

**185-210 DUS  
JD 4045  
OMEGA TOOL  
OPERATORS, MAINTENANCE,  
AND PARTS MANUAL**

SERIAL NUMBER \_\_\_\_\_

MODEL NUMBER \_\_\_\_\_





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# **INTRODUCTION**

## **OWNER'S RESPONSIBILITY**

Your new Boss air compressor was engineered, built and tested to ensure the user both dependable and economical service. This compressor has also been certified as conforming to the applicable Noise Emission standards of the Environmental Protection Agency.

Continuation of this unit's performance depends upon the care it receives during use. Therefore, operation and maintenance procedures described in this manual should be followed carefully. The operator and service personnel responsible for the care of this unit should be thoroughly familiar with this information.

It is the owner's and/or operator's responsibility to perform all safety checks and to ensure that all lubrication, maintenance instruction and recommended practices are followed for safe operation. If disassembly or replacement is required, particularly of internal parts, we recommend the owner see his dealer and not attempt the repair himself.

It is owner's responsibility to ensure that the preventive maintenance program is followed at the recommended intervals. Proper care and service will assure long service life with a minimum of problems and operating expenses.

We recommend that the owner and operator be thoroughly familiar with the contents of the manual.

If you encounter difficulties which you cannot diagnose our service personnel are prepared to help you. Our toll free number is 1-800-635-6587. Outside the continental United States and Canada our number is 219-324-7776.

The model and serial number information is requested on all correspondence. This information can be found on the Model Number Identification Plate. The information contained on the identification plate should be transferred to the cover page of the manual for future reference.

## 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. There are standard safety rules but each situation has its own peculiarities, which cannot always be covered by rules. Therefore with your experience and common sense, you are in a position to do something about 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 pressures or speeds in excess of its rating.

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 by covering parts and exposed openings.

## **USER MODIFICATION**

This Boss compressor incorporates numerous features to minimize noise emissions from the unit during operation. This configuration has been tested for noise emissions at conditions specified by the U.S. Environmental Protection Agency. Conformance to regulations requires the incorporation of the following notification and definition in the OPERATION AND MAINTENANCE MANUAL.

### **TAMPERING WITH NOISE CONTROL SYSTEM PROHIBITED**

Federal law prohibits the following act:

1. The removal, rendering inoperative, other than for purposes of maintenance, repair or replacement of any device or element of design incorporated into any new compressor for the purpose for noise control prior to its sale or delivery to the ultimate purchaser.
2. The use of the compressor after such device or element of design has been removed or rendered inoperative by any person.

Among the acts included in the prohibition against tampering are those listed:

1. Removal or rendering inoperative any of the following:
  - a. The engine exhaust system including the manifold, muffler or tailpipe.
  - b. Any of the enclosure components and associated sound barrier materials.
  - c. The sound baffles in the intake, exhaust and cooling system gas paths.
  - d. The air intake system including the air cleaner, the intake ducting, valve cover and gaskets.
2. Removal of any of the following:
  - a. Engine mounts or other sound isolating barriers in the system.
  - b. Fan shrouding and sound hood.
3. Operation of the compressor with any of the enclosure doors open.

# SECTION 1 SAFETY

## 1.1 PARKING

### CHOOSING A PARKING SITE

1. Park the compressor on a level firm area. Never park on a grade of more than 15 degrees (27%). If you must park on any grade, park across the grade so that the compressor does not tend to roll.
2. Park so that the wind carries exhaust fumes and radiator heat away from the compressor inlet.
3. Park away from work site dust.
4. Stay clear of electrical power lines. Keep the towing vehicle or equipment carrier, compressor, hoses, tools and all personnel at least 10 feet from power lines and buried cables.

## 1.2 BEFORE STARTING THE COMPRESSOR

1. Check fluids levels and for possible leaks.
2. Use adequate hose and couplings with safety locks or pins.
3. Remove all tools and/or loose items from engine compartment.
4. Relieve any pressure in receiver tank.
5. Use proper eye and ear protection.

## 1.3 COMPRESSOR USE AND COMPRESSED AIR

1. Air from this machine is not fit for human breathing or food processing.
2. Never operate in an enclosed area.
3. Never use compressed air to clean your clothes and never direct it at another person, it can kill.
4. Always wear eye protection.
5. Install velocity fuse (“OSHA”) upstream of hose to prevent hose whip in case of a rupture.
6. Keep doors or hoods closed on machines in operation.
7. Do not touch hot surfaces or moving parts, such as exhaust or fans.
8. Do not adjust or restrict relief valves.
9. Do not refuel while machine is running; shut down and allow to cool before refueling.
10. Do not jump-start with cable connections directly on battery.
12. Do not use air at pressure higher than 30 PSIG (207 KPA) for cleaning purposes. Use of higher air pressure can cause injury to the operator.
13. Keep compressor panels closed except when making repairs, adjustments, or servicing the compressor.
14. Make sure all personnel are out of and clear of the compressor before starting or operating it.
15. Do not use either cylinder or air line antifreeze compound in confined area.

## 1.4 SERVICING

1. Before servicing compressor, relieve receiver pressure and allow to cool.
2. Be sure all access panels are opened and/or removed.
3. Wipe up all spills resulting from servicing.
4. Disconnect the grounded (negative) battery connection before making repairs or cleaning inside the enclosure.
5. Do not use flammable solvents for cleaning the compressor.
6. Radiator coolant is under pressure. Do not remove radiator cap quickly, it may cause spray of scalding coolant and severe burns to operator.
7. Make repairs only in clean, dry and well-lighted and well-ventilated areas.
8. Keep all parts of the body and any hand held tools or other metal objects away from exposed live parts of the electrical system.
9. Replace damaged fuel tanks or lines immediately. **DO NOT WELD** on or near fuel tanks or lines.
10. Make sure all personnel are out of the compressor before closing and/or replacing panels.

## 1.5 LIFTING

1. If the compressor is provided with a lifting bail, then lift by the bail. If no bail is provided, then lift by sling.
2. When lifting by helicopter, use a sling. Do not lift by unit lifting bail.
3. Inspect the entire lifting, rigging and supporting structure to ensure it is in good condition and has a rated capacity of at least the gross weight of the compressor plus 50%.

## **SECTION 2 DESCRIPTION**

### **2.1 INTRODUCTION**

Your Boss compressor is a gas/diesel driven Rotary Screw Compressor unit that provides superior performance and reliability along with a minimal amount of required maintenance.

### **2.2 ROTARY COMPRESSOR COMPONENTS COMPRESSOR DESCRIPTION**

The compressor assembly is a positive displacement, oil flood lubricated, screw type unit employing one stage of compression to achieve the desired pressure. Components include a housing (stator), two screws (rotors), gears, bearings and bearing supports.

In operation, two helical grooved rotors mesh to compress air. Inlet air entering the casing is compressed as the male lobes roll down the female grooves, pushing trapped atmospheric air along and compressing it in one stage of compression. This process delivers smooth-flowing air at full pressure to the receiver.

To illustrate the compression sequence, consider the action of the male lobe as similar to a ball. As a helix rotates, the ball (male lobe) meshes with the groove to start a compression cycle with trapped atmospheric air. As the ball moves down the groove, air is compressed. Atmospheric air fills in behind the ball preparing the groove for another compression cycle as rotation continues and the male lobe again meshes with the groove.

During the compression cycle, oil is injected into the compressor for the purpose of lubrication, cooling and sealing. Compressed air laden with oil leaves the compressor unit through a discharge port, which is designed to give optimum performance within the desired discharge pressure range.

#### **AIR FILTER**

The Rotary Screw Compressor unit and engine are protected by a high efficiency, two-stage air filtering system. This is a dry filter that requires maintenance when the air filter restriction gauge says it is time.

#### **OIL COOLING**

The compressor is an “oil flooded” compressor. The oil lubricates, seals and cools the internals of the compressors as it is injected into the compressor. The oil goes through the compressor with the air where it picks up the heat generated by the compression process then seals the spaces between moving parts and lubricates bearings. The hot oil must be cooled. It is separated from the air, passed through the oil cooler (mounted next to the engine radiator), through a thermostatic valve (that helps to rapidly warm cold oil at start-up), then through a full flow oil filter and then back into the compressor. See instructions 4.10 and 4.13 for oil filter element and air/oil separating element servicing.

## **AIR/OIL SEPARATOR**

At the compressor discharge the compressed air and the hot oil flow into a steel ASME coded pressure vessel (rated at 175 psig-250psig) that acts as a reservoir for the air and separates out the oil. From the bottom of this oil sump the oil leaves the vessel on its way to the oil cooler. The air and the slight oil mist still entrained in the air flow through the separator element, which removes the last of the oil from the air. The air passes on out to its final use and the separated oil goes through the scavenge line to the compressor to re-enter the system.

As the compressor air leaves the receiver it goes through a minimum pressure valve that is set to maintain at least 80 psig (55kpa) in the receiver when the compressor is running. The purpose of this pressure is to ensure that there is pressure to force the oil out of the bottom of the receiver, through the oil cooling system, so that sufficient oil is injected into the compressor.

## **CONTROL SYSTEM**

The Boss compressor system is simple to operate. Starting procedure is explained in section 3 and on the instrument panel door of the compressor. Each machine has an On/Off switch and a safety bypass switch that bypasses the safety shutdowns. Once the machine is “on line” and in the run position, control is automatic. The control system senses the need for air and adjusts the speed of the engine and compressor as well as the opening of the compressor inlet valve to supply the amount of air needed. If the air demand is zero, the engine and compressor “idle” and the inlet valve is shut to control the air entering the compressor. If the demand is maximum, the opposite happens, full speed and wide-open inlet valve. Intermediate air demands give intermediate speeds and valve openings for maximum operating efficiency. Service and adjustments are in section 4.14.

## **2.3 ENGINE COMPONENTS**

### **ENGINE DESCRIPTION**

The engine in each Boss compressor system is selected to have reserve horsepower and speed necessary to drive the compressor and all accessories when operating up to a discharge pressure 100 psig (686kpa) to 220 psig (1509kpa).

### **RADIATOR**

The radiator is selected to handle the heat load of the engine. Mounted next to the compressor oil cooler. Cooling air is moved through these two coolers with a specially selected engine fan. The system is designed to handle extreme heat conditions.

### **FUEL SYSTEM**

All units are supplied with fuel tank capacity adequate for a day’s normal operation, fuel filtering system and optional low fuel shutdown. See section 4.3 for fuel servicing.

### **MUFFLER**

Engine noise is reduced by a durable, low restriction engine muffler.

## **2.4 CHASSIS**

### **FRAME**

The entire compressor frame and body is “utilized” and constructed of 3/16" or 10 gauge steel plate, resulting in light weight while providing a much stronger body than conventional designs of light sheet metal over structural members.

## **2.5 ENCLOSURE**

Enclosure is 14 gauge metal with powder coat finish. Each access panel has lockable handles with mechanical props.

## **2.6 INSTRUMENT PANEL DOOR**

Lockable instrument panel doors provide access to all controls and gauges.

## **SECTION 3 OPERATION**

### **3.1 START UP PREPARATION**

1. Check engine and compressor oil levels. Do not overfill.
2. Check coolant level in radiator (Fill at coolant recovery bottle).
3. Check for fuel, oil and coolant leaks.
4. Check air cleaner, clamps and hoses.
5. Check battery connections.
6. Check and adjust tension of fan belts.

NOTE: This unit has minimum air pressure valve to assure compressor oil flow. There will be no airflow from the compressor if receiver pressure is less than 80 PSIG.

### **3.2 STARTING PROCEDURE**

1. Close service valves and move unloader valve to "START" position
2. Press and hold bypass button and turn starter switch to "START" position. If engine fails to start. DO NOT attempt to restart until cranking motor stops rotating. Before restarting, starter switch must be returned to "OFF" position
3. When engine starts, release starter switch and hold bypass button down until oil pressure reaches 15PSI then release. Maintain unloader valve at "START" position until engine is warm and operating smoothly, then move unloader valve to "RUN" position.

### **3.3 EMERGENCY SHUTDOWN PROCEDURE**

Turn start stop switch to "OFF" position

### **3.4 ROUTINE SHUTDOWN PROCEDURE**

1. Move unloader to start position
2. Allow compressor to run 2 to 3 minutes to cool.
3. Move on/off switch to "OFF" position

## SECTION 4 MAINTENANCE

### 4.1 ENGINE FUEL SPECIFICATIONS

#### WARNING

**DO NOT MIX GASOLINE OR ALCOHOL WITH DIESEL FUEL. THIS MIXTURE CAN CAUSE AN EXPLOSION.**

#### CAUTION

**DUE TO THE PRECISE TOLERANCES OF DIESEL INJECTION SYSTEMS, IT IS EXTREMELY IMPROTANT THAT THE FUEL BE KEPT CLEAN AND FREE OF DIRT OR WATER. DIRT OR WATER IN THE SYSTEM CAN CAUSE SEVERE DAMAGE TO BOTH THE INJECTION PUMP AND THE INJECTION NOZZLE.**

**USE ASTM NO.2D FUEL WITH A MINIMUM CETANE NUMBER OF 40. NO.2 DIESEL FUEL GIVES THE BEST ECONOMY AND PERFORMANCE UNDER MOST OPERATING CONDITIONS. SEE ENGINE MANUFACTURES OPERATORS/ INSTRUCTION MANUAL FOR THE PROPER ENGINE FUEL FOR THE BRAND ENGINE IN YOUR BOSS COMPRESSOR.**

#### HIGH ALTITUDE AND LOW TEMPERATURE FUELS

Fuels with cetane numbers higher than 40 may be needed in high altitudes or extremely low ambient temperatures to prevent misfires and excessive smoke.

#### COLD WEATHER FUEL

At opening temperatures below 0 degrees C (32 degrees F) use a blend of No.1D and No.2D fuels, also know as “winterized” No.2D. NOTE: No.1D fuel can be used; however, fuel economy will suffer.

Use low sulfur content fuel having a cloud point that is at least 10 degrees below the lower expected fuel temperature. Cloud point is the temperature at which wax crystals begin to form in diesel fuel.

The viscosity of the fuel must be kept above 1.3 centistokes to provide adequate fuel system lubrication.

#### ENGINE FUEL FILTER

See engine manufactures operator/instruction manual for the proper fuel filter replacement changing intervals for the brand engine in your Boss compressor.

#### WARNING

**KEEP HANDS AND FINGERS CLEAR OF FUEL FITTINGS. HIGH PRESSURE OF THE FUEL CAN CAUSE PENETRATION OF THE SKIN. SEEK IMMEDIATE MEDICAL ATTENTION IF SKIN IS BROKEN BY THE FUEL SPRAY.**

## 4.2 ENGINE OIL AND FILTER

See engine manufactures operator/instruction manual for the proper engine oil and filter changing intervals for the brand engine in your Boss compressor.

### OIL FILTER REPLACEMENT

1. Clean the area around the lubricating filter head.
2. Remove the filter.
3. Clean the o-ring surface of the filter head.

NOTE: The o-ring can stick on the filter head. Make sure it is removed.

4. Apply a light film of lubricating oil to the o-ring-sealing surface before installing.
5. Install the filter as specified by the filter manufacturer.

### CAUTION

**MECHANICAL OVER-TIGHTENING MAY DISTORT THE THREADS OR DAMAGE THE FILTER ELEMENT SEAL.**

## 4.3 ENGINE COOLING SPECIFICATIONS

Diesel engines require a balanced coolant mixture of water and ethylene glycol base antifreeze. This protects the engine cooling system from corrossions as well as freezing damage. The Boss compressor is shipped from the factory with a 50/50 mixture of water and ethylene glycol. In tropical climates where freeze protection is not required, glycol engine coolant should still be used. It will help prevent corrosion and pitting of cylinder liners. See engine manufactures operator/instruction manual for the proper engine coolant for the brand engine in your Boss compressor.

### MIXTURES:

Antifreeze concentration level should not exceed recommended levels. Doing so can cause cooling system failure.

- Use a high quality, low silicate antifreeze
- A mixture of 50% antifreeze and 50% water is required for temperatures above  $-37^{\circ}\text{C}$  ( $-34^{\circ}\text{F}$ ).
- A mixture of 60% antifreeze and 40% water us required for environments below  $-37^{\circ}\text{C}$  ( $-34^{\circ}\text{F}$ ). This provides protection to  $-54^{\circ}\text{C}$  ( $-65^{\circ}\text{F}$ ).
- Never exceed a 60% antifreeze and 40% water mix.

### ENGINE COOLING SYSTEM

All engines have a pressurized cooling system that contains a 50/50 mixture of water and ethylene glycol. Daily maintenance of the system includes a check of the coolant level, proper belt adjustment of fan and water pump drives, soundness of fan and cleanliness of the radiator and oil cooler to permit airflow. Further cooling system maintenance is defined in the engine maintenance manual.

## COOLANT LEVEL

Before each start-up, when radiator is cold, the coolant should be checked. When needed, refill with a 50/50 solution of water and ethylene glycol, DO NOT use 100% antifreeze for “topping off”.

### WARNING

**CHECK THE COOLANT LEVEL ONLY WHEN THE ENGINE IS STOPPED AND THE TEMPERATURE IS BELOW 160°F (70°C) FAILURE TO DO SO CAN CAUSE PERSONAL INJURY FROM HEATED COOLANT SPRAY.**

## 4.4 FAN

Check the fan for cracks, loose rivets, and bent or loose blades. Make sure it is securely mounted. Tighten the cap screws if loose. Replace damaged fans.

### WARNING

**NEVER USE THE FAN TO ROTATE THE ENGINE. THE BLADE(S) CAN BE DAMAGED CAUSING A FAN FAILURE, WHICH CAN RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE.**

## 4.5 RADIATOR PRESSURE CAP

If coolant continually spills from radiator through the overflow then the radiator cap should be tested and/or replaced with a cap of the same pressure rating, generally 13 PSI. Be sure cap is turned to the proper secure position.

## 4.6 RADIATOR

Any sign of leakage from the radiator may justify a pressure test to assure its soundness. Radiator leaks should only be repaired by qualified service people. Dirt that clogs the cooling fins of the radiator should be removed. The use of an air stream of high-pressure steam cleaner should be done with caution so as to not damage the delicate fins. Bent cooling fins will reduce the cooling capability of the radiator.

## 4.7 COMPRESSOR OIL

The life and proper operation of the compressor is dependent on adequate and clean compressor oil. DEXRON® - III Automatic Transmission Fluid is supplied with the new machine and should be used for proper level maintenance and for oil changes. We recommend that you use DEXRON® - III Automatic Transmission Fluid.

### WARNING

**DO NOT REMOVE CAPS OR OTHER COMPONENTS WHEN COMPRESSOR IS RUNNING OR PRESSURIZED. BEFORE DOING SO, STOP COMPRESSOR AND RELIEVE ALL INTERNAL PRESSURE.**

## COMPRESSOR OIL SPECIFICATIONS

It is permissible to use oils other than the ATF shown above; such as Hydraulic oil. If they are used then they must have at least the following minimum properties:

- ISO grade 32
- CPS No. 255675
- API Gravity -
- Viscosity, Kinematic
  - cst at 40 degrees C 33.6
  - cst at 100 degrees C 5.5
- Viscosity saybolt
  - SUS at 100 degrees F 173
  - SUS at 210 degrees F 45
- Viscosity index 98
- Pour point deg. C(deg F) -33(-27)
- Flash point deg.C(deg.F) 204(399)
- Oxidation stability
- Hours to 2.0 mg KOH/g acid no., ASTM D 943 >600

The advantage in using DEXRON® - III in the compressor is that it is good lubricant suitable to its application and it is readily available. There are other oils that may be used that have longer life. They are better able to stand the extreme operating conditions. Whether or not to use these oils is a decision that depends upon the operating conditions. Very frequent oil changes are necessary in extremely hot, dirty operating conditions and if the compressor is operating in a remote, difficult-to-reach service location then perhaps it would be better to use the DEXRON® - III because of availability and cost. If, however service is convenient and attentive so that the oil can be used for as long as it will provide good protection; then higher quality oils may be used that will extend the life of the compressor.

### WARNING

**BOSS DOES NOT RECOMMEND MIXING DIFFERENT TYPES OF OILS. WHEN CHANGING TO A DIFFERENT TYPE OIL, CLEAN COOLER, AIR/OIL RECEIVER AND LINES THOROUGHLY.**

### ADDING COMPRESSOR OIL

1. Level the compressor to assure oil level indicator will be accurate.
2. Remove any dirt around fill cap, which is located on or near the air/oil receiver and then remove the fill cap itself.
3. Inspect the fill cap for damage and cleanliness. Replace if necessary.
4. Proper oil can then be added until the oil level reaches halfway in the sight-level tube or the “bullseye”.
5. Replace full cap securely-never put cap on without tightening immediately.
6. Do not over fill the sump tank. This will cause oil to spray out of the blowdown valve and/or service valve.

## CAUTION

**DO NOT REPLACE FILL CAP WITH A PIPE CAP; SERIOUS INJURY OR DAMAGE COULD RESULT. THE THREADS ARE DIFFERENT. ALWAYS ENSURE A STRAIGHT THREAD FILL CAP IS USED.**

### CHANGING COMPRESSOR OIL

1. Oil and air filter will help prolong oil life. If the oil appears dirty or it has a foul smell it should be replaced.
2. Change compressor oil and filter every 500 hours.
3. Remove fill cap and drain oil from the bottom of the air/oil receiver. Oil will drain more quickly and completely if it is warm from operation.
4. Close all drains and replace oil with fresh oil to proper level. Replace fill cap and run the unit briefly to see if more oil needs to be added and to ensure there are no leaks.

### COMPRESSOR OIL FILTER

The oil filter in the compressor lubrication system is of the full flow spin-on canister type. Initially the filter should be replaced after the first 50 hours, then every 500 hours or sooner if indicated. A dirty filter can restrict oil flow, causing high oil temperature condition, which will result in a unit shutdown.

## CAUTION

**SUBSTITUTE FILTERS MAY HAVE INADEQUATE WORKING PRESSURE LIMITS, RESULTING IN ELEMENT LEAKAGE OR RUPTURE. REPLACEMENT FILTERS MUST BE THE SAME QUALITY AND TYPES AS THE ORIGINAL BOSS AIR COMPRESSORS FILTER.**

### COMPRESSOR OIL FILTER REPLACEMENT

1. Using a strap wrench, remove the old element and o-ring.
2. Clean o-ring seating surface.
3. Apply a light film of oil to the new o-ring.
4. Hand tighten new element until new o-ring is seated in the o-ring groove.
5. Continue tightening element by hand an additional  $\frac{1}{2}$  to  $\frac{3}{4}$  turn.
6. Restart machine and check for leaks.

## CAUTION

**MECHANICAL OVER-TIGHTENING MAY DISTORT THE THREADS OR DAMAGE THE FILTER ELEMENT SEAL.**

## **4.8 COMPRESSOR & ENGINE AIR FILTER MAINTENANCE**

### **ELEMENT REPLACEMENT**

1. Loosen the clamps that secure the dust cup to the body and remove the cover.
2. Empty the dirt from the dust cup.
3. Remove the element.
4. Clean the canister and dust cap with a damp cloth inside and out. **DO NOT** blow dirt out with compressor air.
5. At this time clean or replace the element.
6. Replace the element.
7. Reposition the cover and tighten the clamp, **INSTALL WITH “TOP” UP.**
8. Reset the air filter restriction indicator (if supplied) and the machine will be ready for operation.

### **CAUTION**

**WHEN CLEANING AN ELEMENT, THE ELEMENT WILL BE DAMAGED IF YOU EXCEED THE RECOMMENDED MAXIMUM PRESSURE FOR COMPRESSED AIR (30 PSI/200 KPA).**

### **CAUTION**

**DO NOT STRIKE THE ELEMENT AGAINST ANY HARD SURFACES AND POSSIBLY RUPTURE THE ELEMENT. NEVER BLOW DIRT OUT OF THE INTERIOR OF THE FILTER HOUSING. THIS MAY INTRODUCE DUST DOWNSTREAM OF THE FILTER. INSTEAD, USE A CLEAN DAMP CLOTH. DO NOT OIL ELEMENT.**

### **AIR FILTER ELEMENT CLEANING**

The air filter element is cleaned by using compressed air. The maximum amount of times that an element should be cleaned is (2) times; however the element should be used no longer than a period of one(1) year without changing.

Prior to cleaning an element, check the element for damage. Damaged elements must be replaced.

When cleaning the element with compressed air, never let the air pressure exceed 30 PSIG (200 kpa). Reverse flush the element by, directing the compressed air up and down the pleats in the filter media from the “clean side” of the element. Continue reverse flushing until all dust is removed. Should any oil or greasy dirt remain on the filter surface, the element should then be replaced.

### **ELEMENT INSPECTION:**

1. Place a bright light inside the element to inspect for damaged or leak.
2. Inspect all gaskets and gasket contact surfaces of the housing. Should faulty gaskets be evident, correct the condition immediately. If the clean element is to be stored for later use, it must be stored in a clean container.
3. After the element has been installed, inspect and tighten all air inlet connections prior to resuming operation.

## 4.9 COMPRESSOR OIL THERMOSTATIC VALVE

The oil thermostatic valve acts as a thermostatically controlled by-pass valve and allows varying amounts of oil, depending upon the temperature, to by-pass cooler during the warm up period. When circulated oil reaches a temperature of 140 °F, the valve closes the by-pass completely and all the oil is circulated through the cooler. The oil cooler by-pass is restricted enough to cause some warm oil to flow through the cooler during the warm-up period, maintaining a higher average compressor oil temperature. This reduces condensation in the oil system and also reduces the possibility of a slug of cold oil from the cooler, causing a momentary high restriction and a temporary reduction in the oil pressure, hence oil flow.

### CLEANING OIL THERMOSTAT

1. If it becomes necessary to take the thermostat apart and clean it, disassemble at the bolted flange and remove the element.
2. If coated or dirty, clean as necessary. The element and rubber seal ring should be cleaned only with hot water.
3. Inspect the element for bent or dented parts.
4. Replace any damaged part during cleaning and assembling the pipe openings should be closed with tape or plugs until pipe connections are made.

## 4.10 COMPRESSOR AIR/OIL SEPARATOR

### WARNING

**DO NOT REMOVE CAPS, PLUGS OR OTHER COMPONENTS WHEN COMPRESSOR IS RUNNING OR PRESSURIZED. PERSONAL INJURY WILL RESULT. BEFORE DOING SO, STOP COMPRESSOR AND RELIEVE ALL INTERNAL PRESSURE.**

The separator element is located in the top of the air-oil receiver/separator tank. Here the oil mist contained in the air is removed prior to the final discharge of air. Air should be taken only from the outlet service valves on the center of the top end of the separator-never directly from the receiver/separator fittings on the side of the tank. When the oil vapor in the discharge air becomes excessive, the separator element may need replacing. This should not be necessary more than once a year under normal operating conditions.

### SEPARATOR ELEMENT REPLACEMENT

1. The element may be replaced by removing the head from the top of separator and pulling the element out. **Only a factory element should be used as a replacement.**
2. The separator element flange must have a gasket on each side to seal the head on one side and the vessel on the other. The staple in each gasket must be left in the gasket, it acts as a static ground.
3. Re-torque the head bolts uniformly to a specification of 220ft-lb.(dry) or 170ft-lb. (wet) when replacing the separator head.

## 4.11 BELTS & BELT ADJUSTMENT

Visually inspect the belts. Replace belts if cracked or frayed. Check engine manual for proper belt tension.

## **4.12 CONTROLS-OPERATION AND ADJUSTMENTS**

The compressor system is designed to match air supply and engine performance with the demand. The components of the control system are, the blowdown valve, start-run solenoid, compressor inlet valve, pressure regulator and an engine air cylinder.

The start-run valve that is open in the start run position. This allows air to by-pass the pressure regulator and go directly to the compressor inlet valve, closing it and to the engine air cylinder, holding the throttle at idle. When switched to the run position, shutting off the by-pass air. Control air now has to go through the pressure regulator.

The pressure regulator is referred to as a positive type and its operation is proportional to system pressure. As pressure increases it opens, allowing air to pressurize the inlet valve and air cylinder. When there is an air demand, the pressure decreases and the regulator starts to close, relieving the pressure in the inlet valve and air cylinder. An orifice in the regulator bleeds the air out of control line between regulator, engine air cylinder and inlet valve supplies a signal proportional to the system pressure the inlet valve will modulate. With no air demand the pressure rises, the signal air from the regulator closes the inlet valve. When an air demand is present or the pressure falls, the air signal is removed allowing the inlet valve to open to match air demand.

The blowdown valve has two functions in the system. First it prevents excessive pressure in the start and unload modes by bleeding off the small amount of air being drawn in during idle. Secondly it relieves or blows down the system on shutdown. This valve is not adjustable.

### **ADJUSTMENT**

When performing control adjustments care must be taken in regard to safety as the compressor must be running. Be aware of moving parts, as well as, hot items, such as fans, belts and exhaust components.

### **IDLE OR UNLOAD SPEED ADJUSTMENT (For 100 PSI System)**

With the compressor warmed up and all service valves closed, move start-run switch to run position. Air pressure will build to 120 psig. If air pressure is less than 120 psig, adjust regulator up by turning the adjusting screw clockwise. If air pressure is greater than 120 psig, adjust regulator down by turning the adjusting screw counter-clockwise. Check engine speed with a photo tachometer.

If idle speed is not as listed in specifications, adjustment will be required.

Note: If your unit is rated at a higher pressure add 20psi to the working pressure for unload pressure; ex: 150 PSI working = 170 unload.

### **IDLE SPEED ADJUSTMENT PROCEDURES**

On the injection pump throttle arm, there are two adjusting screws. The air cylinder connected to the throttle arm, this air cylinder moves throttle to increase and decrease engine speed with air demand. When adjusting idle speed, the air cylinder should be fully extended moving throttle arm towards front of engine. To adjust idle speed, loosen locknut on adjusting screw towards rear of engine. Turning adjustment screw clockwise will increase speed. If proper speed cannot be obtained with the adjustment screws, it may require loosening the locknut on air cylinder shaft and adjusting clevis. By turning clevis onto shaft speed will increase, by turning clevis out, speed will decrease. After proper speed is set, tighten all locknuts.

## **PRESSURE REGULATOR ADJUSTMENT**

After setting idle speed and compressor is in run position, the pressure regulator adjustment can be checked and adjusted if required.

The air cylinder receives an air signal from the pressure regulator. This air cylinder controls engine speed with air demand. To adjust pressure regulator, with compressor in the run position, open service valve slightly to allow air to bleed out. By watching air pressure gauge note when air cylinder starts to retract, this should be approximately 105 psig. If cylinder does not start to retract until at a lower pressure, the regulator is set to low. The regulator has a locknut and adjustment screw. Loosen the locknut and turn adjustment screw clockwise to increase the pressure. Turning screw counter clockwise decreases pressure. After adjustment is complete, tighten locknut.

Note: If you unit is rated a higher pressure add 5 PSI to the working pressure; ex: 150 PSI working = 155 retract pressure.

## **RATED SPEED ADJUSTMENT**

With the compressor in a run position open service valve slowly until pressure gauge is reading 100 PSI (working pressure). Check that air cylinder is fully retracted, moving throttle arm to full speed and check the engine speed. Adjust the speed to within the specifications in the front of this manual. To adjust there are two adjusting screws on throttle arm, the adjusting screw towards rear of engine is the high-speed adjustment. Loosen locknut on adjustment screw by turning screw counter clockwise, speed increases, after setting speed to specifications, tighten locknut, close service valve and allow compressor to unload and return to idle.

## **4.13 INSTRUMENTS**

The standard control panel has gauges for air pressure, oil pressure, coolant temperature, ammeter and hourmeter. Also included is an ignition switch, start/run valve and safety bypass switch. The safety bypass switch cuts out the low oil pressure switch to permit starting. The low oil pressure switch is normally opens and closes upon activation. Safety shutdowns are also provided for high compressor oil temperature and high engine coolant temperature. These switches are normally closed and upon activation. If the compressor will not start or shuts down while in operation without an obvious malfunction, each switch can be checked individually by connecting a jumper wire across the terminal posts one switch at a time. The defective switch must be replaced.

NOTE: the existing wiring harness must be connected to the safety switches while making the above check.

## **4.14 BATTERY**

Batteries supplied with Boss compressors are selected to have ample cold cranking amperes for quick starts in inclement weather. Keep them fully charged and if replacement is necessary the replacement must be of equal capacity.

### **WARNING**

**BATTERY GAS CAN EXPLODE CAUSING ACID BURN TO SKIN AND BLINDNESS.  
DO NOT OVERCHARGE OR JUMP THE BATTERY INCORRECTLY.**

## 4.15 MAINTENANCE SCHEDULE

A good maintenance program is the key to long machine life. Follow a regular schedule of inspection and servicing, based on operating hours. Keep an accurate logbook for maintenance, servicing and operating hours. Use the factory recommended Periodic Maintenance schedule (based on favorable operating conditions) to serve as a guide to get long and efficient machine life. Regular service periods are recommended for normal service and operating conditions. For engine maintenance, refer to the engine manual where a detailed description of service instructions is given. For continuous duty, extreme temperature, etc., service more frequently. Neglecting routine maintenance can result in machine failure or permanent damage.

### WARNING

**DO NOT REMOVE CAPS, PLUGS OR OTHER COMPONENTS WHEN COMPRESSOR IS RUNNING OR PRESSURIZED. SEVERE PERSONAL INJURY MAY RESULT. STOP COMPRESSOR AND RELIEVE ALL INTERNAL PRESSURE BEFORE DOING SO.**

## 4.16 DAILY OPERATION

Prior to starting the machine, it is necessary to check the oil level in the sump. Should the level be low, add the necessary amount. If the addition of oil become too frequent, a simple problem may have developed which is causing this excessive loss. See the troubleshooting section under Excessive Oil Consumption for a probable cause and remedy. Also check the linkage prior to starting.

NOTE: the radiator and engine cooling system should be drained and flushed every two years. Replace the coolant with a mixture of 50% ethylene glycol and 50% water. Do not use a leak sealing type of antifreeze. Should a 100% water solution be used, a rust inhibitor must be added.

After a routine start has been made, observe the instrument panel gauges. After the machine has warmed up, it is recommended that general check on the overall machine and instrument panel be made to assure the compressor is running properly. Also check the air filter maintenance indicator (if supplied). Should the indicators show red, clean or replace the elements immediately. (See engine manual.)

## 4.17 MAINTENANCE SCHEDULE CHART

INTERVAL	REQUIRED MAINTENANCE	REFERENCE
EVERY 10 HOURS OR DAILY	1. Check compressor system fluid level.	
	2. Check radiator coolant level in coolant recovery tank.	
	3. Check fuel supply after running.	
	4. Check air filter maintenance indicator (if equipped).	
	5. Check for fuel, oil, air, and water leaks.	
	6. Check battery mounting for security.	
	7. Drain water and sediment from fuel tank.	Drain at bottom of tank.
EVERY 50 HOURS OR WEEKLY	1. Clean return line orifice after initial start only.	
	2. Drain water from compressor oil reservoir. More frequent draining may be required under high humidity conditions.	Drain at bottom of reservoir.
	3. Inspecting lifting frame (and before each lift).	
EVER 500 HOURS	1. Change air end fluid and fluid filter elements.	
	2. Clean battery terminals, check battery hold-downs and cables for wear.	
	3. Check air filter piping, fittings, and clamps.	
	4. Check radiator hoses and clamps.	
	5. Check engine and air end mounts.	
	6. Check fan belt tension.	
EVERY 1000 HOURS	1. Install new air filter elements (shorter intervals may be necessary under dusty conditions).	
	2. Check all door gaskets, hinges, and latches to maintain acoustics seal.	
	3. Drain engine radiator coolant. Clean and flush cooling system. Refill with coolant.	
	4. Check engine and compressor shut down switches.	
	5. Check reservoir pressure relief valve.	
	6. Install new fuel filter and water separator elements	

**NOTICE: Check engine operator's manual for required service and service intervals.**

#### 4.18 RECOMMENDED SPARE PARTS LIST

ENGINE	JD4045
ENGINE AIR FILTER ELEMENT	302014
COMPRESSOR OIL FILTER ELEMENT	124-28093
SEPARATOR AIR/OIL ELEMENT	124-25700
COMPRESSOR AIR FILTER ELEMENT	302014

COMPLETE KITS ARE ALSO AVAILABLE THAT INCLUDE ALL THE ABOVE PARTS.

KIT FOR JOHN DEERE 4045 WITH 10G COMPRESSOR.....80114

#### 4.19 PROCEDURE FOR ORDERING PARTS

Parts can be ordered directly from the factory. When ordering parts always indicate the serial number of the unit. For parts call 1-800-635-6587.

## SECTION 5 TROUBLESHOOTING

### 5.1 TROUBLESHOOTING

If the unit will not crank when a “START” is attempted, DO NOT jump-start without first considering the following:

- If there is obvious battery damage such as a cracked or broken case, replace battery
  - Check for loose battery cables. Tighten if necessary
  - Check terminals for corrosion, clean if necessary
1. Connect the first jumper cable from positive “+” (red) terminal of the discharged battery to the positive “+” (red) terminal on the booster battery. NEVER connect “+” (red) to “-” (black). DO NOT PERMIT vehicles to touch each other as this could establish a ground connection and counteract the benefits of this procedure.
  2. Connect one end of second jumper cable to the ground negative “-” (black) terminal of the booster battery. Connect the other end of this jumper cable to a solid, stationary metallic point on the compressor with the discharged battery but at a point AWAY from the battery (at least 18 inches or more) if possible. DO NOT connect directly to the negative post of the discharged battery.
  3. Disconnect positive battery terminal whenever using a high rate charge. Start the compressor in accordance with normal procedure. When the engine is operating smoothly disconnect the jumper cable end at the engine block before disconnecting the jumper cables from the other position.

Your Boss compressor has safety switches that protect the engine and compressor from permanent damage. The safety switches are as follows:

1. Engine Oil Pressure: This is a normally open switch that closes with 15 PSI of engine oil pressure.
2. Engine Coolant Temperature: This is a normally closed that opens a 220° F.
3. Compressor Oil Temperature: This is a normally closed switch that opens at 245°F.

All above switches are in series with the power feed to the engine fuel solenoid. If any of the switches open, power to the solenoid is lost and the engine shuts down.

#### WARNING

**OPERATING WITHOUT SAFETY SWITCHES COULD CAUSE SEVERE PERSONAL INJURY OR DEATH AND CAUSE SIGNIFICANT PROPERTY DAMAGE. IT WILL VOID EXISTING WARRANTIES. ALWAYS ENSURE THAT ALL SAFETY SYSTEMS ARE FUNCTIONAL.**

## 5.2 TROUBLESHOOTING CHART

The information contained in the troubleshooting chart has been compiled from field report data and factory experience. It contains symptoms and usual causes for the report data and factory experience. It contains symptoms and usual causes for the described problems; however, do not assume that these are the only problems that may occur. All available data concerning the trouble should be systematically analyzed. Before undertaking any repairs or component replacement procedures, a detailed visual inspection is worth performing for almost all problems and may avoid unnecessary additional damage to the machine.

- Check for loose wiring.
- Check for damaged piping.
- Check for parts damaged by heat or an electrical short circuit, usually apparent by discoloration or a burnt odor.

Should your problem persist after making the recommended checks, consult your nearest Boss Air Compressor distributor or the Boss Air Compressor factory by calling 1-800-635-6587 or (219) 324-7776.

SYMPTOM	CAUSE	REMEDY
Machine will not crank.	Faulty battery connections.	Check the battery terminals for tightness and corrosion.
	Low battery voltage.	a. Check voltage and charge or replace the battery. b. Unit may be jump-started.
	Faulty ignition switch.	Replace the switch.
	Starter solenoid connections are loose or corroded.	Clean and tighten connections.
	Faulty starter solenoid or starter.	Repair or replace the faulty components.
Machine cranks, but will not start.	No fuel.	a. Check fuel level and add if necessary. b. If the unit has ran out of fuel it may be necessary to prime the fuel system.
	Air in the fuel system	a. Check fuel line connections and tighten or repair. b. Prime the fuel system.
	Defective safety bypass switch.	Replace the switch.
	Fuel solenoid inoperative.	a. With ignition and safety bypass on, check for voltage at the solenoid. b. Check safety switches.

SYMPTOM	CAUSE	REMEDY	
Machine shuts down with air demand present.	Out of fuel	Check fuel level and add fuel if necessary.	
	Fuel filter restricted.	Change fuel filter.	
	Safety shutdown switches activated.		a. Engine coolant level low; add coolant.
			b. Compressor oil and radiator flow restricted; clean coolers.
			c. Fan belts slipping or broken; repair or replace.
			d. Compressor oil low; add oil.
e. Engine oil level low; add oil.			
f. Compressor oil filter restricted; change the filter.			
g. Engine oil filter restricted; change the filter.			
Defective safety shutdown switch.	Check the shutdown switches.		
Thermostatic valve malfunctioning.	Clean or replace the thermostatic element.		
Machine will not build up pressure	Defective gauge.	Replace the gauge.	
	Air demand too great.	Check service lines for leaks or open valves.	
	Blowdown valve open.	a. Check to see fit the blowdown valve is getting a pilot signal.	
		b. Repair or service valve.	
Faulty coupling.	Replace the coupling.		
With no demand the compressor builds excessive pressure.	Defective gauge.	Replace the gauge.	
	Air cylinder not fully extending.	a. Check for restrictions in the control lines.	
		b. Repair or replace control air cylinder.	
	Pressure regulator not properly adjusted or faulty.	a. Adjust the regulator b. Repair or replace the regulator.	
Insufficient air delivery	Compressor undersized for the air requirement.	Recheck maximum air requirement.	
	Engine speed low.	Check speed and adjust as necessary.	
	Air intake restricted	a. Check air filter for dirt and make sure the indicator is working.	
		b. Look for obstructions in the filter and inlet piping.	
		c. Check that the inlet valve is opening fully.	
Faulty drive coupling.	Replace the coupling.		

<b>SYMPTOM</b>	<b>CAUSE</b>	<b>REMEDY</b>
Excessive compressor oil consumption.	Oil reserve over filled.	Drain to the proper level.
	Leak in the compressor oil system.	Check all piping lines and connections; repair as necessary.
	Oil scavenge line not removing the oil from the separator.	a. Check scavenge line and its check valve for restrictions; clear as necessary.
		b. Make sure that the scavenge line reaches the bottom of the separator.
	Separator element damaged.	Replace the element.
Compressor undersized for the air requirement.	Operating at low pressures increases the oil carry over; recheck the load requirements.	
Compressor overheating	Unit being operating in an area with limited fresh air.	Reposition the unit or open up the confinement.
	Fan belts are loose or broken.	Tighten or replace.
	Dirt build up on the coolers.	Clean the cooler thoroughly. Be careful not to damage the fins.
	Compressor level low.	Check and fill to proper level.
	Compressor oil filter dirty.	Replace the filter.
	Thermostatic valve malfunctioning.	Clean or replace the element.
	Restriction in the compressor oil lines.	Clean or replace the lines.
	Restriction inside the oil cooler.	Clean internal tubes of the cooler.
	Operating the compressor with the panels removed.	Reinstall panels.
Coolant level low.	Add coolant to the proper level.	
High fuel consumption	Leaks in the fuel system.	Check all the fuel lines and connections; repair or replace as necessary.
	Engine not at correct operating speed.	Adjust the engine to its proper speed.
	Pressure to regulator set too high.	Adjust regulator to correct pressure for the unit.
	Engine air intake is restricted.	Inspect the air intake system checking for any restriction; clean repair or replace as necessary.
	Incorrect injection timing.	Adjust to specifications in the engine manual.

## WARRANTY

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

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

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

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

## SUMMARY OF MAIN WARRANTY PROVISIONS

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

The BOSS warranty applies only to new and unused products, which, after shipment from the factory, have not been altered, changed, repaired or mistreated in any manner whatsoever. Normal maintenance items such as lubricants and filters are not warrantable items.

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

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

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

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

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

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

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

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

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

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

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

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

## **WARRANTY/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](mailto: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.

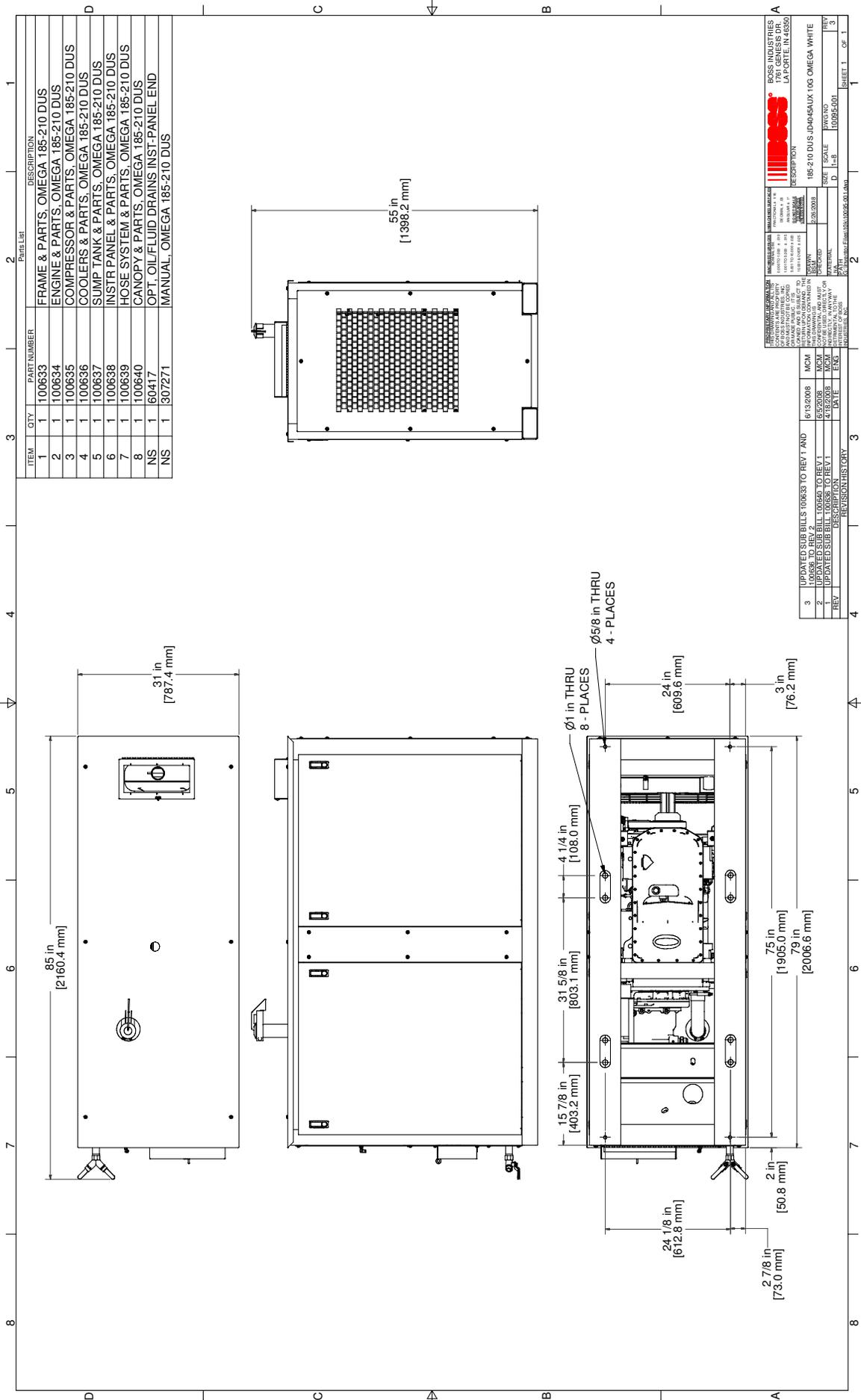
3. Visible Loss or Damage  
Any external evidence of loss or damage must be noted on the Freight Bill or Express Receipt, and signed by the carrier's agent. Failure to adequately describe such external evidence of loss, or damage may result in the carrier refusing to honor a damage claim. The carrier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

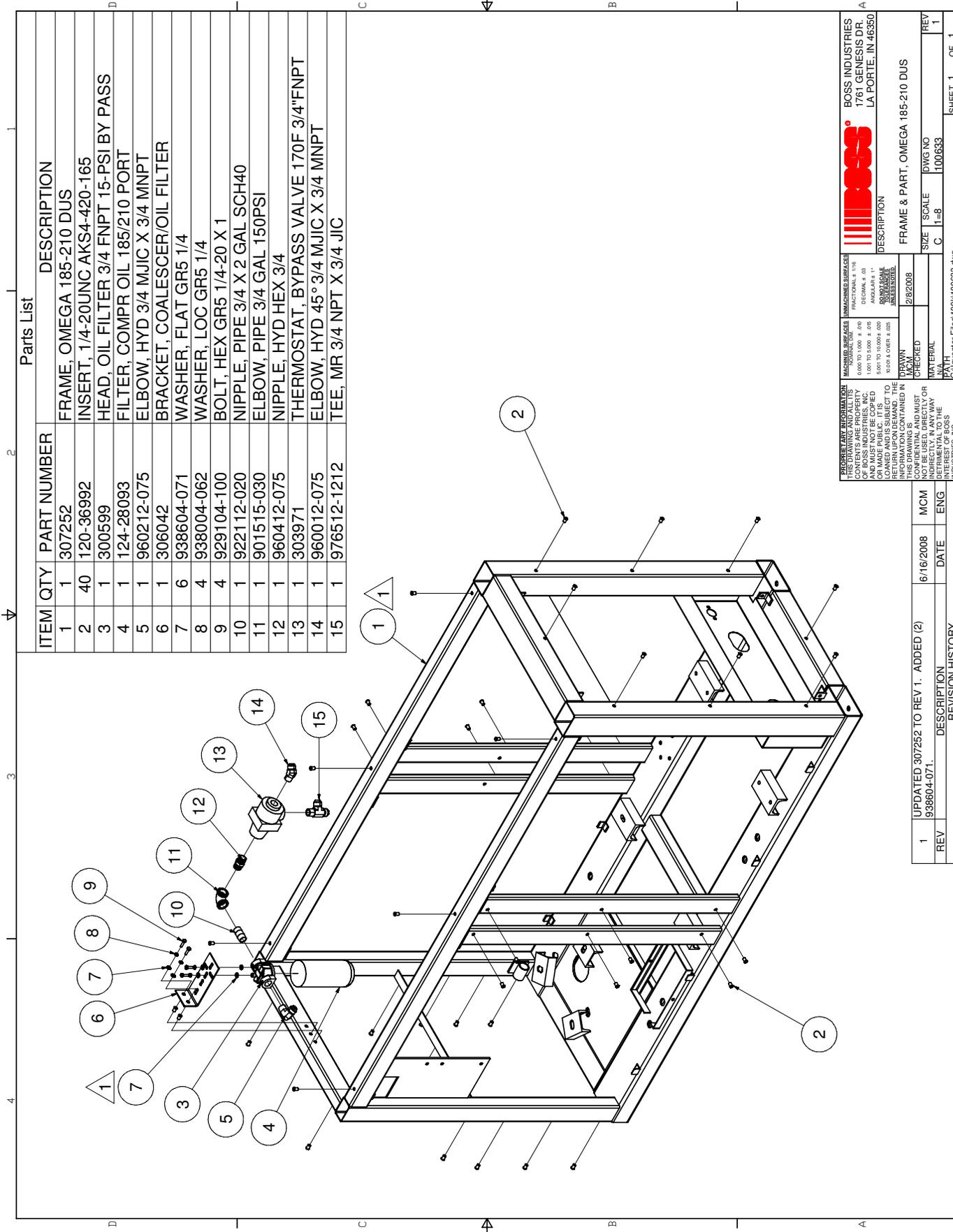
## **SCREW COMPRESSOR AIR-END EXCHANGE PROGRAM**

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.

# NOTES

**SECTION 6**  
**ASSEMBLY DRAWINGS**





Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	307252	FRAME, OMEGA 185-210 DUS
2	40	120-36992	INSERT, 1/4-20UNC.AKS4-420-165
3	1	300599	HEAD, OIL FILTER 3/4 FNPT 15-PSI BY PASS
4	1	124-28093	FILTER, COMPR OIL 185/210 PORT
5	1	960212-075	ELBOW, HYD 3/4 MJIC X 3/4 MNPT
6	1	306042	BRACKET, COALESCER/OIL FILTER
7	6	938604-071	WASHER, FLAT GR5 1/4
8	4	938004-062	WASHER, LOC GR5 1/4
9	4	929104-100	BOLT, HEX GR5 1/4-20 X 1
10	1	922112-020	NIPPLE, PIPE 3/4 X 2 GAL SCH40
11	1	901515-030	ELBOW, PIPE 3/4 GAL 150PSI
12	1	960412-075	NIPPLE, HYD HEX 3/4
13	1	303971	THERMOSTAT, BYPASS VALVE 170F 3/4"FNPT
14	1	960012-075	ELBOW, HYD 45° 3/4 MJIC X 3/4 MNPT
15	1	976512-1212	TEE, MR 3/4 NPT X 3/4 JIC

**PROPRIETARY INFORMATION**  
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**MANUFACTURING TOLERANCES UNLESS OTHERWISE SPECIFIED**  
 DIMENSIONS IN INCHES: 0.000 TO 1.000 ± 0.010  
 1.000 TO 5.000 ± 0.015  
 5.000 TO 10.000 ± 0.020  
 10.000 TO 25.000 ± 0.030  
 25.000 TO 50.000 ± 0.040  
 50.000 TO 100.000 ± 0.050

**DATE** 2/8/2008  
**CHECKED**  
**DRAWN**  
**MATERIAL**

**BOSS INDUSTRIES**  
 1761 GENESIS DR.  
 LA PORTE, IN 46350

**DESCRIPTION**  
 FRAME & PART, OMEGA 185-210 DUS

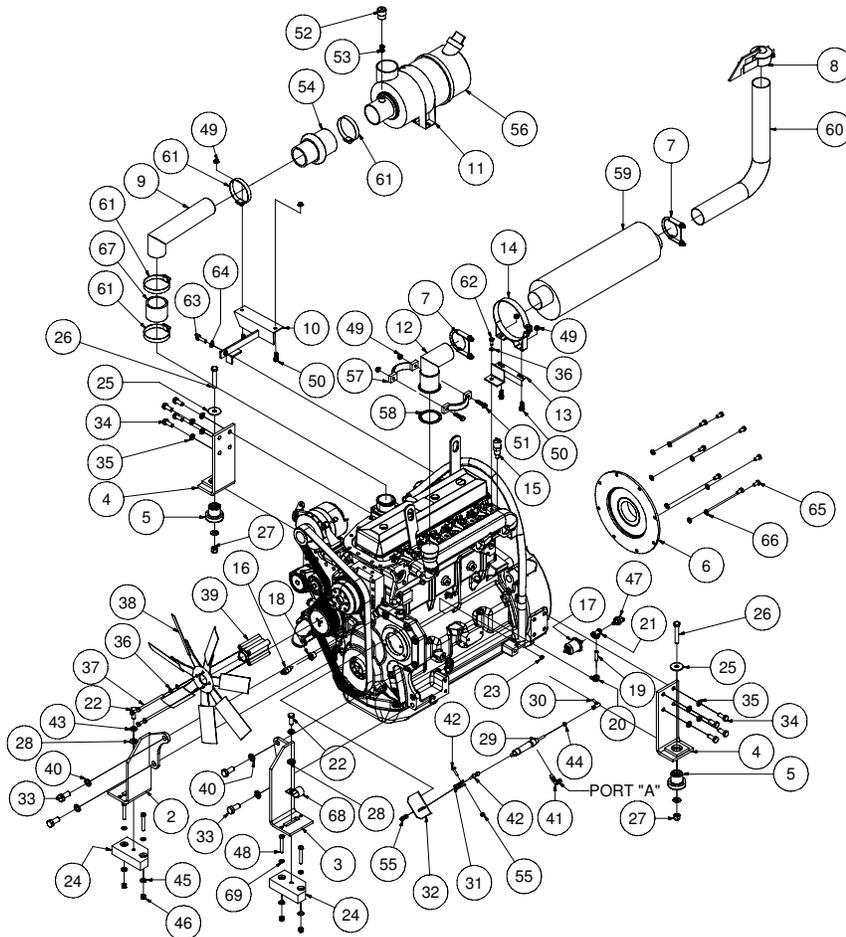
**SIZE** SCALE 1=8  
**DWG NO** 100633  
**REV** C 1  
**REV** 1 OF 1

**PATH** C:\InRoads\Files\1006100633.dwg

REV	DESCRIPTION	DATE	ENG
1	UPDATED 307252 TO REV 1. ADDED (2) 938604-071.	6/16/2008	MCM

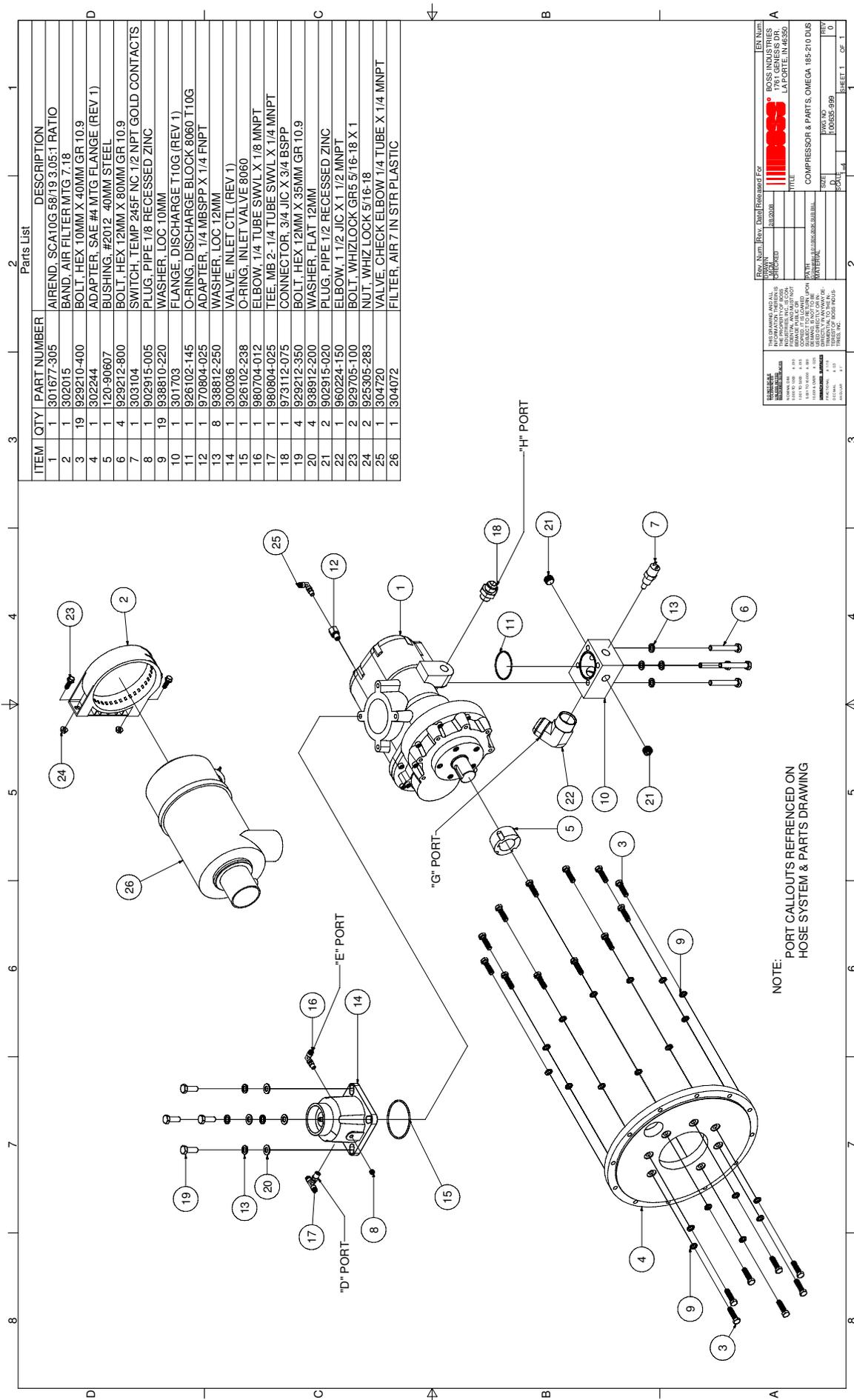
REVISION HISTORY

Parts List				Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION	ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	307207	ENGINE, JD4045 W SAE-A AUX DRIVE	38	1	156-35136	FAN,20 IN PUSHER (METAL) (O)
2	1	150-90729	MOUNT, ENGINE FR RH (O) (REV E)	39	1	304934	SPACER, FAN JD 3 3/4" LG.
3	1	150-90665	MOUNT, ENGINE FR LH (O) (REV D)	40	4	938816-350	WASHER, LOC 16MM
4	2	150-90673	MOUNT,ENGINE REAR (O)	41	1	980704-012M	ELBOW, HYD 1/8 MNPT X 1/4 TUBE SWVL W/HOLE
5	2	302764	ISOLATOR, VIBRATION 1000 LB 185-210				
6	1	154-90975	COUPLING, FLEX, 185-250	42	3	929104-100	BOLT, HEX GR5 1/4-20 X 1
7	2	980100-250	CLAMP, EXHAUST 2 1/2	43	2	937808-125	WASHER, LOC GR8 1/2
8	1	302423-100	CAP, RAIN 2 1/2	44	1	924604-164	NUT, JAM 1/4-28
9	1	158-65476	TUBE, INTAKE 90DG 2 1/2 185DRG	45	4	938206-071	WASHER, FLAT GR8 3/8
10	1	150-90666	BRACKET,ASSY ENG. AIR CLEANER	46	4	925506-198	NUT, NYLOC GR8 3/8-16
11	1	302015	BAND, AIR FILTER MTG 7.18	47	1	301834	SWITCH, PRESS 18# N.O. 1/8MNPT
12	1	158-65921	EXHAUST ELBOW ASSY	48	4	929806-250	BOLT, HEX GR8 3/8-16 X 2 1/2
13	1	158-65875	BRACKET MUFFLER (REV C)	49	6	925305-283	NUT, WHIZ LOCK 5/16-18
14	1	120-34188	CLAMP, MUFFLER MOUNTING 6 1/2	50	4	929705-100	BOLT, WHIZLOCK GR5 5/16-18 X 1
15	1	303150	SWITCH, TEMP 220 F NC GOLD CONTACTS	51	2	929705-150	BOLT, WHIZLOCK GR5 5/16-18 X 1 1/2
16	1	123-33230	SENDER, COOLANT TEMPERATURE 3/8	52	1	300853	INDICATOR, AIR FILTER 25"H2O
17	1	123-19735	SENDER, OIL PRESSURE	53	1	960402-012	NIPPLE, HYD HEX 1/8
18	1	907602-015	BUSHING, RED 1/2 X 3/8 GAL	54	1	301104-325	HOSE, HUMP RED 3 X 2 1/2
19	1	922102-015	NIPPLE, PIPE 1/8 X 1 1/2 GAL SCH40	55	3	924304-145	NUT, NYLOC GR5 1/4-20
20	1	901115-005	ELBOW, PIPE STREET 1/8 GAL	56	1	304072	FILTER, AIR 7 IN STR PLASTIC
21	1	902415-005	TEE, PIPE 1/8 GAL 150PSI	57	2	120-28144	CLAMP, EXHAUST HALF
22	2	929808-125	BOLT, HEX GR8 1/2-13 X 1 1/4	58	1	126-28145	GASKET,EXHAUST-JD
23	1	924404-145	NUT, NYLOC GR5 1/4-28	59	1	124-65589	MUFFLER, 185-210-250 JD02
24	2	305891	SPACER, ENGINE FRONT OMEGA TOOL JD4045 (REV 1)	60	1	121-90614	TUBE, EXHAUST 250
25	2	120-16832	WASHER, SNUBBING .531 ID (B)	61	4	300033-250	CLAMP, AIR INLET HOSE 2 1/2
26	2	929808-300	BOLT, HEX GR8 1/2-13 X 3	62	1	928008-200	BOLT, HEX 8MM X 20MM GR8.8
27	2	925508-262	NUT, NYLOC GR8 1/2-13	63	1	928010-350	BOLT, HEX 10MM X 35MM GR8.8
28	4	938208-112	WASHER, FLAT GR8 1/2	64	1	938810-220	WASHER, LOC 10MM
29	1	120-36345	CYLINDER, AIR ENGINE SPEED	65	8	929806-075	BOLT, HEX GR8 3/8-16 X 3/4
30	1	120-19071	BALL JOINT, 1/4-28 THRD	66	8	937806-094	WASHER, LOC GR8 3/8
31	1	158-36347	BRACKET,PIVOT AIR CYLINDER	67	.187 FT	104-62024	HOSE, 2 1/2 ID
32	1	307055	BRACKET, AIR CYLINDER	68	1	300112	CLAMP, HOSE 1 3/16 I.D.
33	4	929216-350	BOLT, HEX GR10.9 16MM X 35MM	69	4	938605-071	WASHER, FLAT GR5 5/16
34	8	929212-300	BOLT, HEX 12MM X 30MM GR 10.9	NS	1	300033-300	CLAMP, AIR INLET 3
35	8	938812-250	WASHER, LOC 12MM	NS	1 FT	101-13092	TUBING, BUNDYWELD 1/4 OD X .028
36	5	938808-200	WASHER, LOC 8MM	NS	1	123-65483	HARNES, ENGINE DF 4045
37	4	929208-120	BOLT, HEX 8MM X 120MM GR 10.9	NS	1	230-34507	INJECTOR, RETURN FUEL



NOTE:  
PORT CALLOUTS REFERENCED ON  
HOSE SYSTEM & PARTS DRAWING

<small>         REVISIONS          1. 04/10/08          2. 04/10/08          3. 04/10/08          4. 04/10/08          5. 04/10/08          6. 04/10/08          7. 04/10/08          8. 04/10/08          9. 04/10/08          10. 04/10/08          11. 04/10/08          12. 04/10/08          13. 04/10/08          14. 04/10/08          15. 04/10/08          16. 04/10/08          17. 04/10/08          18. 04/10/08          19. 04/10/08          20. 04/10/08          21. 04/10/08          22. 04/10/08          23. 04/10/08          24. 04/10/08          25. 04/10/08          26. 04/10/08          27. 04/10/08          28. 04/10/08          29. 04/10/08          30. 04/10/08          31. 04/10/08          32. 04/10/08          33. 04/10/08          34. 04/10/08          35. 04/10/08          36. 04/10/08          37. 04/10/08          38. 04/10/08          39. 04/10/08          40. 04/10/08          41. 04/10/08          42. 04/10/08          43. 04/10/08          44. 04/10/08          45. 04/10/08          46. 04/10/08          47. 04/10/08          48. 04/10/08          49. 04/10/08          50. 04/10/08          51. 04/10/08          52. 04/10/08          53. 04/10/08          54. 04/10/08          55. 04/10/08          56. 04/10/08          57. 04/10/08          58. 04/10/08          59. 04/10/08          60. 04/10/08          61. 04/10/08          62. 04/10/08          63. 04/10/08          64. 04/10/08          65. 04/10/08          66. 04/10/08          67. 04/10/08          68. 04/10/08          69. 04/10/08          70. 04/10/08          71. 04/10/08          72. 04/10/08          73. 04/10/08          74. 04/10/08          75. 04/10/08          76. 04/10/08          77. 04/10/08          78. 04/10/08          79. 04/10/08          80. 04/10/08          81. 04/10/08          82. 04/10/08          83. 04/10/08          84. 04/10/08          85. 04/10/08          86. 04/10/08          87. 04/10/08          88. 04/10/08          89. 04/10/08          90. 04/10/08          91. 04/10/08          92. 04/10/08          93. 04/10/08          94. 04/10/08          95. 04/10/08          96. 04/10/08          97. 04/10/08          98. 04/10/08          99. 04/10/08          100. 04/10/08       </small>	<small>         THIS DRAWING AND ALL INFORMATION THEREIN IS THE PROPERTY OF BOSS INDUSTRIES, INC. NO COPY, REPRODUCTION, OR DISSEMINATION OF THIS DRAWING OR INFORMATION HEREIN IS TO BE MADE PUBLIC OR COPIED, REPRODUCED, OR TRANSMITTED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION OF BOSS INDUSTRIES, INC.       </small>	<small>         Rev. Num.   Rev. Date   Released For          DRAWN: MCH   2/8/2008          CHECKED: [Signature]       </small>	<small>         EN Num.          BOSS INDUSTRIES          1761 GENESIS DR.          LA PORTE, IN 46350       </small>
<small>         TITLE          ENGINE &amp; PARTS, OMEGA 185-210 DUS       </small>			<small>         PATH          C:\WORK\100634-999\SUB       </small>
<small>         MATERIAL          100634-999       </small>		<small>         DWG NO          100634-999       </small>	<small>         REV          0       </small>
<small>         SCALE          1:1       </small>		<small>         SHEET 1 OF 1       </small>	

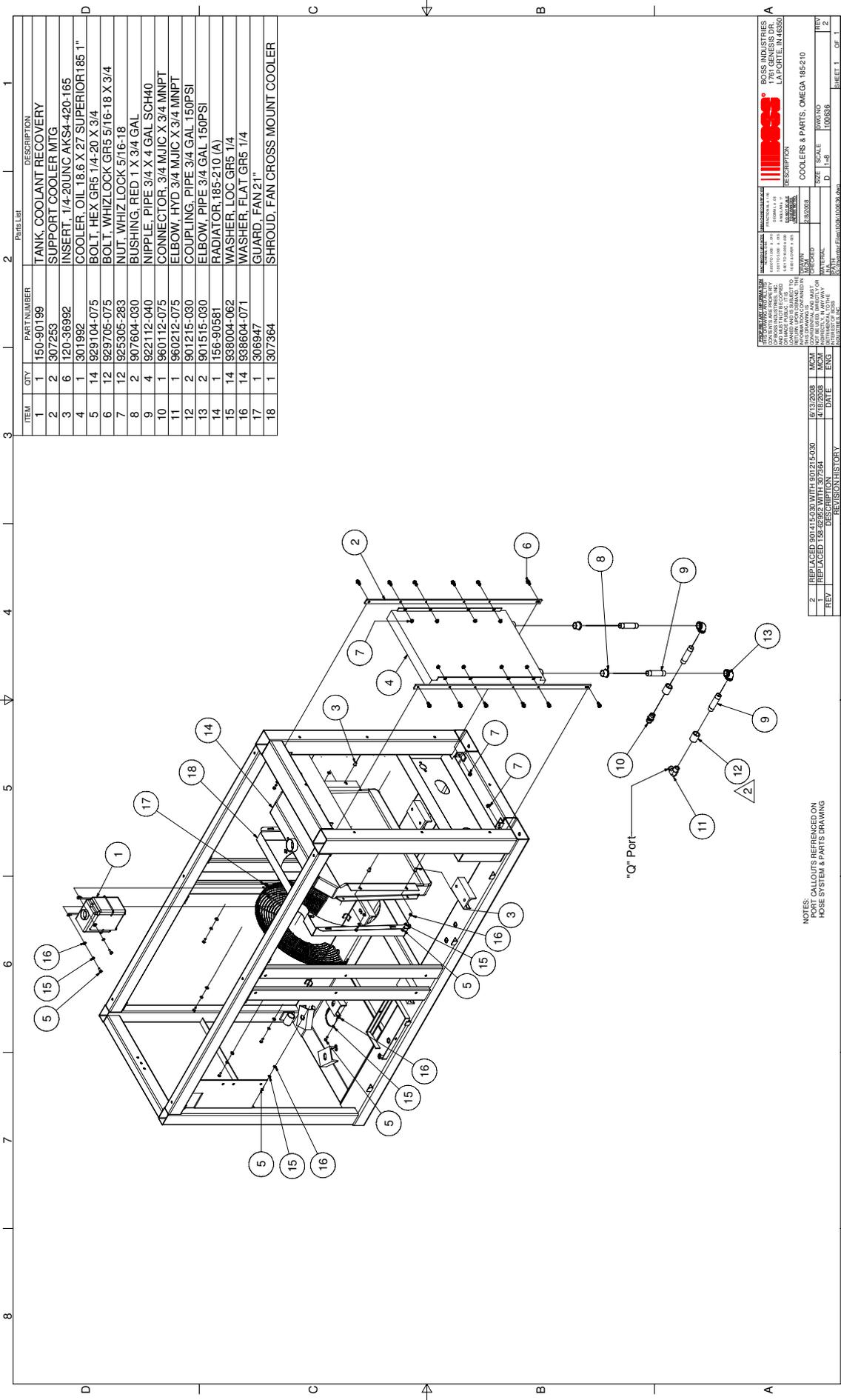


ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	301677-305	AIREND, SCA10G 58/19 3.05:1 RATIO
2	1	302015	BAND, AIR FILTER MTG, 7.18
3	19	929210-400	BOLT, HEX 10MM X 40MM GR 10.9
4	1	302244	ADAPTER, SAE #4 MTG FLANGE (REV.1)
5	1	120-90607	BUSHING, #2012 40MM STEEL
6	4	929212-800	BOLT, HEX 12MM X 80MM GR 10.9
7	1	303104	SWITCH, TEMP 245F NC 1/2 NPT GOLD CONTACTS
8	1	902915-005	PLUG, PIPE 1/8 RECESSED ZINC
9	19	938810-220	WASHER, LOC 10MM
10	1	301703	FLANGE, DISCHARGE T10G, (REV. 1)
11	1	926102-145	O-RING, DISCHARGE BLOCK 8060 T10G
12	1	970804-025	ADAPTER, 1/4 MBSPP X 1/4 FNPT
13	8	938812-250	WASHER, LOC 12MM
14	1	300036	VALVE, INLET CTL (REV. 1)
15	1	926102-238	O-RING, INLET VALVE 8060
16	1	960704-012	ELBOW, 1/4 TUBE SWVL X 1/8 MNPT
17	1	980804-025	TEE, MB 2-1/4 TUBE SWVL X 1/4 MNPT
18	1	973112-075	CONNECTOR, 3/4 JIC X 3/4 BSPP
19	4	929212-350	BOLT, HEX 12MM X 35MM GR 10.9
20	4	938912-200	WASHER, FLAT 12MM
21	2	902915-020	PLUG, PIPE 1/2 RECESSED ZINC
22	1	960224-150	ELBOW, 1 1/2 JIC X 1 1/2 MNPT
23	2	929705-100	BOLT, WHIZLOCK GR5 5/16-18 X 1
24	2	925305-283	NUT, WHIZ LOCK 9/16-18
25	1	304720	VALVE, CHECK ELBOW 1/4 TUBE X 1/4 MNPT
26	1	304072	FILTER, AIR 7 IN STR PLASTIC

2 Parts List

Rev. Num. Rev. Data Released For  
 103-2038  
 BOSS INDUSTRIES  
 103-2038  
 L.A. PORTEIL IN 44230  
 TITLE  
 COMPRESSOR & PARTS, OMEGA 185-210 DUS  
 MATERIAL  
 1000355-999  
 10  
 0  
 SHEET 1 OF 1

NOTE: PORT CALLOUTS REFERENCED ON HOSE SYSTEM & PARTS DRAWING



ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	150-90199	TANK, COOLANT RECOVERY
2	2	307253	SUPPORT COOLER MTG
3	6	120-36992	INSERT, 1/4-20UNC, AKS4-420-165
4	1	301992	COOLER, OIL 18.6 X 27 SUPERIOR 185 1"
5	14	929104-075	BOLT, HEX GR5 1/4-20 X 3/4
6	12	929705-075	BOLT, WHIZLOCK GR5 5/16-18 X 3/4
7	12	925305-283	NUT, WHIZLOCK 5/16-18
8	4	907604-030	BUSHING, RED 1 X 3/4 GAL
9	4	922112-040	NIPPLE, PIPE 3/4 X 4 GAL, SCH40
10	1	960112-075	CONNECTOR, 3/4 MUIX X 3/4 MNPT
11	1	960212-075	ELBOW, HYD 3/4 MUIX X 3/4 MNPT
12	2	901215-030	COUPLING, PIPE 3/4 GAL 150PSI
13	2	901515-030	ELBOW, PIPE 3/4 GAL 150PSI
14	1	156-90581	RADIATOR, 185-210 (A)
15	14	938004-062	WASHER, LOC GR5 1/4
16	14	938604-071	GUARD, FAN 21"
17	1	306947	SHROUD, FAN CROSS MOUNT COOLER
18	1	307364	SHROUD, FAN CROSS MOUNT COOLER

**ROSS INDUSTRIES**  
1761 GENESIS DR.  
LA PORTE, IN 46350

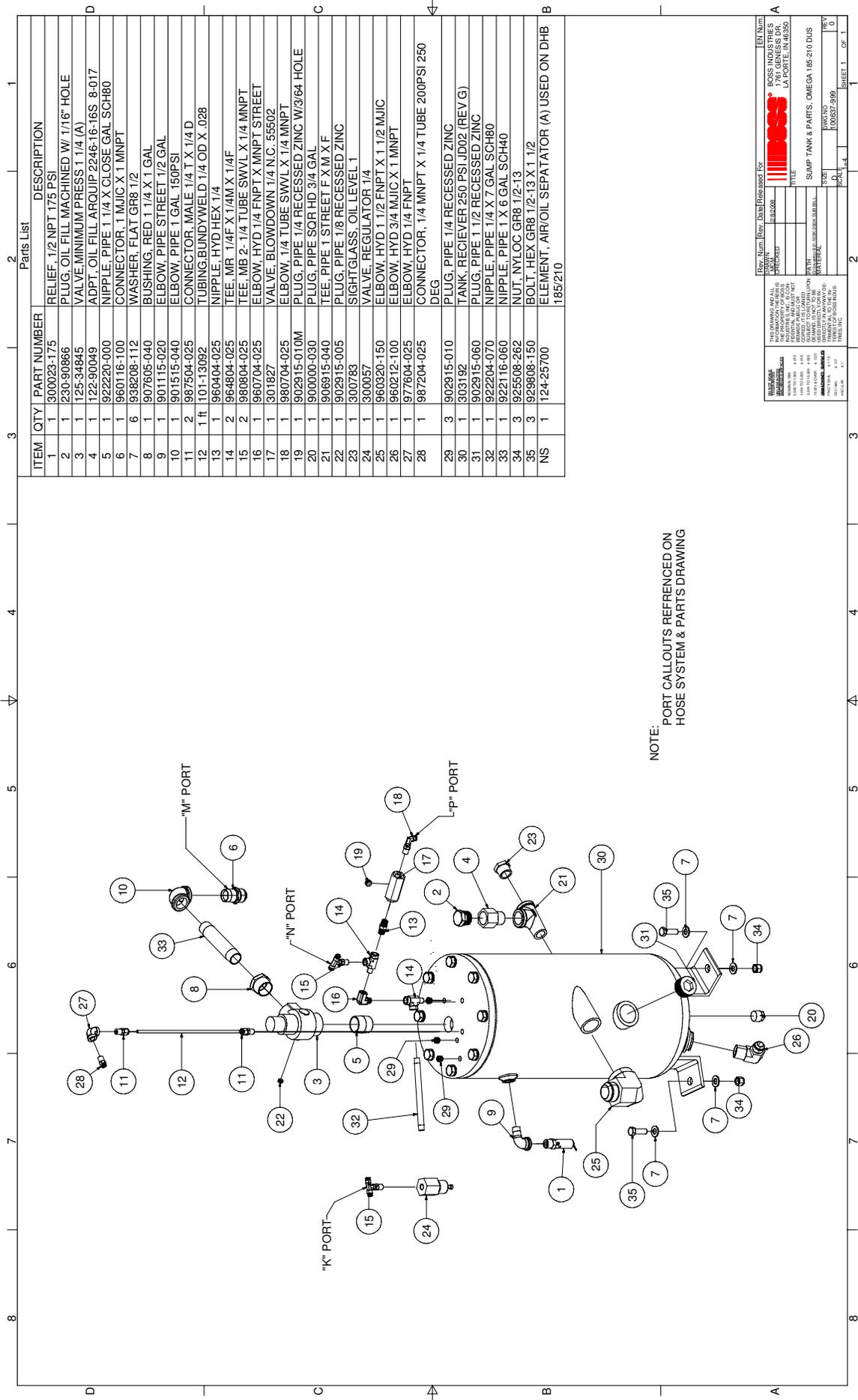
**DESCRIPTION**  
COOLERS & PARTS, OMEGA 185-210

**SCALE**  
D 1-8

**REV**  
REV 1 OF 1

REV	DESCRIPTION	DATE	ENG
1	RELEASED FOR PRODUCTION	01/12/2018	MM
2	REPLACED 185-210 WITH 185-210	01/12/2018	MM

**NOTES:**  
PORT CALLOUTS REFERENCED ON HOSE SYSTEM & PARTS DRAWING



NOTE:  
PORT CALLOUTS REFERENCED ON  
HOSE SYSTEM & PARTS DRAWING

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	300023-175	RELIEF, 1/2 NPT 175 PSI
2	1	230-90866	PLUG, OIL FILL MACHINED W/ 1/16" HOLE
3	1	125-34845	VALVE, MINIMUM PRESS 1 1/4 (A)
4	1	122-90049	ADPT, OIL FILL, ARQUIP 2246-16-16S, 8-017
5	1	922220-000	NIPPLE, PIPE 1 1/4 X CLOSE GAL SCH80
6	1	960116-100	CONNECTOR, 1 MJIC X 1 MNPT
7	6	938208-112	WASHER, FLAT GR8 1/2
8	1	907605-040	BUSHING, RED 1 1/4 X 1 GAL
9	1	901115-020	ELBOW, PIPE STREET 1/2 GAL
10	1	901515-040	ELBOW, PIPE 1 GAL 150PSI
11	2	967504-025	CONNECTOR, MALE 1/4 T X 1/4 D
12	1 ft	101-13092	TUBING, BUNDYWELD 1/4 OD X .028
13	1	960404-025	NIPPLE, HYD HEX 1/4
14	2	964804-025	TEE, MR 1/4F X 1/4M X 1/4F
15	2	980804-025	ELBOW, HYD 1/4 FNPT X MNPT STREET
16	1	960704-025	VALVE, BLOWDOWN 1/4 N.C. 55602
17	1	301827	ELBOW, 1/4 TUBE SWVL X 1/4 MNPT
18	1	960704-025	ELBOW, 1/4 TUBE SWVL X 1/4 MNPT
19	1	902915-010M	PLUG, PIPE 1/4 RECESSED ZINC W/3/64 HOLE
20	1	900000-030	PLUG, PIPE SQR HD 3/4 GAL
21	1	906915-040	TEE, PIPE 1 STREET F X M X F
22	1	902915-005	PLUG, PIPE 1/8 RECESSED ZINC
23	1	300783	SIGHT GLASS, OIL LEVEL 1
24	1	300057	VALVE, REGULATOR 1/4
25	1	960320-150	ELBOW, HYD 1/2 FNPT X 1 1/2 MJIC
26	1	960212-100	ELBOW, HYD 3/4 MJIC X T MNPT
27	1	977604-025	ELBOW, HYD 1/4 FNPT
28	1	987204-025	CONNECTOR, 1/4 MNPT X 1/4 TUBE 200PSI 250 DEG
29	3	902915-010	PLUG, PIPE 1/4 RECESSED ZINC
30	1	303192	TANK, RECIEVER 250 PSI, JD02 (REV G)
31	1	902915-060	PLUG, PIPE 1 1/2 RECESSED ZINC
32	1	922204-070	NIPPLE, PIPE 1/4 X 7 GAL SCH80
33	1	922116-060	NIPPLE, PIPE 1 X 6 GAL SCH40
34	3	925508-262	NUT, NYLOC GR8 1/2-13
35	3	929808-150	BOLT, HEX GR8 1/2-13 X 1 1/2
NS	1	124-25700	ELEMENT, AIR/OIL SEPARATOR (A) USED ON DHB 185/210

Rev: Num: Rev: Date: Released For: \_\_\_\_\_

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BOSS INDUSTRIES  
1781 GENESIS DR.  
LA PORTE, IN 46350

TITLE: SLUMP TANK & PARTS, OMEGA 185-210 DUS

DATE: 12/14/10

DESIGNED BY: \_\_\_\_\_

DRAWN BY: \_\_\_\_\_

CHECKED BY: \_\_\_\_\_

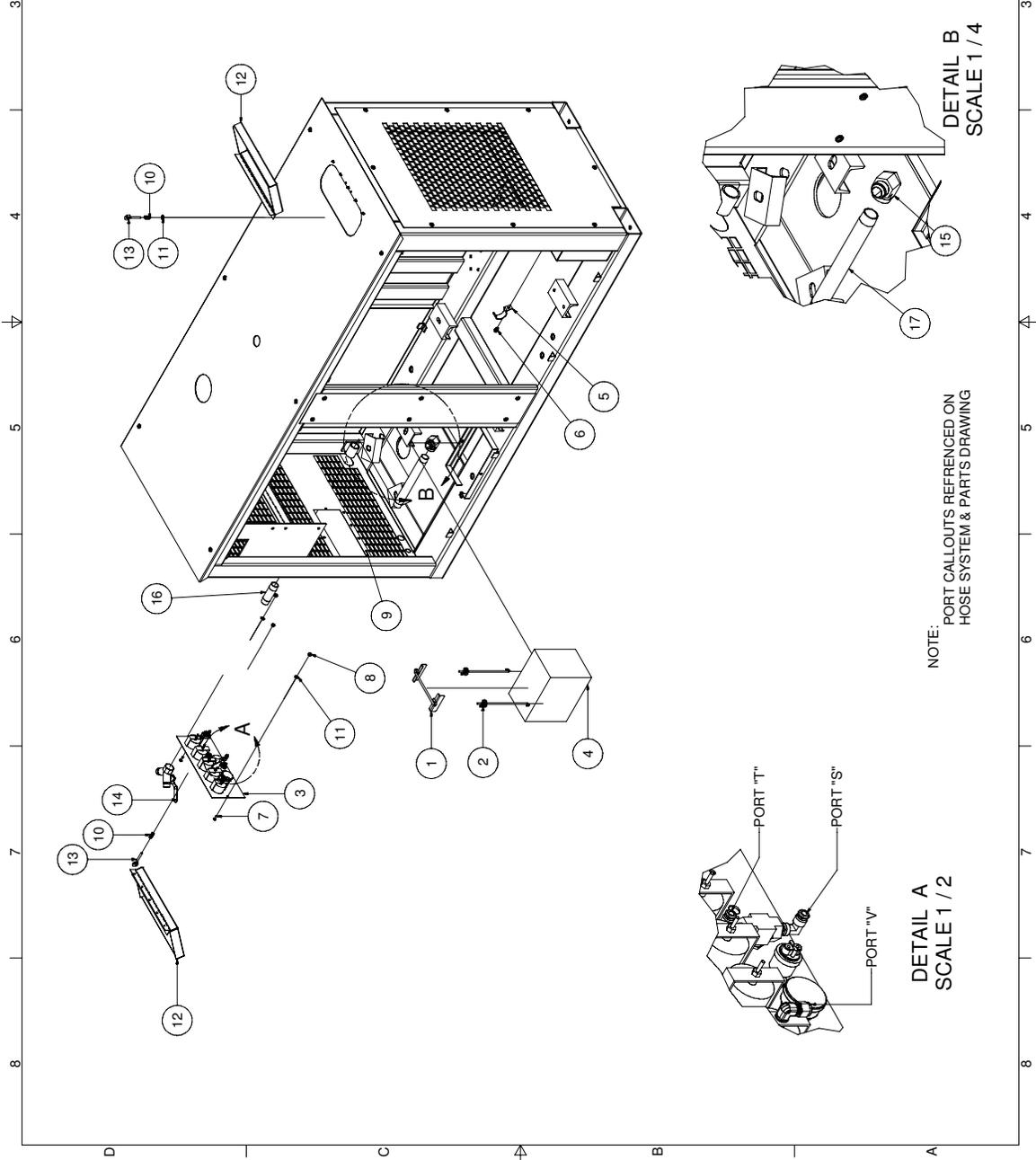
APPROVED BY: \_\_\_\_\_

DATE: 12/14/10

SCALE: \_\_\_\_\_

SHEET 1 OF 1

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	120-14966	BRACKET, BATTERY HOLD DOWN
2	2	120-26804	BOLT, BATTERY HOLD DOWN
3	1	142-90641	INSTRUMENT PANEL, 185-250 (REV A)
4	1	123-66019	BATTERY, 12VOLT 650CCA (A)
5	1	301928-125	CLAMP, CONDUIT 1 1/4"(FITS 1 1/2 O.D.)
6	1	934505-063	SCREW, SELF TAP 5/16 X 5/8
7	2	963904-075	BOLT, BINHD SS STAR-DRIVE 1/4-20 X 3/4
8	4	924304-145	NUT, NYLOC GR5 1/4-20
9	10	943103-025	RIVET, POP 3/16 X 1/2 ALUMINUM
10	2	120-16580	SPRING, PISTON RETURN
11	4	938604-071	WASHER, FLAT GR5 1/4
12	2	109-90240	DOOR/INST PANEL,100DF (3-216)
13	2	120-65681	EYEBOLT, 1/4-20 X 1 7/8 F.T.ZK
14	1	125-18146	VALVE, SERVICE 1 X 3/4-Y VENTED
15	1	122-90031	ELBOW, FEM, 100OEM 8-042
16	1	922216-040	NIPPLE, PIPE 1 X 4 GAL SCH40
17	1	922116-110	NIPPLE, PIPE 1 X 11 GAL SCH40
NS	1	123-62178	CABLE, ASSY 15' NEG. (NOT SHOWN)
NS	1	123-65929	CABLE ASSY RED 2GA 32" (NOT SHOWN)

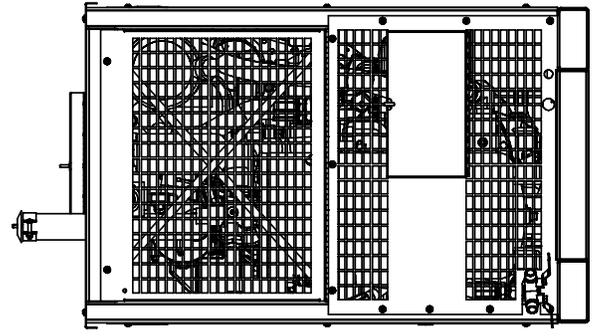


Rev. Num. 0	Rev. Date 08/20/08	Released For	EN Num.
DESIGNED	BY	BY	BY
CHECKED	BY	BY	BY
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TITLE		INSTN PANEL & PARTS, OMEGA 185-250 DUS	
PARTIAL		REV'S	
DATE		REV'S	
DRAWN		DATE	
SCALE		REV'S	
SHEET 1		OF 1	

4 3 2 1

Parts List

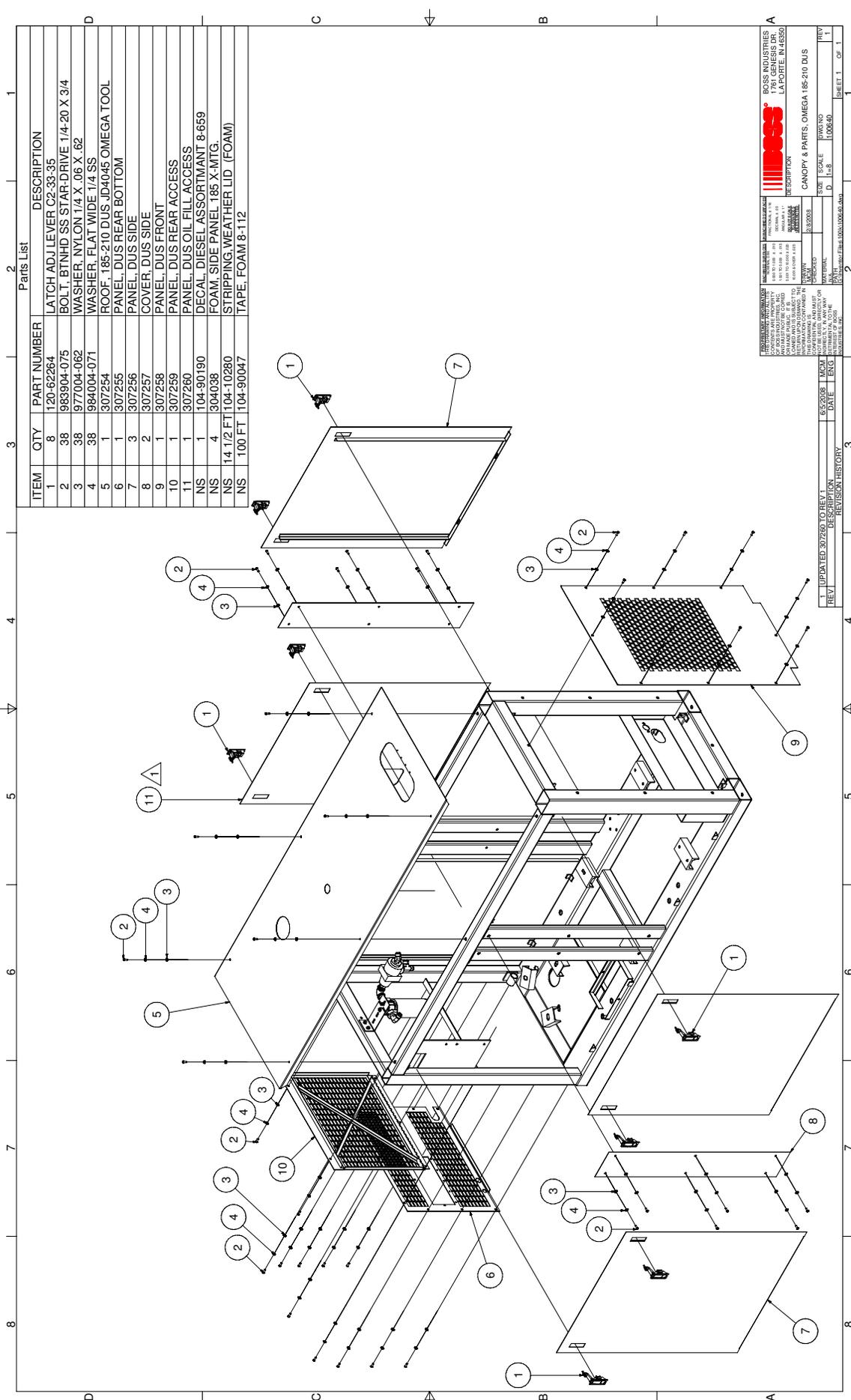
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	304024	KIT, HOSE 1 1/2 X 60 2-CRIMP ST. W SLEEVE
2	1	300071-200	ELBOW, RUBBER 2
3	6	304785-075	FITTING, HOSE 3/4" AEROQUIP CRIMP JIC SWIVEL STR FEMALE
4	2	304784-075	FITTING, HOSE 90 DEG 3/4 AEROQUIP CRIMP JIC FEMALE
5	2	304785-100	FITTING, HOSE 1" AEROQUIP CRIMP JIC SWIVEL STR FEMALE
6	1	301786-300	CLAMP, AIR INLET 3" K FLEX
7	2 FT	304783-100	HOSE, AEROQUIP FC350 1"
8	1	120-65471	HOSE, RADIATOR 1 3/4 ID X 23 1/2
9	4	120-11555	CLAMP, HOSE #28 B28H
10	1	303823	TUBE, LOWER RAD 2" OD X 5" LG
11	2	120-11563	CLAMP, HOSE B32H
12	1	302907	HOSE, RAD 2 ID X 24 FLEX
13	21 FT	301960-025	TUBE, PARAFLEX 1/4 OD X .040 WALL X FT NYLON NATURAL (REV 0)
14	23 FT	304783-075	HOSE, AEROQUIP FC350 3/4"
15	18 1/2 FT	89034176	TUBE, AIR BRAKE 1/2



**NOTE:-**

- A) 26" OF 304783-075 HOSE, 1 OF 304785-075 & 10F 304784-075 FITTINGS CONNECTS AIREND TO BOTTOM OF TEE ON THERMOVALVE PORTS H TO B
- B) 84" OF 304783-075 HOSE 2 OF 304785-075 FITTINGS CONNECTS COOLER TO TEE ON THERMOVALVE PORTS B TO R.
- C) 105" OF 304783-075 HOSE, 2 OF 304785-075 FITTINGS CONNECTS COOLER TO THERMOVALVE PORTS C TO Q.
- D) 53" OF 304783-075 HOSE, 2 OF 304785-075 FITTINGS CONNECTS SUMP TANK TO OIL FILTER HEAD PORTS W TO X.
- E) 22" OF 304783-100 HOSE, 2 OF 304785-100 FITTINGS CONNECTS MINIMUM PRESSURE VALVE TO SERVICE VALVE PORTS M TO U.
- F) 1 OF 304024 COMPRESSOR DISCHARGE TO SUMP TANK PORTS G TO J.
- G) 2 FT OF 301960-025 SUMP SCAVENGE TO COMPRESSOR OIL RETURN PORTS L TO F.
- H) 2 FT OF 301960-025 SUMP REG. TO START VALVE PORTS K TO S.
- I) 4 FT OF 301960-025 SUMP REG. TO AIR PRESSURE GAUGE PORTS N TO V.
- J) 3 1/2 FT OF 301960-025 START VALVE TO SUMP PORTS T TO N.
- K) 2 1/2 FT OF 301960-025 SUMP TEE TO INLET VALVE TEE PORTS K TO D.
- L) 5 FT OF 301960-025 INLET VALVE TEE TO SPEED CYLINDER PORTS D TO A.
- M) 1 1/2 FT OF 301960-025 BLOWDOWN TO INLET VALVE PORTS P TO E.

<p>DO NOT SCALE DIMENSIONS FROM THIS DRAWING</p> <p>PROPORTIONAL # 10:1 ANGULAR # 1:1</p>	<p>THIS DRAWING AND ALL INFORMATION THEREIN IS THE PROPERTY OF BOSS INDUSTRIES, INC. IS CONFIDENTIAL AND MUST NOT BE REPRODUCED, COPIED, OR DISCLOSED WITHOUT THE WRITTEN PERMISSION OF BOSS INDUSTRIES, INC.</p> <p>SUBJECT TO RETURN UPON REQUEST. IT IS TO BE USED DIRECTLY OR INDIRECTLY IN ANYWAY BE THE PROPERTY OF BOSS INDUSTRIES, INC.</p>	<p>Rev. Num.   Rev. Date   Released For</p> <p>2.8.2008</p>	<p>EN Num.</p> <p>BOSS INDUSTRIES 1781 GENESIS DR. LA PORTE, IN 46350</p>
		<p>DRAWN CHECKED</p>	<p>TITLE</p> <p>HOSE SYSTEM &amp; PARTS, OMEGA 185-210 DUS</p>
<p>SCALE</p> <p>1"=4"</p>	<p>SIZE</p> <p>C</p>	<p>DWG NO</p> <p>100639-999</p>	<p>REV</p> <p>0</p>



2  
Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	8	120-62264	LATCH ADJ LEVER C2-33-35
2	38	983904-075	BOLT, BTMHD SS STAR-DRIVE 1/4-20 X 3/4
3	38	977004-062	WASHER, NYLON 1/4 X .06 X .62
4	38	984004-071	WASHER, FLAT WIDE 1/4 SS
5	1	307254	ROOF, 185-210 DUS JD404S OMEGA TOOL
6	1	307255	PANEL, DUS REAR BOTTOM
7	3	307256	PANEL, DUS SIDE
8	2	307257	COVER, DUS SIDE
9	1	307258	PANEL, DUS FRONT
10	1	307259	PANEL, DUS REAR ACCESS
11	1	307260	PANEL, DUS OIL FILL ACCESS
NS	1	104-90190	DECAL, DIESEL ASSORTMENT 8-659
NS	4	304038	FOAM, SIDE PANEL 185 X-MTG.
NS	14 1/2 FT	104-10280	STRIPPING, WEATHER LID (FOAM)
NS	100 FT	104-90047	TAPE, FOAM 8-112

2

BOSS INDUSTRIES  
LA PORTE, IN 46350

CANOPY & PARTS, OMEGA 185-210 DUS

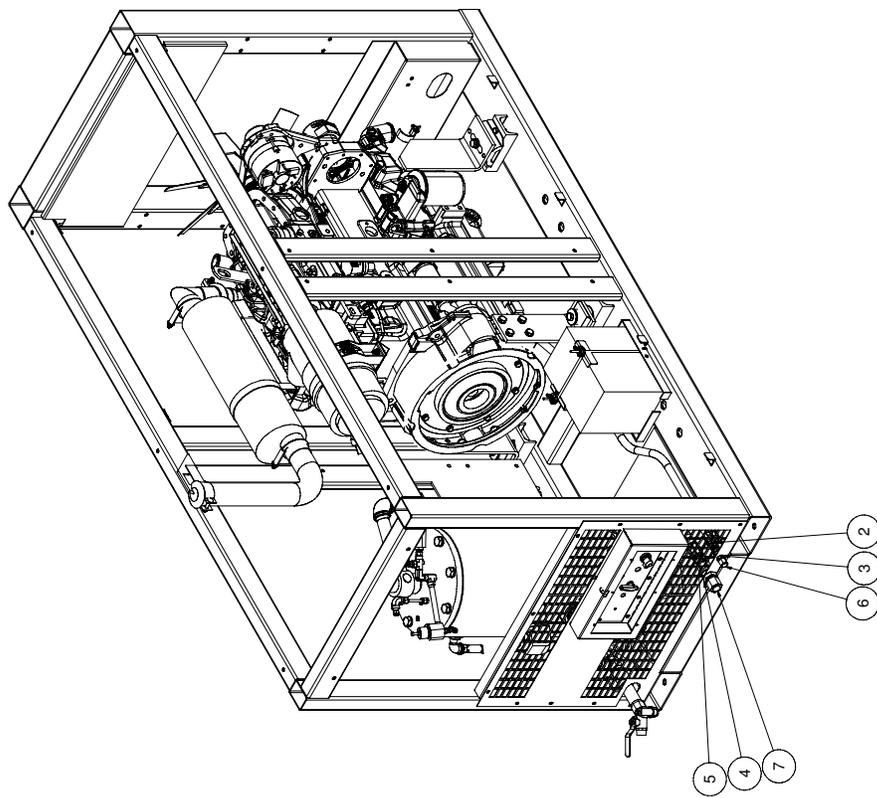
SCALE 1:8

REV. 1 OF 1

REVISION HISTORY

REV.	DESCRIPTION	DATE	BY
1	UPDATED 307260 TO REF. 104-10280		

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	303053	ADAPTER, JD4045 OIL DRAIN M18
2	2	304785-050	FITTING, HOSE 1/2" AEROQUIP CRIMP JIC SWIVEL STR, FEMALE
3	1	962108-050	UNION, BULKHEAD 1/2 JIC X 1/2 JIC
4	1	962112-075	UNION, BULKHEAD 3/4 JIC X 3/4 JIC
5	2	304785-075	FITTING, HOSE 3/4" AEROQUIP CRIMP JIC FEMALE
6	1	977515-050	CAP, 1/2 JIC
7	1	977515-075	CAP, 3/4 JIC
8	1	960212-075	ELBOW, HYD 3/4 MJIC X 3/4 MNPT
9	4 FT	304783-050	HOSE, AEROQUIP FC350 1/2"
10	2 FT	304783-075	HOSE, AEROQUIP FC350 3/4"
NS	-1	900000-030	PLUG, PIPE SQR HD 3/4 GAL



**PROTECTIVE EQUIPMENT**  
 SAFETY GLASSES OR SAFETY GOGGLES  
 SAFETY VEST OR PROTECTIVE CLOTHING  
 SAFETY SHOES WITH METatarsal Guards  
 SAFETY TOOLS  
 SAFETY LIFELINES  
 SAFETY NETS  
 SAFETY BARRIERS  
 SAFETY LIGHTS  
 SAFETY FLAGS  
 SAFETY SIGNALS  
 SAFETY BATTERIES  
 SAFETY CHARGERS  
 SAFETY RECHARGERS  
 SAFETY TESTERS  
 SAFETY Meters  
 SAFETY RECORDERS  
 SAFETY MONITORS  
 SAFETY CONTROLS  
 SAFETY DEVICES  
 SAFETY SYSTEMS  
 SAFETY EQUIPMENT

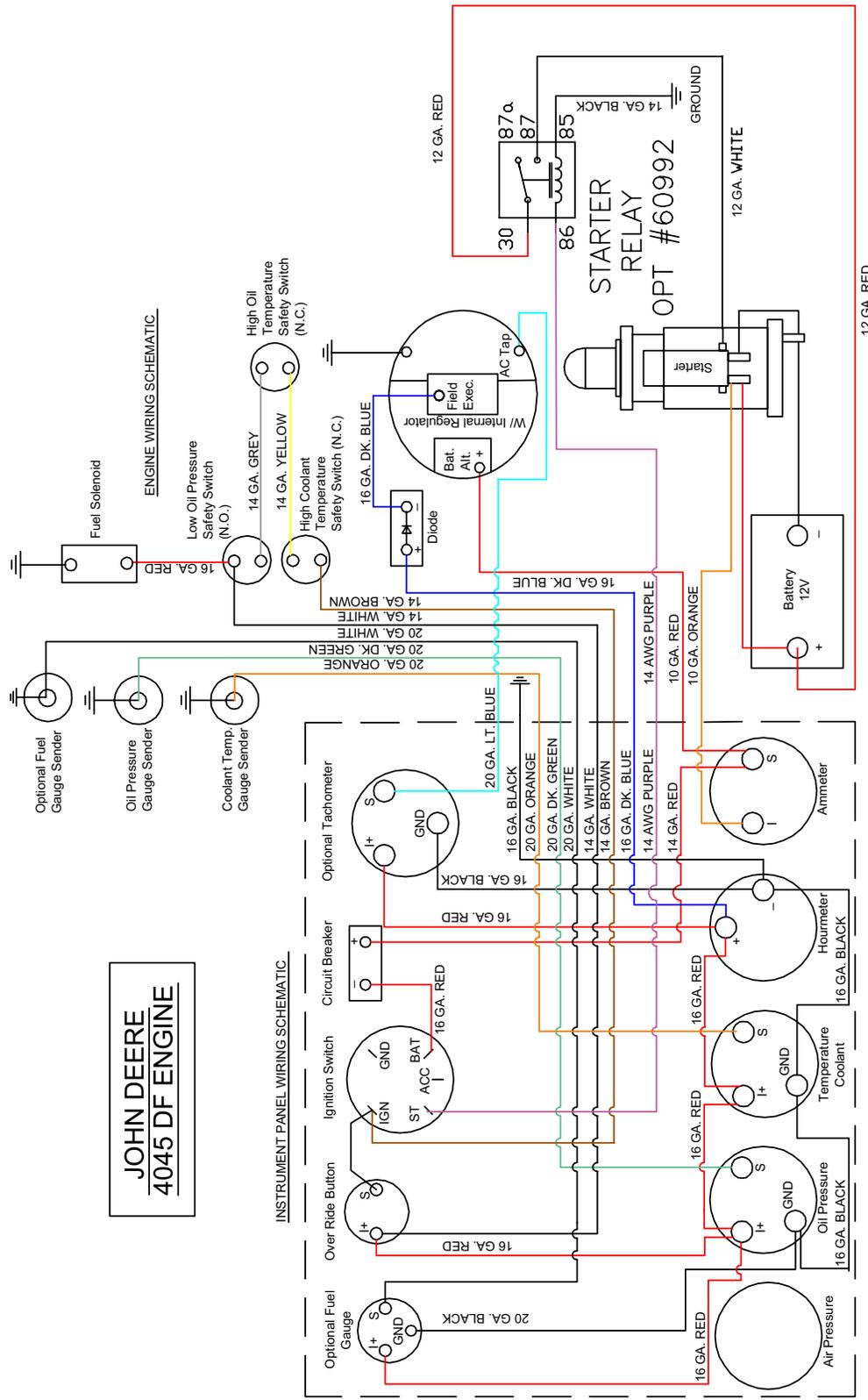
**DESCRIPTION**  
 OPT, OIL FLUID DRAINS INST PANEL END

**SIZE SCALE**  
 D 1:4  
 H 1:4

**REV**  
 1 03/03/00  
 2 06/17/17

**SHEET 1 OF 1**

# JOHN DEERE 4045 DF ENGINE



DATE	REV.	BY	CHKD.
07/24/06	1		
ISSUED FOR	BY	DATE	REV.
BOSS INDUSTRIES, LARORIE, IN 46350	5/24/06		
W/D STARTER RELAY FOR	5/24/06		
HARNESS	5/24/06		
DATE	REV.	BY	CHKD.
07/24/06	1		
ISSUED FOR	BY	DATE	REV.
BOSS INDUSTRIES, LARORIE, IN 46350	5/24/06		
W/D STARTER RELAY FOR	5/24/06		
HARNESS	5/24/06		
DATE	REV.	BY	CHKD.
07/24/06	1		
ISSUED FOR	BY	DATE	REV.
BOSS INDUSTRIES, LARORIE, IN 46350	5/24/06		
W/D STARTER RELAY FOR	5/24/06		
HARNESS	5/24/06		