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Manual Part No. 99903566

# IMT CAS3560 Air Compressor

Operation, Maintenance, and Spare Parts

Revised 20090630



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## Revisions

DATE	LOCATION	DESCRIPTION
20031103	99903573	ECN 9305 - UPDATED FITTINGS, WIRING ON COOLER INSTALLATION
20031230	<b>77441084</b> (see "Electrical Installation (Non-IMT Application) (77441084) (Through 3-15-2005)" on page 24)	Added non-IMT installation.
20040319	99903516	ECN 9401 - Revision to 99903516 Hyd. Schematic.
20040621	99903551	Added 99903551 Decal Installation Drawing.
20041110	99903574-2	Added sightglass, seal, and removal tool part numbers to compressor assembly drawing.
20050315	99903532, 99903574	ECN 9647, 9713 - New harness with intro. of Dom II Series II;
20050711	99903532	ECN 9835 - 99903532 installation updates, hose changes to 99903573,74; added 99903712 standard mounting locations.
20050907	99903712, 99903573, 99903532	ECN 9907 - Added note regarding 10" minimum space between compressor and hydraulic aftercooler.
20060523	99903532, 99903574, 99903573	ECN 10131, 10103, 10087- Mounting bolt length changes, hardware quantity changes, fitting changes.
20061108		Updated ownership statement & IMT logo.
20070103	99903574	Added component parts lists to individual drawing pages.
20070815	99903573	Added harness and relay numbers to cooler install drawing 99903573. Added metric units to specifications.
20090630	99904154	ECN 11062 - ADDED 70397804 COMPRESSOR CLEARANCE DECAL TO DECAL KIT. ADDED CLEARANCE REQUIREMENT IN INSTALLATION SECTION, AND WARNING IN SAFETY SECTION.



## SECTION 1

# Compressor Introduction

This volume provides information on the installation, operation, and repair of IMT hydraulic air compressors. In addition to reading the manual, it is your responsibility to become familiar with government regulations, hazards, and the specific operation of your equipment. Use caution and common sense while operating and maintaining the equipment and follow all safety procedures and regulations. Treat this equipment with respect and service it regularly.

### MODIFICATIONS

Modifications to your equipment must be performed with IMT approved accessories, parts and optional equipment. If in doubt, contact IMT prior to making any modifications. **DO NOT** alter or modify any safety device! All safety devices must be inspected, tested and maintained in proper working condition.

Decals regarding safety and operation are considered safety equipment, and must be kept clean and legible.

The equipment owner and/or designated employee is responsible for informing all operators, maintenance personnel, and others involved in equipment operation about the safe operation and maintenance of the equipment. If questions arise concerning safe operation, contact IMT or your IMT distributor for clarification.

### WARRANTY

Warranty of this unit will be void on any part of the unit subjected to misuse due to overloading, abuse, lack of maintenance and unauthorized modifications. No warranty - verbal, written or implied - other than the official, published IMT new machinery and equipment warranty will be valid with this unit.

### NOTICE TO THE OWNER / USER

If your equipment is involved in a property damage accident, contact your IMT distributor immediately and provide them with the details of the accident and the serial number of the equipment. If an accident involves personal injury, immediately notify your distributor and IMT Technical Support at:

IOWA MOLD TOOLING CO., INC.  
500 HWY 18 WEST  
GARNER, IA 50438  
641 - 923 - 3711

**WARNING**

READ YOUR MANUAL!! FAILURE TO READ, UNDERSTAND AND FOLLOW ANY SAFETY PROCEDURES APPLICABLE TO YOUR EQUIPMENT MAY RESULT IN EQUIPMENT DAMAGE, SERIOUS INJURY, OR DEATH.

**MANUAL STRUCTURE**

Throughout this manual, three means are used to draw the attention of personnel. They are NOTES, CAUTIONs and WARNINGs and are defined as follows:

**NOTE**

A NOTE is used to either convey additional information or to provide further emphasis for a previous point.

**CAUTION**

A CAUTION is used when there is the very strong possibility of damage to the equipment or premature equipment failure.

**WARNING**

A WARNING is used when there is the potential for personal injury or death.



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# Compressor Safety

## 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. Through experience and common sense, you are in the best position to ensure your safety. Lack of attention to safety can result in accidents, personal injury, reduction of efficiency and worst of all, loss of life. Watch for safety hazards. Correct them promptly. Use the following safety precautions as a general guide to safe operation:

### WARNING

All units are shipped with a detailed Operators and Parts Manual. This Manual contains vital information for the safe use and effective 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**.

- Make sure all protective covers and guards are in place, and that the canopy / doors are closed during operation.
- Be very cautious in using this machine in flammable gas risk areas. Use in these areas may require additional safety equipment such as gas detectors, exhaust spark arrestors and shut-off valves, depending on local regulations of the level of risk involved.
- Relieve pressure from the entire system before attempting to service the compressor or removing any compressor parts.
- Do not attempt to service any part while machine is operating.
- Ensure adequate ventilation when releasing discharge air into a confined space.
- For proper airflow, maintain a minimum of 8" of clearance on each end of the compressor. If installing the compressor with a hydraulic aftercooler, keep 10" minimum between the compressor and aftercooler, and maintain 8" on each end of the compressor-cooler combination.

### WARNING

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

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

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

- Periodically check all safety devices for proper operation.
- Do not play with compressed air. Pressurized air can cause serious injury. Avoid bodily contact with compressed air.
- Exercise cleanliness during maintenance and when making repairs. Keep dirt away from parts by covering parts and exposed openings.

**DANGER**

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. Air discharged from the compressor may contain carbon monoxide or other contaminants.

IMT disclaims any and all liabilities for damage or loss due to personal injuries, including death, and/or property damage including consequential damages from using any IMT compressors for 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.
- Use hearing protection around the compressor. The compressor produces loud noises which, over extended exposure, can cause hearing loss.

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.


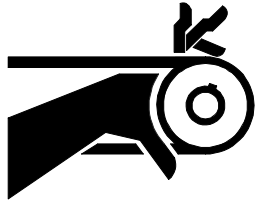


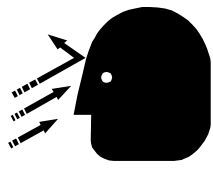
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## Safety Decals

A compliment of warning decals are supplied with each unit. These decals must be affixed to the vehicle after it has been painted, trimmed, and undercoated, etc. and prior to being put into service. The decal placement should ensure decals are clearly visible to the user and service personnel.

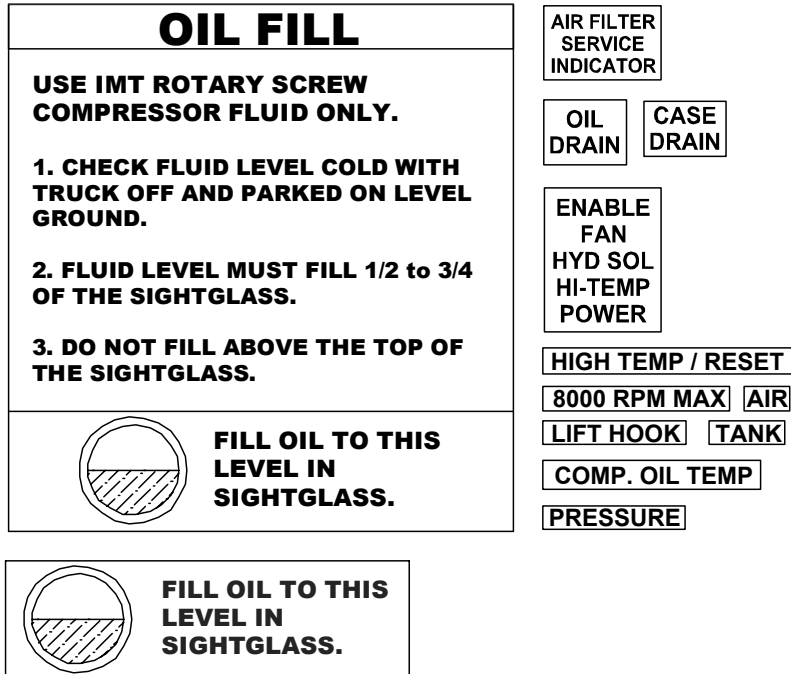
All decals for the IMT CAS3560 Air Compressor can be ordered on a decal sheet, part number 95718232.

## Warning & Caution Decals

 <p><b>Air Compressor Operating Instructions</b></p> <ul style="list-style-type: none"> <li>• Set the parking brake.</li> <li>• Close air tank drain.</li> <li>• Engage the PTO.</li> <li>• Operate the air compressor at least 15 minutes each time the compressor is started. This will reduce moisture build-up and winter freeze-ups.</li> <li>• After disengaging the compressor, relieve system pressure and check oil level.</li> <li>• Wait at least two minutes between compressor shutdown and startup to allow the blow-down cycle to complete.</li> <li>• See the manual for complete operating instructions.</li> </ul> <p>70396168</p>	<p><b>⚠ WARNING</b></p>  <p><b>Do not operate with cover removed.</b></p>	
<p><b>⚠ WARNING</b></p>  <p>Read the operators manual before starting this unit. Failure to adhere to instructions can result in severe personal injury. Replacement manuals can be purchased from: Iowa Mold Tooling Co., Inc. 500 Hwy 18 West Garner, IA 50438</p> <p>70396162</p>	<p><b>⚠ DANGER</b></p>  <p>Discharge air used for breathing will cause severe injury or death. Consult filtration specialist for additional filtration and treatment equipment to meet occupational safety and health administration standards.</p> <p>70396164</p>	<p><b>⚠ DANGER</b></p>  <p><b>HOT OIL UNDER PRESSURE!</b> Will cause SEVERE PERSONAL INJURY OR DEATH. Do not remove valves, caps, plugs or piping when compressor is running or pressurized. Shut down compressor and relieve system of all pressure before removing valves, caps, plugs or piping.</p> <p>70396165</p>

<p><b>CAUTION</b></p>	<p><b>AVOID EQUIPMENT DAMAGE!</b> Minimum 8" (20 cm) clearance on each end of compressor.</p> <p>70397804</p>
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## Instruction Decals



In addition to these instruction decals, the CAS3560 air compressor is marked with a serial number tag at the bottom of the back of the unit.

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## CAS3560 System Description & Specifications

The IMT CAS3560 air compressor is a single-stage, air-cooled, rotary screw, pressure lubricated, hydraulically driven unit designed for mobile or industrial applications. The compressor provides high pressure air for use in air tools, tire service trucks, and other mobile or stationary compressed air needs.

The compressor includes an oil-flooded, rotary screw-type design, a compressor inlet system, a capacity control system, a lubricating oil system, and a discharge system in addition to basic instrumentation. The instrumentation includes a temperature gauge, an hourmeter, a hi-temp warning indicator, an oil level sightglass, and an air restriction indicator. All instrumentation is on the front panel of the compressor. The air delivery rate of the unit is 65 CFM (1.8 cubic meters per minute) at 150 PSI (10.3 bar).

### CAUTION

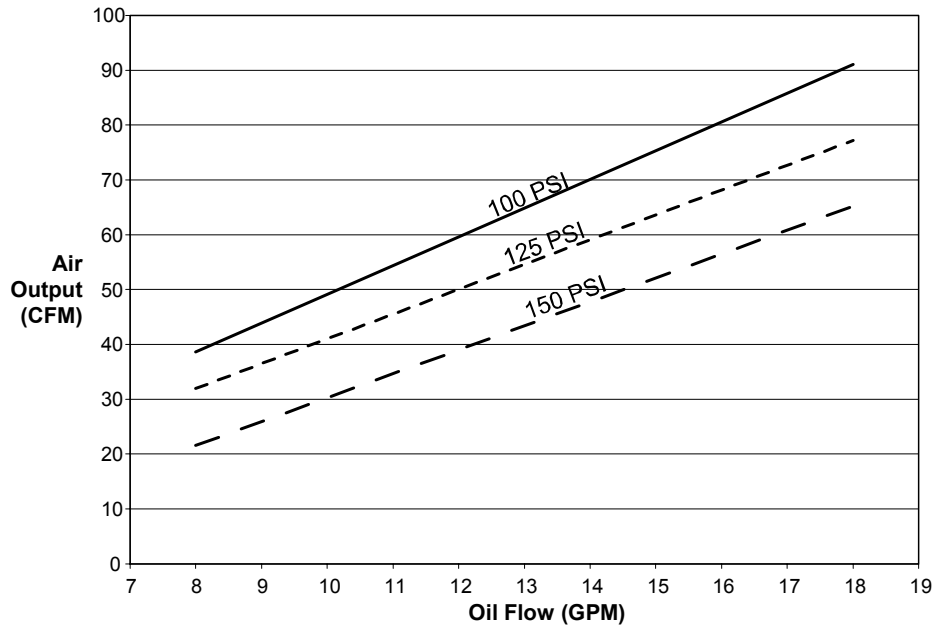
Operating the compressor at pressures above 150 PSI (10.3 bar) will shorten the service life and void the product warranty.

The unit has openings for cooling air intake on each end. Free airflow on all sides is desirable. The front and rear of the compressor cannot be blocked.

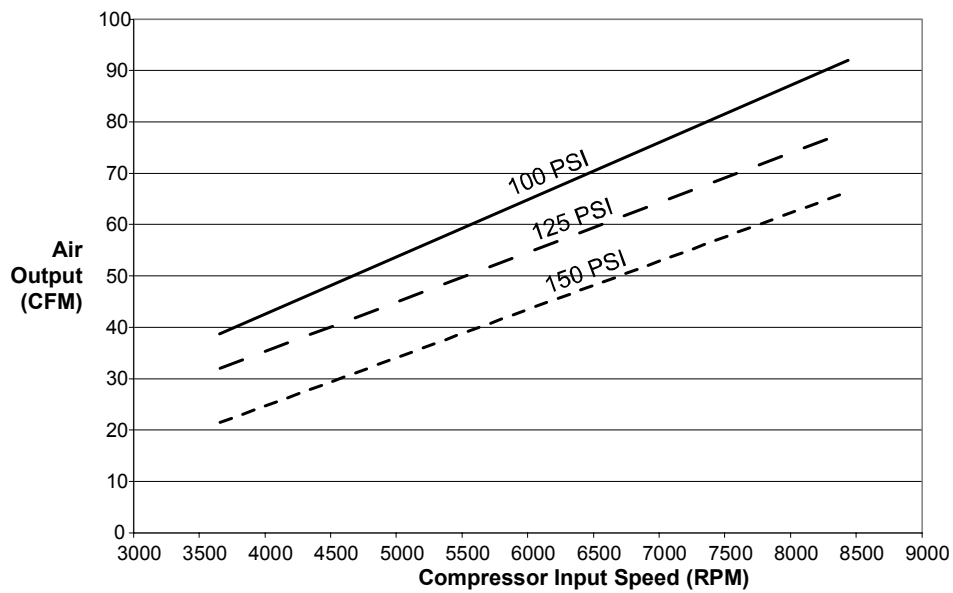
<b>CAS3560 Specifications</b>		
	<b>Units (English)</b>	<b>Units (Metric)</b>
Power Source	Hydraulic Motor	Hydraulic Motor
Dimensions	20" W x 33" L x 24.5" H	508 mm W x 838 mm L x 622 mm H
Delivery	See charts.	See charts.
Cooling	Air	Air
Fan Diameter	16"	406 mm
Operating Speed	See <b>charts</b> (see "Performance Charts" on page 14).	See <b>charts</b> (see "Performance Charts" on page 14).
Lubrication	Oil pump	Oil pump
Oil Capacity	6 qts	5.7 L
Maximum Compressor Oil Temperature	250oF	121oC
Maximum Hydraulic Oil Temperature	180oF	82oC
Weight	365 lb wet	166 Kg wet
Normal Hydraulic Flow	See <b>charts</b> (see "Performance Charts" on page 14).	See <b>charts</b> (see "Performance Charts" on page 14).
Normal Operating Pressure	1850 psi	128 bar
Maximum Pressure	2400 psi	165 bar
Ambient Operating Temperature	0oF to 120oF	-18oC to 49oC
* Add 2-5/8" (67 mm) to height for air filter cap.		
Specifications subject to change without prior notice.		

## Performance Charts

Compressor Air Output vs. Hydraulic Oil Input

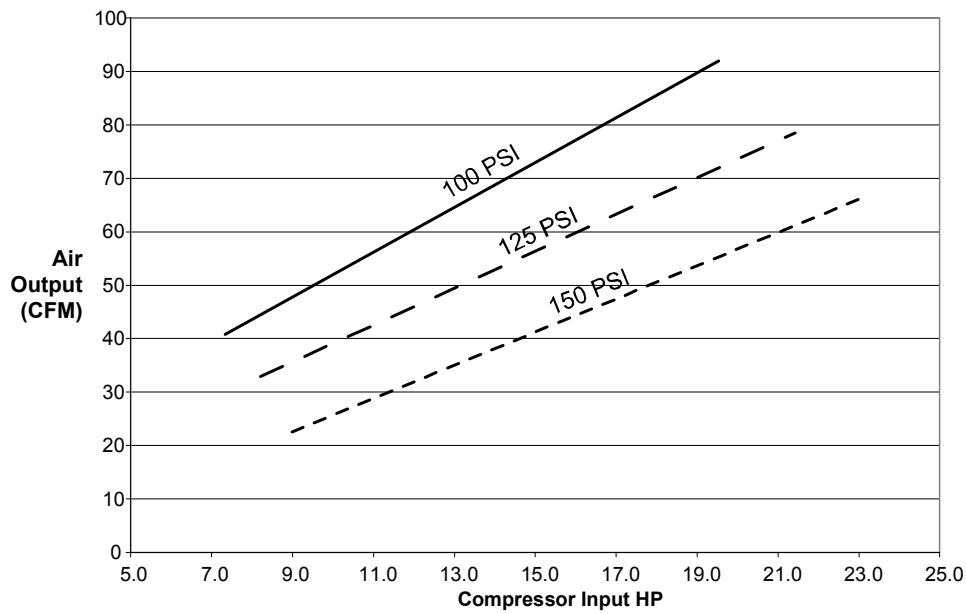


Compressor Air Output vs. Compressor Input Speed

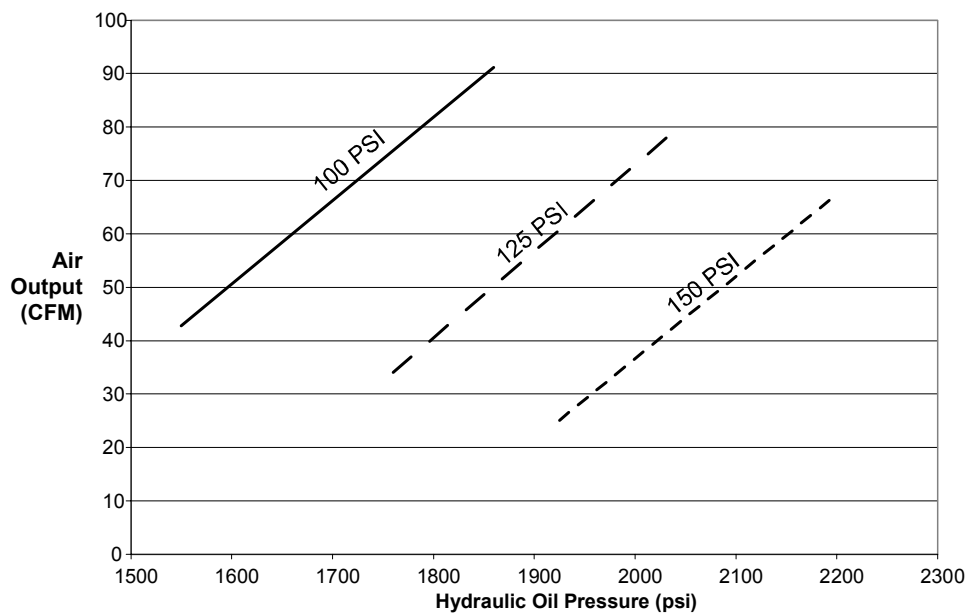




Compressor Air Output vs. Compressor Input HP



Compressor Air Output vs. Hydraulic Oil Pressure



## Performance Data (English)

CFM @ 100 PSI	40	45	60	75	90
Input Power (HP)	7.1	8.3	11.9	15.5	19.1
Compressor Speed (RPM)	3772	4222	5574	6925	8276
Hydraulic Motor Speed (RPM)	2599	2909	3840	4771	5702
Hydraulic Motor Flow (GPM)	8.27	9.22	12.08	14.94	17.8
Hydraulic Motor Pressure (PSI)	1531	1564	1660	1756	1852
Hydraulic Motor Torque (FT-LB)	14.4	15.0	16.3	17.1	17.6

CFM @ 125 PSI	35	45	55	65	75
Input Power (HP)	8.9	11.8	14.7	17.6	20.5
Compressor Speed (RPM)	3956	4990	6020	7051	8082
Hydraulic Motor Speed (RPM)	2726	3438	4148	4858	5568
Hydraulic Motor Flow (GPM)	8.67	10.88	13.1	15.31	17.5
Hydraulic Motor Pressure (PSI)	1766	1828	1889	1951	2013
Hydraulic Motor Torque (FT-LB)	17.1	18.0	18.6	19.0	19.3

CFM @ 150 PSI	25	35	45	55	65
Input Power (HP)	9.8	13.0	16.2	19.4	22.7
Compressor Speed (RPM)	4037	5101	6165	7229	8292
Hydraulic Motor Speed (RPM)	2781	3514	4248	4981	5713
Hydraulic Motor Flow (GPM)	8.79	11.08	13.67	15.66	18.0
Hydraulic Motor Pressure (PSI)	1924	1989	2054	2119	2184
Hydraulic Motor Torque (FT-LB)	18.4	19.4	20.0	20.5	20.8

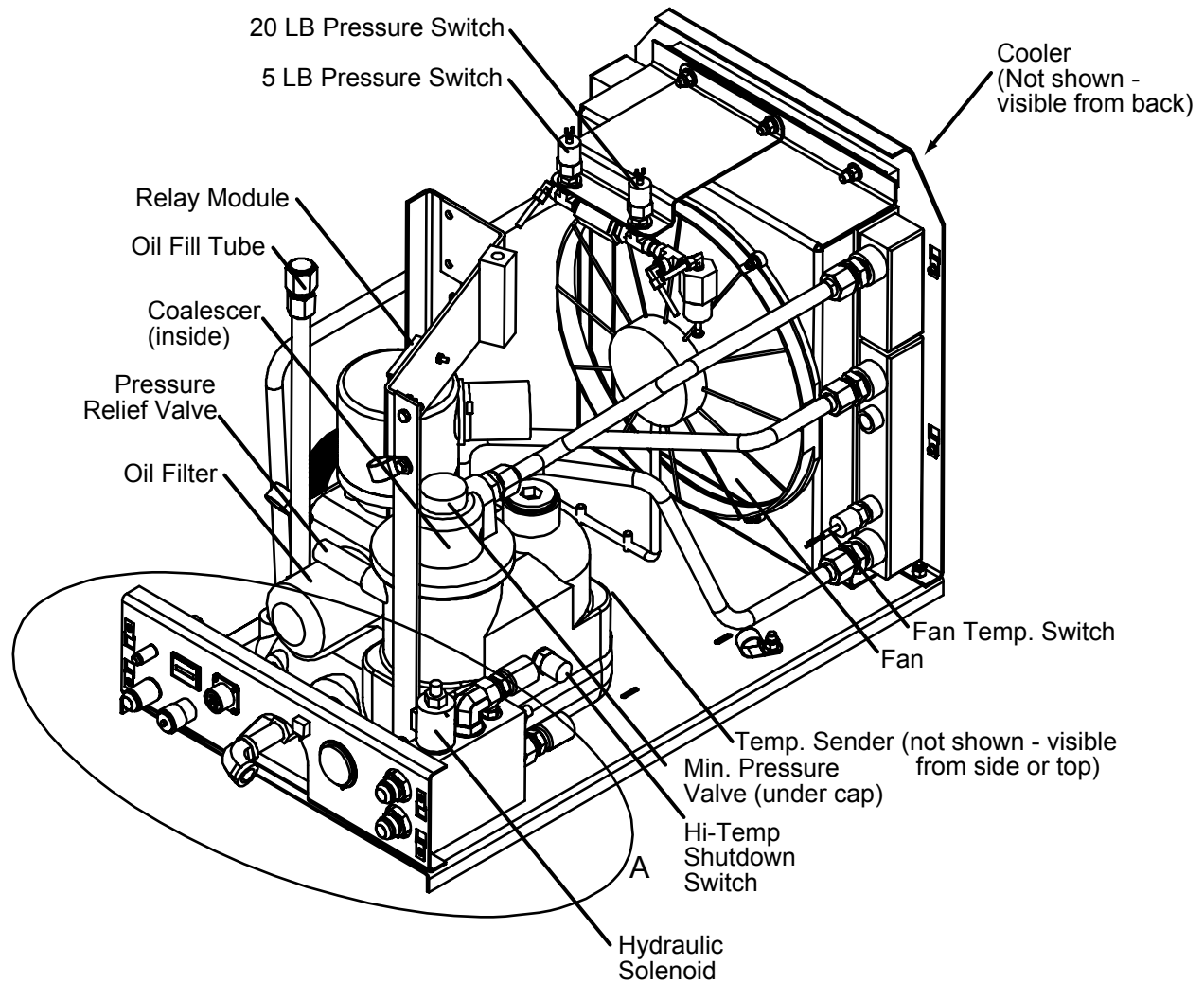
## Performance Data (Metric)

CFM @ 6.9 bar	1133	1274	1700	2124	2550
Input Power (Kw)	5.3	6.2	8.9	11.6	14.2
Compressor Speed (RPM)	3772	4222	5574	6925	8276
Hydraulic Motor Speed (RPM)	2599	2909	3840	4771	5702
Hydraulic Motor Flow (LPM)	31.3	34.9	45.7	56.6	67.4
Hydraulic Motor Pressure (bar)	105.6	107.8	114.4	121	127.7
Hydraulic Motor Torque (Nm)	19.5	20.3	22.1	23.2	23.9

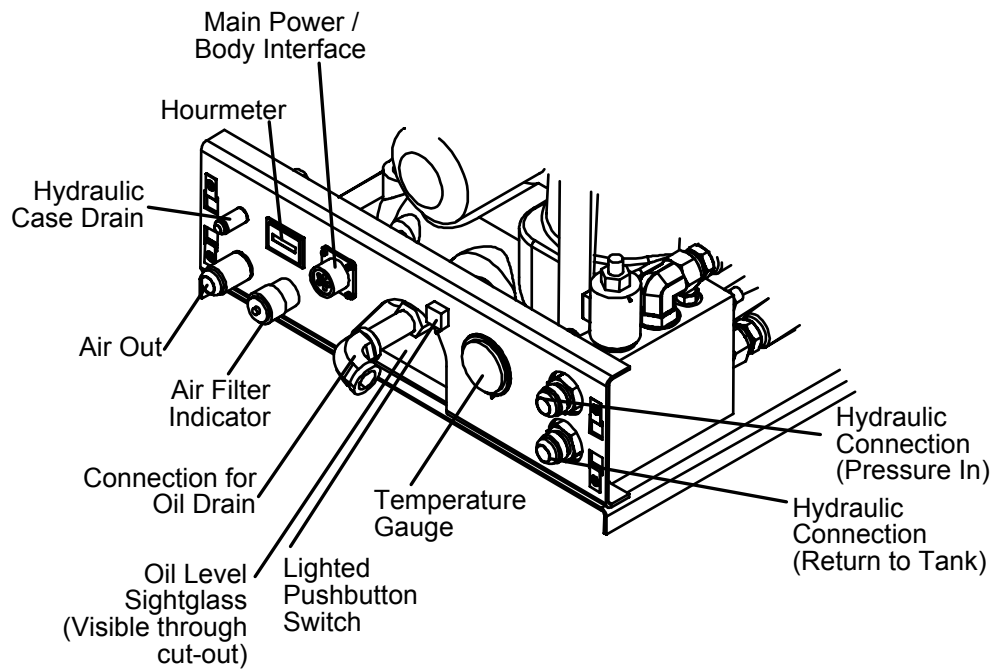
CFM @ 8.6 bar	990	1274	1560	1840	2124
Input Power (Kw)	6.6	8.8	10.9	13.1	15.3
Compressor Speed (RPM)	3956	4990	6020	7051	8082
Hydraulic Motor Speed (RPM)	2726	3438	4148	4858	5568
Hydraulic Motor Flow (LPM)	32.8	41.2	49.6	57.9	66.2
Hydraulic Motor Pressure (bar)	121.8	126	130	134.5	138.8
Hydraulic Motor Torque (Nm)	23.2	24.4	25.2	25.8	26.2

CFM @ 10.3 bar	708	991	1274	1560	1840
Input Power (Kw)	7.3	9.7	12.1	14.5	16.9
Compressor Speed (RPM)	4037	5101	6165	7229	8292
Hydraulic Motor Speed (RPM)	2781	3514	4248	4981	5713
Hydraulic Motor Flow (LPM)	33.3	41.9	51.8	59.3	68.1
Hydraulic Motor Pressure (bar)	132.6	137.1	141.6	146	150.1
Hydraulic Motor Torque (Nm)	24.9	26.3	27.1	27.8	28.2

## CAS3560 Component Identification



## VIEW A - COMPRESSOR FRONT PANEL





## SECTION 2

# Installation

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## Electrical Installation

The IMT CAS3560 air compressor is powered with 12VDC power supplied through a wiring harness which is included with the compressor. If the compressor comes with an IMT service truck package with a crane, the unit will be wired and ready to use and will be controlled through the crane remote. If the compressor comes with an IMT service truck without a crane, the compressor will be wired through the truck and will be controlled with a switch. If the compressor is sold individually, it is up to the customer or his agent to connect the wiring harness appropriately. Use the wiring diagram provided in the parts section to connect the power, ground, and other wires.

The compressor is protected from overheating with a thermal-type discharge oil temperature switch. The switch is factory-set to shut down the compressor at 250° F.

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## Compressor Installation (99903532)

Satisfactory installation depends upon the ability of the installer. Refer to the installation drawing below for the foundation plan for the IMT CAS3560 air compressor installation. When installing, choose a location that will permit top access to service the unit. 28-inches of clearance are required. Compressor performance is optimum with a level installation. The maximum tilt allowed is 20°. You do not need to use isolators with installation - the gasket material is sufficient.

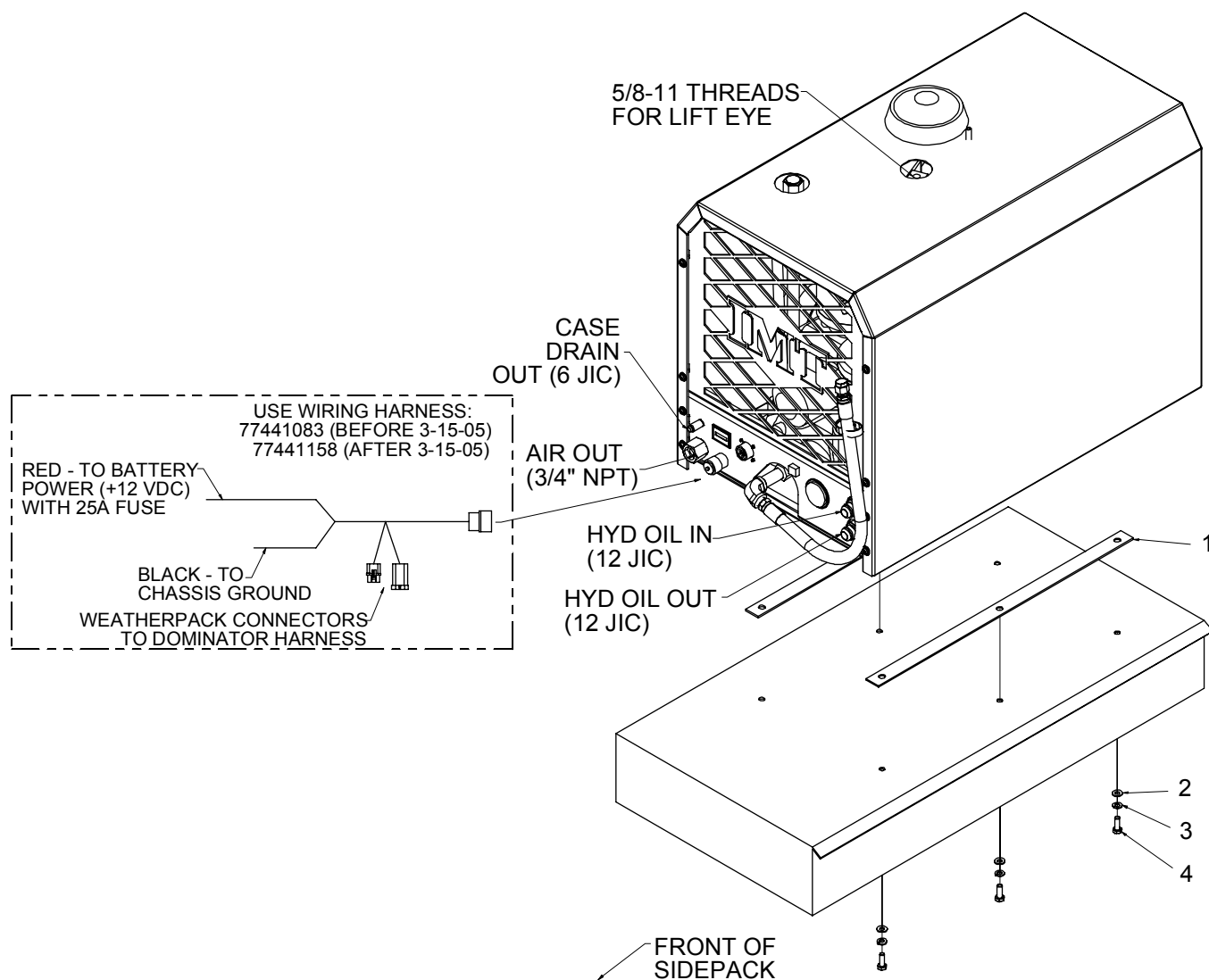
ITEM #	PART #	DESCRIPTION	QUANTITY
1.	76396381	GASKET, COMPRESSOR MT.	2
2.	72062821	WASHER, 3/8 BONDED PLT	6
3.	72063051	WASHER 3/8 LOCK	6
4.	72060047	CAP SCR 3/8-16X1.25 GR5Z (WAS 72060046)	6

Use hydraulic connections and hoses of proper size. Smaller hoses and fittings will reduce compressor performance. IMT recommends the following:

- Pressure Hose: 12 (3/4") rated at 3125 PSI (100R2)
- Return Hose: 12 (3/4") rated at 300 PSI (100R4)
- Case Drain Hose: 6 (3/8") rated at 2250 PSI (100R1)
- Air Discharge Hose: 3/4" air hose rated at 250 psi and 185° F



## 99903532 Drawing

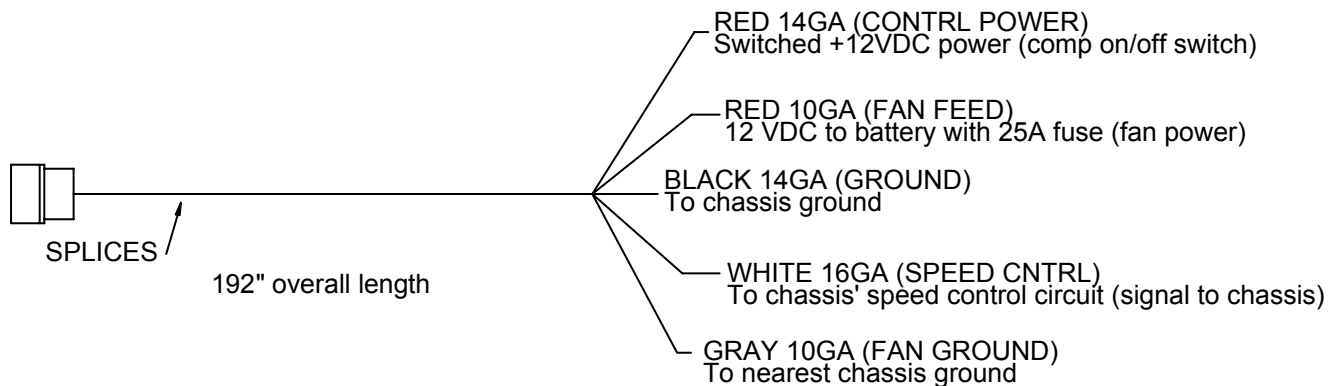


### NOTE:

Maintain at least 8" of clearance on each end of the compressor. When installing in conjunction with a hydraulic aftercooler, keep at least 10" between the cooler and the compressor, while maintaining at least 8" on each end of the compressor-cooler combination.

## Electrical Installation (Non-IMT Application) (77441157) (Effective 3-15-05)

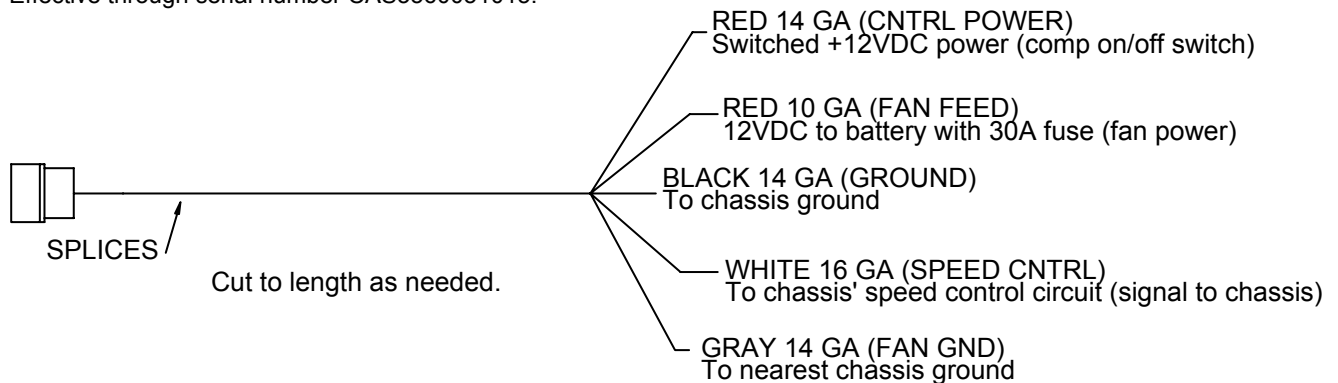
Effective for CAS3560 compressors with serial numbers of CAS3560051016 and higher.



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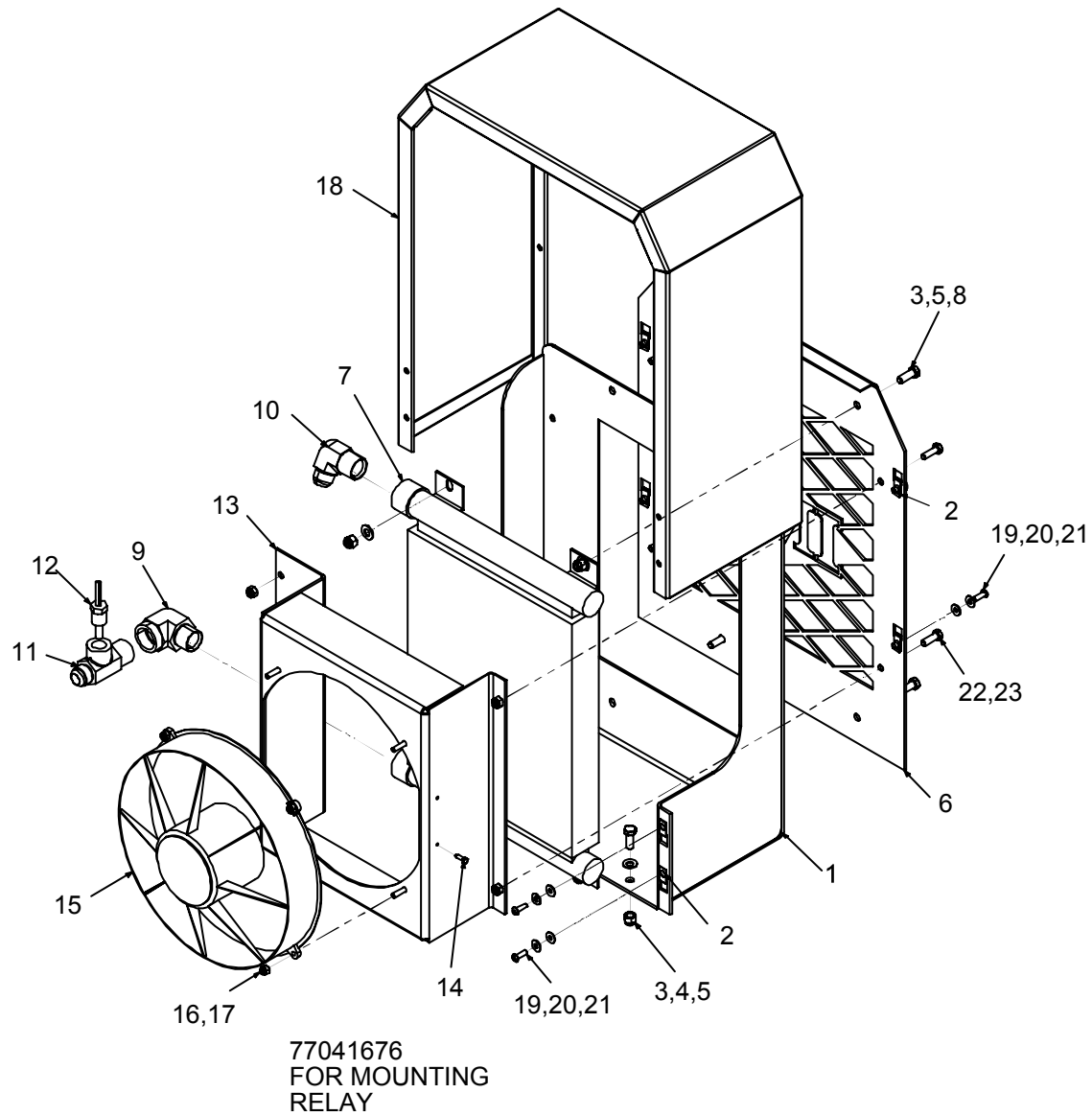
## Electrical Installation (Non-IMT Application) (77441084) (Through 3-15-2005)

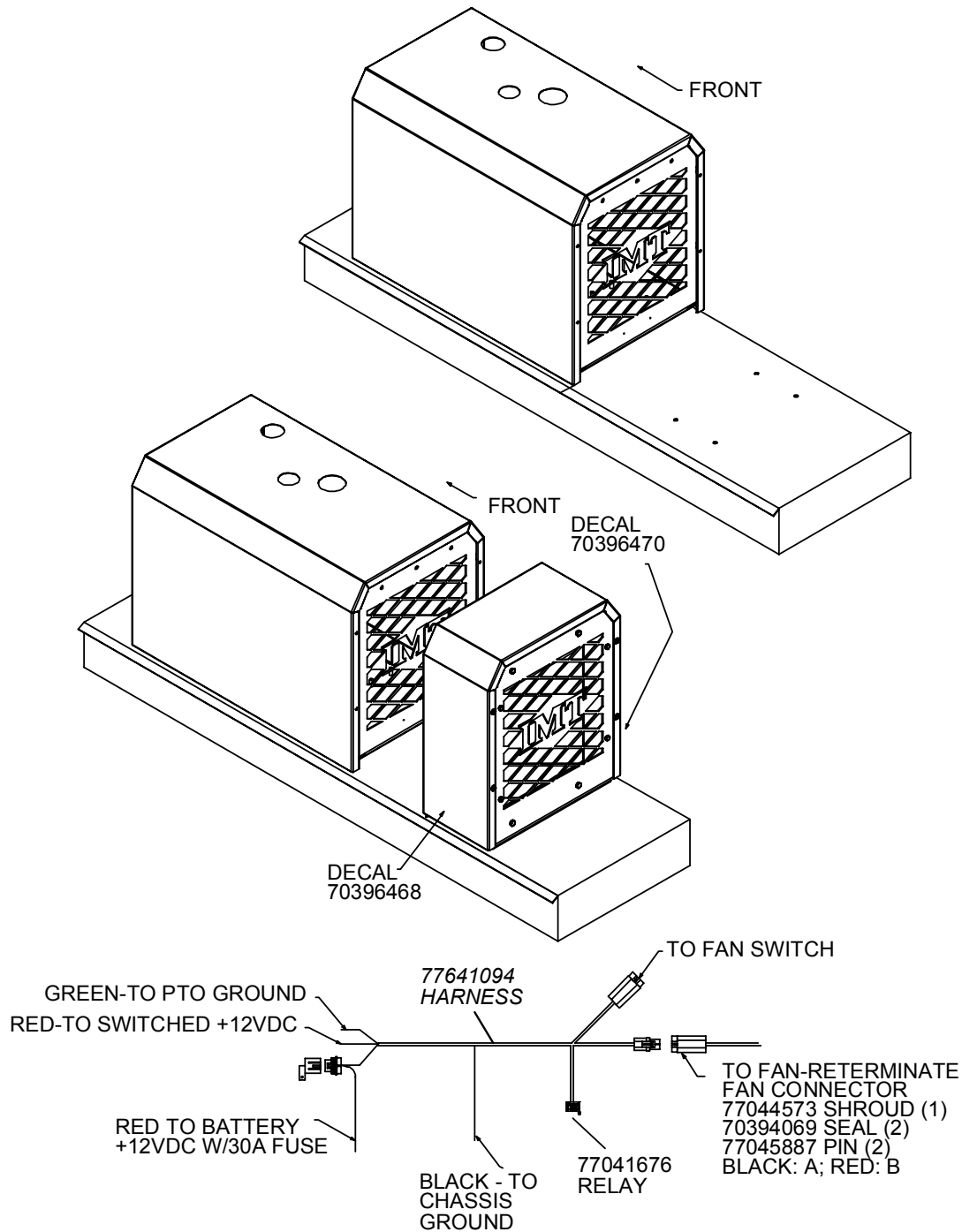
Effective through serial number CAS3560051015.



NEW 20031230

## Cooler Installation (99903573)



**99903573 PARTS**

ITEM	PART #	DESCRIPTION	QUANTITY
1.	52718363	MOUNT-COOLER HYD	1
2.	72062301	NUT-TINNERMAN 1/4-20 UNC	8
3.	72062103	NUT 3/8-16 HEX NYLOC	8
4.	76392821	WASHER-BONDED PLT 3/8	4
5.	72060046	CAP SCR 3/8-16X1 HHGR5Z (WAS 8)	4
6.	60125785	HYD COOLER GRILL	1
7.	73052133	HYDRAULIC COOLER	1
8.	72063003	WASHER 3/8 FLAT	4

99903573 PARTS			
ITEM	PART #	DESCRIPTION	QUANTITY
9.	72531134	ELBOW STREET STL 1X90°	1
10.	72531430	ELBOW MPT/90/JIC 1.00 16 (WAS 72534342)	1
11.	72534390	TEE #12JIC #8FPT #16MPT STL	1
12.	77041659	TEMP SWITCH, FAN	1
13.	60125752	COOLER SHROUD, HYD AUX SIDEPACK	1
14.	72061090	SCR-SELF TAP #12-24X.62 PL HEX WH	1
15.	70733880	FAN	1
16.	72060004	CAP SCR 1/4-20X1 HHGR5Z	4
17.	72062104	NUT 1/4-20 HEX NYLOC	4
18.	60125784	HYD COOLER COVER	1
19.	72063228	WASHER, NYLOC 1/4X5/8X1/16	8
20.	72063001	WASHER 1/4 FLAT	8
21.	72601652	SCR-MACH 1/4-20X3/4 TRHTORXSS	8
22.	72060025	CAP SCR 5/16-18X1 HHGR5Z	4
23.	72062109	NUT 5/16-18 HEX NYLOC	4
24.	77441094	HARNESS-AUX HYD COOLER	1
25.	72060047	CAP SCR 3/8-16X1.25 HHGR5Z	4

REV. E 20060523

**NOTE:**

When the compressor is installed with a hydraulic after-cooler, the minimum space between the cooler and the compressor must be 10". Keep at least 8" on each end of the compressor-cooler combination.

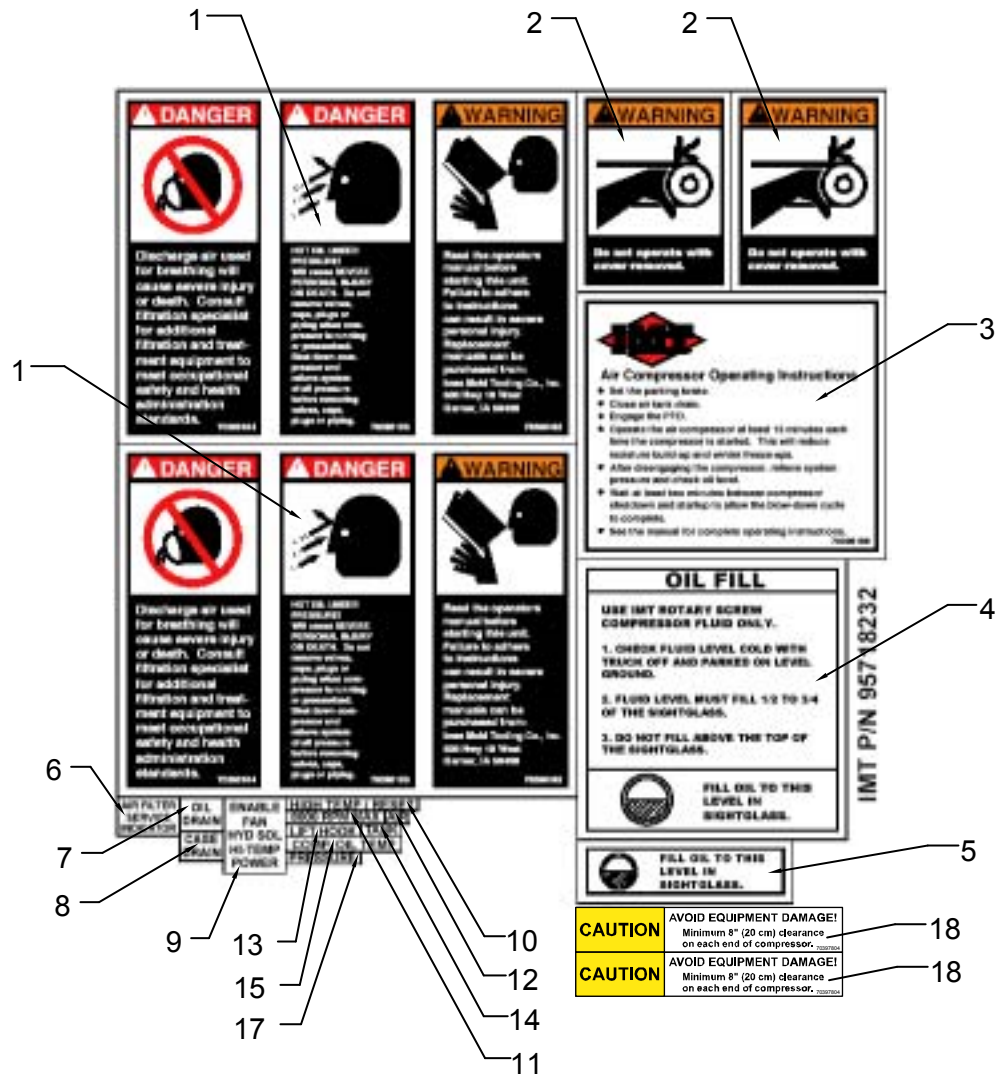
## Compressor Space Requirements

**CAUTION**

Maintain a minimum of 8" clearance on each end of the compressor for proper airflow. If installing the compressor with a hydraulic aftercooler, keep 10" minimum between the compressor and cooler, while still maintaining the 8" of space on each end of the compressor - cooler combination. Failure to follow the recommended installation guidelines will void the warranty on the compressor.

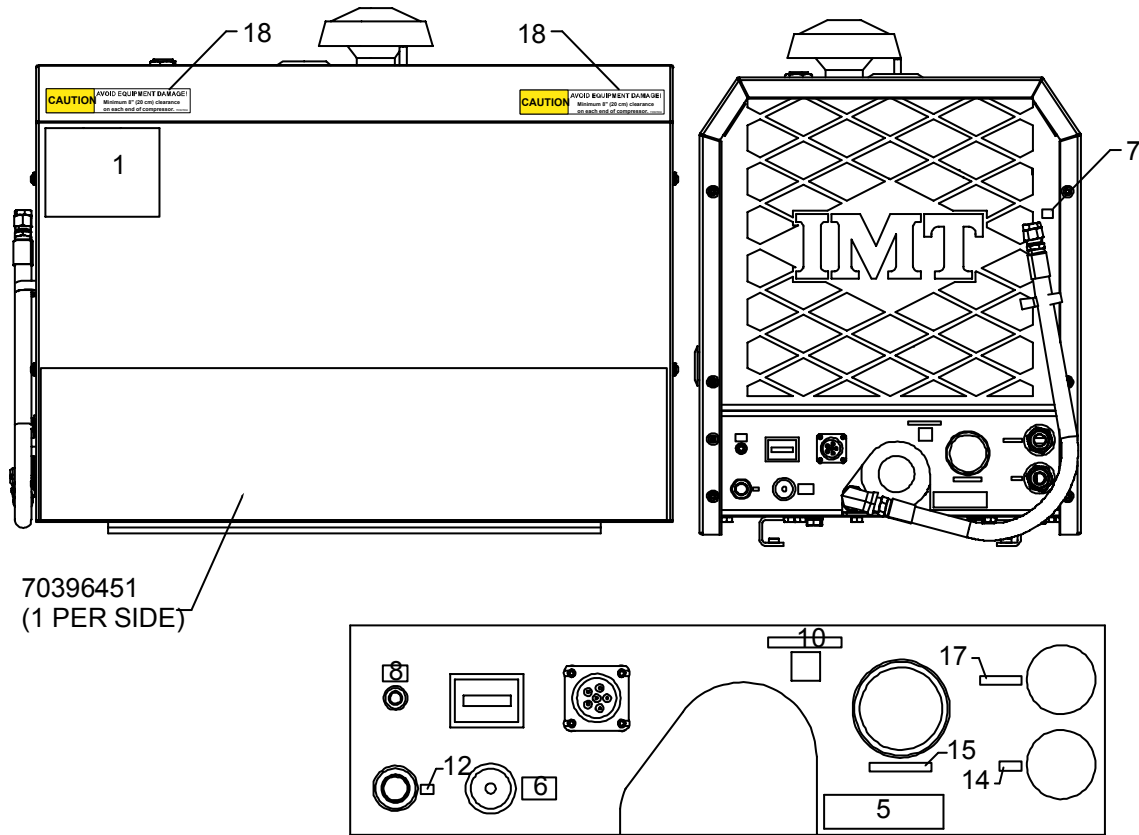
# Decal Installation (99903551)

All decals for the CAS3560 Compressor come on a single sheet of decals, part number 95718232. See the decal sheet illustration for decal item numbers. These items numbers are referred to in the placement instructions.

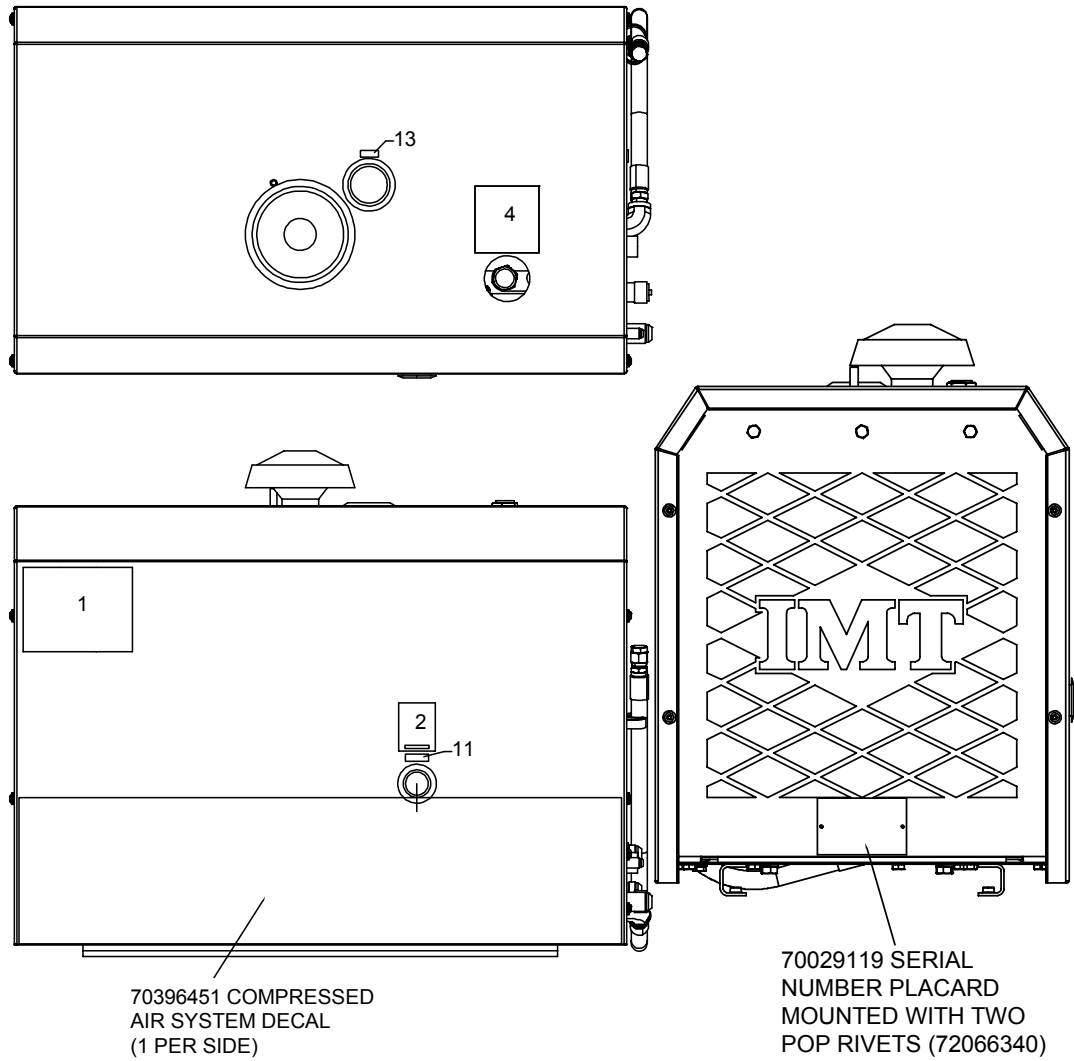


## Decal Placement (99903551)

**Decal Installation (99903551)** (on page 28)

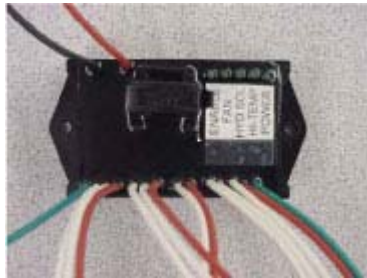


**Decal Installation (99903551) (on page 28)**





## LOCATIONS OF DECALS NOT SHOWN ON PLACEMENT DRAWINGS:

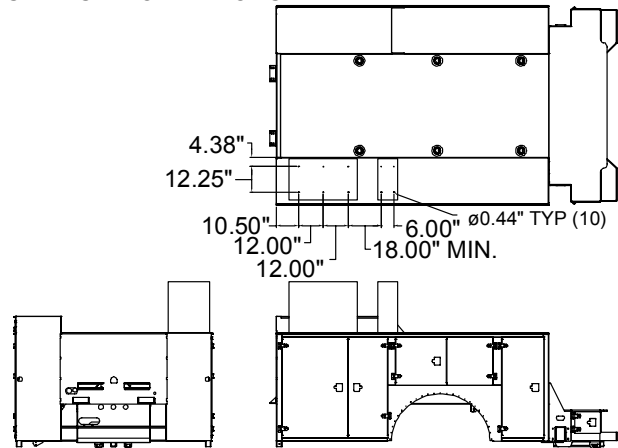
ITEM #	LOCATION
2	Place 1 on 52718087 (lift station) near 70146433 (relay module).
3	Place in cab on the dash board on the passenger side.
9	<p>Place on 70146433 (relay module) over existing decal, rotated CCW 90°.</p> 

## Compressor Mounting Locations (99903712)

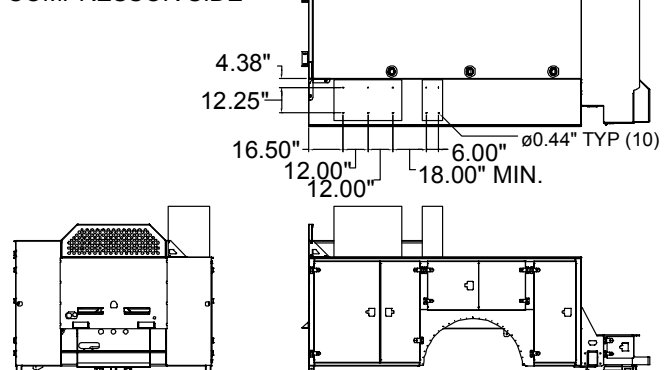
### NOTE:

When installed with hydraulic after-cooler, the minimum space between the cooler and the compressor must be 10". A minimum of 8" must be maintained at each end of the compressor (without aftercooler), or the compressor-aftercooler combination.

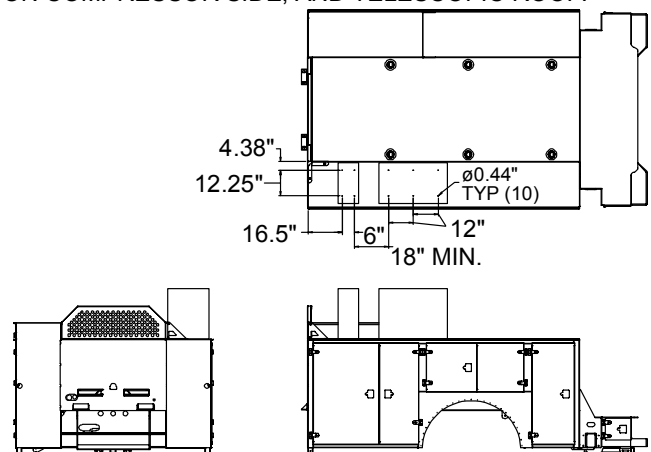
CAS3560 & CAS2545 INSTALLATION ON SERIES 1 AND SERIES 2 DOMINATORS



CAS3560 & CAS2545 INSTALLATION ON SERIES 2 DOM WITH HEADACHE RACK AND STANDARD HEIGHT SIDEPACK ON COMPRESSOR SIDE



CAS3560 & CAS2545 INSTALLATION ON SERIES 2 DOM WITH HEADACHE RACK, STANDARD HEIGHT SIDEPACK ON COMPRESSOR SIDE, AND TELESCOPIC ROOF.



## SECTION 3

# Operation

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## Compressor Terminology

AIR/OIL COALESCER	Performs second stage separation of oil from compressed air feeding tools. Sometimes referred to as the separator element.
CFM	Refers to the volume of compressed air being produced expressed as cubic feet of air per minute.
SPEED CONTROL	Sometimes referred to as the engine speed control
OIL SUMP	The first stage of oil separation from compressed air. Also serves as reservoir area for compressor lubricant.
PSI	Refers to the operating pressure the system is set up at, expressed as pounds per square inch.
PRESSURE RELIEF VALVE	A valve located on the oil sump which opens in case of excessive pressure. Sometimes referred to as the pop-off valve or the check valve.
HI-TEMP SHUTDOWN SWITCH	Works in conjunction with a power relay, sending a signal to stop the compressor power source in cases of high compressor oil temperature.

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## Description of Components

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### COMPRESSOR ASSEMBLY

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

---

### PRINCIPLES OF OPERATION

---

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

During the compression cycle, oil is injected into the compressor. The oil lubricates the rotating parts and bearings; serves as a cooling agent for the compressed air; and seals the running clearances.

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### LUBRICATION SYSTEM

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Oil from the compressor oil sump, at compressor discharge pressure, is directed through the oil filter, cooling system, and to the side of the compressor stator, where it is injected into the compressor. At the same time oil is directed internally to the bearings and shaft seal of the compressor. The oil-laden air is then discharged back into the sump.

---

### OIL SUMP

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

---

### PRESSURE RELIEF VALVE

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The pressure relief valve is set at 200 PSI. It is located at the top of the air/oil sump. This valve acts as a backup to protect the system from excessive pressure that might result from a malfunction.

---

### AIR/OIL COALESCER

---

The coalescer is self-contained within the air end assembly. When air is demanded at the service line, it passes through the coalescer which efficiently provides the final stage of oil separation.

**MINIMUM PRESSURE VALVE**

---

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

**OIL FILTER**

---

The compressor oil filter is the full-flow replaceable element type.

**COMPRESSOR COOLING SYSTEM**

---

The compressor cooling system consists of a remote mounted oil/air cooler with an electric fan. The fan is activated through a temperature switch (180°) and latching relay, so it will not turn off until the compressor is disengaged and the system pressure is fully relieved, or when the engine is turned off. The thermal valve will divert oil to the oil cooler at 160°F.

**ELECTRICAL AND SAFETY CIRCUIT SYSTEM**

---

The unit is supplied with an hourmeter, wire harness and a high temperature shutdown switch. Compressor shutdown occurs in the event of high compressor temperature (> 250°).

**AUTOMATIC BLOW DOWN VALVE**

---

There is one blow down valve in the compressor system. It is located inside the compressor. The valve will automatically bleed the sump to atmospheric pressure when the compressor is disengaged. The blow down time interval is typically less than 90 seconds.

**CONTROL SYSTEM**

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

**PRESSURE REGULATOR VALVE**

---

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

## NOTE

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

---

### INLET VALVE

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

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### AIR AFTERCOOLER

The air after-cooler is a second chamber of the oil cooler. Air leaving the compressor enters the after-cooler. Temperature of the air is reduced to approximately 10-15°F above ambient temperature. Condensation is directed to the air tank, where it is collected.

---

### CONTROL SYSTEM OPERATION

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

The pressure regulator, mounted near the fan/cooler assembly, operates as follows:

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

---

## Compressor Operation Test

Each compressor is bench tested under load at the factory to ensure proper break-in and operation. While it is not necessary to follow any break-in procedures, complete the following checks before putting the unit into service and periodically during use.

### 1 Before start-up

- a) Check the compressor oil level using the sightglass on the unit. If oil is required, use only IMT's synthetic compressor oil. Always check compressor oil level with the truck cold and the compressor on level ground.
- b) Check the air intake filter indicator (visible at the front of the compressor) for cleanliness and obstructions. A dirty or obstructed filter may cause reduced air output. The indicator will be in the red zone when the filter needs attention.
- c) Avoid operating the compressor package when the side-to-side or front-to-rear tilt is greater than 20°.

### *CAUTION*

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Prior to compressor start-up, make sure the cover, guards, and access plugs are in place and secured.

---

### 2 With the compressor engaged:

- a) Adjust engine speed to ensure that compressor speed does not exceed 8000 RPM (max.) under load. Crack open air discharge valve until air pressure drops to 140 PSI and maintains this pressure. Doing so simulates a maximum load condition.
- b) If engine speed increase is required, readjust air discharge valve to 140 PSI after speed has been increased. Repeat until appropriate compressor RPM (NOT engine RPM) is achieved.
- c) Check the compressor RPM using a phototach on the compressor input pulley, located through the canopy cover.

---

## Compressor Start-Up & Shut-Down

### Compressor Start-Up

- a** Make sure all guards, covers, and access plugs are in place and secured.
- b** Start the vehicle engine.
- c** Engage the PTO per the manufacturer's instructions.
- d** Engage the compressor by turning on the power. The power switch location varies depending on the installation. If the compressor is mounted on an IMT service truck with a crane, the power switch is located on the crane remote. Otherwise, the power switch may be located on the truck or as a custom wiring application.

### WARNING

This compressor produces loud noise. Extended exposure to loud noise can cause hearing loss. Wear hearing protection when operating.

Use the relay module to determine if the compressor is operating normally. The *enable* and *power* indicator lights will light. When the compressor oil temperature reaches 180° F, the *fan* indicator light will turn on, indicating that the fan is running. Once the fan starts to run, it will "latch" on and continue to run until the compressor is turned off.

Do not run the compressor for less than 15-minute increments. Short run times will increase water / moisture content in the compressor system. Water and moisture will adversely affect the life of the compressor.

### CAUTION

Operating this unit in excess of 8000 RPM will void the warranty and will shorten the normal service life of the compressor.

### Compressor Shut-Down

- a** Turn off the compressor using the power switch.
- b** Disengage the hydraulic pump / PTO.
- c** Once the drive motor stops, the compressor will purge itself of air. This "blowdown cycle" typically requires approximately 90 seconds. It will not purge the reservoir tank, but only the compressor unit. During the blowdown cycle, the compressor will not restart if turned on. If the power switch is turned on, the compressor will not restart until the blowdown cycle is complete.



- d If the compressor is mounted on a vehicle, and the vehicle needs to be moved, work is completed for the day, or the compressor needs maintenance, you must relieve all pressure from the system. Turn off the compressor normally and allow the blowdown cycle to complete. Then, drain all air using the service valve located on the truck. Close the valve once the air release is complete.

**WARNING**

Federal law prohibits moving a compressor without first releasing all air.

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## 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 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.

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## SECTION 4

# Maintenance & Repair

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

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

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

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

### **DANGER**

Compressor must be shut down and completely relieved of pressure prior to checking fluid levels. Open drain valve on air tank, and compressor service valve, to ensure relief of system air pressure. Failure to comply with this warning may cause damage to property and serious bodily harm.

## Maintenance Schedule

MAINTENANCE OPERATION	SERVICE INTERVAL (Hours/Months)				
	DAILY	WEEKLY	250/3	500/6	1000/12
Air end oil level - check, add if needed					
Air receiver - drain condensation					
Check fittings and air lines for leaks					
Inspect air/oil cooler. Clean if needed.					
Air intake - inspect					
Pressure relief valve - check operation					
Receiver pressure relief valve - check operation					
Belt tension (see Note 1)					
Pressure relief valve - clean					
Tighten and check all valves					
Check all electrical connections					
Air end oil - change (see Note 2)					
Inspect drive system for wear (tension)					
Air cleaner - change					
Coalescer element - change					
Service intervals are listed as hours/months, whichever occurs first.					
Use only IMT synthetic compressor oil. The use of any other oil causes excessive carbon buildup and will void the warranty on the compressor.					
NOTES:					
1) Check belt tension and condition after first 50 hours. Then, check belt tension and condition every 250 hours / 3 months.					
2) Under normal operating conditions, oil changes are required every 3 months. When operating in a dirty environment, change the oil and air filter more frequently as your particular operating conditions dictate.					

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## CAS3560 Maintenance Procedures

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.

Only inspection processes can be completed with the compressor covers on. To complete any maintenance procedures, the covers must be removed.

### LIFTING COMPRESSOR

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A hole with 5/8-11 UNC threads is provided on the top of the compressor. This threaded hole is designed to be used with an eyehook or lifting hook to lift the compressor. Lift hooks or eyehooks with a rating of at least 600 pounds must be provided by the customer.

### COMPRESSOR OIL SUMP FILL, LEVEL, AND DRAIN

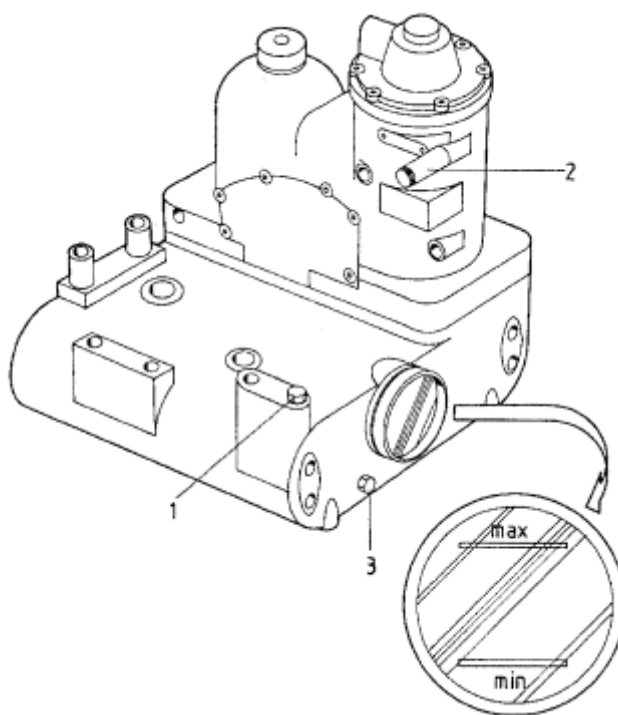
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#### CHECKING COMPRESSOR OIL LEVEL

The proper compressor oil level, when unit is shut down and has had time to settle, is at the midpoint of the oil sightglass. The truck must be level both side to side and front to back when checking the oil.

#### ADDING OIL TO COMPRESSOR

- 1 Before adding or changing compressor oil, completely drain air tank and relieve pressure by opening pressure relief valve.
- 2 Remove filler cap and add new oil until the upper limit of the oil level indicator is reached. Oil can be added at the oil fill tube (1).
- 3 Replace filler cap.
- 4 Close pressure relief valve (2).



## CHANGING COMPRESSOR OIL

- 1 Run compressor until oil temperature is 100° - 122° F (40° - 50° C). Then, completely drain air tank and relieve pressure by opening pressure relief valve.
- 2 Remove filler cap. Open drain valve (3) and drain oil, making sure to follow local and state regulations on waste oil collection and disposal.
- 3 Close drain valve (3). Add oil as described in the section, "Adding Oil to Compressor."
- 4 Replace oil fill cap.
- 5 Close pressure relief valve (2) and open shut-off valve between compressor and compressed-air system.

## DANGER

Do not attempt to drain condensate, remove the oil level fill plug, or break any connection in the air or oil system without first shutting off compressor and manually relieving pressure from the sump and air storage tank. Failure to comply with this warning may cause damage to property and seriously bodily harm.

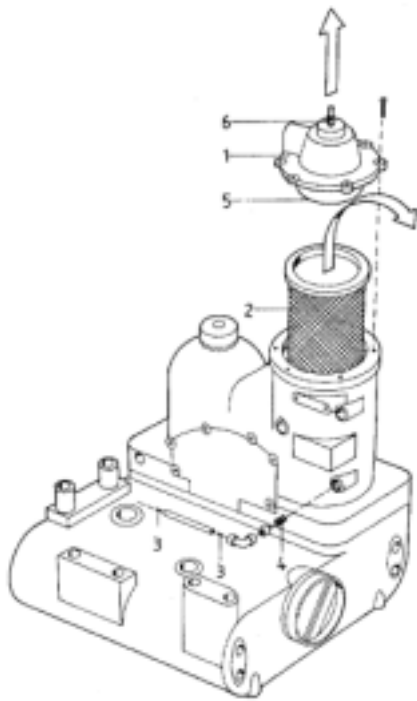
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## AIR INTAKE FILTER

The air intake filter is a heavy-duty two-stage dry type high efficiency filter designed to protect the compressor from dust and foreign objects. The filter is equipped with an evacuator cup for continuous dust ejection while operating and when stopped. Frequency of maintenance of the filter depends on dust conditions at the operating site. The filter element must be serviced when clogged (maximum pressure drop for proper operation is 15" H<sub>2</sub>O). The filter is equipped with a pressure drop indicator. Change the element based on the pressure drop indicator reading, at least as frequently as outlined in the maintenance schedule.

## AIR/OIL COALESCER

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



- 1 Shut down compressor and wait for complete blow down (zero pressure). Also, completely drain air tank.
- 2 Remove output control valve (1).
- 3 Remove coalescer element (2) by turning element counterclockwise.
- 4 Clean output control valve (1) and the contact surfaces of the coalescer.
- 5 Clean hose end orifices (3).
- 6 Lubricate coalescer o-ring. Replace coalescer element (2). Rotate element clockwise by hand until element contacts seal. Rotate element approximately one more turn clockwise with band wrench near top of element.
- 7 Replace o-ring (5) between coalescer and output control valve.
- 8 Replace seals of output control valve with a new set. When assembling, leave nut M6 (6) about 2 mm off the valve cover. (DO NOT TIGHTEN!)
- 9 Replace assembled valve.
- 10 Tighten screws, alternating sides, to a common tightness.
- 11 Run system. Check for leaks.

**NOTE**

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

**WARNING**

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, possibly voiding the warranty and/or resulting in damage to property and serious bodily harm.

---

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

**WARNING**

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, possibly voiding the warranty and/or resulting in damage to property and serious bodily harm.

---

**OIL COOLER**

The interior of the oil cooler should be cleaned when the pressure drop across it at full flow exceeds 25 PSI.

The following procedure has been recommended by the vendor who supplies the cooler:

- 1 Remove cooler.
- 2 Circulate a suitable solvent to dissolve and remove varnish and sludge.
- 3 Flush generously with IMT compressor lubricant.
- 4 After cooler is reinstalled and compressor is filled with fresh oil, change compressor oil after 50 hours of normal operation.

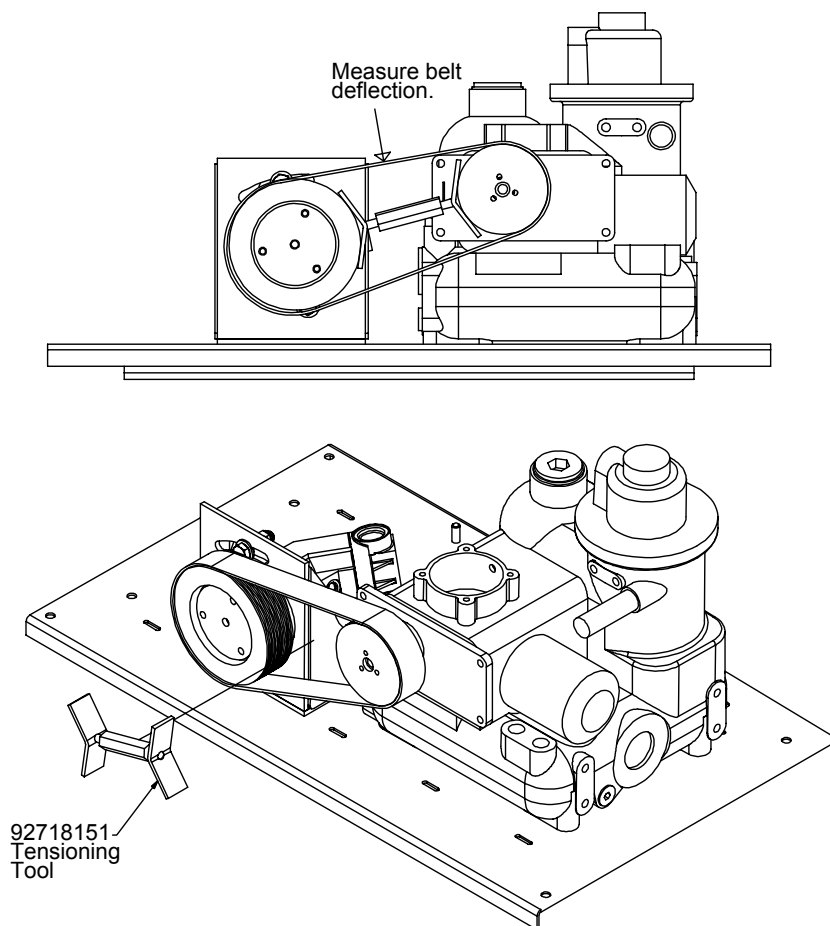


**BELT TENSION**

Tension belt as follows:

- 1 With hydraulic motor mounting bolts loose, install belt.
- 2 Spread pulleys by hand, roughly tensioning belt.
- 3 Install tensioning tool between pulleys. Rotate center section to spread pulleys apart.
- 4 Place straightedge across top of pulleys. Push on top of belt to a deflection of 0.155". Measure force using belt tensioning gauge 79733864.
- 5 With tool still in place, tighten motor mount bolts. Release tool.
- 6 Re-check belt deflection and force with gauge. Adjust as necessary.
- 7 Belt tension specifications based on 9.95" span:  
New Belt - 0.155" belt deflection at 10.7-11.5 lb  
Used Belt - 0.155" belt deflection at 9.23-9.99 lb

**(REF IMT DRAWING 99903559)**



99903559 NEW 20030923

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## Lubricant Recommendations

### WARNING

#### AVOID INJURY OR EQUIPMENT DAMAGE!

Use IMT-recommended compressor oil. Inspect and replace oil, air filter, oil filter, and coalescer elements as stated in this manual.

The combination of a coalescer element loaded with dirt and oxidized oil products together with increased air velocity as a result of this clogged condition may produce a critical point while the machine is in operation where ignition can take place and could cause a fire in the oil sump.

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

### CAUTION

We do not recommend mixing different types or brands of lubricants, due to the possibility of a dilution of the additives or reaction between additives of different types.

---

### LUBRICANT SPECIFICATIONS

IMT specified rotary screw lubricant shipped with your kit contains additives for rust, corrosion and anti-wear inhibitors. Use of any other lubricant is not recommended.

- 1 Flash point 450°F minimum
- 2 Pour point -55°F.
- 3 Contains rust and corrosion inhibitors.
- 4 Contains foam suppressors.
- 5 Contains oxidation stabilizer.

**NOTE**

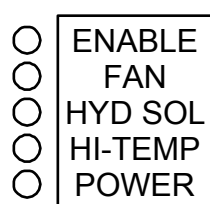
Due to environmental factors, the useful life of all 'Extended Life' lubricants may be shorter than quoted by the lubricant supplier. IMT encourages the user to closely monitor the lubricant condition and to participate in an oil analysis program with the supplier.

No lubricant, however good and/or expensive, can replace proper maintenance and attention. Select and use lubricant wisely.

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## Relay Module

The IMT CAS3560 compressor includes a relay module which is very useful in troubleshooting. Each relay on the module has an LED which indicates the status of the relay. A decal next to the relay indicates which lights control which functions.



- Enable - Control relay which enables other relays
- Fan - Relay for electric fan
- Hyd Sol - Hydraulic solenoid relay which is fed by power relay, controls hi-temp relay
- Hi-Temp - High temperature relay, controls hydraulic solenoid relay
- Power - Main power to solenoid

**Normal Operation**

When the compressor is turned on, the *Power* and *Enable* relays will light, indicating normal operation. When the oil temperature reaches 180° F, the *Fan* relay turns on, indicating that the fan is on. The fan will "latch" on and stay on until the compressor is shut down.

**High Temperature Shut-Down**

When a high temperature situation occurs, with a temperature above 250° F, the *Power* relay will turn off and the *Hi-Temp* and *Hyd Sol* relays will light, indicating high temperatures. The lighted switch on the user control panel will also light. The fan will stay on if it was already on.

To reset, push the lighted pushbutton switch on the control panel. This will reset all switches to normal condition (*Enable* and *Power* relays will be on) and the compressor will restart. If there is still a problem, the unit will shut down again once the temperature reaches 250° F.

NOTE: Even if the reset switch is pressed, the light will stay on and the unit will not restart until the temperature has dropped. Once the *Power* relay lights, the unit is ready to be reset.

---

## Flash Recovery Procedure

### WARNING

A guard **MUST** be placed over the pulley and belt if it is necessary to operate the compressor without the cover.

### WARNING

Severe burns and / or injury could occur from contact with hot surfaces. Several parts of the compressor are hot during and after operation.

When the compressor has flashed, take the following steps to flush the system:

- 1** Flush air compressor and check for rotor grinding.
  - a) Remove 2-1/2" inlet hose from inlet valve.
  - b) Drain compressor oil.
  - c) Completely fill compressor air inlet with clean IMT specified oil. Once full, lower oil drain hose into bucket and rotate compressor by hand to evacuate any remaining oil. Repeat until oil is clean. Make sure the compressor turns freely by hand and that there is no grinding present.
- 2** Flush oil cooler.
  - a) Remove both tubes from oil cooler.
  - b) Verify that the plastic shroud and fan blades are intact. Put power direct to red lead (ground black lead) at fan motor to verify that motor works. Do not run the motor outside of the shroud. Leave package assembled. Fan is a puller style; verify that air from fan pulls air through the oil cooler from the outside.
  - c) Connect a hose to each of the inlet and outlet of the oil cooler.
  - d) Pour IMT compressor oil into lower port (note" hose will need to be higher than cooler). Upper port hose should be drained into a bucket / pan.
  - e) Use low pressure (about 50 psi) air to remove all oil. Input air into the lower port.
  - f) Reconnect tubes (removed in 2a).
  - g) Fill with clean IMT approved oil. Reconnect all fittings and electrical terminals.
- 3** Start compressor.
  - a) Run for 5 minutes. Note operation, sound, check for leaks, etc.
  - b) Drain oil, change oil filter, fill oil to proper level, and finish testing.
- 4** Test safety circuit

- a) Start compressor. Disconnect temperature switch and verify the compressor stops running (oil should cycle through the valve block, but not through the hydraulic motor). *High Temp / Reset* light should be active until depressed. If compressor does not stop running, DO NOT PROCEED! Contact IMT Technical Support. If the compressor stops running, reconnect the temperature switch and depress the *High Temp / Reset* light. The compressor will restart.

## Compressor Troubleshooting

PROBLEM	CAUSE	RESOLUTION
Compressor does not make air.	Air tank drain open.	<ul style="list-style-type: none"> <li>Close tank drain valve.</li> </ul>
	Blow down valve stuck.	<ul style="list-style-type: none"> <li>Remove blow-down valve, clean out, reassemble.</li> </ul>
	PTO not engaged.	<ul style="list-style-type: none"> <li>Engage PTO per instructions.</li> </ul>
Compressor/truck shuts down.	High air end temperature.	<ul style="list-style-type: none"> <li>Check oil level. Add as required per filling instructions. Do not overfill. Wait for compressor to cool down. Restart truck and compressor. If truck shuts down again, continue with troubleshooting.</li> </ul>
	Fan not operating.	<ul style="list-style-type: none"> <li>Insure that cooling fan is operating. If not, check fuse in harness. See speed control troubleshooting.</li> </ul>
	Air flow.	<ul style="list-style-type: none"> <li>Insure that cooler has no airflow obstructions.</li> </ul>
		<ul style="list-style-type: none"> <li>Check air cooler core. Clean as needed.</li> </ul>
		<ul style="list-style-type: none"> <li>High ambient air temperature. Contact IMT Technical Support.</li> </ul>
	Leaks.	<ul style="list-style-type: none"> <li>Check for air leaking from tank or blow down fittings.</li> </ul>
	Safety System Failure	<ul style="list-style-type: none"> <li>Check high temperature shut down circuitry for proper operation.</li> </ul>
Erratic speed. (Compressor revs, slows, then dies.)	Low oil.	<ul style="list-style-type: none"> <li>Check oil filter head for blockage.</li> </ul>
		<ul style="list-style-type: none"> <li>Check for cold (&lt; 0° F) oil.</li> </ul>
Low system pressure.	Air tank drain open.	<ul style="list-style-type: none"> <li>Close tank drain valve.</li> </ul>
	Dirty air filter.	<ul style="list-style-type: none"> <li>Check filter condition. Replace as required.</li> </ul>
	Air leak.	<ul style="list-style-type: none"> <li>Check air system fittings.</li> </ul>
	Pressure control valve stuck.	<ul style="list-style-type: none"> <li>Remove, disassemble, clean. Reassemble and install.</li> </ul>
	Inlet valve not fully open.	<ul style="list-style-type: none"> <li>Inspect and repair. Check control system operation.</li> </ul>
	System demands exceed compressor delivery.	<ul style="list-style-type: none"> <li>Reduce air demand and/or consumption.</li> </ul>

PROBLEM	CAUSE	RESOLUTION
		<ul style="list-style-type: none"> <li>Do not operate multiple tools at one time.</li> </ul>
Coalescer filter plugging.	Excessive water in system.	<ul style="list-style-type: none"> <li>Reduce short run (i.e. less than 15 minute) times. Run compressor for at least 15-20 minutes each time it is started.</li> </ul>
	Foreign material entering compressor inlet.	<ul style="list-style-type: none"> <li>Check air filter.</li> <li>Replace if damaged.</li> </ul>
High oil consumption / oil in air system.	Excessive oil level.	<ul style="list-style-type: none"> <li>Check level per filling instructions. Drain excess oil if necessary.</li> </ul>
	Plugged coalescer filter.	<ul style="list-style-type: none"> <li>Replace coalescer filter.</li> </ul>
	Compressor operating at low pressure (60 psi or below).	<ul style="list-style-type: none"> <li>Operate at rated pressure.</li> </ul>
		<ul style="list-style-type: none"> <li>Reduce system load.</li> </ul>
	Compressor oil leak.	<ul style="list-style-type: none"> <li>Inspect and repair leaks.</li> </ul>
	Leaking oil lines or cooler.	<ul style="list-style-type: none"> <li>Inspect and repair all oil lines and/or cooler.</li> </ul>
	Leaking compressor shaft seal.	<ul style="list-style-type: none"> <li>Replace seal.</li> </ul>
Water in air system.	Defective moisture separator/drain trap.	<ul style="list-style-type: none"> <li>Inspect and clean if required. Replace separator/trap if required.</li> </ul>
	Air cooler core dirty.	<ul style="list-style-type: none"> <li>Inspect and clean.</li> </ul>
	Air tank not drained.	<ul style="list-style-type: none"> <li>Open tank drain. (This should be done each time compressor is run, prior to driving the truck.</li> </ul>
	Excess moisture in compressor oil.	<ul style="list-style-type: none"> <li>Let truck sit overnight. Open oil drain valve on compressor until oil starts to drain. Close drain and check oil level per filling instructions.</li> </ul>
Excessive noise level.	Incorrect compressor speed.	<ul style="list-style-type: none"> <li>Check pulley speed using phototach. WARNING - Do not check speed manually. Do not exceed speeds of 8000 RPM. If speed control is not working properly, contact IMT Technical Support.</li> </ul>
	Low oil level.	<ul style="list-style-type: none"> <li>Check oil level per filling instructions. Fill as required.</li> </ul>
Excessive vibration.	Loose components.	<ul style="list-style-type: none"> <li>Inspect and tighten.</li> </ul>
	Compressor bearing failure.	<ul style="list-style-type: none"> <li>Contact authorized distributor or IMT immediately. Do not operate unit.</li> </ul>

PROBLEM	CAUSE	RESOLUTION
Shaft seal leak.	Defective seal.	<ul style="list-style-type: none"> <li>Replace seal, or contact authorized distributor or IMT Technical Support.</li> </ul>
Pressure relief valve opens.	Compressor operating over pressure.	<ul style="list-style-type: none"> <li>Inspect and verify pressure control valve and control connections.</li> <li>Remove, disassemble, and clean pressure control valve. Reassemble and reinstall.</li> </ul>
	Defective valve.	<ul style="list-style-type: none"> <li>Replace valve.</li> </ul>
	Plugged coalescer filter.	<ul style="list-style-type: none"> <li>Replace filter.</li> </ul>
Speed control does not come up.	Parking brake is not set.	<ul style="list-style-type: none"> <li>Engage parking brake.</li> </ul>
	Blown fuse.	<ul style="list-style-type: none"> <li>Check and replace 5 amp fuse.</li> </ul>
	Compressor is not making air.	<ul style="list-style-type: none"> <li>Insure compressor is engaged and that the pulleys are turning.</li> </ul>
	No signal to speed control module from compressor.	<ul style="list-style-type: none"> <li>With compressor running, check for 12 volts across 20 lb pressure switch (N.O.). If switch is not closing, replace.</li> <li>With the compressor off, check for 12 volts across 5 lb pressure switch (N.C.). If switch does not close, replace switch.</li> </ul>
Speed control comes on when engaging the parking brake with the PTO off.	20 lb pressure switch.	<ul style="list-style-type: none"> <li>With the compressor off, check for 12 volts across 20 lb pressure switch. If switch is not open, replace switch.</li> </ul>
Compressor has experienced a "flash".	Low oil level, high operating temperature, or oil starvation.	<ul style="list-style-type: none"> <li>See resolutions in troubleshooting guide for low oil level, high operating temp., or oil starvation conditions.</li> </ul>
		<ul style="list-style-type: none"> <li>Check oil level per filling instructions. Fill as required.</li> </ul>
		<ul style="list-style-type: none"> <li>See Flash Recovery Procedure.</li> </ul>
Excessive blowdown time.	Blowdown valve stuck.	<ul style="list-style-type: none"> <li>Replace valve.</li> </ul>
	Minimum pressure valve stuck.	<ul style="list-style-type: none"> <li>Replace valve.</li> </ul>
Oil discharges from blowdown valve.	Bad seal in blowdown valve.	<ul style="list-style-type: none"> <li>Replace seal.</li> </ul>
	Improper blowdown valve installation.	<ul style="list-style-type: none"> <li>Remove and reinstall per parts section.</li> </ul>



## SECTION 5

# Parts

## Parts Ordering Information

When placing orders or requesting assistance, refer to the information below:

TO BE COMPLETED BY DEALER	
<b>CHASSIS INFORMATION</b>	
Transmission Make:	Model:
PTO Number:	PTO %:
<b>COMPRESSOR AND HYDRAULIC PUMP INFORMATION</b>	
Compressor Model:	Serial Number:
Pump Make:	Model:
Reservoir Capacity:	Engine RPM:

## Recommended Spare Parts List

Part #	Description	Qty.
79733864	Belt tensioning gauge	1
92718151	Belt tensioning tool	1
89086192	Oil (quart)	1
89086201	Oil (gallon)	1
	Lifting eye	Ref
73396426	Oil filter	1
70048217	Air filter	1
70580171	Belt	1
73396427	Coalescer element	1
94744117	Shaft seal kit	1

## Compressor Assembly Complete Parts List (99903574)

99093574 PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
1.	52718069	BASE-WELDMENT	1
2.	REF	PULLEY	1
3.	52718087	BRACKET-LIFT WELDMENT	1
4.	70048216	BAND-AIR FILTER 4.8	1
5.	52718070	BRACKET-WELD MOTOR MOUNT	1
6.	71410008	TUBE ASM-AIR OUTPUT HOT	1
7.	71410007	TUBE ASM-AIR DISCHARGE	1
8.	71410009	TUBE ASM-OIL RETURN	1
9.	71410010	TUBE ASM-OIL TO COOLER	1
10.	60125139	BULKHEAD	1
11.	72060044	CAP SCR .38-16X .75 HH GR5 Z (PART OF 139)	4
12.	72062103	NUT .38-16 HEX NYLOCK (PART OF 139,142,143)	13
13.	72062301	NUT-TINNERMAN 1/4-20UNC (PART OF 139, 140)	12
14.	70048225	GAUGE-TEMPERATURE 101345	1
15.	77041660	SWITCH-LIGHTED PUSHBUTTON	1
16.	72534358	ADPTR-MPT/FPT STL .12- .12	1
17.	70048222	INDICATOR-AIR FILTER	1
18.	72531534	NIPPLE-BARB BRS .12MPT .25 220CF	2
19.	89392146	HOSE-GP .25X250 WP GRAY 801-4	3'
20.	72066452	CLAMP-HOSE .25- .62 SAE 4 SS	2
21.	70733496	METER-HOUR	1
22.	60125142	GRILLE-	1
23.	70146286	HOLDER-TENSION CLIP 1.125"	1
24.	60125141	GRILLE-COOLER	1
25.	60125146	SPACER-COOLER	1
26.	73052132	COOLER-AIR/OIL CANOPY	1
27.	72053677	ADPTR-MPT/M JIC 1.00 - 12	4
28.	77041645	SWITCH-TEMP 1/2" 180R NO	1
29.	60125145	SHROUD-FAN	1
30.	60125300	BRACKET-CONTROLS	1
31.	72533726	TEE-M PIPE/F PIPE MALE RUN .25	3
32.	73540110	VALVE-BLOWDOWN	1
33.	60124689	PLUG-BLOWDOWN	1
34.	72053013	NIPPLE-PIPE BLK .25X CLOSE	1
35.	73540109	VALVE-REGULATOR .25	1
36.	72063005	WASHER .50 FLAT (PART OF 143) (WAS 6)	4
37.	72053371	REDUCER BUSH-BLK .25- .12	2
38.	77041638	SWITCH-PRESSURE 5LB 1/8" N/C	1
39.	77041639	SWITCH-PRESSURE 20LB 1/8" N/O	1
40.	72534360	ELBOW-MPT/90/TUBE 4 4 (PART OF 141)	3

99093574 PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
41.	72534361	INSERT-TUBE COMPRESSION .125 DIA (PART OF 141)	6
42.	70034475	TUBE-CLEAR PLASTIC .250 OD .125 ID	5'
43.	72066580	CLAMP-UMP20 S464-G12	3
44.	72063003	WASHER .38 FLAT (PART OF 142, 143) (WAS 8)	9
45.	72060046	CAP SCR .38-16X 1.00 HH GR5 Z (PART OF 142)	4
46.	70733695	FAN-ASSEMBLY	1
47.	72060002	CAP SCR .25-20X .75 HH GR5 Z (PART OF 143)	4
48.	72063000	WASHER .19 W FLAT ANSI B27.2Z (PART OF 143)	4
49.	72062104	NUT .25-20 HEX NYLOCK (PART OF 143)	4
50.	70733835	COMPRESSOR	1
51.	72063053	WASHER .50 LOCK (PART OF 141)	10
52.	72601805	CAP SCR M12-1.75X 25 HHZ	10
53.	72060025	CAP SCR .31-18X 1.00 HH GR5 Z (PART OF 141)	5
54.	72062109	NUT .31-18 HEX NYLOCK (PART OF 141)	7
55.	72534354	ADPTR-M BSPP/FPT 2 2	3
56.	72534359	ELBOW-MPT/90/TUBE 2 4	3
57.	72534355	ADPTR-M BSPP/FPT 4 4	1
58.	70048224	SENDER-TEMPERATURE	1
59.	77041662	SWITCH-TEMP 1/2" 250R NC	1
60.	72533625	ADPTR-M BSPP/M JIC 16-12	1
61.	72533656	ADPTR-M BSPP/M JIC 8-12	2
62.	REF	BASE	1
63.	72661369	POP RIVET (WAS 72534357)	1
64.	REF	INTAKE	1
65.	REF	COVER	1
66.	72062163	NUT-METRIC 8MM X 1.25	1
67.	76396154	INSERT-RUBBER INLET 2.5 X 2	1
68.	70396152	HOSE-2.5 ID GT 150 CL	2'
69.	72661549	CLAMP-DUCT 2.5"	2
70.	72534353	ADPTR-M BSPP/FPT 8 8	2
71.	72534352	NIPPLE-PIPE BLK .50X16.00	1
72.	72534351	ADPTR-FPT/M JIC .50 #12	1
73.	60125310	CAP-VENTED 3/4"	1
74.	72053094	NIPPLE-PIPE BLK .50X 3.00	1
75.	72531101	ELBOW-STL .50X90 DEG	1
76.	51396388	HOSE-FA .50 X 24.00 OA( 8- 8)	1
77.	72532679	PLUG-JIC HEX HD STL .75 THD	1
78.	60125297	BRACKET-LIFT	1
79.	60125150	BRACKET-AIR CLEANER	1
80.	72060026	CAP SCR .31-18X 1.25 HH GR5 Z (PART OF 141)	2
81.	70146433	ENGINE FUNCTION MODULE (E.F.M.)	1
82.	72060636	SCR-MACH #10-24X .75 RDH PH ZINC	2
83.	72062106	NUT 10-24 HEX NYLOCK	2
84.	70048215	FILTER-AIR ASSY	1
85.	70048223	CAP-AIR FILTER 4.8	1
86.	76396153	INSERT-RUBBER AIR FILTER 2.5 X 1.75	1

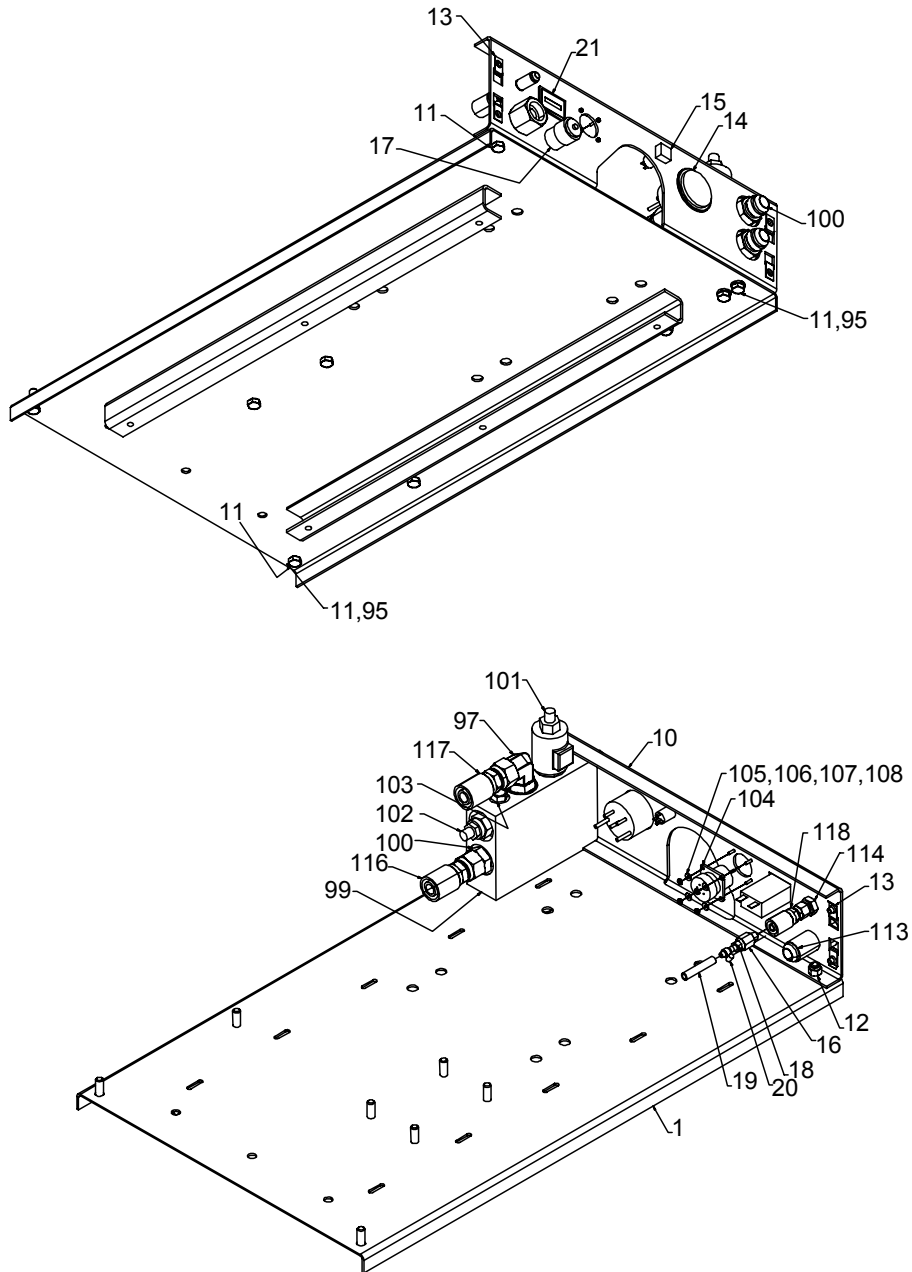
99093574 PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
87.	73050184	MOTOR-HYD 0.73 PISTON BENT AXIS	1
88.	72060094	CAP SCR .50-13X 1.75 HH GR5 Z (PART OF 143)	2
89.	72062080	NUT .50-13 HEX NYLOCK (PART OF 143)	2
90.	60125315	PULLEY-DRIVER	1
91.	60125316	RETAINER-PULLEY	1
92.	70580171	BELT	1
93.	72063050	WASHER .31 LOCK (PART OF 143)	3
94.	72060023	CAP SCR .31-18X .75 HH GR5 Z (PART OF 143)	3
95.	72063051	WASHER .38 LOCK	3
96.	72060436	CAP SCR M10-1.50X 25 HHZ	1
97.	72053767	ELBOW-M STR/90/M JIC 12 12	3
98.	72532355	ADPTR-M STR/M JIC 6 6	1
99.	60125143	VALVE BLOCK-	1
100.	72532366	ADPTR-M STR/M JIC 12 12	3
101.	73540127	VALVE-SOLENOID	1
102.	73540139	VALVE-RELIEF	1
103.	72532140	PLUG-STR HEX HD STL .56	1
104.	77441156	HARNESS- ROTARY SCREW	1
105.	72601806	SCR-MACH 4-40 .50 SKT HEAD	4
106.	72063173	WASHER # 4 W FLAT ANSI B27.2	4
107.	72063172	WASHER # 4 LOCK ZINC	4
108.	72062206	NUT # 4-40 HEX ZINC	4
109.	60125303	COVER-	1
110.	72063228	WASHER-NYLON (PART OF 140)	12
111.	72063001	WASHER .25 FLAT (PART OF 140)	12
112.	72601652	SCR-MACH .25-20X .75TRHTORXSS (PART OF 140)	12
113.	72534381	ADPTR-BULKHEAD FNPT/MJIC 1.00 1.00	1
114.	72532835	UNION-BULKHEAD 37 DEG JIC .56	1
115.	72060050	CAP SCR .38-16X 2.00 HH GR5ZC (PART OF 142)	3
116.	51396385	HOSE-FJ .75 X 17.00 OAL(12-12)	1
117.	51396386	HOSE-FJ .75 X 19.00 OAL(12-12)	1
118.	51396387	HOSE-FJ .38 X 35.00 OAL ( 6- 6)	1
119.	89393607	WEATHERSTRIP- .62X.50	6'
120.	76396420	SOUNDPROOFING- 30"x60"	1
121.	60125408	GRILLE	1
122.	72066340	RIVET-POP AL .12 X .375 GRIP (PART OF 140)	8
123.	70034429	PLUG-PLSTC BUTTON B-80-21 2.31 (PART OF 140)	1
124.	70034445	PLUG-PLSTC BUTTON FLUSH 1.50 (PART OF 140)	1
125.	72532661	PLUG-PIPE SOC HEX STL .50	1
126.	72053412	PLUG-PIPE SQ HD STL .25	1
127.	72063227	WASHER-LOCK 10MM (PART OF 143)	1
139.	51718585	KIT-HRDWR CAS3560 BASE	1
140.	51718586	KIT-HRDWR CAS3560 CANOPY	1
141.	51718587	KIT-HRDWR CAS3560 AIR END	1
142.	51718588	KIT-HRDWR CAS3560 COOLER	1
143.	51718589	KIT-HRDWR CAS3560 MOTOR	1

99093574 PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
144.	72534369	ELBOW-#2BSPP #4COMP	2
145.	72534370	TUBING-CONTROL LINE PLASTIC	1
146.	72063117	WASHER 7/16 FLAT	4
147.	72063002	WASHER 5/16 FLAT	2

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## 99903574-1 Drawing

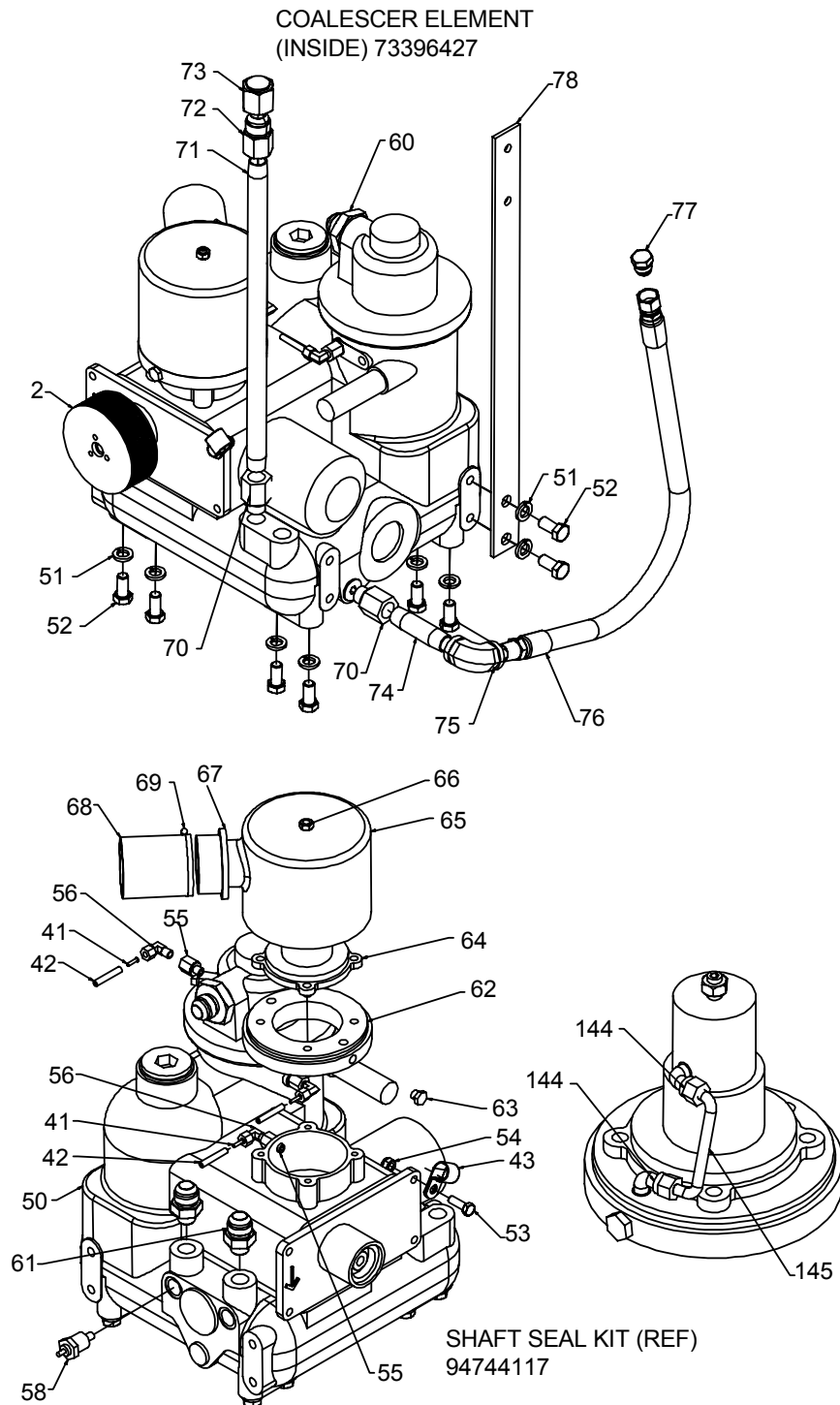
**Compressor Assembly Parts List (99903574)** (see "Compressor Assembly Complete Parts List (99903574)" on page 55)



99903574-1 PARTS LIST			
ITEM	PART #	DESCRIPTION	OVERALL QUANTITY
1.	52718069	BASE-WELDMENT	1
10.	60125139	BULKHEAD	1
11.	72060044	CAP SCR .38-16X .75 HH GR5 Z (PART OF 139)	4
12.	72062103	NUT .38-16 HEX NYLOCK (PART OF 139,142,143)	13
14.	70048225	GAUGE-TEMPERATURE 101345	1
15.	77041660	SWITCH-LIGHTED PUSHBUTTON	1
16.	72534358	ADPTR-MPT/FPT STL .12- .12	1
17.	70048222	INDICATOR-AIR FILTER	1
18.	72531534	NIPPLE-BARB BRS .12MPT .25 220CF	2
19.	89392146	HOSE-GP .25X250 WP GRAY 801-4	3'
20.	72066452	CLAMP-HOSE .25- .62 SAE 4 SS	2
21.	70733496	METER-HOUR	1
95.	72063051	WASHER .38 LOCK	3
97.	72053767	ELBOW-M STR/90/M JIC 12 12	3
99.	60125143	VALVE BLOCK-	1
100.	72532366	ADPTR-M STR/M JIC 12 12	3
101.	73540127	VALVE-SOLENOID	1
102.	73540139	VALVE-RELIEF	1
103.	72532140	PLUG-STR HEX HD STL .56	1
104.	77441156	HARNESS- ROTARY SCREW	1
105.	72601806	SCR-MACH 4-40 .50 SKT HEAD	4
106.	72063173	WASHER # 4 W FLAT ANSI B27.2	4
107.	72063172	WASHER # 4 LOCK ZINC	4
108.	72062206	NUT # 4-40 HEX ZINC	4
113.	72534381	ADPTR-BULKHEAD FNPT/MJIC 1.00 1.00	1
114.	72532835	UNION-BULKHEAD 37 DEG JIC .56	1
116.	51396385	HOSE-FJ .75 X 17.00 OAL(12-12)	1
117.	51396386	HOSE-FJ .75 X 19.00 OAL(12-12)	1
118.	51396387	HOSE-FJ .38 X 35.00 OAL ( 6- 6)	1
139.	51718585	KIT-HRDWR CAS3560 BASE	1
142.	51718588	KIT-HRDWR CAS3560 COOLER	1
143.	51718589	KIT-HRDWR CAS3560 MOTOR	1

## 99903574-2 Drawing

**Compressor Assembly Parts List (99903574)** (see "Compressor Assembly Complete Parts List (99903574)" on page 55)

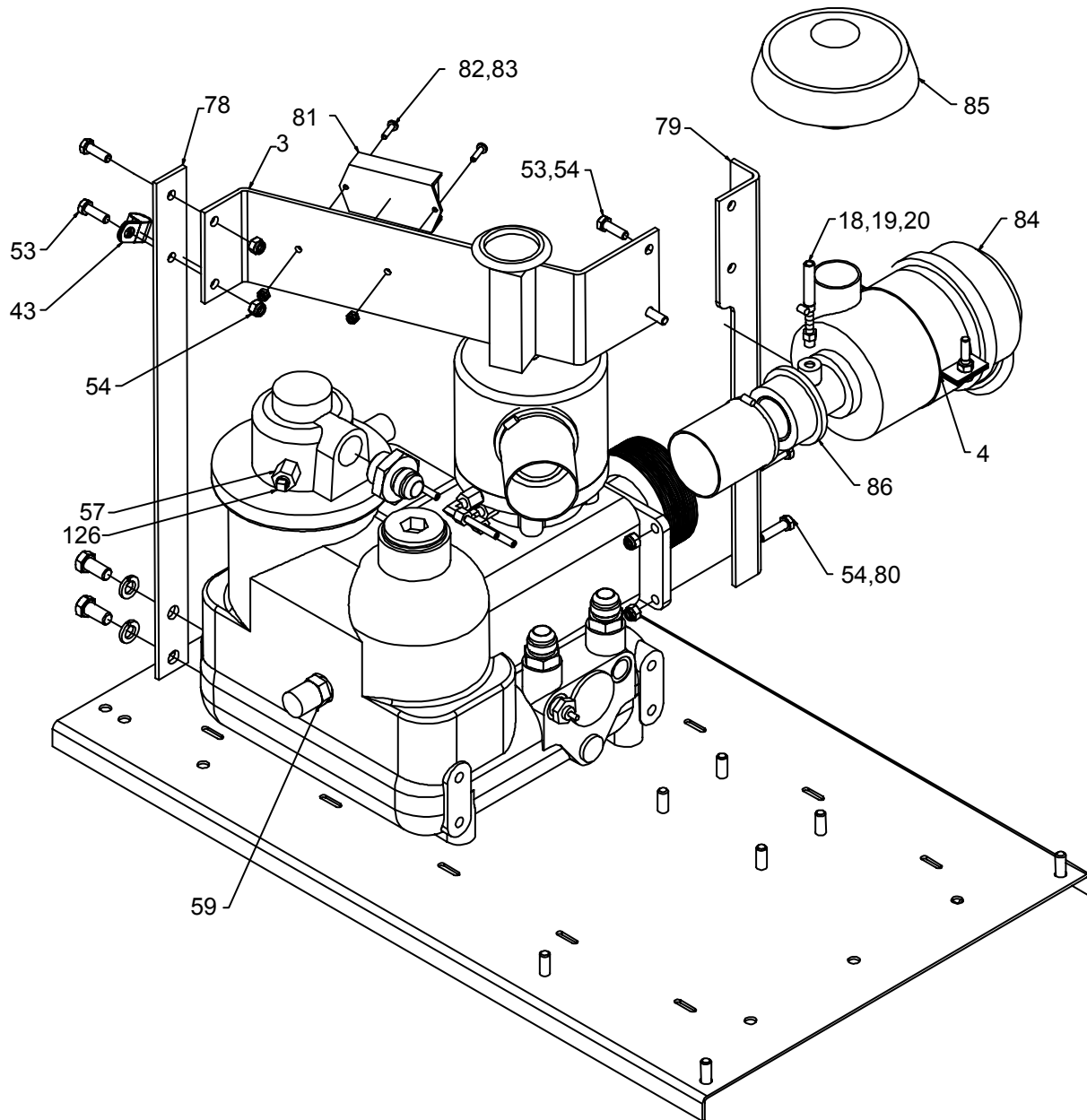




99903574-2 PARTS LIST			
ITEM	PART #	DESCRIPTION	OVERALL QUANTITY
2.	REF	PULLEY	1
41.	72534361	INSERT-TUBE COMPRESSION .125 DIA (PART OF 141)	6
42.	70034475	TUBE-CLEAR PLASTIC .250 OD .125 ID	5'
43.	72066580	CLAMP-UMP20 S464-G12	3
50.	70733835	COMPRESSOR	1
51.	72063053	WASHER .50 LOCK (PART OF 141)	10
52.	72601805	CAP SCR M12-1.75X 25 HHZ	10
54.	72062109	NUT .31-18 HEX NYLOCK (PART OF 141)	7
55.	72534354	ADPTR-M BSPP/FPT 2 2	3
56.	72534359	ELBOW-MPT/90/TUBE 2 4	3
58.	70048224	SENDER-TEMPERATURE	1
60.	72533625	ADPTR-M BSPP/M JIC 16-12	1
61.	72533656	ADPTR-M BSPP/M JIC 8-12	2
62.	REF	BASE	1
63.	72661369	POP RIVET (WAS 72534357)	1
64.	REF	INTAKE	1
65.	REF	COVER	1
66.	72062163	NUT-METRIC 8MM X 1.25	1
67.	76396154	INSERT-RUBBER INLET 2.5 X 2	1
68.	70396152	HOSE-2.5 ID GT 150 CL	2'
69.	72661549	CLAMP-DUCT 2.5"	2
70.	72534353	ADPTR-M BSPP/FPT 8 8	2
71.	72534352	NIPPLE-PIPE BLK .50X16.00	1
72.	72534351	ADPTR-FPT/M JIC .50 #12	1
73.	60125310	CAP-VENTED 3/4"	1
74.	72053094	NIPPLE-PIPE BLK .50X 3.00	1
75.	72531101	ELBOW-STL .50X90 DEG	1
76.	51396388	HOSE-FA .50 X 24.00 OA( 8- 8)	1
77.	72532679	PLUG-JIC HEX HD STL .75 THD	1
78.	60125297	BRACKET-LIFT	1
141.	51718587	KIT-HRDWR CAS3560 AIR END	1
144.	72534369	ELBOW-#2BSPP #4COMP	2
145.	72534370	TUBING-CONTROL LINE PLASTIC	1

## 99903574-3 Drawing

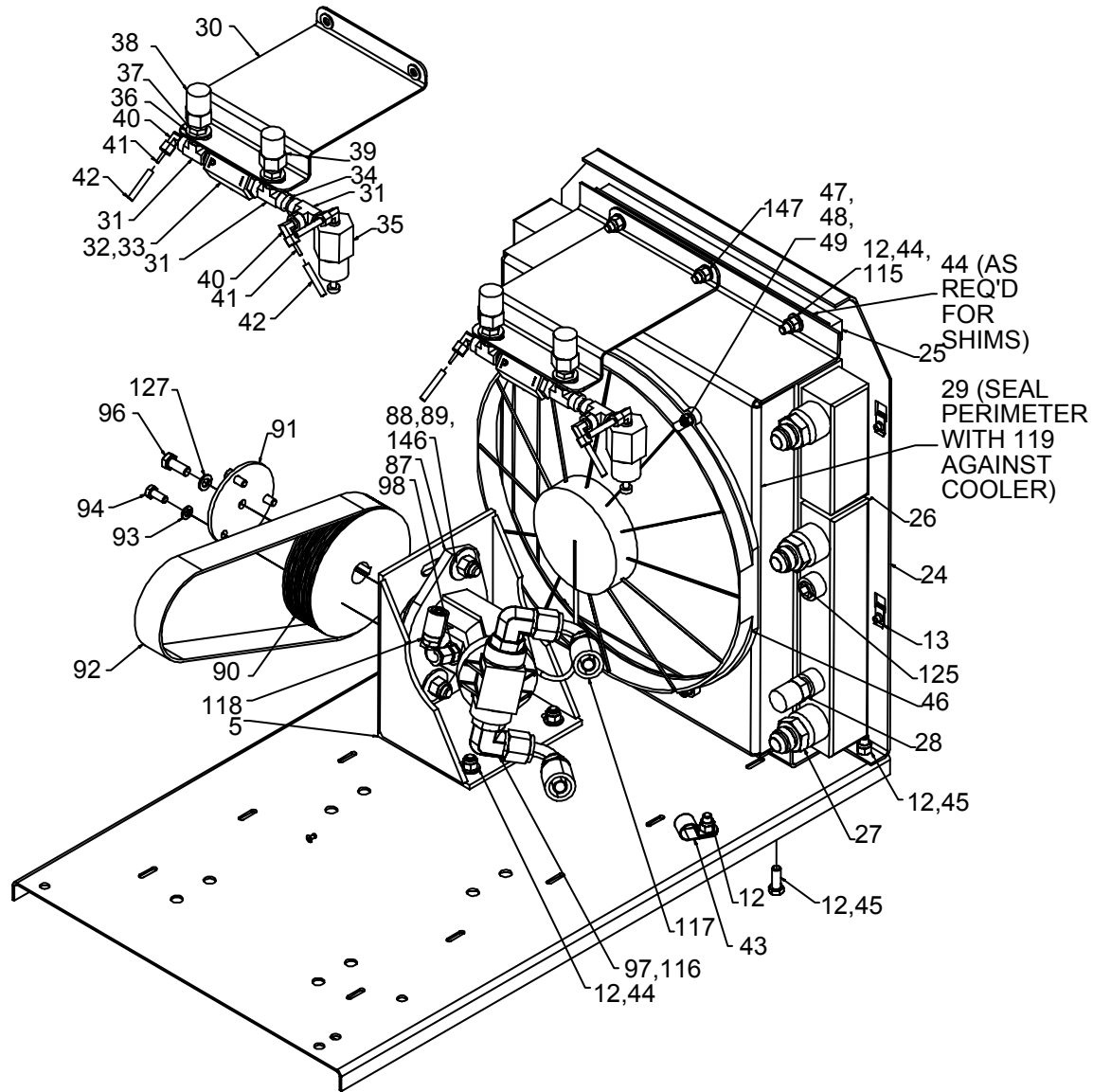
**Compressor Assembly Parts List (99903574)** (see "Compressor Assembly Complete Parts List (99903574)" on page 55)



99903574-3 PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
3.	52718087	BRACKET-LIFT WELDMENT	1
4.	70048216	BAND-AIR FILTER 4.8	1
18.	72531534	NIPPLE-BARB BRS .12MPT .25 220CF	2
19.	89392146	HOSE-GP .25X250 WP GRAY 801-4	3'
20.	72066452	CLAMP-HOSE .25- .62 SAE 4 SS	2
43.	72066580	CLAMP-UMP20 S464-G12	3
53.	72060025	CAP SCR .31-18X 1.00 HH GR5 Z (PART OF 141)	5
54.	72062109	NUT .31-18 HEX NYLOCK (PART OF 141)	7
57.	72534355	ADPTR-M BSPP/FPT 4 4	1
59.	77041662	SWITCH-TEMP 1/2" 250R NC	1
78.	60125297	BRACKET-LIFT	1
79.	60125150	BRACKET-AIR CLEANER	1
80.	72060026	CAP SCR .31-18X 1.25 HH GR5 Z (PART OF 141)	2
81.	70146433	ENGINE FUNCTION MODULE (E.F.M.)	1
82.	72060636	SCR-MACH #10-24X .75 RDH PH ZINC	2
83.	72062106	NUT 10-24 HEX NYLOCK	2
84.	70048215	FILTER-AIR ASSY	1
85.	70048223	CAP-AIR FILTER 4.8	1
86.	76396153	INSERT-RUBBER AIR FILTER 2.5 X 1.75	1
126.	72053412	PLUG-PIPE SQ HD STL .25	1
141.	51718587	KIT-HRDWR CAS3560 AIR END	1

## 99903574-4 Drawing

**Compressor Assembly Parts List (99903574)** (see "Compressor Assembly Complete Parts List (99903574)" on page 55)



### 99903574 PARTS LIST

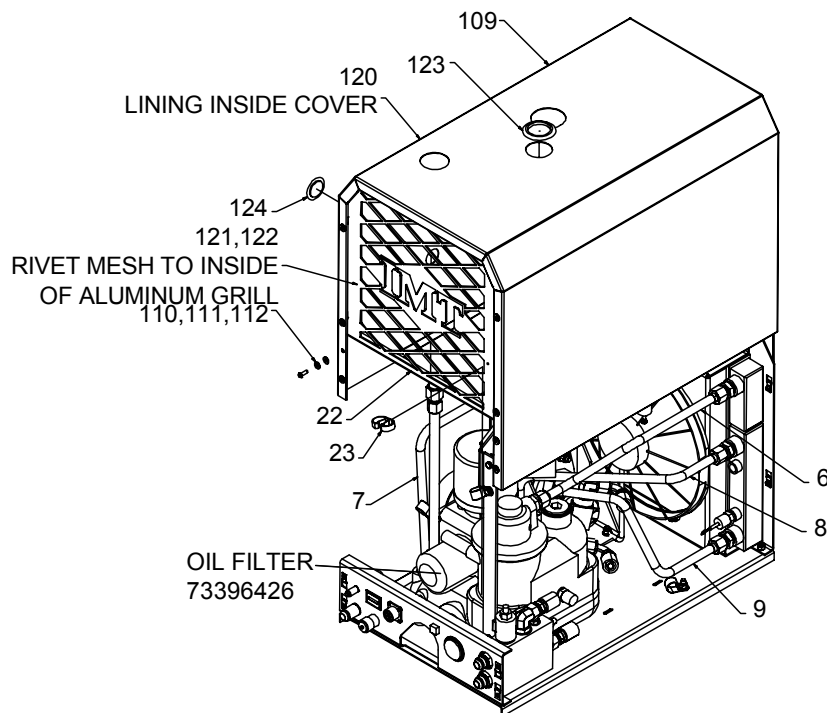
ITEM	PART #	DESCRIPTION	QUANTITY
5.	52718070	BRACKET-WELD MOTOR MOUNT	1
12.	72062103	NUT .38-16 HEX NYLOCK (PART OF 139,142,143)	13
13.	72062301	NUT-TINNERMAN 1/4-20UNC (PART OF 139, 140)	12
24.	60125141	GRILLE-COOLER	1
25.	60125146	SPACER-COOLER	1
26.	73052132	COOLER-AIR/OIL CANOPY	1

99903574 PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
27.	72053677	ADPTR-MPT/M JIC 1.00 - 12	4
28.	77041645	SWITCH-TEMP 1/2" 180R NO	1
29.	60125145	SHROUD-FAN	1
30.	60125300	BRACKET-CONTROLS	1
31.	72533726	TEE-M PIPE/F PIPE MALE RUN .25	3
32.	73540110	VALVE-BLOWDOWN	1
33.	60124689	PLUG-BLOWDOWN	1
34.	72053013	NIPPLE-PIPE BLK .25X CLOSE	1
35.	73540109	VALVE-REGULATOR .25	1
36.	72063005	WASHER .50 FLAT (PART OF 143) (WAS 6)	4
37.	72053371	REDUCER BUSH-BLK .25- .12	2
38.	77041638	SWITCH-PRESSURE 5LB 1/8" N/C	1
39.	77041639	SWITCH-PRESSURE 20LB 1/8" N/O	1
40.	72534360	ELBOW-MPT/90/TUBE 4 4 (PART OF 141)	3
41.	72534361	INSERT-TUBE COMPRESSION .125 DIA (PART OF 141)	6
42.	70034475	TUBE-CLEAR PLASTIC .250 OD .125 ID	5'
43.	72066580	CLAMP-UMP20 S464-G12	3
44.	72063003	WASHER .38 FLAT (PART OF 142, 143) (WAS 8)	9
45.	72060046	CAP SCR .38-16X 1.00 HH GR5 Z (PART OF 142)	4
46.	70733695	FAN-ASSEMBLY	1
47.	72060002	CAP SCR .25-20X .75 HH GR5 Z (PART OF 143)	4
48.	72063000	WASHER .19 W FLAT ANSI B27.2Z (PART OF 143)	4
49.	72062104	NUT .25-20 HEX NYLOCK (PART OF 143)	4
87.	73050184	MOTOR-HYD 0.73 PISTON BENT AXIS	1
88.	72060094	CAP SCR .50-13X 1.75 HH GR5 Z (PART OF 143)	2
89.	72062080	NUT .50-13 HEX NYLOCK (PART OF 143)	2
90.	60125315	PULLEY-DRIVER	1
91.	60125316	RETAINER-PULLEY	1
92.	70580171	BELT	1
93.	72063050	WASHER .31 LOCK (PART OF 143)	3
94.	72060023	CAP SCR .31-18X .75 HH GR5 Z (PART OF 143)	3
96.	72060436	CAP SCR M10-1.50X 25 HHZ	1
97.	72053767	ELBOW-M STR/90/M JIC 12 12	3
98.	72532355	ADPTR-M STR/M JIC 6 6	1
115.	72060050	CAP SCR .38-16X 2.00 HH GR5ZC (PART OF 142)	3
116.	51396385	HOSE-FJ .75 X 17.00 OAL(12-12)	1
117.	51396386	HOSE-FJ .75 X 19.00 OAL(12-12)	1
118.	51396387	HOSE-FJ .38 X 35.00 OAL ( 6- 6)	1
119.	89393607	WEATHERSTRIP- .62X.50	6'
125.	72532661	PLUG-PIPE SOC HEX STL .50	1
127.	72063227	WASHER-LOCK 10MM (PART OF 143)	1
139.	51718585	KIT-HRDWR CAS3560 BASE	1
140.	51718586	KIT-HRDWR CAS3560 CANOPY	1
141.	51718587	KIT-HRDWR CAS3560 AIR END	1
142.	51718588	KIT-HRDWR CAS3560 COOLER	1
143.	51718589	KIT-HRDWR CAS3560 MOTOR	1

99903574 PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
146.	72063117	WASHER 7/16 FLAT	4
147.	72063002	WASHER 5/16 FLAT	2

## 99903574-5 Drawing

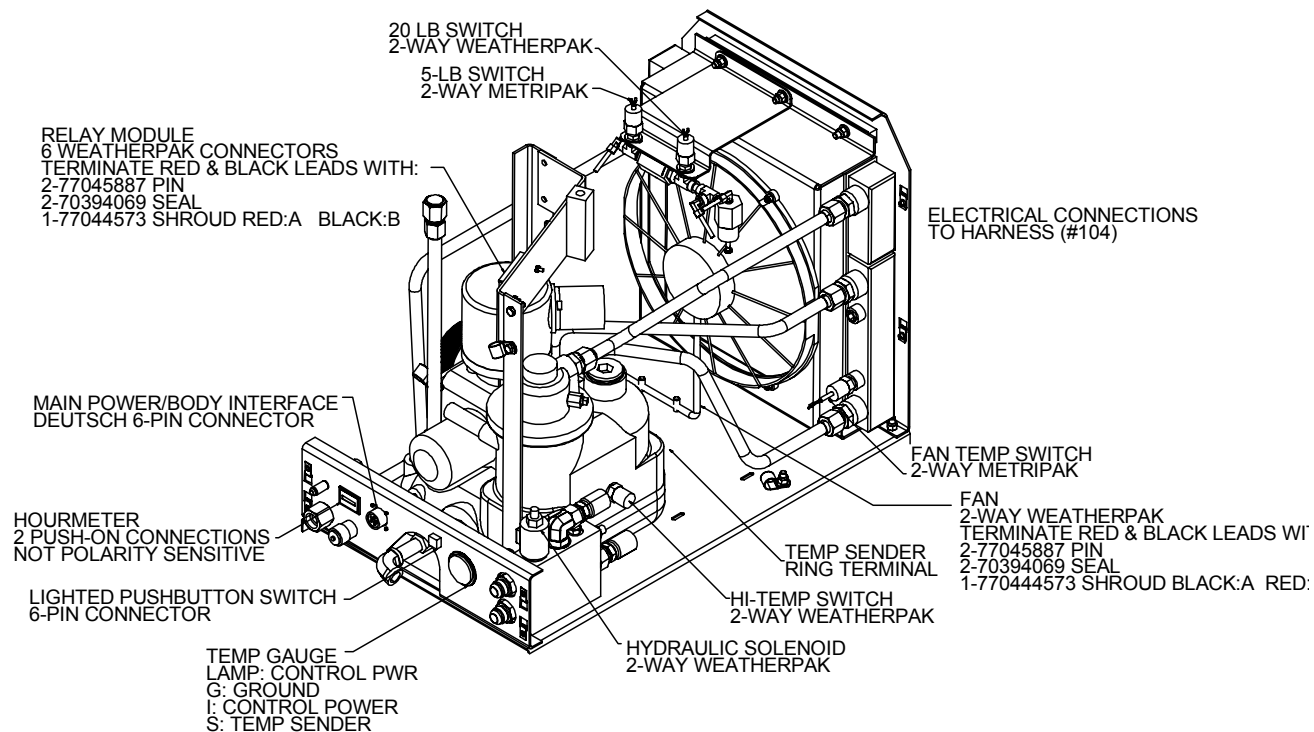
**Compressor Assembly Parts List (99903574)** (see "Compressor Assembly Complete Parts List (99903574)" on page 55)



99903574-5 PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
6.	71410008	TUBE ASM-AIR OUTPUT HOT	1
7.	71410007	TUBE ASM-AIR DISCHARGE	1
8.	71410009	TUBE ASM-OIL RETURN	1
9.	71410010	TUBE ASM-OIL TO COOLER	1
22.	60125142	GRILLE-	1
23.	70146286	HOLDER-TENSION CLIP 1.125"	1
109.	60125303	COVER-	1
110.	72063228	WASHER-NYLON (PART OF 140)	12
111.	72063001	WASHER .25 FLAT (PART OF 140)	12
112.	72601652	SCR-MACH .25-20X .75TRHTORXSS (PART OF 140)	12
120.	76396420	SOUNDPROOFING- 30"x60"	1
121.	60125408	GRILLE	1
122.	72066340	RIVET-POP AL .12 X .375 GRIP (PART OF 140)	8

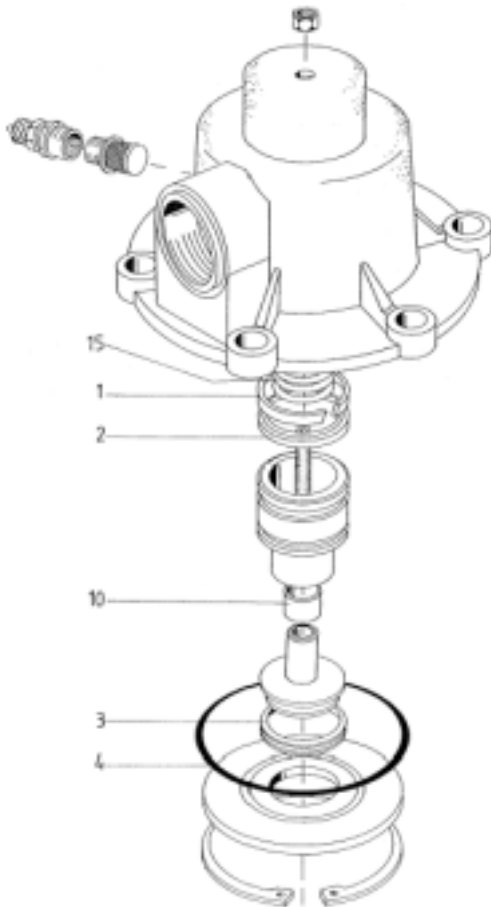
**99903574-5 PARTS LIST**

ITEM	PART #	DESCRIPTION	QUANTITY
123.	70034429	PLUG-PLSTC BUTTON B-80-21 2.31 (PART OF 140)	1
124.	70034445	PLUG-PLSTC BUTTON FLUSH 1.50 (PART OF 140)	1
140.	51718586	KIT-HRDWR CAS3560 CANOPY	1



## Discharge Valve (70733872)

70733872 PARTS			
ITEM	PART #	DESCRIPTION	QUANTITY
	94744119	SEAL KIT ASM.	1
	94744120	REPAIR KIT ASM.	1
1.		SLIDE RING	1
2.		PISTON GASKET	1
3.		PLATE GASKET	1
4.		O-RING	1
10.		BEARING	1
15.		SPRING	

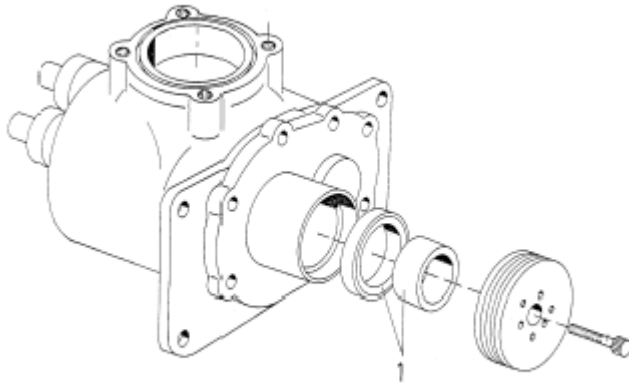




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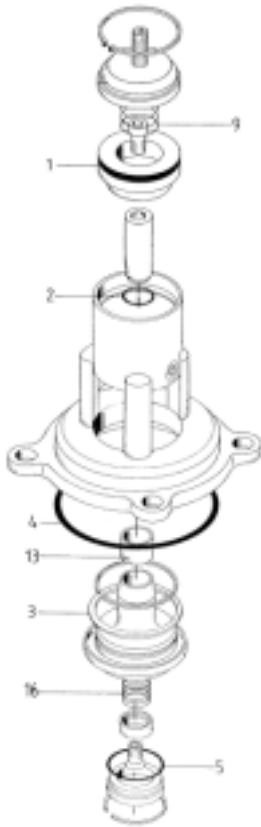
## Compressor Air End

COMPRESSOR AIR END PARTS			
ITEM	PART #	DESCRIPTION	QUANTITY
1.	94744117	SHAFT SEAL ASM.	1

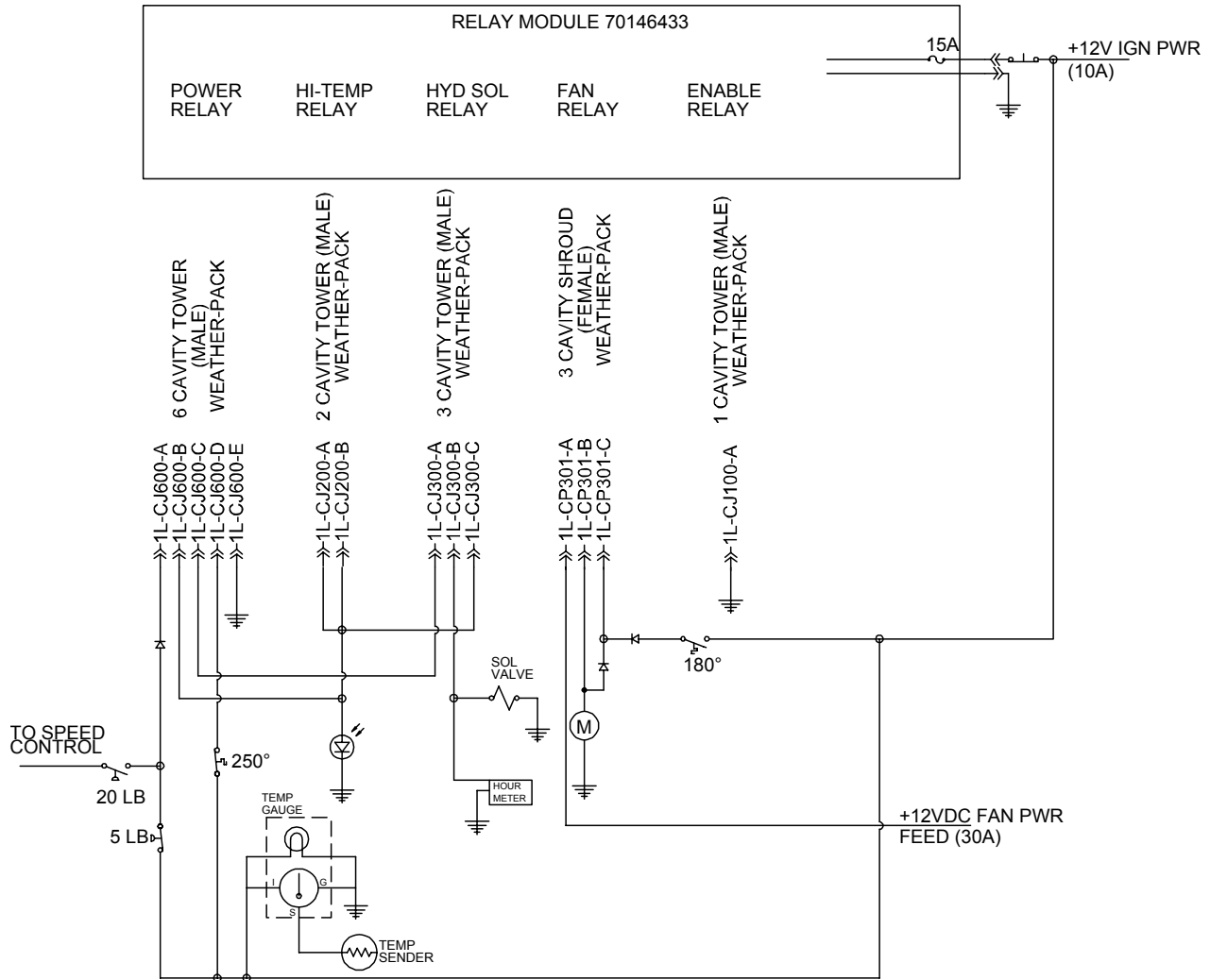


## Air Inlet Valve (70733873)

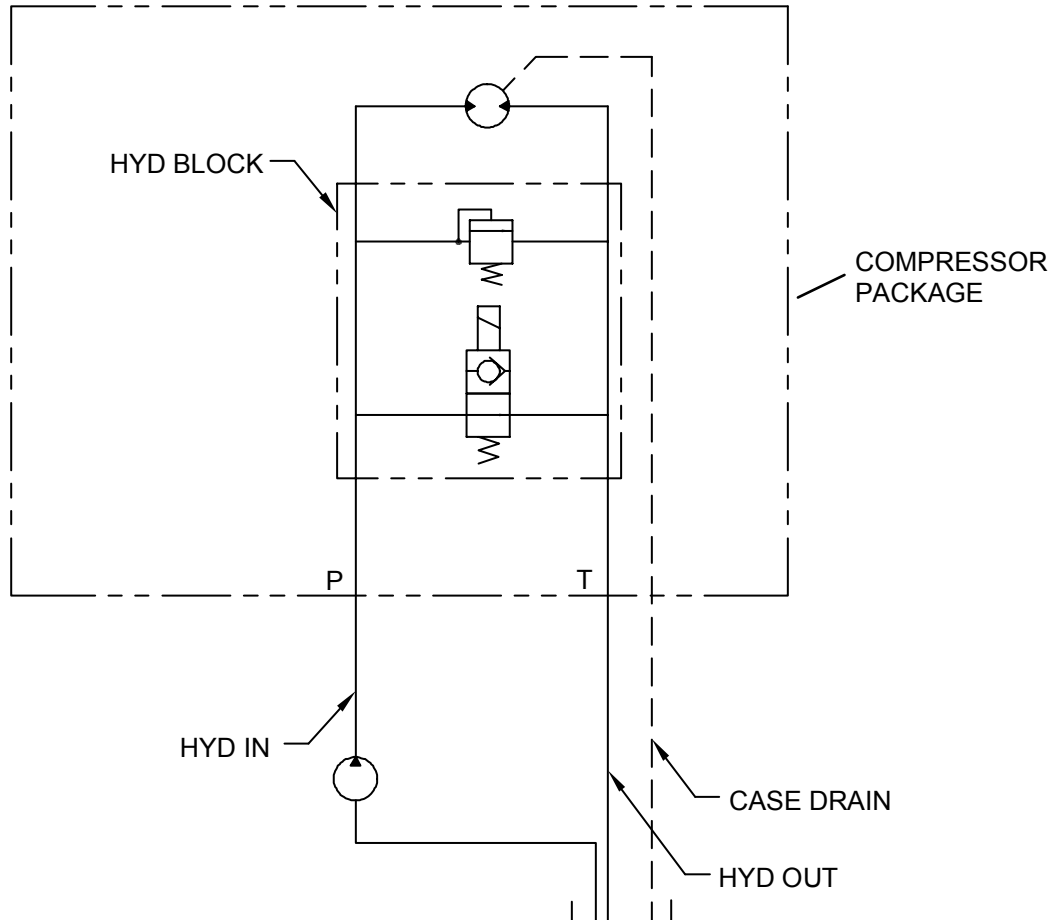
70733873 PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
	94744121	SEAL KIT ASM. (INCL. 1-5)	1
	94744122	REPAIR KIT ASM (INCL. 1-5,9,13,16)	1
1.		GASKET	1
2.		O-RING	1
3.		GASKET	1
4.		O-RING	1
5.		O-RING	1
9.		SPRING	1
13.		BEARING BUSHING	1
16.		SPRING	1



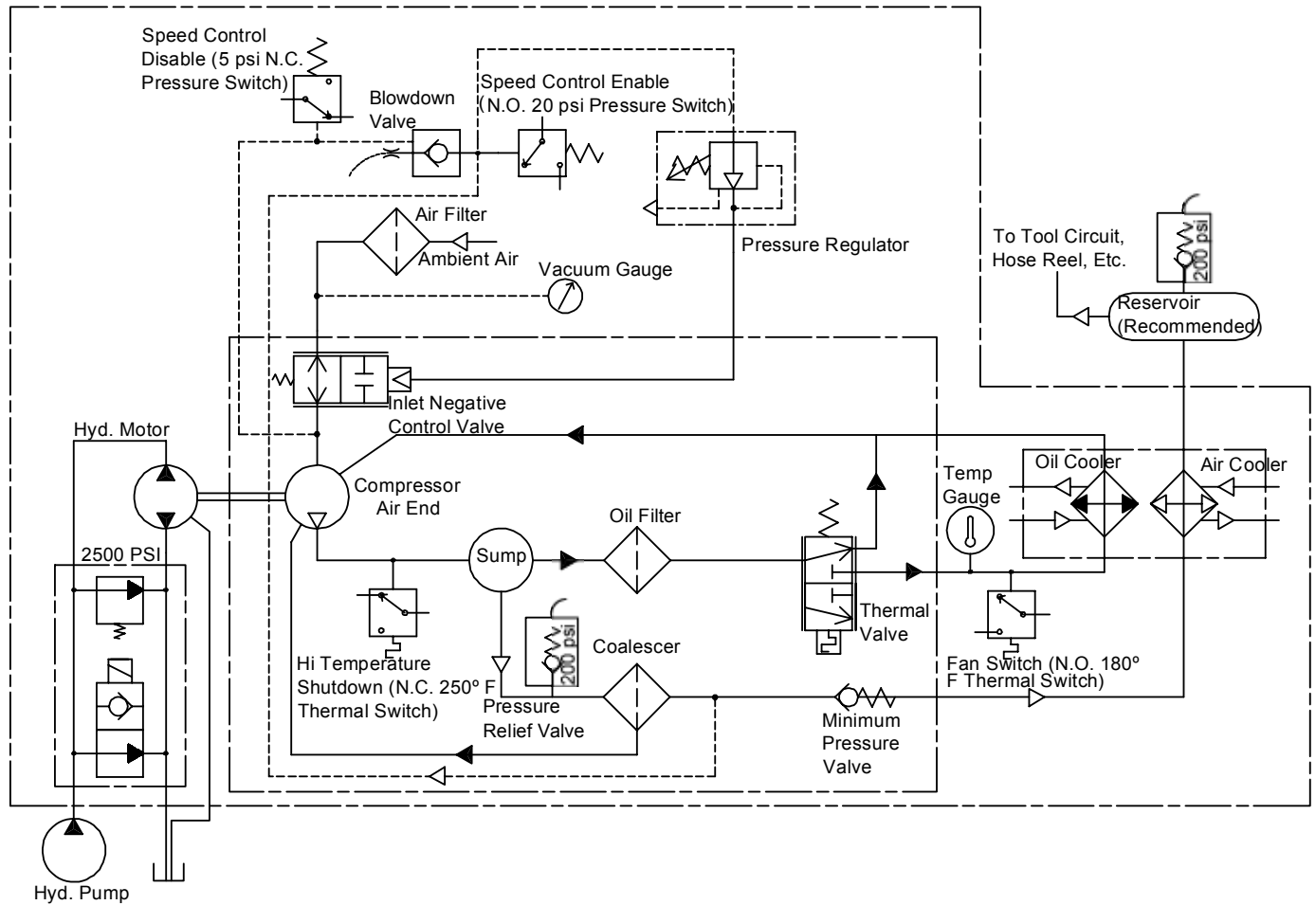
# Electrical Schematic



## Hydraulic Schematic



# Hydraulic Schematic (99903516)



REV. A 20040319