and any discrepancies with your compressor and explanations here

X Series Compressors Owner's Manual

TABLE OF CONTENTS

INTRODUCTION & STARTUP CHECKLIST	3
EXTENDED 10-YEAR EXCHANGE WARRANTY & CONDITIONS	4
Warranty Termination	4
MAJOR COMPRESSOR PARTS ILLUSTRATED	5
MEMBERSHIP AND ONLINE ACCESS	6
SAFETY FIRST	7
INSTALLATION SAFETY INSTRUCTIONS	8
OPERATIONAL PRECAUTIONS	10
MAINTENANCE RELATED SAFETY PRECAUTIONS	11
HOW TO ADJUST PRESSURES & RESET HOURS	13
How Reset Service Hours	14
Servicing Schedule	14
Servicing Checklist	15
Example Videos for Filter Change	15
USER MANUALS & VIDEOS	16
TROUBLESHOOTING ERRORS & FAILURES	17
WIRING DIAGRAMS	19
CONTACT INFORMATION	21
Technical Support via Text or Email	21

INTRODUCTION & STARTUP CHECKLIST

This manual applies to **X-Series US Air Compressors** and explains all equipment available, including options. Therefore, you may find some explanations for different equipment or controls not installed on your compressor. All specifications provided in this manual are current at the time of printing. However, based on continual product improvements, US Air Compressor reserves the right to make changes at any time without notice. Depending upon specifications, the compressor shown in the illustrations may differ from yours.

STARTUP CHECKLIST

1. Call US Air Compressor to **register your compressor** with a valid email address
 - At least one authorized user is required (see: [membership](#) for further details)
 - For convenience multiple users can be registered for separately handling different tasks like servicing, accounting, and purchasing (ordering parts)
2. **Select the right location** for the [installation](#) of your compressor
 - leaving adequate space around the perimeter for ease in access and servicing
 - leaving sufficient head-space above the compressor for proper air ventilation
 - on a leveled-floor and location away from dusts, dirt, or pollutants
3. **Read this manual entirely** and have the hook ups done by certified technicians
 - electrical connections by a certified electrician
 - mechanical connections by a certified mechanic/HVAC person
4. Before pressing the START button, **please read the [operational precautions](#)** again



Make sure to open any outlet isolation valve. Running the compressor against a closed valve will abruptly open the safety air-release valve, which suddenly releases compressed air & oil mixture around, making a potential mess.

EXTENDED 10-YEAR EXCHANGE WARRANTY & CONDITIONS




You have purchased a rotary screw air compressor, which relies upon regular service. Timely servicing with original parts purchased from **US Air Compressor, the OEM** (Original Equipment Manufacturer), is a fundamental prerequisite to maintain the extended warranty. Having confidence in the quality of its compressors, US Air Compressor offers **competitive pricing** along with an **extended 10-year exchange warranty**. Detailed terms and conditions are available in your original purchase document. The warranty comes with the following fundamental conditions:



1. **Servicing using the OEM Parts:** Customers are required to purchase genuine service parts & oil from the US Air Compressor based on a predetermined service schedule
2. **Commitment to a periodical servicing schedule:** Customers are required to register (free of charge) as members to access an online service scheduling platform

US Air Compressor [membership](#) platform simply enables customers;

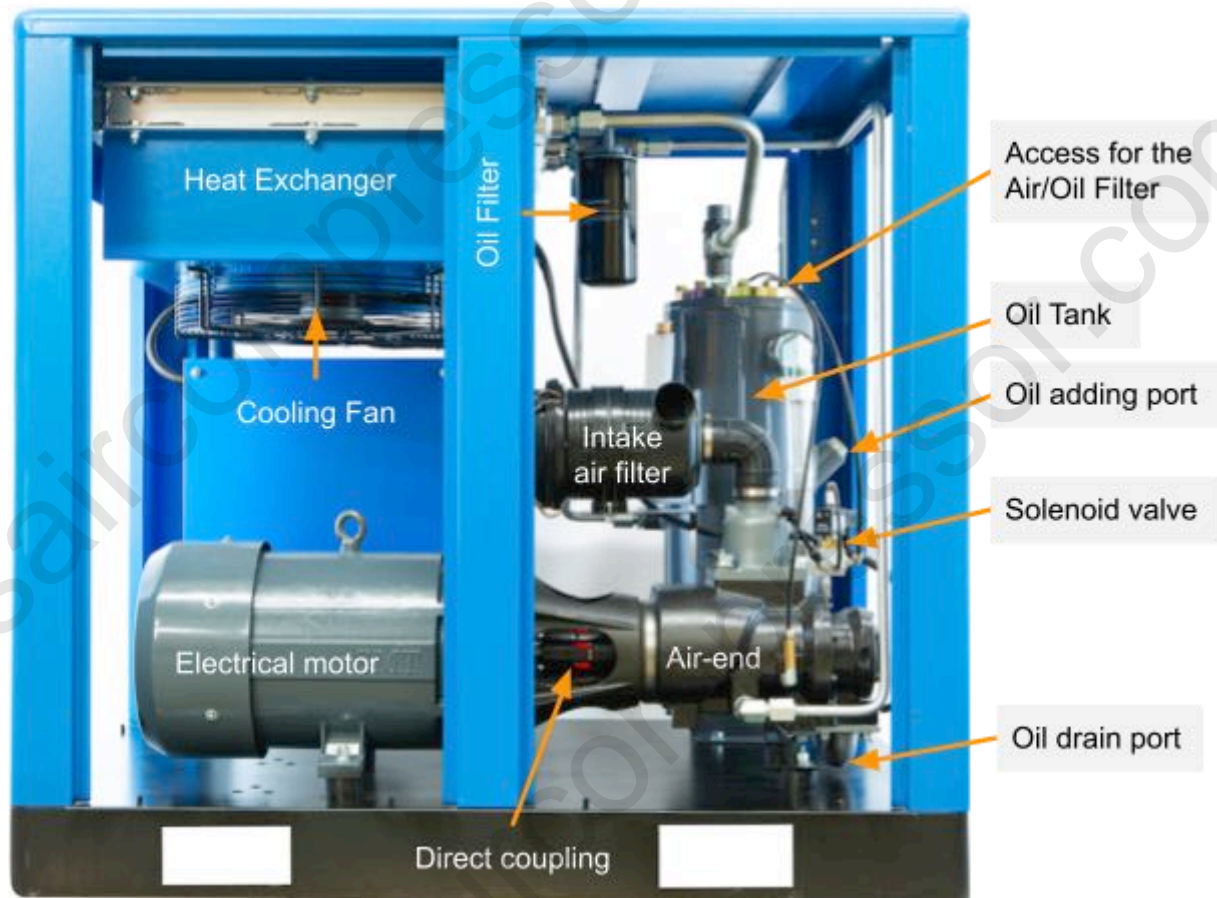
- 👍 to access (free of charge) to an online service monitoring system that is designed to keep a compressor's service records both historical and future
- 👍 have confidence in ordering the right parts without the need to remember any technical specifications. All genuine parts and oil specifications, servicing frequencies and associated costs are conveniently predetermined and accessible at any time
- 👍 have clarity in servicing metrics and timeline by an online historical service record for keeping all related maintenance events and purchase parts in one place

  	<p>If you do NOT schedule servicing your compressor will schedule it for you</p>
---	---

Warranty Termination

- 👎 **Not purchasing original parts as periodically scheduled from the US Air Compressor will discontinue the warranty.** Short-term savings from buying unauthorized aftermarket parts is not worth the risk of future repair and replacement costs and prolonged compressor down times, which could turn-out to be a tremendous cost.
- 👎 **This compressor should neither be modified nor serviced with non-genuine US Air Compressor products.** Modification without using genuine products voids the warranty and makes the customer liable for any damage or destruction from the compressor. Using aftermarket parts will diminish the compressor's desired performance, safety or durability, and may even violate government regulations. In addition, damage or liability resulting from such unauthorized modification and/or non-genuine parts usage is the obligation of the modifier.

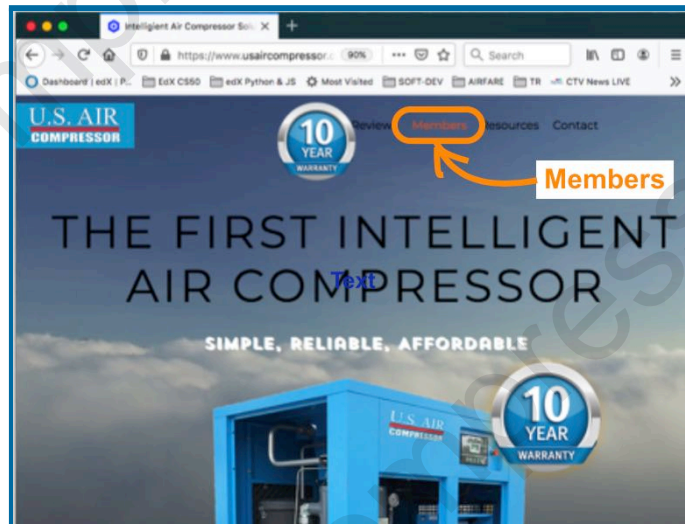
MAJOR COMPRESSOR PARTS ILLUSTRATED



MEMBERSHIP AND ONLINE ACCESS

Unless already done so, please call US Air Compressor and register your compressor with an authorized email address. **Membership registry is a prerequisite for the Extended 10-Year Exchange Warranty.** Registered members may also order parts online faster.

1. Open a web browser using a computer or cell phone and visit:
www.UsAirCompressor.com and click Members



2. Or visit www.UsAirCompressor.com/members to directly go to the member login screen below. (Use your own registered email address and serial number)

US AIR COMPRESSOR LOGIN

REGISTERED EMAIL ADDRESS

✉ JSmith@abc.com

COMPRESSOR SERIAL NUMBER

🔒

LOGIN

SAFETY FIRST



All responsibility for any damage or injury resulting from neglecting these precautions, or non-observance of the normal caution and care required for installation, operation, maintenance and repair, even if not expressly stated, will be disclaimed by US Air Compressor.

1. The operator must employ safe working practices and observe all related work safety requirements and regulations.
2. If any of the following statements does not comply with the applicable legislation, the stricter of the two shall apply.
3. Installation, operation, maintenance and repair work must only be performed by authorized, trained, specialized personnel who are trained to repair and fix air compressors.
4. The compressor is not considered capable of producing air of breathing quality. For air of breathing quality, the compressed air must be adequately purified according to the applicable legislation and standards.
5. Before any maintenance, repair work, adjustment or any other non-routine checks, stop the compressor, press the emergency stop button, switch off the voltage and depressurize the compressor. In addition, the power isolating switch must be opened and locked.
6. Compressed air is dangerous to play with and may cause serious harm. Never apply the air to yourself or direct an air stream to anyone. Never use the air to clean dirt from your clothes. When using the air to clean equipment, do so with extreme caution and wear eye protection.
7. The owner is responsible for maintaining the unit in safe operating condition. Parts and accessories shall be replaced if unsuitable for safe operation. Parts should only be purchased for US Air compressors.
8. It is not allowed to walk or stand on the unit or on its components.



INSTALLATION SAFETY INSTRUCTIONS



All responsibility for any damage or injury resulting from neglecting these precautions, or non-observance of the normal caution and care required for installation, operation, maintenance and repair, even if not expressly stated, will be disclaimed by US Air Compressor.


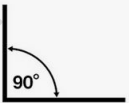
1. The machine must only be lifted using suitable equipment in accordance with the applicable safety regulations. Loose or pivoting parts must be securely fastened before lifting. It is strictly forbidden to dwell or stay in the risk zone under a lifted load. Lifting acceleration and deceleration must be kept within safe limits. Wear a safety helmet when working in the area of overhead or lifting equipment.
2. The unit is designed for indoor use only.
3. Place the machine where the ambient air is as cool and clean as possible. If necessary, install a suction or discharge duct. Never obstruct the air inlet so does the outlet. Care must be taken to minimize the entry of moisture at the inlet air.
4. Any blanking flanges, plugs, caps and desiccant bags must be removed before connecting the pipes.
5. Air hoses must be of correct size and suitable for the working pressure. Never use frayed, damaged or worn hoses. Distribution pipes and connections must be of the correct size and suitable for the working pressure.
6. The aspirated air must be free of flammable fumes, vapors and particles, e.g. paint solvents, that can lead to internal fire or explosion.
7. Arrange the air intake so that loose clothing worn by people cannot be sucked in.
8. Ensure that the discharge pipe from the compressor to the aftercooler or air net is free to expand (FLEXIBLE & AFTERCOOLER IS NOT CARRYING THE WEIGHT OF PIPING) under heat and that it is not in contact with or close to flammable materials.
9. No external force may be exerted on the air outlet valve; the connected pipe must be free of strain.
10. If remote control is installed, the machine must bear a clear sign stating: DANGER: This machine is remotely controlled and may start without warning.



The operator has to make sure that the machine is stopped and depressurized and that the electrical isolating switch is open, locked and labeled with a temporary warning before any maintenance or repair. As a further safeguard, persons switching on or off remotely controlled machines shall take adequate precautions to ensure that there is no one checking or working on the machine. To this end, a suitable notice shall be affixed to the start equipment.



If you choose to use the remote control, you must release US Air Compressor for all and any liabilities and must produce a legal document filed in the State where the compressor is installed and the state US Air compressor headquarter is located.

11. Air-cooled machines must be installed in such a way that an adequate flow of cooling air is available and the exhausted air does not recirculate to the compressor air inlet or cooling air inlet.
12. The electrical connections must correspond to the applicable codes. The machines must be earthed and protected against short circuits by fuses in all phases. A lockable power isolating switch must be installed near the compressor. 
13. On machines with automatic start/stop system or if the automatic restart function after voltage failure is activated, a sign stating "This machine may start without warning" must be affixed near the instrument panel.
14. In multiple compressor systems, manual valves must be installed to isolate each compressor. Non-return valves (check valves) must not be relied upon for isolating pressure systems.
15. Never remove or tamper with the safety devices, guards or insulation fitted on the machine. Every pressure vessel or auxiliary installed outside the machine to contain air above atmospheric pressure must be protected by a pressure relieving device or devices as required.
16. Piping or other parts with a temperature in excess of 70°C (158°F) and which may be accidentally touched by personnel in normal operation must be guarded or insulated. Other high temperature piping must be clearly marked.
17. For water-cooled machines, the cooling water system installed outside the machine has to be protected by a safety device with set pressure according to the maximum cooling water inlet pressure.
18. The ground must be leveled and must not be subject to variable inclination.
19. Using non US Air compressor original equipment and parts will void your warranty. Aftermarket parts are inferior and may cause damage to your compressor. 

OPERATIONAL PRECAUTIONS



All responsibility for any damage or injury resulting from neglecting these precautions, or non-observance of the normal caution and care required for installation, operation, maintenance and repair, even if not expressly stated, will be disclaimed by US Air Compressor.

This compressor is a rotary-screw type positive displacement machine and must **never run against a closed-valve (isolation valve)** right at its outlet. Doing so will create a sudden and tremendously high pressure build up which would be destructive to the machine itself. Avoiding any adverse consequences of such a simple mistake, your **US Air Compressor is equipped with a safety air-relief valve, which abruptly relieves air/oil mixture to protect the machine.** This may significantly reduce the oil level in the machine in addition to making significant oil spill (spray around) that needs to be cleaned up. Therefore, your compressor is usually shipped with extra **break-in oil** than normally required to compensate for possible startup errors like running the compressor against a closed valve and ending up losing oil. It must be noted that the **initial break-in oil is totally transparent** and may not be easily visible from the sight-glass as the oil level could be higher than the maximum level visible by the sight-glass.

Once properly installing and connecting the compressor preferably to an air dryer and/or a buffer air tank before connecting an air distribution pipe network —before starting the compressor— **drain** (and save for future use) **some of the oil may be drained**, so that the oil level would be visible and adjusted under the maximum level line. Never drain the oil level under mid-point between maximum and minimum levels. Save the extra oil drained for future use within the next 500 hours or 90 days, if needed. ever touch any piping or components of the compressor during operation.

1. Use only the correct type and size of hose end fittings and connections. When blowing through a hose or airline, ensure that the open end is held securely. A free end will whip and may cause injury. Make sure that a hose is fully depressurized before disconnecting it.
2. Persons switching on remotely controlled machines shall take adequate precautions to ensure that there is no one checking or working on the machine. To this end, a suitable notice shall be affixed to the remote start equipment.
3. Never operate the machine when there is a possibility of taking in flammable or toxic fumes, vapors or particles.
4. Never operate the machine below or in excess of its limit ratings.
5. Keep all bodywork doors shut during operation. The doors may be opened for short periods only, e.g. to carry out routine checks.
6. Periodically check that:
 - ONLY Genuine US AIR Compressor parts are installed in your compressor.
 - All guards are in place and securely fastened
 - All hoses and/or pipes inside the machine are in good condition, secure and not rubbing
 - No leaks occur

- All fasteners are tight
 - All electrical leads are secure and in good order
 - Safety valves and other pressure relief devices are not obstructed by dirt or paint
 - Air outlet valve and air net, i.e. pipes, couplings, manifolds, valves, hoses, etc. are in good repair, free of wear or abuse
 - Air cooling filters of the electrical cabinet are not clogged
7. If warm cooling air from compressors is used in air heating systems, e.g. to warm up a workroom, take precautions against air pollution and possible contamination of the breathing air.
 8. On water-cooled compressors using open circuit cooling towers, protective measures must be taken to avoid the growth of harmful bacteria such as Legionella pneumophila bacteria.
 9. Do not remove any of, or tamper with, the sound-damping material.
 10. Never remove or tamper with the safety devices, guards or insulation fitted on the machine. Every pressure vessel or auxiliary installed outside the machine to contain air above atmospheric pressure shall be protected by a pressure relieving device or devices as required.

MAINTENANCE RELATED SAFETY PRECAUTIONS



All responsibility for any damage or injury resulting from neglecting these precautions, or non-observance of the normal caution and care required for installation, operation, maintenance and repair, even if not expressly stated, will be disclaimed by US Air Compressor.

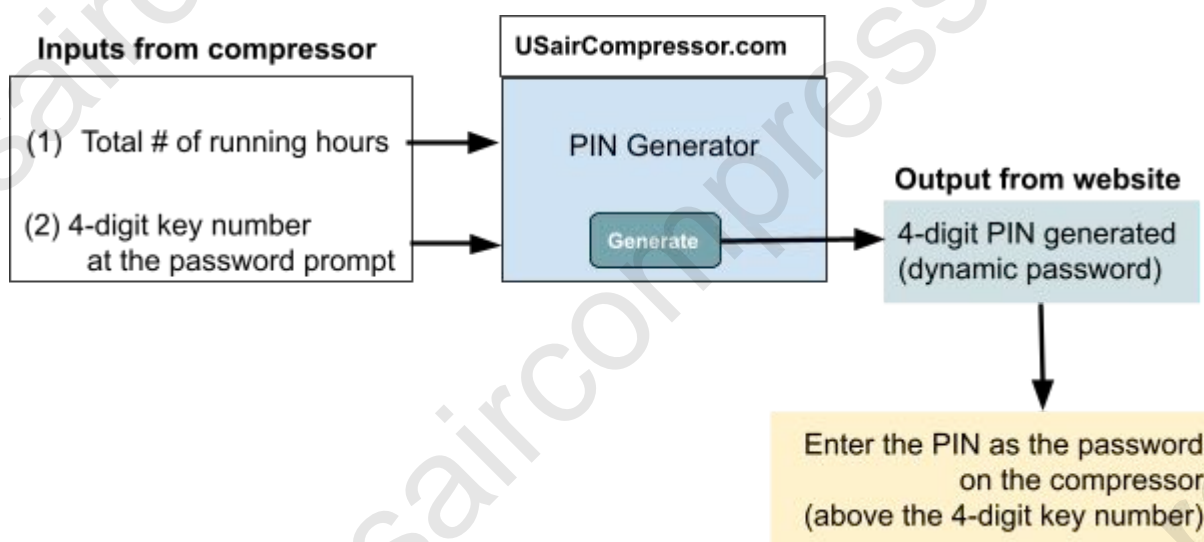
1. Always use the correct safety equipment (such as safety glasses, gloves, safety shoes, etc.).
2. Use only the correct tools for maintenance and repair work.
3. Use only genuine spare parts.
4. All maintenance work shall only be undertaken when the machine has cooled down.
5. A warning sign bearing a legend such as "Work in progress; do not start" shall be attached to the starting equipment.
6. Persons switching on remotely controlled machines shall take adequate precautions to ensure that there is no one checking or working on the machine. To this end, a suitable notice shall be affixed to the remote start equipment.
7. Close the compressor air outlet valve and depressurize the compressor before connecting or disconnecting a pipe.
8. Before removing any pressurized component, effectively isolate the machine from all sources of pressure and relieve the entire system of pressure.

9. Never use flammable solvents or carbon tetrachloride for cleaning parts. Take safety precautions against toxic vapors of cleaning liquids.
10. Scrupulously observe cleanliness during maintenance and repair. Keep dirt away by covering the parts and exposed openings with a clean cloth, paper or tape.
11. Never weld or perform any operation involving heat near the oil system. Oil tanks must be completely purged, e.g. by steam cleaning, before carrying out such operations. Never weld on, or in any way modify, pressure vessels.
12. Whenever there is an indication or any suspicion that an internal part of a machine is overheated, the machine shall be stopped but no inspection covers shall be opened before sufficient cooling time has elapsed; this to avoid the risk of spontaneous ignition of the oil vapor when air is admitted.
13. Never use a light source with open flame for inspecting the interior of a machine, pressure vessel, etc.
14. Make sure that no tools, loose parts or rags are left in or on the machine.
15. All regulating and safety devices shall be maintained with due care to ensure that they function properly. They may not be put out of action.
16. Before clearing the machine for use after maintenance or overhaul, check that operating is correct. Check that all control and shut-down devices are fitted and that they function correctly
17. Every time the separator element is renewed, examine the discharge pipe and the inside of the oil separator vessel for carbon deposits; if excessive, the deposits should be removed.
18. Protect the motor, air filter, electrical and regulating components, etc. to prevent moisture from entering them, e.g. when steam cleaning.
19. Make sure that all sound-damping material and vibration dampers, e.g. damping material on the body work and in the air inlet and outlet systems of the compressor, is in good condition. If damaged, replace it by genuine material from the manufacturer to prevent the sound pressure level from increasing.
20. Never use caustic solvents, which can damage materials of the air net, e.g. polycarbonate bowls.


HOW TO ADJUST PRESSURES & RESET HOURS

Please watch the [videos provided](#) in the following sections showing examples for changing user parameters. For accessing user parameters, as a default password (8888) needs to be entered first.

For changing any user parameters, a second password is needed. This is a dynamic password, which needs to be obtained from www.usaircompressor.com in the **Members** area. Your compressor's serial number and your company authorized email address previously registered with US Air Compressor will be used for logging in as a member. After logging in, the dynamic password will be generated using the "PIN Generator". The following information will be required to generate PIN (which is the dynamic password)



The total number of running hours for the compressor (1) should be noted prior to the attempt changing any user parameters. When the second password is asked, please also note the 4-digit key number (2) second line at the password prompt. [User Instructions and videos below](#) are self-explanatory for entering passwords and making changes to any user parameters.

	<p>Please DO NOT CALL US Air Compressor to obtain a dynamic password over the phone. Dynamic passwords (PINs) can only be generated by the member at the website. How to obtain dynamic PIN numbers is explained in the step by step instructions and youtube videos below.</p>
---	--

How Reset Service Hours

When there is an alarm to reset the compressor service hours you need to reset all timers related to service parts to 0000 and (S)ave. User Manual provides step by step instructions to resetting timers (basically setting to zero) as well as changing any other user parameters.

- Oil Filter,
- Oil/Air Separator, O/A Separator,
- Air Filter,
- Oil, Lube, Coolant,
- Grease,
- Belt

[User Instructions and videos](#) in the next section are self-explanatory for making changes to any user parameters including resetting (setting to zeros) any of the above service parameters. Every 500 hours the RESET procedure must be repeated. The purpose of this practice is to ensure the compressor is checked by the user for every 500 hours of operation as a proactive measure and to avoid any possibility of disrepair. This periodical check by the user also reminds the user to service the compressor at the right period.

Normal periodical service intervals are indicated below provided that the compressor is located in a clean environment. Different levels of dirt, pollution may require more frequent changes;

Servicing Schedule

- **First Time Service at**
 - 500 hours or 3 months BREAK-IN Service – CHANGE OIL and FILTERS.
- **Follow-up Periodical Services in every (hours or months, whichever comes first)**
 - 1,000 hours or 2 months GREASE MOTOR BEARINGS (where applicable).
 - 3,000* hours or 12* months CHANGE FILTER KIT.
 - 3,000 or 12 months CHANGE OIL.
 - 12,000 hours or 48 months REPLACE COUPLING ELEMENT.
 - 15,000 hours or 48 months REPLACE FAN AND INTAKE VALVE.
 - 20,000* hours or 60* months REPLACE MOTOR BEARINGS.
 - 25,000* hours or 60* months EXCHANGE AIREND.



* Service hours and frequencies are indicated for clean environmental conditions. Any escalation in terms of dust, dirt, and other airborne pollution would require more frequent oil and filter servicing.

Servicing Checklist

- Order the necessary Oil and Filter Kit online at www.USairCompressor.com/members
- Once parts received plan for the actual service timing (so it is not rushed)
- Stop the compressor (if already running)
- Power off the main electrical switch
- Wait for a couple of minutes to ensure main display goes off
- Drain the oil from the oil tank using the drain valve
- Fill the new oil and close the filling port (valve)
- Check the oil level form sight-glass (ensuring it is between minimum & maximum levels)
- Replace the Oil Filter with the new one
- Replace the Air/Oil separator filter with the new one
- Dispose the used oil according to the best practices for waste oil management

Example Videos for Filter Change

Your filters may not be exactly as shown in the following videos; but, they might still help.

- Example: Oil Filter Change: youtu.be/qPXPEPqDnQ8
- Example: Air/Oil Separator Change (Slide-in Air/Oil Filter): youtu.be/XNcEMNwMI7c

USER MANUALS & VIDEOS

Please select one of the following controllers that matches the controller installed on your compressor. User Manuals are provided with the compressor; however, can be downloaded anytime from www.USairCompressor.com/members. The member area requires a user login with a registered email address and associated compressor's serial number.



User Manual X1

[Step by step instructions: User Manual X1](#)

Video: How to set User Parameters X1 (5 min)
youtu.be/uMeCfKdjs4U



User Manual X2

[Step by step instructions: User Manual X2](#)

Video: How to set User Parameters X2 (4 min)
youtu.be/aIXVO0Z1-gs



User Manual X3

[Step by step instructions: User Manual X3](#)

Video: How to set User Parameters X2 (2 min)
youtu.be/pvE_UFgtLK8

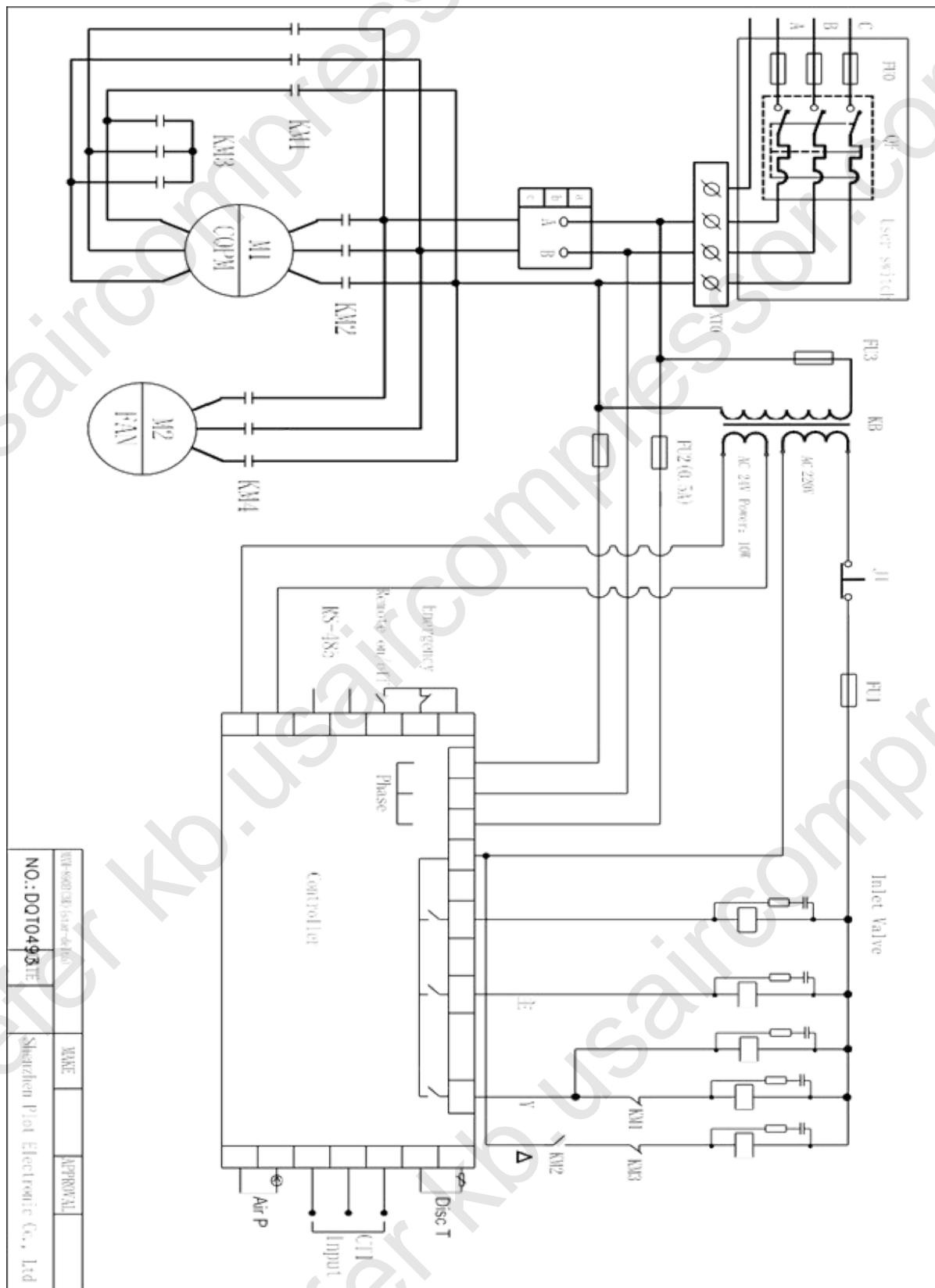
TROUBLESHOOTING ERRORS & FAILURES

Alarm	Reason	Solution
Fail to Stop	Electrical input phase sequence may be wrong	Swap any two of the three input phase wires
	In or out voltage is higher or lower than permissible values	Correct input voltages according to the safe working voltage ranges. 220V rted motors: between 208V & 230V 480V rated motors: between 465V & 480V
	One of the phases does not have power	Check all input phases, make sure all three phases carry the right voltage (above)
	There is an unbalance in input phases	Max unbalance accepted in between phases is 2%. more than that must be corrected
	There is pressure after the compressor higher than compressor is allowed.(Pressure can be seen on the compressor display as pressure measured)	Discharge excess pressure in your compressed air system. Set other compressor pressure levels so that compressed air pressure in the system does not exceed the max pressure setting allowed for your compressor
Display is not energizing / not showing anything	Check input power lines. One or two of the input wires may not have power	Make sure all three power lines coming to the compressor are powered up at the right voltage range (given above)
	Check fuses in the electrical box.	Replace blown ones
Discharge Air Temperature High	Clogged cooler	Clean the cooler
	Insufficient Ventilation where compressor installed causing temperature go above 40 °C at the environment	Make sure ambient temperature does not go above 105°F (40°C) when compressor is running
	Oil level low or contaminated oil	Top up or change the oil. (running at high temperature will cause excess oil to carry over. Make sure other reasons indicated are not causing the high temperature alarm).
	Clogged oil filter or air oil separator	Change filters and oil.

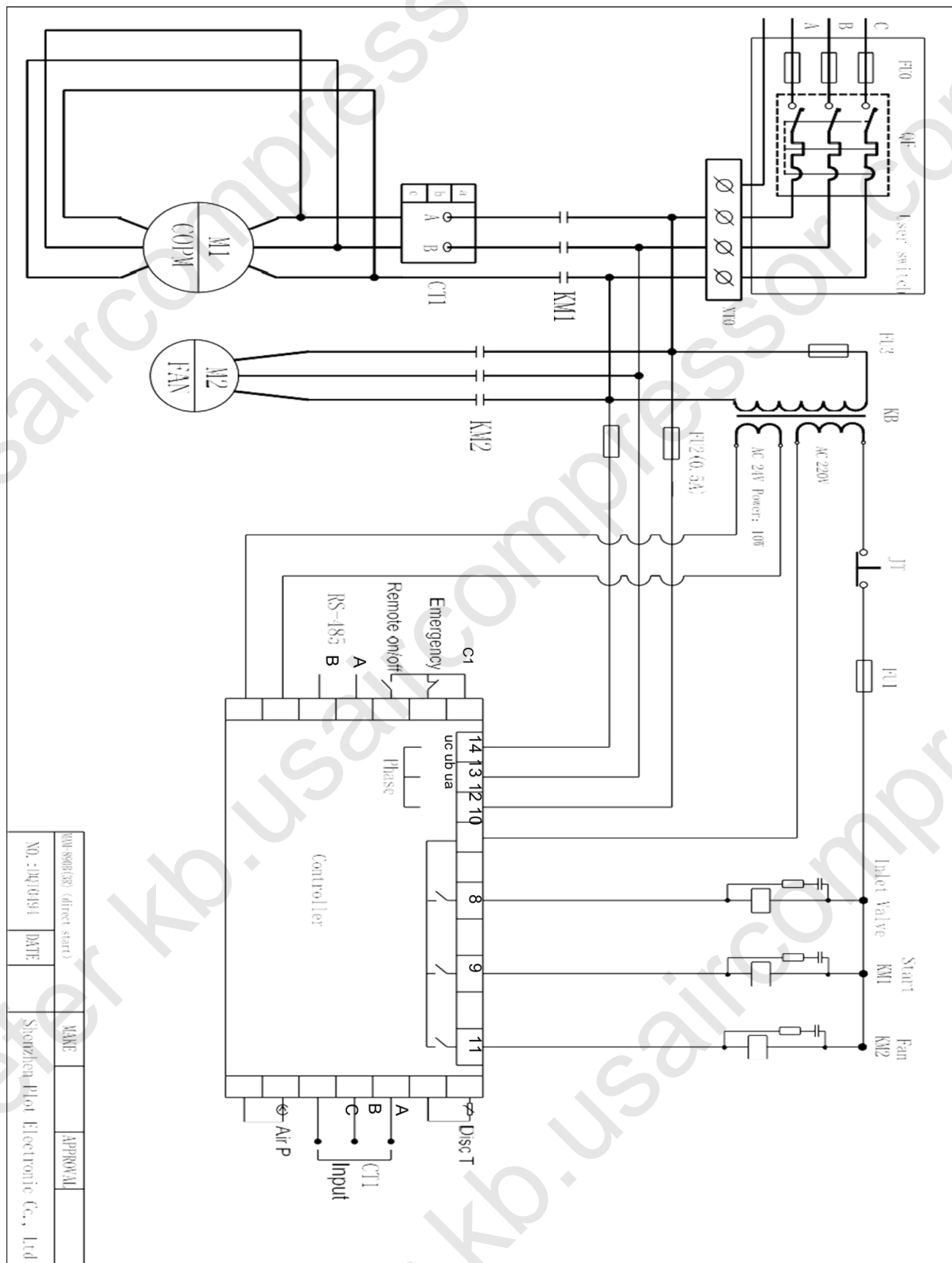
Temperature Sensor Failure	Temperature Sensor Failure	Change temperature sensor
High Pressure	Pressure at the compressor outlet is above the limits	Make sure there is no clogged piping or reduced cross sections after the compressor. Make sure pipe and adapter sizes never go smaller than the compressor outlet size. Air does not go up directly after the compressor so that there will be no condensate water coming back to the compressor through the compressed air lines. Make sure the isolation valve after the compressor and other valves are open till the tank. Compressor needs an appropriately sized tank. Consult Us Air Compressor for the tank sizing.
Pressure Sensor Failure	Sensor Faulty	Change sensor
Open Phase	One of the input phase is missing	Have all power lines have the right voltage for the compressor.
Overload	Motor is Overloaded. Input voltages are too low	Check input voltages and make sure input voltage is within limits.
Main contactor hesitates or restarts	Emergency button cable connections are loose.	Check the wiring and whether the emergency button is properly working or not. Change emergency stop.

WIRING DIAGRAMS

Star-delta Start





DOL start wiring Diagram













This Manual is not updated since Dec.31st/2022. Refer to kb.usaircompressor.com for further information and any discrepancies with your compressor and explanations here.

CONTACT INFORMATION

 <p>U.S. Customers +1 (612) 987 8933 US Air Compressor Inc. 8100 West 96th St. Bloomington, Minnesota 55438, USA</p>	 <p>Canadian Customers +1 (905) 238 0225 US Air Compressor Canada Inc. 5596 Ambler Dr, Mississauga, Ontario, L4W 2K9, Canada</p>
<p>https://www.usaircompressor.com/contact-us</p>	

Technical Support via Text or Email

	<p>Before making a technical inquiry, please make sure to read step by step instructions and troubleshooting errors watch how to videos which may already have the answer</p>
	<p>All technical inquiries including via the Internet, text (SMS), and voice messages go into a common pool. For clarity in communication and keeping priority sequence, all customers are encouraged to contact via internet text (SMS) or email. Agents will faster be able to diagnose problems from customers who clearly identify  technical inquiries</p>
	<p>Please identify your technical inquiry by providing:</p> <ul style="list-style-type: none"> — Serial number of the compressor (6 digit number) — Company name — Contact name — Brief explanation and pictures supporting technical inquiry
	<p>Please send the info  above (including pictures) by</p> <ul style="list-style-type: none"> — text (SMS) to +1 (612) 987 8933 or — internet https://www.usaircompressor.com/contact-us 
	<p>If you don't have access to a cell phone or computer, then please call +1 (612) 987 8933 to leave a voice message providing info  above</p>
<p>Agents will get back to all  inquiries in the order of priority sequence.</p>	