
IMT Air Compressors - DAR130

Manual # 99905032

Revised 20101119



IOWA MOLD TOOLING CO., INC.

PO Box 189

Garner, IA 50438

Tel: 641-923-3711 FAX: 641-923-2424

Website: <http://www.imt.com>

Copyright © 2010 Iowa Mold Tooling Co., Inc.
All rights reserved

No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise without the prior written permission of Iowa Mold Tooling Co., Inc.

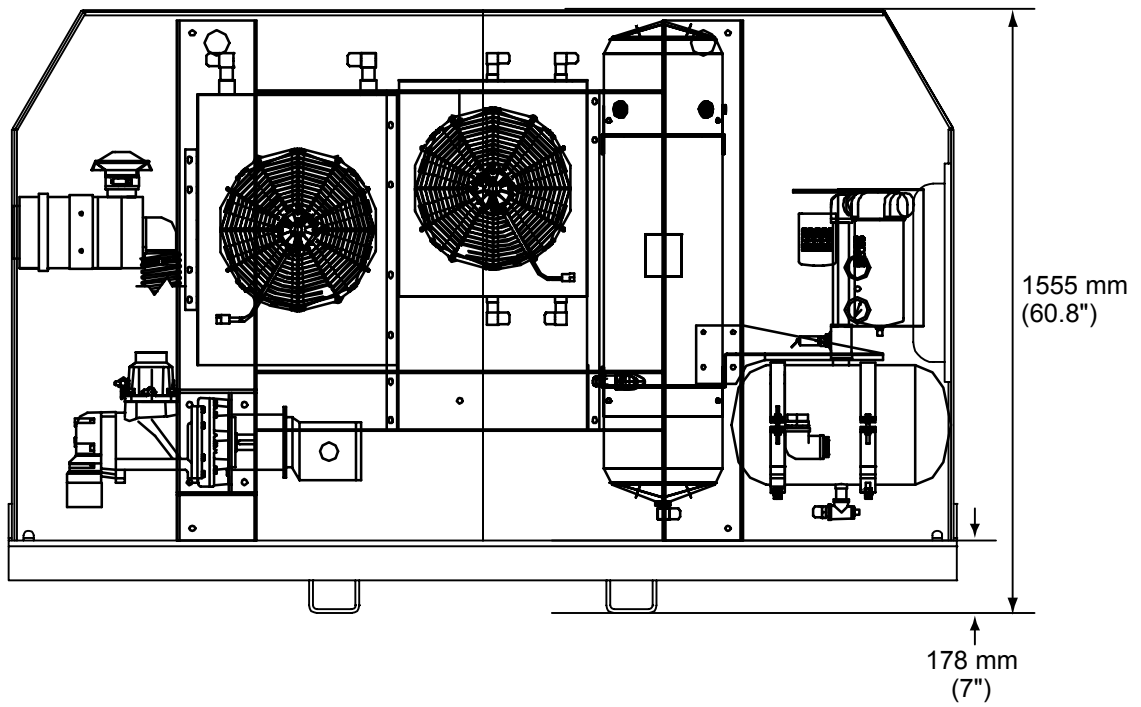
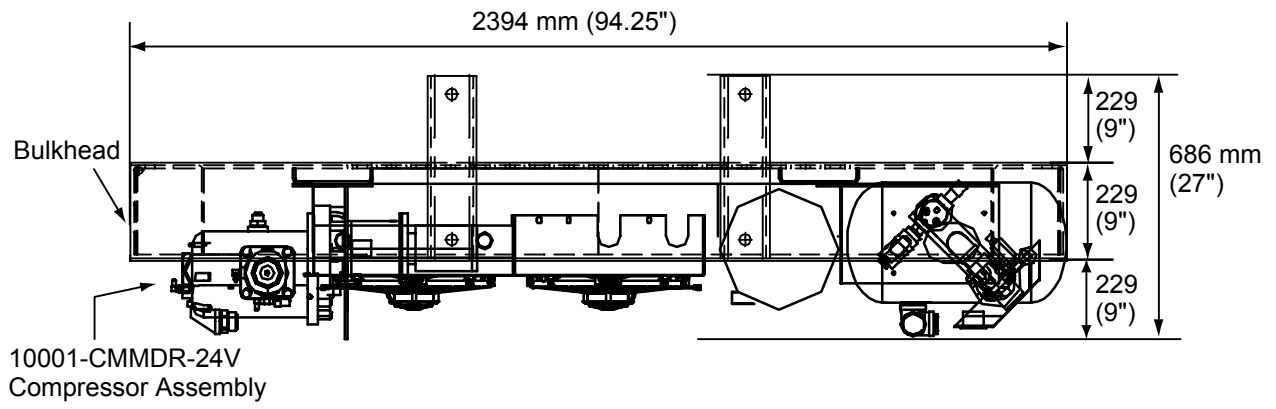
Iowa Mold Tooling Co., Inc. is an Oshkosh Corporation Company.

CHAPTER 1

DAR130 Compressor Specifications

COMPRESSOR SPECIFICATIONS	
TYPE	Rotary Screw
POWER SOURCE	Hydraulic Motor
NORMAL HYDRAULIC OPERATING PRESSURE	2800 psi at 30 gpm (193 bar at 113 lpm)
AIR DELIVERY @ 110 PSIG (7.58 bar)	130 cfm (3.68 cubic meters/min.)
COMPRESSOR SPEED	1400 rpm
FLUID CAPACITY-COMPRESSOR (not hydraulic)	3.75 gallons (14.2 liters)
MOUNTED COMPRESSOR DIMENSIONS	27" (686 mm) from back of mounting surface to front of compressor 94.25" (2394 mm) overall width
COMPRESSOR / AIR INLET	10" w x 16" h x 18" l (254 x 406 x 457 mm)
RECEIVER / SUMP	12" diameter x 22" l (305 x 559 mm)
SPIN-ON ELEMENT	5" diameter x 13" h (127 x 330 mm)
WEIGHT (dry)	575 lb (261 kg)
Specifications subject to change without notice.	

Compressor Dimensions, Shown Mounted in Bulkhead



Compressor Precautions












! DANGER

EXPLODING TANK WILL CAUSE
DEATH, SERIOUS INJURY
OR PROPERTY DAMAGE

- Drain air tank after each use to prevent moisture build-up and corrosion which leads to tank failure.
- Assure that tank and compressor relief valves work properly, and are at correct pressure settings.
- DO NOT modify or repair air tank.
- NEVER drive vehicle with pressure in air tank.

71303886

	Failure to follow operating and maintenance procedures as outlined in this manual could result in equipment damage, personal injury or death. Follow all maintenance procedures and intervals.		Do not use air from this compressor for breathing or food processing. Air from this compressor will cause severe injury or death if used for breathing or food processing.
	Maintenance must be performed only by trained and qualified personnel, using correct tools, specified torques and approved replacement parts.		Hot oil under pressure can cause severe injury or death. Shut down, let cool and relieve pressure in compressor before servicing.
	All electrical components and cable wiring must be installed and grounded in accordance with NFPA, national electrical codes and applicable state and local codes.		Do not overfill the compressor with oil. Use correct quantity of manufacturer's lubricant. Repair leaks and clean spills immediately.
	Before removing guards or servicing the compressor, disconnect all power supplies. Display warning signs and lock out electrical circuits.		Compressors generate high temperatures. Do not touch or otherwise come in contact with hot surfaces. Doing so can cause severe personal injury.
	All guards must be in position and secure before and during operation.		

Compressor Safety

WARNING

AVOID PERSONAL INJURY OR PROPERTY DAMAGE! READ YOUR MANUAL! All units are shipped with a detailed operators and parts manual which contains vital information for the safe use and efficient operation of this unit.

AIR COMPRESSOR SAFETY PRECAUTIONS

Safety is basically common sense. While there are standard safety rules, each situation has its own peculiarities that cannot always be covered by rules, and with your experience and common sense, you are in a position to ensure your safety. Lack of attention to safety can result in death, serious injury, accidents, and efficiency reductions. Watch for safety hazards and 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 the machine is operating.

WARNING

AVOID PERSONAL INJURY OR PROPERTY DAMAGE! Check the compressor sump oil level only when the compressor is not operating and the system is completely relieved of pressure. Open the service valve to ensure relief of system air pressure when performing maintenance on compressor air/oil system.

- Do not operate the compressor at pressure or speed in excess of its rating as indicated in Compressor Specifications.
- Periodically check all safety devices for proper operation.
- Do not play with compressed air. Pressurized air can cause serious injury to personnel.
- Exercise cleanliness during maintenance and when making repairs. Keep dirt away from parts by covering parts and exposed openings.
- Do not install a shut-off valve between the compressor and compressor oil sump.

DANGER

AVOID DEATH OR SERIOUS INJURY!

Do not use IMT 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.

IMT 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 IMT compressors used to supply breathing air.

- Do not disconnect or bypass safety circuit system.
- Do not install safety devices other than authorized IMT replacement devices.
- Close all openings and replace all covers and guards before operating compressor unit.
- Do not leave tools, rags, or loose parts on the compressor or drive parts.
- Do not use flammable solvents for cleaning parts.
- Keep combustibles out of and away from the compressor and any associated enclosures.

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

IMT 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.

CHAPTER 2

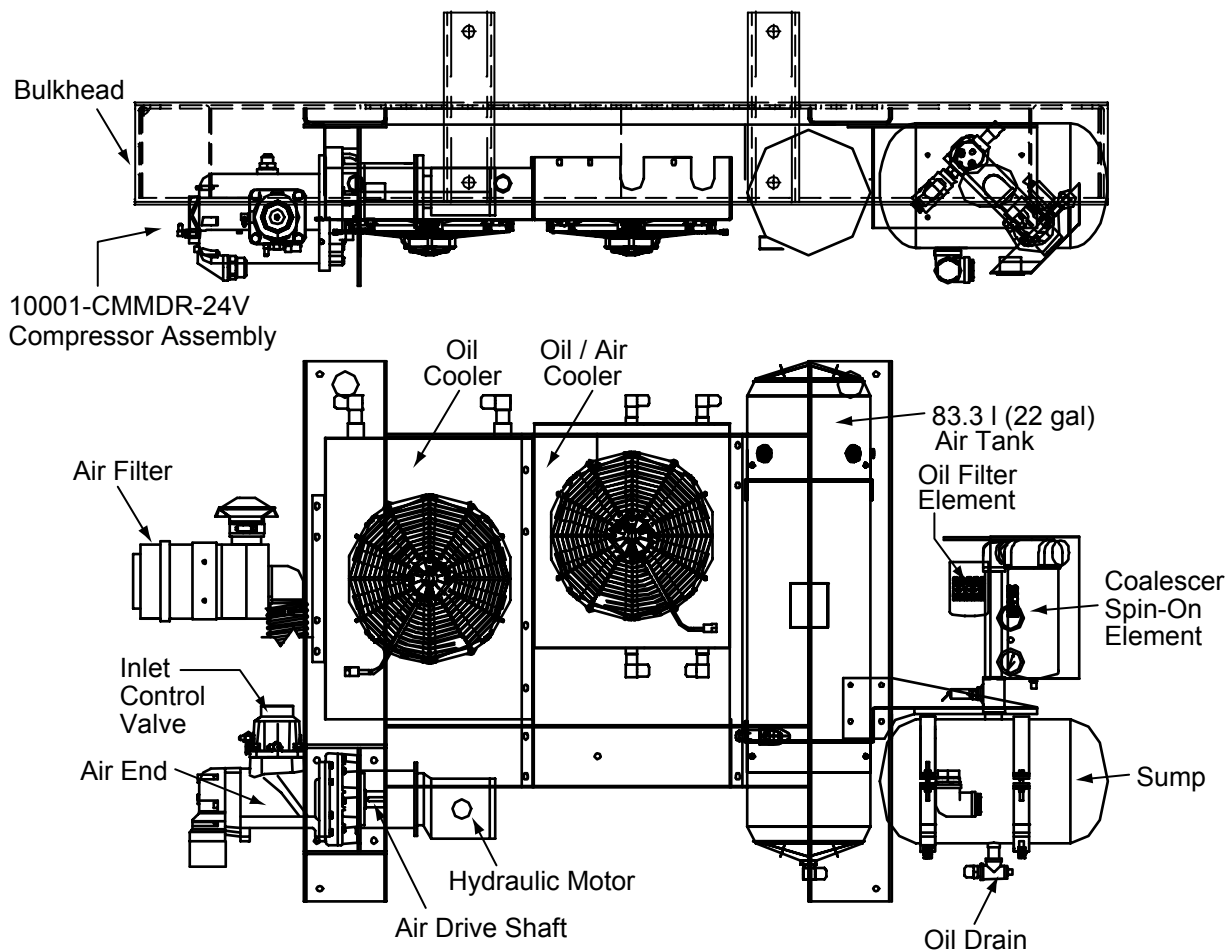
Compressor Lubrication & Maintenance

In This Chapter

Compressor Maintenance	9
Compressor Oil Specifications	14
Commander IV Compressor Preventative Maintenance Kit.....	14
Compressor Troubleshooting	15

Compressor Maintenance

DAR130 COMPRESSOR MAINTENANCE SCHEDULE					
COMPRESSOR COMPONENT	MAINTENANCE TASK	DAILY (10 HOURS)	MONTHLY (25 HOURS)	500 HOURS / 6 MONTHS	1000 HOURS / 12 MONTHS
Compressor Oil	Check oil level.				
	Drain water.				
	Change oil and oil filter.				
Compressor Air Filter	Check daily. Clean if needed.				
	Replace element.				
	Check piping, fittings, clamps.				
	Change coalescer element.				
Air End Shaft Seal	Check for leakage. Replace seal if needed.				
Leaks	Check for air and oil leaks.				
Safety Circuit Switches	Check daily.				
Sump Safety Valve	Check.				



Maintenance intervals in the schedule outlined in this manual are based on one hour of compressor operation 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, relieve all pressure from the sump. Add oil at the fill cap located between the cooler assembly and the cab. Use the drain plug provided at the bottom of the sump. The proper oil level, when the unit is shut down and oil has had time to settle, is at the midpoint of the oil sightglass. The truck must be level when checking the oil. **DO NOT OVERFILL.** The oil sump capacity is listed in the Compressor Specifications section.

WARNING

AVOID EQUIPMENT DAMAGE AND PERSONAL INJURY! Shut off the compressor and manually relieve pressure from the sump before attempting to drain condensate, remove the oil level fill plug, or break any connection in the air or oil system.

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. Maintain the filter depending on the dust conditions at the operating site. Service the filter element when clogged (maximum pressure drop for proper operation is 15" H₂O). The filter is equipped with a pressure drop indicator, and the element should be changed based on the pressure drop reading first, at least as frequently as outlined in the maintenance schedule.

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 when the pressure drop across it exceeds 15 PSI. Dirty oil clogs the element and increases the pressure drop across it.

To replace the coalescer element:

- 1 Shut down compressor and wait for complete blow down (zero pressure).
- 2 Disconnect drain line.
- 3 Turn element counterclockwise for removal (viewing element from the bottom).
- 4 Install new rubber seal in head. Supply a film of fluid directly to seal.
- 5 Rotate element clockwise, by hand, until element contacts seal (viewing element from the bottom).
- 6 Using band wrench near the top of the element, rotate element approximately one more turn clockwise.
- 7 Reconnect drain line.
- 8 Run system. Check for leaks.

WARNING

AVOID PERSONAL INJURY, PROPERTY DAMAGE, AND VOIDED WARRANTY! Do not substitute element. Use only a genuine IMT 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.

NOTE

When connecting drain line, hold canister nut securely when tightening the hose fitting.

OIL RETURN LINE

This line originates at the bottom of the air/oil coalescer and flows through a 1/4" hose elbow, located at the air end. On the DAR130 Rotary Screw Compressor, the elbow incorporates an oil return line check valve which stops the flow of oil into the coalescer at shutdown.

OIL FILTER

The compressor oil filter is a spin-on, throw away type. After replacing filter, dispose of used filter according to local and state hazardous waste regulations.

To replace filter:

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

WARNING

AVOID PERSONAL INJURY, PROPERTY DAMAGE, AND VOIDED WARRANTY! Do not substitute element. Use only a genuine IMT 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.

HYDRAULIC OIL COOLER & COMPRESSOR AIR/OIL COOLER COMBINATION

The interior of the oil cooler should be cleaned when the pressure drop across it at full flow exceeds 25 PSI. Follow these steps to clean the oil cooler:

- 1 Remove cooler.
- 2 Circulate a suitable solvent to dissolve and remove varnish and sludge.
- 3 Flush the compressor oil cooler section generously with IMT compressor lubricant. Do not use oil to flush the aftercooler portion on the combo cooler.
- 4 After coolers are reinstalled, fill the compressor and hydraulic system with the proper fluids, to their appropriate levels. Change compressor oil after 50 hours of normal operation.

AIR END SHAFT SEAL INSTALLATION

- 1 Remove all hoses and fittings from the compressor unit, including 1/2" discharge line, 3/4" main oil injection, 1/4" regulator, 1/4" blowdown, and 3" air intake.
- 2 Strap compressor unit. Remove 7 mounting screws from mounting bracket.
- 3 Remove hydraulic motor and coupling hub from the compressor shaft along the key.
- 4 Remove (5) socket head retaining bolts on cover. Slide cover off shaft. The cover has the seal and snap ring assembly within.
- 5 Press old snap ring and seal off the cover for assembly of new seal.
- 6 Pull seal wear sleeve off shaft with puller. Adding heat to one area only on wear sleeve will help enlarge and aid in removal.
- 7 Clean shaft and surface of bearing. Remove all burrs from shaft where the wear sleeve gets installed.
- 8 Press new wear sleeve onto shaft. Oil. To aid in installation, oil heat new wear sleeve to approximately 212° F.
- 9 Clean seal cover and snap ring with solvent before installation.
- 10 Press new seal (included in repair kit) into cover. Insert snap ring.
- 11 Place the assembly tool on the drive shaft until it sits on the end of the wear sleeve. Slightly lubricate the assembly tool on the external surface. Add Loctite 573 to seal cover.
- 12 Install cover, seal, and snap ring assembly over shaft and assembly tool. Note: The assembly tool slip fits on the shaft and allows the new seal, in cover, to slide onto wear sleeve without cutting the lip of the shaft seal. Reinstall the dirt ring retainer once the new seal and cover assembly are in place.
- 13 Place seal cover against rotor casting. Do not damage the seal. Slide off assembly tool.
- 14 Screw down the socket head retaining bolts on the cover with a torque of 220 in-lb (25 Nm).
- 15 Reinstall coupling hub and key. Circulate a suitable solvent to dissolve and remove varnish and sludge. Replace cooler.

NOTE

The seal cover is installed using an o-ring gasket. Avoid pinching the o-ring out of its groove upon reinstallation.

Compressor Oil Specifications

LUBRICANT SPECIFICATIONS

IMT "Cool Blue" rotary screw lubricant shipped with your kit contains additives for rust, corrosion, and anti-wear inhibitors. Use of any other lubricant is not recommended and may void the equipment warranty.

- 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.

Compressor Preventative Maintenance Kit

91716201 PREVENTATIVE MAINTENANCE KIT			
PART #	DESCRIPTION	QUANTITY IN KIT	FREQUENCY
301669	COALESCER-LONG SPIN-ON ELEMENT	1	1/YEAR
70733495	LUBRICANT-DIAMOND DOOR LUBE	1	1 CAN. USE AS REQUIRED TO LUBRICATE ROLL-UP DOOR.
70048209	ELEMENT-AIR (FRL)	2	2/YEAR
73052088	FILTER ELEMENT-RETURN	2	2/YEAR
73054974	FILTER-BREATHER OIL RESERVOIR	2	2/YEAR
300005001	ELEMENT-OIL FILTER 80	2	2/YEAR
302014	AIR FILTER ELEMENT	2	2/YEAR
70048148	ELEMENT-FILTER 100 MESH W/GSKT	2	2/YEAR
89086201	COMPRESSOR OIL-IMT GALLON ROTARY SCREW	6	2/YEAR (3 GALLONS EACH)

Compressor Troubleshooting

This section includes instructions for troubleshooting the equipment following a malfunction. Each problem symptom for a component or system is followed by a list of probable causes and suggested resolutions.

In general, perform the procedures in the order in which they are listed. Vary the order if needed due to specific conditions.

PROBLEM	CAUSE	RESOLUTION
Truck Engine Will Not Start	Vehicle engine problem.	<ul style="list-style-type: none"> Check vehicle manual.
	High temperature.	<ul style="list-style-type: none"> The compressor shutdown safety switch causes the vehicle engine to shut down on vehicles with manual transmissions. If this occurs, restart the truck once the temperature drops, or by disengaging the PTO. If the compressor high-temperature switch has shut off the engine, take the vehicle for service.
Unplanned Shutdown	Engine problem.	<ul style="list-style-type: none"> Check fuel level, truck dash gauges and indicators.
	Check compressor discharge temperature / switch gauge.	<ul style="list-style-type: none"> If the relay circuit is tripped, the 12V DC solenoid will lose power and divert hydraulic oil back to the reservoir. The blowdown switch and the temperature switchgauge will not allow power to the hydraulic solenoid until the air has blown down and the temperature has dropped into its normal operating range. Take for service if high temperature shutdown has occurred.
	Low compressor oil.	<ul style="list-style-type: none"> Check compressor oil level. Add if needed.
	Airflow obstruction.	<ul style="list-style-type: none"> Check the oil cooler for dirt, slush, ice on fins, or other obstructions.
	Hose or wiring break.	<ul style="list-style-type: none"> Check for broken hoses, oil lines, or loose or broken wires.

PROBLEM	CAUSE	RESOLUTION
Low Discharge Pressure	Too much air demand.	<ul style="list-style-type: none"> ▪ If air tools require more air than the compressor can produce, change tools.
	Open service valve.	<ul style="list-style-type: none"> ▪ Close service valve.
	Leaks in service lines.	<ul style="list-style-type: none"> ▪ Repair line leaks
	Restricted compressor inlet air filter.	<ul style="list-style-type: none"> ▪ Replace filter.
	Faulty control system operation.	<ul style="list-style-type: none"> ▪ Check regulator signal. Repair system if needed.
High Discharge Pressure (Indicated if the safety valve blows or the system shuts down on high pressure)	Faulty discharge pressure gauge.	<ul style="list-style-type: none"> ▪ Replace pressure gauge.
	Coalescer plugged.	<ul style="list-style-type: none"> ▪ Clean coalescer.
	Faulty safety valve.	<ul style="list-style-type: none"> ▪ Replace safety valve.
	No regulator air pressure signal to inlet valve.	<ul style="list-style-type: none"> ▪ Check signal, and replace faulty components.
Sump Relief Valve Activates	Inlet valve leaks or is open.	<ul style="list-style-type: none"> ▪ Repair or replace valve.
	Faulty regulator.	<ul style="list-style-type: none"> ▪ Repair or replace regulator.
Sump Pressure Does Not Blow Down	Inoperative automatic blow down valve at coalescer head.	<ul style="list-style-type: none"> ▪ Replace valve
	Blockage.	<ul style="list-style-type: none"> ▪ Check air line from side of inlet valve to blow down valve.
	Clogged muffler.	<ul style="list-style-type: none"> ▪ Check / clean muffler.
Oil Consumption	Excess oil consumption, or oil in service line.	<ul style="list-style-type: none"> ▪ Check overfilling of oil sump. ▪ Repair leaking oil lines or oil cooler. ▪ Inspect oil line to the compressor. Open plugged oil return line if needed. ▪ Replace coalescer element if defective. ▪ Repair leaks in compressor shaft seal. ▪ Check discharge pressure. Pressure should be between 65 PSI and 150 PSI.
Engine Will Not Accelerate or Maintain Full Load Speed	Engine problem.	<ul style="list-style-type: none"> ▪ Refer to engine manual.
	High compressor discharge pressure.	<ul style="list-style-type: none"> ▪ Reduce discharge pressure
	Compressor running at truck idle. (Improper speed)	<ul style="list-style-type: none"> ▪ Correct speed
	Operating above maximum altitude rating of compressor and truck.	<ul style="list-style-type: none"> ▪ Move to lower altitude

Coalescer Element Plugging	Oil breakdown.	<ul style="list-style-type: none"> ▪ Extreme operating temperature - reduce temperature. ▪ Water in oil. Drain condensate from oil sump. ▪ Wrong oil. Use only IMT-approved compressor oil. ▪ Dirty oil - change oil. ▪ Oil return line plugged. Clean oil return line. <p>Change oil and oil filter per maintenance schedule.</p>
	Compressor air inlet.	<ul style="list-style-type: none"> ▪ Check system for leaks.
High Compressor Discharge Temperature	Low oil level.	<ul style="list-style-type: none"> ▪ Add oil if required
	Thermal valve	<ul style="list-style-type: none"> ▪ Check thermal valve operation
	Reduced flow through cooler.	<ul style="list-style-type: none"> ▪ Clean outside of oil cooler
		<ul style="list-style-type: none"> ▪ Clean oil system (cooler) internally. ▪ Check fan relay harness.

CHAPTER 3

Compressor Operation

In This Chapter

Compressor Start Up/Shutdown.....	19
Compressor Controls	20
Compressor Operating Conditions	21
Sub-Zero Temperature Operating Instructions.....	21

Compressor Start Up/Shutdown

An operating procedure decal is furnished with every PTO compressor. The decal should be attached to the truck dashboard or visor where it will be visible to the driver.

PTO Operating Procedure

Start-Up

- 1 Stop vehicle. Engage parking brake.
- 2 Shift transmission to neutral.
- 3 Depress PTO On/Off switch to *on* position. Engagement is complete when red indicator light comes on.
- 4 Turn compressor power switch to *on* position.

Shutdown

- 1 Close service valve.
- 2 Turn off compressor power switch.
- 3 Depress PTO On/Off switch to *off* position.

Compressor Controls

CONTROL OR INDICATOR	PURPOSE
TEMPERATURE SWITCH GAUGE	Monitors the temperature of the air/fluid mixture leaving the compressor. The normal reading should be approximately 175 to 210° F. Sends signal to relay when the compressor reaches 240° and the compressor will shut off.
HOURMETER	Indicates accumulated hours of actual compressor operation.
FLUID LEVEL SIGHTGLASS	Indicates fluid level in the sump. Should be half full when at proper level. Check this level when the compressor is disengaged and the vehicle is parked on level ground.
PRESSURE RELIEF VALVE	Vents sump pressure to the atmosphere if the pressure inside the sump exceeds 200 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 on shutdown.
PRESSURE REGULATING VALVE	Senses air pressure from sump to provide automatic regulation of the compressor inlet control valve and load controller.
BLOW DOWN VALVE	Coalescer head blow down valve vents the sump pressure to the atmosphere at shut down.
MINIMUM PRESSURE VALVE	Restricts 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 the coalescer element does not occur during shutdown.

Compressor Operating Conditions

If possible, operate the compressor with the truck as close to level as possible. The compressor will operate on a 15° tilt from side to side and end to end without adverse problems. Fluid carry over and/or oil starvation may occur if operated at a tilt beyond 15°. Operation in ambient temperatures above 100° F may result in high temperature shutdown.

NOTE

If the compressor is being used to power sandblasting equipment or an air storage tank, use a check valve directly after the minimum pressure orifice to prevent backflow into the sump. This check valve should have a maximum pressure drop rating of 2 PSIG (13.78 kPa) operating and a capacity rating equal to the compressor.

NOTE

When a hose reel is not used, the compressor service valve should be relocated to the hose reel inlet, or to a customer-supplied air connection port. Typical plumbing from a minimum pressure orifice should flow in the following order:

- 1 Minimum pressure orifice
- 2 Check valve
- 3 Air tank (when used)
- 4 Service valve
- 5 Moisture trap/ gauge / oiler combination (when used)
- 6 Hose reel (when used)

Sub-Zero Temperature Operating Instructions

For IMT rotary screw compressors (both shaft driven and hydraulically driven) sub-zero temperature operation is defined as operation of the compressor when the oil temperature is below 0° F. It is possible to operate an IMT rotary screw compressor when the ambient temperature is below 0° F, as long as the oil temperature is above 0° F. Follow these guidelines to protect the compressor:

1 MAINTENANCE REQUIREMENTS

If the IMT rotary screw compressor is expected to operate at temperatures below 0° F, the oil filter, coalescer, air filter, and oil should be changed before the compressor is run in sub-zero temperatures (ex: late fall, but this may vary by location and environment). Performing this maintenance will improve the performance of the system during sub-zero temperature operation. Use only IMT approved rotary screw compressor oils and filters.

2 STORAGE REQUIREMENTS

The IMT rotary screw compressor should be stored at or above 0° F. If the ambient temperature is below 0° F the vehicle should be stored inside, preferably in a heated environment. After moving the vehicle from the heated environment, the compressor system should be operated for 15 minutes before proceeding to a job site. During this time, the service valve must be slightly ajar such that the pressure gauge reads between 100 and 140 psi. This ensures that the oil temperature has had adequate time to come up to operating temperature, and that most of the water in the system has been removed. This will allow for approximately one hour of travel time before the oil cools to ambient temperature. If an extended driving time is expected, the operator may need to stop driving and run the system for 15 minutes every hour to ensure that the oil temperature does not cool to below 0° F. The operator should use his/her judgment when deciding what interval is needed between running the compressor to warm the oil. Lower ambient temperature will require more frequent warming of the compressor oil.

3 FAILURE TO FOLLOW MAINTENANCE AND STORAGE REQUIREMENTS

At temperatures below 0° F, failure to follow the guidelines may result in overheating of the compressor due to the oil's inability to circulate through the compressor system. The lack of circulation leads to rapid warming of the compressor air end, and eventually the compressor air end will exceed the maximum operating temperature. If the system shuts down due to high temperature during sub-zero temperature operation, the oil will need to be warmed before restarting. This may require moving the vehicle to a heated location or waiting for the ambient temperature (and therefore the oil temperature) to exceed 0° F.

CAUTION

Failure to adhere to these guidelines and repeated running of the compressor to high temperature shutdown may result in permanent damage to the air end.

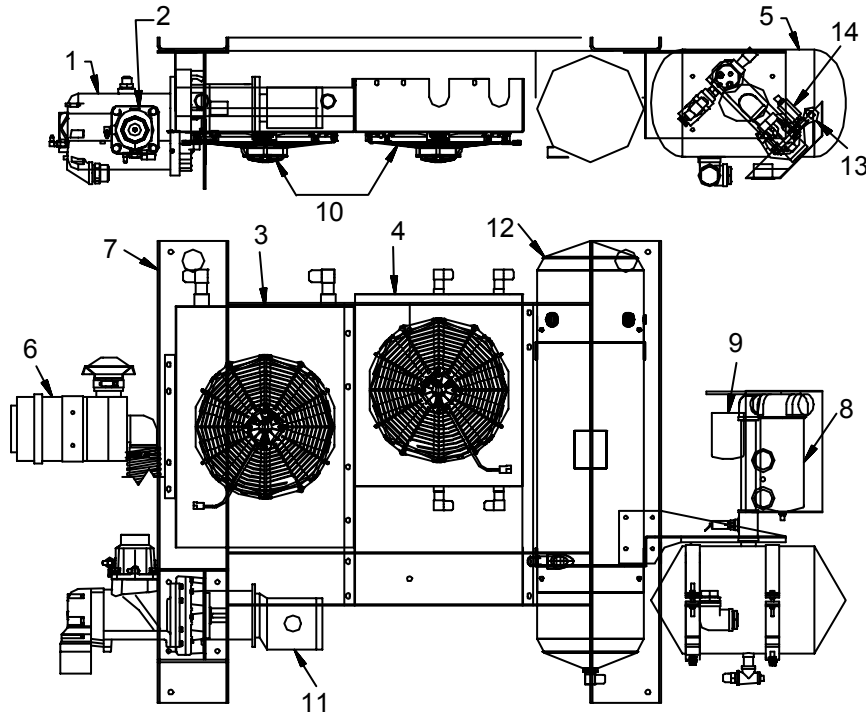
CHAPTER 4

Compressor Parts

In This Chapter

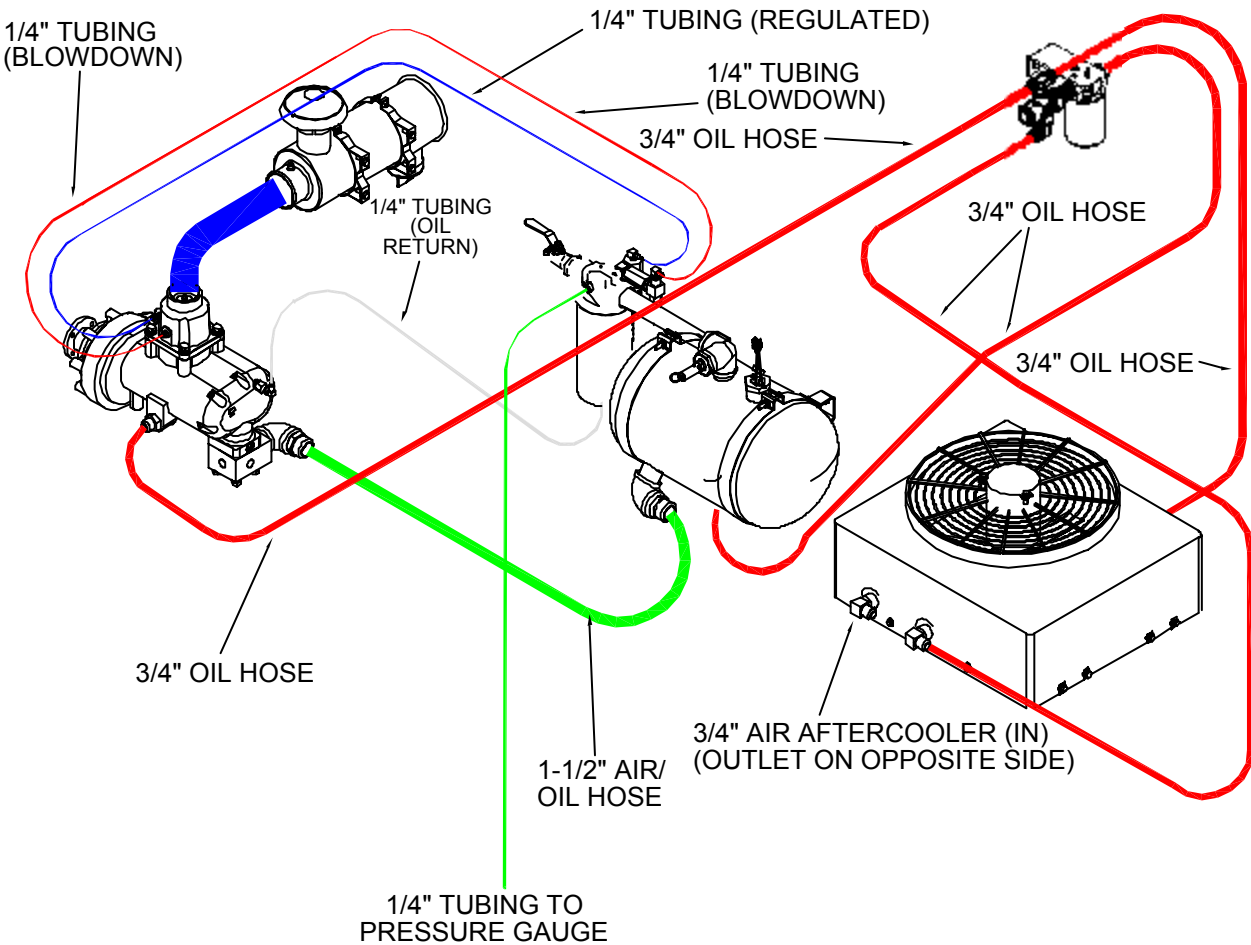
Compressor Integral Components	24
Compressor Air-Oil Schematic	25
Hydraulic Schematic.....	26
Oil Cooler	27
Hose Ports.....	28
Compressor Air Inlet System.....	29
Compressor Discharge System.....	30
Compressor Electrical System	32
Wiring Diagram.....	33
Compressor & Mounting System.....	35
Air Tank	37
Headboard, Compressor Mounting (52717236).....	38
Compressor Recommended Spare Parts	38

Compressor Integral Components

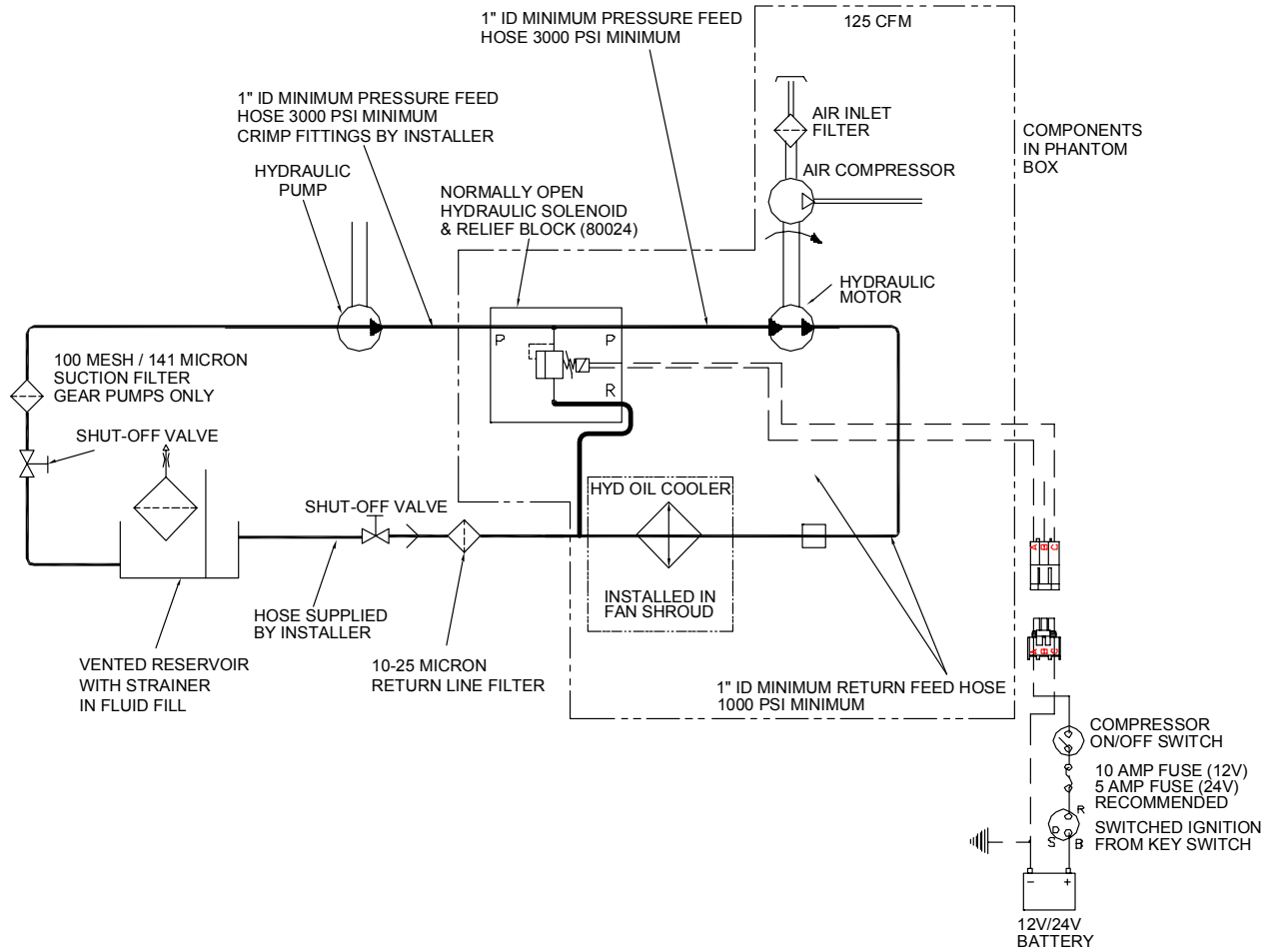


COMPRESSOR PARTS LIST				
ITEM	PART #	DESCRIPTION	DETAILS	QUANTITY
1.	301677-305	COMPRESSOR, AIR		1
2.	300036	VALVE, INLET CONTROL		1
3.	301992	COOLER, OIL	18.6 X 27	1
4.	301804	COOLER, OIL/AIR		1
5.	300225	SUMP, 12" DISCHARGE WITH PLATE BAFFLE		1
6.	302013	ASSEMBLY, AIR FILTER		1
7.	302003	FRAME		1
8.	301669	COALESCER, SPIN-ON ELEMENT		1
9.	300005-001	ELEMENT, OIL FILTER		1
10.	301921	FAN, ASSEMBLY WITH MOTOR & GRILL		1
11.	300724	MOTOR, HYDRAULIC	4.48 CIR SAE "B" 2	1
12.	70733413	TANK, AIR 22 GALLON VERTICAL		1
13.	300057	VALVE, REGULATOR	1/4	1
14.	301827	VALVE, BLOWDOWN	1/4 N.C.	1

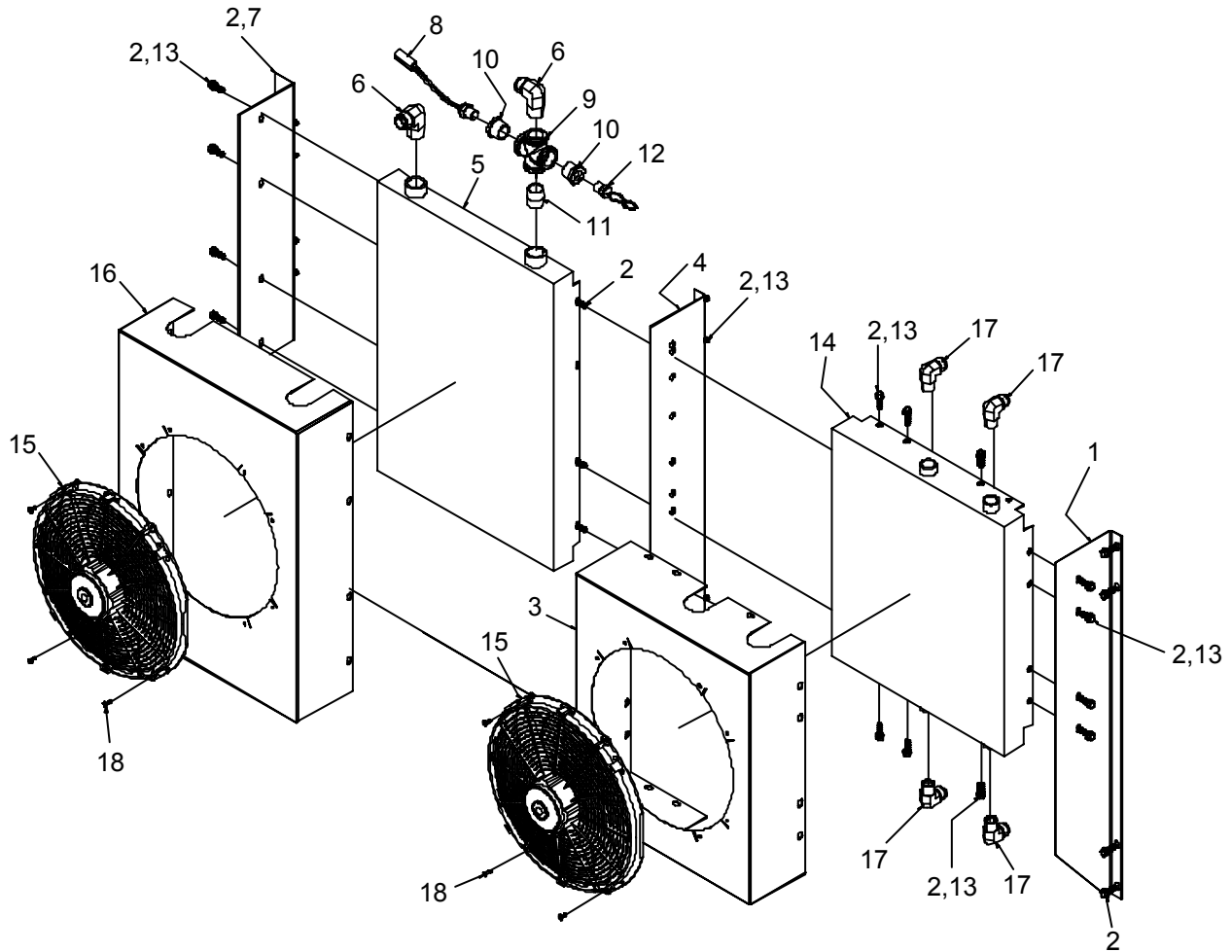
Compressor Air-Oil Schematic



Hydraulic Schematic



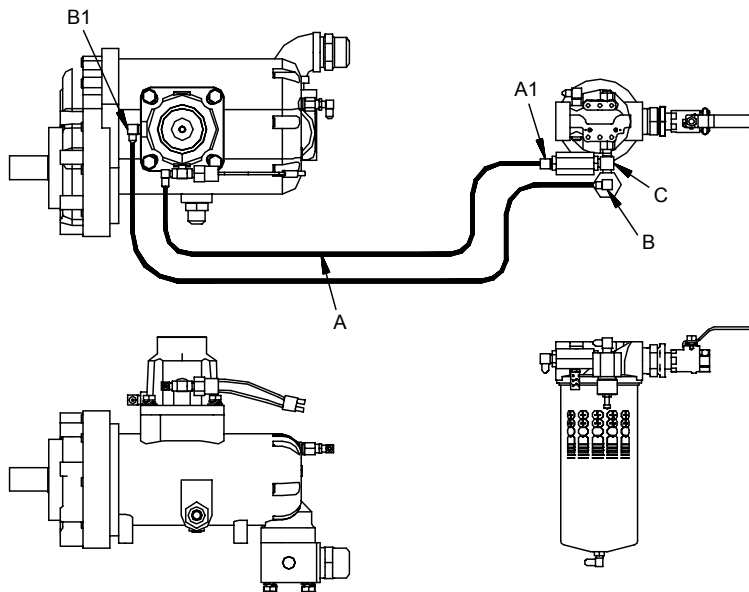
Oil Cooler



OIL COOLER SYSTEM PARTS				
ITEM	PART #	DESCRIPTION	DETAILS	QUANTITY
1.	302009	BRACKET, MOUNTING		1
2.	929705-100	BOLT, WHIZLOCK	GR5 5/16-18 X 1	29
3.	301813	SHROUD, OIL/AIR COOLER		1
4.	302008	BRACKET, HYD/COMBO MOUNTING		1
5.	301992	COOLER, OIL	18.6 X 27	1
6.	960216-100	ELBOW, HYDRAULIC	1 MJIC X 1 MNPT	2
7.	302005	BRACKET, OIL COOLER		1
8.	302865	SENSOR, TEMPERATURE	175 F NO W/WP CONN	1
9.	901315-040	CROSS, PIPE	1 GAL 150PSI	1
10.	907604-020	BUSHING, RED	1 X 1/2 GAL	2
11.	922216-000	NIPPLE, PIPE	1 X CLOSE GAL SCH80	1
12.	302899	SENSOR, TEMPERATURE	90 F NO W/WP CONN	1

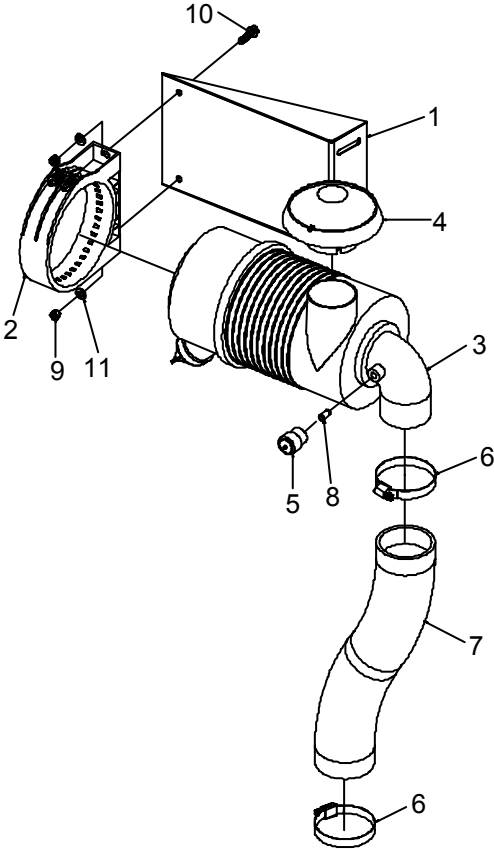
OIL COOLER SYSTEM PARTS				
ITEM	PART #	DESCRIPTION	DETAILS	QUANTITY
13.	925305-283	NUT, WHIZ LOCK	5/16-18	17
14.	301804	COOLER, OIL-AIR	18.6	1
15.	300989	FAN ASSEMBLY WITH MOTOR & GRILL		2
16.	302017	SHROUD, OIL COOLER	18.88 X 27.0	1
17.	960212-075	ELBOW	3/4 JIC X 3/4 MNPT	4
18.	943104-038	RIVET, POP	1/4 X 3/8 ALUMINUM	8

Hose Ports



PORT	DESCRIPTION
A	Air signal supply, at shutdown only to A1
A1	Signal from "A" at shutdown to exhaust air from compressor system
B	Outlet regulated air pressure signal, present only when there is no demand for air. (i.e. Closed service valve or air pressure dead headed into a tool that is not being used.) Maximum pressure in this line is 50 PSIG.
B1	Air signal from "B" regulator outlet to compressor inlet valve regulating port. Air signal modulated air opening from open to closed when there is no demand for air.
C	System air pressure signal port to air pressure regulator inlet. Air pressure is present anytime there is air pressure in the system.

Compressor Air Inlet System

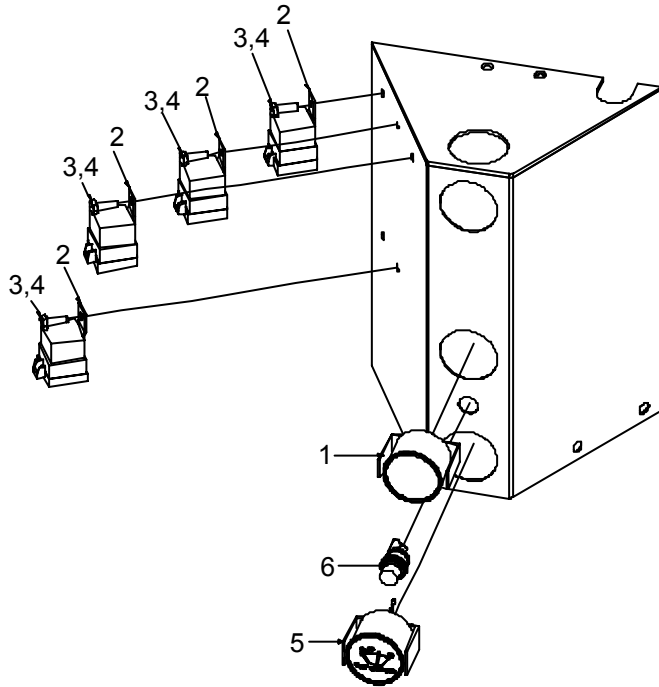


AIR INLET SYSTEM PARTS				
ITEM	PART #	DESCRIPTION	DETAILS	QUANTITY
1.	302018	BRACKET, AIR FILTER MOUNTING		1
2.	302015	BAND, AIR FILTER MOUNTING		1
3.	302013	ASSEMBLY, AIR FILTER		1
4.	300031	CAP, AIR FILTER		1
5.	70048222	INDICATOR, AIR FILTER	25" H2O	1
6.	301786-300	CLAMP, AIR INLET	3"	2
7.	301785-300	HOSE, AIR INLET	3" ID	1.6 ft
8.	922202-000	NIPPLE, PIPE	1/8 X CLOSE GAL SCH80	1
9.	924305-166	NUT, NYLOC	GR5 5/16-18	2
10.	929705-125	BOLT, WHIZLOCK	GR5 5/16-18 X 1 1/4	2
11.	938205-071	WASHER, FLAT	GR8 5/16	2

DISCHARGE SYSTEM PARTS				
ITEM	PART #	DESCRIPTION	DETAILS	QUANTITY
1.	300107	SIGHTGLASS, OIL LEVEL	1 1/2	1
2.	902615-060	ELBOW, PIPE SIDE OUT	1 1/2 GAL 150PSI	1
3.	72534409	CONNECTOR	1 1/2 MJIC X 1 1/2 MNPT	2
4.	301466-150	CAP, JIC	1 1/2 W/ HOLE	1
5.	702053251	NIPPLE, PIPE	1 1/2 X CLOSE GAL SCH80	1
6.	300225	SUMP, 12 in DISCHARGE WITH PLATE BAFFLE		1
7.	300234	BAND, SUMP MOUNTING 12		2
8.	302010	PANEL, GAUGE-COALESCER GUARD		1
9.	302007	BRACKET, TANK MOUNTING		1
10.	302012	BRACKET, OIL FILTER MOUNTING		1
11.	302289	BRACKET, SUMP TANK SUPPORT		1
12.	300023-200	VALVE, RELIEF	1/2 NPT 200#	1
13.	902205-052	TEE, PIPE REDUCER	1 1/4 X 1 1/4 X 1/2 GAL 150PSI	1
14.	922120-110	NIPPLE, PIPE	1 1/4 X 11 GAL SCH40	1
15.	901515-050	ELBOW, PIPE	1 1/4 GAL 150PSI	1
16.	922220-000	NIPPLE, PIPE	1 1/4 X CLOSE GAL SCH80	1
17.	300331	HEAD, COALESCER		1
18.	301669	COALESCER, SPIN-ON LONG IMT		1
19.	977704-0404	TEE	1/4 MNPT	1
20.	73540110	VALVE, BLOWDOWN	1/4 N.C.	1
21.	60124689	MUFFLER, EXHAUST	1/4	1
22.	960204-025	ELBOW, HYDRAULIC	1/4 MJIC X 1/4 MNPT	1
23.	73540109	VALVE, REGULATOR	1/4	1
24.	902206-026	TEE, PIPE REDUCER	1 1/2 X 1/2 X 1 1/2 GAL 150PSI	1
25.	73540114	VALVE, DRAIN COCK	1/2" MPT	1
26.	977608-050	ELBOW, HYD	1/2 FNPT	1
27.	960408-050	NIPPLE, HYD	HEX 1/2	1
28.	960708-050	ELBOW, HYD	1/2 FNPT X MNPT STREET	1
29.	902203-023	TEE, PIPE REDUCER	3/4 X 1/2 X 3/4 GAL 150PSI	1
30.	922212-000	NIPPLE, PIPE	3/4 X CLOSE GAL SCH80	2
31.	960112-075	CONNECTOR	3/4 MJIC X 3/4 MNPT	1
32.	960212-075	ELBOW, HYD	3/4 MJIC X 3/4 MNPT	2
33.	300599	HEAD, OIL FILTER	3/4 FNPT 15-PSI BY PASS	1
34.	960412-075	NIPPLE, HYDRAULIC	HEX 3/4	1
35.	301662	VALVE, THERMAL	3/4 3-PORT	1
36.	961712-075	TEE, MBR	3/4 JIC X 3/4 JIC X 3/4 MNPT	1
37.	938004-062	WASHER, LOC	GR5 1/4	6
38.	929104-075	BOLT, HEX	GR5 1/4-20 X 3/4	6
39.	300005-001	ELEMENT, OIL FILTER IMT		1
40.	72063003	WASHER, FLAT	GR8 3/8	12
41.	72063225	WASHER, LOC	GR8 3/8	8
42.	72060046	BOLT, HEX	GR8 3/8-16 X 1	8
43.	72062109	NUT, WHIZ LOCK	5/16-18	2
44.	929705-100	BOLT, WHIZLOCK	GR5 5/16-18 X 1	2

DISCHARGE SYSTEM PARTS				
ITEM	PART #	DESCRIPTION	DETAILS	QUANTITY
45.	302087	BULBWELL,	5/8 UNF X 1/2 NPT	1
46.	929808-125	BOLT, HEX	GR8 1/2-13 X 1 1/4	1
47.	938208-112	WASHER, FLAT	GR8 1/2	2
48.	937808-125	WASHER, LOCK	GR8 1/2	1
49.	960104-025	CONNECTOR	1/4 MJIC X 1/4 MNPT	1
50.	300845	VALVE, MINIMUM PRESS	3/4	1
51.	302287	BRACKET, COALESER SUPPORT		1
52.	902915-010	PLUG, PIPE	1/4 RECESSED ZINC	2
53.	72053404	PLUG, PIPE	1/2 RECESSED ZINC	1
54.	984724-188	PLUG,	24 SAE(1.875-12)	1
55.	960204-012	ELBOW,	1/4 JIC X 1/8 MNPT	1
56.	907600-005	BUSHING, REDUCER	1/4 X 1/8 GAL	1
57.	301422	SWITCH, PRESS	NO 20 PSI	1
58.	925508-262	NUT, NYLOC	GR8 1/2-13	1
59.	907605-030	BUSHING, REDUCER	1 1/4 X 3/4 GAL	1
REV 20090525				

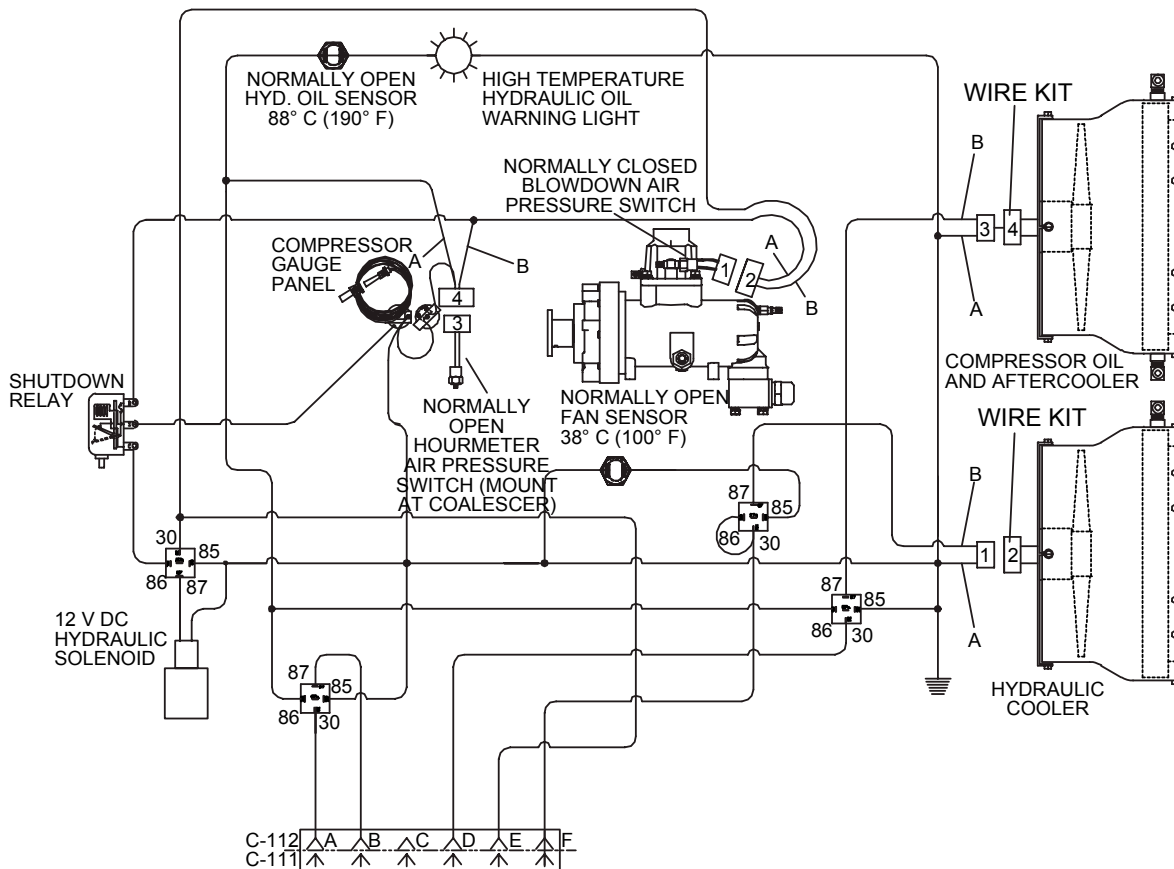
Compressor Electrical System



COMPRESSOR ELECTRICAL BOX PARTS				
ITEM	PART #	DESCRIPTION	DETAILS	QUANTITY
1.	300074	GAUGE, HOURMETER		1
2.	301755-012	RELAY, POWER	12VDC	4
3.	929104-075	BOLT, HEX	GR5 1/4-20 X 3/4	4
4.	924304-145	NUT, NYLOC	GR5 1/4-20	4
5.	302139-004	SWITCHGAUGE, TEMPERATURE		1
6.	302027	INDICATOR, RED LIGHT	12V	1
REF	60225-999	KIT, LATCHING RELAY		1
REF	302016	WIRE HARNESS (NOT SHOWN)		1
REV 20090525				

Wiring Diagram

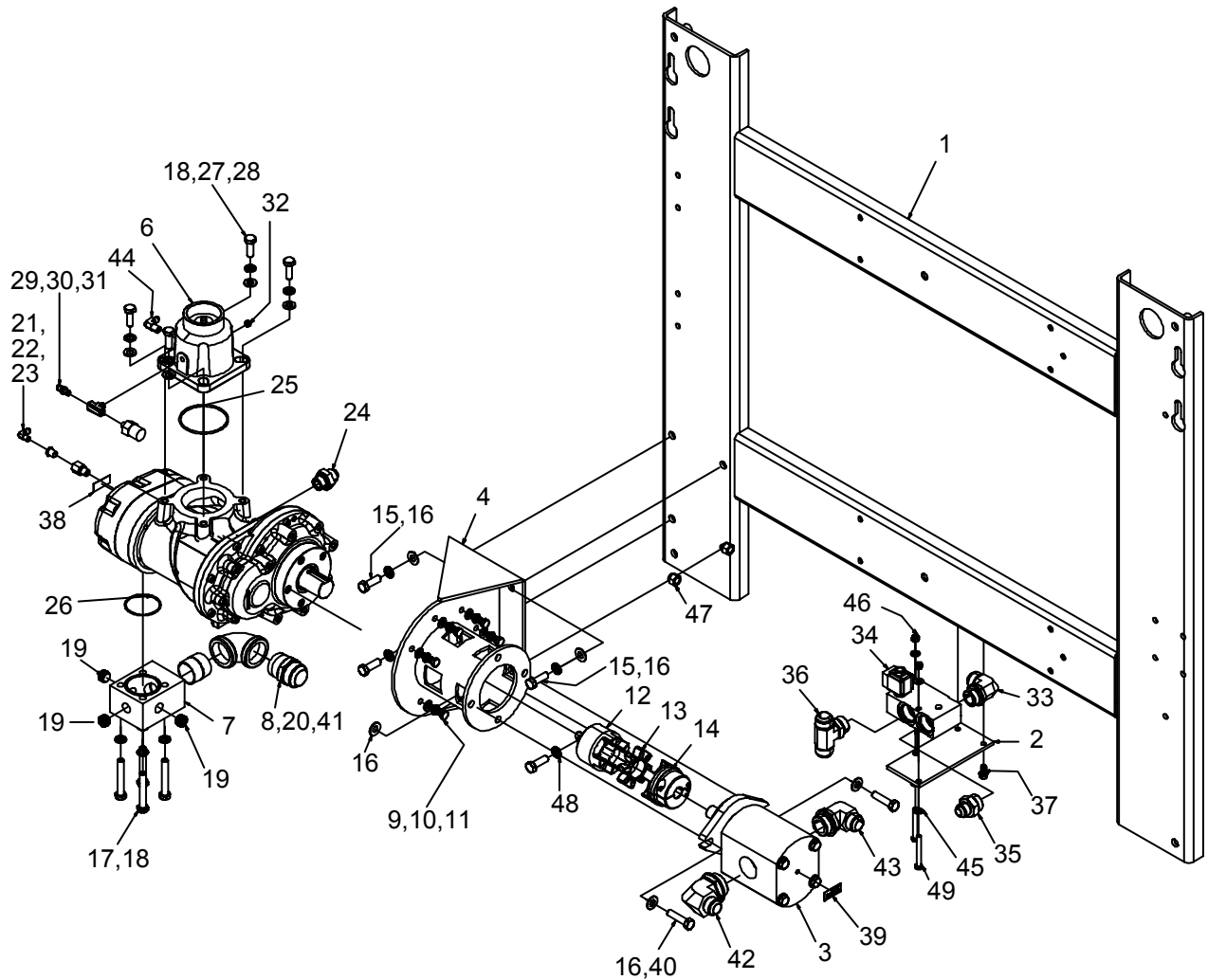
FITTINGS	
1	METRIPACK 280 FEMALE CONNECTOR #15300027
2	METRIPACK 280 MALE CONNECTOR #15300002
3	WEATHERPACK SHROUD #12010973
4	WEATHERPACK TOWER #12015792
	ALL RELAYS - HELLA #66211
	ALL RELAYS - SOCKETS - METRIPACK #630 WEATHERPROOF RELAY CONNECTOR. PACKARD ASSEMBLY LESS TERMINALS #12065686.



With a 24-volt system, use these replacement parts:

- 77041674 - RELAY-24 VOLT 20 AMP
- 303185 - FAN-16in PULLER STR BLADE 24VDC
- 10001-CMMDR-24 - COMPRESSOR-24 VOLT
- 303187 - HIGH TEMPERATURE WARNING LIGHT (24VDC)
- 302025 - SOLENOID VALVE (12VDC & 24VDC)

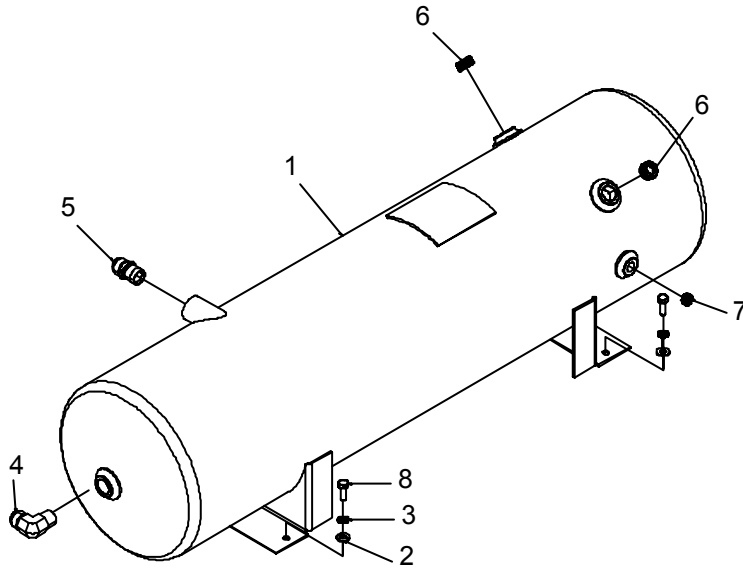
Compressor & Mounting System



COMPRESSOR PARTS & MOUNTING SYSTEM				
ITEM	PART #	DESCRIPTION	DETAILS	QUANTITY
1.	302003	FRAME		1
2.	302045	BRACKET, HYDRAULIC VALVE BLOCK MOUNTING		1
3.	300724	MOTOR, HYDRAULIC		1
4.	302006	BRACKET, COMPRESSOR MOUNTING		1
5.	301677-305	AIR END		1
6.	300036	VALVE, INLET CONTROL		1
7.	301703	FLANGE, DISCHARGE		1
8.	960124-150	CONNECTOR	1 1/2 MJIC X 1 1/2 MNPT	1
9.	929210-300	BOLT, HEX	10MM X 30MM GR 10.9	7
10.	938810-220	WASHER, LOCK	10MM	7

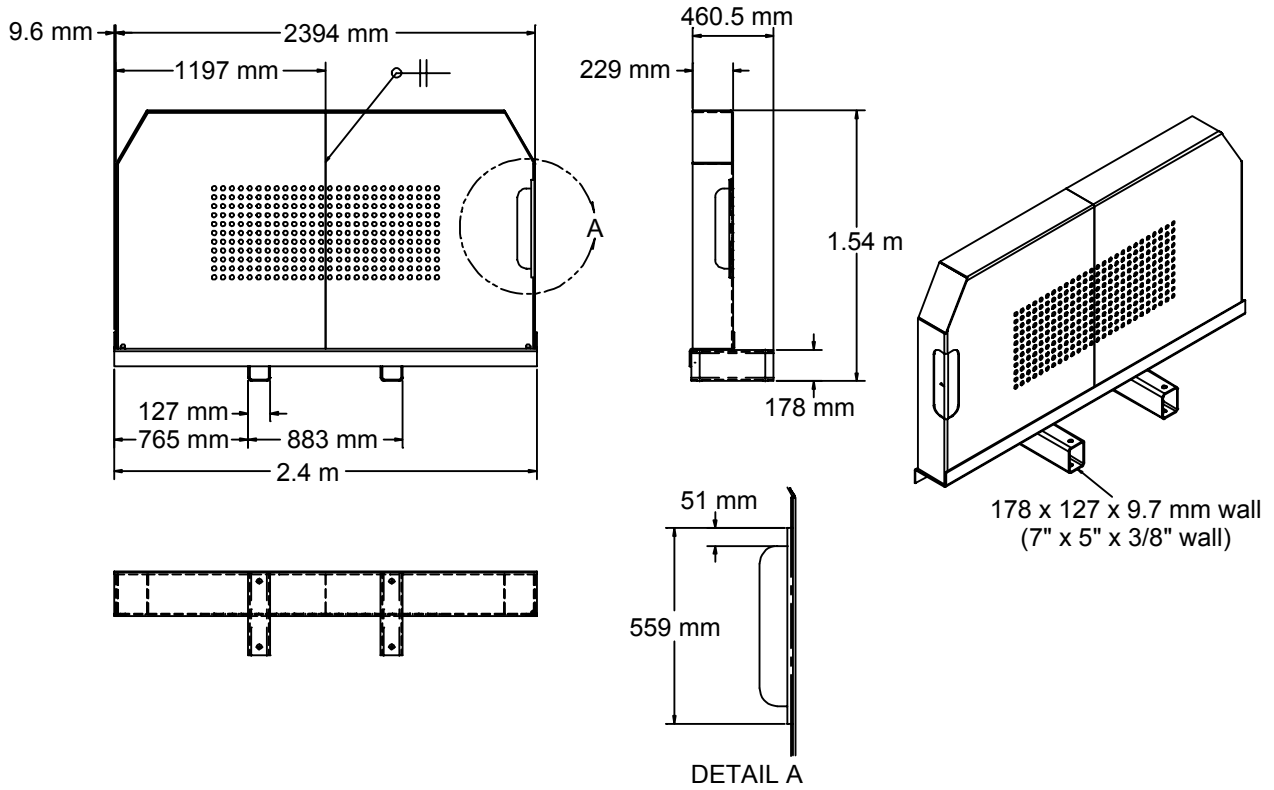
COMPRESSOR PARTS & MOUNTING SYSTEM				
ITEM	PART #	DESCRIPTION	DETAILS	QUANTITY
11.	938910-200	WASHER, FLAT	10MM	7
12.	302132	HUB, HYDRAULIC COUPLING		1
13.	302134	SPIDER, HYDRAULIC COUPLING		1
14.	302133	HUB, HYD COUPLING		1
15.	929808-150	BOLT, HEX	GR8 1/2-13 X 1 1/2	4
16.	938208-112	WASHER, FLAT	GR8 1/2	8
17.	929212-800	BOLT, HEX	12MM X 80MM GR 10.9	4
18.	938812-250	WASHER, LOCK	12MM	8
19.	902915-020	PLUG, PIPE	1/2 RECESSED ZINC	3
20.	922224-000	NIPPLE, PIPE	1 1/2 X CLOSE GAL SCH80	1
21.	970804-025	ADAPTER	1/4 MBSPP X 1/4 FNPT	1
22.	907600-005	BUSHING, RED	1/4 X 1/8 GAL	1
23.	300721	VALVE, CHECK ELBOW	1/8NPTx1/4JIC	1
24.	973112-075	CONNECTOR	3/4 JIC X 3/4 BSPP	1
25.	926102-238	O-RING, INLET VALVE		1
26.	926102-145	O-RING, DISCHARGE BLOCK		1
27.	938912-200	WASHER, FLAT	12MM	4
28.	929212-350	BOLT, HEX	12MM X 35MM GR 10.9	4
29.	960104-012	CONNECTOR	1/4 MJIC X 1/8 MNPT	1
30.	961902-012	TEE	MB 1/8 F X 1/8 F X 1/8 M	1
31.	301421	SWITCH, PRESSURE NORMALLY CLOSED		1
32.	902915-005	PLUG, PIPE	1/8 RECESSED ZINC	1
33.	970416-131	ELBOW, HYDRAULIC	1 MJIC X -16 MSAE	1
34.	80024	KIT, HYDRAULIC VALVE BLOCK	1" SAE	1
	302024	COIL, HYDRAULIC SOLENOID	12VDC NORMALLY OPEN	1
	302025	VALVE, HYDRAULIC SOLENOID NORMALLY OPEN	12VDC	1
	302026	VALVE, CARTRIDGE RELIEF		1
35.	970512-131	CONNECTOR	3/4 MJIC X -16 MSAE	1
36.	976516-131	TEE	1 JIC X 16 SAE X 1 JIC	1
37.	929705-075	BOLT, WHIZLOCK	GR5 5/16-18 X 3/4	2
38.	301594	DECAL, TEMPERATURE COMPRESSOR- 250 F		1
39.	301593	DECAL, TEMP. HYDRAULIC 140 F30		1
40.	929808-200	BOLT, HEX	GR8 1/2-13 X 2	2
41.	901515-060	ELBOW, PIPE	1 1/2 GAL 150PSI	1
42.	970416-188	ELBOW, HYDRAULIC	1 MJIC X -24 MSAE	1
43.	970416-162	ELBOW, HYDRAULIC	1 MJIC X -20 MSAE	1
44.	960204-025M	ELBOW, HYDRAULIC	1/4 MJIC X 1/4 MNPT W/HOLE	1
45.	938605-071	WASHER, FLAT	GR5 5/16	4
46.	925505-273	NUT, NYLOC	GR8 5/16-18	2
47.	925508-262	NUT, NYLOC	GR8 1/2-13	2
48.	937808-125	WASHER, LOC	GR8 1/2	4
49.	929105-275	BOLT, HEX	GR5 5/16-18 X 2 3/4	2
REV 20090526				

Air Tank



AIR TANK PARTS				
ITEM	PART #	DESCRIPTION	DETAILS	QUANTITY
1.	70733413	TANK, AIR 22 GALLON VERTICAL	22-GAL VERTICAL	1
2.	938206-071	WASHER	FLAT GR8 3/8	4
3.	937806-094	WASHER	LOCK GR8 3/8	4
4.	960212-075	ELBOW	3/4 JIC X 3/4 MNPT	1
5.	960112-075	CONNECTOR	3/4 MJIC X 3/4 MNPT	2
6.	902915-030	PLUG, PIPE	3/4 RECESSED ZINC	2
7.	902915-015	PLUG, PIPE	3/8 RECESSED ZINC	1
8.	929806-100	BOLT, HEX	GR8 3/8-16 X 1	4
REV 20090526				

Headboard, Compressor Mounting (52717236)



Compressor Recommended Spare Parts

Recommended Spare Parts for one-year:

NOTE: This spare parts list does not necessarily indicate that the items can be expected to fail in the course of a year. It is intended to provide the user with a stock of parts sufficient to keep the unit operating with the minimal down-time waiting for parts. There may be parts failures not covered by this list. Parts not listed are considered as not being Critical or Normal Wear items during the first year of operations and you need to contact the distributor or manufacturer for availability.

ASSEMBLY PART #	PART NO.	DESCRIPTION	QUANTITY	CODE
INTEGRAL COMPRESSOR COMPONENTS				
	301669	SPIN-ON COALESCER	1	P
	300005-001	OIL FILTER ELEMENT	2	P
	301921	FAN ASSEMBLY (12V)	1	W
	303185	FAN ASSEMBLY (24V)	1	W
	300057	REGULATOR VALVE	1	W
	301827	BLOW DOWN VALVE	1	W
AIR INLET SYSTEM				
	300031	INLET RAIN CAP	1	
	300853	AIR FILTER SERVICE INDICATOR	1	W
DISCHARGE SYSTEM				
	300331	COALESCER HEAD	1	W
	300023-200	RELIEF VALVE	1	W
	300107	RECEIVER SIGHT GLASS	1	W
	300021	BLOWDOWN MUFFLER	1	W
	300187	REGULATOR VALVE REPAIR KIT	1	W
	300186	INLET VALVE REPAIR KIT	1	W
	301421	NORMALLY CLOSED PRESSURE SWITCH #5	1	W
	300072	FAN SENSOR	1	W
	300076-016	MURPHY TEMPERATURE GAUGE	1	W
	300074	HOURMETER	1	W
	300845	MINIMUM PRESSURE VALVE	1	W
	300599	OIL FILTER HEAD	1	W
	300721	OIL LINE CHECK VALVE	1	W
	301448-300	OIL-COOL BLUE CASE	2	P
	300909-025	BREAKER (25A)	1	W
	302014	AIR FILTER ELEMENT	2	P
	301932-10G4	SHAFT SEAL KIT T10G	1	W
	300730	COUPLING SLEEVE	1	W

ASSEMBLY PART #	PART NO.	DESCRIPTION	QUANTITY	CODE
	301755	RELAYS	1	W
	302899	FAN SENSOR-100	1	W
	302024	COIL	1	W
	302025	SOLENOID	1	W
	302026	RELIEF-MANIFOLD	1	W
	301834	NORMALLY OPEN PRESSURE SWITCH (20#)	1	W
	302028	SHAFT SEAL REMOVAL TOOL T10G	1	P
	302030	HYD MOTOR SEAL KIT	1	W
	301662	THERMAL VALVE	1	W
REPAIR KITS				
	307471	REGULATOR REPAIR KIT	1	W
	307095	SHAFT SEAL REPAIR KIT	1	W