MechanX

Owner’s / Operator's Manual

40 CFM Diesel Driven Air Compressor

310129
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INDEX

BOSS INDUSTRIES, LLC DISCLAIMS ANY AND ALL LIABILITIES FOR DAMAGE OR LOSS DUE TO PERSONAL INJURIES, INCLUDING DEATH, AND/OR PROPERTY DAMAGE INCLUDING CONSEQUENTIAL DAMAGES ARISING OUT OF ANY BOSS COMPRESSOR SYSTEM NOT USED IN ACCORDANCE WITH THE OPERATOR INSTRUCTIONS.

ALL UNITS ARE SHIPPED WITH A DETAILED OPERATOR'S MANUAL. THIS MANUAL CONTAINS VITAL INFORMATION FOR THE SAFE USE AND EFFICIENT OPERATION OF THIS UNIT. CAREFULLY READ THE OPERATOR'S MANUAL BEFORE STARTING THE UNIT. FAILURE TO ADHERE TO THE INSTRUCTIONS COULD RESULT IN SERIOUS BODILY INJURY OR PROPERTY DAMAGE.

Care is required when working with an air compressor or compressed air. Compressed air is one of the many ways energy can be stored. Releasing the stored energy in an uncontrolled manner can result in catastrophic consequences. Death and permanent disability are all possibilities that can occur. The following are suggested as minimum precautions to be used when operating the BOSS Air Compressor. It is important that each work site engages in a risk analysis of that site and produces procedures in order to minimize injury to their employees. Health and Safety Regulations today require that this is a compulsory process to be carried out on each site. These, with site specific designed safety precautions will help to reduce accidents, personal injury and loss of life. It is the responsibility of the employer to ensure that the work site is safe for the employees.

SAFETY WHEN OPERATING AN AIR COMPRESSOR

- Do not bypass or disable the oil temperature sensor
- Do not expose the tank or compressor to extreme heat
- Do not perform any service or repairs until the system has been completely relieved of air pressure
- Maintenance and repairs on the system should only be done by qualified personnel
- Do not operate the compressor while driving
- Do not tamper with the pressure relief valve
- Run the system at idle speed and under no load conditions for 2 to 3 minutes before turning the system off to allow system cooling and lubrication to occur
- Follow safe work practices
- Wear the appropriate safety equipment when operating air-powered equipment, particularly eye and hearing protection
- Avoid contact with rotating components, ensure all safety guards are in place
- Avoid all contact with pressurized air. If it penetrates your skin, it can enter your blood stream and cause death
- To prevent compressor explosion or fire, make sure that the air entering the compressor is free of flammable vapors
- Vaporized oil propelled by high pressure is an explosive mixture
- Do not breathe the compressor air, vaporized oil is a respiratory hazard
- Stay clear of all moving parts when the system is operating
- Follow safety procedures for tire service operations as set by the authority

INTRODUCTION

The BOSS MechanX utilizes a diesel engine to power the compressor. Only those who have been trained and who have read and understand the operator and installation manual should operate and/or install the BOSS MechanX. This manual contains vital information on integrating the compressor system into the vehicle system and to ensure that it is installed and operated in a safe and efficient manner. The following is a view of the MechanX compressor unit.

Detailed Information on the compressor and the engine are supplied separate to this Owner's / Operator's Manual.

The specifications on the following pages are an overview of the components used in the MechanX.

COMPRESSOR SPECIFICATION

Compressor Type:	Oil injected rotary screw compressor
Drive System:	Diesel powered via direct mechanical coupling
Control:	Pneumatic
Maximum Air Delivery:	40 CFM @ 150 psi
Pressure Regulation:	Mechanical inlet control valve modulates flow in response to demand
Inlet Valve Regulation:	Pneumatic
Engine Control System:	Pneumatic speed control, engine and compressor high temperature and pressure engine shutdown system
Safety Features:	200 PSI relief valve in compressor sump Temperature safety sensor in the compressor Rapid blow-down valve to discharge system pressure on shutdown
Lubrication:	All replacement compressor oils must be approved by BOSS prior to use. Warranty will be nullified if oil has not been approved.
Filters:	Paper-type replaceable air filters Spin-on type compressor oil filter element Coalescing filter element

HYDRAULIC PUMP SPECIFICATION

Pump Type:	Gear pump
Drive Type:	Direct
Hydraulic Options:	8 gpm @ 3000 psi Maximum 10 gpm @ 2500 psi Maximum
Hydraulic Inlet:	**1” JIC**
Hydraulic Outlet:	**1/2” JIC**

DIESEL ENGINE SPECIFICATION

Engine Model:	Kubota D902
Engine Type:	3 Cylinder, water cooled, Diesel Combustion Engine
Power (intermittent):	24.8 HP
Electrical System:	12 Volts DC
Maximum Speed:	3600 RPM
Direction of Rotation:	Counter Clockwise (viewed from flywheel)
Engine Control System:	Electric key start, pneumatic speed control via air cylinder
Engine Protection:	Engine low oil pressure and high water temperature sensors
Lubrication:	BOSS approved oil to meet strict emission control regulations, min. class "CF" or better is required. If oil does not meet the minimum requirements, all warranty will be nullified.

IMPORTANT:

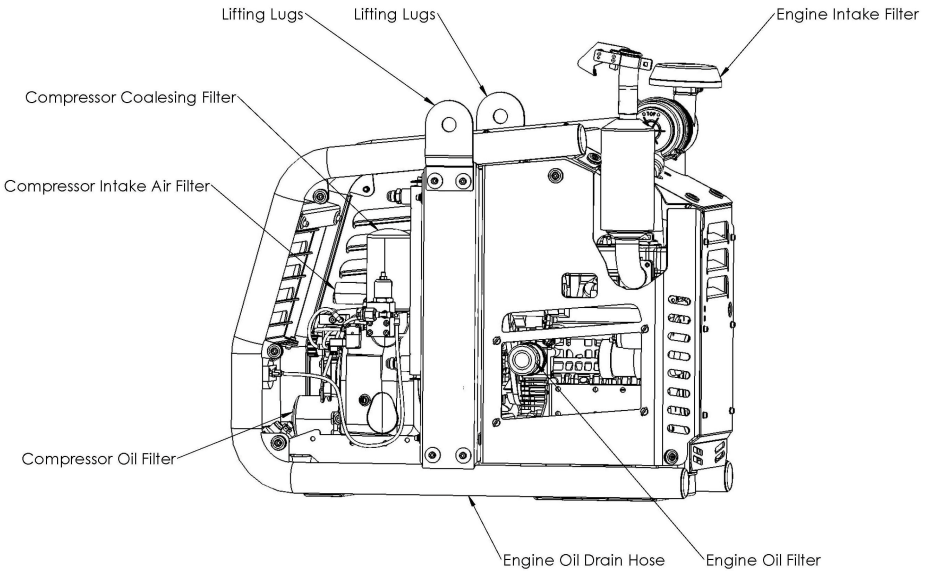
Engine oil should be MIL-L-2104F or have properties of API classification CF grades or higher. Change the type of engine oil according to the ambient temperature.

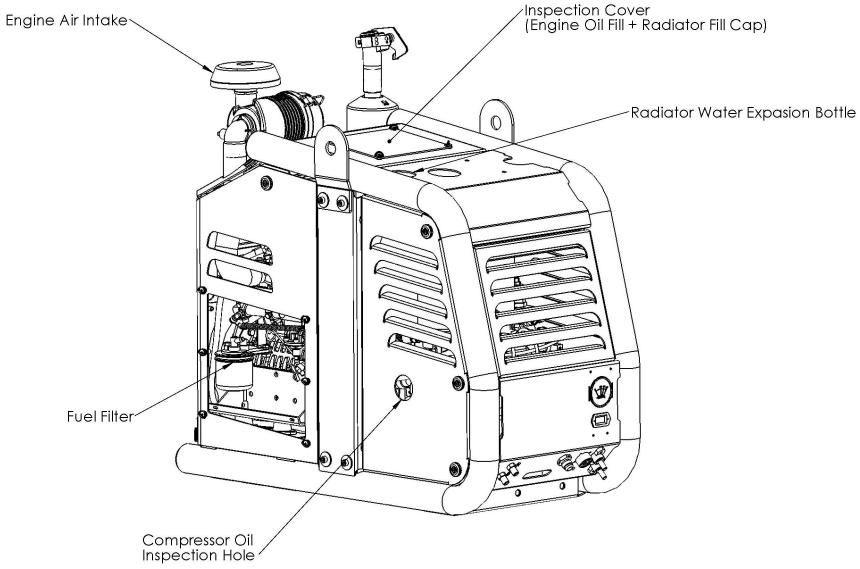
Above 25℃ (77℉)	SAE30 or SAE10W-30 or SAE15W-40.
0℃ to 25℃ (32℉ to 77℉	SAE20 or SAE10W-30 or SAE15W-40
Below 0℃ (32℉)	SAE10 or SAE10W-30 or SAE15W-40

Engine Oil quantity 2.5L

Filters:	Air Filter - Paper-type replaceable (Not Possible To Clean)
	Oil Filter - Spin on type (Not Possible To Clean)
	Engine fuel filter – In Line Element (Not Possible To Clean)

1. Check the oil level in the engine.
2. Check the coolant level in the engine.
3. Check the oil level in the compressor.
4. Check that all hoses are secured and not damaged. Replace any damaged hoses before starting.
5. Check that all electrical cables are secure. Secure all cables that are not tied down.
6. Check that the air inlet and air filter on the engine are clear.

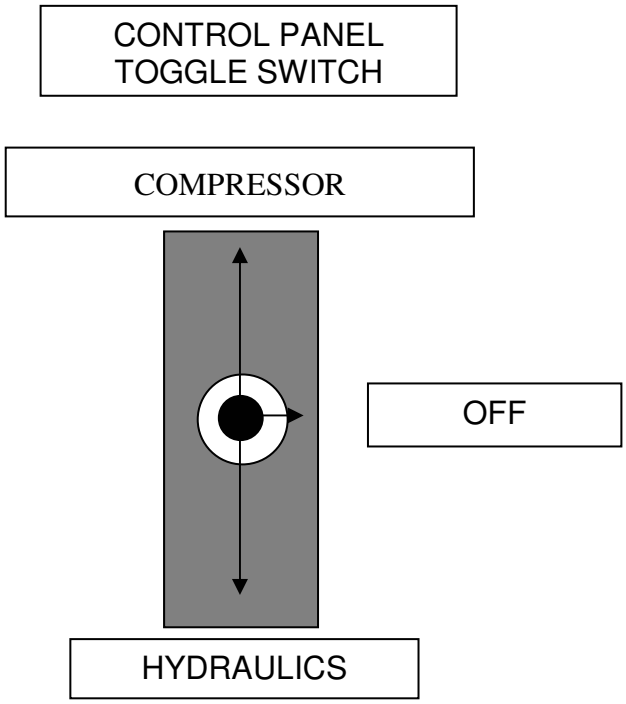




TOGGLE SWITCH SELECTION:

1 Select COMPRESSOR, HYDRAULICS (if equipped), or OFF.

2 If COMPRESSOR or HYDRAULICS is selected the engine should idle up and the respective component will be fully operational.



STARTING THE DIESEL ENGINE

1 Check to make sure the TOGGLE SWITCH is set to the OFF position.

2 Push and hold the PREHEAT button and turn the key to the ON position for approximately 15 seconds to prime the fuel pump and to apply power to the glow plugs. Do not hold the PREHEAT button for longer than 15 seconds. The system could be damaged should you extend the time beyond the 15 seconds.

3 Turn the key to the right to the START position until the engine has started and then release the key. Do not crank for more than 10 seconds.

4 Allow the engine to run at no load for 2-3 minutes. This will allow the engine to warm up and lubrication system to be fully operational before the load is applied.

5 If the engine does not start, repeat the process described in 2 and 3 above. The maximum number of attempts should be limited to 4; and after this the operator should seek assistance.

OPERATING THE COMPRESSOR

1 Flip the TOGGLE SWITCH to COMPRESSOR. This will engage the compressor load solenoid. The engine speed will increase until the preset regulated pressure is reached.

2 Listen for air escaping from the pressurized air system. Ensure that all air line valves are closed in order to reach regulated pressure.

3 If the escaping air is from a broken pipe or connection, flip the TOGGLE SWITCH to the center position of OFF. Stop the diesel engine. Advise your maintenance department that you require their assistance.

4 The engine will reduce its RPM when the compressor reaches the preset regulated pressure. The compressor is now ready to be used. (It should be noted the preset regulated pressure can be adjusted via the regulator control valve. It is recommended that your maintenance department does this if required.)

5 The compressor is ready to use.

STOPPING THE COMPRESSOR UNIT

1 Disengage the compressor by flipping the TOGGLE SWITCH to the OFF position.

2 The compressor will unload and bleed off pressure. The engine will return to idle speed.

3 It is good practice to allow the engine to run under no load for 2-3 minutes before turning off.

4 Turn the engine off by turning the ignition key to the OFF position. If you hear a slight “hissing” noise this is normal, the compressor is bleeding off pressure out of the system.

OPERATING THE HYDRAULIC PUMP UNIT (if equipped)

1 Flip the TOGGLE SWITCH to the HYDRAULICS position.

2 The engine speed will elevate and the hydraulics are ready to be used.

STOPPING THE HYDRAULIC PUMP UNIT (if equipped)

1 To stop using the hydraulic pump flip the TOGGLE SWITCH to OFF.

2 Turn the key switch to OFF to stop the engine.

The compressor is a rotary screw type driven by a diesel engine. Compression occurs when inlet air (at normal atmospheric pressure) enters a chamber where it is trapped between the rotating rotor lobes. A lubricated pitch line provides sealing. As the lobes mesh, they reduce the volume of the air, compressing it to the desired pressure.

The system has a two-stage air/oil separator. The first separation stage consists of baffles, which perform mechanical separation. The second stage uses a special separation element, which delivers dry air to the outlet. The second stage is a spin-on type coalescing filter.

Pressure regulation is achieved by adjusting the pressure regulator valve mounted in front of the compressor (Gold adjustable valve). The system pressure is preset at 150 psi. To reduce the pressure, either adjust the regulating valve or use a Filter Regulator Lubricator (FRL) to achieve the final tool pressure.

The compressor air intake is protected by a paper-type replaceable air filter, and a spin-on type oil filter for the oil side and a coalescing filter for final oil removal from the air.

Safety features included in the compressor are:

- 200 PSI relief valve in separation manifold
- Blow-down valve to discharge system pressure on shutdown
- Over temperature safety sensor in the compressor oil
- Over pressure mounted at the minimum pressure valve
- **Do not disable or bypass the over-temperature shutdown circuits. Failure of the shutdown system could result in equipment damage, injury or death.**

A liquid-to-liquid air cooler with thermal bypass valve maintains operating temperatures in an optimal performance range. This helps to increase system durability and reduces the temperature of the compressed air.

Installation of Compressor Unit

The information in this section is very important for proper operation of the compressor. Read these requirements before beginning installation.

1 General Consideration When Mounting the Compressor Unit

The starting point for the installation is a quick overview of the requirements. Some of these points will be dealt with in more detail further on in this text. Things that should be considered now are as follows;

1 The unit should be installed in an open area.

2 The unit will need to be properly secured to the vehicle by means of bolts and nuts.

3 It should be possible that the sight level glass for oil level can be checked easily.

4 It should be possible to service the unit easily without having to disconnect lines or remove and reposition the unit.

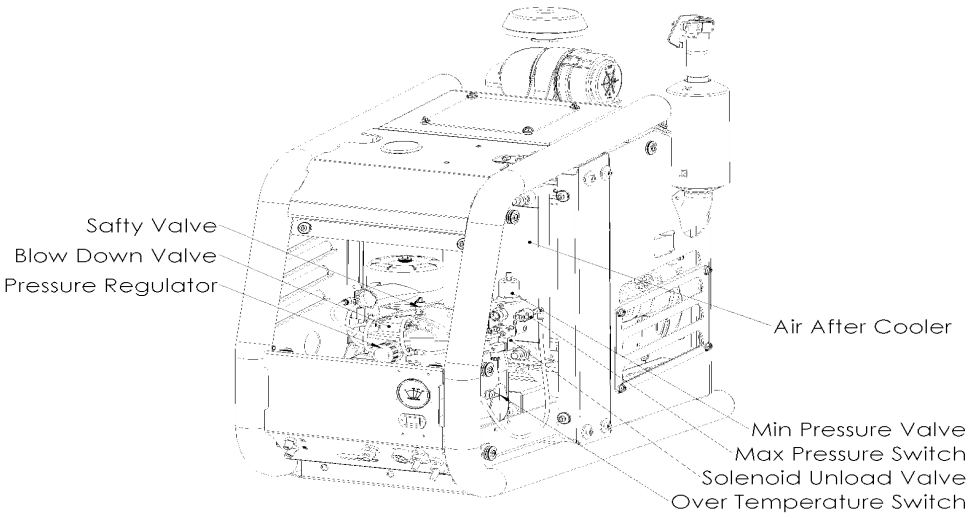
5 The unit should be protected from excessive exposure to the elements and possible incidental damage from other operations.

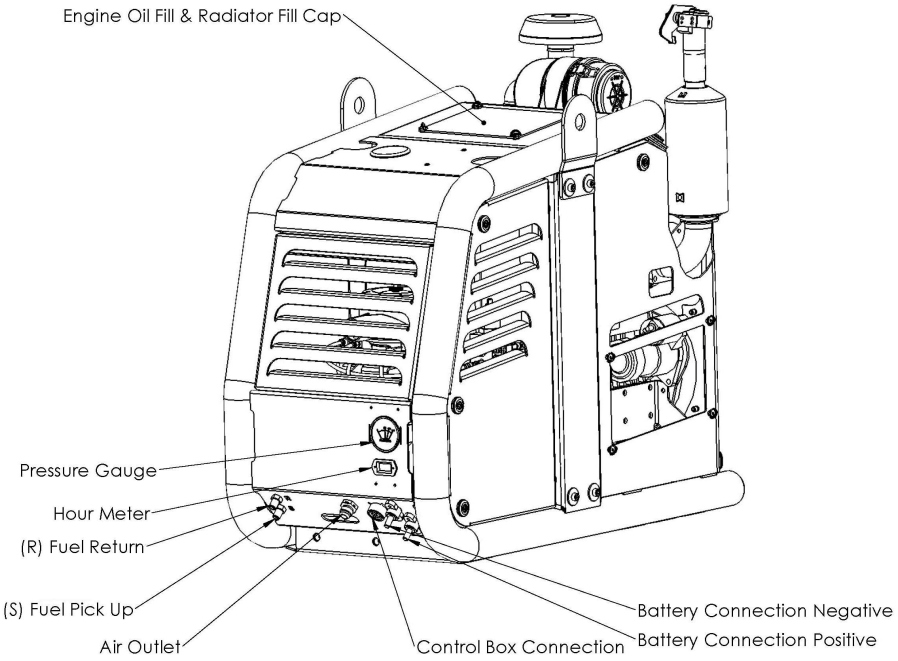
6 The unit should be installed in an area away from heat sources such as engines, exhaust systems or other components that generate heat.

7 The unit should not be installed in a location where it will be exposed to high contamination levels or combustible gases.

8 The engine exhaust should be routed away from the compressor unit. The engine exhaust should be located in an area where the exhaust CANNOT be filled up with rain.

The following are detailed views of the compressor/diesel engine unit.





2 Ventilation Considerations for the MechanX

It is not possible to make absolute recommendations regarding ventilation because of the widely differing circumstances that are possible. Duty cycle, ambient temperature and enclosure shape are some of the important variables. Ideal ventilation will provide good airflow through the unit with no restrictions. Broadly speaking, there are two ways in which the MechanX compressor can be mounted,

Top or Deck Mounting

This is the preferred mounting location. Placing the unit in an area where there are no restrictions on the intake of fresh air and exhausting of hot air and exhaust gases. This provides the best cooling and ensures reliability and life for the MechanX.

Enclosed Mounting

It is important that discussion occurs between the manufacturer and the person installing when the unit is to be placed in an enclosed area. Ventilation is one of the most important things to consider when looking at the installation of a compressor/diesel engine driven unit in an enclosed area. It is important that the air intake to the compressor and the engine exhaust are located outside of the enclosed space. The unit generates considerable amount of heat when running. Proper ventilation is vital for proper operation and to avoid damage to components. Ensure there is a minimum of 10" (250 mm) clearance between cooler grills on the MechanX and any other components mounted on the vehicle. The installation must be tested in the event that the unit is installed in an area considered to be enclosed mounting. The following is a method suggested for testing.

1 It is best to test the installation at the hottest expected ambient temperature.

2 Setup and run the system at 120 PSI. This can be done by installing a ball valve on the air outlet pipe and adjusting the opening of the valve so that the compressor is running continuously at 120 PSI

3 Record the engine, compressor and current ambient temperature for future reference.

4 Run the system at full load for at least one hour or until the temperatures stabilizes. Temperature stabilizing means there is no rise in temperature for 15 minutes when the compressor is running at the rated load.

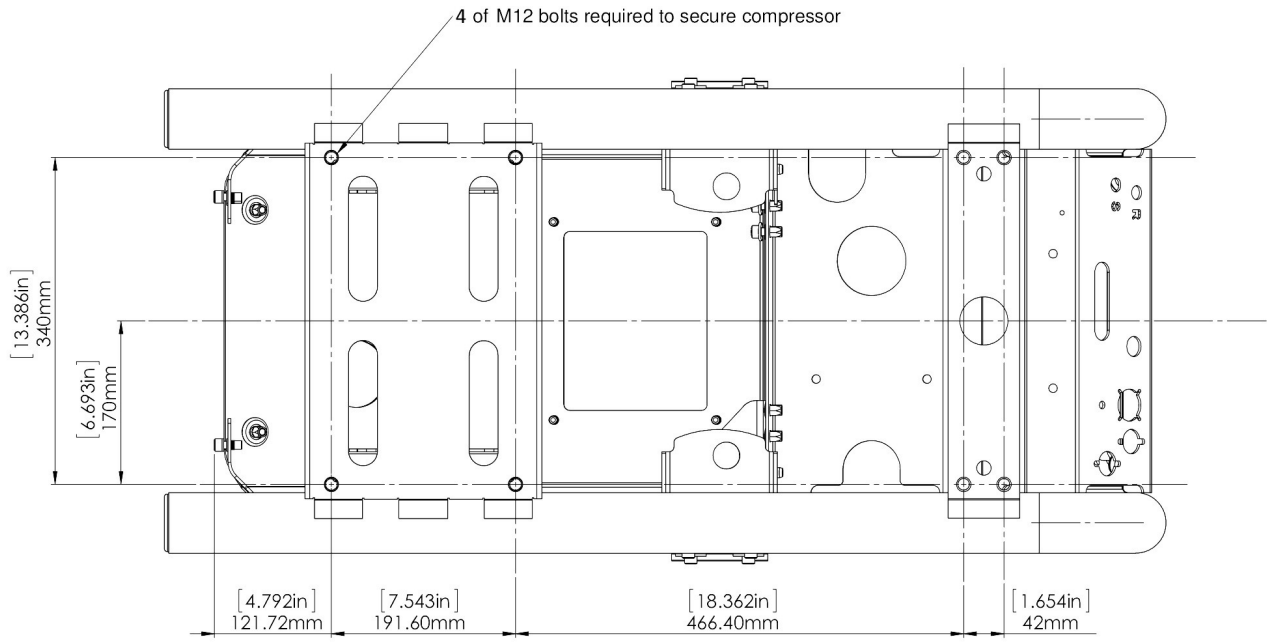
5 Record the engine and compressor temperatures every 10 minutes.

6 If the system over-temps, the ventilation is not sufficient, review the installation, make changes as needed, and repeat the test.

3 Engine Exhaust Considerations for the MechanX

In the event that the exhaust system needs to be ducted away from the engine assembly, the following are a minimum that should be considered

- The exhaust pipe needs to be adequate for the engine.
- There needs to be a flexible joint at the point where the extension is connected to the exhaust system of the MechanX.
- Ensure the exhaust pipe has suitable clearance and does not come in contact with anything.
- Ensure that the exhaust system has a method to prevent water from entering the exhaust system.
- Ensure exhaust from the diesel engine is routed in a way to prevent recirculation back into the unit.



4 Securing the MechanX to the Body of the Vehicle

It is important to consider maintenance needs, (in particular daily need), service requirements, electrical connections, air connections, location of control panel before the MechanX is secured to the body of the vehicle.

- Locate a suitable mounting position for MechanX. Place the unit and check for clearances to any other objects.
- There are four weld nuts located at the four corners of the bottom formed plate which can be used as mounting bolt locations. Holes can also be drilled through the bottom of the formed plate if alternate locations are required.
- Drill holes in mounting surface and secure the MechanX to the truck. Use a minimum of 4 – M12 bolts. .

5 Connecting Truck Electrics to the MechanX

Electrical connection of the MechanX to the vehicle is very simple. The entire control system is mounted in the MechanX.

- The MechanX needs to be connected the vehicle battery. A minimum of 4 AWG (25mm) cable is required for the connection because the MechanX is started using the vehicle battery. MechanX units are 12 Volt DC. In the event that a vehicle is 24 Volt DC (Two 12 Volt DC batteries are supplied in the vehicle), connection for the MechanX will be across 1 of the batteries.
- The control box which includes the main toggle switch needs to be connected to the MechanX front panel via the Deutsch plug provided at the end of the 30 foot cable of the control box. It should be noted, this control box can be mounted in the cab of the vehicle if an extension harness is purchased or any location in the vehicle's body.

6 Connecting of the MechanX to the fuel tank

It is normal to use the vehicle's fuel tank for all models of the MechanX. The MechanX has as standard a fuel pump built into it. It is suggested that an additional electrical fuel pump is installed if the compressor unit is installed 20” (500 mm) or more above the height of, or 5' away or further from, the vehicle's diesel tank. The following is the method for connecting the fuel to the compressor unit.

1 Cut the feed and return lines at the tank. Install the tees into the cut lines.

2 Install the provided check valve at the T-Piece of the feed line.

3 Connect the diesel feed line to the compressor unit from the check valve. Connect the return line from the compressor unit to the return line tee.

7 Connecting the supplied Hydraulic Block to the MechanX (if equipped)

1 Mount the supplied hydraulic block between the MechanX and the hydraulic tank.

2 Run a minimum 1/2" i.d. hose rated at 3000 psi from the pressure port on the pump to the 'P' port on the block.

3 Run a minimum 1" i.d. hose rated at 3000 psi from the 'T' port on the block to the hydraulic tank.

4 Port A on the hydraulic block should be used to connect the rest of the hydraulic system.

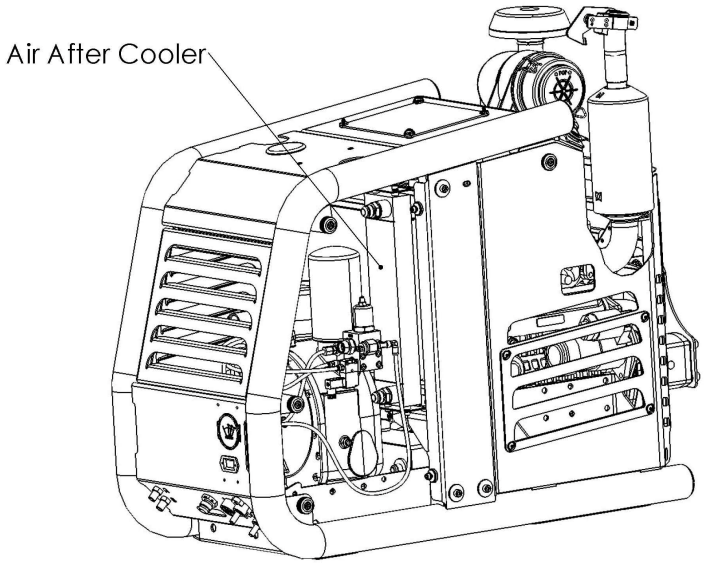
5 Run a minimum 1" i.d. hose rated at 3000 psi from the tank to the dry valve on the pump.

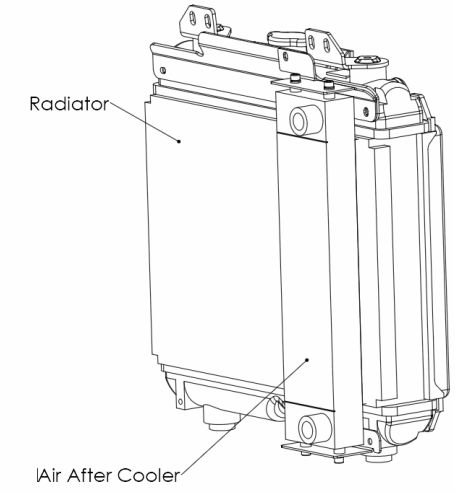
6 Plug in the connector on the hydraulic block to the mating connector on the MechanX harness.

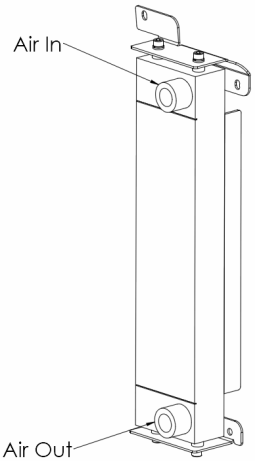
8 Air After Cooler for MechanX (Optional)

It is important for the majority of air tools that the air supplied should be free of moisture. High content of moisture in the air will considerably reduce the reliability and life of the air tool. In applications such as painting with air guns, the finish can be greatly affected by moisture in the air.

Filters used in the standard filter regulator lubricator units have a limit to what they can handle. It is suggested in areas of high humidity or in situations where the standard FRL is not able to cope with the moisture that an Air After Cooler be installed onto the compressor unit. The following pictures show the BOSS after cooler installed onto a MechanX.







9 Completing the Installation - Before The Check

Make sure that the following have been completed before operating the MechanX.

1 Check the compressor oil level; make sure the compressor has been filled to the correct level prior to shipping.

2 Check the engine coolant level.

3 Check the engine oil level.

5 Check fuel level.

6 Do a final inspection to make sure that all fasteners and connections are tight.

7 Check that all hoses and wiring are secure and protected.

10 Check Operation – Setup and Performance Testing of MechanX

1 The compressor is dispatched from the factory with the pressure preset to the customer specification. Should the customer want to alter this setting, the instruction on how to do this can be found in the compressor manual.

2 Refer to Pages 7 and 8 of this manual for the method to be used to start the compressor.

3 On starting and running, the air pressure will be found to be at the pressure specified by the customer and the engine will be at the lower speed (idle speed). If the pressure is not at the specified pressure, refer to BOSS before attempting any adjustments.

4 Listen for leaks in the air line. You should hear a hissing sound if there are any leaks. Fix any leaks you may find.

5 Keep the system running at the preset pressure until the compressor is up to operating temperature.

6 Using the ball valve located on the outlet of the compressor, slowly open the ball valve and watch the pressure drop. The pressure will drop to the point that the pressure is 20 PSI below the maximum pressure setting. The engine will speed up to the maximum preset RPM.

7 Keep the ball valve at the current position for about 5 minutes. The engine should continue to run at the maximum preset RPM.

8 Slowly close the ball valve and watch the pressure while closing. The engine will drop to the lower speed when the pressure reaches maximum set point.

9 Your compressor is working correctly if it is operating as per this description. It is now ready for duration and heat testing in the application.

SCHEDULE MAINTENANCE

The maintenance intervals recommended are for standard operating conditions. The intervals for inspection, lubrication and maintenance are maximum intervals. More frequent inspections should be made if the unit is operating in a dusty environment, in high ambient temperatures or in other unusual conditions. A planned program of periodic inspection and maintenance will help to avoid premature failure and costly repairs. Daily visual inspections should become routine.

Table 1 -Maintenance Schedule

Interval	Compressor	Diesel Engine
	Action to be taken	
Periodically During Operation	Observe all gauge readings. Note any change from the normal reading and determine the cause. Have the necessary repairs made. (Note: "Normal" is the usual gauge reading when operating at similar conditions on a day to day basis.)	
Every 10 Hours or Daily	Check the compressor oil level.	Check engine oil level
	Check air filter/s and connecting hose and clamps	
	Check for oil and air system, including hoses, for leaks	
		Check water level
Every 25 Hours or Monthly	Drain water from Compressor and check oil level	
After first 50 hours of operation (7201-K0017)		Change engine oil (see pg 10, System Specifications, Diesel Engine, Lubrication)
		Change engine oil filter cartridge
	Check system for oil and/or air leaks	Check all fuel hoses and clamping bands
	Check engine/Compressor/Generator Mounts for excessive wear and fastener torque.	
	Check shaft Couplings for movement on shafts	
Every 100 Hours	Check engine/Compressor/Generator Mounts for excessive wear and fastener torque.	
	Check shaft Couplings for movement on shafts	
	Check the compressor oil level.	Change engine oil (see pg 10, System Specifications, Diesel Engine, Lubrication)
	Check system for oil and/or air leaks	
		Clean air cleaner element
		Check fan belt tension
Every 200 Hours of operation or 6 months		Check radiator hoses and clamping bands
		Change engine oil filter cartridge
		Change engine oil (see pg 10, System Specifications, Diesel Engine, Lubrication)
		Change engine air intake filter if necessary
Every 400 Hours of operation or 9 months Engine Compressor See Service Kit List (p.16)	Change compressor oil 3L	Change Engine Oil
	Change compressor oil filter	Change engine oil filter
	Change compressor air filter	Replace in-line fuel filter element
		Check engine fan belt
		Check drive coupling
		Check fuel filter if necessary
		Check engine mounts
800 Hours / 18 months	Change compressor oil filter	Replace engine air filter and service as per 400 hrs service
	Change compressor coalescing filter	
	Change compressor air filter	
Periodically or as required	Inspect and replace spin-on coalescing element if necessary	Inspect and clean oil cooler fins
		Check fuel filter
	Check system for oil and/or air leaks	Check valve clearance
Every 1500 hours		Check Kubota Manual

SPARE PARTS AND SERVICE KITS

Use only BOSS certified parts to maintain your MechanX system.

Complete Kit	Part Number	Description
BSK-AOC-MECHX	300324	Compressor Oil Filter
	301413	Compressor Air Filter
	302600	Compressor Coalescer
	300854	Engine Air Filter

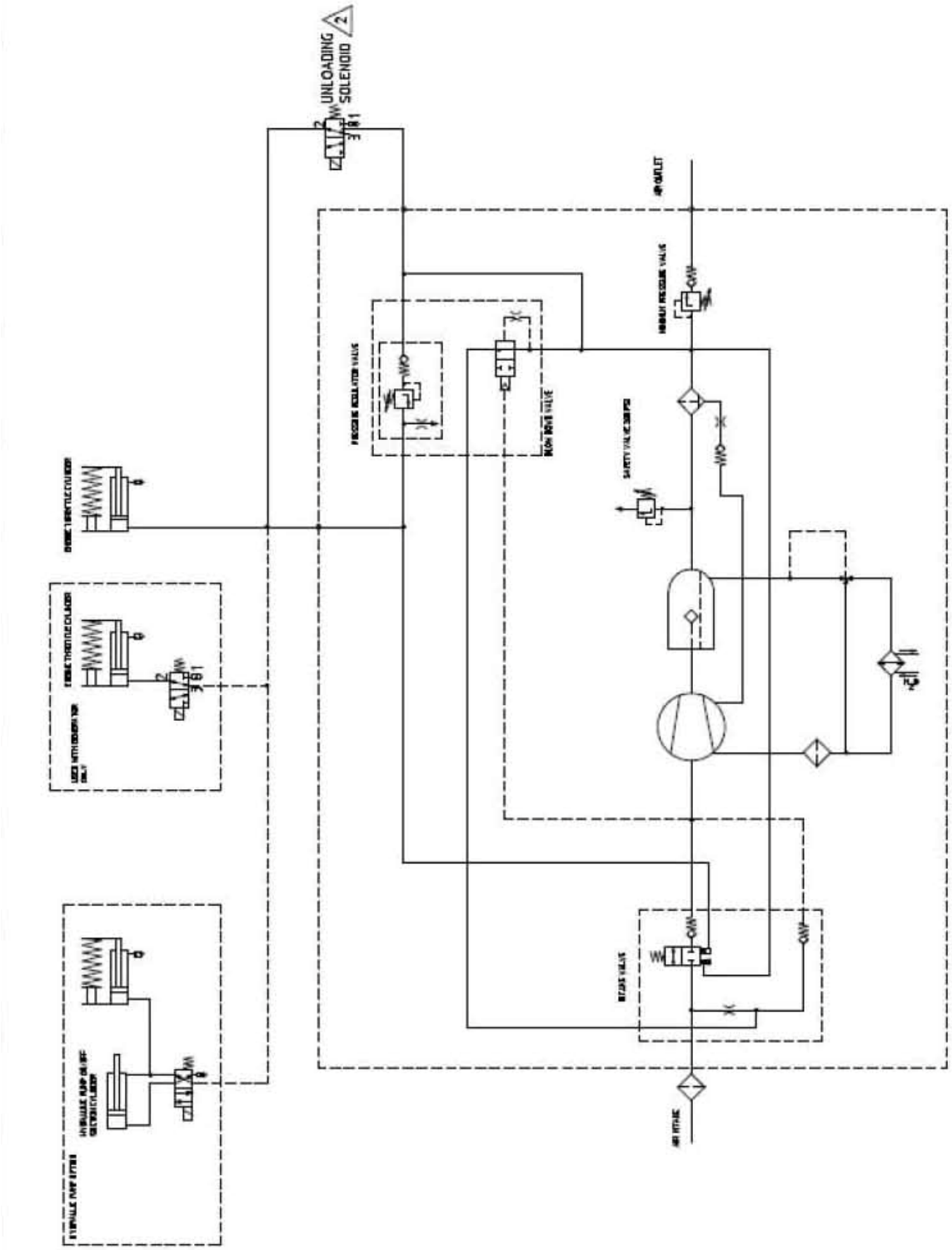
Contacting Boss Industries, LLC

Phone: (800) 635-6587 (USA)
Phone: (219) 324-7776 (Outside USA)
Fax: (877) 254-4249 (USA)
Email: service@bossair.com
Website: http://www.bossair.com

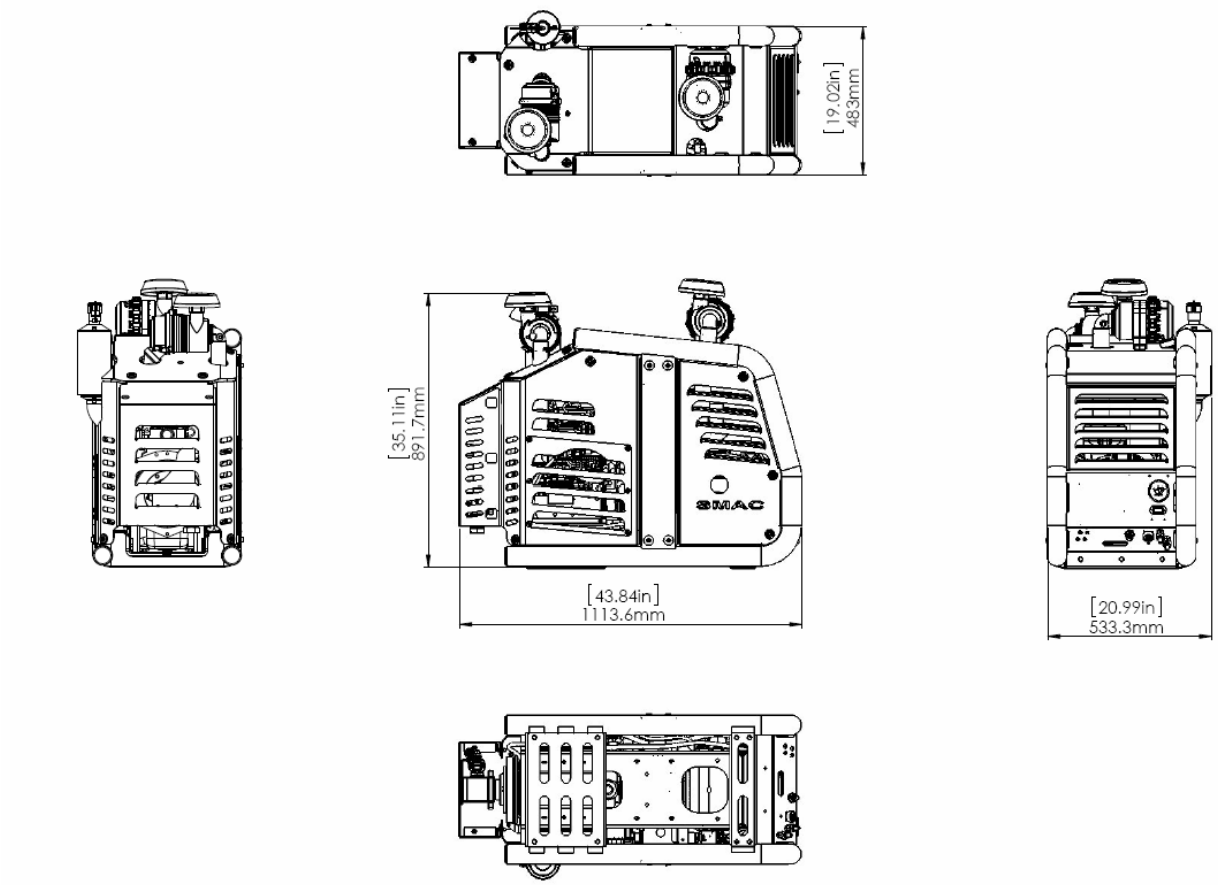
When calling for technical support, have the following information available:

Machine Serial Number
Description of the problem

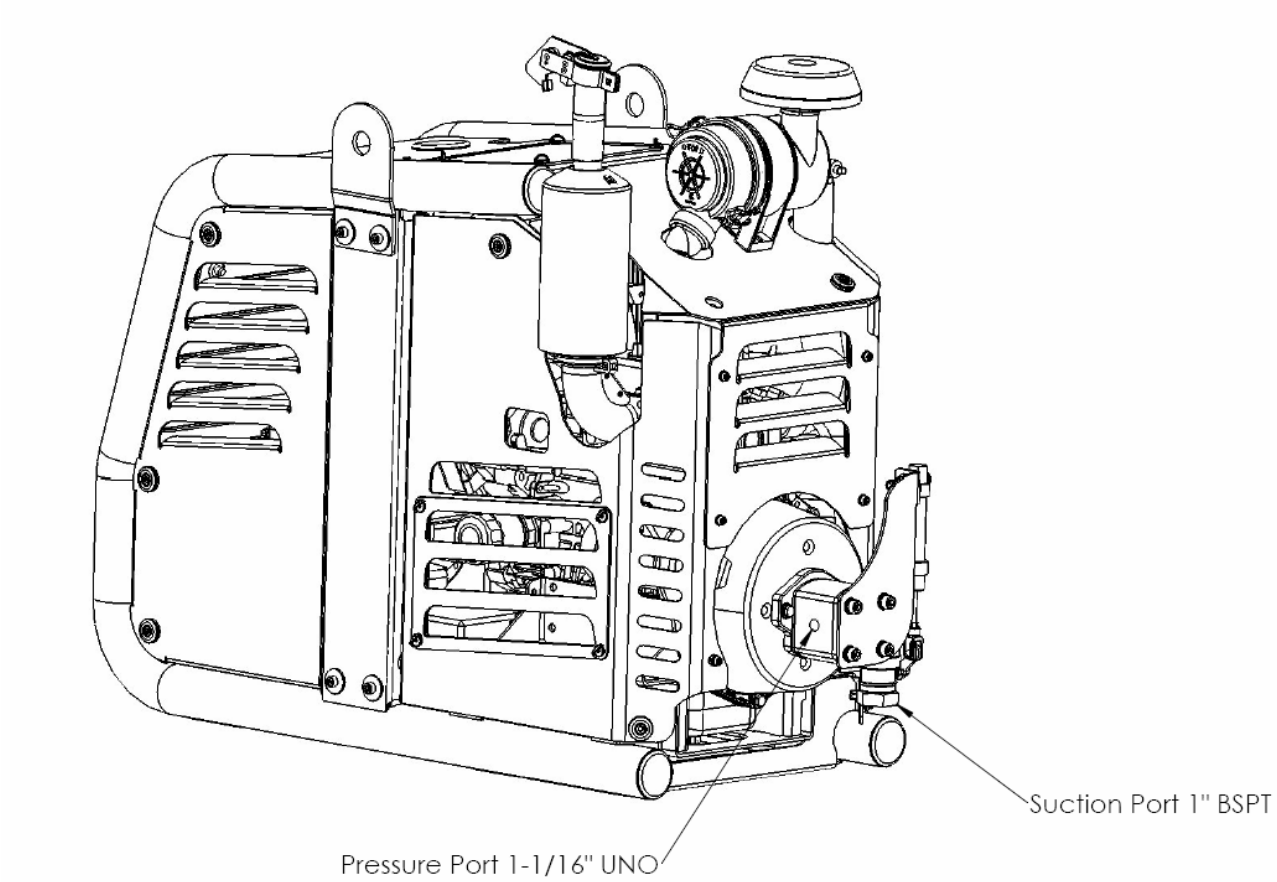
Pneumatic Schematic



Overall Dimensions



Hydraulic Pump Installation



Warranty Policy

Boss Industries, LLC (BOSS) warrants that this Rotary Screw Compressor unit conforms to applicable drawings and specifications approved in writing by BOSS. The unit assembly will be free from defects in material and workmanship for a period of three (3) years from the date of initial operation or forty-two (42) months from the date of shipment, whichever period first expires. All other components and parts of BOSS manufacture will be free from defects in material and workmanship for a period of one (1) year from the date of initial operation or eighteen (18) months from the date of shipment, whichever period first expires. If within such period BOSS receives from the Buyer written notice of and alleged defect in or non-conformance of the unit, all other components and parts of BOSS manufacture and if in the judgment of BOSS these items do not conform or are found to be defective in material of workmanship, BOSS will at its option either, (a) furnish a Service Representative to correct defective workmanship, or (b) upon return of the item F.O.B. BOSS original shipping point, repair or replace the item or issue credit for the replacement item ordered by Buyer, (Defective material must be returned within thirty (30) days of return shipping instructions from BOSS. Failure to do so within specified time will result in forfeiture of claim), or (c) refund the full purchase price for the item without interest. Factory installed units will also include warranty on installation for a period of one (1) year. This warranty does not cover damaged caused by accident, misuse or negligence. If the compressor unit is disassembled the warranty is void. BOSS's sole responsibility and Buyer's exclusive remedy hereunder is limited to such repair, replacement, or repayment of the purchase price. Parts not of BOSS manufacture are warranted only to the extent that they are warranted by the original manufacture. BOSS shall have no responsibility for any cost or expense incurred by Buyer from inability of BOSS to repair under said warranty when such inability is beyond the control of BOSS or caused solely by Buyer.

There are no other warranties, express, statutory or implied, including those of merchantability and of fitness of purpose; nor any affirmation of fact or representation that extends beyond the description of the face hereof.

This warranty shall be void and BOSS shall have no responsibility to repair, replace, or repay the purchase price of defective or damaged parts or components resulting directly or indirectly from the use of repair or replacement parts not of BOSS manufacture or approved by BOSS or from Buyer's failure to store, install, maintain, and operate the compressor according to the recommendations contained in the Operating and Parts Manual and good engineering practice. The total responsibility of BOSS for claims, losses, liabilities or damages, whether in contract or tort, arising out of or related to its products shall not exceed the purchase price. In no event shall BOSS be liable for any special, indirect, incidental or consequential damages of any character, including, but not limited to, loss of use of productive facilities or equipment, loss of profits, property damage, expenses incurred in reliance on the performance of BOSS, or lost production, whether suffered by Buyer or any third party.

BOSS INDUSTRIES, LLC
1761 GENESIS DRIVE
LAPORTE, IN 46350
(219) 324-7776 Phone
(219) 324-7470 Fax

SUMMARY OF MAIN WARRANTY PROVISIONS

As claims, policies and procedure are governed by the terms of BOSS Industries; warranty, it is necessary to outline some of the more important provisions.

The BOSS INDUSTRIES warranty applies only to new and unused products which, after shipment from the factory, have not been altered, changed, repaired or mistreated in any manner whatsoever.

Normal maintenance items such as lubricants, filters, and shaft seals are not warrantable items.

Parts not of BOSS INDUSTRIES manufacture are warranted only to the extent they are warranted by the original manufacturer.

Damage resulting from abuse, neglect, misapplication or overloading of a machine, accessory or part is not covered under warranty.

Deterioration or wear occasioned by chemical and/or abrasive action or excessive heat shall not constitute defects.

Parts replacement and/or correction of defective workmanship will normally be handled by BOSS INDUSTRIES or their authorized distributor.

Failure to file a detailed warranty claim/service report for each occurrence of material defect of defective workmanship will cause warranty claim to be rejected.

Defective material must be returned within 30 days of receipt of shipping instructions. Failure to do so within specified time will result in forfeiture of claim.

The distributor is responsible for the initial investigation and write up of the warranty claim.

Distributor shall be allowed no more than 30 days from date of repair to file a warranty claim/service report.

Warranty for failure of BOSS INDUSTRIES replacement parts covers the net cost of the party only, not labor and mileage.

The BOSS INDUSTRIES warranty does not cover diagnostic calls and travel. That is time spent traveling to the machine to analyze the problem and returning with the proper tools and parts to correct the problem.

BOSS INDUSTRIES will deduct from allowable credits for excess freight caused by sender failing to follow return shipping instructions.

Distributors or end-users automatically deducting the value of a warranty claim from outstanding balances due and payable to BOSS INDUSTRIES prior to receiving written notification of BOSS INDUSTRIES approval of the warranty claim may be subject to forfeiture of the entire claim.

WARANTY/RETURN GOODS INSTRUCTIONS

The warranty/return procedure outlined below is provided to give the claimant the information necessary to file a warranty/return claim, and enable BOSS INDUSTRIES the ability to best serve its' customers.

Please see the following instructions to initiate a return:

Contact BOSS INDUSTRIES Returns Department by telephone at 219.324.7776 or via email at service@bossair.com. You may also send a fax at 219.324.7470.

WARANTY CLAIMS – PREPARATION OF PART RETURN

Parts returned to the factory must be properly packaged to prevent damage during shipment. Damage to a part as a result of improper handling or packing could be cause for denial. When addressing the package for shipment, the following information must be on the outside of, or tagged clearly, to the package.

1. Return Goods Authorization #.
2. Distributor or end-users return address.
3. Correct factory address.
4. Number of packages pertaining to each claim.

NOTE: *Our warranty requires that all defective parts be returned to BOSS INDUSTRIES freight pre-paid. Items sent without RGA number will not be accepted. Unauthorized Returns Will Immediately Be Refused At Dock.*

RETURN OR WARRANTY CLAIMS – FILING PROCEDURES

1. Initiate through a purchase order for warranty part or request for credit.
2. RGA will accompany replacement part.
3. BOSS INDUSTRIES will confirm disposition of failed part within 30 days of receipt and or request additional information.
4. Claim denial will result in issuance of a letter of denial.
5. BOSS INDUSTRIES will consider each claim on its' own merit and reserves the right to accept or reject claim request. In case of air-ends, these will be returned to the manufacturer for their analysis/input.
6. Send Warranty Claim to:

   BOSS INDUSTRIES, LLC
   1761 Genesis Drive
   LaPorte, IN 46350
   Attn: Returns Dept.

GENERAL

An approved claim depends on the following provision:

1. An RGA # must be issued by BOSS INDUSTRIES. (See filing procedures.)
2. Failed part must be returned within 30 days of original invoice date, freight prepaid, with RGA #.
3. Part is determined to be defective.
4. Workmanship is determined to be defective.
5. Machine is within warranty period.
6. Machine has been operated within design conditions.

Claims made through distributors must be verified by distributor prior to contacting BOSS INDUSTRIES.

DAMAGE IN TRANSIT

Do not return damaged merchandise to BOSS INDUSTRIES, please follow claim procedure.

1. Loss in transit:

   The merchandise in our kit or provided in our factory installations has been thoroughly inspected or carefully installed and tested before leaving our plant. However, regardless of the care taken at the factory, there is a possibility that damage may occur in shipment. For this reason, it is recommended that the unit be carefully inspected for evidence of possible damage or malfunction during the first few hours of operation. Responsibility for the safe delivery of the kit or factory installed unit was assumed by the carrier at the time of shipment. Therefore, claims for loss or damage to the contents of the kit or factory installed unit should be made upon the carrier.

2. Concealed loss or damage:

   Concealed loss or damage means loss or damage, which does not become apparent until the kit is unpacked or the factory-installed unit is run by the enduser. The contents of the kit or factory installed unit may be damaged due to rough handling while in route to its destination, even thought the kit or factory installed unit shows no external damage. When the damage is discovered upon unpacking, make a written request for inspection by the carrier agent within fifteen days of delivery date. Then file a claim with the carrier since such damage is the carrier's responsibility.

   By following these instructions carefully, we guarantee our full support of your claims, to protect you against loss from concealed damage

3. Visible Loss or Damage

   Any external evidence of loss or damage must be noted on the Freight Bill or Express Receipt, and signed by the carrier's agent. Failure to adequately describe such external evidence of loss, or damage may result in the carrier refusing to honor a damage claim. The carrier will supply the form required to file such a claim.