

**BOSS INDUSTRIES 80200/8075 AHBI  
HYDRAULIC AIR COMPRESSOR  
OPERATORS, INSTALLATIONS, AND PARTS  
MANUAL**



# OPERATORS AND PARTS MANUAL

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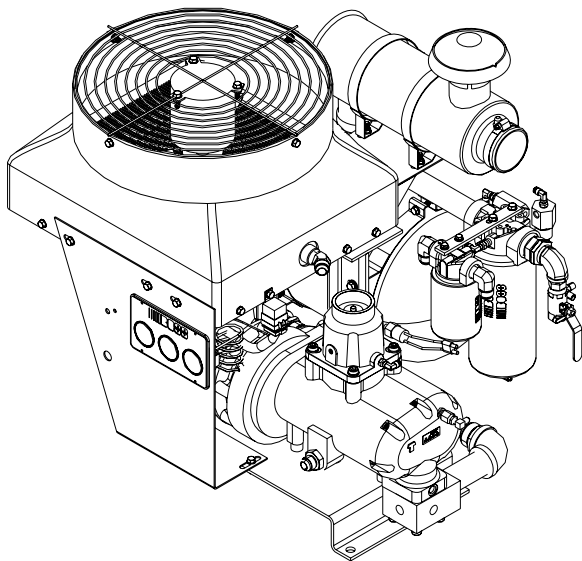


# SPECIFICATIONS

## BOSS INDUSTRIES 80200/8075AHBI COMPRESSOR

DELIVERY @ 110 PSIG	CFM	80	100	125	160	185
Input Speed RPM to Compressor	RPM	950	1200	1450	1875	2160
Hydraulic Fluid Required @ 2600 psig	GPM	21.5	25.5	30	37	42
Fluid Capacity	3.50 Gallons					
Components - Compressor System	(Overall Dimensions)					
Compressor / Air Inlet	10" W x 16" H x 18" L					
Receiver / Sump	12" Dia. x 22" L					
Spin - On Element	5" Dia x 13" H					
Cooler / Fan Assembly	19" W x 12" H x 22" W					
Weight (dry)	8075 - 640 lbs. 80200 - 530 lbs.					

***SPECIFICATIONS SUBJECT TO CHANGE WITHOUT PRIOR NOTICE***



10006-001

CRH 6/7/02

80200AHBI



8075AHBI

## **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 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 INDUSTRIES 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 INDUSTRIES 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 INDUSTRIES COMPRESSORS USED TO SUPPLY BREATHING AIR.**

Do not disconnect or bypass safety circuit system.

Do not install safety devices other than authorized BOSS INDUSTRIES 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.

Keep combustibles out of and away from the Compressor 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 INDUSTRIES 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/and or compressor package prior to being put into service. The decals shall be placed so as to be clearly visible to the user and service personnel. (Figures 1 through 5.)

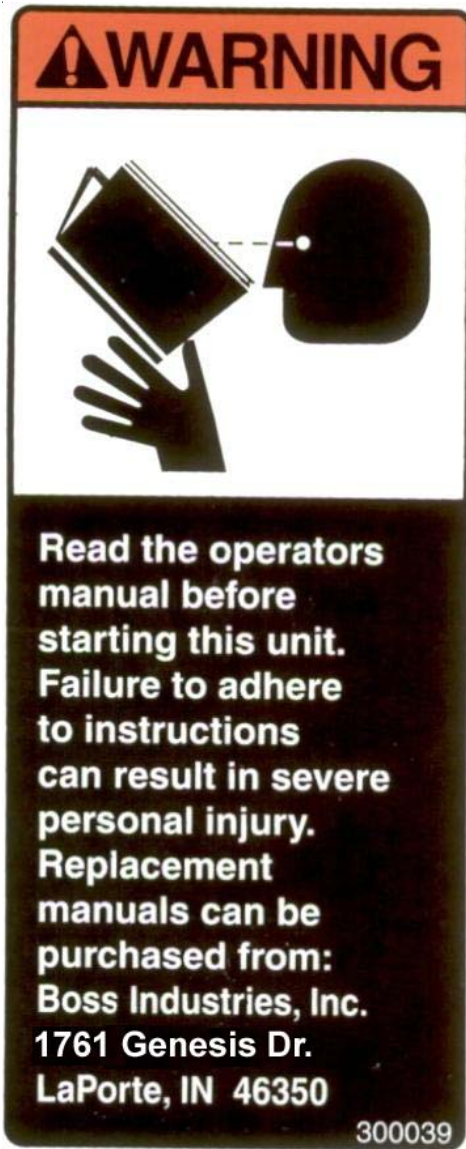


Figure 1. To be placed on service panel near gauges.  
P/N 300039

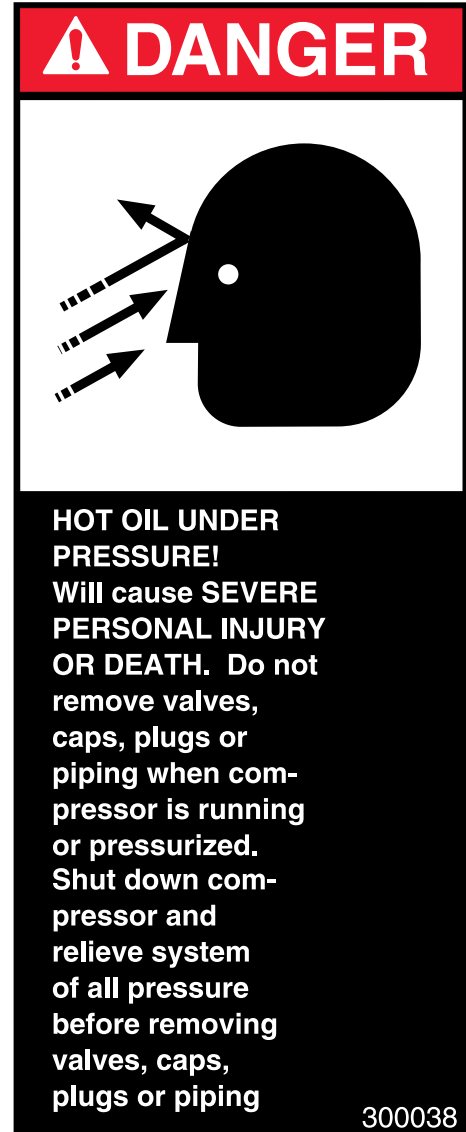


Figure 2. To be placed near oil sump filler cap.

## SAFETY



Figure 3. To be placed on body near air service

## 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 II OR EQUIVALENT.**

- 1. CHECK FLUID LEVEL WITH TRUCK OFF  
AND PARKED ON LEVEL GROUND BEFORE  
STARTING COMPRESSOR.**
- 2. ADD FLUID IF NONE IS SHOWING IN  
SIGHTGLASS.**
- 3. DO NOT FILL ABOVE LINE ON SIGHTGLASS**

BOSS 300047

## COMPRESSOR TERMINOLOGY

**ATF** - Automatic transmission fluid.

**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.

**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.

**SHUTDOWN SWITCH** - Works in conjunction with a temperature and pressure switchgauges, sending a signal to stop the compressor power source in cases of high temperature or pressure.

**GPM** - Gallons per minute of flow of hydraulic flow to the motor or compressor flow through the compressor system.

## DESCRIPTION OF COMPONENTS

### SAFETY VALVE

The pop safety valve is set at 175 PSI 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 and is independent of the sump. When air is demanded at the service line, it passes through the coalescer which efficiently provides the final stage of oil separation.

### OIL RETURN LINE

The oil that is removed by the coalescer accumulates at the bottom of the can and is returned through an oil return line leading to the compressor. The oil return line is 1/4 and goes to elbow hose fitting which is located at the compressor.

### MINIMUM PRESSURE ORIFICE

The minimum pressure orifice is located at the outlet of the coalescer head and serves to maintain a minimum discharge pressure of 65 PSIG in operation, which is required to assure adequate compressor lubrication pressure.

### OIL FILTER

The compressor oil filter is the full-flow replaceable element type and has a safety bypass built into it.

### COMPRESSOR COOLING SYSTEM

The compressor cooling system consists of an oil cooler remote mounted aerodynamically designed cooling pressure or a cooler mounted in front of the truck's radiator. Oil temperature is controlled by a thermal switch or a valve located down stream of the oil filter. The switch or valve maintains compressor oil temperatures in the range of 160° - 200° F.

## DESCRIPTION OF COMPONENTS

### INSTRUMENTATION

The BOSS PTO unit incorporates a gauge panel that monitors temperature, hours of operation and pressure. It is designed to be mounted inside the cab or in a protected area outside of the cab.

### COMPRESSOR DISCHARGE PRESSURE SWITCHGAUGE

This switchgauge indicates the discharge air/oil pressure. Operate compressor within the discharge pressure limits as indicated in specifications section. The switchgauge ensures high pressure safety shutdown before the safety relief valve on the sump is discharged, preventing hot pressurized oil spray on the vehicle and/or compressor components.

### 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 SWITCHGAUGE

This switchgauge indicates compressor air discharge temperature. The switchgauge ensures safety shutdown in case of excessive operating temperatures, preventing compressor damage.

### ELECTRICAL AND SAFETY SYSTEM

The BOSS compressor's standard electrical system consists of a gauge panel; a remote mount 12 VDC fan package with fan switch and relay assembly (for standard cooling system only); and a resettable normally closed shutdown switch. These components are integrated together to provide a safety shutdown system that is activated when extreme high temperature or pressure conditions are present. When the temperature or pressure exceeds the maximum set parameter of the respective switchgauge a signal is sent to "trip" the shutdown switch from normally closed to open shutting down the system.

## AUTOMATIC BLOW DOWN VALVE

There is one blow down valve in the compressor system. It is located at the downstream side of the coalescer head and will automatically bleed the sump to zero pressure when the compressor is disengaged. Blow down time interval takes between 30 to 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 coalescer head 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 175 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.

## DESCRIPTION OF COMPONENTS

### CONTROL SYSTEM OPERATION

The following discussion explains the operation of the control system from a condition of “no load” to a condition of “full capacity” at working pressure. For the working pressure range of your machine, refer to applicable data in “Specifications”.

The pressure regulator, mounted on the coalescer head, operates as follows:

1. As the demand for air decreases, the receiver pressure rises. When this pressure exceeds the set point of the pressure regulator, the regulator opens sending a secondary pressure signal to the inlet valve. The poppet valve moves towards the valve inlet seat against the force of the modulating spring inside the valve. This regulates the opening area of the inlet valve.
2. If the air demand goes to zero, (service valve closed or air dead headed at tool) the inlet valve will close completely.
3. As the demand for air increases, the procedure is reversed.

## 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 avoid 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

INTERVAL	ACTION
PERIODICALLY DURING OPERATION	1. Observe all gauge reading. Note any change from the normal reading and determine the cause. Have necessary repairs made. (NOTE: "NORMAL" is the usual gauge reading when operating at similar conditions on a day to day operation.)
EVERY 10 HOURS OR DAILY	1. Check the compressor oil level. 2. Check air filter. Pressure drop indicator while compressor is operating. 3. Check for oil and air leaks. 4. Check safety circuit switches.
EVERY 25 HOURS OR MONTHLY	1. Drain water from compressor oil.
EVERY 100 HOURS	1. Grease compressor drive shaft (if equipped).
EVERY 500 HOURS OR 6 MONTHS	1. Change compressor oil and oil filter. 2. Check compressor shaft seal for leakage. 3. Check air filter piping, fittings and clamps. 4. Check compressor supports. 5. Install new air filter element. (Shorter interval may be necessary under dusty conditions.) 6. Check sump safety valve.
EVERY 1000 HOURS	1. Change coalescing element.
PERIODICALLY OR AS REQUIRED	1. Inspect and clean air filter element. 2. Inspect and replace spin-on coalescer element if necessary. 3. Inspect and clean oil cooler fins.

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 INDUSTRIES 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 PTO 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 INDUSTRIES 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 sump is completely relieved of pressure. Oil is added at the fill cap on the side of the receiver/sump. A drain plug is provided at the bottom of the sump. The proper oil level, when unit is shut down and has had time to settle, is at the midpoint of the oil sightglass. The unit 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 two-stage dry type high efficiency filter designed to protect the compressor from dust and foreign objects.

The 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" H<sub>2</sub>O). 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. Disconnect drain line.
3. Turn element counterclockwise for removal (viewing element from bottom).
4. Install new rubber seal in head and supply a film of fluid directly to seal.
5. Rotate element clockwise by hand until element contacts seal (viewing element from bottom).
6. Rotate element approximately one more turn clockwise with band wrench near the top of element.
7. Reconnect drain line.
8. Run system and check for leaks.

***NOTE: When connecting drain line care must be taken to hold onto canister nut securely when tightening the hose fitting.***

### WARNING

**DO NOT SUBSTITUTE ELEMENT. USE ONLY A GENUINE BOSS INDUSTRIES 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.**

### OIL RETURN LINE

This line originates at the bottom of the air/oil coalescer and flows through a special 1/4 hose elbow located at the air-end. This elbow incorporates an oil return line check valve stopping the flow of oil into the coalescer at shutdown.

## 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. Remove filter by unscrewing from filter head (turn counterclockwise by hand viewing from bottom) and discard.
3. Install a new filter by applying a little oil to the seal and then screw the filter on by hand (turning it clockwise until hand tight, plus one - third turn viewing from bottom). Do not use tools to tighten the filter.
4. Check for leaks in operation.

### WARNING

**DO NOT SUBSTITUTE ELEMENT. USE ONLY A GENUINE BOSS INDUSTRIES 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.**

### OIL COOLER

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 BOSS INDUSTRIES compressor lubricant.
4. After cooler is reinstalled and compressor is filled with fresh oil, change compressor oil after 50 hours of normal operation.

# MAINTENANCE

## COMPRESSOR SHAFT SEAL

### SHAFT SEAL INSTALLATION INSTRUCTIONS:

1. Remove PTO drive shaft, companion flange and key.
2. Remove (5) socket head retaining bolts on cover and slide cover off shaft. Cover has the seal and snap ring assembled in it.
3. Press old snap ring and seal off the cover for assembly of new seal.
4. Pull seal wear sleeve off shaft with puller, adding heat to one area only on wear sleeve will help enlarge and aid in it's removal.
5. Clean shaft and surface of bearing 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. Clean seal cover and snap ring with solvent before installation.
8. Press new seal into cover (included in repair kit) and insert snap ring.
9. Place the assembly tool on the drive shaft until it sits on the end of the wear sleeve. Slightly lubricate the assembly tool on the external surface and add Loctite 573 to seal cover.
10. Install cover, seal and snap ring assembly, over shaft and assembly tool. Note: Assembly tool is slip fit on shaft and allows new seal in cover to slide on to wear sleeve without cutting the lip of shaft seal. Reinstall the dirt ring retainer once the new seal and cover assembly is in place.
11. Place seal cover against rotor casting paying attention not to damage the seal and slide off assembly tool.
12. Screw down the socket head retaining bolts on the cover with a torque of 25Nm.
13. Reinstall companion flange, key and drive shaft assembly.

# 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/pressure shutdown switch; it is normally closed. If it is popped out, it had opened the circuit and will need to be reset. Push the button in to reset it. You will then hear the button click if it was tripped by the switchgauges.
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 switch.
  - B. Coalescer plugged up.
  - C. Faulty safety valve.
  - D. Faulty regulator (regulator air pressure signal is not getting to inlet valve)
3. High pressure shutdown at compressor idle:
  - 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 at coalescer head.
2. Blockage in air line from side of inlet valve to blow down valve.
3. Muffler at blow down 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 entire line, to the compressor.
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 line 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. Clean outside of oil cooler.
3. Clean oil system (cooler) internally.
4. Check fan switch/relay harness.

## COMPRESSOR OPERATION

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

<b>CONTROL OR INDICATOR</b>	<b>PURPOSE</b>
TEMPERATURE SWITCH GAUGES	Monitors the temperature of the air/fluid mixture leaving the compressor. The normal reading should be approximately 175 to 200 degrees F. Sends signal to high temperature pressure switch when the compressor reaches 240 degrees temperature and the compressor will shut down.
PRESSURE SWITCH GAUGES	Monitors the pressure inside the sump tank. When the pressure reaches 150 PSI the compressor will shut down
HOURMETER	Indicator accumulated hours of actual compressor operation.
FLUID LEVEL SIGHTGLASS	Indicates fluid level in the sump. Proper level should fill half the glass. Check this level when the compressor is disengaged and the vehicle is parked on level ground.
PRESSURE RELIEF VALVE	Vents sump pressure to the atmosphere if the pressure inside the sump exceeds 175 PSI.
COMPRESSOR INLET CONTROL VALVE	Regulates the amount of air intake in accordance with the amount of compressed air being used. Isolates fluid in compressor unit on shutdown.
PRESSURE REGULATING VALVE	Senses air pressure from sump to provide automatic regulation of the compressor inlet control valve and load controller.
BLOW DOWN VALVE	Coalescer head blow down valve vents the sump pressure to the atmosphere at shut down.
MINIMUM PRESSURE ORIFICE	Resticts air flow to balance sump and service air pressure. Assures a minimum of 65 PSI to maintain compressor lubrication.
RETURN LINE CHECK VALVE	Ensures thst the back flow to coalescer element does not occur during shut down.

# COMPRESSOR OPERATION

## OPERATING CONDITIONS

The following conditions should exist for maximum performance of the compressor. The unit 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. Fluid carry over and/or oil starvation may occur if operated beyond this tilt.

### NOTE

**IF THE COMPRESSOR IS BEING USED TO POWER SANDBLASTING EQUIPMENT, OR HAS AN AIR STORAGE TANK, USE A CHECK VALVE DIRECTLY AFTER THE MINIMUM PRESSURE ORIFICE 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.**

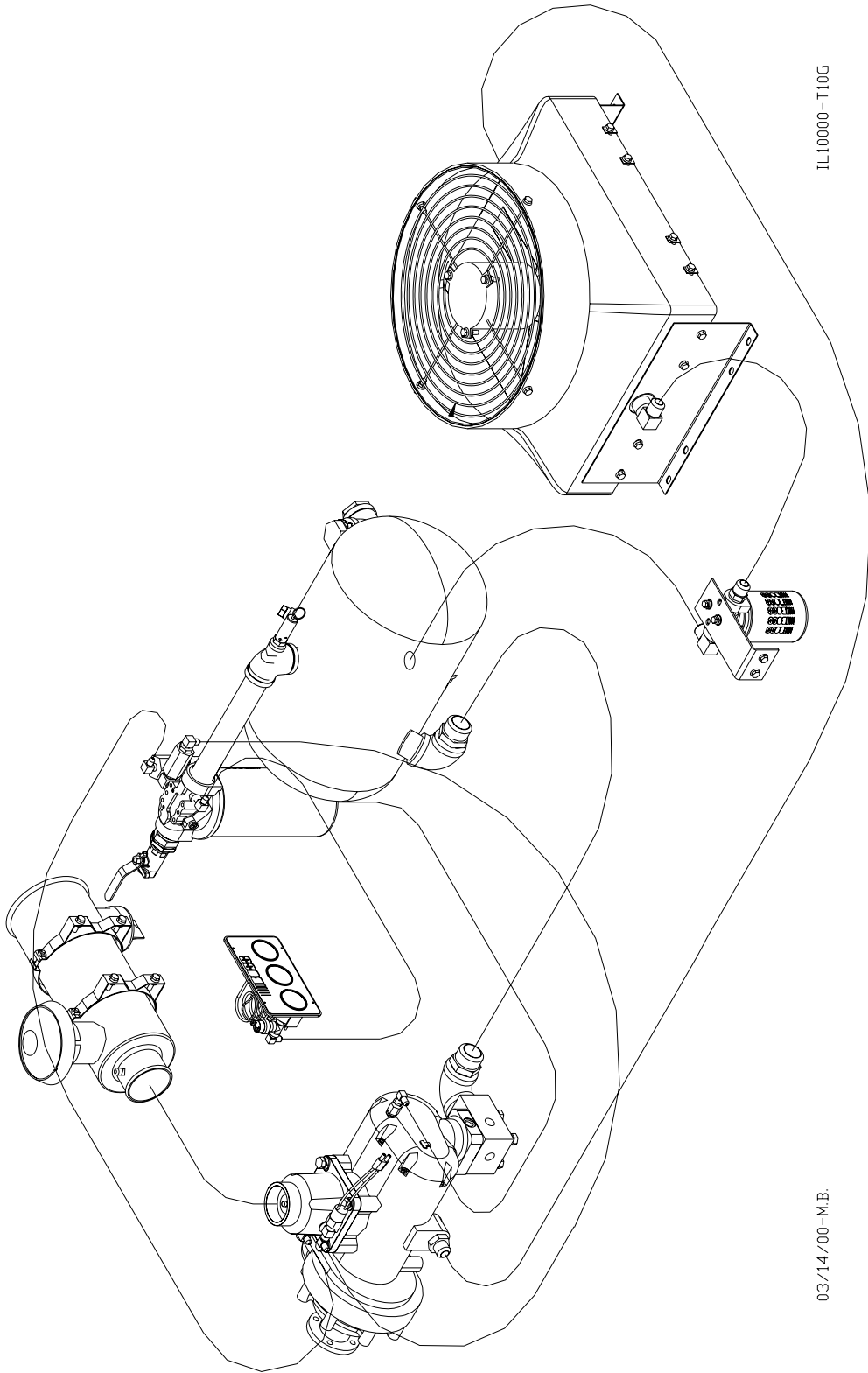
### NOTE

**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 ORIFICE.**
- 2. CHECK VALVE.**
- 3. AIR TANK (WHEN USED).**
- 4. SERVICE VALVE.**
- 5. MOISTURE TRAP/GAUGE/OILER COMBINATION (WHEN USED).**
- 6. HOSE REEL (WHEN USED).**

**PARTS AND  
ILLUSTRATION  
SECTION**

# AIR/OIL SCHEMATIC

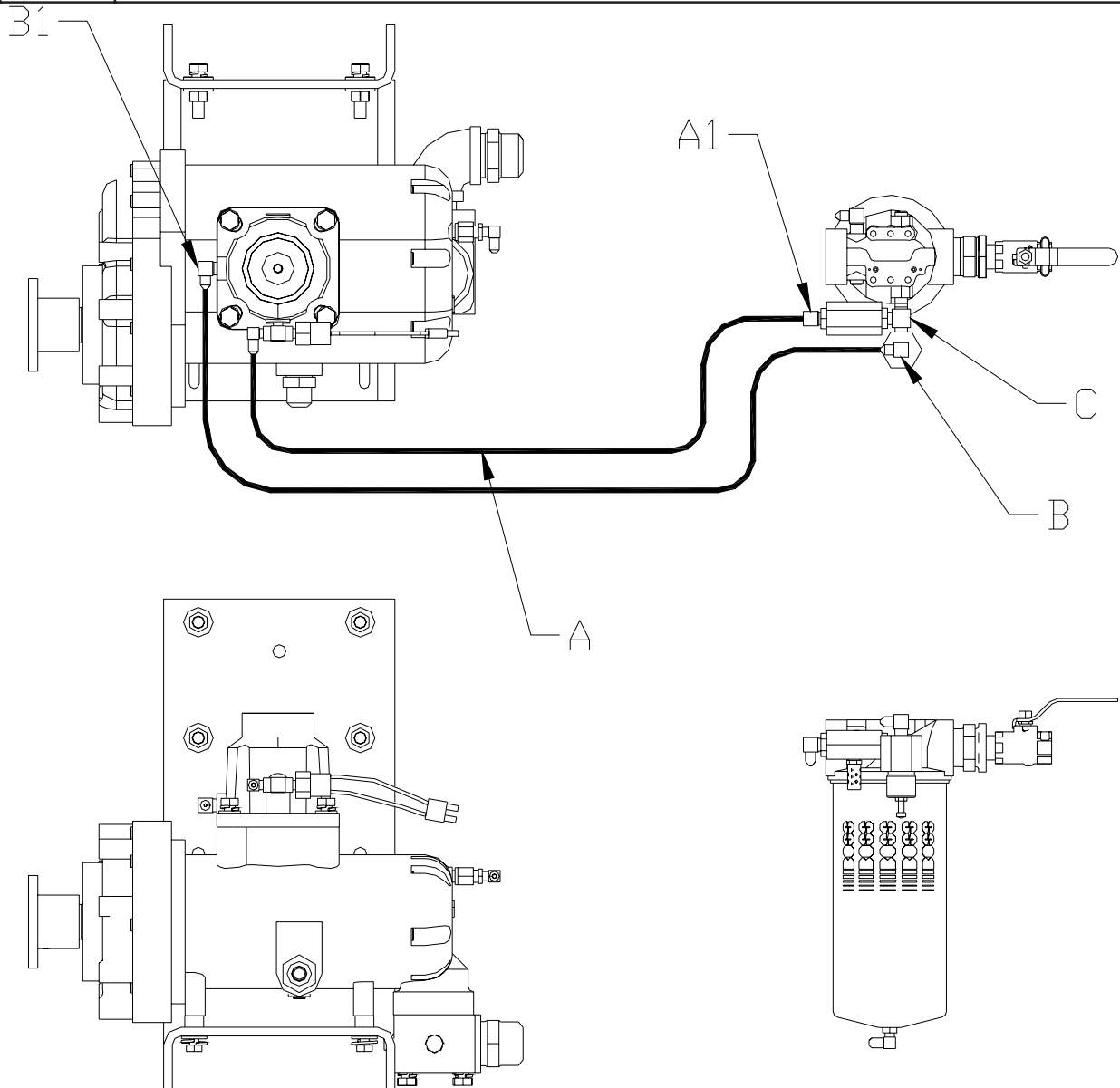


03/14/00-M.B.

IL10000-T10G

## CONTROL HOSE PORT CALL OUTS

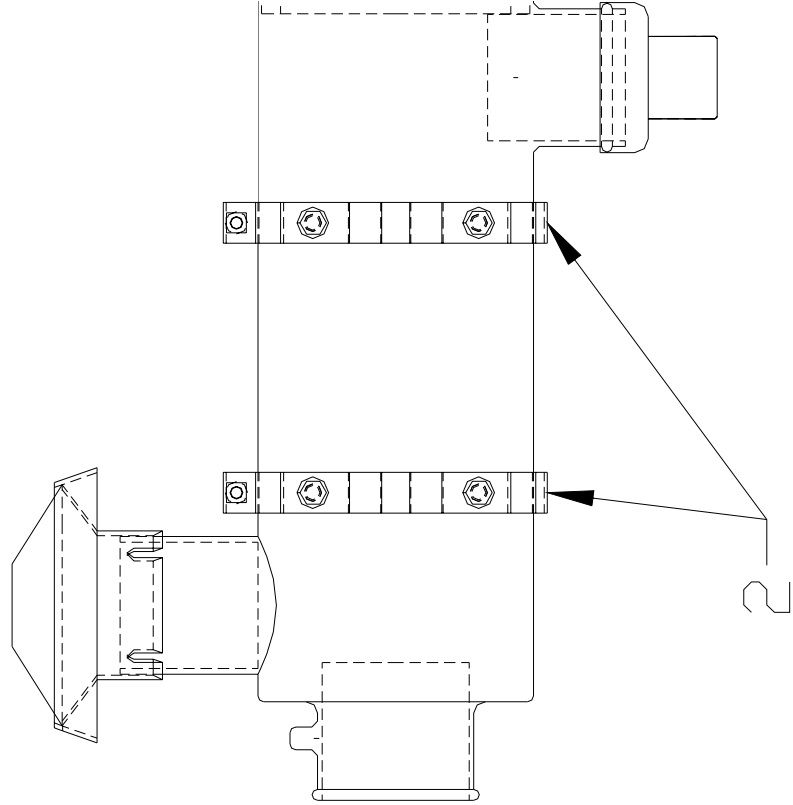
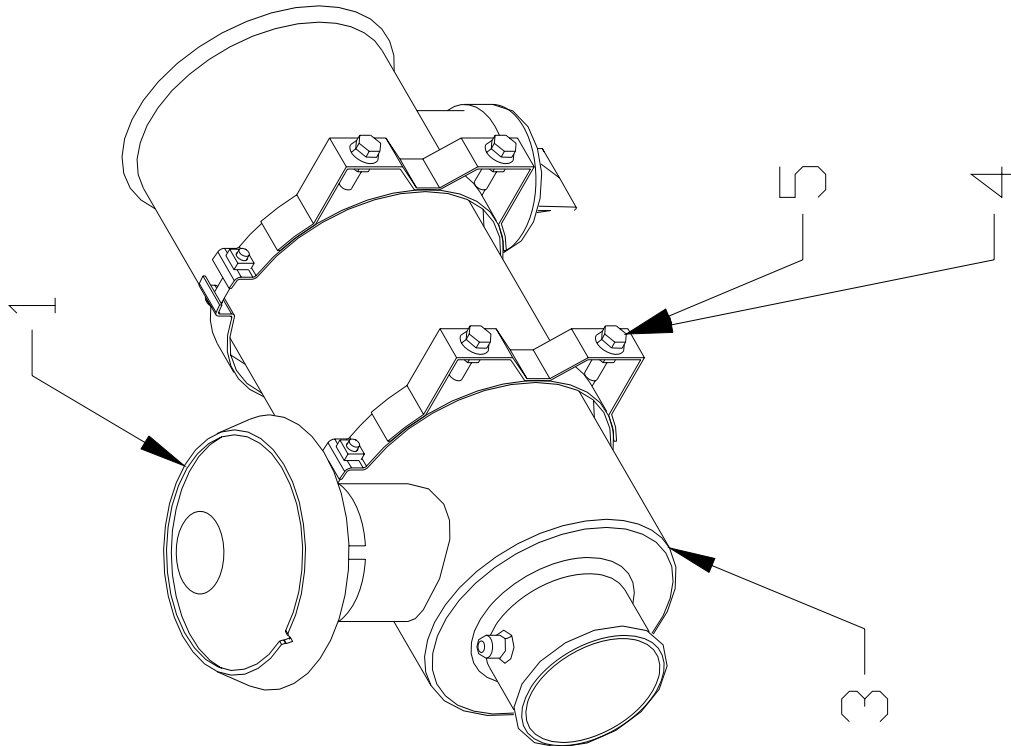
PORT	DESCRIPTION
A	AIR SIGNAL SUPPLY, AT SHUTDOWN ONLY TO A1
A1	SIGNAL FROM "A" AT SHUTDOWN TO EXHAUST AIR FROM COMPRESSOR SYSTEM
B	OUTLET REGULATED AIR PRESSURE SIGNAL, PRESENT ONLY WHEN THERE IS NO DEMAND FOR AIR. I.E. CLOSED SERVICE VALVE OR AIR PRESSURE DEAD HEADED INTO TOOL THAT IS NOT BEING USED. MAXIMUM PRESSURE IN THIS LINE IS 50 PSIG.
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. AIR PRESSURE IS PRESENT ANYTIME THERE IS AIR PRESSURE IN THE SYSTEM.



# AIR INLET SYSTEM

100002

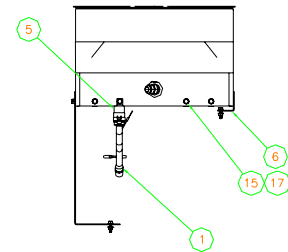
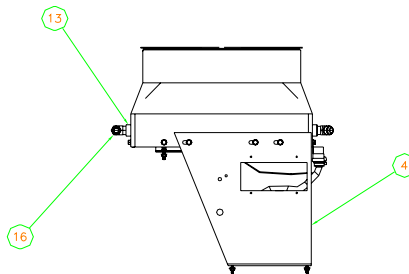
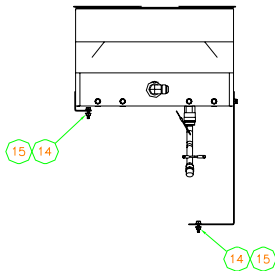
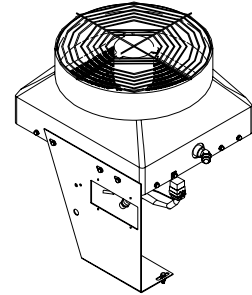
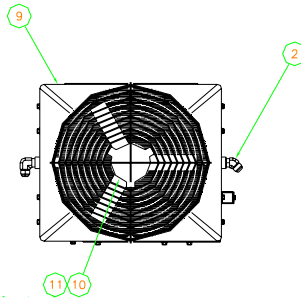
PART NUMBER	QTY	DESCRIPTION	ITEM
300031	1	EACH CAP, AIR FILTER 6.5	1
300032	2	EACH BAND, AIR FILTER MTG. 6.5	2
300917	1	EACH ASSY, AIR FILTER - 6.5	3
929705-100	4	EACH BOLT, WHIZLOCK GR5 5/16-18 X 1	4
925305-283	4	EACH NUT, WHIZ LOCK 5/16-18	5
301785-300	10	FOOT HOSE, AIR INLET 3" ID KFLEX (NOT SHOWN)	6
301786-300	2	EACH CLAMP, AIR INLET 3" KFLEX (NOT SHOWN)	7



# OIL COOLING SYSTEM

100001

300009	1	EACH ASSY, FAN BLADE 18 3-BL	1
300012	1	EACH MOTOR, FAN 12VDC	2
300013	1	EACH GUARD, FINGER 18	3
300014	1	EACH COOLER, OIL 18.6	4
300149	2	EACH BRACKET, OIL COOLER VENTURI 18	5
925305-283	17	EACH NUT, WHIZ LOCK 5/16-18	6
929705-100	33	EACH BOLT, WHIZLOCK GR5 5/16-18 X 1	7
960212-075	3	EACH ELBOW, 3/4 JIC X 3/4 MNPT 90°	8
961505-140	16	EACH NUT, TINNERMAN - 5/16-18	9
300394	1	EACH RING, OIL COOLER (REVISION 0)	10
300006	1	EACH VENTURI, OIL COOLER	11
300005	1	EACH ELEMENT, OIL FILTER 8060	12
300599	1	EACH HEAD, OIL FILTER	13
300625	1	EACH BRACKET, COALESCER/OIL	14
938204-071	2	EACH WASHER, FLAT 1/4	15
929104-075	2	EACH BOLT, .HEX GR5 1/4-20 X 3/4	16
938004-062	2	EACH WASHER, .LOC 1/4	17

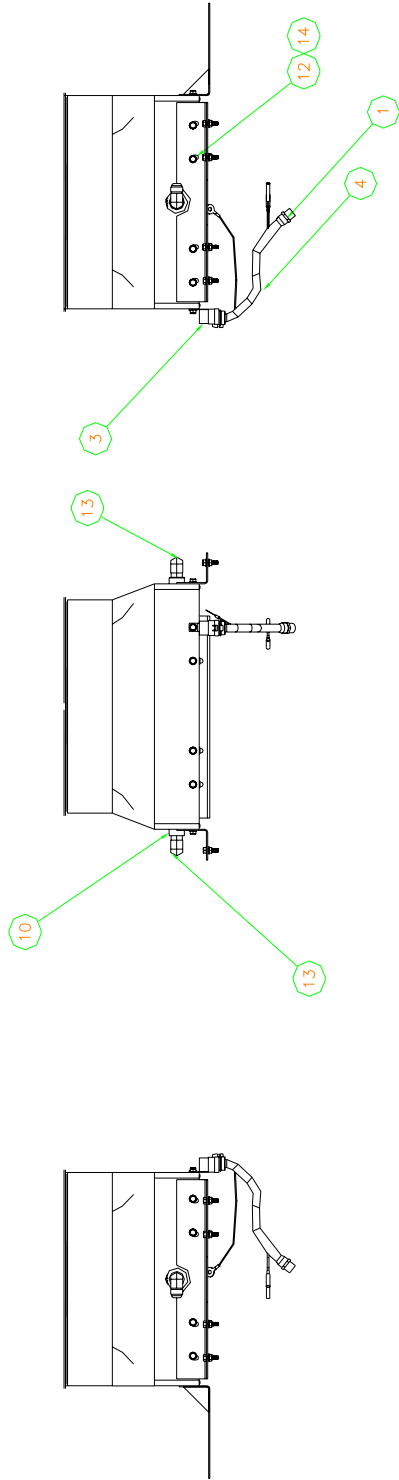
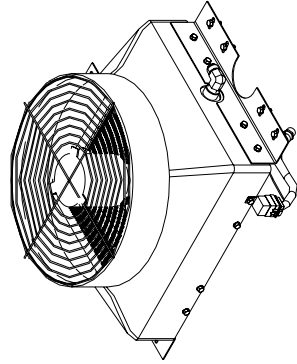
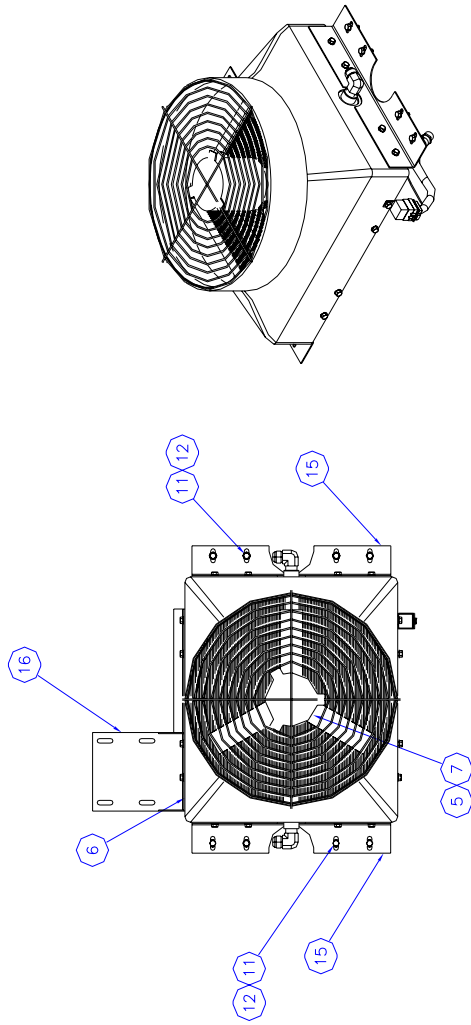


USE WITH MAS 200 BOM 100065 REV 001

# OIL COOLING SYSTEM

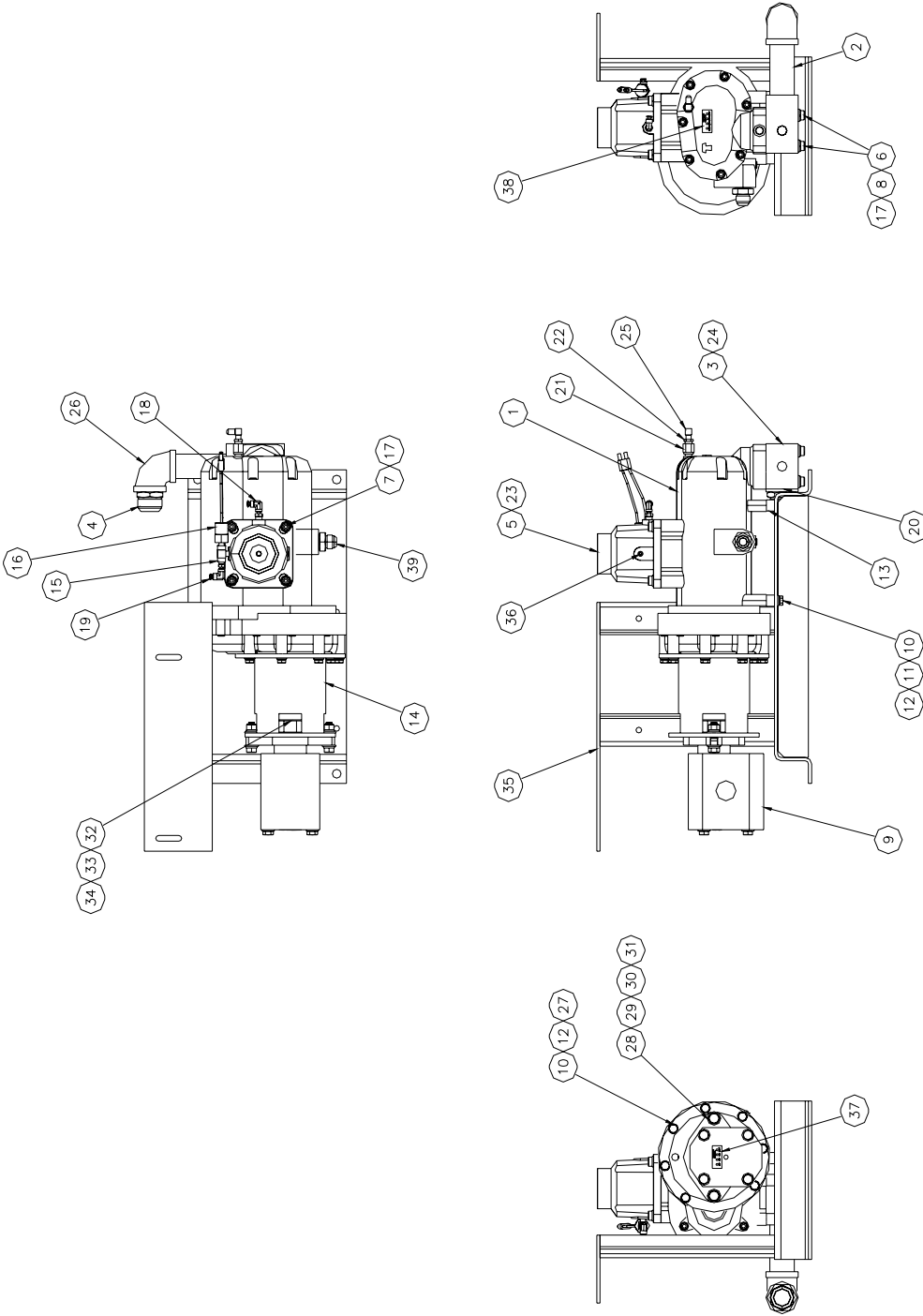
## 100020-003-999

ITEM	QTY	NAME
1	1	302865 SENSOR, TEMP 175 NO
2	1	302119 KIT, WIRE
3	1	301755-012 RELAY, PWR WTHPRPF 12VDC
4	1	
5	1	943104-038 RIVOT, POP 1/4 X 5/16 ALUM
6	1	304454 VENTURI/FAN 9"
7	1	304468 FAN ASSY, W/MOTOR & GRILL
8	1	
9	1	
10	1	300014 COOLER, OIL 18-62
11	8	925305-283 NUT, WHIZ LOCK .3125-18
12	31	929705-100 BOLT, WHIZLOCK GR5 .3125-18 X 1.000
13	2	960212-075 ELBOW, .750 JIC X .750 MNPT
14	16	961505-140 NUT, TINNEMAN -.3125-18
15	2	300264 BRACKET, OIL COOLER MTG 8075AHBI (REVISION 1)
16	1	300266 BRACKET, AIR CLEANER AHBI (REVISION 2)



# 80200AHBI COMPRESSOR AND MOUNTING SYSTEM

100063-999



CRH 1/22/02

100063-999

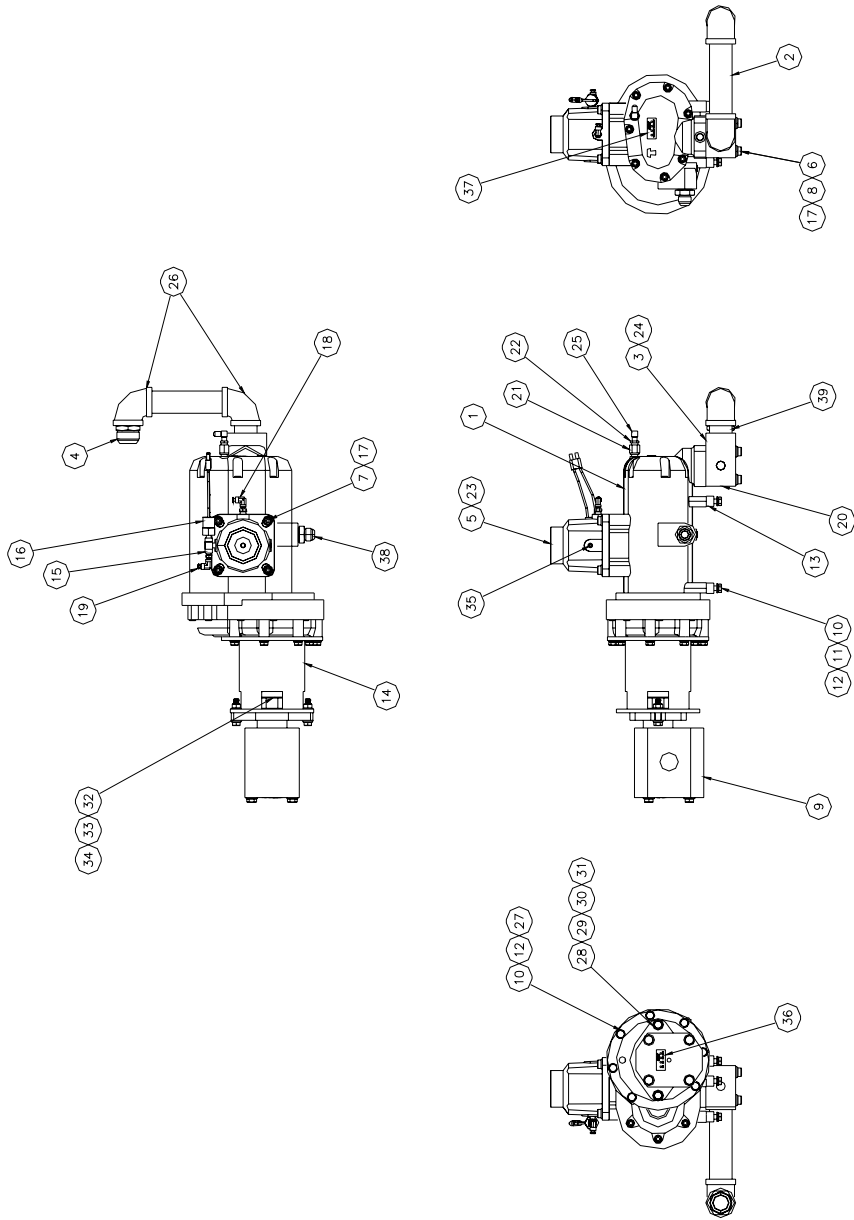
# COMPRESSOR AND MOUNTING SYSTEM

## 100051

PART NUMBER	QTY	DESCRIPTION	ITEM
970804-025	1 EACH	ADAPTER, 1/4 BSPP X 1/4 FNPT	1
301703	1 EACH	FLANGE, DISCHARGE T10G	2
300036	1 EACH	VALVE, INLET CONTROL	3
301704	1 EACH	FOOT, COMP MTG T10G	4
301917	1 EACH	FLANGE, CMPNN 40MM T10G BGPWRM	5
301881	3 EACH	SPACER, DIA. .44 X .85 LG	6
932206-050	1 EACH	SCREW, SET 3/8 X 1/2	7
938912-200	4 EACH	WASHER, FLAT M12	8
902915-020	1 EACH	PLUG, PIPE 1/2 RECESSED ZINC	9
929808-200	4 EACH	BOLT, HEX GR8 1/2-13 X 2	10
926008-448	4 EACH	NUT, HEX GR8 1/2-13	11
937808-125	4 EACH	WASHER, LOC 1/2	12
938208-112	8 EACH	WASHER, PLAIN 1/2 PLATED GR 8	13
938812-250	8 EACH	WASHER, LOC M12	14
980704-025M	1 EACH	ELBOW, 1/4 TB SW X 1/4 NPT WITH HOLE	15
980704-012	1 EACH	ELBOW, 1/4 TB X 1/8 MNPT 90°	16
970712-075	1 EACH	CONNECTOR, 3/4 JIC X 3/4 BSPP	17
300721	1 EACH	VALVE, CHCK ELBW 1/8 NPTx1/4 JIC	18
907600-005	1 EACH	BUSHING, REDUCING 1/4 X 1/8	19
926102-238	1 EACH	O-RING, INLET VALVE 8060	20
926102-145	1 EACH	O-RING, DSCHRG BLCK 8060 T10G	21
929212-350	4 EACH	BOLT, HEX HD 12MM X 35MM GR10.9	22
929212-800	4 EACH	BOLT, HEX HD 12MM X 80MM GR10.9	23
922224-000	1 EACH	NIPPLE, PIPE 1 1/2 X CLOSE SCH	24
901515-060	1 EACH	ELBOW, PIPE 1 1/2	25
960124-150	1 EACH	CONNECTOR, 1 1/2 JIC X 1 1/2 MNPT	26
929210-450	3 EACH	BOLT, HEX 10MM X 45MM GR10.9	27
938810-220	3 EACH	WASHER, LOC M10	28
938910-200	3 EACH	WASHER, FLAT 10MM	29
961902-012	1 EACH	TEE, MB 1/8M X 1/8F X 1/8F	30
301677-305	1 EACH	COMPRESSOR, AIR SCA10G	31
301421	1 EACH	SWITCH, PRESSURE N.C.	32
301503	1 EACH	KIT, WRE CNNCTR METRI PCK (NOT SHOWN)	33

# 8075AHBI COMPRESSOR AND MOUNTING SYSTEM

100066-003-999



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100066-003-999

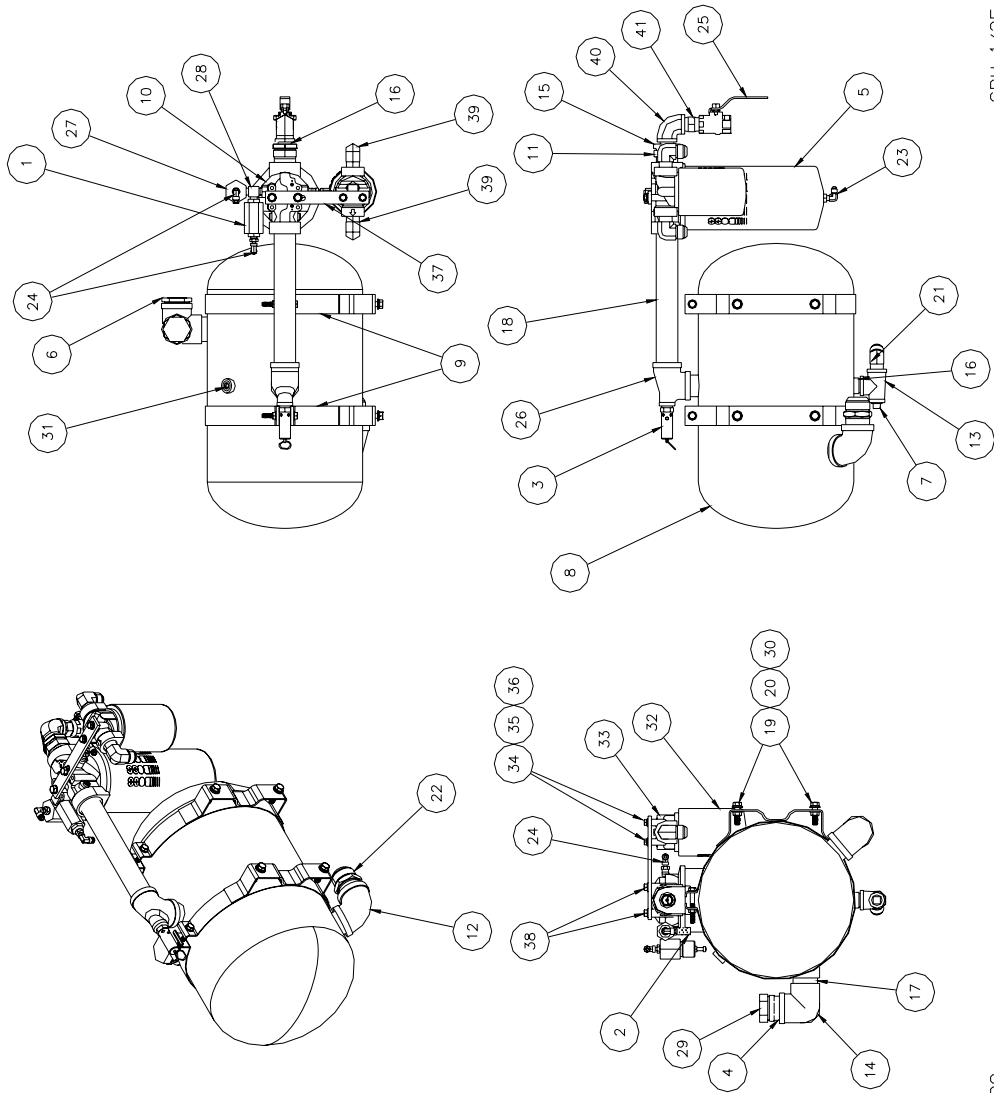
# COMPRESSOR AND MOUNTING SYSTEM

## 100051

PART NUMBER	QTY	DESCRIPTION ITEM	
970804-025	1	EACH ADAPTER, 1/4 BSPP X 1/4 FNPT	1
301703	1	EACH FLANGE, DISCHARGE T10G	2
300036	1	EACH VALVE, INLET CONTROL	3
301704	1	EACH FOOT, COMP MTG T10G	4
301917	1	EACH FLANGE, CMPNN 40MM T10G BGPWRM	5
301881	3	EACH SPACER, DIA. .44 X .85 LG	6
932206-050	1	EACH SCREW, SET 3/8 X 1/2	7
938912-200	4	EACH WASHER, FLAT M12	8
902915-020	1	EACH PLUG, .PIPE 1/2 RECESSED ZINC	9
929808-200	4	EACH BOLT, HEX GR8 1/2-13 X 2	10
926008-448	4	EACH NUT, HEX GR8 1/2-13	11
937808-125	4	EACH WASHER, LOC 1/2	12
938208-112	8	EACH WASHER, PLAIN 1/2 PLATED GR 8	13
938812-250	8	EACH WASHER, LOC M12	14
980704-025M	1	EACH ELBOW, 1/4 TB SW X 1/4 NPT WITH HOLE	15
980704-012	1	EACH ELBOW, 1/4 TB X 1/8 MNPT 90°	16
970712-075	1	EACH CONNECTOR, 3/4 JIC X 3/4 BSPP	17
300721	1	EACH VALVE, CHCK ELBW 1/8 NPTx1/4 JIC	18
907600-005	1	EACH BUSHING, REDUCING 1/4 X 1/8	19
926102-238	1	EACH O-RING, INLET VALVE 8060	20
926102-145	1	EACH O-RING, DSCHRG BLCK 8060 T10G	21
929212-350	4	EACH BOLT, HEX HD 12MM X 35MM GR10.9	22
929212-800	4	EACH BOLT, HEX HD 12MM X 80MM GR10.9	23
922224-000	1	EACH NIPPLE, PIPE 1 1/2 X CLOSE SCH	24
901515-060	1	EACH ELBOW, PIPE 1 1/2	25
960124-150	1	EACH CONNECTOR, 1 1/2 JIC X 1 1/2 MNPT	26
929210-450	3	EACH BOLT, HEX 10MM X 45MM GR10.9	27
938810-220	3	EACH WASHER, LOC M10	28
938910-200	3	EACH WASHER, FLAT 10MM	29
961902-012	1	EACH TEE, MB 1/8M X 1/8F X 1/8F	30
301677-305	1	EACH COMPRESSOR, AIR SCA10G	31
301421	1	EACH SWITCH, PRESSURE N.C.	32
301503	1	EACH KIT, WRE CNNCTR METRI PCK (NOT SHOWN)	33

# DISCHARGE SYSTEM

100064-999



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100064-999

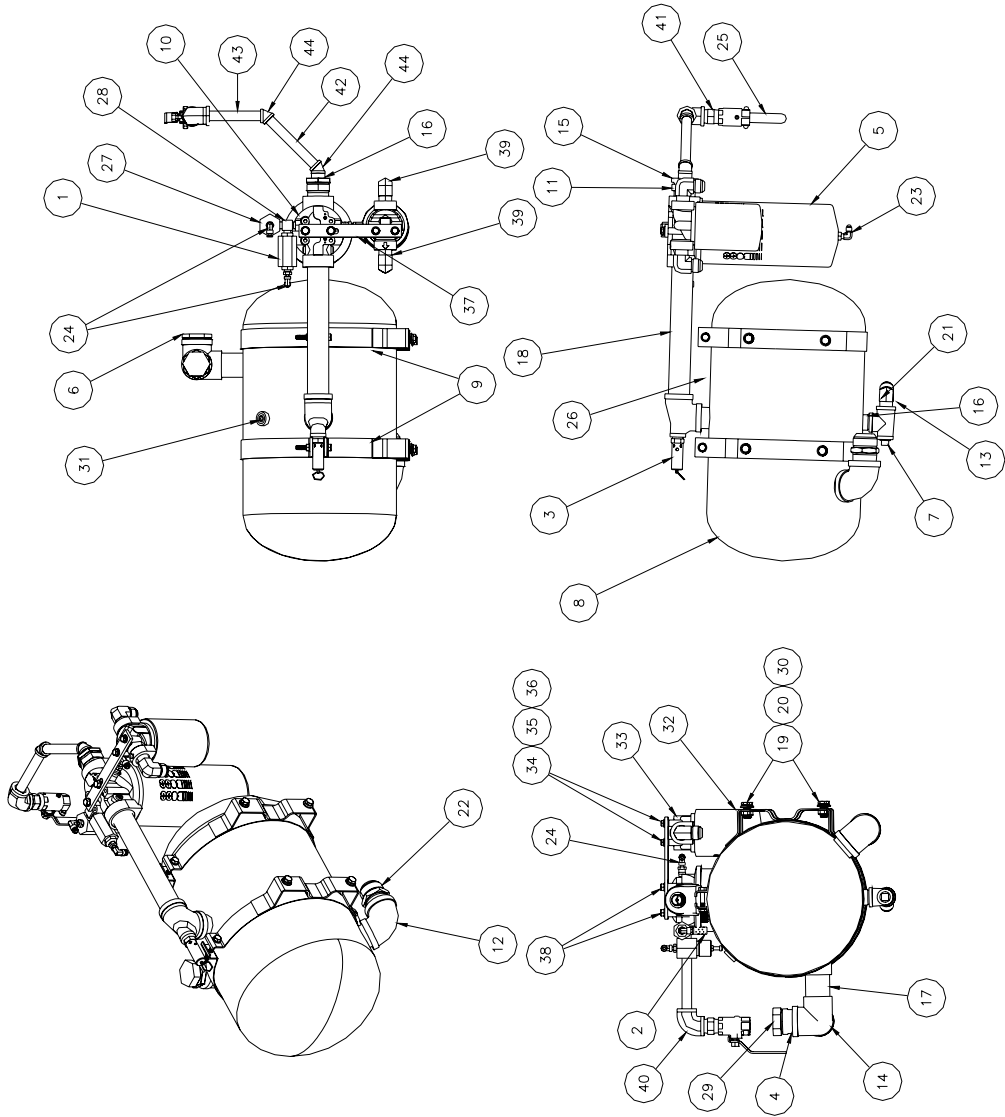
# DISCHARGE SYSTEM

100003

PART NUMBER	QTY	DESCRIPTION	ITEM
300225	1	EACH SUMP, 12" DISCH. W/PLATE BAFF	1
300331	1	EACH HEAD, COALESCER	2
300093	1	EACH COALESCER, SPIN-ON ELEMENT	3
300605	1	EACH ORIFICE, MIN PRESS 1 1/4 X 1	4
907604-030	1	EACH BUSHING, REDUCING 1 X 3/4	5
922212-000	2	EACH NIPPLE, .PIPE 3/4 X CLOSE SCH8	6
300022-075	1	EACH VALVE, SERVICE - 3/4" VENTED	7
922120-110	1	EACH NIPPLE, PIPE 1 1/4 X 11	8
902205-025	1	EACH TEE, PIPE RED 1 1/4 X 1/2 X 1	9
300023-175	1	EACH VALVE, RELIEF - 1/2 NPT (175#)	10
301827	1	EACH VALVE, BLOWDOWN 1/4 N.C. 55502	11
922224-000	1	EACH NIPPLE, PIPE 1 1/2 X CLOSE SCH	12
902415-060	1	EACH TEE, PIPE 1 1/2"	13
300089	1	EACH ADAPTER, 1 1/4 SAE X 1 1/2"NPT	14
300090-020	1	EACH CAP, OIL FILL 1-1/4 SAE W/HOLE	15
300107	1	EACH SIGHTGLASS, OIL LEVEL 1 1/2	16
902203-023	1	EACH TEE, PIPE RED 3/4 X 1/2 X 3/4	17
300108	1	EACH PLUG, MAGNETIC 1/2" NPT	18
960112-075	1	EACH CONNECTOR, 3/4 JIC X 3/4 MNPT	19
901515-060	1	EACH ELBOW, PIPE 1 1/2	20
960124-150	1	EACH CONNECTOR, 1 1/2 JIC X 1 1/2 MNPT	21
902915-020	1	EACH PLUG, .PIPE 1/2 RECESSED ZINC	22
300068	2	EACH BRACKET, RECEIVER TANK	23
300021	1	EACH MUFFLER, EXHAUST 1/4	24
960204-012	1	EACH ELBOW, 1/4 JIC X 1/8 MNPT 90°	25
980704-025	3	EACH ELBOW, 1/4 TB SW X 1/4 MNPT 90°	26
300057	1	EACH VALVE, REGULATOR 1/4	27
929105-250	2	EACH BOLT, HEX GR5 5/16-18 X 2 1/2	28
929806-100	4	EACH BOLT, HEX GR8 3/8-16 X 1	29
937806-094	8	EACH WASHER LOC 3/8 GRADE 8	30
938206-071	12	EACH WASHER, FLAT 3/8 - GR8	31
926006-337	8	EACH NUT, HEX GR8 3/8-16	32
929806-150	4	EACH BOLT, HEX GR8 3/8-16 X 1 1/2	33
977704-0404	1	EACH TEE, 1/4 MNPT X 1/4 MNPT X 1/4 MN	34
300234	2	EACH BAND, SUMP MTG 12	35
938205-071	2	EACH WASHER, FLAT 5/16	36
925305-283	2	EACH NUT, WHIZ LOCK 5/16-18	37

# DISCHARGE SYSTEM

## 100021-003-999



CRH 1/25/02

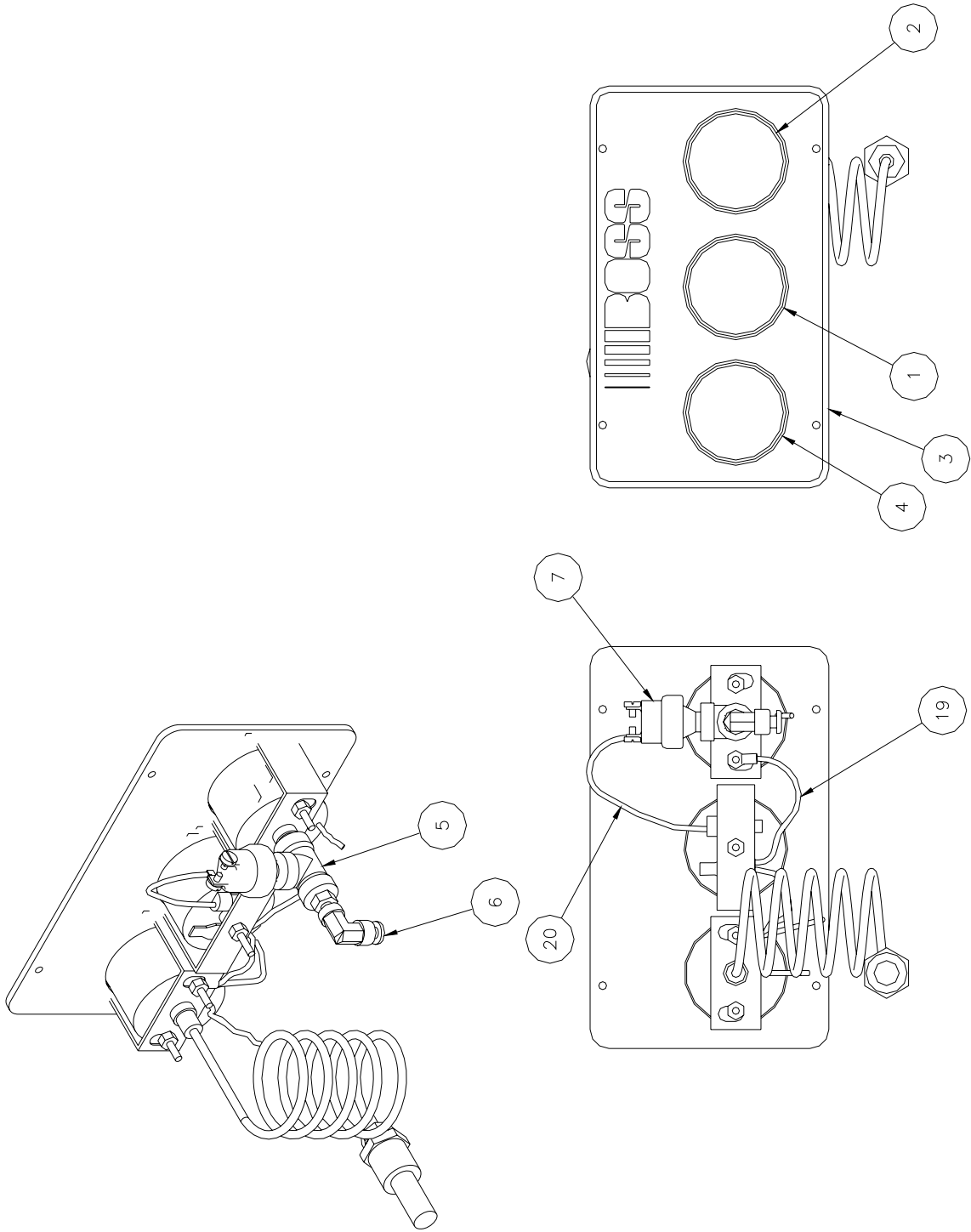
100021-003-999

# DISCHARGE SYSTEM

100003

PART NUMBER	QTY	DESCRIPTION	ITEM
300225	1	EACH SUMP, 12" DISCH. W/PLATE BAFF	1
300331	1	EACH HEAD, COALESCER	2
300093	1	EACH COALESCER, SPIN-ON ELEMENT	3
300605	1	EACH ORIFICE, MIN PRESS 1 1/4 X 1	4
907604-030	1	EACH BUSHING, REDUCING 1 X 3/4	5
922212-000	2	EACH NIPPLE, .PIPE 3/4 X CLOSE SCH8	6
300022-075	1	EACH VALVE, SERVICE - 3/4" VENTED	7
922120-110	1	EACH NIPPLE, PIPE 1 1/4 X 11	8
902205-025	1	EACH TEE, PIPE RED 1 1/4 X 1/2 X 1	9
300023-175	1	EACH VALVE, RELIEF - 1/2 NPT (175#)	10
301827	1	EACH VALVE, BLOWDOWN 1/4 N.C. 55502	11
922224-000	1	EACH NIPPLE, PIPE 1 1/2 X CLOSE SCH	12
902415-060	1	EACH TEE, PIPE 1 1/2"	13
300089	1	EACH ADAPTER, 1 1/4 SAE X 1 1/2"NPT	14
300090-020	1	EACH CAP, OIL FILL 1-1/4 SAE W/HOLE	15
300107	1	EACH SIGHTGLASS, OIL LEVEL 1 1/2	16
902203-023	1	EACH TEE, PIPE RED 3/4 X 1/2 X 3/4	17
300108	1	EACH PLUG, MAGNETIC 1/2" NPT	18
960112-075	1	EACH CONNECTOR, 3/4 JIC X 3/4 MNPT	19
901515-060	1	EACH ELBOW, PIPE 1 1/2	20
960124-150	1	EACH CONNECTOR, 1 1/2 JIC X 1 1/2 MNPT	21
902915-020	1	EACH PLUG, .PIPE 1/2 RECESSED ZINC	22
300068	2	EACH BRACKET, RECEIVER TANK	23
300021	1	EACH MUFFLER, EXHAUST 1/4	24
960204-012	1	EACH ELBOW, 1/4 JIC X 1/8 MNPT 90°	25
980704-025	3	EACH ELBOW, 1/4 TB SW X 1/4 MNPT 90°	26
300057	1	EACH VALVE, REGULATOR 1/4	27
929105-250	2	EACH BOLT, HEX GR5 5/16-18 X 2 1/2	28
929806-100	4	EACH BOLT, HEX GR8 3/8-16 X 1	29
937806-094	8	EACH WASHER LOC 3/8 GRADE 8	30
938206-071	12	EACH WASHER, FLAT 3/8 - GR8	31
926006-337	8	EACH NUT, HEX GR8 3/8-16	32
929806-150	4	EACH BOLT, HEX GR8 3/8-16 X 1 1/2	33
977704-0404	1	EACH TEE, 1/4 MNPT X 1/4 MNPT X 1/4 MN	34
300234	2	EACH BAND, SUMP MTG 12	35
938205-071	2	EACH WASHER, FLAT 5/16	36
925305-283	2	EACH NUT, WHIZ LOCK 5/16-18	37

80200/8075AHBI ELECTRICAL SYSTEM  
100092-999/100008-003-999



CRH 1/22/02

100092-999

# ELECTRICAL SYSTEM

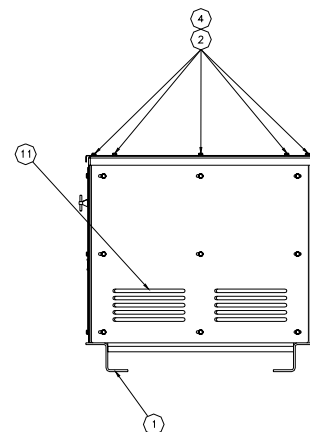
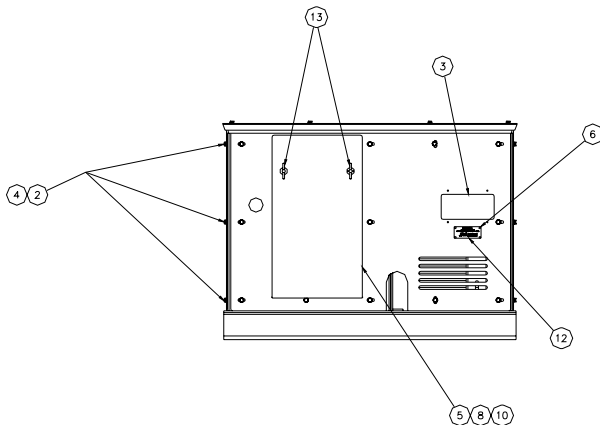
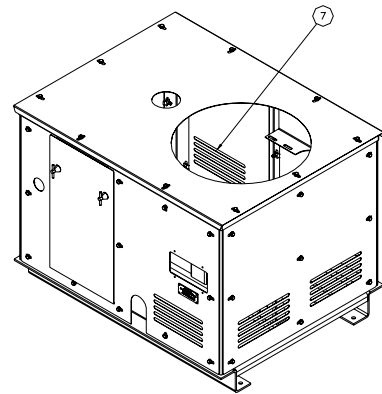
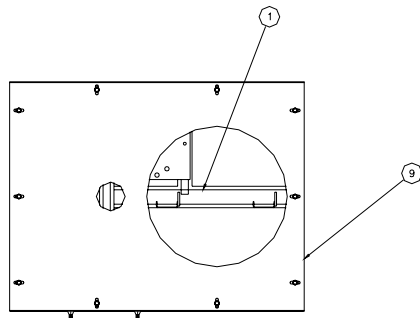
100008

PART NUMBER	QTY	DESCRIPTION	ITEM
300074	1	EACH GAUGE, HOURMETER	1
300076-016	1	EACH SWITCHGAUGE, TEMP W/THRMWL-16'	2
300227	1	EACH GAUGE, PANEL	3
300075	1	EACH SWITCHGAUGE, PRESSURE	4
960602-012	1	EACH TEE, PIPE 1/8 HYD	5
980704-012	1	EACH ELBOW, 1/4 TB SW X 1/8 NPT 90°	6
301834	1	EACH SWITCH, PRESSURE 18#	7
974216-YW	15	FOOT WIRE, 16 GA YELLOW (NOT SHOWN)	8
979110-014	4	EACH TERMINAL, RING #10 HS 16-14 (NOT SHOWN)	9
300079	1	EACH SWITCH, SHUTDOWN (NOT SHOWN)	10
300909-025	1	EACH BREAKER, 25 AMP CIRCUIT (NOT SHOWN)	11
925801-130	2	EACH NUT, HEX GR5 #10-32 UNF (NOT SHOWN)	12
974212-RD	10	FOOT WIRE, 12 GA RED BOSS LOGO (NOT SHOWN)	13
974216-BE	10	FOOT WIRE, 16 GA BLUE BOSS LOGO (NOT SHOWN)	14
979125-010	2	EACH TERMINAL, RING 1/4 HS 12-10 (NOT SHOWN)	15
979138-014	2	EACH TERMINAL, RING 3/8 X 16-14 (NOT SHOWN)	16
979315-014	1	EACH TERMINAL, BUTT TYPE 16-14 (NOT SHOWN)	17
301885	1	EACH HARNESS, GAUGE PNL	18
979516-2S10R005	1	EACH WIRE ASSY, 16GAX005X25FSPX10RS	19
979138-010	1	EACH TERMINAL, RING 3/8 X 12-10 (NOT SHOWN)	20

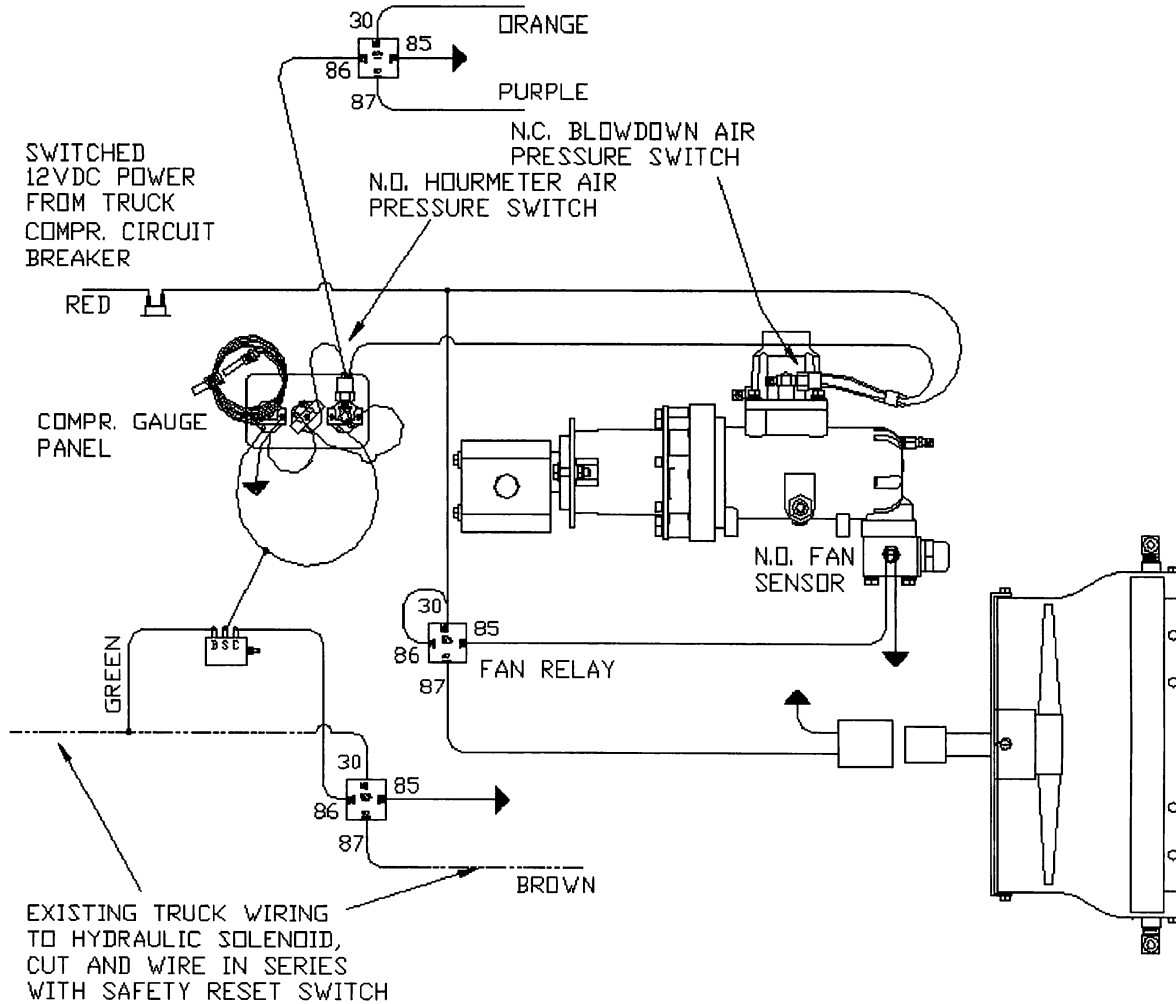
# ELECTRICAL SYSTEM

## 100008

PART NUMBER	QTY	DESCRIPTION	ITEM
300074	1	EACH GAUGE, HOURMETER	1
300076-016	1	EACH SWITCHGAUGE, TEMP W/THRMWL-16'	2
300227	1	EACH GAUGE, PANEL	3
300075	1	EACH SWITCHGAUGE, PRESSURE	4
960602-012	1	EACH TEE, PIPE 1/8 HYD	5
980704-012	1	EACH ELBOW, 1/4 TB SW X 1/8 NPT 90°	6
301834	1	EACH SWITCH, PRESSURE 18#	7
974216-YW	15	FOOT WIRE, 16 GA YELLOW (NOT SHOWN)	8
979110-014	4	EACH TERMINAL, RING #10 HS 16-14 (NOT SHOWN)	9
300079	1	EACH SWITCH, SHUTDOWN (NOT SHOWN)	10
300909-025	1	EACH BREAKER, 25 AMP CIRCUIT (NOT SHOWN)	11
925801-130	2	EACH NUT, HEX GR5 #10-32 UNF (NOT SHOWN)	12
974212-RD	10	FOOT WIRE, 12 GA RED BOSS LOGO (NOT SHOWN)	13
974216-BE	10	FOOT WIRE, 16 GA BLUE BOSS LOGO (NOT SHOWN)	14
979125-010	2	EACH TERMINAL, RING 1/4 HS 12-10 (NOT SHOWN)	15
979138-014	2	EACH TERMINAL, RING 3/8 X 16-14 (NOT SHOWN)	16
979315-014	1	EACH TERMINAL, BUTT TYPE 16-14 (NOT SHOWN)	17
301885	1	EACH HARNESS, GAUGE PNL	18
979516-2S10R005	1	EACH WIRE ASSY, 16GAX005X25FSPX10RS	19
979138-010	1	EACH TERMINAL, RING 3/8 X 12-10 (NOT SHOWN)	20



INSTALLER SUPPLIED WIRES  
TO 30 AND 87 AT RELAY FOR COMPR IDLE  
SINGLE SPEED ELECTRONIC ENGINE ACTIVATION



THE ENGINE SPEED CONTROL WIRING SHOWN IS TO BE  
USED ON A CHASSIS THAT ALLOWS HELD SWITCH OPERATION.  
CONSULT BOSS FOR APPROVAL ON CHASSIS SPECIFIC  
WIRING AND PROGRAMMING SPECIFICATIONS.

701029-017

CRH 1/22/02

## RECOMMENDED SPARE PARTS LIST

<b>PART NUMBER</b>	<b>DESCRIPTION</b>	<b>QTY</b>
300005	OIL FILTER ELEMENT	1
300092	AIR FILTER ELEMENT 6.5	1
300093	SPIN ON COALESCER	1
300187	REGULATOR REPAIR KIT	1
301932-10G3	KIT SHAFT SEAL REPAIR T10G 30MM	1
301932-10G4	KIT SHAFT SEAL REPAIR T10G 40MM	1
300186 (USED ON 300036)	KIT INLET VALVE REPAIR	1



**INSTALLATION**

**SECTION**

# Instructional Procedures for the Installation of BOSS INDUSTRIES 80200/8075 AHBI Geared Rotary Screw Air Compressor

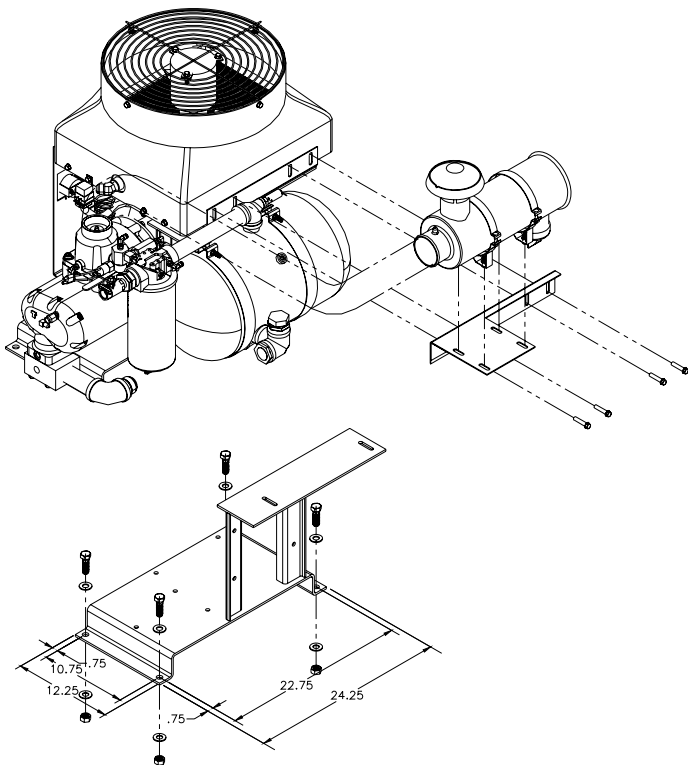
This air compressor should be installed only by those who have been trained and delegated to do so and who have read and understand both the operators' manual and the installation manual. Failure to follow the instructions, procedures, and safety precautions in this manual may result in accidents and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

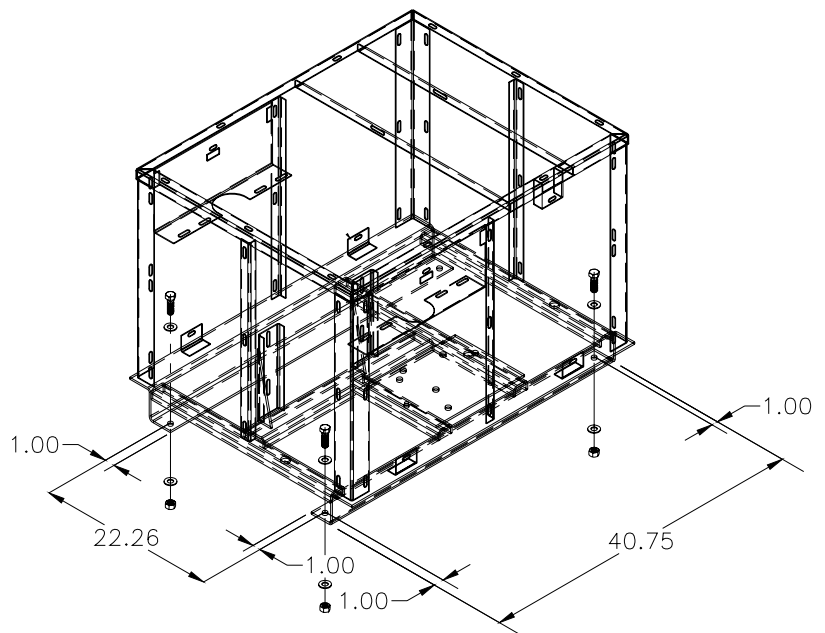
When mounting the compressor care should be taken to ensure that its location does not impede the operation of other components on the vehicle. For example, if your vehicle is equipped with a crane, you must make sure the compressor will not interfere with the swing of the crane. In addition, the compressor 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 5/8 inch grade 8 bolts, washers be used on both sides of the mounting surface with grade 8 nyloc nuts. These are not supplied with the unit, as we do not know the thickness of the surface you are mounting to.



M10047

CRH 1/22/02

80200AHBI



M10048

CRH 1/24/02

8075AHBI

# 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 701029-017 on page 39) The unit is shipped with 5 loose wires, they need to be connected as follows:

1. Connect red wire to switched 12 vdc power.
2. The green wire should be spliced into the 12 vdc switched feed for the hydraulic systems solenoid.
3. Connect brown wire to the hydraulic solenoid completing the circuit started in step 2.
4. The orange and purple wires are 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 compressors should be connected directly from the hydraulic block with the input line (high pressure) to the 1 5/8 size port on the motor. The return line (low pressure) 1 7/8 size port is also connected directly to the motor. 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.

### **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.

# INSTRUCTIONAL PROCEDURES

- 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.
- 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 8075/80200AHBI**

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 INDUSTRIES. 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 INDUSTRIES 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 INDUSTRIES receives from the Buyer written notice of and alleged defect in or nonconformance of the unit, all other components and parts of BOSS INDUSTRIES manufacture and if in the judgment of BOSS INDUSTRIES these items do not conform or are found to be defective in material of workmanship, BOSS INDUSTRIES 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 INDUSTRIES 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 INDUSTRIES. 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 INDUSTRIES'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 INDUSTRIES manufacture are warranted only to the extent that they are warranted by the original manufacture. BOSS INDUSTRIES shall have no responsibility for any cost or expense incurred by Buyer from inability of BOSS INDUSTRIES to repair under said warranty when such inability is beyond the control of BOSS INDUSTRIES 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 INDUSTRIES 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 INDUSTRIES manufacture or approved by BOSS INDUSTRIES 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 INDUSTRIES 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 INDUSTRIES 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 INDUSTRIES, or lost production, whether suffered by Buyer or any third party.

**BOSS INDUSTRIES, INC.  
1761 GENESIS DRIVE  
LAPORTE IN 46350  
800-635-6587**

# 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 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 and filters 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 part 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.

# 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 INDUSTRIES 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 INDUSTRIES. (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 INDUSTRIES.

## 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 INDUSTRIES 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 INDUSTRIES 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.  
1761 GENESIS DRIVE  
LAPORTE IN 46350  
ATTN: WARRANTY CLAIM ENCLOSED**

## 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, 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.

## **SCREW COMPRESSOR AIR-END EXCHANGE PROGRAM**

Factory manufactured air-ends are available on an exchange basis. For current prices and availability, contact BOSS Industries, Inc. or an authorized BOSS distributor. Prices are F.O.B. shipping point. Prices do not include labor for removal or installation. A repairable trade-in air-end must be returned freight prepaid within 30 days after shipment of the manufactured air-end. A five hundred dollar (\$500.00 core charge) trade-in allowance will be credited to your account upon return of the defective trade-in. If no air-end is returned, or the air-end has been disassembled, you will be invoiced for the difference between exchange price and price without exchange air-end. Exchanged air-ends are warranted for 12 months.