

**BOSS MODEL 25 AHBI
PTO AIR COMPRESSOR
OPERATORS, MAINTENANCE
AND PARTS MANUAL**

**OPERATORS, MAINTENANCE, AND PARTS MANUAL
BOSS MODEL 25 AHBI**

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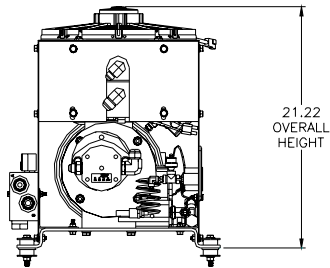
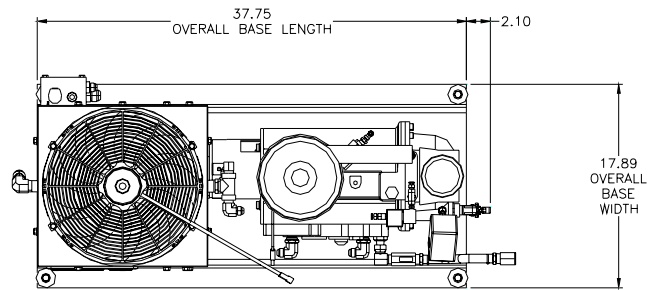
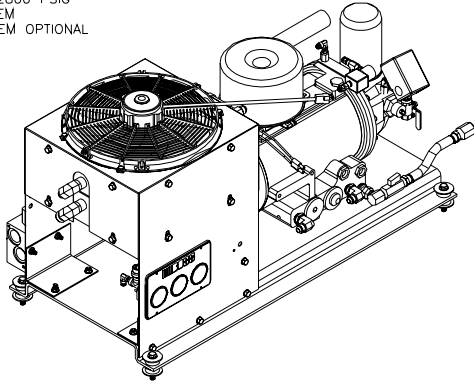
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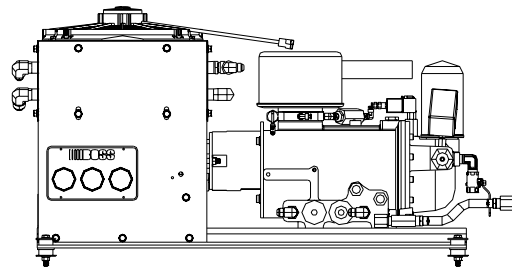
SPECIFICATIONS

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT PRIOR NOTICE

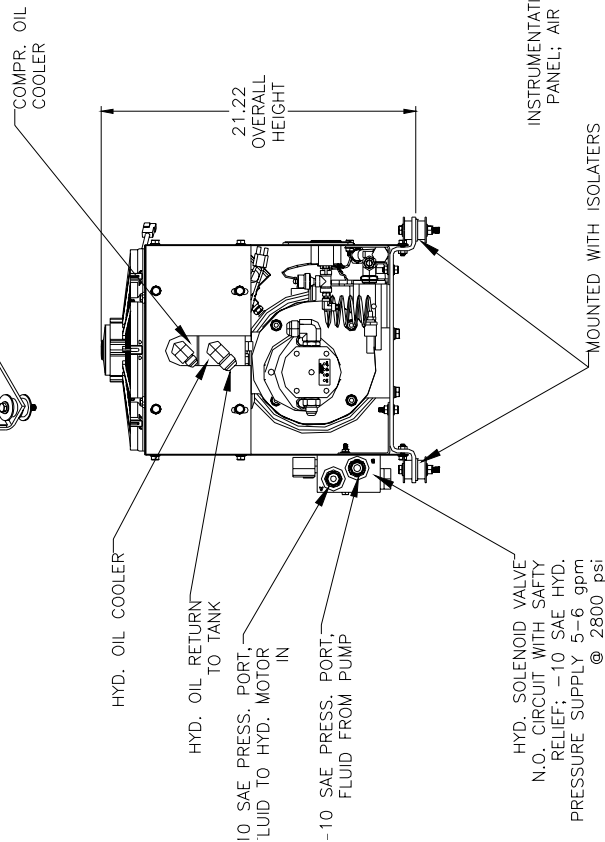
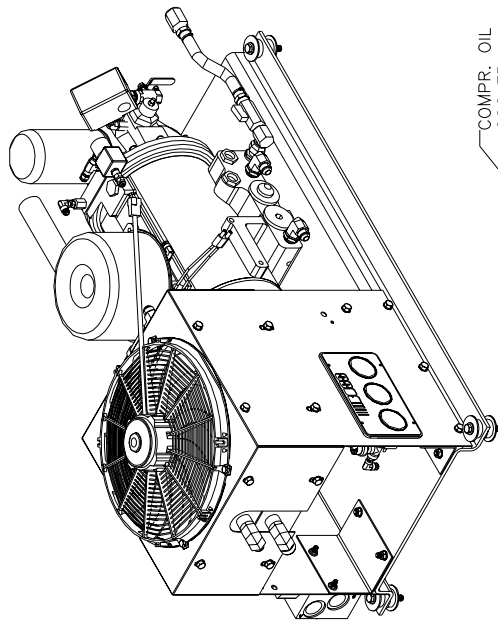
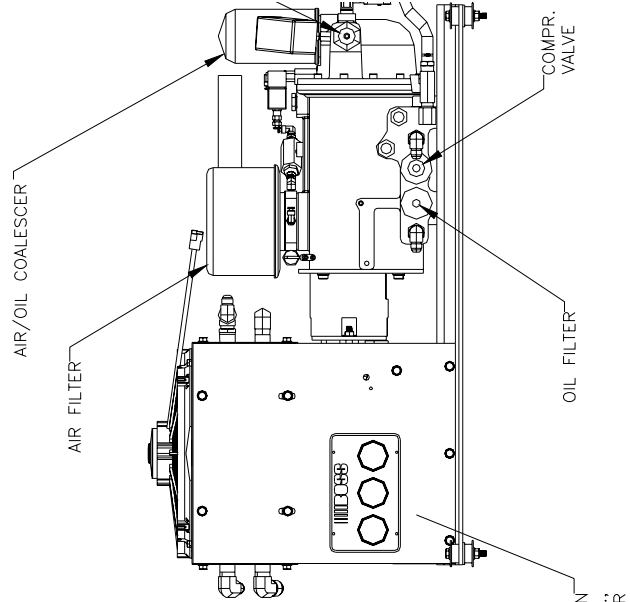
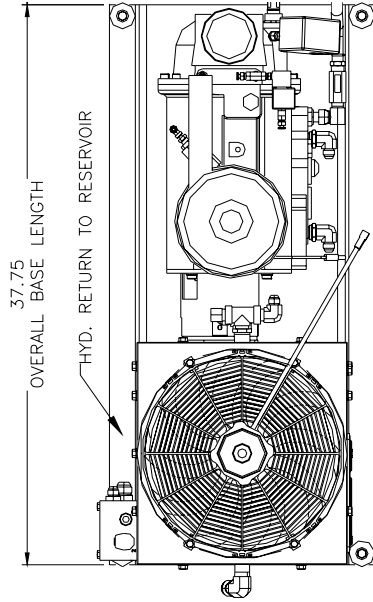
COMPRESSOR AND HYDRAULIC SPECIFICATIONS
25 CFM @ 110 PSIG
5-6 GPM HYDRAULIC @ 2800 PSIG
12 VDC ELECTRICAL SYSTEM
24 VDC ELECTRICAL SYSTEM OPTIONAL



20053-999



CRH 6/7/02



HYD. SOLENOID VALVE
N.O. CIRCUIT WITH SAFETY
RELIEF; -10 SAE HYD.
PRESSURE SUPPLY 5-6 gpm
@ 2800 psi

20053-999-1

CRH 6/

SAFETY

WARNING

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

AIR COMPRESSOR SAFETY PRECAUTIONS

Safety is basically common sense. While there are standard safety rules, each situation has its own peculiarities that cannot always be covered by rules. Therefore with your experience and common sense, you are in a position to ensure your safety. Lack of attention to safety can result in: accidents, personal injury, reduction of efficiency and worst of all - Loss of Life. Watch for safety hazards. Correct them promptly. Use the following safety precautions as a general guide to safe operation:

Do not attempt to remove any compressor parts without first relieving the entire system of pressure.

Do not attempt to service any part while machine is operating.

DANGER

CHECK THE COMPRESSOR SUMP OIL LEVEL ONLY WHEN THE COMPRESSOR IS NOT OPERATING AND SYSTEM IS COMPLETELY RELIEVED OF PRESSURE. OPEN SERVICE VALVE TO ENSURE RELIEF OF SYSTEM AIR PRESSURE WHEN PERFORMING MAINTENANCE ON COMPRESSOR AIR/OIL SYSTEM. FAILURE TO COMPLY WITH THIS WARNING MAY CAUSE DAMAGE TO PROPERTY AND SERIOUS BODILY HARM.

Do not operate the compressor at pressure(s) or speed in excess of its rating as indicated in "Compressor Specifications".

Periodically check all safety devices for proper operation.

Do not play with compressed air. Pressurized air can cause serious injury to personnel.

Exercise cleanliness during maintenance and when making repairs. Keep dirt away from parts by covering parts and exposed openings.

SAFETY

Do not install a shut-off valve between the compressor and compressor oil sump.

DANGER

DO NOT USE BOSS COMPRESSOR SYSTEMS TO PROVIDE BREATHING AIR. SUCH USAGE, WHETHER SUPPLIED IMMEDIATELY FROM THE COMPRESSOR SOURCE, OR SUPPLIED TO BREATHING TANKS FOR SUBSEQUENT USE, CAN CAUSE SERIOUS BODILY INJURY.

BOSS DISCLAIMS ANY AND ALL LIABILITIES FOR DAMAGE FOR LOSS DUE TO PERSONAL INJURIES, INCLUDING DEATH, AND/OR PROPERTY DAMAGE INCLUDING CONSEQUENTIAL DAMAGES ARISING OUT OF ANY BOSS COMPRESSORS USED TO SUPPLY BREATHING AIR.

Do not disconnect or bypass safety circuit system.

Do not install safety devices other than authorized BOSS replacement devices.

Close all openings and replace all covers and guards before operating compressor unit.

Tools, rags, or loose parts must not be left on the compressor or drive parts.

Do not use flammable solvents for cleaning parts. This can cause the unit to ignite during operation.

Keep combustibles out of and away from the Compressor/Inlet and any associated enclosures.


The owner, lessor, or operator of the Compressor are hereby notified and forewarned that any failure to observe these safety precautions may result in damage or injury.

BOSS expressly disclaims responsibility or liability for any injury or damage caused by failure to observe these specified precautions or by failure to exercise that ordinary caution and due care required when operating or handling the Compressor, even though not expressly specified above.

SAFETY

A compliment of warning decals is supplied with each unit. These decals must be affixed to the vehicle after it has been painted, trimmed, and undercoat, etc. and prior to being put into service. The decals shall be placed so as to be clearly visible to the user and service personnel.

! WARNING



**Read the operators manual before starting this unit. Failure to adhere to instructions can result in severe personal injury. Replacement manuals can be purchased from:
Boss Industries, Inc.
720 Boyd Blvd.
LaPorte, IN 46350**

300039

! DANGER



**HOT OIL UNDER PRESSURE!
Will cause SEVERE PERSONAL INJURY OR DEATH. Do not remove valves, caps, plugs or piping when compressor is running or pressurized. Shut down compressor and relieve system of all pressure before removing valves, caps, plugs or piping**

300038

SAFETY


! DANGER



Discharge air used for breathing will cause severe injury or death consult filtration specialist for additional filtration and treatment equipment to meet occupational safety and health administration standards

300040

! WARNING



Driveshaft in rotation. Switch off engine and disconnect battery or electrical supply before attempting to work or perform maintenance on the compressor package.

300043

SAFETY


⚠ WARNING



**Do not
operate
without
fan guard
in place.**

300041

⚠ WARNING



**Connect air hoses only
in full compliance
with OSHA Standard 29
CFR 1926:(b)(7)
The required safety
devices should be
tested in accordance
with their manufacturer's
recommendations
to verify that they
reduce pressure in
case of hose failure
and will not nuisance
trip with the hose
and tool combinations
in use.**

300042

COMPRESSOR FLUID

USE AUTOMATIC TRANSMISSION FLUID
DEXRON III OR EQUIVALENT.

1. CHECK FLUID LEVEL WITH TRUCK OFF AND PARKED ON LEVEL GROUND BEFORE STARTING COMPRESSOR.
2. PROPER OIL LEVEL IS BETWEEN THE TOP & THE MIDPOINT OF THE UPPER OIL SIGHTGLASS.
3. DO NOT OVER FILL

302605

DIRECTION OF ROTATION



BOSS 300048



BOSS

BOSS INDUSTRIES, INC.
720 BOYD BLVD. LAPORTE, IN 46350

MODEL NO. _____
SERIAL NO. _____
INPUT R.P.M. _____

300204

COMPRESSOR TERMINOLOGY

AIR/OIL COALESCER - Performs second stage separation of oil from compressed air feeding air tools. Sometimes referred to as the separator element.

CFM - Refers to the volume of compressed air being produced, expressed as cubic feet of air per minute.

COMPRESSOR LUBRICANT - DEXTRON III ATF.

GPM - Refers to the amount of gallons per minute of hydraulic fluid flowing through the pump.

OIL SUMP - The first stage of oil separation from compressed air. Also serves as reservoir area for compressor lubricant and sometimes referred to as the receiver tank.

PSI - Refers to the operating pressure the system is set up at, expressed as pounds per square inch.

SAFETY VALVE - A valve located on the oil sump which opens in case of excessive pressure. Sometimes referred to as the pop-off or pressure relief valve.

DESCRIPTION OF COMPONENTS

COMPRESSOR ASSEMBLY

The BOSS hydraulic drive compressor assembly is a positive displacement, oil flooded, rotary screw type unit employing one stage of compression to achieve the desired pressure. Components include a housing (stator), two screws (rotors), bearings, and bearing supports. Power from the hydraulic motor shaft is transferred to the male rotor through a drive coupling. The female rotor is driven by the male rotor. There are five lobes on the male rotor while the female rotor has six roots.

PRINCIPLES OF OPERATION

In operation, two helical grooved rotors mesh to compress air. Inlet air is trapped as the male lobes roll down the female grooves, pushing trapped air along, compressing it until it reaches the discharge port in the end of the stator and delivers smooth-flowing, pulse-free air to the receiver.

During the compression cycle, oil is injected into the compressor and serves these purposes:

1. Lubricates the rotating parts and bearings.
2. Serves as a cooling agent for the compressed air.
3. Seals the running clearances.

LUBRICATION SYSTEM

Oil from the compressor at discharge pressure, is directed into it's integral housing, through the thermal valve and filter, and then out of the integral housing to the oil cooling system, and then back to the side of the compressor stator, where it is injected into the compressor. At the same time oil is directed internally to the bearings and shaft seal of the compressor.

OIL SUMP

Compressed, oil-laden air enters the sump from the compressor. As the oil-laden air enters the sump, most of the oil is separated from the air as it passes through a series of baffles and de-fusion plates. The oil accumulates at the bottom of the sump for recirculation. However, some small droplets of oil remain suspended in the air and are passed on to the Coalescer.

DESCRIPTION OF COMPONENTS

SAFETY VALVE

The pop safety valve is set at 218 PSI (15 BAR) and is located at the top of the air/oil sump. This valve acts as a backup to protect the system from excessive pressure that might result from a malfunction.

AIR/OIL COALESCER

The coalescer is self-contained within a spin-on housing. When air is demanded at the service line, it passes through the coalescer which efficiently provides the final stage of oil separation. When mounting/installing the unit, leave clearance for removal.

OIL RETURN LINE

The oil that is removed by the coalescer accumulates and is returned through an internal oil return line leading to the compressor.

MINIMUM PRESSURE VALVE

The minimum pressure valve is located at the outlet of the coalescer head and serves to maintain a minimum discharge pressure of approximately 75 PSIG in operation, which is required to assure adequate compressor lubrication pressure.

OIL FILTER

The compressor oil filter is a removable and cleanable screen built into the side of the compressor housing. Screen replacement may be necessary after several cleanings.

COMPRESSOR OIL AND HYDRAULIC OIL COOLING SYSTEMS

The compressor cooling system consists of a combination hydraulic cooler and compressor cooler mounted on the common frame. Compressor oil temperature is controlled by a thermal valve located down stream of the oil filter. The thermal valve maintains the compressor oil temperature at approximately 185°F. Air is drawn through the hydraulic cooler, then the compressor cooler out the top of the package. Allow for adequate clearance at the top (12") for the air to exit. Also, the package location should not be subjected to above ambient air temperatures.

DESCRIPTION OF COMPONENTS

INSTRUMENTATION

The BOSS hydraulic drive compressor unit incorporates a gauge panel that monitors temperature, pressure and hours of operation.

HOURMETER

The hourmeter records the total number of operating hours. It serves as a guide in following the recommended inspection and maintenance schedule. The hourmeter will only run when there is pressure in the system.

COMPRESSOR DISCHARGE AIR/OIL TEMPERATURE SWICHGAUGE

This swichgauge indicates compressor air discharge temperature. The swichgauge ensures safety shutdown in case of excessive operating temperatures, preventing compressor damage, by stopping hydraulic flow to the compressor motor.

ELECTRICAL AND SAFETY SYSTEM

The BOSS compressor's standard electrical system consists of:

- Gauge panel with a temperature swichgauge, hourmeter and discharge pressure swichgauge.
- Compressor and hydraulic oil cooler fan assembly and relay.
- Compressor after cooler/oil cooler fan assembly with relay.
- N.O. hourmeter pressure switch.
- N.C. blowdown pressure switch.
- 12VDC N.O. hydraulic solenoid and relay.
- Switch relay for customer equipment interface during compressor operation.

DESCRIPTION OF COMPONENTS

AUTOMATIC BLOW DOWN VALVE

There is one blow down valve in the compressor system. It is located at the intake valve and will automatically bleed the sump to zero pressure when the compressor is disengaged. Blow down time interval takes between 45 and 60 seconds.

CONTROL SYSTEM

The prime component of the compressor control system is the compressor inlet valve. The control system is designed to match air supply to air demand and to prevent excessive discharge pressure when compressor is at idle. Control of air delivery is accomplished by the inlet valve regulation and modulation as directed by the discharge pressure regulator.

DISCHARGE PRESSURE REGULATOR VALVE

This valve, located on the compressor discharge housing is used to set the desired discharge pressure within the operating pressure range. Turning the regulator screw clockwise increases the working pressure, a counterclockwise movement of the screw reduces the working pressure. This system has a maximum operating pressure of 150 psi.

NOTE: Most air tools operating pressure range is between 90 and 125 psi. Operating above the tools recommended pressures will decrease the life of the tool. Higher operating pressure can also over torque nut and bolts fatiguing the fastener and mating parts. Strictly adhere to tool operating pressures and torque standards set forth by the tool manufacturer and the specifications of the equipment that work is being performed on.

INLET VALVE

The compressor inlet valve is a piston operated disc valve that regulates the inlet opening to control capacity and serving as a check valve at shutdown.

INSPECTION, LUBRICATION, AND MAINTENANCE

This section contains instructions for performing the inspection, lubrication, and maintenance procedures required to maintain the compressor in proper operating condition. The importance of performing the maintenance described herein cannot be over emphasized.

The periodic maintenance procedures to be performed on the equipment covered by this manual are listed below. It should be understood that the intervals between inspections specified are maximum interval. More frequent inspections should be made if the unit is operating in a dusty environment, in high ambient temperature, or in other unusual conditions. A planned program of periodic inspection and maintenance will help avoided premature failure and costly repairs. Daily visual inspections should become a routine.

The LUBRICATION AND MAINTENANCE CHART lists serviceable items on this compressor package. The items are listed according to their frequency of maintenance, followed by those items which need only “As Required” maintenance.

The maintenance time intervals are expressed in hours. The hourmeter shows the total number of hours your compressor has run. Use the hourmeter readings for determining your maintenance schedules. Perform the maintenance at multiple intervals of the hours shown. For example, when the hourmeter shows “100” on the dial, all items listed under “EVERY 10 HOURS” should be serviced for the tenth time, and all items under “EVERY 50 HOURS” should be serviced for the second time, and so on.

DANGER

COMPRESSOR MUST BE SHUT DOWN AND COMPLETELY RELIEVED OF PRESSURE PRIOR TO CHECKING FLUID LEVELS. OPEN SERVICE VALVE TO ENSURE RELIEF OF SYSTEM AIR PRESSURE. FAILURE TO COMPLY WITH THIS WARNING MAY CAUSE DAMAGE TO PROPERTY AND SERIOUS BODILY HARM.

LUBRICATION AND MAINTENANCE CHART

NOTE: Compressor oil and filter is to be changed after the first 50 hours of operation. After this, normal intervals are to be followed.

LUBRICANT RECOMMENDATIONS

WARNING

IT IS IMPORTANT THAT THE COMPRESSOR OIL BE OF A RECOMMENDED TYPE AND THAT THIS OIL AS WELL AS THE AIR FILTER, OIL FILTER, AND COALESCER ELEMENTS BE INSPECTED AND REPLACED AS STATED IN THIS MANUAL.

THE COMBINATION OF A COALESCER ELEMENT LOADED WITH DIRT AND OXIDIZED OIL PRODUCTS TOGETHER WITH INCREASED AIR VELOCITY AS A RESULT OF THIS CLOGGED CONDITION MAY PRODUCE A CRITICAL POINT WHILE THE MACHINE IS IN OPERATION WHERE IGNITION CAN TAKE PLACE AND COULD CAUSE A FIRE IN THE OIL SUMP.

FAILURE TO COMPLY WITH THIS WARNING MAY CAUSE DAMAGE TO PROPERTY AND SERIOUS BODILY HARM.

The following are general characteristics for a rotary screw lubricant. Due to the impossibility of establishing limits on all physical and chemical properties of lubricants which can affect their performance in the compressor over a broad range of environmental influences, the responsibility for recommending and consistently furnishing a suitable heavy duty lubricant must rest with the individual supplier if they choose not to use the recommended BOSS rotary screw lubricant. The lubricant supplier's recommendation must, therefore, be based upon not only the following general characteristics, but also upon his own knowledge of the suitability of the recommended lubricant in helical screw type air compressors operating in the particular environment involved.

CAUTION

MIXING DIFFERENT TYPES OR BRANDS OF LUBRICANTS IS NOT RECOMMENDED DUE TO THE POSSIBILITY OF A DILUTION OF THE ADDITIVES OR A REACTION BETWEEN ADDITIVES OF DIFFERENT TYPES.

LUBRICANT RECOMMENDATIONS

LUBRICANT CHARACTERISTICS

1. Flash point 400°F minimum.
2. Pour point -40°F.
3. Contains rust and corrosion inhibitors.
4. Contains foam suppressors.
5. Contains oxidation stabilizer.

NOTE

DUE TO ENVIRONMENTAL FACTORS THE USEFUL LIFE OF ALL “EXTENDED LIFE” LUBRICANTS MAY BE SHORTER THAN QUOTED BY THE LUBRICANT SUPPLIER. BOSS ENCOURAGES THE USER TO CLOSELY MONITOR THE LUBRICANT CONDITION AND TO PARTICIPATE IN AN OIL ANALYSIS PROGRAM WITH THE SUPPLIER.

NOTE

NO LUBRICANT, HOWEVER GOOD AND/OR EXPENSIVE, CAN REPLACE PROPER MAINTENANCE AND ATTENTION. SELECT AND USE IT WISELY.

MAINTENANCE

If some of the maintenance intervals in the schedule outlined in this manual seem to be rather short, it should be considered that one hour's operation of a compressor is equal to about 40 road miles on an engine. Thus, eight hours operation is equal to 320 road miles, 250 hours is equal to 10,000 road miles, etc.

COMPRESSOR OIL SUMP FILL, LEVEL, AND DRAIN

Before adding or changing compressor oil make sure that the compressor is completely relieved of pressure. Oil is added at the fill cap on the side of the compressor body. A drain valve/hose assembly is provided at the bottom of the compressor body. The proper oil level, when unit is shut down and has had time to settle between the top and the midpoint of the upper oil sightglass. The truck must be level when checking the oil. **DO NOT OVERFILL.** The oil sump capacity is given in "Compressor Specifications".

DANGER

DO NOT ATTEMPT TO DRAIN CONDENSATE, REMOVE THE OIL LEVEL FILL PLUG, OR BREAK ANY CONNECTION IN THE AIR OR OIL SYSTEM WITHOUT SHUTTING OFF COMPRESSOR AND MANUALLY RELIEVING PRESSURE FROM THE SUMP. FAILURE TO COMPLY WITH THIS WARNING MAY CAUSE DAMAGE TO PROPERTY AND SERIOUS BODILY HARM.

AIR INTAKE FILTER

The air intake filter is a heavy-duty dry type high efficiency filter designed to protect the compressor from dust and foreign objects. Optional two-stage available.

Optional filter is equipped with an evacuator cup for continuous dust ejection while operating and when stopped.

Frequency of maintenance of the filter depends on dust conditions at the operating site. The filter element must be serviced when clogged (maximum pressure drop for proper operation is 15" of water). The filter is equipped with a pressure drop indicator, and the element should be changed based on it's reading first and then by the maintenance intervals outlined.

MAINTENANCE

AIR/OIL COALESCER

The air/oil coalescer employs an element permanently housed within a spin-on canister. This is a single piece unit that requires replacement when it fails to remove the oil from the discharge air, or pressure drop across it exceeds 15 PSI. Dirty oil clogs the element and increases the pressure drop across it.

To replace element proceed as follows:

1. Shutdown compressor and wait for complete blow down (zero pressure).
2. Turn element counterclockwise for removal (viewing element from bottom).
3. Apply a film of fluid directly to seal on the new element.
4. Rotate element clockwise by hand until element contacts seal (viewing element from bottom).
5. Rotate element approximately one more turn clockwise with band wrench near the top of element.
6. Run system and check for leaks.

WARNING

DO NOT SUBSTITUTE ELEMENT. USE ONLY A GENUINE BOSS REPLACEMENT ELEMENT. THIS ELEMENT IS RATED AT 200 PSI WORKING PRESSURE. USE OF ANY OTHER ELEMENT MAY BE HAZARDOUS AND COULD IMPAIR THE PERFORMANCE AND RELIABILITY OF THE COMPRESSOR, POSSIBLY VOIDING THE WARRANTY AND/OR RESULTING IN DAMAGE TO PROPERTY AND SERIOUS BODILY HARM.

COALERSCER OIL RETURN

This originates at the bottom of the air/oil coalescer and flows through a special recovery pipe and venturi nozzle. If the coalerscer starts to fill with oil there is a good chance the venturi or pipe has been plugged. Consult factory for cleaning instructions.

MAINTENANCE

OIL FILTER

The compressor oil filter is a spin-on, throw away type.

To replace filter proceed as follows:

1. Make sure system pressure is relieved.
2. Unscrew with 14 mm allen wrench.
3. Remove oil filter from housing.
4. Remove gasket and clean or replace the screen.
5. Reinsert filter and gasket into housing and tighten with 14 mm allen wrench.
6. Add oil, re-tighten filler cap.
7. Check for leaks in operation.

WARNING

DO NOT SUBSTITUTE ELEMENT. USE ONLY A GENUINE BOSS REPLACEMENT ELEMENT. USE OF ANY OTHER ELEMENT MAY BE HAZARDOUS AND COULD IMPAIR THE PERFORMANCE AND RELIABILITY OF THE COMPRESSOR, POSSIBLY VOIDING THE WARRANTY AND/OR RESULTING IN DAMAGE TO PROPERTY AND SERIOUS BODILY HARM.

HYDRAULIC OIL COOLER AND COMPRESSOR OIL COOLER COMBINATION

The interior of the oil cooler should be cleaned when the pressure drop across it at full flow exceeds 25 PSI. The following procedure has been recommended by the vendor who supplies the cooler:

1. Remove cooler.
2. Circulate a suitable solvent to dissolve and remove varnish and sludge.
3. Flush generously with compressor lubricant (compressor oil cooler section only, use hydraulic oil to flush the hydraulic cooler portion on the combo cooler).
4. Once the coolers are reinstalled, fill the compressor and hydraulic systems with the proper fluids to their appropriate levels.

MAINTENANCE

SHAFT SEAL

SHAFT SEAL INSTALLATION INSTRUCTIONS:

1. Remove hydraulic motor, drive coupling and adapter housing from face of compressor.
2. Remove coupling hub from compressor shaft.
3. Remove 4 screws from shaft seal cover and press seal out.
4. Pull seal wear sleeve off shaft with puller.
5. Clean shaft surface removing all burrs from shaft where the wear sleeve gets installed.
6. Press new wear sleeve on to shaft. Oil heating new wear sleeve to 212°F approximately aids in the installation of this ring.
7. Press new seal into housing with seal assembly tool, until contact with snapping.
8. Temporarily install new seal installation cone over shaft to protect seal during reinstallation.
9. Reinstall cover.
10. Reverse steps 2 then 1.

TROUBLESHOOTING

This section contains instructions for troubleshooting the equipment following a malfunction.

The troubleshooting procedures to be performed on the equipment are listed below. Each symptom of trouble for a component or system is followed by a list of probable causes of the trouble and suggested procedures to be followed to identify the cause.

In general, the procedures listed should be performed in the order in which they are listed, although the order may be varied if the need is indicated by conditions under which the trouble occurred. In any event, the procedures which can be performed in the least amount of time and with the least amount of removal or disassembly of parts, should be performed first.

UNPLANNED SHUTDOWN

When the operation of the machine has been interrupted by an unexplained shutdown, check the following:

1. Check the fuel level and truck dash gauges and indications for possible engine problems.
2. Check the compressor discharge temperature/switchgauge. If the latching relay circuit is tripped the 12VDC solenoid will lose power and divert hydraulic oil back to the reservoir. The compressor blowdown pressure switch and the temperature switchgauge will not allow power to the hydraulic solenoid until the air has blown down and the temperature has dropped into its normal operating range and the push button has been re-set. Take compressor in for service once a high temperature shutdown has occurred. Failure to do so will void your warranty.
3. Check that the compressor oil is at proper level.
4. Check oil cooler for dirt, slush, ice on the fins, or any other obstructions to the cooling air flow.
5. Make a thorough external check for any cause of shutdown such as broken hose, broken oil lines, loose or broken wire, etc.

TROUBLESHOOTING

IMPROPER DISCHARGE PRESSURE

1. If discharge pressure is too low, check the following:
 - A. Too much air demand. (Air tools require more air than what the compressor can produce, air tools are free wheeling without resistance.)
 - B. Service valve wide open to atmosphere.
 - C. Leaks in service line.
 - D. Restricted compressor inlet air filter.
 - E. Faulty control system operation (i.e. regulator is sending a signal to close inlet valve at all times.)
2. If discharge pressure is too high, safety valve blows, or system shuts down on high pressure, check the following:
 - A. Faulty discharge pressure swichgauge.
 - B. Coalescer plugged up.
 - C. Faulty safety valve.
 - D. Faulty regulator (regulator air pressure signal is not getting to inlet valve)
3. Sump relief valve activates:
 - A. Inlet valve leaking or open
 - B. Faulty regulator

SUMP PRESSURE DOES NOT BLOW DOWN

If after the compressor is shutdown, pressure does not automatically blow down, check for:

1. Automatic blow down valve may be inoperative.
2. Blockage in air line from side of inlet valve to blow down valve pilot port 1.
3. Blow down valve orifice is clogged.

OIL CONSUMPTION

Abnormal oil consumption or oil in service line, check for the following:

1. Over filling of oil sump.
2. Leaking oil lines or oil cooler.
3. Plugged oil return line: check nozzle beneath the sightglass.
4. Defective coalescer element.
5. Compressor shaft seal leakage.
6. Discharge pressure below 65 PSI or above 175 PSI.

TROUBLESHOOTING

COALESCER PLUGGING

If the coalescer element has to be replaced frequently because it is plugging up, it is an indication that foreign material may be entering the compressor inlet or the compressor oil is breaking down.

Compressor oil can break down prematurely for a number of reasons.

(1) Extreme operating temperature, (2) negligence in draining condensate from oil sump, (3) using the improper type of oil, (4) dirty oil, (5) oil return nozzle plugged.

The complete air inlet system should be checked for leaks.

HIGH COMPRESSOR DISCHARGE TEMPERATURE

1. Check compressor oil level. Add oil if required (see Section for oil specifications).
2. Check thermal valve operation.
3. Clean outside of oil cooler.
4. Clean oil system (cooler) internally.
5. Check fan relay harness.

COMPRESSOR OPERATION

Before starting the compressor, read this section thoroughly. Familiarize yourself with the controls and indicators, their purpose, location, and use.

COMPRESSOR OPERATION

OPERATING CONDITIONS

The following conditions should exist for maximum performance of the compressor. The truck should be as close to level as possible when operating. The compressor will operate on a 15 degree sideward and lengthwise tilt without any adverse problems. Operation in ambient temperatures above 100°F (38°C) may experience high temperature shutdown.

NOTE

IF THE COMPRESSOR IS BEING USED TO POWER SANDBLASTING EQUIPMENT, OR AN AIR STORAGE TANK, USE A CHECK VALVE DIRECTLY AFTER THE MINIMUM PRESSURE VALVE TO PREVENT BACKFLOW INTO THE SUMP. THIS CHECK VALVE SHOULD HAVE A MAXIMUM PRESSURE DROP RATING OF 2 PSIG (13.78kPa) OPERATING AND A CAPACITY RATING EQUAL TO THE COMPRESSOR.

NOTE

THE COMPRESSOR SERVICE VALVE SHOULD BE RELOCATED TO THE HOSE REEL INLET OR BE THE CUSTOMERS AIR CONNECTION PORT WHEN A HOSE REEL IS NOT USED. TYPICAL PLUMBING FROM MINIMUM PRESSURE ORIFICE SHOULD FLOW IN THE FOLLOWING ORDER:

- 1. MINIMUM PRESSURE VALVE.**
- 2. CHECK VALVE.**
- 3. AIR TANK (WHEN USED).**
- 4. MOISTURE TRAP/GAUGE/OILER COMBINATION (WHEN USED).**
- 5. HOSE REEL (WHEN USED).**

**PARTS AND
ILLUSTRATION
SECTION**

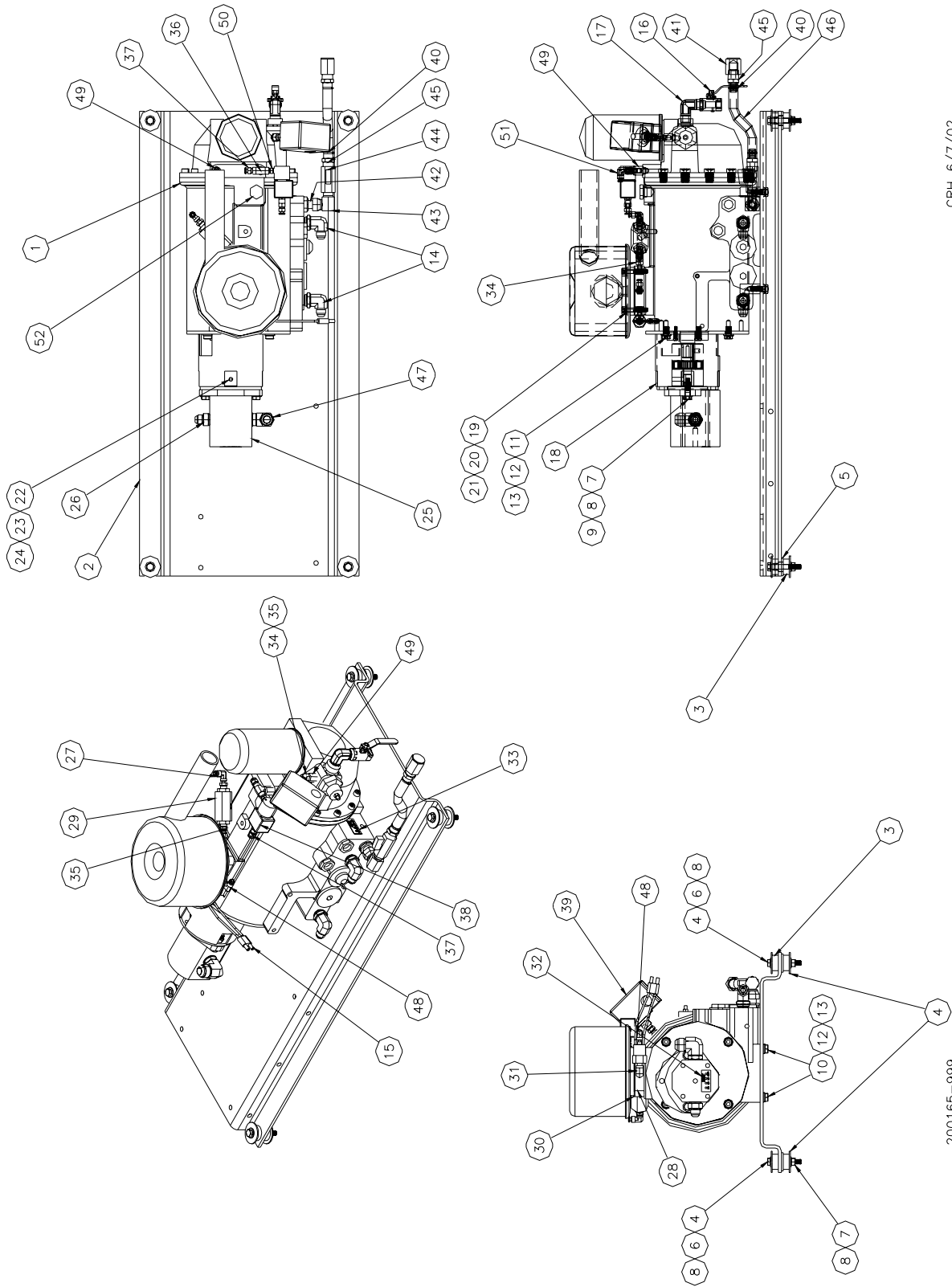
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CONTROL HOSE PORT CALL OUTS

PORT	DESCRIPTION
A	AIR SIGNAL SUPPLY, AT SHUTDOWN ONLY TO PILOT PORT ON BLOWDOWN VALVE EXHAUSTS SUMP AIR AT SHUTDOWN
B	OUTLET REGULATED AIR PRESSURE SIGNAL, PRESENT ONLY WHEN THERE IS NO DEMAND FOR AIR. I.E. CLOSED SERVICE VALVE OR AIR PRESSURE DEAD HEADED INTO TOOL THAT IS NOT BEING USED.
B1	AIR SIGNAL FROM "B" REGULATOR OUTLET TO COMPRESSOR INLET VALVE REGULATING PORT. AIR SIGNAL MODULATES AIR OPENING FROM OPEN TO CLOSED WHEN THERE IS NO DEMAND FOR AIR.
C	SYSTEM AIR PRESSURE SIGNAL PORT TO AIR PRESSURE REGULATOR INLET AND BLOWDOWN INLET. AIR PRESSURE IS PRESENT ANYTIME THERE IS AIR PRESSURE IN THE SYSTEM.
C1	SYSTEM AIR PRESS FEED TO PORT 'C'

HOSE SYSTEM

PART NUMBER	QTY	DESCRIPTION	FIND #
975408-033	1 EACH	HOSE ASSY, 1/2" X 33" S X S OILCOOLER OUTLET TO COMPR INJECTION	1
975508-019	1 EACH	HOSE ASSY, 1/2 X 19" S X E COMPR OUT TO COOLER FEED PORT	2
975508-020	1 EACH	HOSE ASSY, 1/2" X 20" BLOCK OUTLET TO MTR INLET	3
975412-021	2 EACH	HOSE ASSY, 3/4" X 21" HYD. MTR. OUT TO CLR. IN & BLOCK BYPASS TO COOLER IN	4
301960-025	6 FOOT	TUBE, PARAFLEX 1/4 O.D. X .040	5



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COMP & MTG SYSTEM

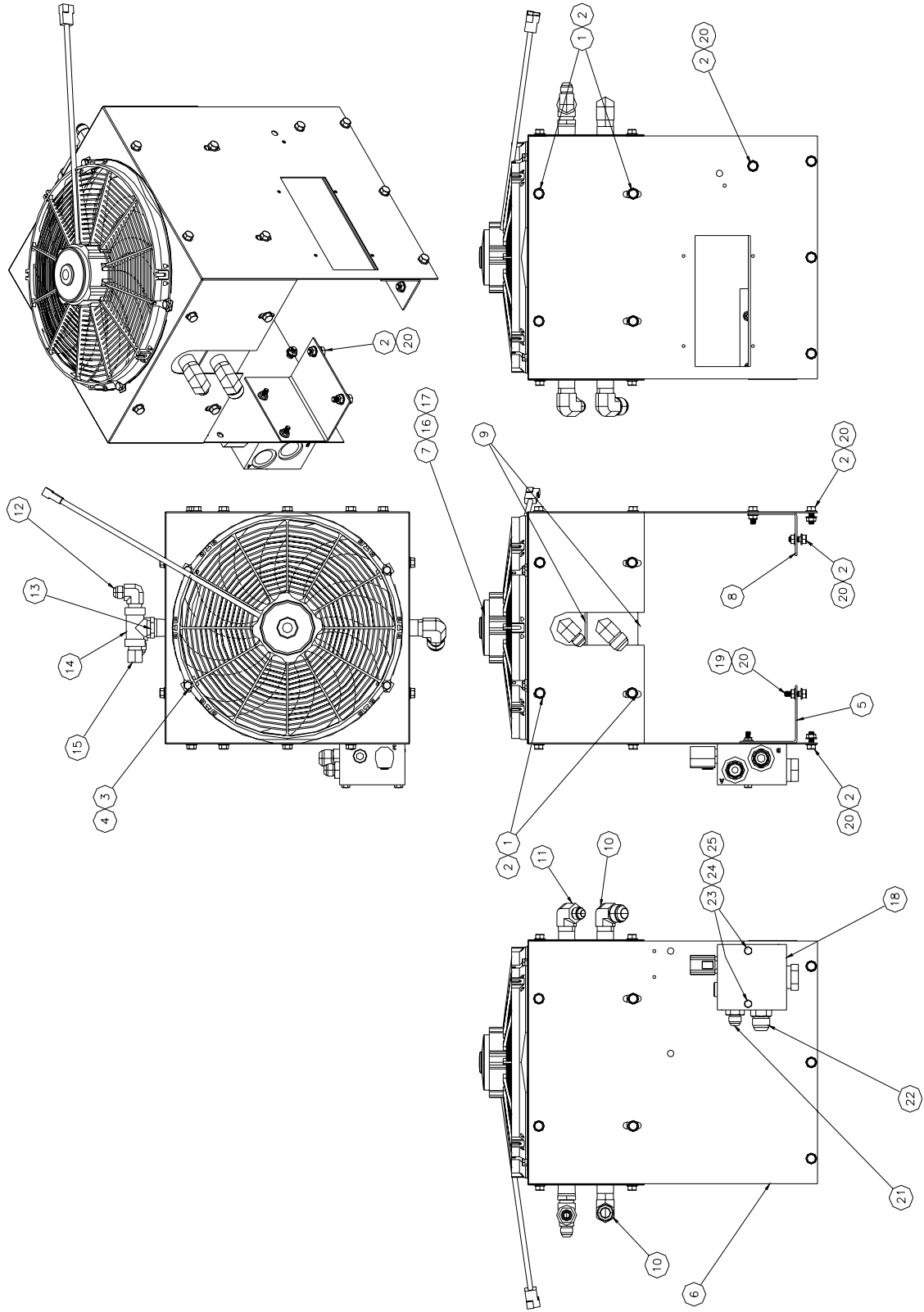
200165-999

PART NUMBER	QTY		DESCRIPTION	FIND #
301722	1	EACH	COMPRESSOR, AIR SCI8 (REVISION	1
302108-001	1	EACH	FRAME, ROCKY MNTN AIR SCI8	2
302097	4	EACH	ISOLATER, SCI8 FRAME	3
302098	8	EACH	WASHER, SNUBBING ISOLATOR	4
938212-112	4	EACH	WASHER, FLAT 3/4	5
929806-250	4	EACH	BOLT, HEX GR8 3/8-16 X 2 1/2	6
925506-198	6	EACH	NUT, NYLOC - 3/8-16 GR8	7
938206-071	10	EACH	WASHER, FLAT 3/8 - GR8	8
929806-150	2	EACH	BOLT, HEX GR8 3/8-16 X 1 1/2	9
929210-300	4	EACH	BOLT, HEX 10MM X 30MM GR10.9	10
929310-200	4	EACH	BOLT, SOC HD 10MM X 20MM GR10.9	11
938910-200	8	EACH	WASHER, FLAT 10MM	12
938810-220	8	EACH	WASHER, LOC M10	13
970608-050	2	EACH	ELBOW, 1/2 JIC X 1/2 BSPP	14
301421	1	EACH	SWITCH, PRESSURE N.C.	15
300022-050	1	EACH	VALVE, SERVICE-1/2 W/VENT PORT	16
983608-050	1	EACH	ELBOW, PIPE 1/2MNPT X 1/2BSPT M	17
302283	1	EACH	ADAPTER, COMPR-HYDMOTOR SCI8	18
929308-450	4	EACH	BOLT, SOC HD 8MM X 30MM GR10.9	19
938908-180	4	EACH	WASHER, FLAT M8	20
938808-200	4	EACH	WASHER, LOC M8 - GR10.9	21
302101	1	EACH	HUB, CPLNG 25MMX8X7 KYWYR28-03	22
302102	1	EACH	HUB, CPLNG 5/8 RND W 5/32 KYWY	23
302103	1	EACH	SPIDER, CPLNG R28-03 98SHR RED	24
302082	1	EACH	MOTOR, HYD .39 CIR SAE"A" 5/8	25
970508-088	1	EACH	CONNECTOR, 1/2 JIC X - 10 SAE	26
980704-025	1	EACH	ELBOW, 1/4 PAR TUBE SW X 1/4 NPT	27
302551	1	EACH	ADAPTER, SCI8G INLET VLV TMAR W REG	28
301827	1	EACH	VALVE, BLOWDOWN 1/4 N.C. 55502	29
302453	1	EACH	GASKET, INLET VLV SCI8/TMAR	30
960702-012	1	EACH	ELBOW, PIPE HYD STREET 1/8 NPT	31
301593	0.100	BOX	DECAL, TEMP.HYD.-140 F30	32
301594	0.100	BOX	DECAL, TEMP.COMPR.-250 F	33
903315-012	2	EACH	ELBOW, PIPE STREET 1/8 45 DEG.	34
961604-012	2	EACH	NIPPLE, HEX RED 1/4 X 1/8	35
961902-012	1	EACH	TEE, MB 1/8F X 1/8F X 1/8M	36
980604-012	2	EACH	CONNECTOR, 1/4 PAR TUBE X 1/8 NPT	37
301939	1	EACH	SOLENOID, N.O. AIR 38	
300904	1	EACH	SWITCH, PRESSURE FURNAS	39
300033-075	2	EACH	CLAMP, AIR INLET HOSE 3/4 WORM GEAR	40
906130-020	1	EACH	CAP, PIPE 1/2 41	
302631	1	EACH	ADAPTER, 1/2 BSPP X 1/2 NPT	42
302632	1	EACH	ELBOW, 1/2 NPT SW X 1/2 NPT 90 DEG.	43
302633	1	EACH	VALVE, BALL 1/2 NPT	44
302634	2	EACH	FITTING, BARB 1/2 NPT X 1/2 HOSE	45

COMP & MTG SYSTEM

200165-999

PART NUMBER	QTY		DESCRIPTION	FIND #
302636	1	EACH	HOSE, 1/2 OIL DRAIN INFINITY	46
970412-088	1	EACH	ELBOW, 3/4 JIC X -10 SAE	47
980704-025M	1	EACH	ELBOW, 1/4 PAR TUBE SW X 1/4 NPT	48
970802-012	3	EACH	ADAPTER, 1/8 M BSPP X 1/8 FNPT	49
960402-012	1	EACH	NIPPLE, HEX 1/8 X 1/8	50
980704-012	1	EACH	ELBOW, 1/4 PAR TUBE SW X 1/8 NPT	51
302625	1	EACH	PLUG, METRIC M20 X 1 INFINITY	52
302667	1	EACH	PLUG, METRIC M8 X 1 (NOT SHOWN)	53



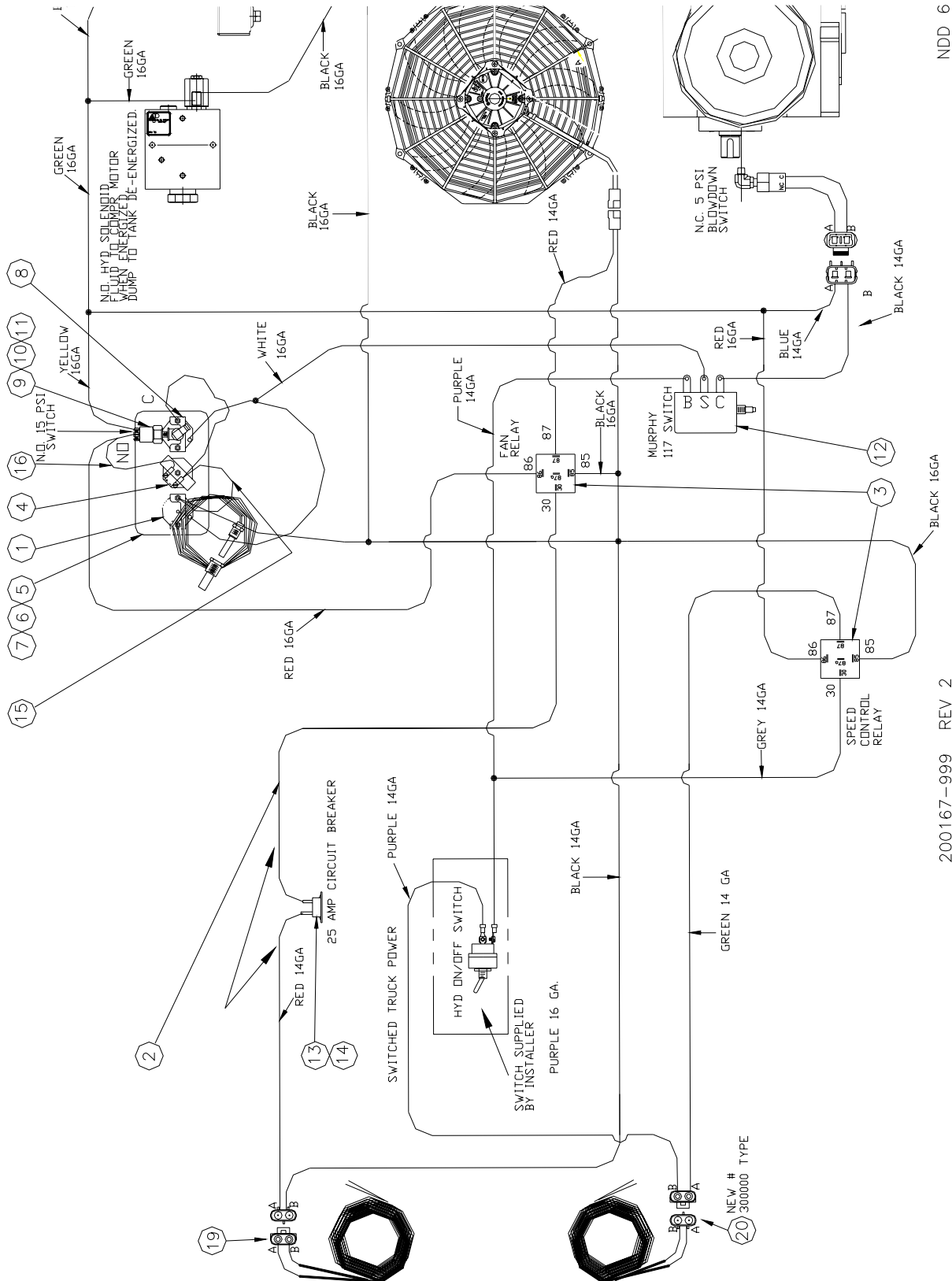
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200166-999

OIL COOLING SYSTEM

200166-999

PART NUMBER	QTY		DESCRIPTION	FIND #
961505-140	16	EACH	NUT, TINNERMAN - 5/16-18	1
929705-075	26	EACH	BOLT, WHIZLOCK GR5 5/16-18 X 3	2
929104-075	4	EACH	BOLT, HEX GR5 1/4-20 X 3/4	3
975804-012	4	EACH	NUT, TINNERMAN FLAT 1/4-20 X 1	4
302121	1	EACH	BRACKET, SUPPORT RCKY MTN AIR	5
302109	1	EACH	SHROUD, OIL CLR RCKY MNTN AIR	6
302112	1	EACH	FAN, ASSY W/MTR & GRILL 13" PU	7
302239	1	EACH	BRACKET, OIL COOLER SHROUD	8
300836	2	EACH	COOLER, OIL 12" X 13.5"	9
960212-075	1	EACH	ELBOW, 3/4 JIC X 3/4 MNPT 90 DEGREE	10
960208-075	1	EACH	ELBOW, 1/2 JIC X 3/4 MNPT 90 DEGREE	11
960208-050	1	EACH	ELBOW, 1/2 JIC X 1/2 MNPT 90 DEGREE	12
982808-075	1	EACH	BUSHING, HYD RED 3/4 X 1/2	13
961908-050	1	EACH	TEE, MB 1/2F X 1/2F X 1/2M	14
302087	1	EACH	BULB WELL, 5/8" UNF X 1/2" NPT	15
300444-006	2	EACH	TAP, 1/16 X 1/2 X 6" CLOSED CELLO	16
300444-013	2	EACH	TAP, 1/16 X 1/2 X 13" CLOSED CELLO	17
80056-06-12	1	EACH	KIT, HYD VALVE BLOCK 6GPM FLOW CONTROL	18
929705-100	1	EACH	BOLT, WHIZLOCK GR5 5/16-18 X 1	19
925305-283	11	EACH	NUT, WHIZLOCK 5/16-18	20
970508-088	1	EACH	CONNECTOR, 1/2 JIC X -10 SAE	21
970512-088	1	EACH	CONNECTOR, 3/4 JIC X -10 SAE	22
929104-325	2	EACH	BOLT, HEX GR5 1/4-20 X 3 1/4	23
938204-071	2	EACH	WASHER, FLAT 1/4	24
925204-226	2	EACH	NUT, HEX GR5 1/4-20	25



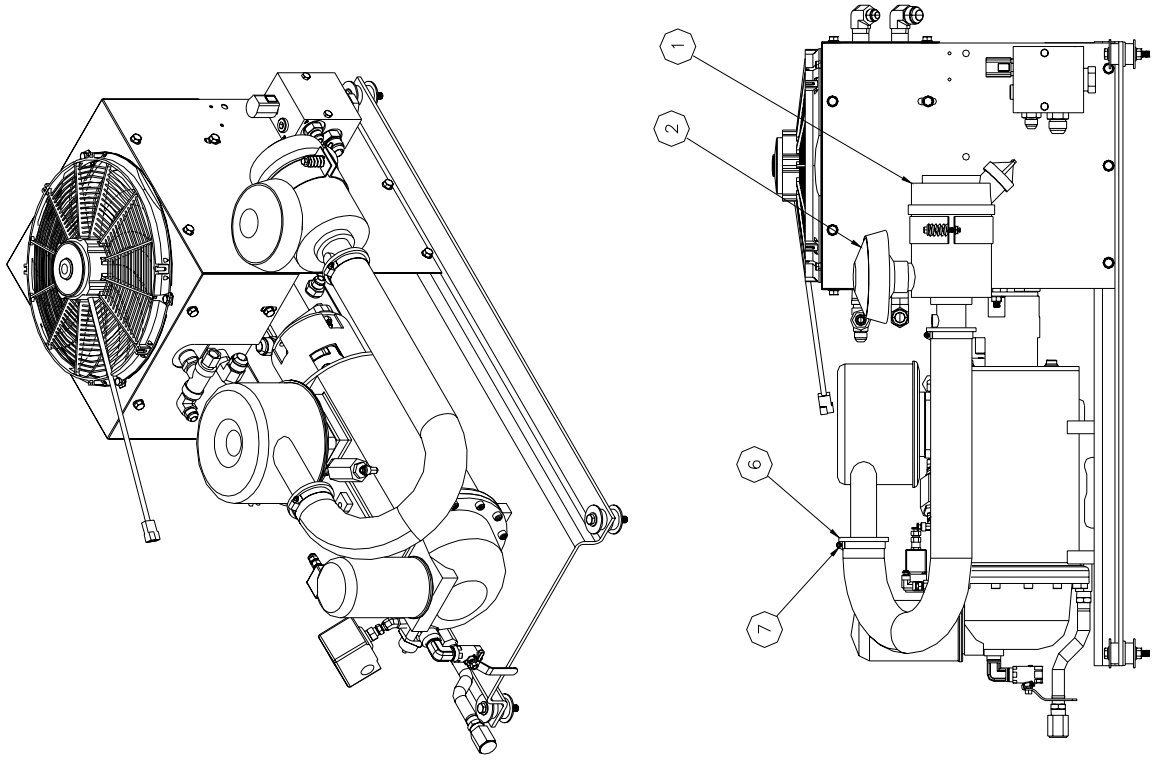
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200167-999 REV 2

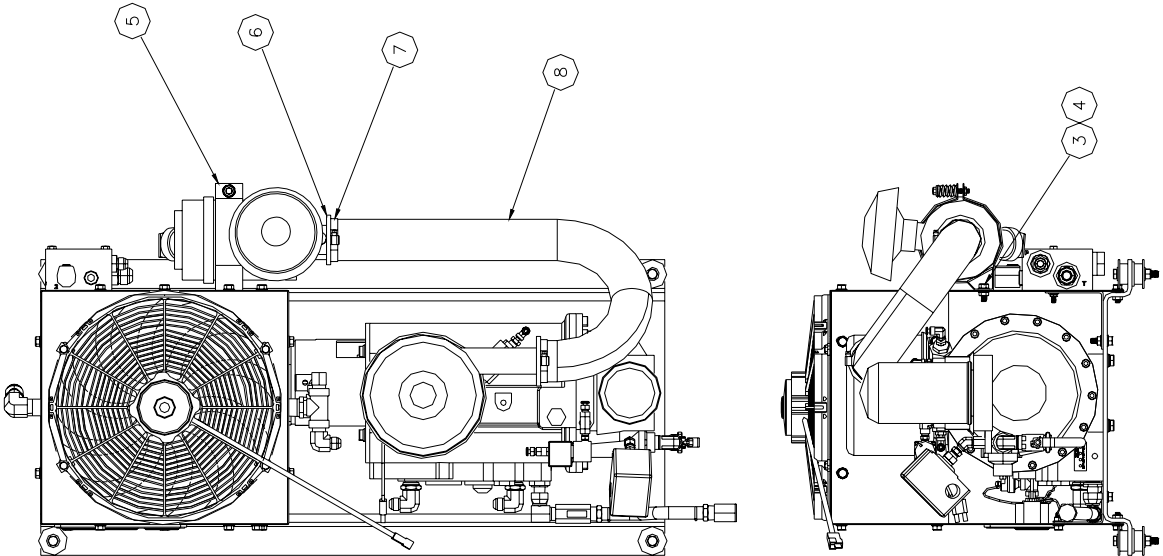
ELECTRICAL SYSTEM

PART NUMBER	QTY		DESCRIPTION	FIND #
300076-004	1	EACH	SWICHGAUGE, TMP 4'0-250	1
302117	1	EACH	HARNESS, 25AHBI	2
301755-012	2	EACH	RELAY, PWR WTHRPRF 12VDC	3
300074	1	EACH	GAUGE, HOURMETER	4
300227	1	EACH	PANEL, GAUGE REV.1	5
931600-050	6	EACH	SCREW, MACHINE 6-32 X 1/2	6
973700-063	6	EACH	NUT, HEX NYLOC G2 COURSE #6-32	7
300075	1	EACH	SWICHGAUGE, PRESSURE	8
980704-012	1	EACH	ELBOW, 1/4PAR TUBE SW X 1/8NPT	9
960602-012	1	EACH	TEE, PIPE 1/8 HYD	10
301834	1	EACH	SWICH, PRESSURE 18#	11
300079	1	EACH	SWICH, SHUTDOWN117	12
300909-025	1	EACH	BREAKER, 25 AMP CIRCUIT	13
925801-130	2	EACH	NUT, HEX GR5#10-32 UNF ZINC	14
301885	1	EACH	HARNESS, GAUGE PNL (REVISION #	15
979516-2S10R005	1	EACH	WIRE ASSY, 16GAX005X25FSPX10RS	16
300904	1	EACH	SWITCH, PRESSURE FURNAS	17
301939	1	EACH	SOLENOID, N.O. AIR 18	
301392	1	EACH	HARNESS, FEMALE 35/175 RS	19
302681	1	EACH	HARNESS, MALE 2 POS FEM SHROUD	20

AIR FILTER OPTION 60313-999



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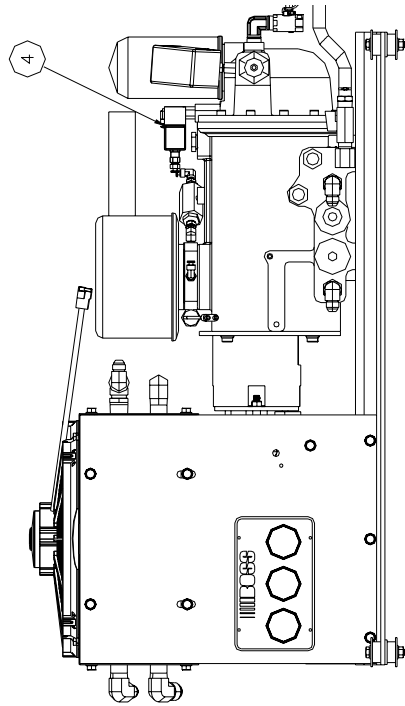
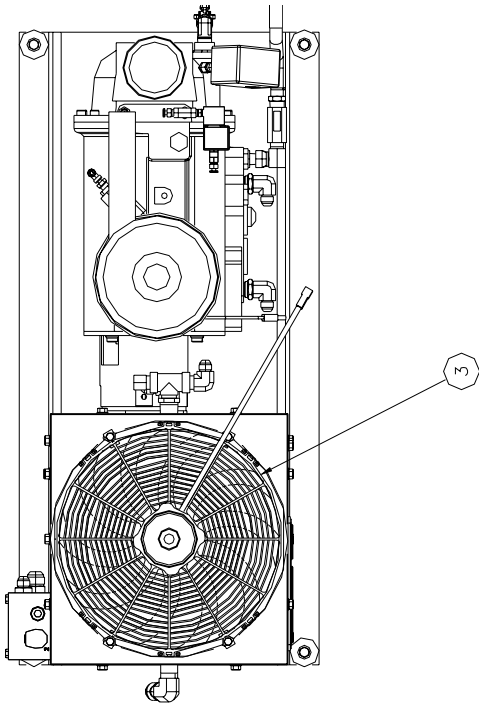


60313-999

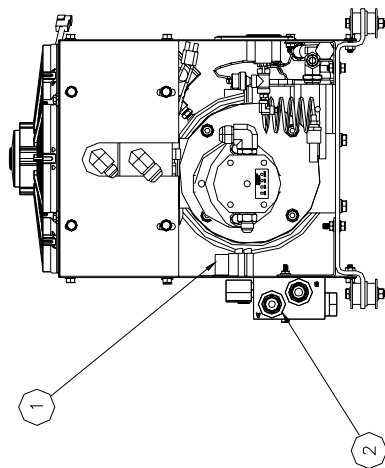
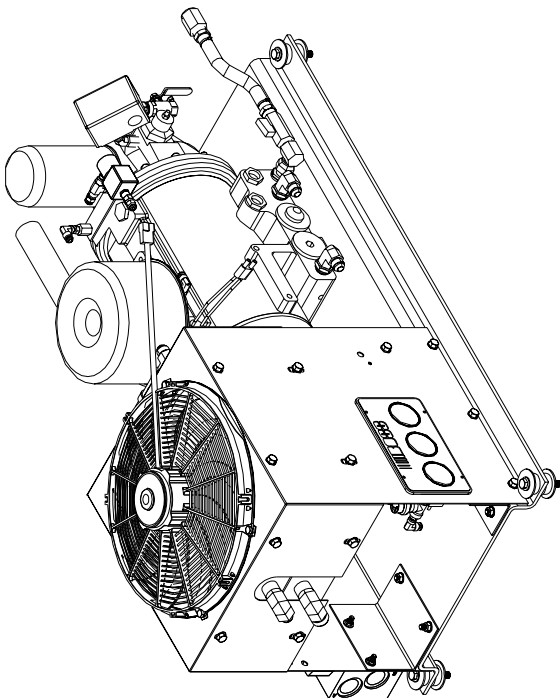
AIR FILTER OPTION 60313-999

PART NUMBER	QTY		DESCRIPTION	FIND #
300918	1	EACH	ASSY, AIR FILTER - 4.8	1
300857	1	EACH	CAP, AIR FILTER 4.8	2
925305-283	1	EACH	NUT, WHIZLOCK 5/16-18	3
929705-075	1	EACH	BOLT, WHIZLOCK GR5 5/16-18 X 3/4	4
300855	1	EACH	BAND, AIR FILTER MTG. 4.8	5
301397	2	EACH	INSERT, RUBBER 2 1/2 X 1 3/4	6
301786-250	2	EACH	CLAMP, AIR FILTER 2 1/2 IN KFLEX	7
301785-250	2 1/2	FOOT	HOSE, AIR INLET 2 1/2 I.D. KFLEX	8

24 VDC OPTION 60299-999



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60299-999

24 VDC OPTION

60299-999

PART NUMBER	QTY		DESCRIPTION	FIND #
301755-024	2	EACH	RELAY, PWR WTHRPRF 24VDC	1
80056-06-24	1	EACH	KIT, HYD VALVE BLOCK 6GPM 12V FLOW CONTROL	2
302643	1	EACH	FAN, ASSY W/MTR & GRILL 13" PULLER 24VDC	3
301939-024	1	EACH	SOLENOID, N.O. AIR 24VDC	4
301755-012	-2	EACH	RELAY, PWR WTHRPRF 12VDC	
80056-06-12	-1	EACH	KIT, HYD VALVE BLOCK 6GPM FLOW CONTROL	
302112	-1	EACH	FAN, ASSY W/MTR & GRILL 13" PULLER 24VDC	
301939	-1	EACH	SOLENOID, N.O. AIR	

RECOMMENDED SPARE PARTS LIST

SERVICE QUESTIONNAIRE

DATE: _____

- 1. Information given by: _____
- 2. Information received by: _____
- 3. Has anyone helped you: Yes _____ No _____

- 4. Distributor: _____
- 5. End-User: _____
- 6. Phone Number: _____
- 7. Make and Model for PTO: _____
- 8. BOSS Serial #: _____
- 9. Make and Model of Engine: _____
- 10. Engine: _____
- 11. Transmission: _____

- 12. Nature of Problem: _____

- 13. Engine RPM: _____
- 14. Compressor RPM: _____
- 15. Action Taken: _____

ADDITIONAL COMMENTS: _____

Instructional Procedures for the Installation of BOSS INDUSTRIES 25 AHBI Geared Rotary Screw Air Compressor

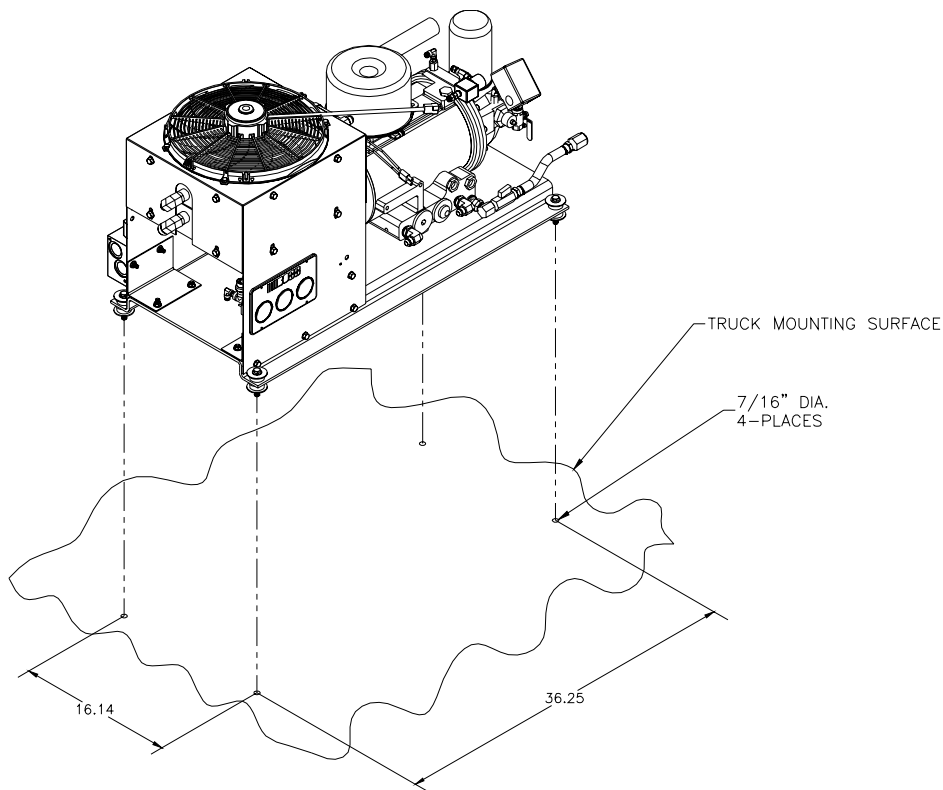
This air compressor should be installed only by those who have been trained and delegated to do so and who have read and understand both the operators' manual and the installation manual. Failure to follow the instructions, procedures, and safety precautions in this manual may result in accidents and injuries.

Install, use, and operate this air compressor only in full compliance with all pertinent O.S.H.A. requirements and all pertinent Federal, State, and Local codes or requirements and with BOSS INDUSTRIES, Inc. instructions.

Do not modify this compressor except with written factory approval.

1. MOUNTING COMPRESSOR

When mounting the compressor care should be taken to ensure that its location does not impede the operation of other components on the vehicle. For example, if your vehicle is equipped with a crane, you must make sure the compressor will not interfere with the swing of the crane. In addition, the compressor should be installed in an area that permits cool ambient air to enter the air filter and the hot air from the cooler to exhaust without recirculating into the air filter. One last consideration in the mounting should be the routing of hoses and electrical wires. The frame mounting holes are shown below and should be secured to the vehicle with 3/8 inch grade 8 bolts, washers be used on both sides of the mounting surface with grade 8 nyloc nuts. Hardware supplied with unit, may not work in all applications.



M10050

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INSTRUCTIONAL PROCEDURES

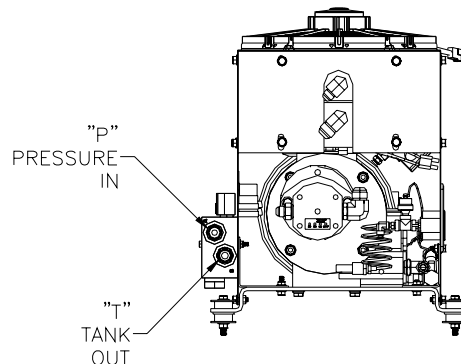
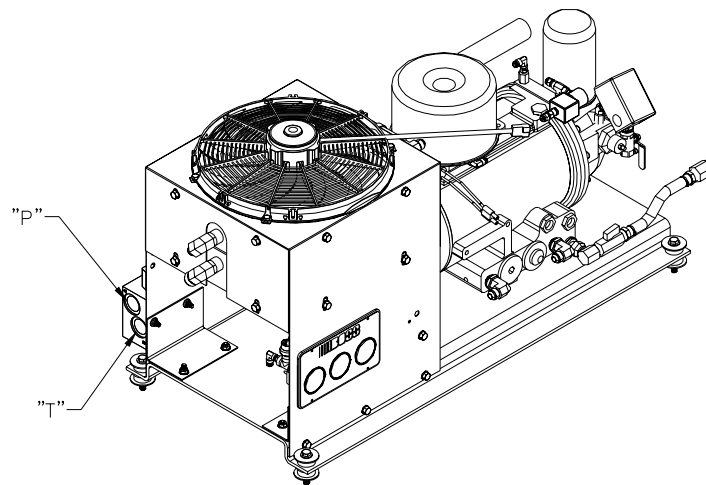
2. INSTALLING THE WIRING & CONNECTING THE HYDRAULIC HOSES

This unit is shipped from the factory with all necessary internal wiring installed. The only remaining wiring necessary is the wiring needed to interface your vehicle/power source with the Boss compressor. (Please refer to drawing 200167-999 on page 40) The unit is shipped with 4 loose wires, they need to be connected as follows:

1. Connect red wire to switched 12 vdc power. (or 24 VDC if you have this option)
2. The green wire should be spliced into the 12 vdc switched feed for the hydraulic systems solenoid. (or 24 VDC if you have this option)
3. Connect black wire to ground.
4. The purple wire is used to activate an electronic speed control circuit if required. Please contact the factory with engine specific information for further assistance.

CONNECTING THE HOSES

The hydraulic hoses to the compressor should be connected directly to the hydraulic control block. The pressure "P" input line should be made from a good quality high pressure (min. 3000 PSI) hydraulic hose 1/2" or 3/4" i.d. The return line to tank "T" can be made from a medium pressure (min. 1000 PSI) hydraulic hose 3/4" i.d. Care should be taken to see that the hoses are not installed with kinks or bends that inhibit flow of the hydraulic oil. Lack of flow could result in damage to the motor and compressor. Lastly check to make sure hoses are not in contact with sharp objects or edges that may fray, chafe or cut them over time. Secure all hoses with tie down straps or clamps.



INSTRUCTIONAL PROCEDURES

3. PRE-START-UP INSPECTION CHECKS

This inspection should be done prior to removing truck from bay. Final testing of the system, including checking for leaks, is to be done outside.

ALL TRUCKS SHOULD BE ROAD TESTED PRIOR TO STARTING INSTALLATION TO ISOLATE ANY PREVIOUS TRUCK PROBLEMS.

- I. Check sales order to verify that all compressor related items originally ordered have been installed or are ready to ship with the truck. This would include any special filters, oils, hoses, options, etc.
- II. Vacuum all areas that have metal or plastic shavings. Wipe all fingerprints off unit and vehicle.
- III. Apply decals to proper location. Make sure that the area is cleaned prior to applying decals. All decals should have a professional appearance upon application.
- IV. Check all assemblies, clamps, fittings, drivelines, angles, nuts, and bolts to ensure they are properly tied and secured to the vehicle. This is a very critical area of inspection. The vehicle should not be moved until this inspection has been completed.
- V. Record all serial numbers for this installation.
 - A. Vehicle V.I.N.
 - B. Hydraulic Pump Data
 - C. Air-End Serial Number
 - D. BOSS INDUSTRIES Serial Number
 - E. Receiver Tank Serial Number
 - F. Note any special applications relating to specific installations.
- VI. Check all fluid levels (position the unit on a level surface so that proper amount of fluids can be added).
 - A. Fuel to provide for three hours of operation.
 - B. Transmission fluid and PTO box.
 - C. Compressor.

Check the compressor oil sump level (see lubricant section of the operator and parts section for type of lubricant to use). 1. Add oil if needed. 2. Additional oil may need to be added after test. 3. Top off oil level to half the sightglass when finished with the test.
 - D. Any other applicable fluids.

4. INITIAL START-UP AND TEST

- A. Start power source and allow for warm-up.
- B. Read the operation section in the operator and parts manual carefully before proceeding onto the initial start-up.

INSTRUCTIONAL PROCEDURES

C. Engage hydraulic system. A direction of rotation arrow is attached to the compressor package above the hydraulic coupling. The coupling/hub must be rotating in the direction the arrow is pointing. If for any reason this arrow has been removed the correct compressor rotation is clockwise when looking directly at the compressor shaft. Check the direction of rotation by quickly engaging and then disengaging the compressor.

CAUTION

DO NOT RUN THE COMPRESSOR IN A REVERSE ROTATION FOR PERIODS LONGER THAN 5 SECONDS. CONTINUED OPERATION IN THIS MANNER WILL RESULT IN EXTENSIVE COMPRESSOR UNIT DAMAGE.

The safety shutdown switch should be wired in series with the solenoid that opens the flow of the hydraulic oil to the compressor drive motor. In cases of high temperature and/or pressure, the closing of the valve will stop the compressor operation. Refer to page 39.

Safety circuit testing for 25 AHBI

Safety circuit testing can be done in the following manner. Start the truck. Engage the compressor. Take a screwdriver and touch the 1/16" allen head screw on the face of the temperature gauge and simultaneously touch the outside ring on the face of the gauge. This should shut off the power to the solenoid of the hydraulics. Push the button in on the shutdown switch to reset. Repeat the test with the pressure gauge if solenoid does not stop flow to compressor, check wiring.

WARRANTY

SECTION

WARRANTY

BOSS Industries, Inc. 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 two (2) years from the date of initial operation or thirty (30) 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 nonconformance 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 or 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 damage 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 which 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 charter, 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, Inc.

720 Boyd Boulevard

LaPorte, IN 46352

SUMMARY OF MAIN WARRANTY PROVISIONS

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

The BOSS 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 and filters are not warrantable items.

Parts not of BOSS 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 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 replacement parts covers the net cost of the party only, not labor and mileage.

The BOSS 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 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 prior to receiving written notification of BOSS approval of the warranty claim may be subject to forfeiture of the entire claim.

WARRANTY INTRODUCTION

The warranty policy and procedures outlined here within are detailed to provide the claimant with the information necessary when filing a warranty claim, and enabling BOSS the ability to best serve it's customers.

WARRANTY CLAIMS - GENERAL

An approved claim depends on the following provision:

1. A warranty claim/service report # must be issued by BOSS. (See filing procedures).
2. Failed part must be returned within 30 days, freight prepaid, with receipt of warranty claim/service report.
3. Part is definitely defective.
4. Workmanship is definitely defective.
5. Machine is within warranty period.
6. Machine has been operating within design conditions.

Claims made by distributors must be verified by distributor prior to contracting BOSS.

WARRANTY CLAIMS - FILING PROCEDURES

1. Initiate through purchase order for warranty part or request for credit.
2. Warranty Claims/Service Report will accompany replacement part. When returning failed part to the factory for warranty credit, fill out all information requested on Warranty Claims/Service Report when it is returned to you with replacement part.
3. BOSS will confirm disposition of failed part within 30 days, and or request additional information.
4. Claim acceptance or denial will result in release of a credit or confirmation letter of denial.
5. BOSS will consider each claim on it's 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/Service Report request to:

BOSS Industries, Inc.

720 Boyd Boulevard

LaPorte, IN 46350

WARRANTY 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 claims disallowance of credit. When addressing the package for shipment, the following information must be on the outside of or tagged clearly to package.

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

NOTE: Our warranty requires that all defective parts be returned to BOSS freight prepaid. Items sent without RGA number will not be accepted.

DAMAGE IN TRANSIT

Do not return damaged merchandise to BOSS Industries, Inc. 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 end-user. The contents of the kit or factory installed unit may be damaged due to rough handling while in route to its destination, even though 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.