

**BOSS INDUSTRIES 80102 HP AHBI
HYDRAULIC AIR
COMPRESSOR
OPERATORS, INSTALLATIONS,
AND PARTS MANUAL**

OPERATORS AND PARTS MANUAL

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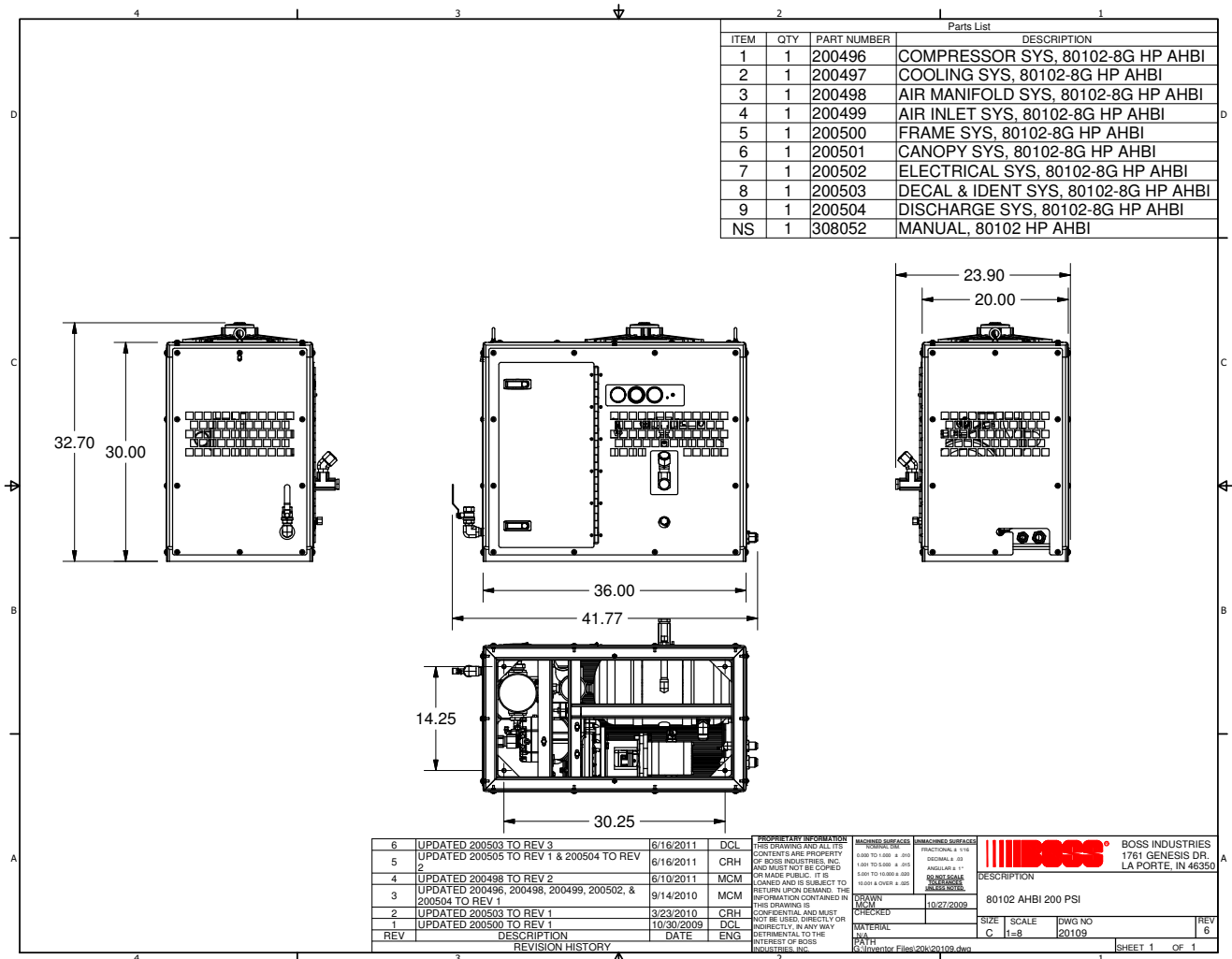
SPECIFICATIONS

BOSS INDUSTRIES 80102 HP AHBI COMPRESSOR

DELIVERY @ 200 PSIG	CFM	30	40	50	60	70	80	90	95
Input Speed RPM to Compressor	RPM	1110	1395	1685	1945	2250	2500	2750	2900
Hydraulic Motor 'B' @ 2700 PSI	GPM	10.6	13.3	16.0	18.5	21.4	23.8	26.2	27.6
Weight (dry) (TYP.)	400 lbs.								
Fluid Capacity (SYS.) (TYP.)	2.50 Gallons								

** CALCULATIONS PERFORMED @ 85% EFFICIENCY MECHANICAL
AND 96% EFFICIENCY VOLUMETRIC.*

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT PRIOR NOTICE



80102 HP AHBI

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 usually common sense. While there are standard safety rules, each situation has its own peculiarities that cannot always be covered by rules. 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 a 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 repairs. Keep dirt away from parts by covering parts and exposed openings.

SAFETY

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 the 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.

Rotary screw compressor systems provide continuous volume and pressure output. Therefore, the use of an air storage tank is not necessary in a Boss Industries Inc. rotary screw compressor system. In the rare event air usage is required without operating the vehicle, follow all state and federal DOT regulations regarding air storage tank usage.

The owner, leaseholder, 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 7.)



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



Figure 2. To be placed near oil sump filler cap.
P/N: 300038

SAFETY



Figure 3. To be placed on body near air service valve.
P/N: 300040



Figure 4. To be placed near fan motor.
P/N: 300041

SAFETY



Figure 5. To be placed near air outlet.
P/N: 300042

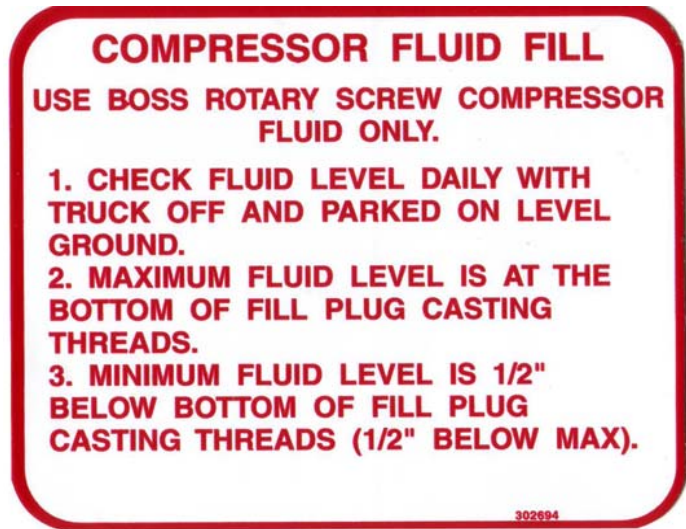


Figure 6. To be placed near oil fill.
P/N: 302694

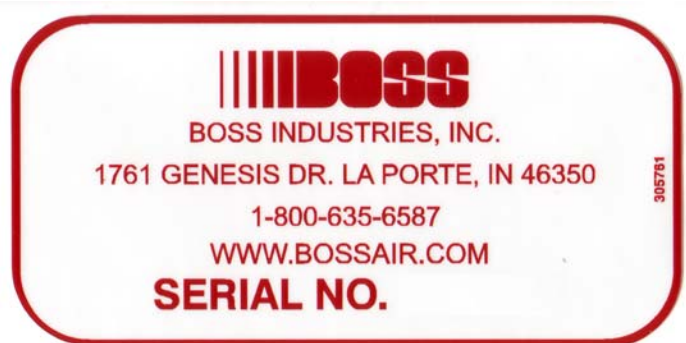


Figure 7. Boss Serial Tag
P/N: 305761

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 safety valve is set at 250 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.

MINIMUM PRESSURE VALVE

The minimum pressure valve is located at the outlet of the coalescer head and serves to maintain a minimum discharge pressure 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 with shroud and louvers designed to push air away from the unit. Oil temperature is controlled by a temperature switch. The switch maintains compressor oil temperatures in the range of 160° - 200° F by cycling the fan on and off.

DESCRIPTION OF COMPONENTS

INSTRUMENTATION

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

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.

HOURLMETER

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

ELECTRICAL AND SAFETY SYSTEM

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 BLOWDOWN VALVE

There is an integrated blowdown 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. Blowdown 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.

DESCRIPTION OF COMPONENTS

DISCHARGE PRESSURE REGULATOR VALVE

This integrated valve, located on the inlet valve 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 200 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 nuts 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.

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, 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 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 intervals. 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. 3. Check for oil and air leaks. 4. Check safety circuit switches.
EVERY 25 HOURS OR MONTHLY	1. Drain water from compressor oil.
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 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 of 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 sump. A drain plug is provided at the bottom of the sump. 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” H₂O).

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 top).
3. Install new rubber seal in head and supply a film of fluid directly to seal.
4. Rotate element clockwise by hand until element contacts seal (viewing element from top).
5. Rotate element approximately one more turn clockwise with band wrench near the bottom of element.
6. Run system and check for leaks.

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.

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 (one-fourth turn counterclockwise with band wrench, viewing from bottom, continue to remove by hand) 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-fourth turn with band wrench viewing from bottom).
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.

TROUBLESHOOTING

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

The troubleshooting procedures for this 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. Integrated blow down valve may be inoperative at coalescer head.
2. Blockage in air line from side of inlet valve to integrated blow down valve.

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. Defective coalescer element.
4. Compressor shaft seal leakage.
5. Discharge pressure below 65 PSI or above 225 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.

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.

CONTROL OR INDICATOR	PURPOSE
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 the shutdown switch when the compressor reaches 240 degrees Fahrenheit and the compressor will shut down.
PRESSURE SWITCH GAUGES	Monitors the pressure inside the sump tank. When the pressure exceeds 200 PSI the compressor will shutdown
HOURLMETER	Indicator accumulated hours of actual compressor operation.
PRESSURE RELIEF VALVE	Vents sump pressure to the atmosphere if the pressure inside the sump exceeds 250 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 blowdown valve vents the sump pressure to the atmosphere at shutdown.
MINIMUM PRESSURE VALVE	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 that the back flow to coalescer element does not occur during shutdown.

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

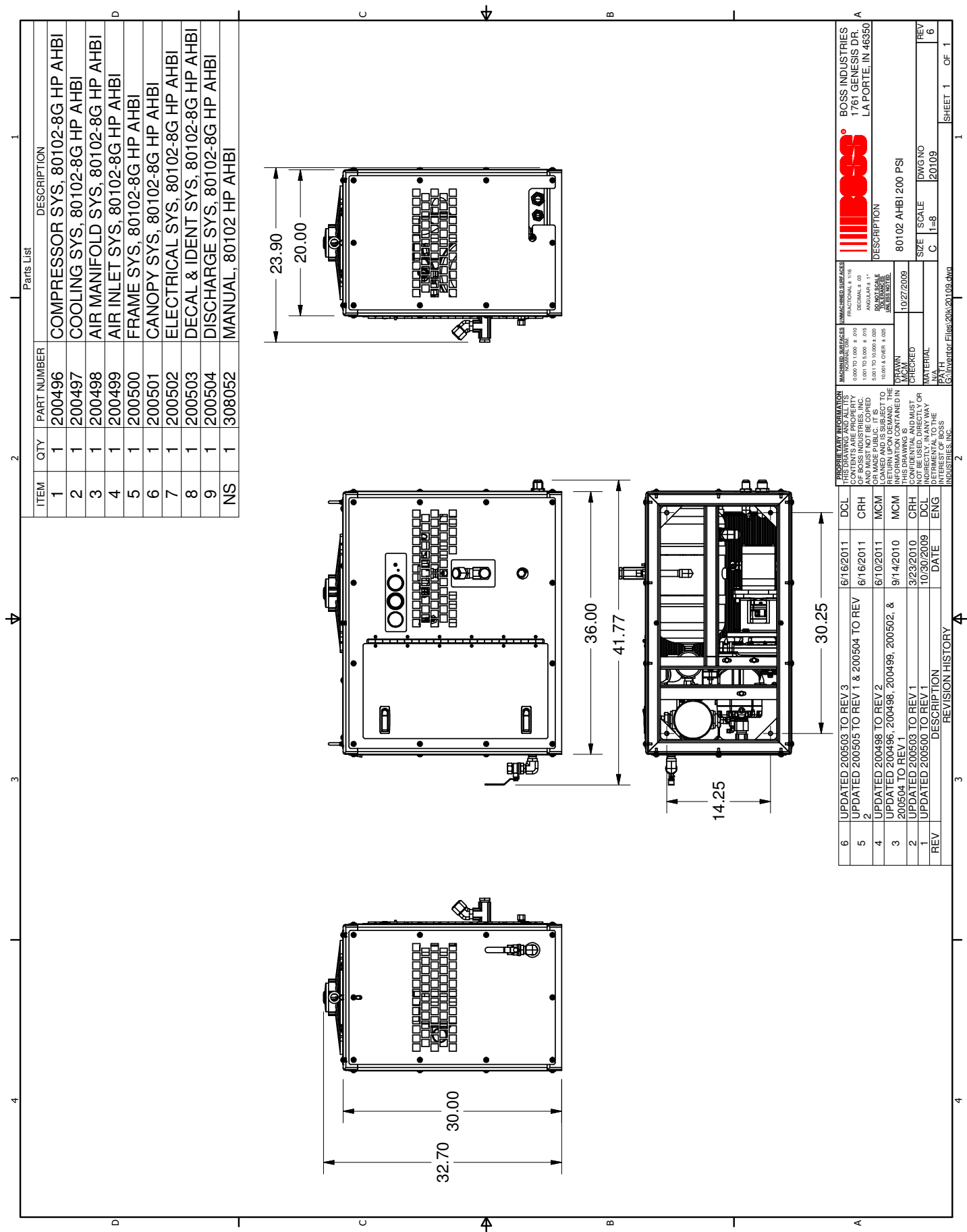
IF THE COMPRESSOR IS BEING USED TO POWER SANDBLASTING EQUIPMENT, OR HAS AN AIR STORAGE TANK, USE A CHECK VALVE DIRECTLY AFTER THE MINIMUM PRESSURE VALVE TO PREVENT BACKFLOW INTO THE SUMP. THIS CHECK VALVE SHOULD HAVE A MAXIMUM PRESSURE DROP RATING OF 2 PSIG (13.78kPa) OPERATING AND A CAPACITY RATING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

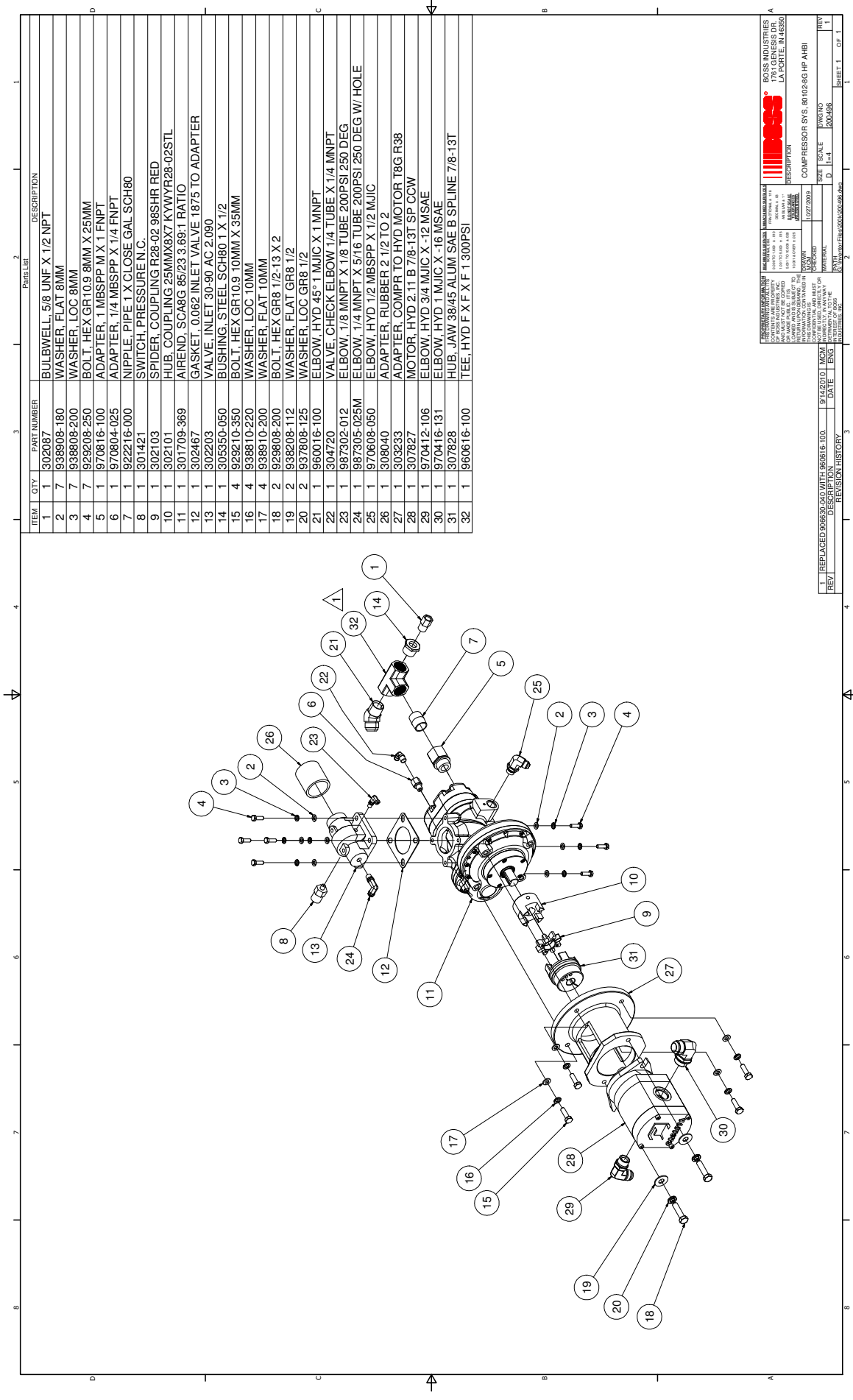
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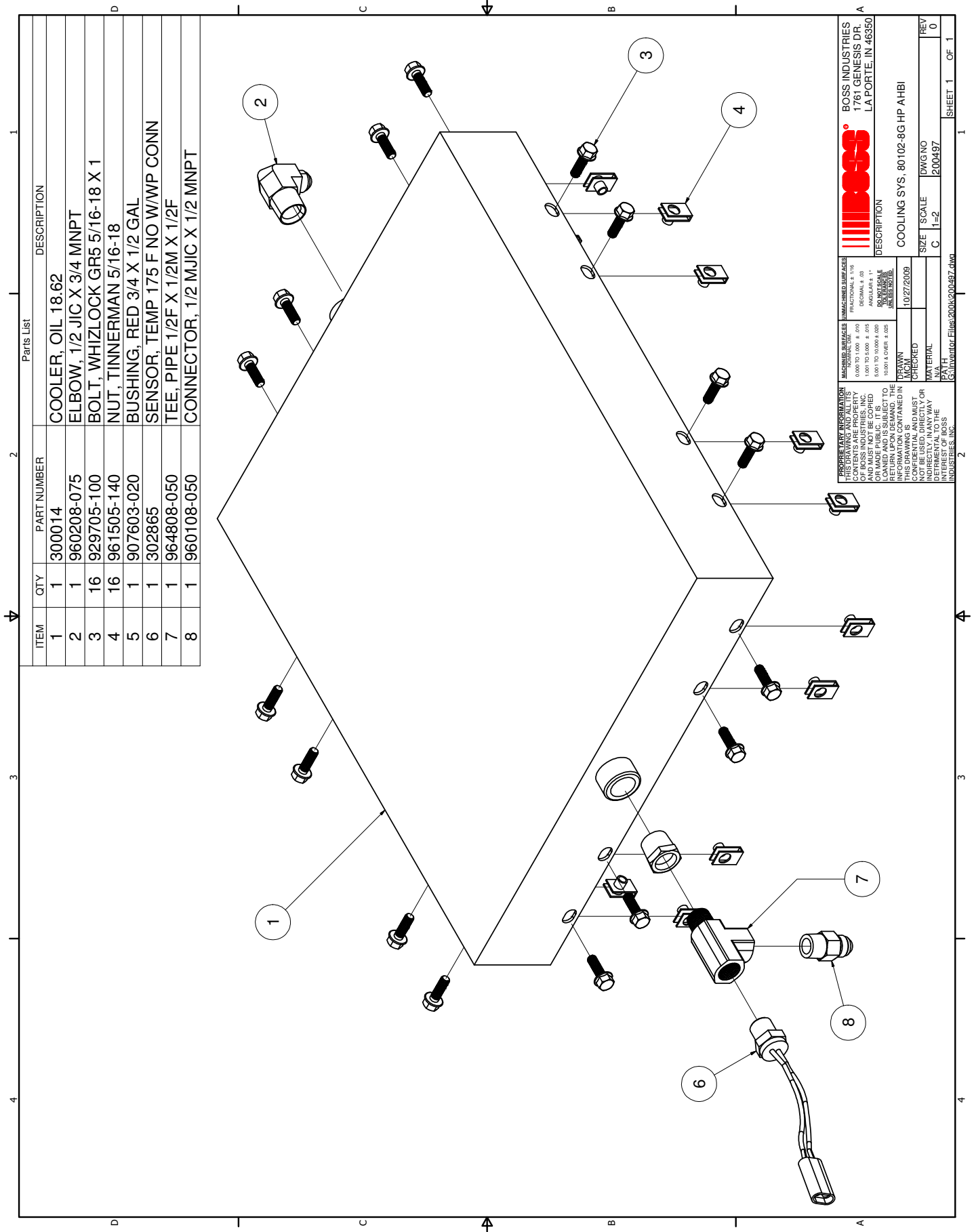
THE COMPRESSOR SERVICE VALVE SHOULD BE RELOCATED TO THE HOSE REEL INLET OR BE THE CUSTOMERS AIR CONNECTION PORT WHEN A HOSE REEL IS NOT USED. TYPICAL PLUMBING FROM MINIMUM PRESSURE VALVE SHOULD FLOW IN THE FOLLOWING ORDER:

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

PARTS AND ILLUSTRATION SECTION



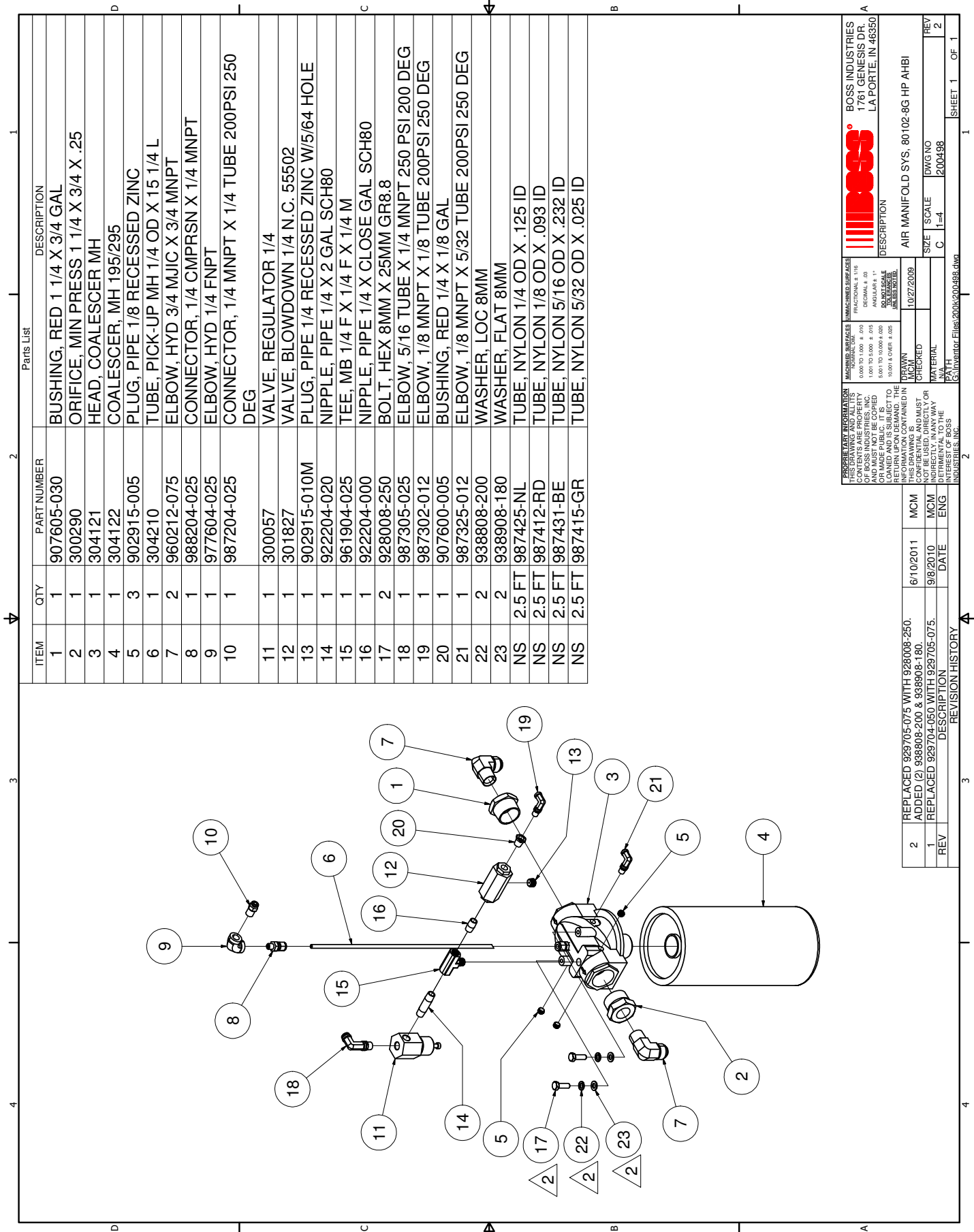
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Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	300014	COOLER, OIL 18.62
2	1	960208-075	ELBOW, 1/2 JIC X 3/4 MNPT
3	16	929705-100	BOLT, WHIZLOCK GR5 5/16-18 X 1
4	16	961505-140	NUT, TINNEMAN 5/16-18
5	1	907603-020	BUSHING, RED 3/4 X 1/2 GAL
6	1	302865	SENSOR, TEMP 175 F NO WWP CONN
7	1	964808-050	TEE, PIPE 1/2F X 1/2M X 1/2F
8	1	960108-050	CONNECTOR, 1/2 MJIC X 1/2 MNPT

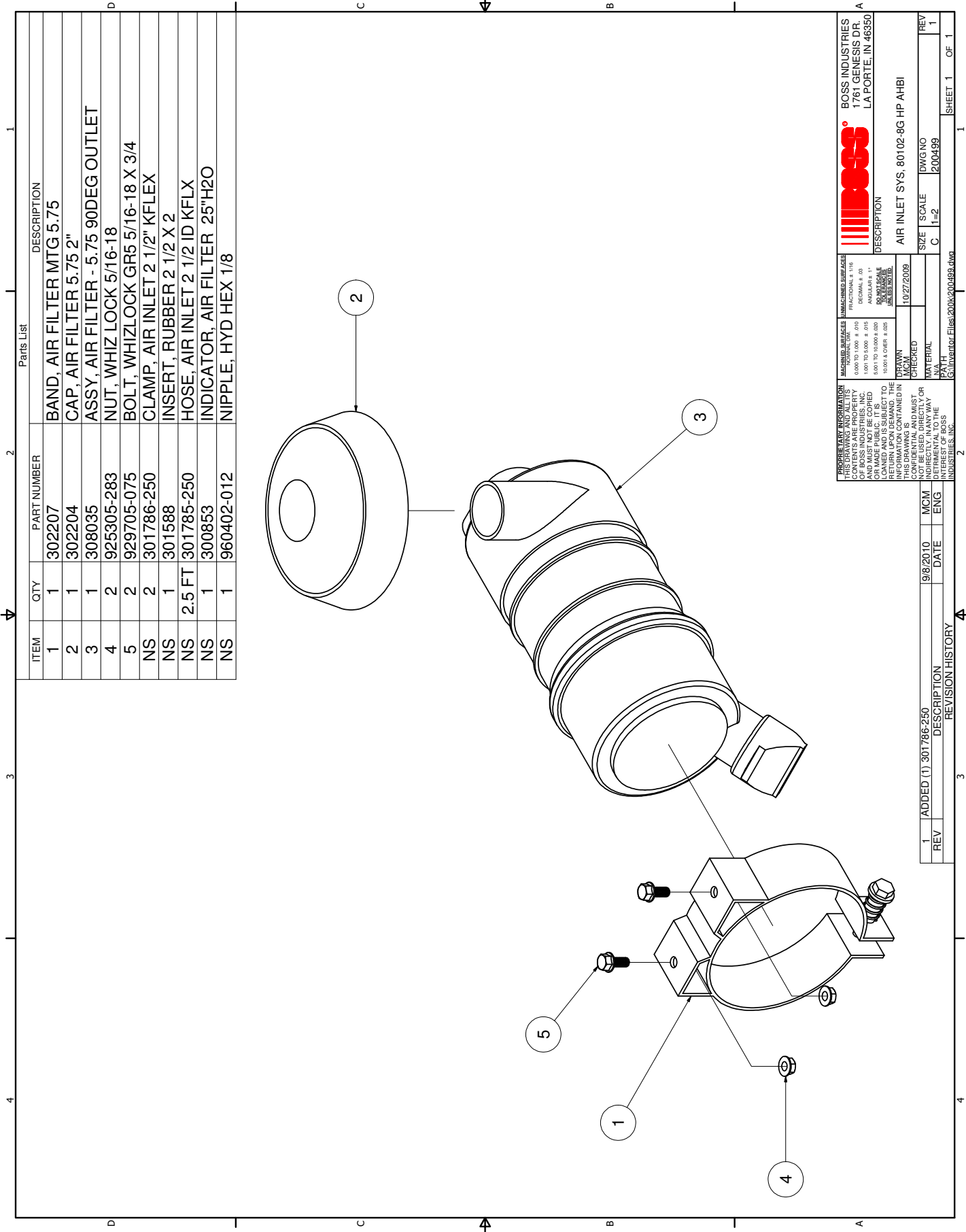
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1761 GENESIS DR.
LA PORTE, IN 46350

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DRAWN 10/27/2009	CHECKED 10/27/2009	DESCRIPTION COOLING SYS, 80102-8G HP AHBI
MATERIAL 304	SCALE 1=2	SIZE C
REV 0	DWG NO 200497	SHEET 1 OF 1



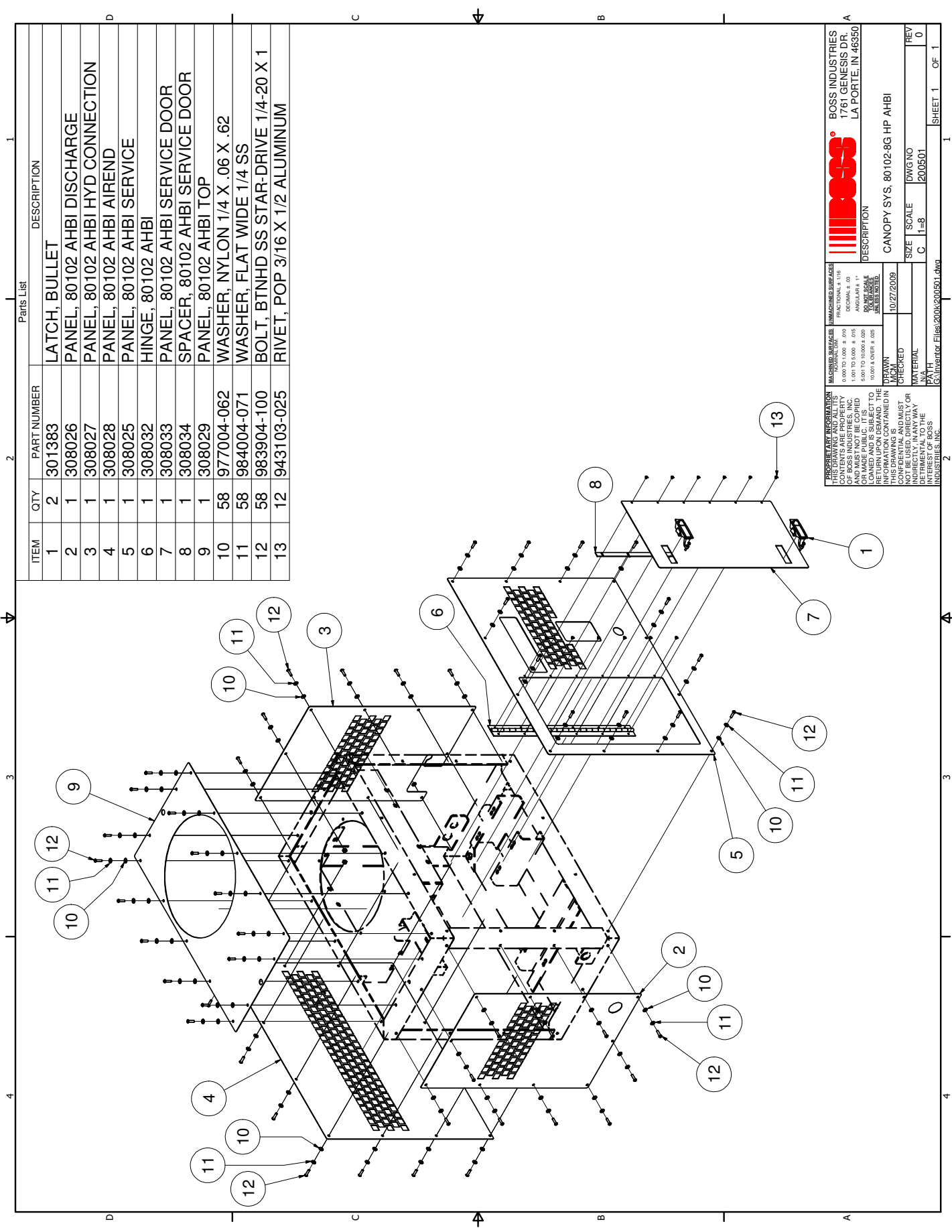
Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	907605-030	BUSHING, RED 1 1/4 X 3/4 GAL
2	1	300290	ORIFICE, MIN PRESS 1 1/4 X 3/4 X .25
3	1	304121	HEAD, COALESCER MH
4	1	304122	COALESCER, MH 195/295
5	3	902915-005	PLUG, PIPE 1/8 RECESSED ZINC
6	1	304210	TUBE, PICK-UP MH 1/4 OD X 15 1/4 L
7	2	960212-075	ELBOW, HYD 3/4 MJIC X 3/4 MNPT
8	1	988204-025	CONNECTOR, 1/4 CMPSRN X 1/4 MNPT
9	1	977604-025	ELBOW, HYD 1/4 FNPT
10	1	987204-025	CONNECTOR, 1/4 MNPT X 1/4 TUBE 200PSI 250 DEG
11	1	300057	VALVE, REGULATOR 1/4
12	1	301827	VALVE, BLOWDOWN 1/4 N.C. 55502
13	1	902915-010M	PLUG, PIPE 1/4 RECESSED ZINC W/5/64 HOLE
14	1	922204-020	NIPPLE, PIPE 1/4 X 2 GAL SCH80
15	1	961904-025	TEE, MB 1/4 F X 1/4 F X 1/4 M
16	1	922204-000	NIPPLE, PIPE 1/4 X CLOSE GAL SCH80
17	2	928008-250	BOLT, HEX 8MM X 25MM GR8.8
18	1	987305-025	ELBOW, 5/16 TUBE X 1/4 MNPT 250 PSI 200 DEG
19	1	987302-012	ELBOW, 1/8 MNPT X 1/8 TUBE 200PSI 250 DEG
20	1	907600-005	BUSHING, RED 1/4 X 1/8 GAL
21	1	987325-012	ELBOW, 1/8 MNPT X 5/32 TUBE 200PSI 250 DEG
22	2	938808-200	WASHER, LOC 8MM
23	2	938908-180	WASHER, FLAT 8MM
NS	2.5 FT	987425-NL	TUBE, NYLON 1/4 OD X .125 ID
NS	2.5 FT	987412-RD	TUBE, NYLON 1/8 OD X .093 ID
NS	2.5 FT	987431-BE	TUBE, NYLON 5/16 OD X .232 ID
NS	2.5 FT	987415-GR	TUBE, NYLON 5/32 OD X .025 ID

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RETURN UPON DEMAND. THE DRAWING IS THE PROPERTY OF BOSS INDUSTRIES, INC. AND MUST BE RETURNED TO THE COMPANY OR DESTROYED BY THE USER.		CHECKED DATE: 10/27/2009		DESCRIPTION AIR MANIFOLD SYS. 80102-8G HP AHBI	
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REVISION HISTORY		REV: 2 OF: 1		SHEET 1 OF 1	



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	302207	BAND, AIR FILTER MTG 5.75
2	1	302204	CAP, AIR FILTER 5.75 2"
3	1	308035	ASSY, AIR FILTER - 5.75 90DEG OUTLET
4	2	925305-283	NUT, WHIZ LOCK 5/16-18
5	2	929705-075	BOLT, WHIZLOCK GR5 5/16-18 X 3/4
NS	2	301786-250	CLAMP, AIR INLET 2 1/2" KFLEX
NS	1	301588	INSERT, RUBBER 2 1/2 X 2
NS	2.5 FT	301785-250	HOSE, AIR INLET 2 1/2 ID KFLX
NS	1	300853	INDICATOR, AIR FILTER 25"H2O
NS	1	960402-012	NIPPLE, HYD HEX 1/8

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REV		DESCRIPTION		DATE		MCM	
1		ADDED (1) 301786-250		9/8/2010		MCM	
REVISION HISTORY							
SIZE SCALE C 1=2							
DWG NO 200499							
REV 1							
SHEET 1 OF 1							

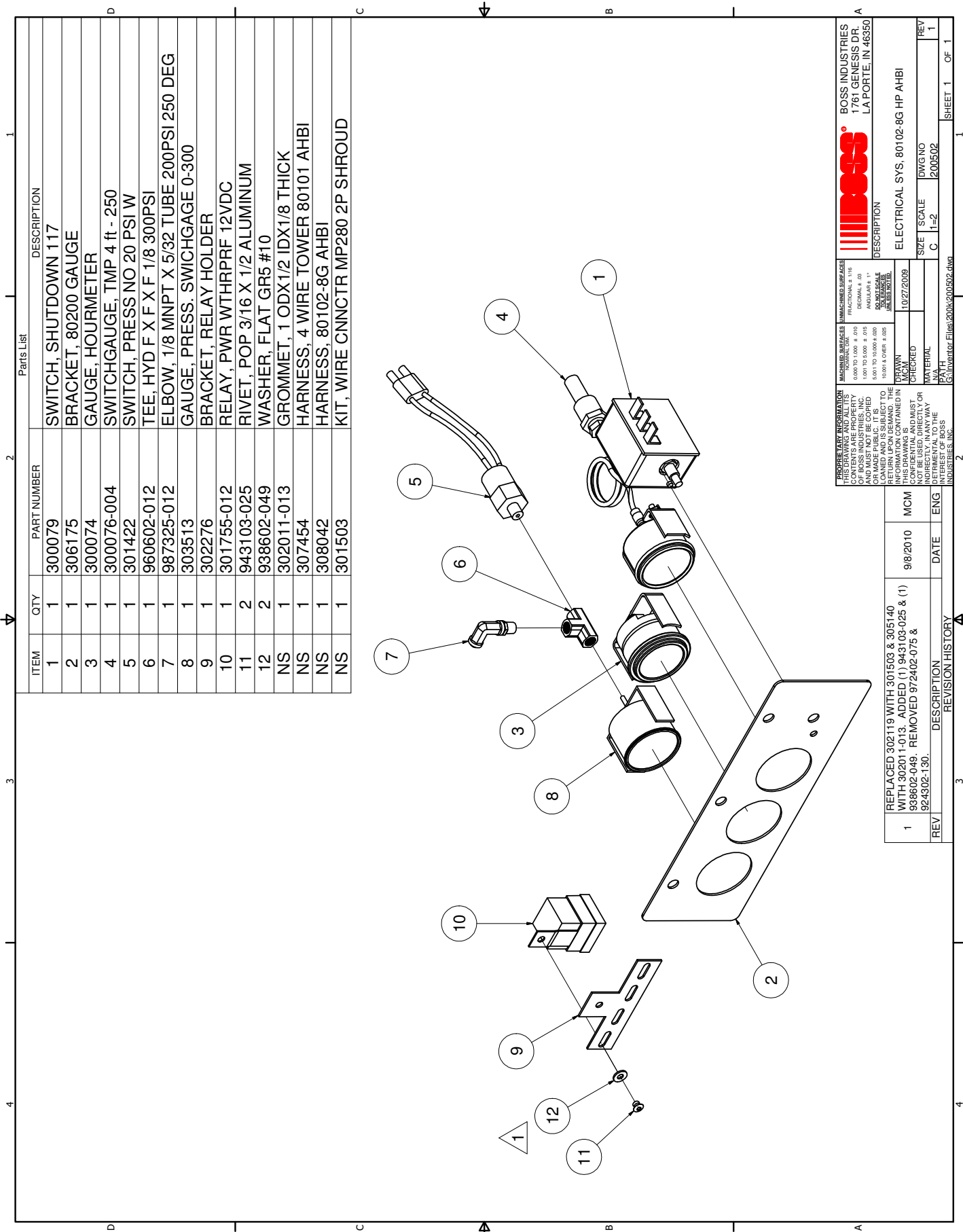


Parts List				DESCRIPTION	
ITEM	QTY	PART NUMBER			
1	2	301383		LATCH, BULLET	
2	1	308026		PANEL, 80102 AHBI DISCHARGE	
3	1	308027		PANEL, 80102 AHBI HYD CONNECTION	
4	1	308028		PANEL, 80102 AHBI AIREND	
5	1	308025		PANEL, 80102 AHBI SERVICE	
6	1	308032		HINGE, 80102 AHBI	
7	1	308033		PANEL, 80102 AHBI SERVICE DOOR	
8	1	308034		SPACER, 80102 AHBI SERVICE DOOR	
9	1	308029		PANEL, 80102 AHBI TOP	
10	58	977004-062		WASHER, NYLON 1/4 X .06 X .62	
11	58	984004-071		WASHER, FLAT WIDE 1/4 SS	
12	58	983904-100		BOLT, BTNHD SS STAR-DRIVE 1/4-20 X 1	
13	12	943103-025		RIVET, POP 3/16 X 1/2 ALUMINUM	

BOSS INDUSTRIES
1761 GENESIS DR.
LA PORTE, IN 46350

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DRAWN MCM 10/27/2009	CHECKED MCM 10/27/2009	DESCRIPTION CANOPY SYS, 80102-8G HP AHBI	
MATERIAL ALUMINUM		SIZE C	SCALE 1=8
REV 0		DWG NO 200501	SHEET 1 OF 1

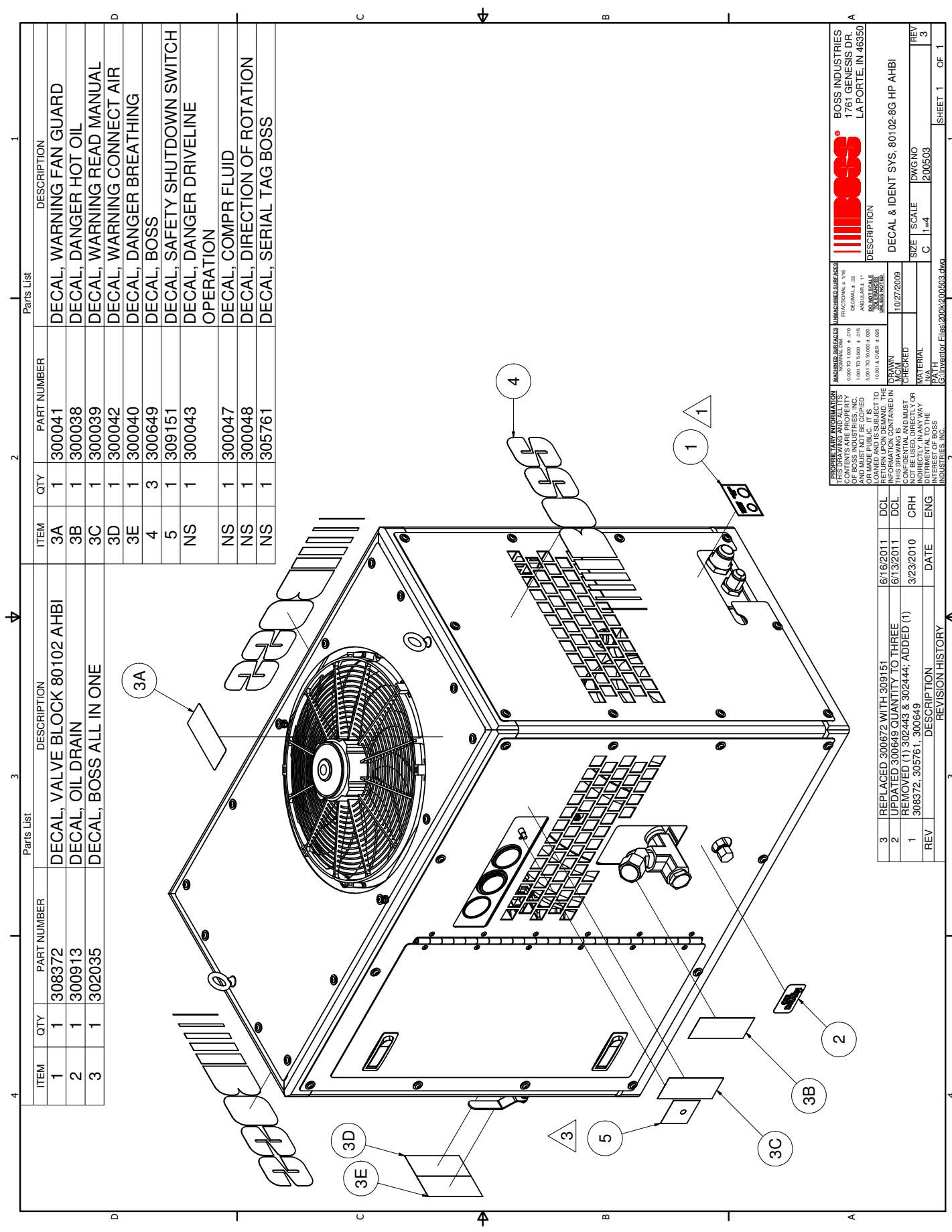
Path: G:\Inventor Files\2009\200501.dwg



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	300079	SWITCH, SHUTDOWN 117
2	1	306175	BRACKET, 80200 GAUGE
3	1	300074	GAUGE, HOURMETER
4	1	300076-004	SWITCHGAUGE, TMP 4 ft - 250
5	1	301422	SWITCH, PRESS NO 20 PSI W
6	1	960602-012	TEE, HYD F X F 1/8 300PSI
7	1	987325-012	ELBOW, 1/8 MNPT X 5/32 TUBE 200PSI 250 DEG
8	1	303513	GAUGE, PRESS. SWITCHGAGE 0-300
9	1	302276	BRACKET, RELAY HOLDER
10	1	301755-012	RELAY, PWR WTHRPRF 12VDC
11	2	943103-025	RIVET, POP 3/16 X 1/2 ALUMINUM
12	2	938602-049	WASHER, FLAT GR5 #10
NS	1	302011-013	GROMMET, 1 ODX1/2 IDX1/8 THICK
NS	1	307454	HARNESS, 4 WIRE TOWER 80101 AHBI
NS	1	308042	HARNESS, 80102-8G AHBI
NS	1	301503	KIT, WIRE CNNECTR MP280 2P SHROUD

		BOSS INDUSTRIES 1761 GENESIS DR. LA PORTE, IN 46350	
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DRAWN: MCM CHECKED: MCM MATERIAL: N/A DATE: 10/27/2009		ELECTRICAL SYS, 80102-8G HP AHBI SIZE: SCALE C 11-2 DWG NO 200502 REV 1 SHEET 1 OF 1	

REV	DESCRIPTION	DATE	ENG
1	REPLACED 302119 WITH 301503 & 305140 WITH 302011-013. ADDED (1) 943103-025 & (1) 938602-049. REMOVED 972402-075 & 924302-130.	9/8/2010	MCM



Parts List			Parts List		
ITEM	QTY	PART NUMBER	DESCRIPTION	ITEM	QTY
1	1	308372	DECAL, VALVE BLOCK 80102 AHBI	3A	1
2	1	300913	DECAL, OIL DRAIN	3B	1
3	1	302035	DECAL, BOSS ALL IN ONE	3C	1
				3D	1
				3E	1
				4	3
				5	1
				NS	1
				NS	1
				NS	1
				NS	1

Parts List			Parts List		
ITEM	QTY	PART NUMBER	DESCRIPTION	ITEM	QTY
3A	1	300041	DECAL, WARNING FAN GUARD		
3B	1	300038	DECAL, DANGER HOT OIL		
3C	1	300039	DECAL, WARNING READ MANUAL		
3D	1	300042	DECAL, WARNING CONNECT AIR		
3E	1	300040	DECAL, DANGER BREATHING		
4	3	300649	DECAL, BOSS		
5	1	309151	DECAL, SAFETY SHUTDOWN SWITCH		
NS	1	300043	DECAL, DANGER DRIVELINE OPERATION		
NS	1	300047	DECAL, COMPR FLUID		
NS	1	300048	DECAL, DIRECTION OF ROTATION		
NS	1	305761	DECAL, SERIAL TAG BOSS		



BOSS INDUSTRIES
1761 GENESIS DR.
LA PORTE, IN 46350

DESCRIPTION

DECAL & IDENT SYS, 80102-8G HP AHBI

DATE 10/27/2009

CHECKED [Signature]

DRAWN [Signature]

SCALE 1:1

SIZE C 11-4

REV 3

OF 1

REV	DESCRIPTION	DATE	ENG
3	REPLACED 300672 WITH 309151	6/16/2011	DCL
2	UPDATED 300649 QUANTITY TO THREE	6/13/2011	DCL
1	REMOVED (1) 302443 & 302444; ADDED (1) 308372, 305761, 300649	3/23/2010	CRH

REVISION HISTORY

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INVENTOR: [Signature] DATE: 10/27/2009

CHECKED: [Signature] DATE: 10/27/2009

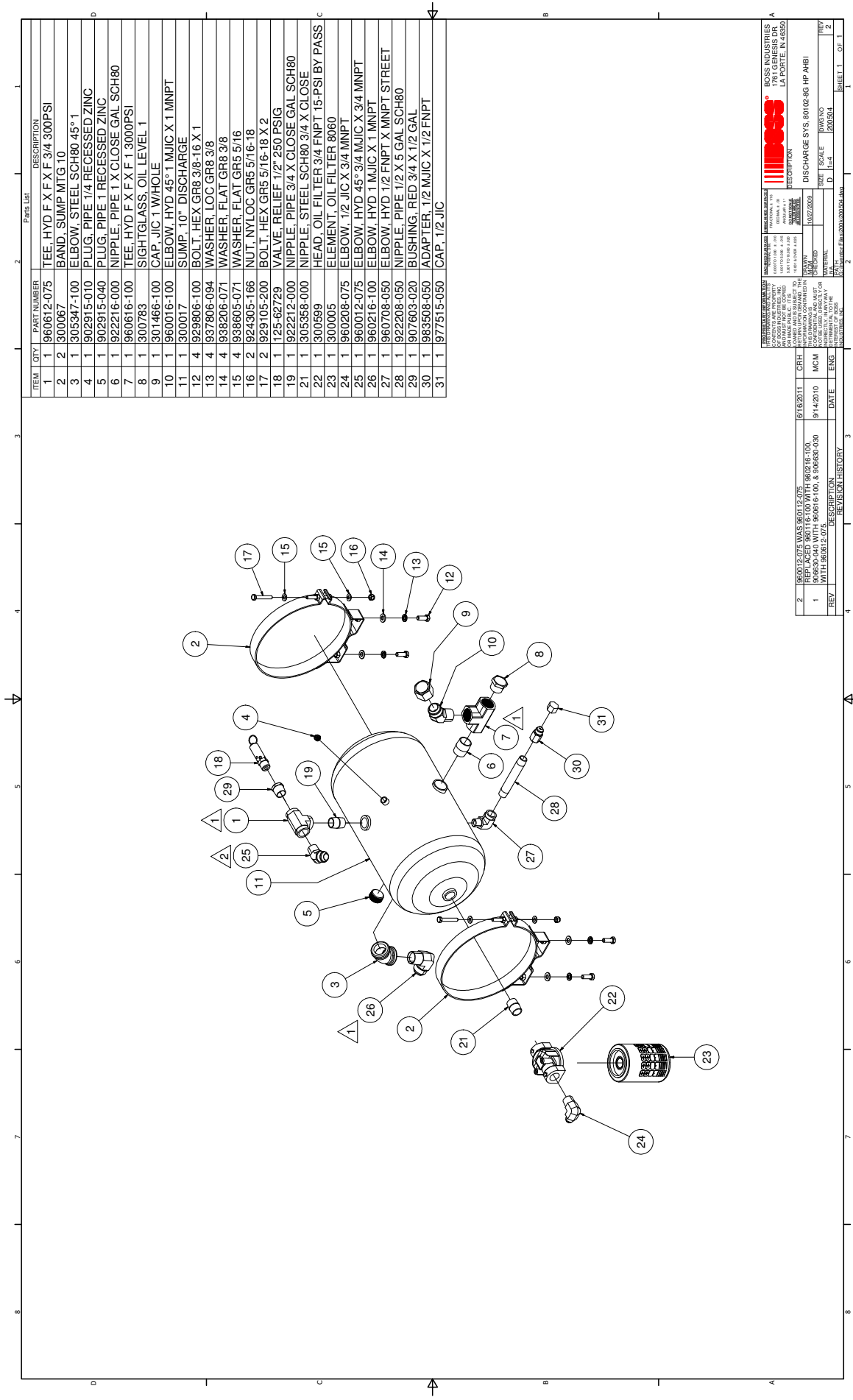
DRAWN: [Signature] DATE: 10/27/2009

SCALE: 1:1

SIZE: C 11-4

REV: 3

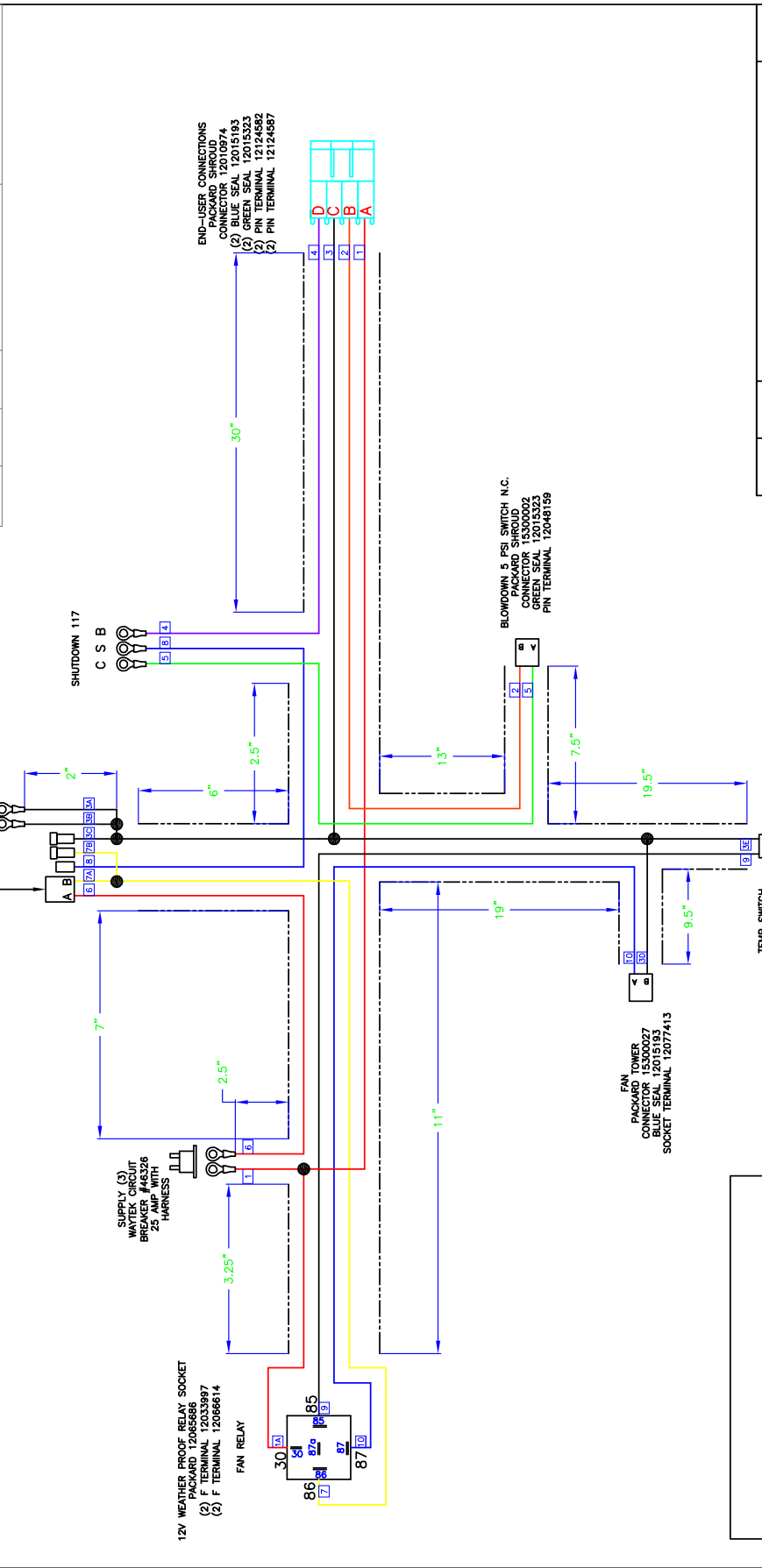
OF: 1



PARTS LIST			DESCRIPTION	
ITEM	QTY	PART NUMBER		
1	1	960612-075	TEE, HYD F X F X F 3/4 3000PSI	
2	2	300067	BAND, SUMP MTG 10	
3	1	305347-100	ELBOW, STEEL SCH80 45° 1	
4	1	902915-010	PLUG, PIPE 1/4 RECESSED ZINC	
5	1	902915-040	PLUG, PIPE 1 RECESSED ZINC	
6	1	922216-000	NIPPLE, PIPE 1 X CLOSE GAL SCH80	
7	1	960616-100	TEE, HYD F X F X F 1 3000PSI	
8	1	300783	SIGHTGLASS, OIL LEVEL 1	
9	1	301466-100	CAP, JIC 1 W/HOLE	
10	1	960016-100	ELBOW, HYD 45° 1 MJIC X 1 MNPT	
11	1	300017	SUMP, 10" DISCHARGE	
12	4	929806-100	BOLT, HEX GR8 3/8-16 X 1	
13	4	937806-094	WASHER, LOC GR8 3/8	
14	4	938206-071	WASHER, FLAT GR8 3/8	
15	4	938605-071	WASHER, FLAT GR5 5/16	
16	2	924305-166	NUT, NYLOC GR5 5/16-18	
17	2	929105-200	BOLT, HEX GR5 5/16-18 X 2	
18	1	125-62729	VALVE, RELIEF 1/2" 250 PSIG	
19	1	922212-000	NIPPLE, PIPE 3/4 X CLOSE GAL SCH80	
20	1	305358-000	NIPPLE, STEEL SCH80 3/4 X CLOSE	
21	2	300599	HEAD, OIL FILTER 3/4 FNPT 15-PSI BY PASS	
22	1	300005	ELEMENT, OIL FILTER 8060	
23	1	960208-075	ELBOW, 1/2 JIC X 3/4 MNPT	
24	1	96012-075	ELBOW, HYD 45° 3/4 MJIC X 3/4 MNPT	
25	1	960216-100	ELBOW, HYD 1 MJIC X 1 MNPT	
26	1	960708-050	ELBOW, HYD 1/2 FNPT X MNPT STREET	
27	1	922208-050	NIPPLE, PIPE 1/2 X 5 GAL SCH80	
28	1	907603-020	BUSHING, RED 3/4 X 1/2 GAL	
29	1	963508-050	ADAPTER, 1/2 MJIC X 1/2 FNPT	
30	1	977515-050	CAP, 1/2 JIC	
31	1			

REVISION HISTORY		REVISION HISTORY	
REV	DESCRIPTION	DATE	ENG
2	REPLACES 960612-075	8/12/2011	CRM
1	REPLACES 960616-100 WITH 960216-100, 90630-040 WITH 960616-100, & 906630-030 WITH 960612-075	9/14/2010	MCM
REVISION HISTORY			
DESCRIPTION		DATE	
DISCHARGE SYS 80102-90 HP AHB1		10/27/2009	
BOSS INDUSTRIES		LA PORTE, IN 46350	
SHEET 1		OF 1	

WIRE NO.	COLOR	WIRE GA.	LEFT HAND SIDE	RIGHT HAND SIDE
1	RED	12	4-PIN CONNECTOR PIN A	#10 RING 10-12
1A	RED	12	FAN RELAY PIN 30	WITH WIRE #1
2	ORANGE	16	4-PIN CONNECTOR PIN B	BLOWDOWN SWITCH PIN A
3	BLACK	12	4-PIN CONNECTOR PIN C	WITH WIRE #3C-3E
3A	BLACK	16	1/4" RING 14-16	WITH WIRE #3C
3B	BLACK	16	1/4" RING 14-16	WITH WIRE #3B
3C	BLACK	16	1/4" MALE DISCONNECT 14-16	WITH WIRE #3
3D	BLACK	12	TEMP SWITCH PIN B	WITH WIRE #3
3E	BLACK	16	TEMP SWITCH PIN A	WITH WIRE #3
4	PURPLE	16	4-PIN CONNECTOR PIN D	1/4" RING 14-16
5	GREEN	16	1/4" RING 14-16	BLOWDOWN SWITCH PIN B
6	RED	12	#10 RING 10-12	H.M. PRESSURE SWITCH PIN A
7	YELLOW	16	FAN RELAY PIN 86	WITH WIRE #7A, 7B
7A	YELLOW	16	H.M. PRESSURE SWITCH PIN B	WITH WIRE #7
7B	YELLOW	16	1/4" MALE DISCONNECT 14-16	WITH WIRE #7
8	BLUE	16	1/4" RING 14-16	BUTT CONNECTOR 14-16
9	BLACK	16	FAN RELAY PIN 85	TEMP SWITCH PIN B
10	BLUE	12	FAN RELAY PIN 87	FAN PIN A



NOTES:

- TAPE LOOM EVERY 6".
- TAPE ALL BREAKOUTS.
- TAG WIRES WITH NUMBERS AS NOTED IN BOX.
- STOP LOOM 2" FROM TERMINALS UNLESS NOTED.

DO NOT SCALE. TOLERANCES UNLESS NOTED. UNMATCHED SURFACES. NOMINAL DIM 1.000 TO 5.000 ±.010 5.001 TO 10.000 ±.020 10.001 & OVER ±.025 UNMATCHED SURFACES. FRACTIONAL SURFACES. DECIMAL ±.01	THIS DRAWING AND ALL INFORMATION THEREIN IS THE PROPERTY OF BOSS INDUSTRIES, INC. IT IS NOT TO BE COPIED, REPRODUCED, OR REPRODUCED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION OF BOSS INDUSTRIES, INC. THIS DRAWING IS TO BE USED FOR THE MANUFACTURE OF THE PARTS AND ASSEMBLIES IDENTIFIED HEREON. IT IS THE RESPONSIBILITY OF THE USER OF THIS DRAWING TO VERIFY THE DIMENSIONS AND QUANTITIES SHOWN HEREON AGAINST THE PARTS AND ASSEMBLIES TO BE MANUFACTURED. IF ANY DISCREPANCY IS FOUND, THE USER SHALL CONTACT THE DESIGN ENGINEER FOR THE PROJECT. THE USER SHALL BE RESPONSIBLE FOR THE CORRECTION OF THE DISCREPANCY. THIS DRAWING IS THE PROPERTY OF BOSS INDUSTRIES, INC. IT IS NOT TO BE COPIED, REPRODUCED, OR REPRODUCED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION OF BOSS INDUSTRIES, INC.	DATE: 10/27/09 RELEASED FOR: CHANGE NO.				OR: DCL TC: ENG:				BOSS INDUSTRIES, LAPORTE, IN 46350 HARNES, 80102-8G AHBI				REV: 0			
		DATE: 10/27/09				DATE: 10/27/09				DATE: 10/27/09				DATE: 10/27/09			
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		DATE: 10/27/09				DATE: 10/27/09				DATE: 10/27/09				DATE: 10/27/09			

RECOMMENDED SPARE PARTS LIST

PART NUMBER	DESCRIPTION
302206	AIR FILTER ELEMENT
304122	SPIN ON COALESCER
307092	SHAFT SEAL REPAIR KIT SCA8G
300005	OIL FILTER
307471	REGULATOR REPAIR KIT

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 INDUSTRIES 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: _____

INSTALLATION SECTION

INSTRUCTIONAL PROCEDURES

for the Installation of BOSS INDUSTRIES 80102 HP 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 to be secured to the vehicle with 3/8 inch grade 8 bolts and washers. These are not supplied with the unit, as we do not know the thickness of the surface to which you will be mounting the unit.

2. INSTALLATION OF AIR STORAGE TANKS

This Rotary screw air compressor system is designed to provide continuous volume and constant pressure without the use of an air storage tank. Within a few seconds of engagement, the compressor will produce full volume and pressure needed to run corresponding air operated equipment without waiting for air tanks to fill.

Air storage tanks are not utilized as standard equipment on vehicle mounted rotary screw compressors. The installation of air storage tanks, if not done properly, will hinder the performance of the rotary screw compressor. Boss Industries Inc. strongly discourages the use of an air storage tank as standard equipment for vehicle mounted rotary screw air compressors.

In the rare event air usage is required without operating the vehicle, an air storage tank can be added to your system. When adding an air storage tank, be sure to follow all state and federal DOT regulation regarding air storage tank usage.

3. 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. The unit is shipped with the mating end of the 4 pin connector with 15 feet of coiled wire. The wires need to be connected as follows:

INSTRUCTIONAL PROCEDURES

Pin A (Red)-	Battery Power
Pin B (Orange)-	Power Out to hydraulic system solenoid through safeties
Pin C (Black)-	Battery Ground
Pin D (Purple)-	12vdc switch power for operation

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 5/8 size port on the motor. The return line (low pressure) 3/4 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.

4. 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, 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. 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.
 - D. Any other applicable fluids.

INSTRUCTIONAL PROCEDURES

5. 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.

Safety circuit testing for 80102 HPAHBI

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 INFORMATION

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 or 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/RETURN GOODS INSTRUCTIONS

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

Please see the following instructions to initiate a return:

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

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 denial. When addressing the package for shipment, the following information must be on the outside of, or tagged clearly, to the package.

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

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

RETURN OR WARRANTY CLAIMS – FILING PROCEDURES

1. Initiate through a purchase order for warranty part or request for credit.
2. RGA will accompany replacement part.
3. BOSS INDUSTRIES will confirm disposition of failed part within 30 days of receipt and or request additional information.
4. Claim denial will result in issuance of a letter of denial.
5. BOSS INDUSTRIES will consider each claim on its' own merit and reserves the right to accept or reject claim request. In case of air-ends, these will be returned to the manufacturer for their analysis/input.
6. Send Warranty Claim to:
BOSS INDUSTRIES, INC.
1761 Genesis Drive
LaPorte, IN 46350
Attn: Returns Dept.

GENERAL

An approved claim depends on the following provision:

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

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

DAMAGE IN TRANSIT

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

1. Loss in transit:

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

2. Concealed loss or damage:

Concealed loss or damage means loss or damage, which does not become apparent until the kit is unpacked or the factory-installed unit is run by the 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.

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

3. Visible Loss or Damage

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

SCREW COMPRESSOR AIR-END EXCHANGE PROGRAM

Replacement air-ends are available from the factory. For current prices and availability, contact BOSS INDUSTRIES, Inc. or an authorized BOSS INDUSTRIES distributor. Prices are F.O.B. shipping point. Prices do not include labor for removal or installation.