



An Oshkosh Corporation Company

CAS40P

40 CFM/100 PSIG HYDRAULIC OPEN CIRCULATION RECIPROCATING COMPRESSOR

INSTALLATION, OPERATION, MAINTENANCE AND PARTS MANUAL

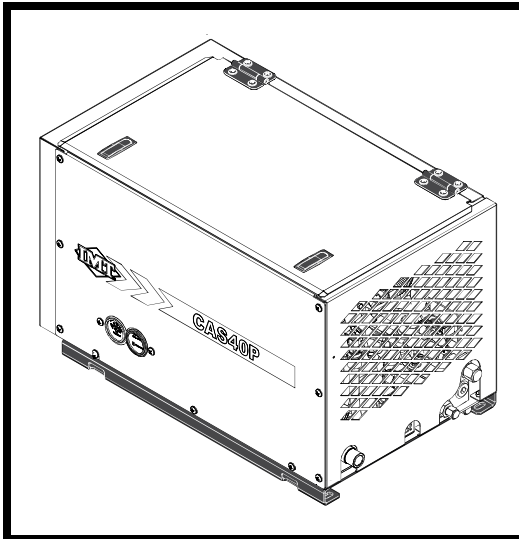


Read this manual before installing, operating or servicing this equipment. Failure to comply with the operation and maintenance instructions in this manual **WILL VOID THE EQUIPMENT WARRANTY.**

NOTE

This publication contains the latest information available at the time of preparation. Every effort has been made to ensure accuracy. Iowa Mold Tooling Co., Inc. reserves the right to make design change modifications or improvements without prior notification.

**KEEP THE MANUAL
WITH THE VEHICLE**



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NOTE

Use only IMT Reciprocating Oil and Genuine IMT Parts. Inspect and replace damaged components before operation. Substituting non-IMT Oil or non-genuine IMT filter components **WILL VOID THE COMPRESSOR WARRANTY!**

NOTE

Making unauthorized modifications to the system components **WILL VOID THE WARRANTY!**

Always inform IMT before beginning any changes to the CAS40P system.

P/N 99906466

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JUNE 2019

NOTICE TO CUSTOMER

This manual is the final version and some of the information and specifications are subject to change without notice.



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SECTION 1: SAFETY

1.1 GENERAL INFORMATION

The products provided by IMT® are designed and manufactured for safe operation and maintenance. But it is ultimately the responsibility of the users and maintainers for safe use of this equipment. Part of this responsibility is to read and be familiar with the contents of this manual before operation or performing maintenance actions.

IMPORTANT	
	Read this manual before operating or servicing the CAS40P Air Compressor System. Failure to do so could result in damaged equipment, bodily injury, or death.

1.2 ▲ DANGERS, WARNINGS, CAUTIONS AND NOTES

See information boxes below.

DANGER	
Identifies actions or conditions which will cause death, severe injury, or equipment damage or destructive malfunctions.	

WARNING	
Identifies actions or conditions which can cause death, severe injury, or equipment damage or destructive malfunctions.	

CAUTION	
Identifies actions or conditions which will or can cause injuries, equipment damage or malfunctions.	

NOTE

Additional information (or existing information) which should be brought to the attention of operators/maintainers affecting safety, operation, maintenance, or warranty requirements.

1.3 ▲ SUMMARY OF DANGERS, WARNINGS, CAUTIONS AND NOTES

These boxed inserts are placed throughout this manual in the sections where they apply. This subsection is a general summary of their contents.

1.3.1 ▲ DANGERS

- Keep tools or other conductive objects away from live electrical parts.
- Never touch electrical wires or components while the machine is operating. They can be sources of electrical shock.

1.3.2 ▲ WARNINGS

- **DO NOT** ever use this compressor as a breathing air source. IMT® disclaims any and all liabilities for damage or loss due to fatalities, personal injuries resulting from the use of an IMT compressor to supply breathing air.
- **DO NOT** perform any modifications to this equipment without prior factory approval.
- **DO NOT** operate the compressor or any of its systems if there is a known unsafe condition. Disable the equipment by disconnecting it from its power source. Install a lock-out tag to identify the equipment as inoperable to other personnel.
- **DO NOT** attempt to service the equipment while it is operating.



- **DO NOT** use the compressor for purposes other than for which it is intended. High pressure air can cause serious and even fatal injuries.
- **DO NOT** operate the compressor outside of its specified pressure and speed ratings. (See **Section 3, Specifications** or refer to the equipment data plate.)
- **DO NOT** use flammable solvents or cleaners for cleaning the compressor or its parts.
- **DO NOT** operate the compressor in areas where flammable, toxic, or corrosive fumes, or other damaging substance can be ingested by the compressor intakes.
- **DO NOT** operate the compressor with any by-pass or other safety systems disconnected or rendered inoperative.
- Keep arms, hands, hair and other body parts, and loose clothing away from fans, drive shafts, and other moving parts.
- **DO NOT** operate the compressor with any guards removed or damaged, or other safety devices inoperative.
- **DO NOT** operate the compressor in enclosed or confined spaces where ventilation is restricted or closed-off.
- **DO NOT** install shut-off valves between the compressor and the compressor receiver tank (sump).
- Ensure that hoses connected to service valves are fitted with correctly sized and rated flow limiting devices which comply with applicable codes. Pressurized broken or disconnected hoses can whip causing injuries or damage.
- **DO NOT** use tools, hoses, or equipment that have maximum ratings below that of this compressor.
- Keep metal tools, and other conductive objects away from live electrical components.
- Before performing maintenance or repair operations on the compressor, ensure that all power has been removed and been locked out to prevent accidental application.
- **DO NOT** assume that because the compressor is in a STOPPED condition that power has been removed.
- Use this compressor only to compress atmospheric air. Use of this equipment

as a booster pump and/or to compress any other gaseous or aerosol substance constitutes improper use. It can also cause damage or injuries. Such misuse will also void the warranty.

- Install, operate, and maintain this equipment in full compliance with all applicable OSHA, other Federal, state, local codes, standards, and regulations.
- Before performing maintenance, or replacing parts, relieve the entire system pressure by opening a service valve which will vent all pressure to the atmosphere: remove all electrical power.

1.3.3 ▲ CAUTIONS

- Check all safety devices for proper operation on a routine basis.
- Ensure that no tools, rags, or other objects are left on compressor drive systems or near intakes.
- Keep the equipment clean when performing maintenance or service actions. Cover openings to prevent contamination.
- **DO NOT** operate the compressor if cooling air is not available (fan/cooler not operating) or if lubricant levels are below their specified minimum levels.
- Ensure all plugs, hoses, connectors, covers, and other parts removed for maintenance actions are replaced before applying power to the compressor.
- Avoid touching hot surfaces and components.
- Ensure that electrical wiring, terminals; hoses and fittings are kept in serviceable condition through routine inspections and maintenance. Replace any damaged or worn components.
- Wear appropriate protective (eye and hearing protection) equipment and clothing when operating or maintaining this equipment. **DO NOT** wear jewelry, loose clothing; and long hair should be restrained with headband or safety hat.

1.3.4 ▲ SAFETY DECALS

Safety decals are placed onto, or located near, system components that can present a hazard to operators or service personnel. All pertinent decals listed in **Section 7.13**,



Decal Locations are located near a component, which is subject to respect in terms of safety precautions. Always heed the information noted on the safety decals.



1.4 DISPOSING OF MACHINE FLUIDS

Always dispose of machine fluids under the guidance of all applicable local, regional and/or federal law.

IMT® encourages recycling when allowed. For additional information, consult the fluid container label.



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SECTION 2: SPECIFICATIONS

TABLE 2A: CAS40P SPECIFICATIONS

GENERAL SYSTEM INFORMATION	SPECIFICATION
RATINGS	
Capacity (CFM @ 100 [150 maximum] psig):	40 CFM
Air Pressure at tool [†] (psig):	100
Speed (RPM @ 100 psig):	865
Hydraulic flow (gpm @ 120°F hydraulic oil temperature):	10 (± 0.5)
Hydraulic pressure (psig @ 100/150 compressor psig):	2375
Maximum compressor oil temperature	250°F
Maximum Hydraulic oil temperature	180°F
COMPRESSOR	
Type:	Two-stage, four cylinder, reciprocating
Compressor oil reservoir capacity:	3 quarts
Air inlet system:	Twin dry-type, single stage
Drive coupling:	Belt drive
Hydraulic motor:	Gear type
PACKAGE	
Main frame:	Formed powder-coated steel with a bolt-down provision
Electrical supply:	12V Standard; 24V Optional
Electrical connections:	Weatherpack
Enclosure:	Galvanneal sheet steel, powder-coated
Cooler:	Hydraulic oil cooler/radiator core — electric fan
Package connections:	Discharge air — 3/4" NPT female
	Hydraulic supply — 1/2" 37° JIC male
	Hydraulic return — 3/4" 37° JIC male
	+12VDC (PTO activated)
Dimensions:	Length — 34.87"
	Width — 21.00"
	Height — 21.94"
Weight:	400 lbs
[†] Air output expectations are at the end of the hose reel, not at the air end. The system includes an air tank and a hose reel with 50ft of 3/8" or 1/2" air hose.	

**TABLE 2B: CAPSCREW TIGHTENING TORQUE VALUES**

SIZE	GRADE	LUBRICATED
1/4 - 20 UNC	5	6 ft-bs
5/16 - 18 UNC	5	13 ft-lbs
3/8 - 16 UNC	5	23 ft-lbs
1/2 - 13 UNC	5	55 ft-lbs
3/4 - 10 UNC	5	200 ft-lbs

TABLE 2C: COMPRESSOR TORQUE VALUES

BOLTS SIZE	GRADE	TORQUE (ft.-lb.)	POSITION
1/4-20	5	8	Side Plate Bolts
1/4-28	8	11.76	HP Valve Nut
3/8-16	5	26	Cylinder to Base Bolts
3/8-24	8	33.8	Connecting Rod Bolts
5/16-18	5	17	Head to Cylinder
	5	10	LP & HP Valve Hold Down Covers
	5	17	End Cover/Discharge Manifold Bolts
5/16-24	8	21.3	LP Valve Nut



SECTION 3: INSTALLATION

3.1 MACHINE PACKAGE RECEIPT/INSPECTION

Upon receipt of the machine package, inspect the exterior of the shipping crate for signs of shipping/transit damage. Any damage should be reported immediately to the shipping company.

NOTE

Before fully unpacking the unit, inspect the component parts, supports and loose-packed parts to ensure that there have been no internal movements of assemblies or components, which may have been damaged during shipment.

Open the lid and inspect the component parts and supports to ensure that there has been no internal movements of assemblies or components which may have caused damage. Should any damage be discovered during package inspection, contact the shipping company immediately.

NOTE

Contact IMT® at
(641) 923-3711 / Fax: (641) 923-2424
www.imt.com
to report missing items, incorrect part
numbers, or other discrepancies.

To install the CAS40P compressor system, refer to the following sections:

3.2 GENERAL INSTRUCTIONS

This section provides general guidance for locating and preparing the CAS40P compressor package for operation. Each installation is unique and can be affected by location, ventilation, and other factors such

as electrical and hydraulic power supply availability and location.

DISCLAIMER

DO NOT install in any enclosed space without first contacting IMT.



WARNING

Install, operate, and maintain this equipment in full compliance with all applicable OSHA, other Federal, state, local codes, standards, and regulations.



WARNING

Before performing maintenance or repair operations on the compressor, ensure that all power has been removed and locked out to prevent accidental application.

DO NOT assume that because the compressor is in a STOPPED condition that power has been removed.



WARNING

DO NOT perform any modifications to this equipment without prior factory approval.



WARNING

DO NOT use plastic pipe, or incorrectly rated piping or hose. Incorrectly rated connection material can fail and cause injury or equipment damage.



WARNING

DO NOT operate the compressor in enclosed or confined spaces where ventilation is restricted or closed off.

**NOTE**

Install electrical components (circuit breakers, pressure switches, toggle switches, etc.) in locations where exposure to water or moisture will be most minimized.

NOTE

In order to prevent accidental damage to vehicle components (fuel tanks, lines, brake lines, wiring harnesses), note their location before drilling any holes.

3.3 DETERMINING THE CAS40P UNIT MOUNTING LOCATION

When determining the location to mount the CAS40P unit, the following criteria must be taken into consideration:

- The mounting surface must be level and able to accommodate the four [4] mounting bolts of the base frame. Refer to **Figure 3-2** or **Figure 3-3** for layout of mounting hole slots' locations.

IMPORTANT

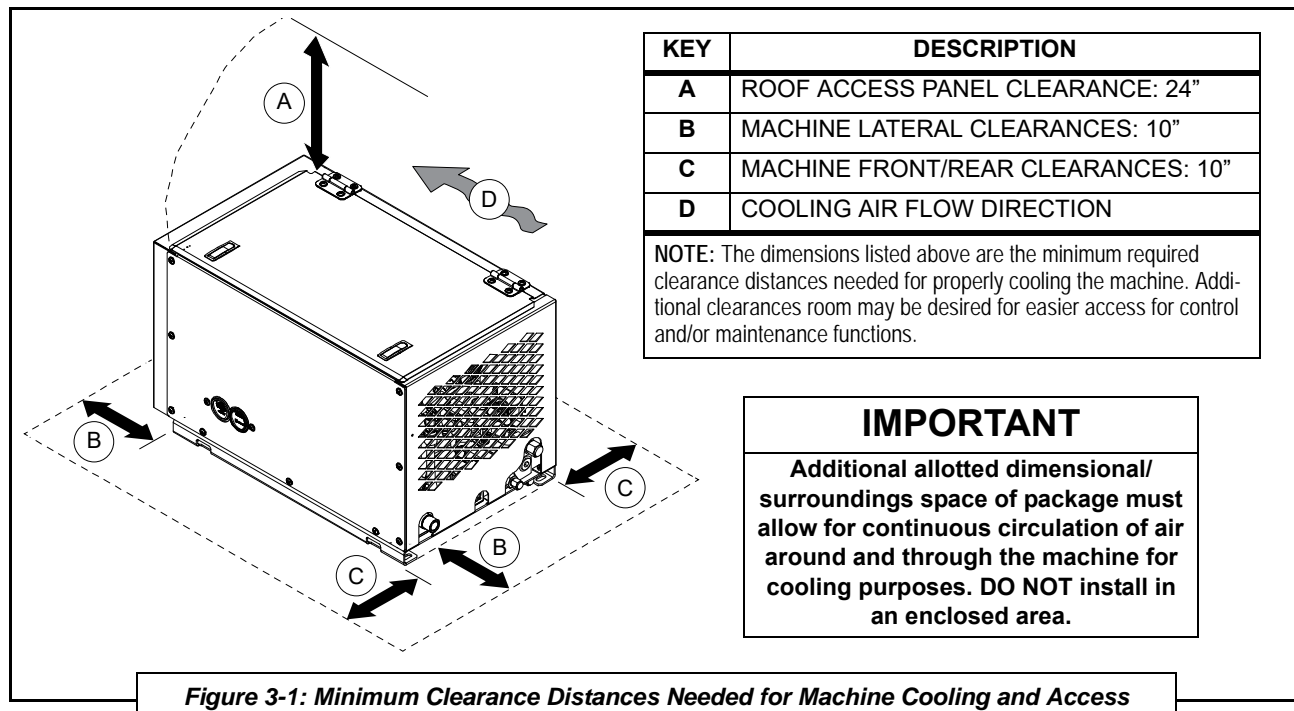
Mounting surface must be able to bear the weight of the machine (400 lbs).

- Mount the machine with a minimum of four (4) mounting slots.
- The location must allow for the machine dimensions, *and* additional space requirements for minimum cooling, maintenance and access. Refer to **Figure 3-1** to determine the additional minimum space requirement measurements.
- The external gauges must be easily visible to the operator.

It is recommended, for most installations, to mount the compressor on the driver's side of the vehicle. The unit should be situated in such a manner that the fan (rear) and hydraulic cooler (front) are not obstructed. Do not place the compressor in any location where it can ingest exhaust fumes, dust or debris.

3.4 CONNECTING THE ELECTRICAL SUPPLY

Refer to **Figure 3-2** or **Figure 3-3**. Connect the electrical supply connector, located at the connection port panel end of the unit.



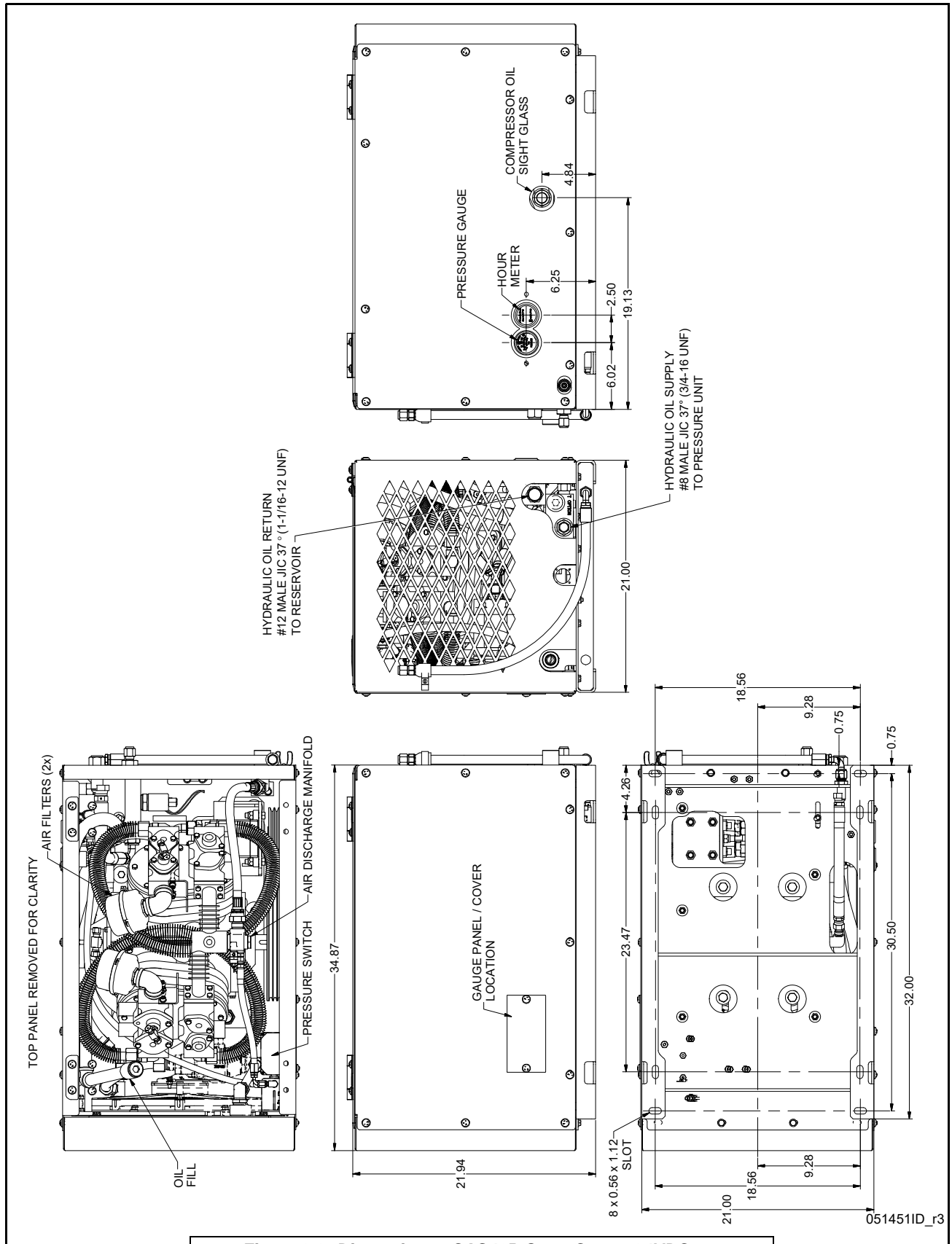
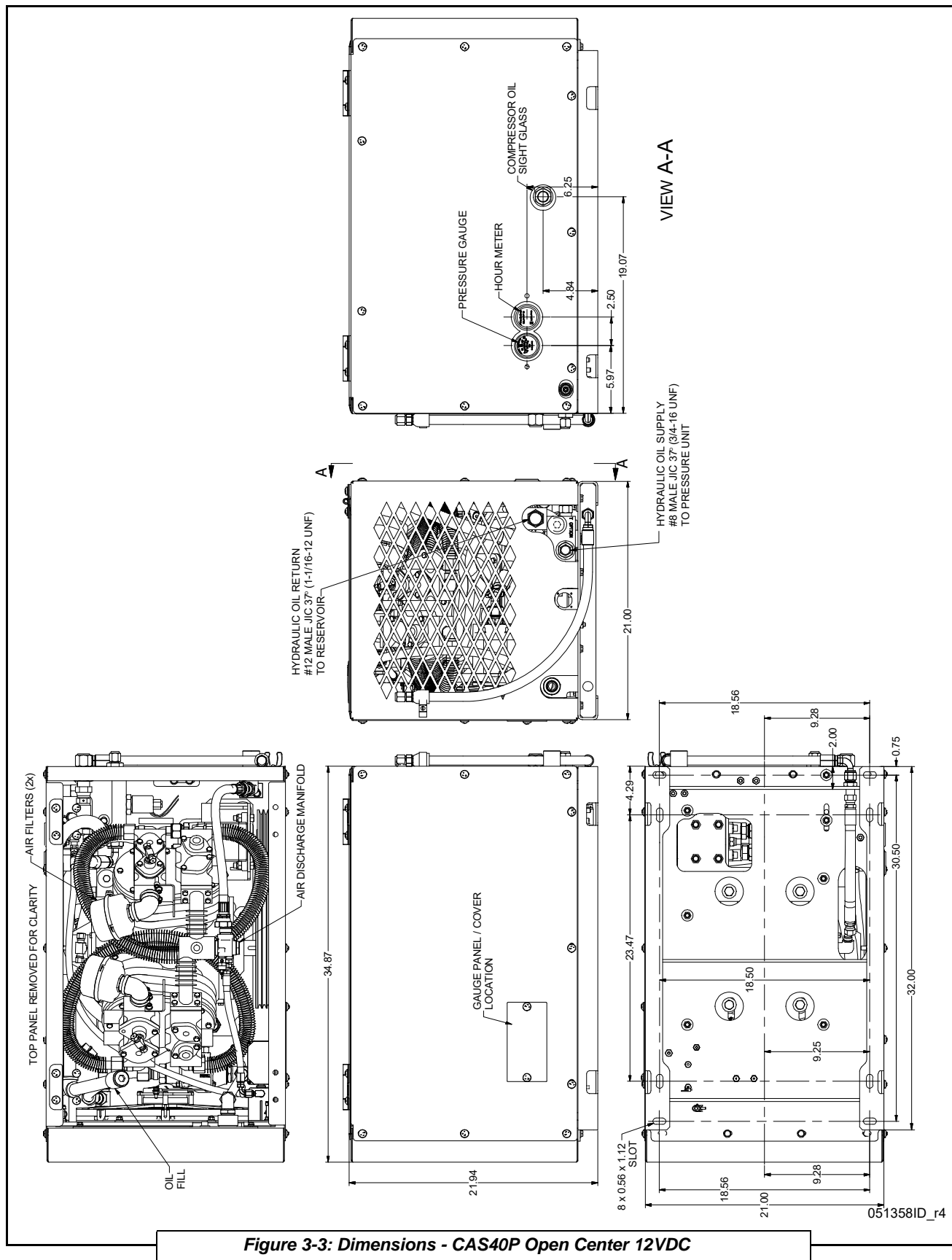


Figure 3-2: Dimensions - CAS40P Open Center 24VDC





3.5 HYDRAULIC SYSTEM REQUIREMENTS

The following requirements should be taken into consideration before installing the hydraulic system:

- The hydraulic flow and pressure requirements of the air compressor.
- A continuous hydraulic load is necessary when the compressor is running.
- The duty cycle and ambient operating temperatures.
- Other hydraulic equipment which may share the same hydraulic supply system (IMT® recommends a dedicated pump and hydraulic circuit).

3.6 CONNECTING THE HYDRAULIC SUPPLY AND RETURN

Refer to **Section 7.15** for hydraulic supply and return hose location connections and layout routing. Use correctly rated hoses (3000 psi minimum) to securely connect both supply (1/2" J.I.C. 37° male) and return connectors (3/4" J.I.C. 37° male).

NOTE

IMT recommends 1/2" supply and 3/4" return hose.

3.7 CONNECTING THE AIR SUPPLY

Refer to **Figures 3-2** for service air discharge port location. Connect the service valve. Connect the discharge line to the 3/4" NPT female connector.

3.7.1 AIR RESERVOIR TANK INSTALLATION

The CAS40P air compression system will require the additional installation of an air tank/receiver, to be incorporated downstream of the unit's service air output. This tank will serve as a reservoir for accumulated air pressure, allowing for constant pressure availability for direct service needs. IMT recommends the

following criteria when determining the design of the receiver tank installation:

TANK SPECIFICATIONS

- 30 gallon minimum capacity (recommended).
- ASME-rated and compliant to applicable standards (200 psig minimum).
- Supplied with an adequately-rated relief valve.
- Supplied with moisture drain.

CONNECTION HOISING AND SERVICE VALVE SPECIFICATIONS

- Hose must be flexible; steel-braided enforcement.
- Rated for high temperature (450°F minimum).
- Pressure-rated for 200 psig (minimum).

MOUNTING SPECIFICATIONS

- If tank is to be permanently mounted, IMT® recommends a mounting with no less than four (4) mounting/securing points.
- Tank mounted levelly.
- Service air out port of tank readily accessible, or piped/hosed for such availability.
- Drain is readily available, or piped/hosed for such availability.
- Tank drain function must have auto-drain, petcock, or valve that allows for tank to be purged of moisture while tank is pressurized/system is running.

The above listed features should serve as a minimum checklist of what to include when installing the reservoir portion of the compression system. However, if additional assistance is needed for designing the reservoir tank-side of the service out operation, consult the IMT Service Department.



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SECTION 4: OPERATION

4.1 GENERAL INFORMATION

The IMT CAS40P compressor has a comprehensive array of controls and indicators. Understanding the correct operation of the system will help you to understand and recognize when it is operating optimally. The information in the Operation Section will help the operator to recognize and interpret the readings, which will call for service or indicate the beginning of a malfunction.

4.2 OPERATING CONDITIONS

- Operate only in well-ventilated areas.
- Ensure there are no obstructions of cooling air intakes and outlets around the machine.
- Do not leave anything resting on top of the machine. Hot cooling air will generate high heat and must not be restricted.
- Be sure to leave sufficient room around the machine for cooling air circulation. There must be a minimum of 10 (ten) inches for the cooler intake, and 10 (ten) inches for the sides and rear. Heated air must be able to vent away from the intake.
- Operate machine with the top cover closed, and all panels secured in place.
- Refer to specifications for operating parameters.
- Recommended: **DO NOT** exceed maximum operating angle of 15°.

4.3 INITIAL (FIRST) START-UP

The compressor has been factory-tested and its air and hydraulic valves have been adjusted to their specified operating settings. Its crankcase has also been filled, but check

the oil level before initial start-up. (Refer to **Section 5.4.3, Compressor System Lubrication**, for the correct lubricant type.)

The following steps apply to the first time start-up after the machine installation. Before attempting to start the unit, make sure that the machine (vehicle) is on a level surface, and check the sight glass to ensure that the oil level is within the acceptable range. Add oil if necessary. Refer to **Figure 4-1** for unit check locations and **Figure 4-2** for instrumentation. See **Section 5.4.3, Compressor System Lubrication**, for the correct oil type, sight glass location and level range depiction.

- 1.) Ensure the ON/OFF switch is in the OFF position.
- 2.) Ensure all service outlets are closed.
- 3.) Apply hydraulic power.
- 4.) Check for hydraulic supply or return leaks and correct if required.
- 5.) Allow air pressure to build up in the receiver tank.

The compressor is now operating automatically. It will continue to pump until

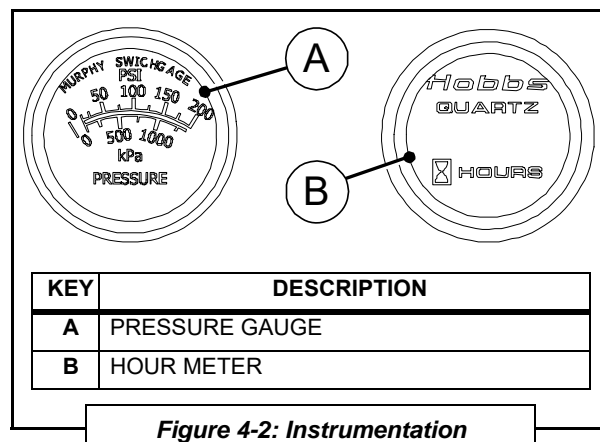


Figure 4-2: Instrumentation



the pressure reaches the factory set-point (100-175 psig). At this point the compressor unit will switch off and the hydraulic flow will be redirected back to the supply tank; any air in the compressor will be vented to the atmosphere. The accumulated pressure in the receiver tank is maintained by the check valve fitted to the compressor outlet connection.

When a demand is applied to the unit, the receiver tank pressure drops until it reaches the low pressure set-point. The compressor then automatically restarts and repeats this cycle in response to service demands and receiver tank pressure.

4.4 SHUTDOWN (FIRST TIME AND ROUTINE)

- 1.) Close all service valves.
- 2.) Disengage the hydraulic supply.

4.5 ROUTINE START-UP

- 1.) Check the compressor oil level.
Refer to **Section 5.4.3.1, Checking the Oil Level** for procedure on checking the oil.
- 2.) Close all service valves.
- 3.) Engage the hydraulic supply.

4.6 EXTREME CONDITION OPERATION

When operating in extreme hot or cold conditions, extra attention should be given to any indications that could lead to a serious problem. Machine review and maintenance check schedules should be more frequent than the normal suggestions given in **Section 5, Table 5A: Route Maintenance Schedule**.



SECTION 5: MAINTENANCE

5.1 GENERAL INFORMATION

The CAS40P requires routine maintenance to ensure its proper functioning and that its operational life is not prematurely shortened. This section contains general maintenance instructions for normal operating conditions. However, these maintenance actions should be performed more frequently in excessively dusty environments, or where the equipment will be exposed to extreme temperature variations.



WARNING

DO NOT perform any modifications to this equipment without prior factory approval.



WARNING

Install, operate, and maintain this equipment in full compliance with all applicable OSHA, other Federal, state, local codes, standards, and regulations.



WARNING

Before performing maintenance:
Shut down machine, relieve all system pressure and lock out all power, as per the Safety Section of this manual. If machine is hot, allow package to cool before removing any panel.

NOTE THAT THE SYSTEM CAN BE STARTED REMOTELY:

Always clearly tag the start-up instrumentation against accidental system start-ups during maintenance.



WARNING

DO NOT touch electrical wires, wire harnesses, terminals, or other components when power is applied to the compressor unit.



WARNING

Keep metal tools, and other conductive objects away from live electrical components.



WARNING

DO NOT attempt to service the equipment while it is operating.

5.2 MACHINE MAINTENANCE SCHEDULE

Refer to **Table 5A: Routine Maintenance Schedule**. A routine maintenance schedule based on time and/or hours logged, is given in **Table 5A**. The intervals are determined from machine usage under typical operation conditions. However, the operator must be aware that operating conditions will vary depending on such things as specific customer requirements, environmental temperatures and cleanliness of the ambient air. With this in mind, the specifications given in **Table 5A** should be used as a guideline instead of a fixed agenda. A safe approach to routine maintenance would be to perform the given maintenance task more frequently under harsher conditions.

IMT® provides a routine maintenance parts list in **Section 7, Table 7A**. Should a non-routine part need replacement or servicing, peruse the various parts list illustrations in **Section 7** to help determine the exact part and part number in question. Our parts and service departments are ready to assist in identifying and/or replacing non-routine parts.

For assistance in obtaining routine maintenance or replacement parts, consult **Section**

**TABLE 5A: ROUTINE MAINTENANCE SCHEDULE**

WARNING Before performing maintenance: Shut down machine, relieve all system pressure and lock out all power, as per the Safety Section of this manual. If machine is hot, allow package to cool before removing any panel. NOTE THAT THE SYSTEM CAN BE STARTED REMOTELY: Always clearly tag the start-up instrumentation against accidental system start-ups during maintenance.		MAINTENANCE INTERVALS Hourly or Calendar Period - whichever comes first			NOTES: If working in dusty or dirty conditions, reduce the recommended time intervals between servicing by half for compressor oil change, and compressor filter servicing. For routine, as well as non-routine, maintenance replacement parts and kits, refer to either Section 7, Table 7A, or the specific sub-section Figures in Section 5.
KEY	TASK DESCRIPTION	Daily Maintenance	Weekly Maintenance	Every 500 Hours or Annually	ACTION TO TAKE
1	Before starting , check compressor crankcase oil level.	•	•	•	Ensure vehicle is situated on a level surface before checking oil level. Add oil if necessary. Refer to Section 5.4.3 .
2	Check for any loose bolts and/or loose connections.	•	•	•	Tighten if necessary.
3	Check drive belt for tension.	•	•	•	If necessary, consult Section 5.4.6 for procedure on tightening the drive belts.
4	Check for leaks.	•	•	•	Visually note any leaks or evidence of leaks around the compressor unit and hose connections. Tighten any loose connection point where needed. Repair or replace any damaged part.
5	Inspect and clean the air discharge system.	•	•	•	Check/drain air reservoir daily, or more frequently, depending on working environment conditions.
6	After starting , check pressure gauge for correct operating pressure.	•	•	•	Refer to Section 2, Table 2A , and Section 5.4.2 .
7	Clean dust and foreign matter from the compressor oil cooler core.		•	•	Consult Section 5.4.5 for procedure on cleaning the cooler core (external and internal).
8	Remove, inspect, and clear air intake filters if necessary ^I .		•	•	Consult Section 5.4.4 for procedure on how to inspect and/or change the air intake filters.
9	Inspect and clean the compressor valves.		II		Consult the IMT Service Department for maintenance procedure for the compressor valves.
10	Change the compressor crankcase oil.			•	Consult Section 5.4.3 for procedure on changing the crankcase oil.
11	Check the hoses for damage or other signs of deterioration.			•	Consult Section 7.10 for assistance with hose replacement.
12	Check the wiring for damage or deterioration and ensure that connections are secure.			•	Refer to Section 7.14 (Electrical System Wiring Diagram) for wire system route connections.
^I Air filters inspection performed weekly (change if needed); air filters change interval is yearly, or sooner depending upon inspection.					
^{II} Valves should be removed from the cylinder heads every 500 hours or annually (whichever comes first) and examined for cleanliness and carbon formation (build-up).					



7.1, *Parts Ordering Procedure*, and Table 7A: *Recommended Spare Parts List*.

5.3 REPLACEMENT PARTS

Replacement parts should be purchased through your local IMT® representative or where the compressor system was purchased. If, for any reason, parts are not available in this manner, they can be purchased through IMT directly.

Iowa Mold Tooling Co., Inc.

500 Highway 18 West
Garner, Iowa 50438

Phone: (641) 923-3711

Fax: (641) 923-2424

www.imt.com

NOTE

If additional spare parts are being stored for future use, make certain that they are stored in proper containers that allow for protection against contamination, and kept in a clean area of moderate temperature reading. For information on storing the machine package for periods of non-use, consult *Section 5.5, Long Term Storage*.

5.4 PARTS REPLACEMENT AND ADJUSTMENT PROCEDURES

WARNING

Before performing maintenance:
Shut down machine, relieve all system pressure and lock out all power, as per the Safety Section of this manual. If machine is hot, allow package to cool before removing any panel.

NOTE THAT THE SYSTEM CAN BE STARTED REMOTELY:

Always clearly tag the start-up instrumentation against accidental system start-ups during maintenance.

WARNING

Follow all applicable safety recommendations as outlined in *Section 1: Safety of this manual*.

WARNING

DO NOT use tools, hoses, or equipment that have maximum ratings below that of this compressor.

WARNING

DO NOT use flammable solvents or cleaners for cleaning the compressor or its parts.

NOTE

Wear appropriate protective (eye and hearing protection) equipment and clothing when operating or maintaining this equipment. DO NOT wear jewelry, loose clothing; and long hair should be restrained with headband or safety hat.

NOTE

Keep the equipment clean when performing maintenance or service actions. Cover openings to prevent contamination.

NOTE

When using compressed air to clean the components, the nozzle pressure should not exceed 15 psig.

5.4.1 REMOVING PANELS FOR MACHINE MAINTENANCE ACCESS

Although most of the routine maintenance procedures can be accessed from either outside of the compressor package or via the top roof access panel, some procedures will require the temporary removal of one or both side panels in order to freely service the maintenance item. Consult *Figure 5-1* and the proper panel removal sub-section listed below to remove the desired panel.

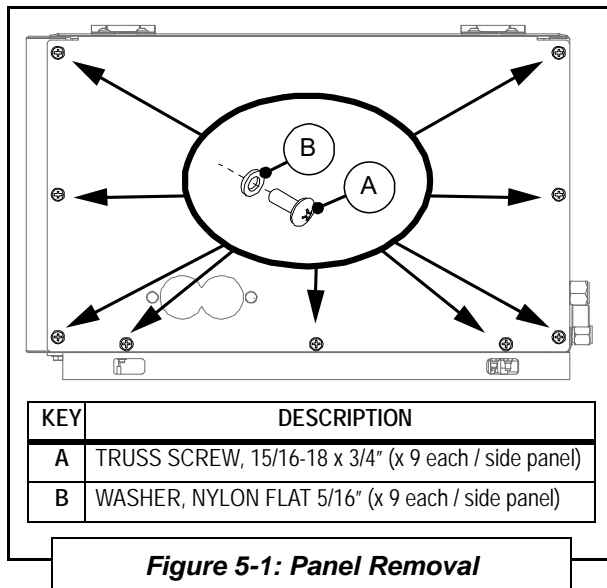


Figure 5-1: Panel Removal



WARNING

Before performing maintenance:
Shut down machine, relieve all system pressure and lock out all power, as per the Safety Section of this manual. If machine is hot, allow package to cool before removing any panel.

NOTE THAT THE SYSTEM CAN BE STARTED REMOTELY:

Always clearly tag the start-up instrumentation against accidental system start-ups during maintenance.

5.4.1.1 REMOVING LONG-SIDE PANELS FOR MAINTENANCE ACCESS

Consult **Figure 5-1** and the following procedures to remove a side panel for maintenance access.

1. With a #4 bit Phillips head screwdriver remove the nine (9) 5/16-18 x 3/4" truss screws [A] and the nine (9) 5/16" nylon flat washers [B] from the panel side to be accessed.
2. Remove panel from the frame and set aside.
3. Retain screws and washers for re-assembly.

5.4.1.2 REPLACING LONG-SIDE PANELS

Refer to **Figure 5-1** and the following procedure:

1. Align the mounting holes in the drive assembly access panel to the mounting holes on the drive assembly side of the machine.
2. With a #4 bit Phillips head screwdriver, loosely replace the nine (9) 5/16" nylon flat washers [A], and the nine (9) 5/16-18 x 3/4" truss screws [B] sets.
3. Tighten the screws into position.

5.4.2 CHECKING PRESSURE GAUGE

Perform a visual inspection each time the compressor is started to ensure that the pressure gauge is operating normally. Allow the compressor to warm up, and verify that the pressure gauge is within its recommended range. Such inspections will minimize the possibility of damage or an unsafe condition from occurring. Refer to **Section 2: Specifications**.

5.4.3 COMPRESSOR SYSTEM LUBRICATION

NOTE

When inspecting the oil level, ensure that the oil fill sight glass does not contain any cracks or pits.

The compressor is fully charged at the factory with IMT Reciprocating Compressor Oil. This section gives details on checking and changing the compressor oil.

The compressor oil level sight glass is accessible from the outside of the canopy.

5.4.3.1 CHECKING THE OIL LEVEL

Refer to **Figure 5-2**. Check oil level daily (preferred), or at least every week, and top off, if necessary. To ensure a proper oil level the compressor unit must be located on a level surface. Oil is filled via the fill port [B]. If low, fill the oil level until the sight glass is 1/4 to 3/4 full. **DO NOT** overfill.

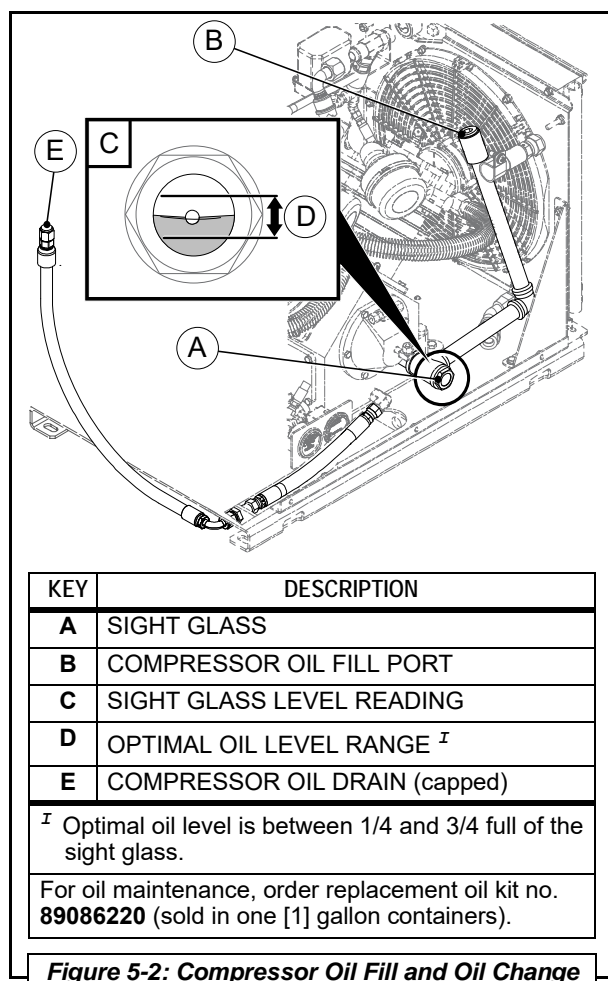


Figure 5-2: Compressor Oil Fill and Oil Change

IMPORTANT

To maintain warranty, IMT® compressor oil must be used. **DO NOT** substitute compressor oil.



CAUTION

DO NOT mix oil types, weights, or brands. Mixing oil types can cause equipment damage or failure.

NOTE

Dispose of discarded oil within the guidelines of all applicable local, regional and/or federal laws.

5.4.3.2 CHANGING THE COMPRESSOR OIL



WARNING

Before performing maintenance:
Shut down machine, relieve all system pressure and lock out all power, as per the Safety Section of this manual. If machine is hot, allow package to cool before removing any panel.

NOTE THAT THE SYSTEM CAN BE STARTED REMOTELY:

Always clearly tag the start-up instrumentation against accidental system start-ups during maintenance.

Refer to **Figure 5-2** and the following procedure:

1. Place a container (of at least three [3] quarts capacity) below the level of the compressor unit, within reach of the drain hose end [E].
2. Disengage the oil drain hose cap from the oil drain fill port [B] using a male hex socket wrench.
3. Remove the hose cap [E] from the end of the drain.
4. Thoroughly drain the existing oil into the container.
5. Replace the hose cap on the end of the drain hose [E] and tighten.
6. At the oil fill port [B], fill crankcase with a full charge of IMT® reciprocating oil to the proper level indicated by the sight glass reading [D]. **DO NOT OVERFILL.**
7. Replace the 3/4" hex socket plug on the oil fill port [B], and tighten.

5.4.4 AIR FILTER MAINTENANCE

Depending on the degree of contamination of the air taken in, regularly and carefully inspect the air filters on (at least) a weekly basis. The air filter elements should be replaced approximately every 500 operating hours or sooner, depending upon inspection. Plugged suction filters can cause high oil consumption and reduced delivery quantity!

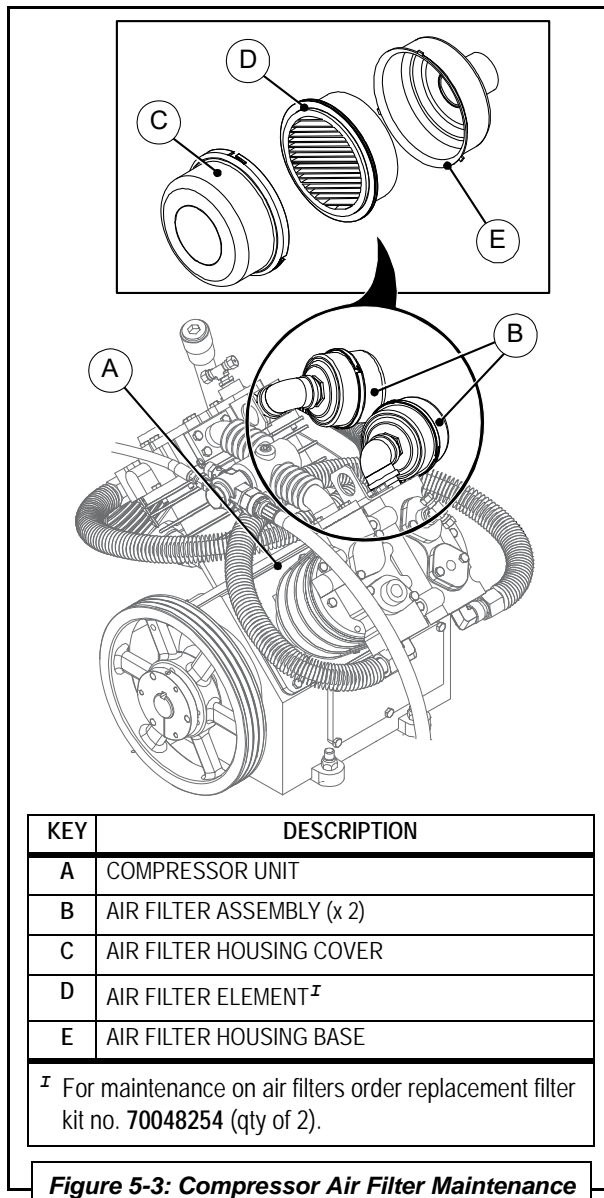


Change the filter more often when running in dusty conditions.

NOTE

If one of the air filters is in need of replacement, replace both air filters at the same time.

The compressor air filters are accessible from via the hinged roof panel. To check and/or replace the air filter, refer to **Figure 5-3** and the following procedure:



5.4.4.1 INSPECTING THE AIR FILTER(S)

1. With the machine off and the ignition key removed, locate both of the air filter assemblies [B] on the compressor unit [A].

NOTE

Wipe off any soil or debris from the filter cover(s) and base(s) before accessing the air filter element(s).

2. Grasp the end cover [C], and push in (toward elbow), while at the same time twisting the cover counterclockwise until the cap slots move past the base mounting posts, freeing the cap.
3. Remove the air filter [D].
4. Visually and carefully inspect the air filter element, including between the pleats, for soiling, damage and/or signs of wear. If the element is intact, replace the element for further use. If damaged, **DO NOT** reuse the air filter element; replace with new filter element.

5.4.4.2 REPLACING THE AIR FILTER(S)

1. Seat the new (or cleaned) air filter [D] in position on the air filter base [E].
2. Place the end cover [C] in position over the air filter base [E].
3. Turn the end cap clockwise until it encounters the air filter base mounting posts; push in (toward the elbow), while turning the end cap past the mounting posts to secure the cap in position.
4. Dispose of worn air filters within the guidelines of all applicable local, regional and/or federal laws.

5.4.5 COOLER CORE MAINTENANCE

Refer to **Figure 5-4**. Periodically leaves, paper, or other debris can get wedged into the vents on the side panels of the enclosure. The cooler core within the enclosure can trap foreign matter that passes through the vents as well. Opening the roof panel and checking that the cooler is clean and

free from debris will ensure that the CAS40P package operates safely within the temperature limits described in **Section 2, Specifications** of this manual.

Should the core become clogged, you can use low pressure compressed air to blow

through the fins from the inside of the canopy to clean it out. You may need to remove the fan from the shroud in order to reach parts of the core. **DO NOT** use high pressure air or a pressure washer.

If the cooler has become internally clogged, it may need to be flushed or replaced. Consult the IMT® Service Department.

5.4.6 RE-ADJUSTING OR REPLACING THE COMPRESSOR DRIVE BELTS

WARNING

Before performing maintenance:
Shut down machine, relieve all system pressure and lock out all power, as per the Safety Section of this manual. If machine is hot, allow package to cool before removing any panel.

NOTE THAT THE SYSTEM CAN BE STARTED REMOTELY:

Always clearly tag the start-up instrumentation against accidental system start-ups during maintenance.

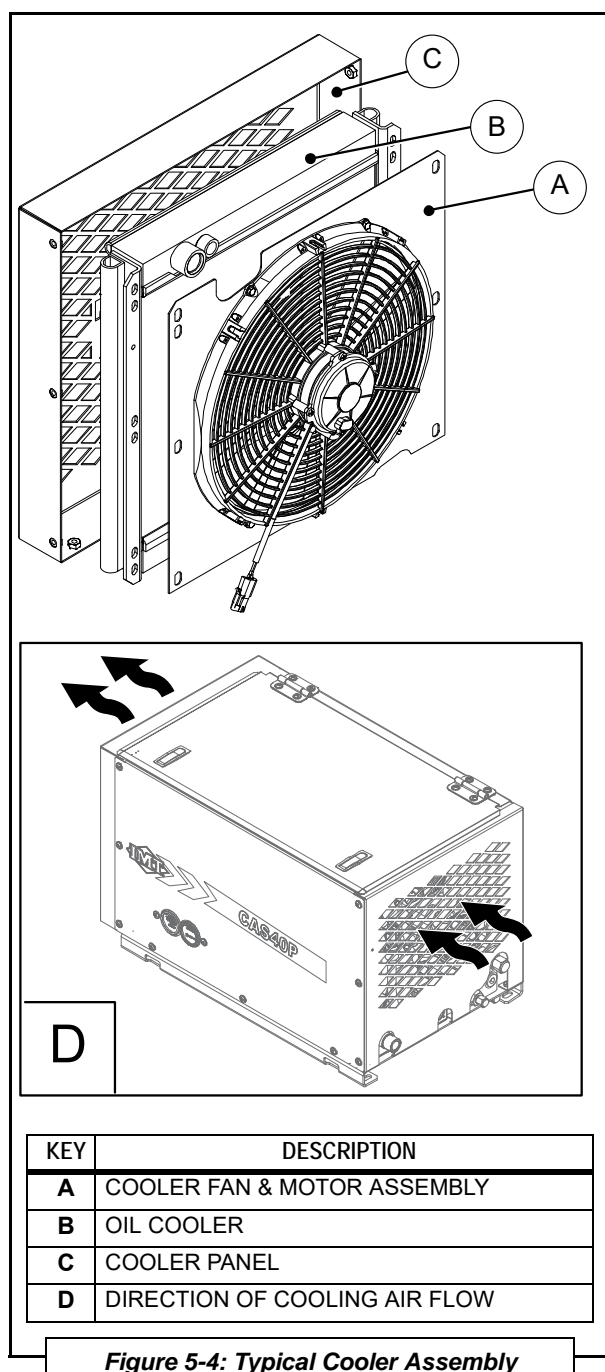
NOTE

For worn or damaged belts:
Always replace all the drive belts at the same time, regardless of any single belt's condition.

To access the package for drive belt maintenance, the drive assembly access panel must be removed. Consult **Section 5.4.1, Removing Panels for Machine Maintenance Access** to remove the drive assembly access side panel.

To readjust or replace the compressor drive belts, refer to **Figures 5-5** and **5-6**. The belts are slackened by pivoting the hydraulic motor assembly's bracket, which temporarily repositions the hydraulic motor sheave enough to allow removal and replacement of the belt. Note that the compressor sheave remains stationary.

1. Loosen the horizontal pivot bolt nut [H]. Loosen enough to allow movement, but **DO NOT** remove the bolt [F].



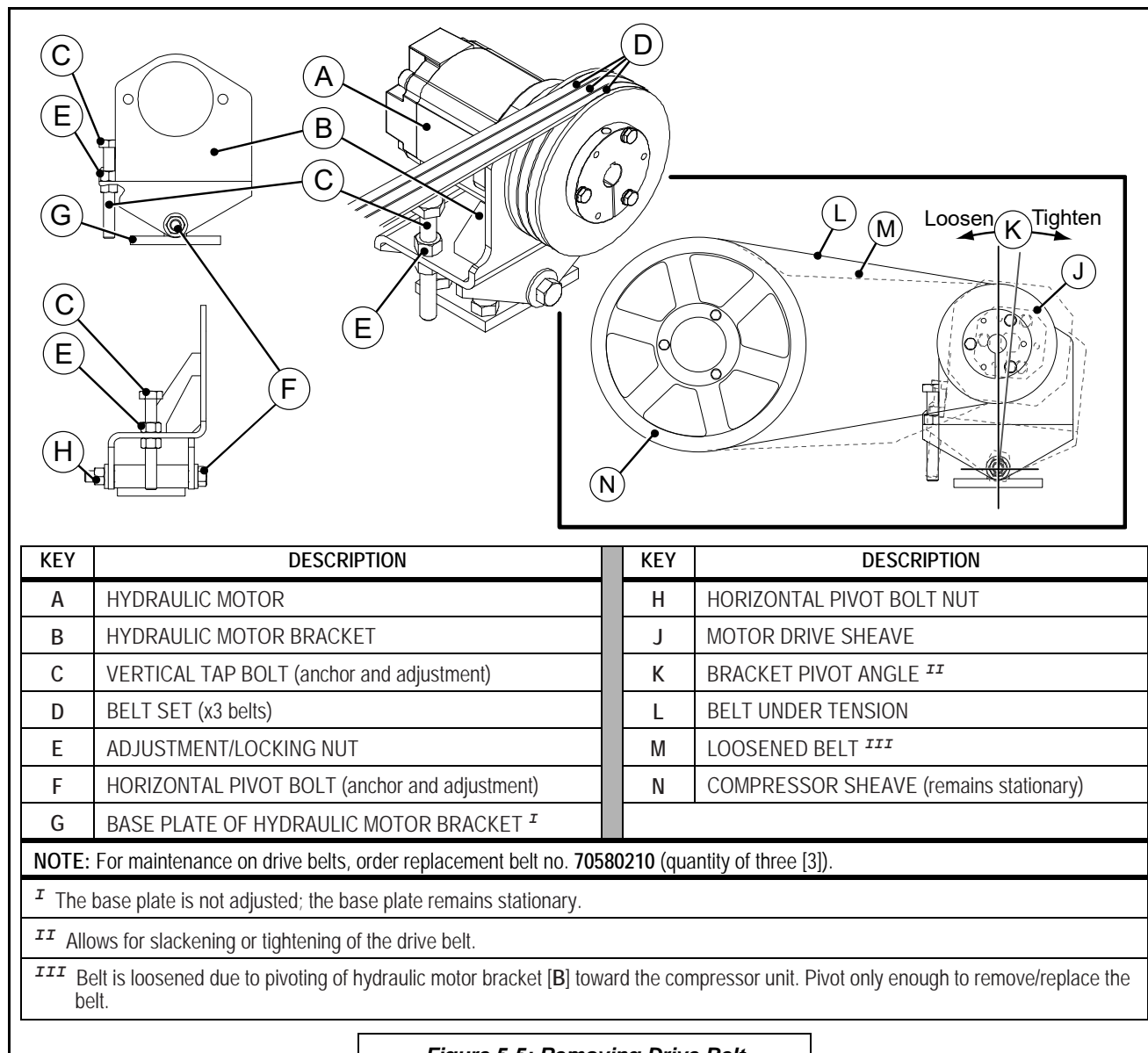


Figure 5-5: Removing Drive Belt

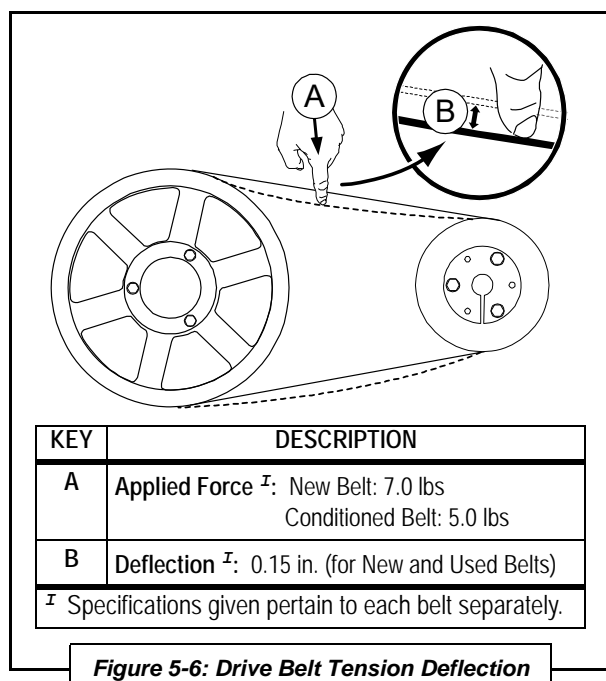
- Loosen the adjustment/locking nut [E].
- Loosen the vertical tap bolt [C] to allow for the hydraulic motor bracket [B] to pivot the motor assembly angle [K] toward the compressor unit, which causes the belt to slack.
- Remove the belts when enough slack allows for them to slip off of the motor sheave [J].
- Thread the new drive belts into place over the compressor sheave [N] and motor drive sheave [J].

- Adjust the vertical tap bolt [C] to tighten the belts by pivoting the hydraulic motor bracket [B] away from the compressor unit [angle K], which causes tension in the belt.

NOTE

BELT TENSION DEFLECTION DATA

Refer to Figure 5-6. Applied force at center of belt span is seven (7) lbs. for a new belt, or five (5) lbs. for a conditioned belt. Deflection factor is 0.15 inches for both new and conditioned belts.



7. When the belt has been adjusted to proper tension, tighten the adjustment/locking nut [E].
8. Hold horizontal pivot bolt nut [H] in place with a wrench while tightening the horizontal pivot bolt [F] to secure the motor bracket in place.
9. Recheck the belt tension, and adjust as necessary until proper tightness is achieved. Check the belt tension routinely, as new belts may need to undergo a breaking-in period of adjustment.

5.4.7 DRIVE SHEAVE ALIGNMENT



WARNING

Before performing maintenance:
Shut down machine, relieve all system pressure and lock out all power, as per the Safety Section of this manual. If machine is hot, allow package to cool before removing any panel.

NOTE THAT THE SYSTEM CAN BE STARTED REMOTELY:

Always clearly tag the start-up instrumentation against accidental system start-ups during maintenance.

To access the package for drive belt maintenance, the drive assembly access panel must be removed. Consult **Section 5.4.1, Removing Panels for Machine Maintenance Access** to remove the drive assembly access side panel.

Refer to **Figures 5-7** and **5-8**, and the following procedure:

Pulley alignment is set at factory and should not need to be adjusted. If it becomes necessary to adjust the pulley alignment, an alignment test may be performed with a straight edge, such as a yard stick, that is long enough to overlap both the compressor and motor drive sheaves. Adjustments are made via positioning of the hydraulic motor (bracket). **Note that the compressor pulley always remains stationary during adjustment.**

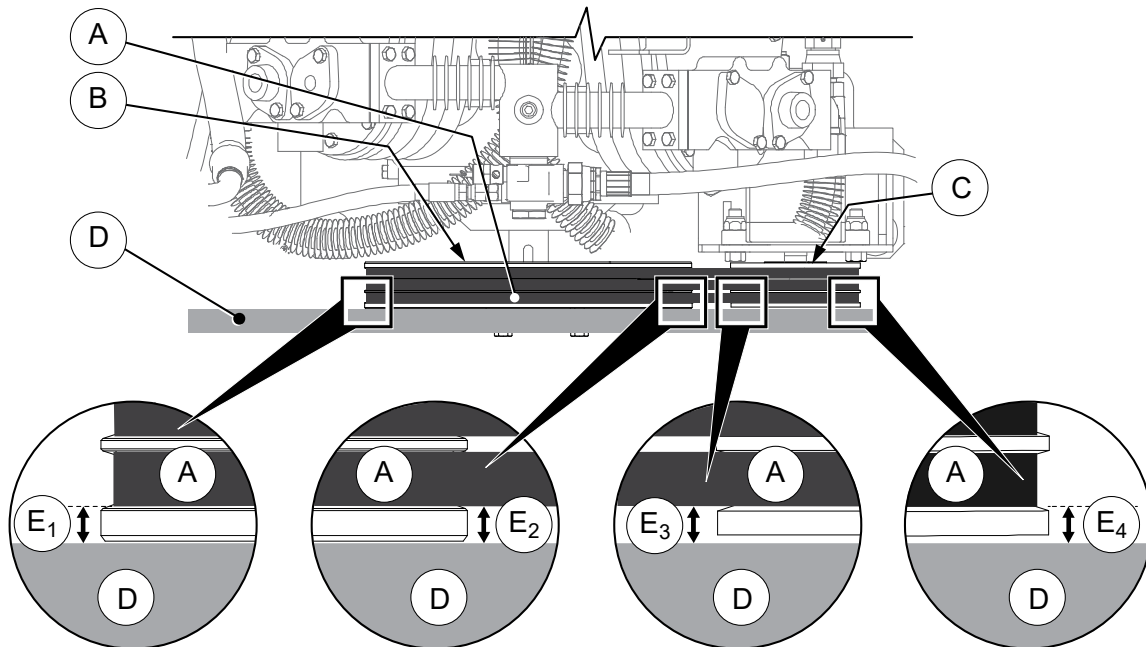
5.4.7.1 TESTING PULLEY ALIGNMENT

In order to confirm that the pulleys are in alignment, several measurements must be taken to get an accurate account. For measurement point locations refer to **Figure 5-7**, for tolerance measurements refer to **Figure 5-6**.

1. Place the straight edge *flush* against both the face of the compressor pulley, and the face of the hydraulic motor pulley, just *above* the mounting screws. Make sure the straight edge overlaps both sheaves as much as possible.

Ideally the straight edge should be flush to both the compressor drive pulley and the hydraulic motor pulley. However, a tolerance of no more than a 1/16 inch clearance is acceptable at either side between the motor pulley face and the straight edge, depending on the direction (toward compressor, or toward cooler) of the skew (see **Figure 5-8**).

2. Place the straight edge *flush* against both the face of the compressor pulley, and the face of the hydraulic motor pulley, just *below* the mounting screws. Make sure the straight edge overlaps both sheaves as much as possible.



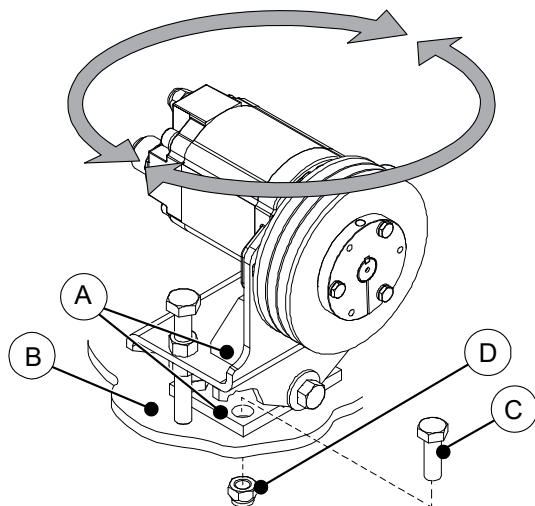
KEY	DESCRIPTION	KEY	DESCRIPTION
A	DRIVE BELT ^I	D	STRAIGHT EDGE ^{II}
B	COMPRESSOR SHEAVE	E	MEASUREMENT POINTS (E ₁ through E ₄) ^{III}
C	HYDRAULIC MOTOR DRIVE SHEAVE		

^I Consider the belt that is *furthest away* from the compressor and hydraulic motor (ergo, the outer belt).

^{II} The straight edge must be long enough to span across both sheaves (example: yard stick)

^{III} Measurements are taken between the outer drive belt's [A] edge and the straight edge [D] when the straight edge is positioned across the compressor and motor sheaves. Compare measurements E₁ and E₃, and E₂ and E₄. Acceptable range for alignment occurs when there is a difference of no more than 1/16" for each pair.

Figure 5-7: Drive Sheave (Pulley) Alignment Check



KEY	DESCRIPTION
A	HYDRAULIC MOTOR BRACKET
B	FRAME (MOUNTING SURFACE)
C	CAPSCREW (MOUNTING BOLT) (x 4)
D	HEX LOCKING NUT (x 4)

Figure 5-8: Hydraulic Motor Pulley Alignment - Lateral Adjustment



The tolerance check should be within the 0.0625" (1/16 inch) acceptable range.

5.4.7.2 ADJUSTING THE MOTOR ASSEMBLY FOR PIVOTAL ALIGNMENT

The motor sheave is positioned, in regard to being aligned with the compressor pulley, by lateral adjustment of the hydraulic motor's base bracket. Before attempting to adjust the motor bracket to align the motor pulley, the drive belts should first be removed in order to relieve any tension while aligning the motor sheave. Consult **Section 5.4.6** to remove the drive belts.

Refer to **Figures 5-7** and **5-8**. In order to adjust the motor pulley, the hydraulic motor bracket must be loosened enough to allow the motor to be moved laterally into alignment.

1. Refer to **Figure 5-8**. Loosen, but do not remove, one or two of the four (4) mounting bolt sets (capscrews [C] and hex locking nuts [D]), fastening the hydraulic motor bracket to the frame.

NOTE

It should not be necessary to fully loosen all of the hydraulic motor bracket's mounting bolts. Loosening one or two of the mounting bolts should be enough to allow for the bracket to be adjusted.

The bracket should be just loose enough to allow for a rubber-headed mallet to move the bracket by applying short taps.

NOTE

If using a rubber mallet to position the motor bracket, take care to strike the bracket face and not the sheave during adjustment.

2. Follow the steps and referrals given in **Figures 5-7** and **5-8** to determine if the drive sheaves are aligned within the operating tolerance range of 1/16".

3. Adjust the motor bracket position in slight increments, taking frequent tolerance measurements with the straight edge until the alignment is within the acceptable range.
4. Once the bracket is positioned within range of all checks performed in **Figure 5-7**, carefully tighten the motor bracket bolts that were loosened in step #1 to the proper torque (refer to **Section 2, Tables 2B** and **2C** for torque specifications).
5. Replace the belts as per **Section 5.4.6**, to achieve the correct belt tension.

IMPORTANT

DO NOT over-tension the belts.

Be aware that it may be necessary to repeat and check both belt tensions and pulley alignment several times before drive is properly set.

5.4.8 PRESSURE SWITCH MAINTENANCE

Refer to **Figure 5-9**. The pressure switch is pre-adjusted at the factory. Its cover is sealed with a tamper-proof coating. **Do not** remove this protective sealing.

IMPORTANT

Tampering with the pressure switch settings without specific approval from the IMT® Service Department will void the warranty!

The pressure switch should never be used to manually-adjust the pressure settings, as injury or damage to the machine may result. If a problem concerning pressure levels exists, consult the troubleshooting section of this manual. Should the problem persist, contact the IMT Service Department for assistance.

5.4.9 CHECKING HOSES AND WIRING

To maximize the accessible work space needed for compressor unit maintenance, both side panels (drive assembly access

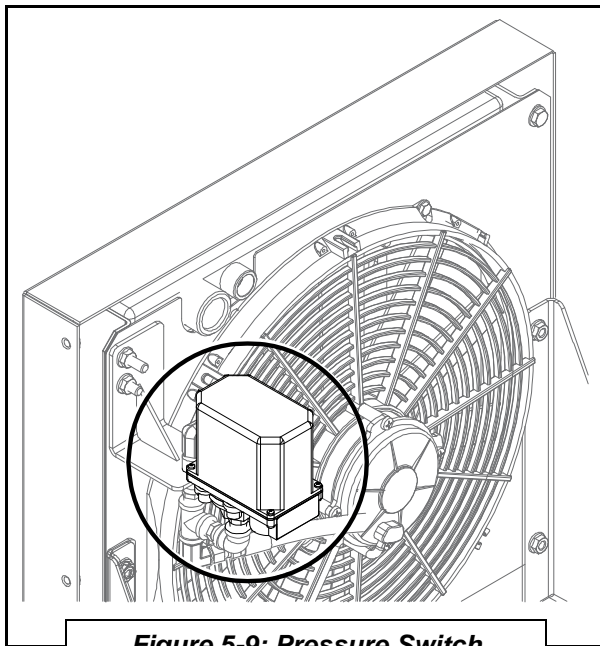


Figure 5-9: Pressure Switch

panel and instrumentation panel) must be removed. Consult **Section 5.4.1, Removing Panels for Machine Maintenance Access** to remove the drive assembly access side panel.

NOTE

For hose replacements, refer to **Sections 7.10A and 7.10B, Hydraulic Hose System**.

Hoses and wires are routed away from potential pinch points, heat sources, and other hazards. However, when service is performed on a machine, it can become necessary to cut zip ties or remove hose clamps, which can allow hoses and wires to become exposed to some hazards within the enclosure. Verify that no hoses or wires are near belts, exhaust, fan blades, sharp edges, or other pinch points.

Hoses and wires should perform for the service life of the product. Occasionally, a plug or hose end may work itself loose over time. Check all the hose fittings to see that there is no visible leakage.

5.4.10 SERVICING THE SYSTEM FUSE AND CIRCUIT BREAKER

⚠ WARNING

Before performing maintenance:
Shut down machine, relieve all system pressure and lock out all power, as per the Safety Section of this manual. If machine is hot, allow package to cool before removing any panel.

NOTE THAT THE SYSTEM CAN BE STARTED REMOTELY:

Always clearly tag the start-up instrumentation against accidental system start-ups during maintenance.

⚠ DANGER

Fuses and breakers will need to be replaced if blown when tripped. When changing a fuse, or dealing directly with any function of the electrical system maintenance, always be aware of the safety warnings given in **Section 1, Safety**.

To access the machine area where the fuse and/or circuit breaker are located, the long-side canopy panel must be removed. Consult **Section 5.4.1, Removing Panels for Machine Maintenance Access** to remove the drive assembly-side access side panel.

Consult **Figure 5-10** for the locations of the fuse, relays and circuit breaker. IMT recommends using a fuse removal tool, though pliers will suffice, when removing the fuse.

5.4.11 REPLACING THE INTERCOOLER FINNED TUBES

Refer to **Figure 5-11**. The intercooler tubes (left and right, respectively) may need to be replaced if their fins become damaged. Damaged fins may hinder the intercooler tubes' ability to cool the compressed air. When replacing an intercooler tube:

- **Never** apply pressure to the finned-ports of the tubes, as they are fragile and subject to damage.

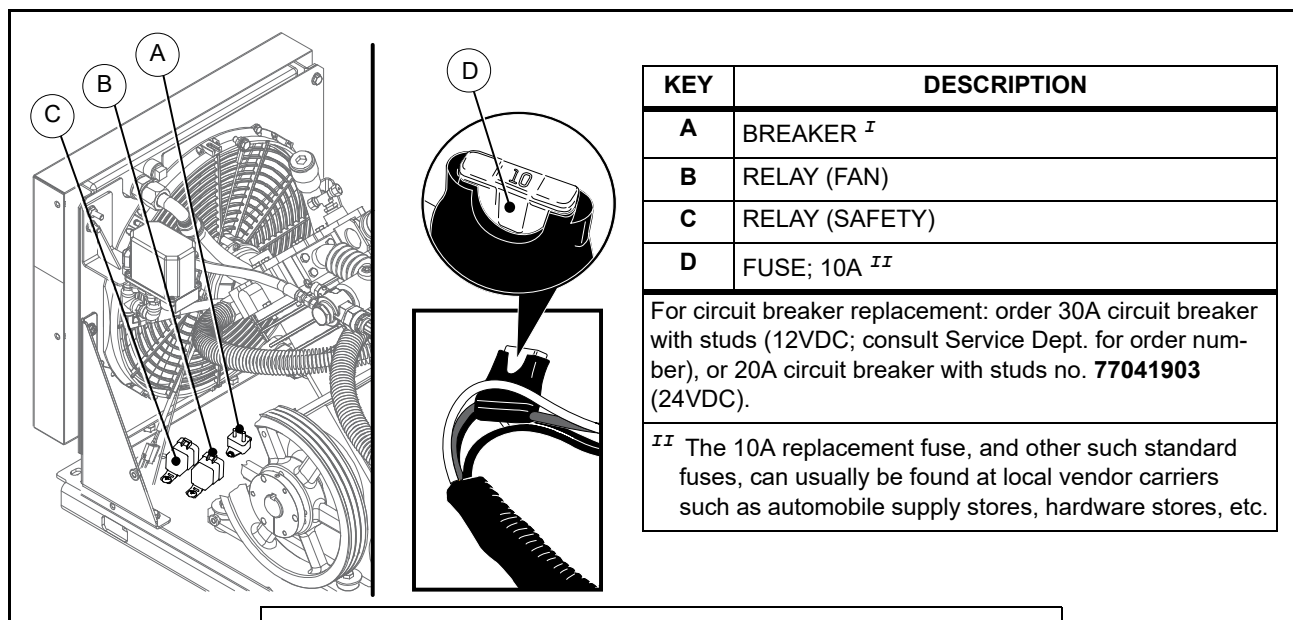


Figure 5-10: Fuses, Breaker and Relays Locations

- If additional leverage is desired to loosen or tighten an intercooler tube connection, use an additional wrench [D], placed on the connecting elbow, to stabilize the tube while loosening or fastening the tube end.
- When fitting a new intercooler tube into place, use minimal bending to alleviate stress on the fins.

5.4.12 PRESSURE (SAFETY) RELIEF VALVES

Refer to **Figure 5-12**. Although the pressure (safety) relief valves have a reset ring at the cap, **DO NOT** test the valves by pulling on their reset rings. The pressure relief valves require no safety testing. Should one prove faulty per indications given in the **Trouble-**

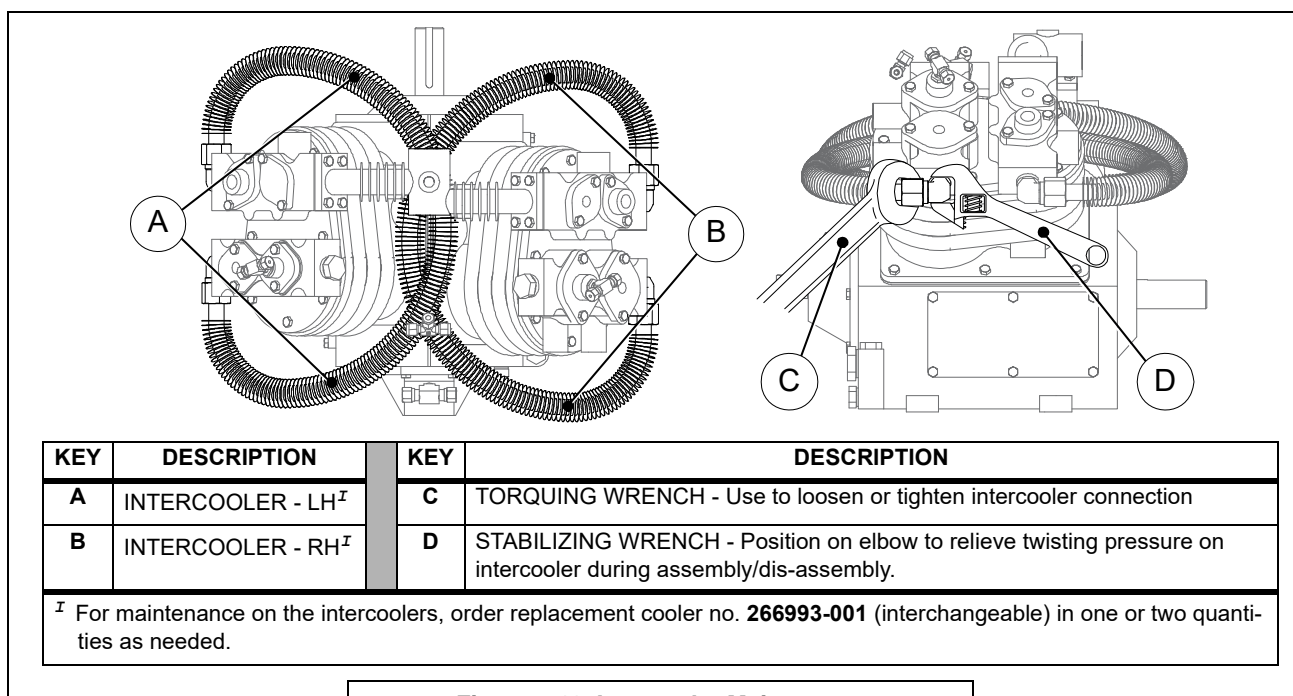
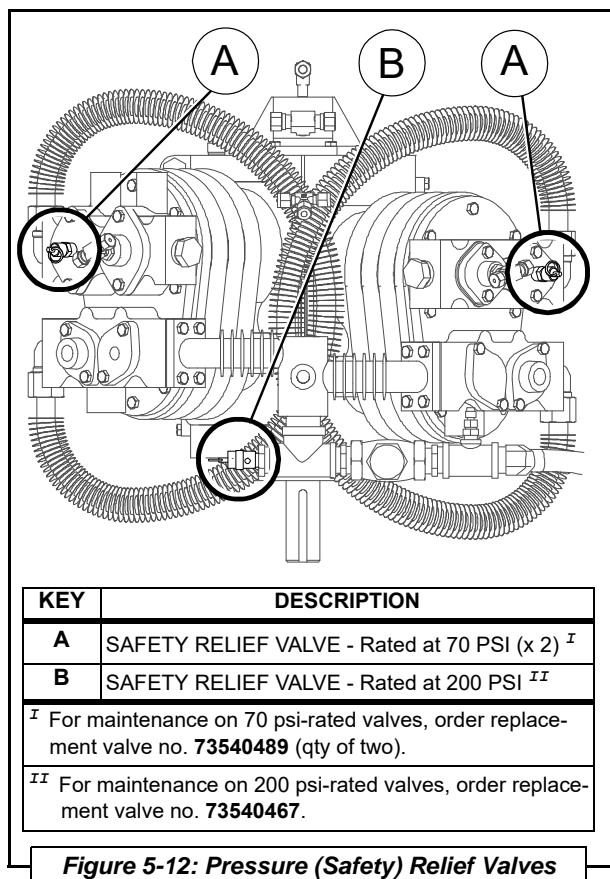


Figure 5-11: Intercooler Maintenance



shooting Guide (Section 6.2), replace the valve.

NOTE

If valves vent *excessively* more than once, replace valve.

5.5 LONG TERM STORAGE

Parts can wear out over time, regardless of the degree of usage. If storing the CAS40P-AW unit for long periods of time, prepare the unit by doing the following:

- De-pressurize the air tank and open the drain valve on the tank.
- Cover with a waterproof secured tarp or plastic sheet to prevent the accumulation of dust, but leave the bottom open for air circulation. The covering should allow for easy removal for in-storage maintenance.
- Whenever possible, store in a sheltered area to minimize exposure to the elements.
- While in storage, every two (2) to three (3) months rotate the compressor and motor by hand to prevent flat spots on the bearings that will lead to premature failure.

At the end of the storage period, follow the unpacking, general, and start-up procedures. If the unit has been stored for more than eighteen (18) months, the IMT® Service Department should be consulted before restarting the compressor.

NOTE

IMT does not recommend outside storage.



SECTION 6: TROUBLESHOOTING

6.1 GENERAL INFORMATION

This troubleshooting guide has been compiled from operational and test data. It lists malfunctions/fault conditions, possible causes, and suggested corrective actions for the most common types of problems that may occur. However, **DO NOT** assume that these are the only problems that may occur. All available data concerning the trouble should be systematically analyzed before undertaking any repairs or component replacement procedures. While it is intended to be comprehensive, operators and maintainers can encounter malfunctions or problems not listed in this table.

A detailed visual inspection is worth performing for almost all problems, and may avoid unnecessary additional damage to the machine. The procedures which can be performed in the least amount of time and with the least amount of removal or disassembly of parts, should be performed first. Always remember to:

1. Check for loose wiring.
2. Check for damaged piping.
3. Check for parts damaged by heat or an electrical short circuit, usually noticeable by discoloration or a burnt odor.

Should the problem persist after making the recommended check, consult your nearest IMT® representative or the IMT Service Department.

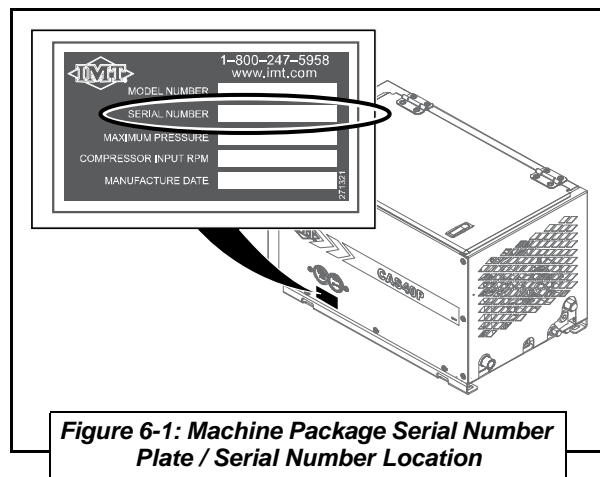


Figure 6-1: Machine Package Serial Number Plate / Serial Number Location

WARNING

Install, operate, and maintain this equipment in full compliance with all applicable OSHA, other Federal, state, local codes, standards, and regulations.

WARNING

Before performing maintenance:
Shut down machine, relieve all system pressure and lock out all power, as per the Safety Section of this manual. If machine is hot, allow package to cool before removing any panel.

NOTE THAT THE SYSTEM CAN BE STARTED REMOTELY:
Always clearly tag the start-up instrumentation against accidental system start-ups during maintenance.



6.2 TROUBLESHOOTING GUIDE

MALFUNCTION/FAULT	POSSIBLE CAUSE	CORRECTIVE ACTION
Compressor will not start	PTO/hydraulics not engaged	Ensure hydraulics engaged.
	Compressor switch OFF	Turn switch ON.
	25A fuse blown	Check and replace fuse if necessary (Section 5.4.10).
	Compressor pressure switch stuck	Replace; consult Service Department for reset instructions.
Compressor will not start (Continued)	Diverter valve not operating	Check power and ground/replace valve.
	Hydraulic motor stalled	Switch OFF and attempt to turn the motor by hand to restart—replace if this fails.
	Hydraulic pump failure	Replace.
	Hydraulic relief valve set too low	Check with pressure gauge and reset.
	Power unit speed is too low	Check and correct.
	Hydraulic line obstructed	Check hoses for kinks, crimping, or damage.
	Low hydraulic oil level	Check and refill.
Compressor runs slow	Hose/connection leaks	Check for leaks or damage/repair (Section 5.4.9 and the wiring diagram (Section 7.14)).
	Low hydraulic flow/pressure	Check and reset.
	Hydraulic motor or pump worn	Replace.
	Low hydraulic oil level	Check and refill.
	Hydraulic relief valve set too low	Check and reset.
	Power speed too slow	Check and correct.
	Hydraulic oil line restriction	Check for blockages, kinks, or other obstructions.
	Priority valve set too low	Reset.
Compressor runs hot	Cooling fan not operating	Check/power ground to fan motor (wiring diagram Section 7.14).
	Faulty relay	Check for presence of power - if present, replace relay.
<i>Continued on next page</i>		



6.2 TROUBLESHOOTING GUIDE

MALFUNCTION/FAULT	POSSIBLE CAUSE	CORRECTIVE ACTION
Compressor runs hot (continued)	Circuit breaker tripped	Replace breaker (Section 5.4.10). Replace fan assembly, if faulty.
	Insufficient ventilation	Relocate unit for better ventilation/circulation.
	Low compressor oil level	Refill to correct level (Section 5.4.3).
	Soiled compressor cylinder cooling fins	Clean.
	Soiled air intake filters	Replace air filter elements (Section 5.4.4).
	Faulty compressor valves	Inspect and replace.
Low output air	Air filters soiled or plugged	Replace air filter elements (Section 5.4.4).
	Air line leak	Inspect and replace hose or tighten connections.
	Discharge valve stuck	Remove and clean, or replace.
	Faulty compressor valves	Inspect and replace.
	Insufficient hydraulic oil flow	Refer to <i>Compressor runs slow</i> section of this table.
	Safety/relief valve leak	Replace valve.
Low air pressure	Air filters soiled/plugged	Replace air filter elements (Section 5.4.4).
	Pressure switch setting too low	May need to be replaced or reset; consult Service Department for reset instructions.
	Air line leak	Inspect and replace hose or tighten connections.
	Air consumption exceeds capacity	Check applied demand on supply air.
	Faulty compressor valves	Inspect and replace.
	Defective air pressure gauge	Refer to Section 5.4.2 and Section 7.4 . Replace if necessary.
	Discharge valve soiled or stuck	Remove and clear, or replace.
	Blown head gasket	Replace.

Continued on next page



6.2 TROUBLESHOOTING GUIDE

MALFUNCTION/FAULT	POSSIBLE CAUSE	CORRECTIVE ACTION
Abnormal pressure fluctuations	Air line leak	Inspect and replace hose or tighten connections.
	Pressure switch incorrectly set	May need to be replaced or reset; consult Service Department for reset instructions.
	Pressure switch faulty	Replace; consult Service Department for reset instructions.
	Hydraulic supply problems	Refer to <i>Compressor runs slow</i> section of this table.
Pressure relief valve(s) open continuously	Defective air pressure gauge	Refer to Section 5.4.2 and Section 7.11 . Replace if necessary.
	Damaged, worn, or leaking valve	Replace valve.
	Pressure switch set too high	May need to be replaced or reset; consult Service Department for reset instructions.
Compressor cycles too frequently	Air line leak	Inspect and replace hose or tighten connections.
	Pressure switch differential setting is too small	May need to be replaced or reset; consult Service Department for reset instructions.
	Pressure switch faulty	Replace; consult Service Department for reset instructions.
	Excessive moisture in receiver tank	Drain tank; check/drain on more frequent interval to prevent moisture build-up.
	Discharge air valve leaking	Replace.
	Pressure switch faulty (if it does not remove power from the solenoid valve)	Replace; consult Service Department for reset instructions.
Compressor will not shut OFF or unload	Solenoid valve does not operate (no power to solenoid valve)	Replace solenoid valve; refer to Sections 7.9A or 7.9B .
	Air line leak	Inspect and replace hose or tighten connections.
Oil in discharge air	Air intake restricted	Replace air filter elements (Section 5.4.4).
<i>Continued on next page</i>		



6.2 TROUBLESHOOTING GUIDE

MALFUNCTION/FAULT	POSSIBLE CAUSE	CORRECTIVE ACTION
Oil in discharge air	Compressor crankshaft overfilled	Drain to correct level.
	Compressor crankcase has oil with the wrong viscosity	Drain crankcase and refill with the correct oil (Section 5.4.3.2).
	Restricted crankcase breather	Clean or replace breather.
	Worn piston rings	Replace rings.
	Piston rings incorrectly installed	Reinstall.
	Worn or scored cylinder	Replace cylinder and rings.
Knocking sound	Crankcase oil level low	Check; refill to correct level (Section 5.4.3).
	Soiled or defective check valve	Clean or replace.
	Worn piston ring	Replace piston and pin.
	Worn main bearing	Replace bearings and/or shaft.
	Worn connecting rod	Replace connecting rod.
	Excessive crankshaft end movement	Replace crank shaft bearings.
	Piston contacting piston plate	Inspect, repair, replace valves and piston.



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SECTION 7: ILLUSTRATED PARTS LIST

7.1 PARTS ORDERING PROCEDURE

Part orders should be placed through the distributor from whom the unit was purchased. If, for any reason parts cannot be obtained in this manner, contact the factory directly at the address or phone numbers below.

When ordering parts, always indicate the **Serial Number** of the machine package. This can be obtained from the Bill of Lading for the machine package, or from the compressor unit serial number plate. See **Figure 7-1** for location of machine package serial plate. Consult **Table 7A: Recommended Spare Parts List** on the next page for a listing of replacement parts.

IOWA MOLD TOOLING CO., INC.

500 Highway 18 West

Garner, Iowa 50438

Phone: 641.923.3711

Fax: 641.923.2424

www.imt.com

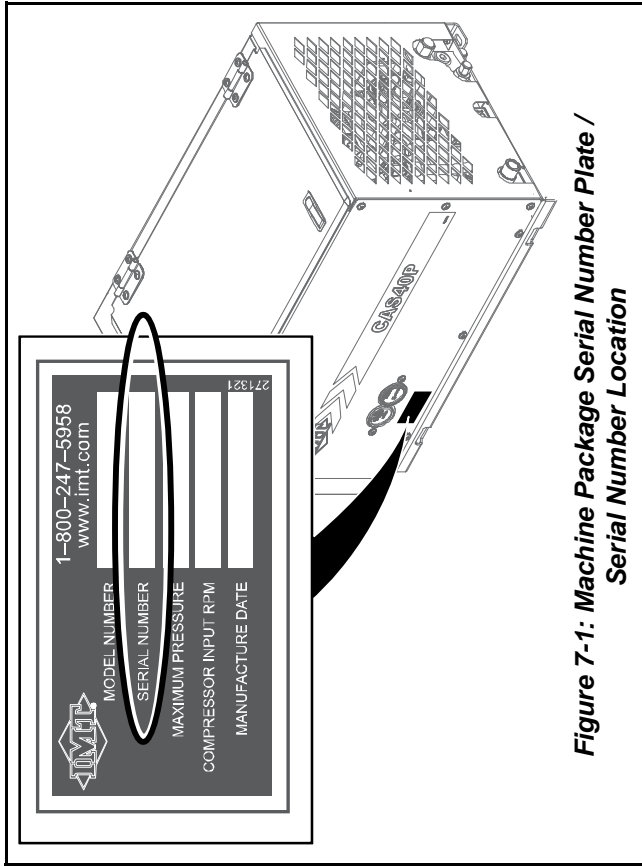


Figure 7-1: Machine Package Serial Number Plate / Serial Number Location



TABLE 7A: RECOMMENDED SPARE PARTS LIST

KEY NO.	DESCRIPTION	PART NUMBER	QTY
ROUTINE/SCHEDULED MAINTENANCE ITEMS			
1	Filter, Air Intake Receiver Compressor	70048254	2
2	Belt, Drive Cogged 3V x 450	70580210	3
3	Oil, Reciprocating Compressor ^I	89086220	1 gal.
NON-ROUTINE/NON-SCHEDULED MAINTENANCE ITEMS			
4	Kit, Compressor Ring Repair	73744206	1
5	Kit, Compressor Valve	73744207	1
6	Kit, Compressor Gasket Replacement	73744208	1
7	Kit, Compressor Overhaul Repair	73744209	1
8	Intercooler, Finned Tubed - Right	71414998	1
9	Intercooler, Finned Tubed - Left	71414995	1
10	Kit, Hydraulic Hose	<i>II</i>	1
11	Fuse, 25A Replacement <i>III</i>	77041914	1
12	Fuse, 10A Replacement <i>III</i>	-	1
13	Breaker, Circuit 20A with Studs (24VAC)	77041903	1
14	Breaker, Circuit 30A with Studs (12VAC)	consult factory	1
15	Valve, Relief (low pressure) (70 psi)	73540489	2
16	Valve, Relief (high pressure) (200 psi)	73540467	1

^I Use only IMT® Reciprocating Oil and Genuine IMT Parts. Inspect and replace damaged components before operation. Substituting non-IMT oil or non-genuine IMT filter components **WILL VOID THE COMPRESSOR WARRANTY!**

^{II} If a hose needs to be replaced, refer to **Section 7.10A** and **Section 7.10B** to identify the hose by part number, per machine type. If a machine's entire hose requirement needs to be replaced, a hose change kit is available from the IMT Parts Department.

^{III} Some standard components, such as fuses, may be obtained quicker and more economically from local sources such as an Auto Supply Store, etc.

PLEASE NOTE: WHEN ORDERING PARTS, INDICATE MACHINE SERIAL NUMBER.

IMPORTANT

The above table listing contains items that require maintenance on a routine basis, and also those parts that may require maintenance over the course of the compressor package's performance schedule. Although this recommended list is pro-offered as a comprehensive guide to replacement parts, damage may occur to the machine beyond the scope of this listing.

Should any part of the compressor package that is not listed in Table 7A become damaged or inoperable, use the various sub-sections in Section 7 to best locate and identify the damaged part(s).

IMPORTANT

If additional spare parts are being stored for future use, ensure that they are stored in proper containers that allow for protection against contamination, and kept in a clean area of moderate temperature reading. For information on storing the machine package for periods of non-use, consult **Section 5.5, Long Term Storage**.

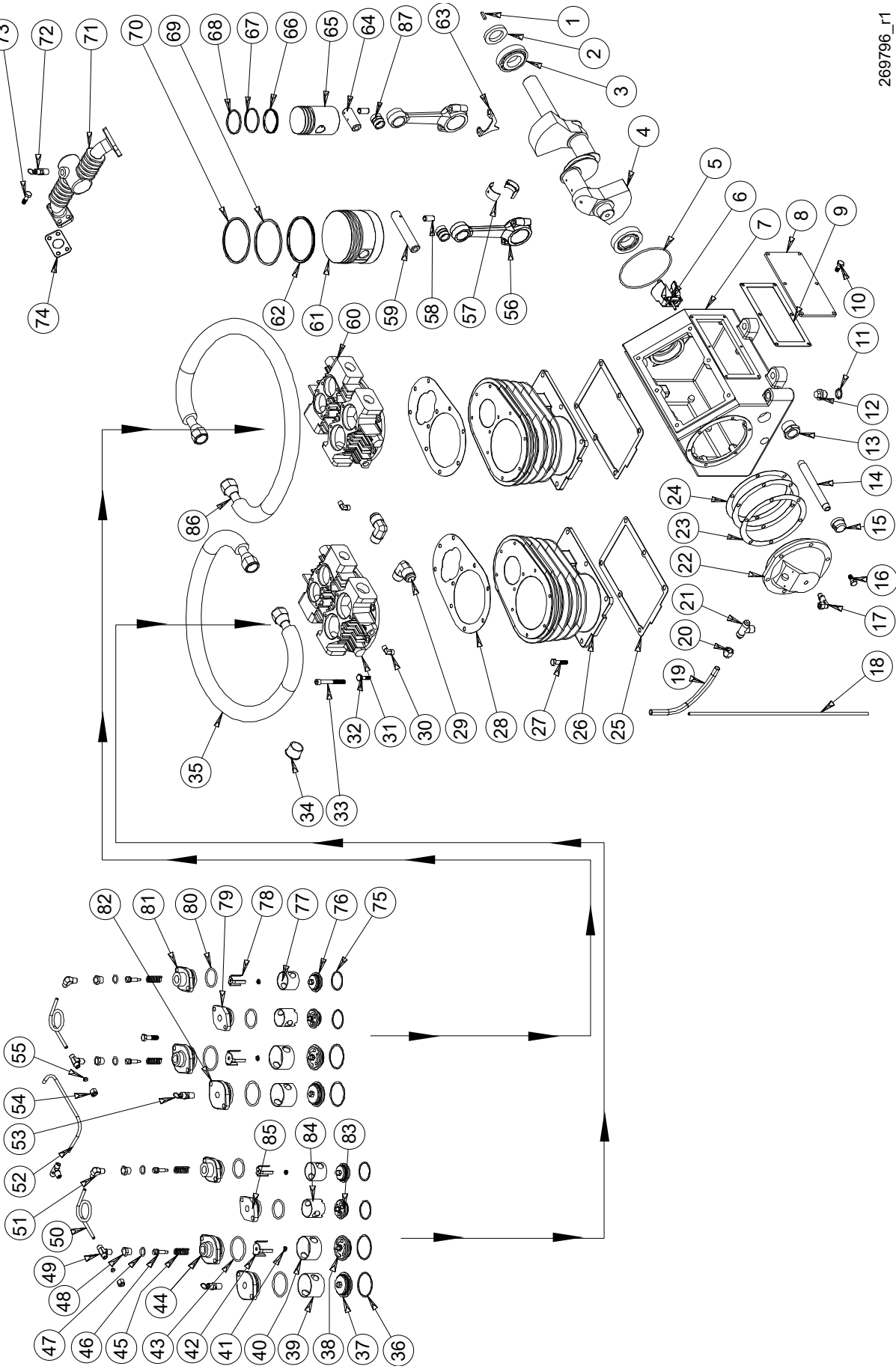


TABLE 7B: MAINTENANCE TRACKING LOG

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7.2 COMPRESSOR UNIT ASSEMBLY



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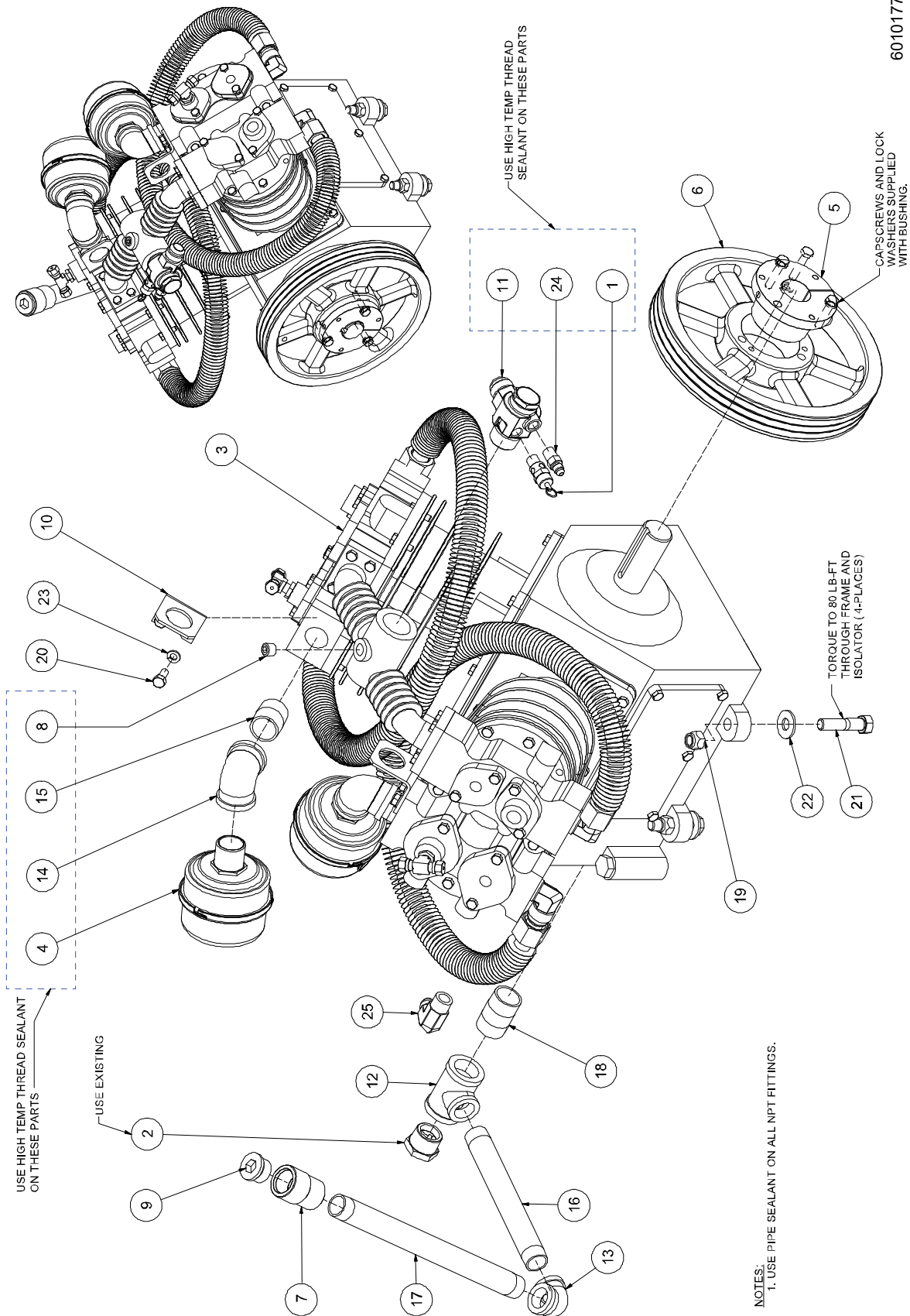
7.2 COMPRESSOR UNIT ASSEMBLY

KEY NO.	DESCRIPTION	PART NUMBER	QTY	KEY NO.	DESCRIPTION	PART NUMBER	QTY	KEY NO.	DESCRIPTION	PART NUMBER	QTY
1	KEY 8 X 8	266993-005	1	30	ELBOW, AFTERCOOLER	266993-036	2	60	CYLINDER HEAD (RIGHT)	266993-06	1
2	OIL SEAL	266993-006	1	31	CYLINDER HEAD (LEFT)	266993-037	1	61	PISTON L.P.	266993-066	2
3	BEARING	266993-007	2	32	SOCKET HEAD CAPSCREW	266993-038	16	62	OIL CONTROL RING L.P.	266993-067	2
4	CRANKSHAFT	266993-008	1	33	SOCKET HEAD CAPSCREW	266993-039	4	63	DIL DIPPER	266993-068	2
5	FEEDER RING	266993-009	1	34	PLUG FOR PORT OF AIR FLTR	N/A	2	64	WRIST PIN H.P.	266993-069	2
6	C.U. ASSY	266993-010	2	35	INTERCOOLER (LEFT)	266993-040	1	65	PISTON H.P.	266993-070	2
7	CRANKCASE	266993-011	1	36	COPPER GASKET L.P. VALVE	266993-041	4	66	OIL CONTROL RING H.P.	266993-071	2
8	SIDE COVER	266993-012	2	37	DISCHARGE VALVE L.P.	266993-042	2	67	BTM COMPRESSION RING H.P.	266993-072	2
9	SIDE COVER GASKET	266993-013	2	38	INLET VALVE L.P.	266993-043	2	68	TOP COMPRESSION RING H.P.	266993-073	2
10	SIDE COVER CAPSCREV	266993-014	12	39	CAGE, L.P., DISCHARGE	266993-044	2	69	BTM COMPRESSION RING L.P.	266993-074	2
11	OIL FILLING PLUG GASKET	266993-015	1	40	CAGE L.P., INLET	266993-04	2	70	TOP COMPRESSION RING L.P.	266993-075	2
12	OIL FILLING PLUG	266993-016	1	41	LOCKNUT	266993-046	4	71	AFTERCOOLER	266993-020	1
13	OIL SIGHT GLASS	266993-017	1	42	F'INGER, L.P.	266993-047	2	72	SAFETY VALVE H.P.	266993-076	1
14	OIL DRAIN PIPE	266993-018	1	43	O-RING L.P., COVER	266993-048	4	73	CAPSCREW, AFTERCOOLER	266993-077	8
15	OIL DRAIN PIPE CAP	266993-019	1	44	HOLD DOWN COVER LP	266933-049	2	74	GASKET, AFTERCOOLER	266993-021	2
16	END COVER CAPSCREV	266993-022	6	45	UNLOADER SPRING INLET VLV	266993-050	4	75	COPPER GASKET	266993-078	4
17	C.U. VALVE ASSY	266993-023	1	46	PLUNGER INLET UNLOADER	266993-051	4	76	VALVE ASSY H.P. NLET	266993-079	2
18	UNLOADING TUBE	266993-024	1	47	O-RING PLUNGER	266993-052	4	77	CAGE, H.P. INLET	266993-080	2
19	BREATHER TUBE	266993-025	2	48	BUSHING 318" NPT X 1/4 NPT	266993-053	4	78	FINGER, H.P. INLET	266993-081	2
20	TIGHTEN NUT-END COVER	266993-026	4	49	TEE FITTING	266993-054	3	79	HOLD DOWN CVR H.P., DISCHRG (LFT)	266993-082	1
21	TEE, BREATHER CONNECTOR	266993-027	1	50	UNLOADER TUBE	266993-055	2	80	O-RING H.P. HOLD COVER	266993-083	4
22	END COVER	266993-028	1	51	TUBE ELBOW	266993-056	2	81	HOLD DOWN CVR H.P., INLET	266993-084	2
23	GASKET-END CDVER	266993-029	1	52	UNLOADER TUBE	266993-057	1	82	HOLD DOWN CVR L.P., DISCHRG	266993-085	2
24A	ADJUSTING GSKT-END CVR	266993-030	MANY	53	SAFETY VALVE L.P., DISCHRG	266993-058	2	83	DISCHARGE VALVE H.P.	266993-086	2
24B	ADJUSTING GSKT-END CVR	266993-031	MANY	54	NUT	266993-059	9	84	CAGE, H.P. DISCHARGE	266993-087	2
25	GASKET-CRANKCASE	266993-032	2	55	COMPRESSOR RING	266993-060	9	85	HOLD DOWN CVR H.P.,DISCHRG (RT)	266993-088	2
26	CYLINDER	266993-033	2	56	CONNECTING ROD	266993-061	4	86	FINNED TUBE INTERCOOLER	266993-089	1
27	SPINLOCK CAPSCREW	266993-034	12	57	BEARING INSERT	266993-062	4 SETS	87	NEEDLE BEARING	266993-090	4
28	GASKET, CYLINDER HEAD	266993-035	2	58	ROLL PIN	266993-063	4				
29	ELBOW, AFTERCOOLER	266993-003	4	59	WRIST PIN L.P.	266993-064	2				

PLEASE NOTE: WHEN ORDERING PARTS, INDICATE MACHINE SERIAL NUMBER.



7.3 COMPRESSOR AND PARTS



NOTES:
1. USE PIPE SEALANT ON ALL NPT FITTINGS.

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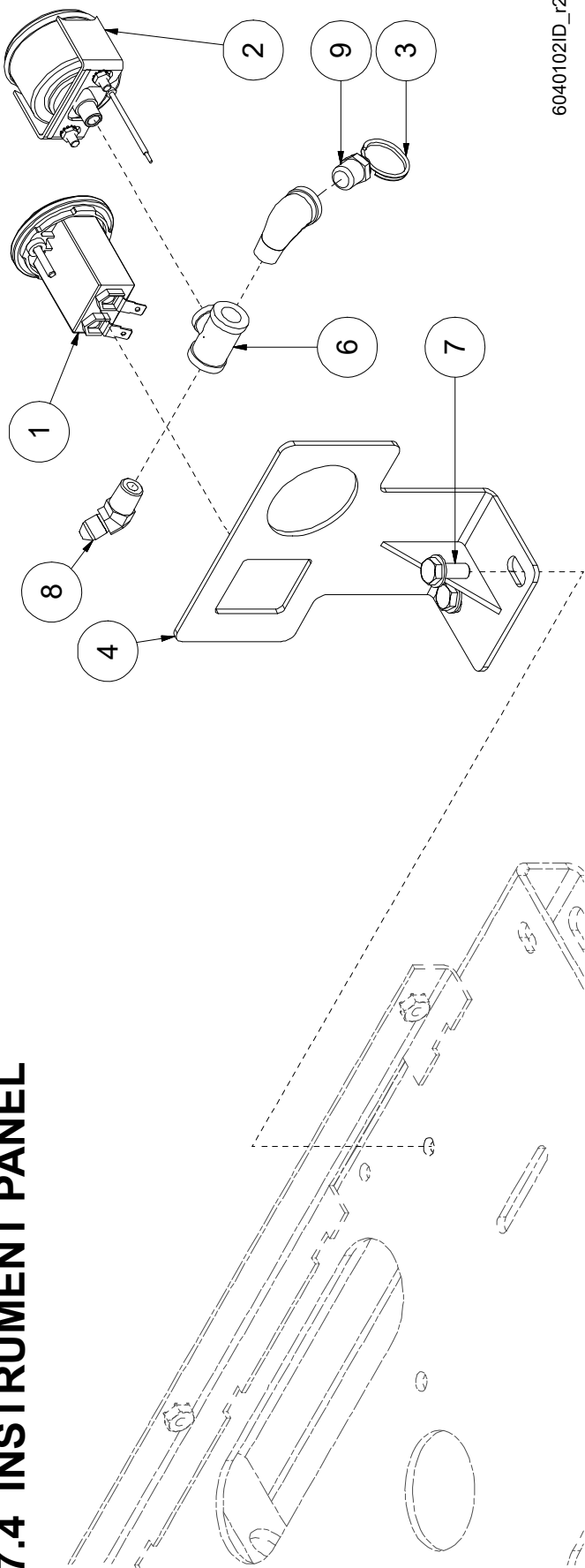
7.3 COMPRESSOR AND PARTS

ITEM	DESCRIPTION	PART NUMBER	QTY
1	VALVE, RELIEF 200 PSI 1/4 NPT MALE		1
2	GLASS, SIGHT 1" WITH BALL		1
3	COMPRESSOR, RECIPROCATING 40CFM LP452		1
4	FILTER, AIR INTAKE RECIP COMPR 25CFM		2
5	BUSHING, SPLIT TAPER MASKA SKX1-3/8		1
6	SHEAVE, DRIVEN T.B. WOODS 3V10.6X3-SK		1
7	ADAPTER, 3/4 NPT TO 1 1/16 SAE O-RING		1
8	PLUG, PIPE SOCKET 1/4 NPT		1
9	PLUG, SAE O-RING HOLLOW HEX #12		1
10	BRACKET, UNIT LIFTING RC 40		2
11	VALVE, CHECK MANIFOLD 60CFM 450F		1
12	TEE, PIPE GALV 1 x 1 x 3/4		1
13	ELBOW, PIPE GALV 90 DEG 3/4		1
14	ELBOW, PIPE GALV 90 DEG 1		2
15	NIPPLE, PIPE XS 1 INCH X CLOSE		2
16	NIPPLE, PIPE GALV 3/4 X 8		1
17	NIPPLE, PIPE GALV 3/4 x 12		1
18	NIPPLE, PIPE GALV 1 x 2		1
19	NUT, HEX LOCKING 1/2-13 GR8		4
20	CAPSCREW, HEX GR8 5/16-18 X 3/4		4
21	CAPSCREW, HEX GR8 1/2-13 x 2.25		4
22	WASHER, FLAT 1/2		4
23	WASHER, LOCK 5/16		4
24	CONNECTOR, 37FL/MPT #04 x 1/4		1
25	ELBOW, 37FL/90M #08 x 1/2		1

PLEASE NOTE: WHEN ORDERING PARTS, INDICATE MACHINE SERIAL NUMBER.



7.4 INSTRUMENT PANEL

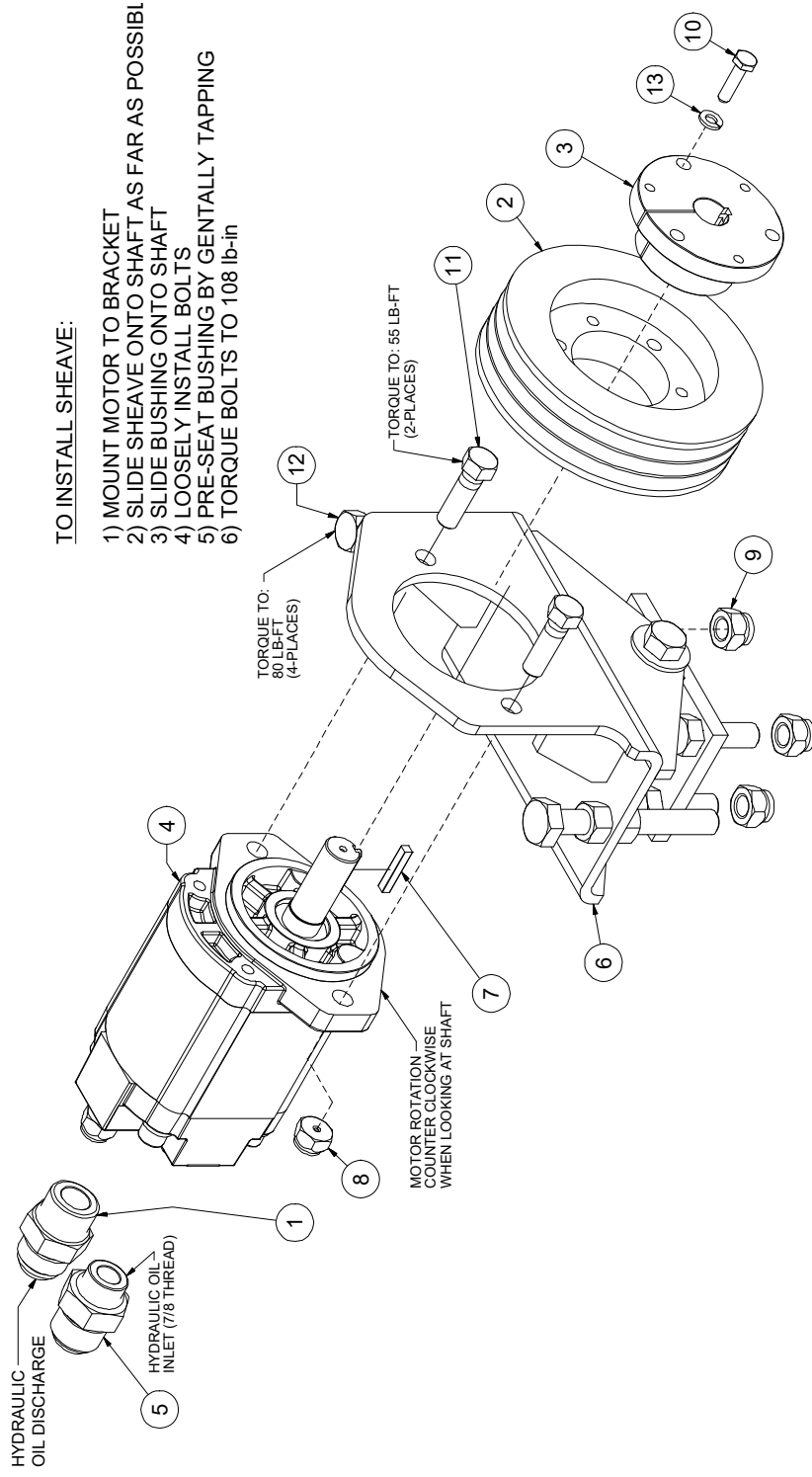


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KEY NO.	DESCRIPTION	PART NUMBER	QTY
1	GAUGE, HOUR METER		1
NS	STRAP, LANYARD 6 INCH LONG		1
2	GAUGE, AIR PRESSURE w/ SWITCH		1
3	RING, KEY		1
4	BRACKET, GAUGE MOUNTING	7146524	1
5	ELBOW, PIPE STREET 1/4		1
6	TEE, PIPE GALV 1/4 x 1/4 x 1/8		1
7	SCREW, SER WASH 5/16-18 x 0.75		2
8	ELBOW, 45 DEG. 1/4 MPT x #4 MJIC		1
9	DRAIN, CABLE-PULL 1/4"NPT		1
PLEASE NOTE: WHEN ORDERING PARTS, INDICATE MACHINE SERIAL NUMBER.			



7.5 HYDRAULIC DRIVE SYSTEM

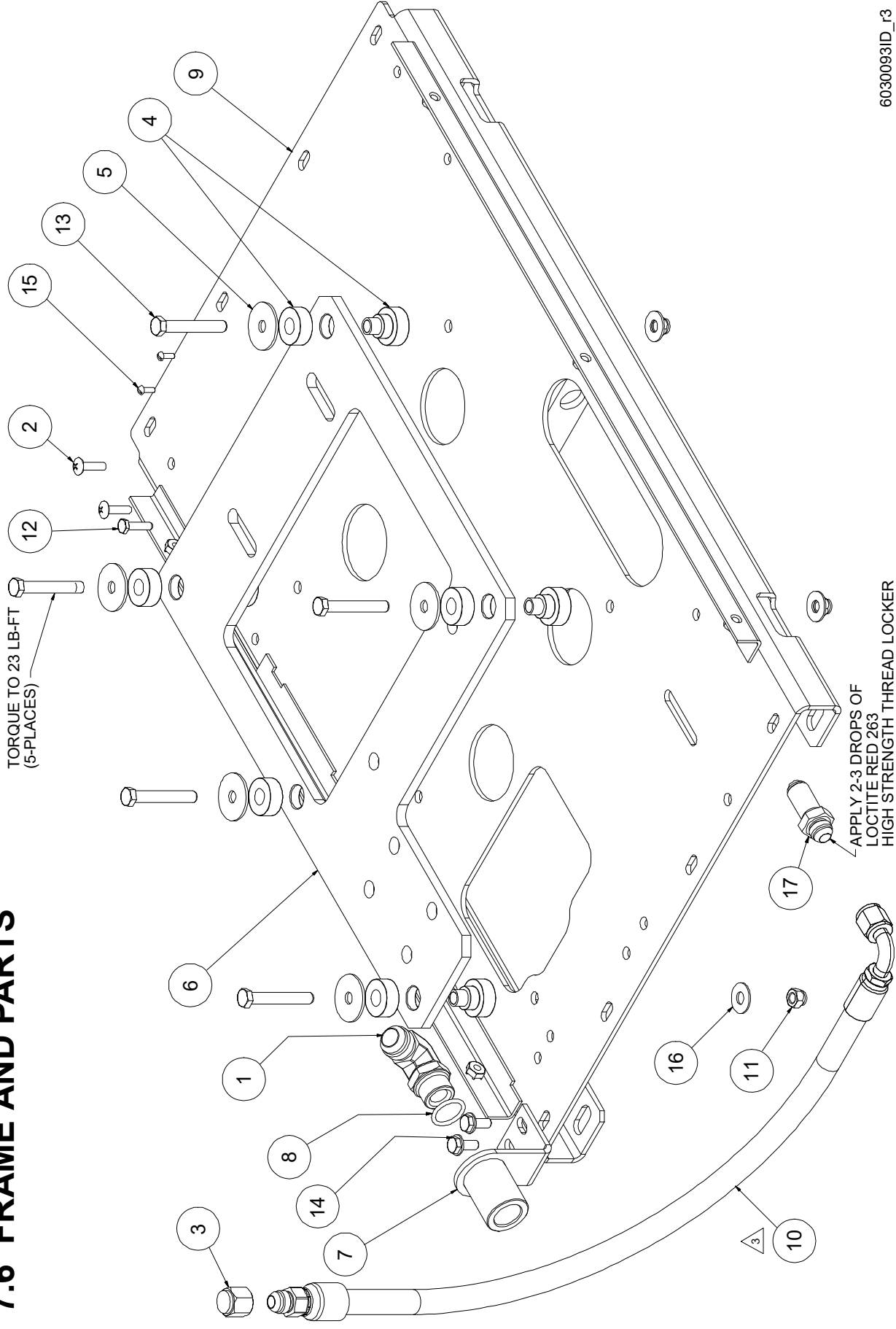


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KEY NO.	DESCRIPTION	PART NUMBER	QTY
1	CONNECTOR, O-RING 3/4 x 3/4 JIC		1
2	SHEAVE, GATES #QD 3/3V 5.60		1
3	BUSHING, SPLIT TAPER SDS 3/4 0.75		1
4	MTR, HDRLC EXTND SHAFT CASAPPA PLM 20 20		1
5	CONECTR, 7/8-14 SAE O RING x 3/4 JIC 37 DEG		1
6	BRACKET,MOTOR MNT CASAPPA		1
7	KEY,SQUARE 3/16 X 3/16 X 1.25 +0.000/-0.002		1

PLEASE NOTE: WHEN ORDERING PARTS, INDICATE MACHINE SERIAL NUMBER.

7.6 FRAME AND PARTS



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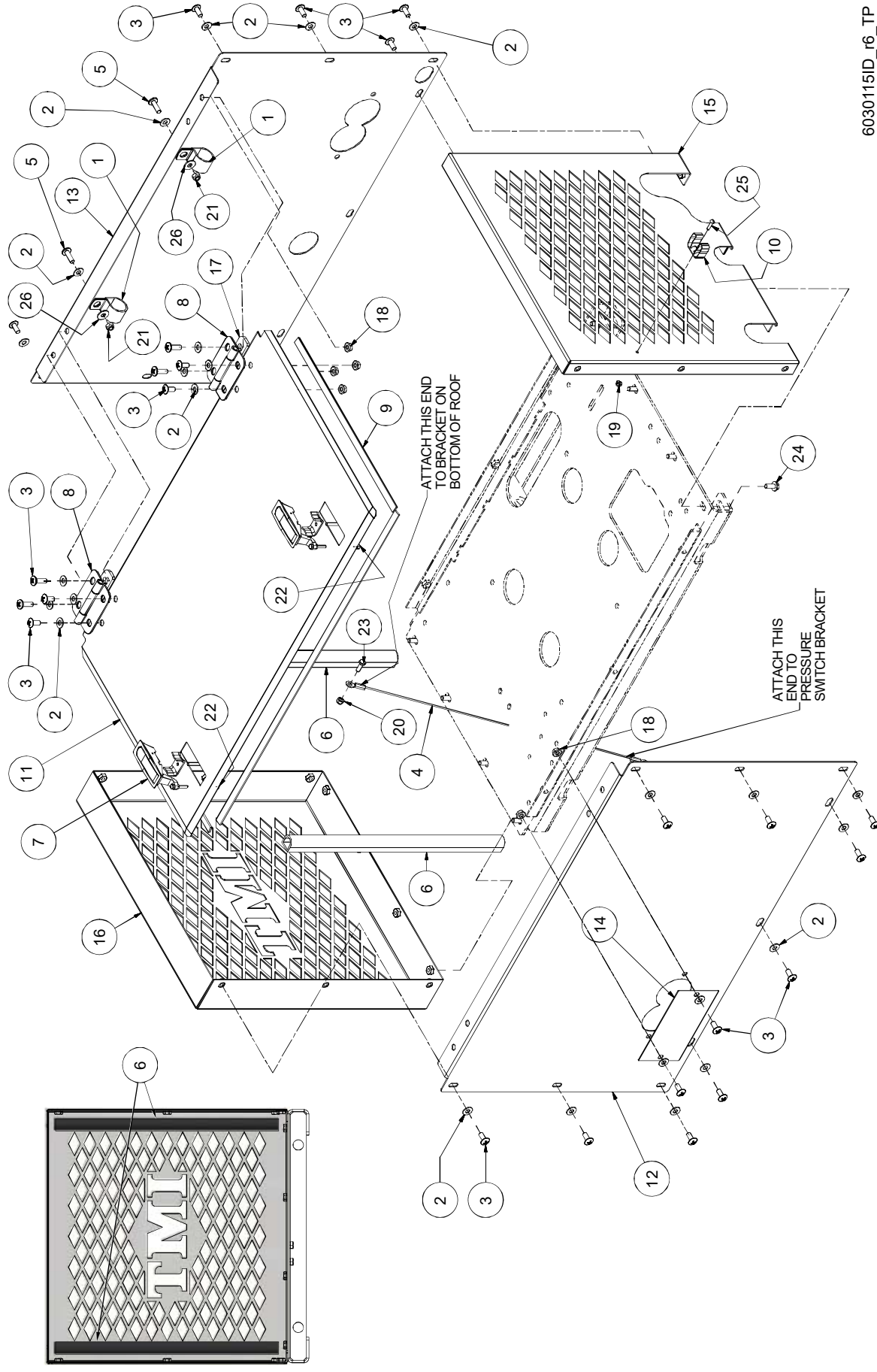


7.6 FRAME AND PARTS

KEY NO.	DESCRIPTION	PART NUMBER	QTY
1	ELBOW, 90 DEG #12 MJIC x #12 MSAE		1
2	SCREW, TRUSS HD 1/4-20 x 3/4		2
3	CAP, FEMALE JIC 3/4-16 #8		1
4	MOUNT, RUBBER 130 LB AXIAL GREEN		5
5	WASHER, SNUBBING RUBBER MOUNT		5
6	BASE, COMPR UNIT MNT RECIP		1
7	BRACKET, SERV AIR ASSY		1
8	O-RING, #12 SILICONE 0.125 X 0.95 ID		1
9	FRAME,		1
10	HOSE, ASSY DRAIN CAS40P		1
11	NUT, HEX LOCKING 3/8-16		5
12	CAPSCREW, HEX GR5 1/4-20 x 1		1
13	CAPSCREW, HEX GR5 3/8-16 x 2.5		5
14	SCREW, SER WASH 5/16-18 x 0.75		2
15	SCREW, ROUND HD #8-32 x 1/2		2
16	WASHER, FLAT 3/8		5
17	BULKHEAD, MJIC x MJIC #8		1
PLEASE NOTE: WHEN ORDERING PARTS, INDICATE MACHINE SERIAL NUMBER.			



7.7 CANOPY AND PARTS



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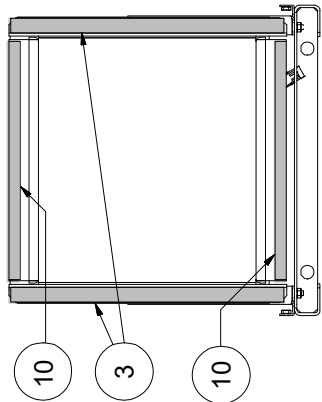
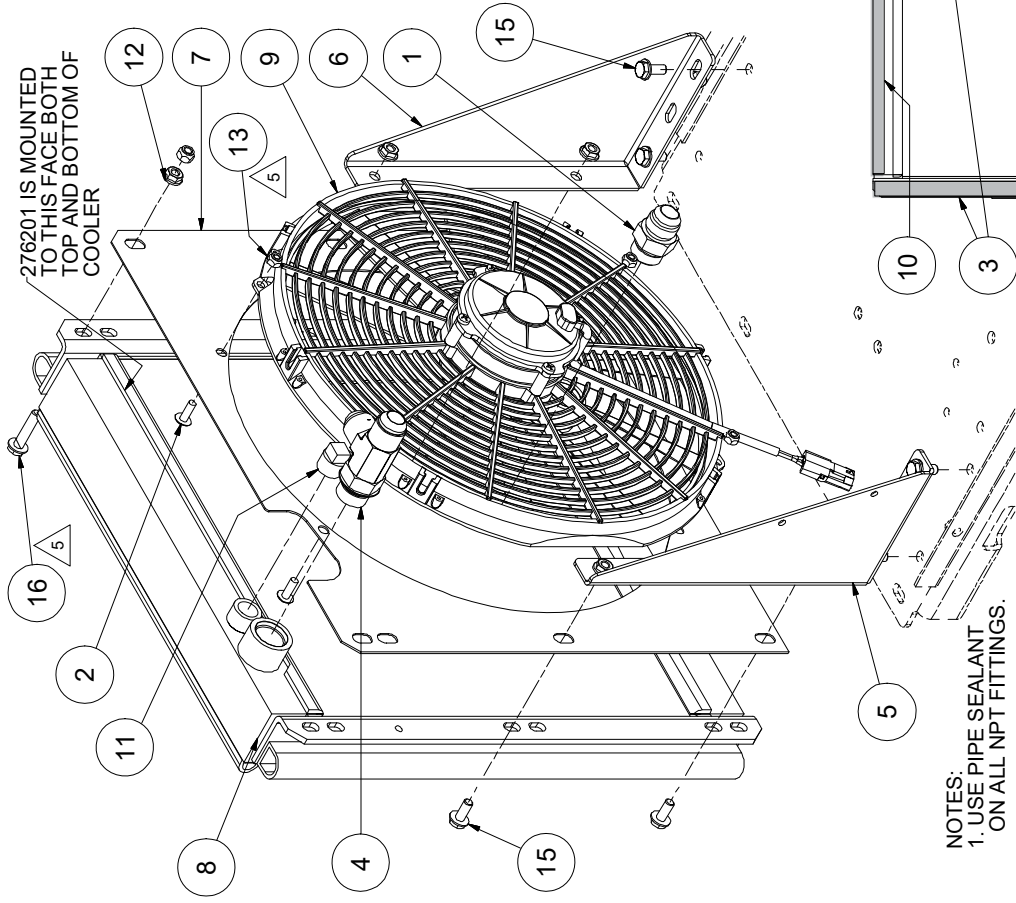
7.7 CANOPY AND PARTS

KEY NO.	DESCRIPTION	PART NUMBER	QTY
1	CLAMP, HOSE SUPPORT 1.25 ID		2
2	WASHER, NYLON 5/16-18		30
3	SCREW, TRUSS HD 5/16-18x3/4 SS		30
4	CABLE, ASSEMBLY CANOPY "VIPER"		1
6	SEAL, RUBBER "D" TRIM-LOK		37,000 in
7	LATCH, SENTRY PANEL		2
8	HINGE, RECP COMPRS ROOF PNL		2
9	GASKET, SEAL AND TRIM		6.2 ft
10	CLIP, TOOL ZINC 3/4 TO 1-1/8		1
11	PANEL, ROOF RC 40 NARROW		1
12	PANEL, LEFT		1
13	PANEL, RIGHT		1
14	PANEL, GAUGE COVER		1
15	PANEL, FRONT IMT CAS40P		1
16	PANEL, COOLER SIDE IMT CAS40P		1
17	SPACER, ROOF HINGE		2
18	NUT, HEX FLANGE 5/16-18		10
19	NUT, HEX LOCKING #10-24		1
20	NUT, HEX LOCKING 1/4-20		1
21	NUT, HEX LOCKING 5/16-18		2
22	NUT, HEX METRIC 5mm x 0.8		2
23	CAPSCREW, HEX GR5 1/4-20 x 0.75		1
24	SCREW, SER WASH 5/16-18 x 0.75		8
25	SCREW, ROUND HD #10-24 x 0.75		1
26	WASHER, FLAT 5/16		2
PLEASE NOTE: WHEN ORDERING PARTS, INDICATE MACHINE SERIAL NUMBER.			



7.8A COOLER AND PARTS - OPEN CENTER 12VDC STANDARD

KEY NO.	DESCRIPTION	PART NUMBER	QTY
1	CONNECTOR, #12 MSAE x #12 MJIC		1
2	SCREW, TRUSS HD 1/4-20UNC X 3/4LG S.S.		4
3	SEAL, RUBBER "D" TRIM-LOK		37.00 in
4	TEE, .37 MJIC, .37MJIC, O-RING RUN 3/4		1
5	BRACKET, COOLER MOUNTING LEFT		1
6	BRACKET, COOLER MOUNTING RIGHT		1
7	PANEL, COOLER SHROUD		1
8	COOLER, OIL 2.00 CORE INCH SINGLE PASS		1
9	FAN & MOTOR ASSY BLOWER 12V		1
10	SEAL, BULB D SHAPE 3/4 WIDTH		64.50 in
11	PLUG, PIPE 1/2		1
12	NUT, HEX FLANGE 5/16-18		5
13	NUT, HEX LOCKING 1/4-20		4
14	NUT, HEX LOCKING 5/16-18		1
15	SCREW, SER WASH 5/16-18 x 0.75		8
16	SCREW, SER WASH 5/16-18 x 1.5		1
PLEASE NOTE: WHEN ORDERING PARTS, INDICATE MACHINE SERIAL NUMBER.			

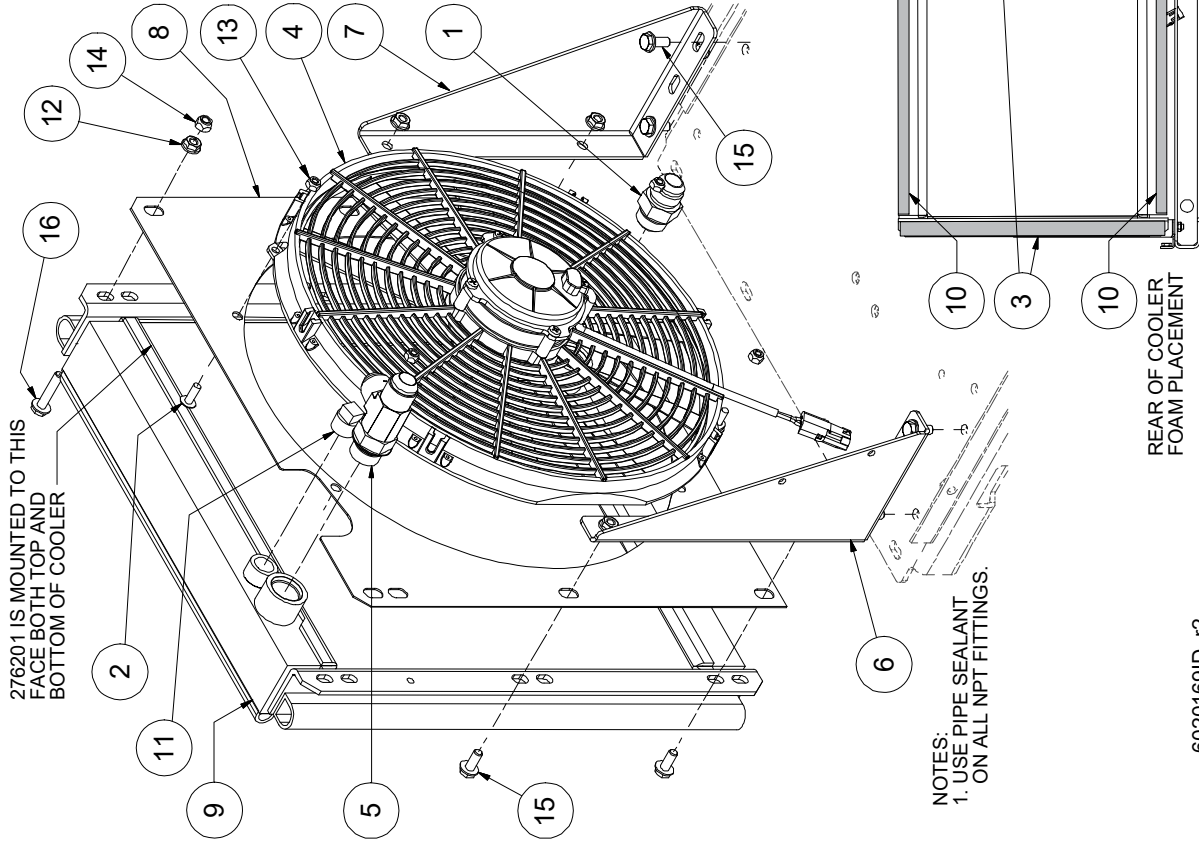


REAR OF COOLER
FOAM PLACEMENT / 5

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7.8C COOLER AND PARTS - OPEN CENTER 24VDC STANDARD



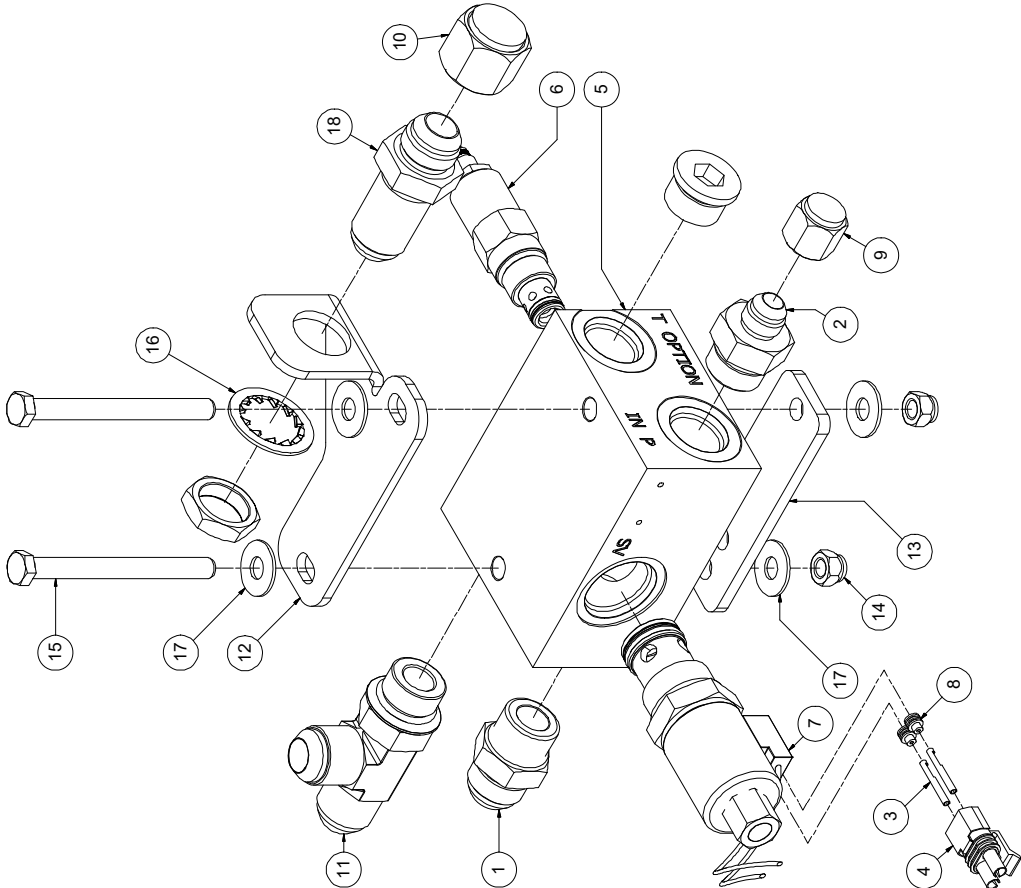
KEY NO.	DESCRIPTION	PART NUMBER	QTY
1	CONNECTOR, #12 MSAE x #12 MJIC		1
2	SCREW, TRUSS HD 1/4-20UNC X 3/4LG S.S.		4
3	SEAL, RUBBER "D" TRIM-LOK		37,000 in
4	FAN & MOTOR ASSY., 125/185 24V		1
5	TEE, 37 MJIC, 37MJIC. O-RING RUN 3/4		1
6	BRACKET, COOLER MOUNTING LEFT		1
7	BRACKET, COOLER MOUNTING RIGHT		1
8	PANEL, COOLER SHROUD		1
9	COOLER, OIL 2.00 CORE INCH SINGLE PASS		1
10	SEAL, BULB D SHAPE 3/4 WIDTH		64.50 in
11	PLUG, PIPE 1/2		1
12	NUT, HEX FLANGE 5/16-18		5
13	NUT, HEX LOCKING 1/4-20		4
14	NUT, HEX LOCKING 5/16-18		1
15	SCREW, SER WASH 5/16-18 x 0.75		8
16	SCREW, SER WASH 5/16-18 x 1.5		1
PLEASE NOTE: WHEN ORDERING PARTS, INDICATE MACHINE SERIAL NUMBER.			

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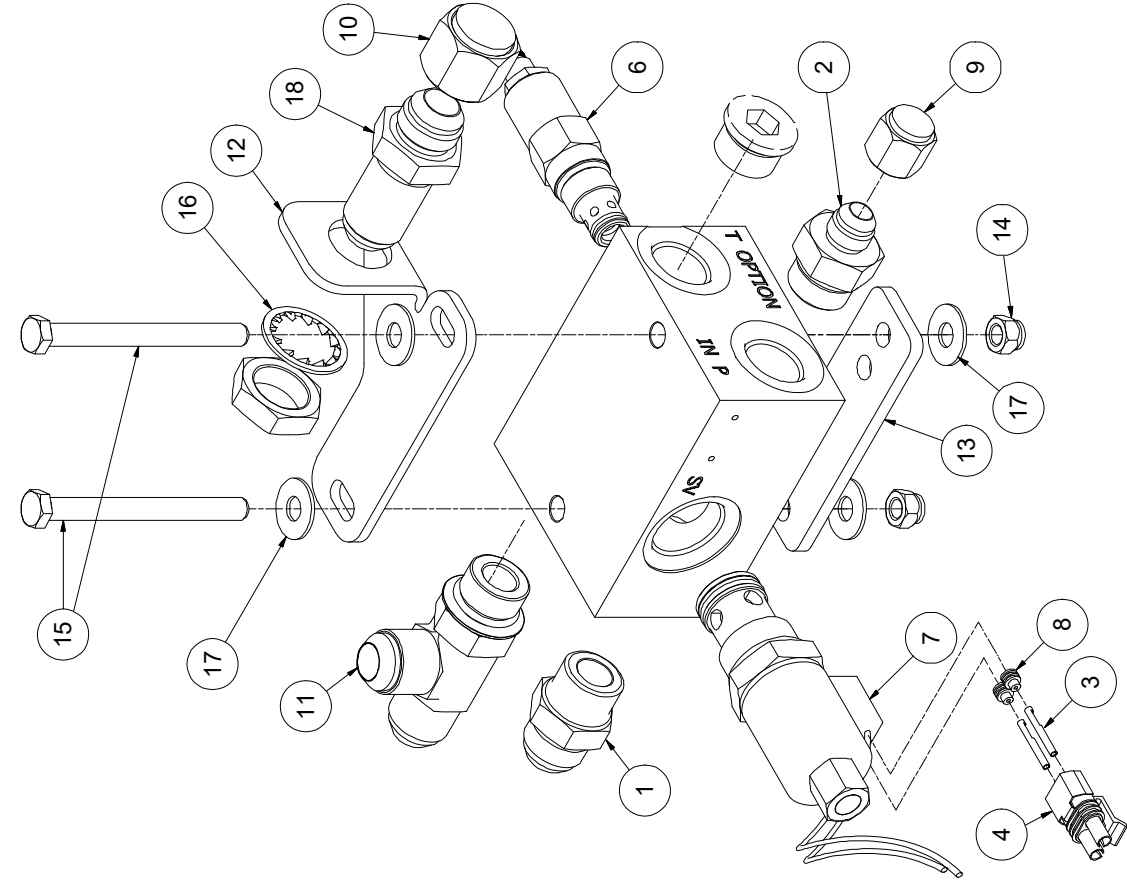
7.9A HYDRAULIC MANIFOLD ASSEMBLY - OPEN CENTER 12VDC

KEY NO.	DESCRIPTION	PART NUMBER	QTY
1	CONNECTOR, O-RING 3/4 x 3/4 JIC		1
2	CONNECTOR, #12 MSAE x #8 MJIC		1
3	TERMINAL, PCKRD FEMALE		2
4	CONNECTOR, PCKRD FEMALE		1
5	MANIFOLD, HYDRAULIC SOLENOID		1
6	VALVE, PRESSURE RELIEF		1
7	VALVE, SOLENOID WITH 12V. COIL		1
8	SEAL, CABLE GREEN 16-14 GA		2
9	CAP, FEMALE JIC 3/4-16 #8		1
10	CAP, FEMALE JIC 1 1/16-12 #12		1
11	TEE, 37 MJIC, 37MJIC. O-RING RUN 3/4		1
12	SUPPORT, OIL RETURN HOSE		1
13	FLAT, SHIM HYDRAULIC MANIFOLD		1
14	NUT, HEX LOCKING 3/8-16		2
15	CAPSCREW, HEX GR5 3/8-16 x 4		2
16	WASHER, INTERNAL TOOTH 1 INCH		1
17	WASHER, FLAT 3/8		4
18	BULKHEAD, MJIC x MJIC #12		1
PLEASE NOTE: WHEN ORDERING PARTS, INDICATE MACHINE SERIAL NUMBER.			





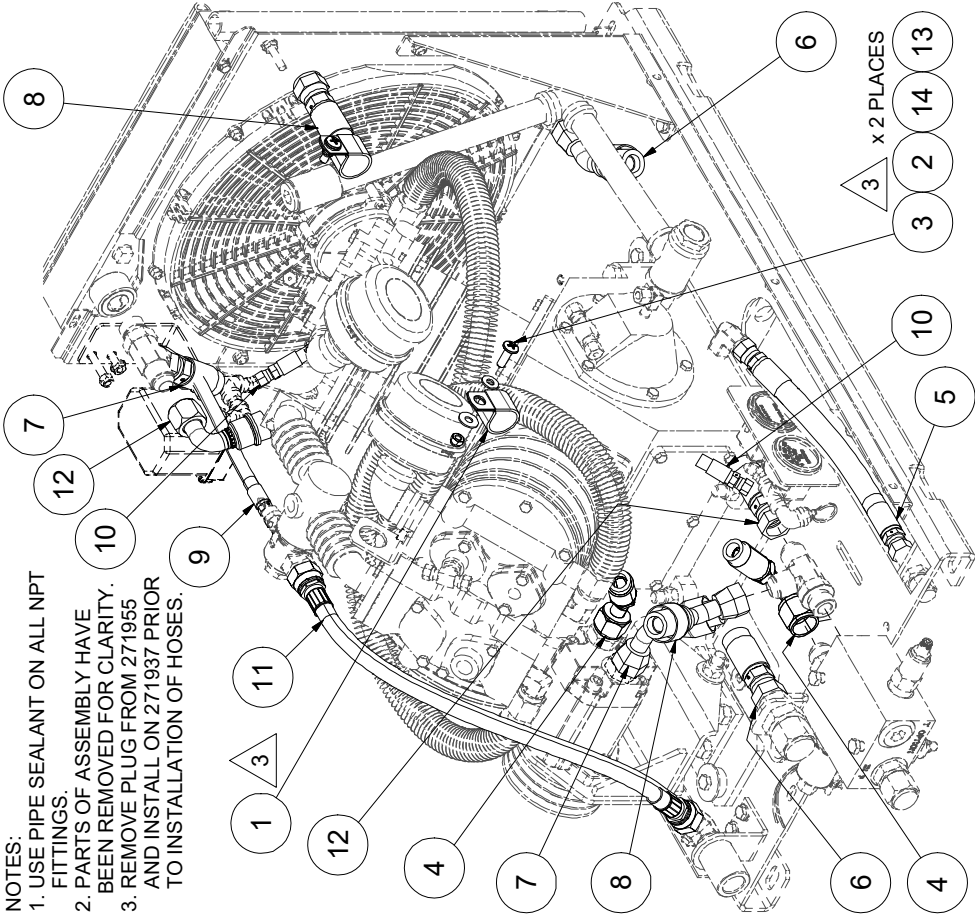
7.9B HYDRAULIC MANIFOLD ASSEMBLY - OPEN CENTER 24VDC



KEY NO.	DESCRIPTION	PART NUMBER	QTY
1	CONNECTOR, O-RING 3/4 x 3/4 JIC		1
2	CONNECTOR, #12 MSAE x #8 MJIC		1
3	TERMINAL, PCKD FEMALE		2
4	CONNECTOR, PCKD FEMALE		1
5	MANIFOLD, HYDRAULIC SOLENOID		1
6	VALVE, PRESSURE RELIEF		1
7	VALVE, SOLENOID w/ 24V COIL		1
8	SEAL, CABLE GREEN 16-14 GA		2
9	CAP, FEMALE JIC 3/4-16 #8		1
10	CAP, FEMALE JIC 1 1/16-12 #12		1
11	TEE, 37 MJIC, 37MJIC, O-RING RUN 3/4		1
12	SUPPORT, OIL RETURN HOSE		1
13	FLAT, SHIM HYDRAULIC MANIFOLD		1
14	NUT, HEX LOCKING 3/8-16		2
15	CAPSCREW, HEX GR5 3/8-16 x 4		2
16	WASHER, INTERNAL TOOTH 1 INCH		1
17	WASHER, FLAT 3/8		4
18	BULKHEAD, MJIC x MJIC #12		1
PLEASE NOTE: WHEN ORDERING PARTS, INDICATE MACHINE SERIAL NUMBER.			



7.10A HOSE ROUTE - OPEN CENTER STANDARD



- NOTES:
1. USE PIPE SEALANT ON ALL NPT FITTINGS.
 2. PARTS OF ASSEMBLY HAVE BEEN REMOVED FOR CLARITY.
 3. REMOVE PLUG FROM 271955 AND INSTALL ON 271937 PRIOR TO INSTALLATION OF HOSES.

KEY NO.	DESCRIPTION	PART NUMBER	QTY
1	CLAMP, HOSE SUPPORT 1.25 ID		2
2	WASHER, NYLON 5/16-18		2
3	SCREW, TRUSS HD 5/16-18 x 1 SS		2
4	HOSE, ASSY 5/8 X 16.5 HYD MTR TO MFLD		1
5	HOSE, OIL DRAIN		1
6	HOSE, ASSY 3/4 X 31.5 SRTGT X 45		1
7	HOSE, ASSY 3/4 X 52 MOTOR TO CLR		1
8	HOSE, ASSY 3/4 X 46 ACCUMULATOR		1
9	HOSE, PRESSURE SWITCH		1
10	HOSE, PRESSURE GAUGE		1
11	HOSE, AIR DISCHARGE SS FLEX		1
12	HOSE, ASSY 3/4 CLR TO MFLD 2016		1
13	NUT, HEX LOCKING 5/16-18		2
14	WASHER, FLAT 5/16		2
PLEASE NOTE: WHEN ORDERING PARTS, INDICATE MACHINE SERIAL NUMBER.			

IMPORTANT

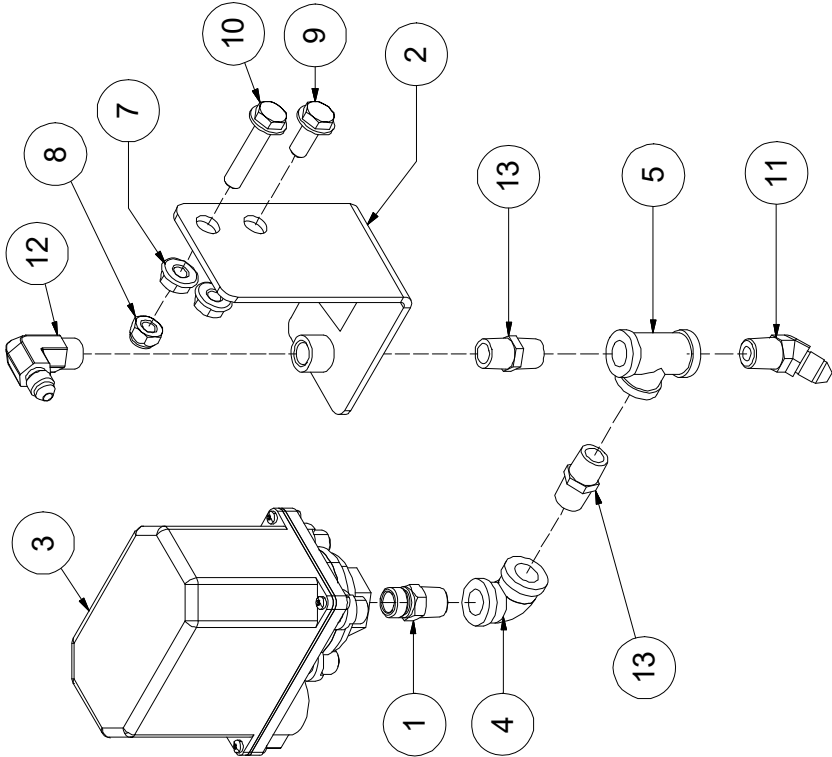
Customer is responsible for hoses on the vehicle-side of the hydraulic system, including set-up and maintenance. Customer should be aware of, and make arrangements for, any vehicle-side hose maintenance or replacements, as these hoses are not included with the hose maintenance kit.

Note also that any oil filter(s) used on vehicle-side of hydraulic system are not included with the kit.

6120247ID_r3

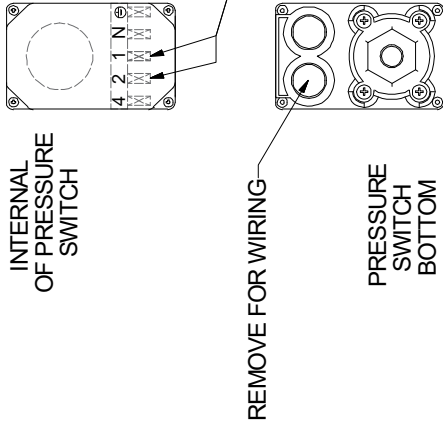


7.11 PRESSURE CONTROL SWITCH



ASSEMBLY DRAWING STANDARD NOTES:
1. USE HIGH TEMPERATURE THREAD SEALANT ON ALL MALE PIPE THREADS.

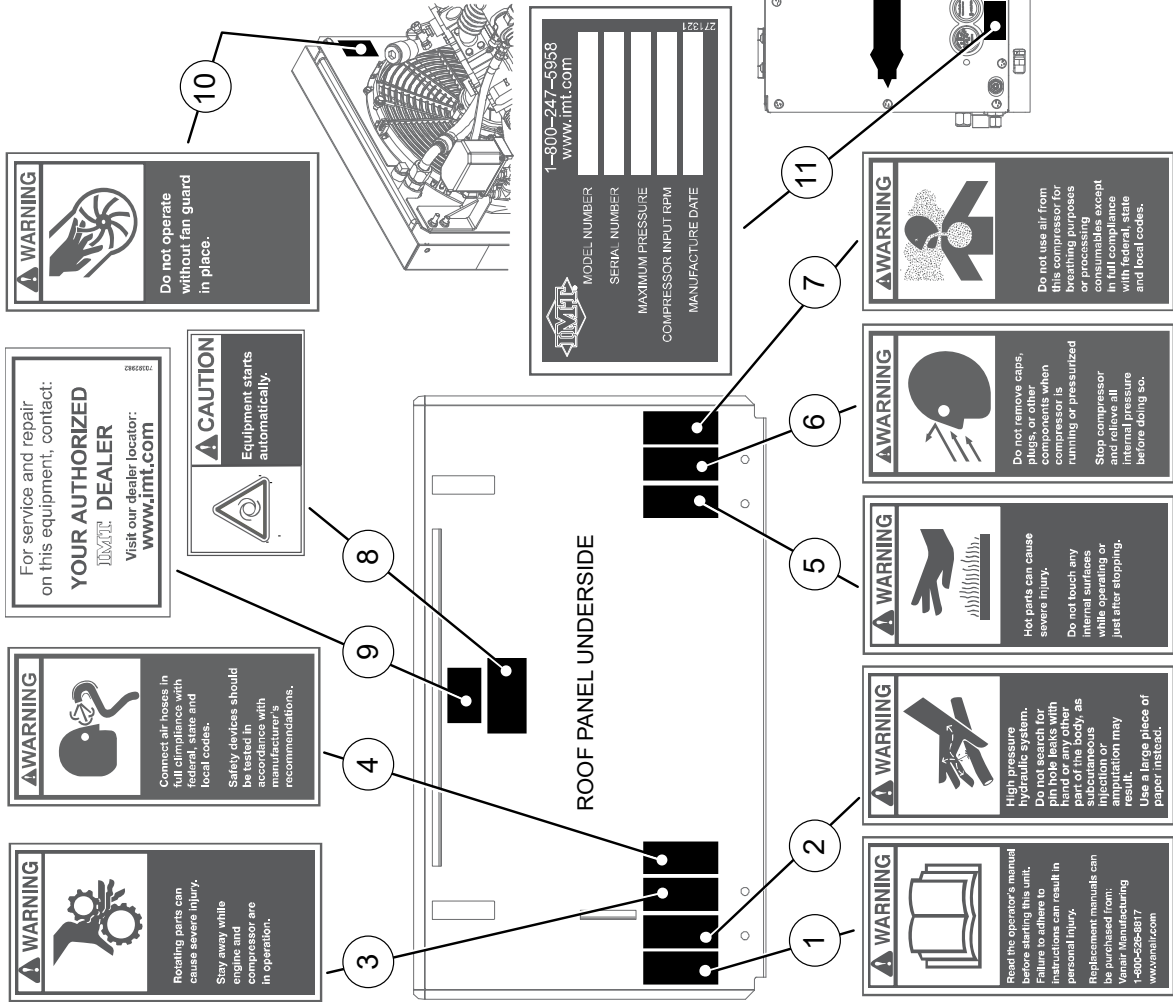
KEY NO.	DESCRIPTION	PART NUMBER	QTY
1	ADAPTER, #4 MBSPP X 1/4 MNPT		1
2	BRACKET, PRESS SWITCH MNTG		1
3	SWITCH,PRESSURE NO/NC ADJUSTABLE MAX 362PSI EATON		1
4	ELBOW, PIPE GALV 90 DEG 1/4		1
5	TEE, PIPE GALV 1/4		1
7	NUT, HEX FLANGE 5/16-18		2
8	NUT, HEX LOCKING 5/16-18		1
9	SCREW, SER WASH 5/16-18 x 0.75		1
10	SCREW, SER WASH 5/16-18 x 1.5		1
11	ELBOW, 45 DEG. 1/4 MPT x #4 MUJIC		1
12	ELBOW, 37FL/90M #04 x 1/4		1
13	NIPPLE, PIPE HEX 1/4 x 1/4		2
PLEASE NOTE: WHEN ORDERING PARTS, INDICATE MACHINE SERIAL NUMBER.			



6120277ID_r1



7.13 DECALS - PART 1 OF 2

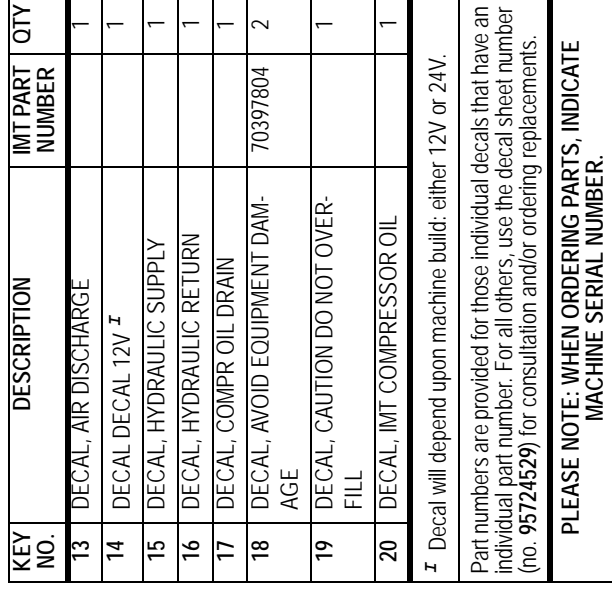


KEY NO.	DESCRIPTION	VA PART NUMBER	IMT PART NUMBER	QTY
1	DECAL, READ MANUAL	272371		1
2	DECAL, WARNING HIGH PRES	264380		1
3	DECAL, ROTATING PARTS	264374		1
4	DECAL, AIR HOSE	261885		1
5	DECAL, HOT PARTS	264372		1
6	DECAL, DO NOT REMOVE CAPS	264378		1
7	DECAL, DO NOT USE AIR	261886		1
8	DECAL, CAUTION AUTO-START	272041		1
9	DECAL, IMT SERVICE/REPAIR	275991	70392982	1
10	DECAL, DO NOT RMV FAN GRD	264383		2
11	PLATE, SERIAL NUMBER	271321	70399254	2
12	DECAL, IMT CAS40P	277695		2

Part numbers are provided for those individual decals that have an individual part number. For all others, use the decal sheet number (no. 95724529) for consultation and/or ordering replacements.

PLEASE NOTE: WHEN ORDERING PARTS, INDICATE MACHINE SERIAL NUMBER.

WARNING
DO NOT REMOVE OR COVER ANY SAFETY DECAL. Replace any safety decal that becomes damaged or illegible.

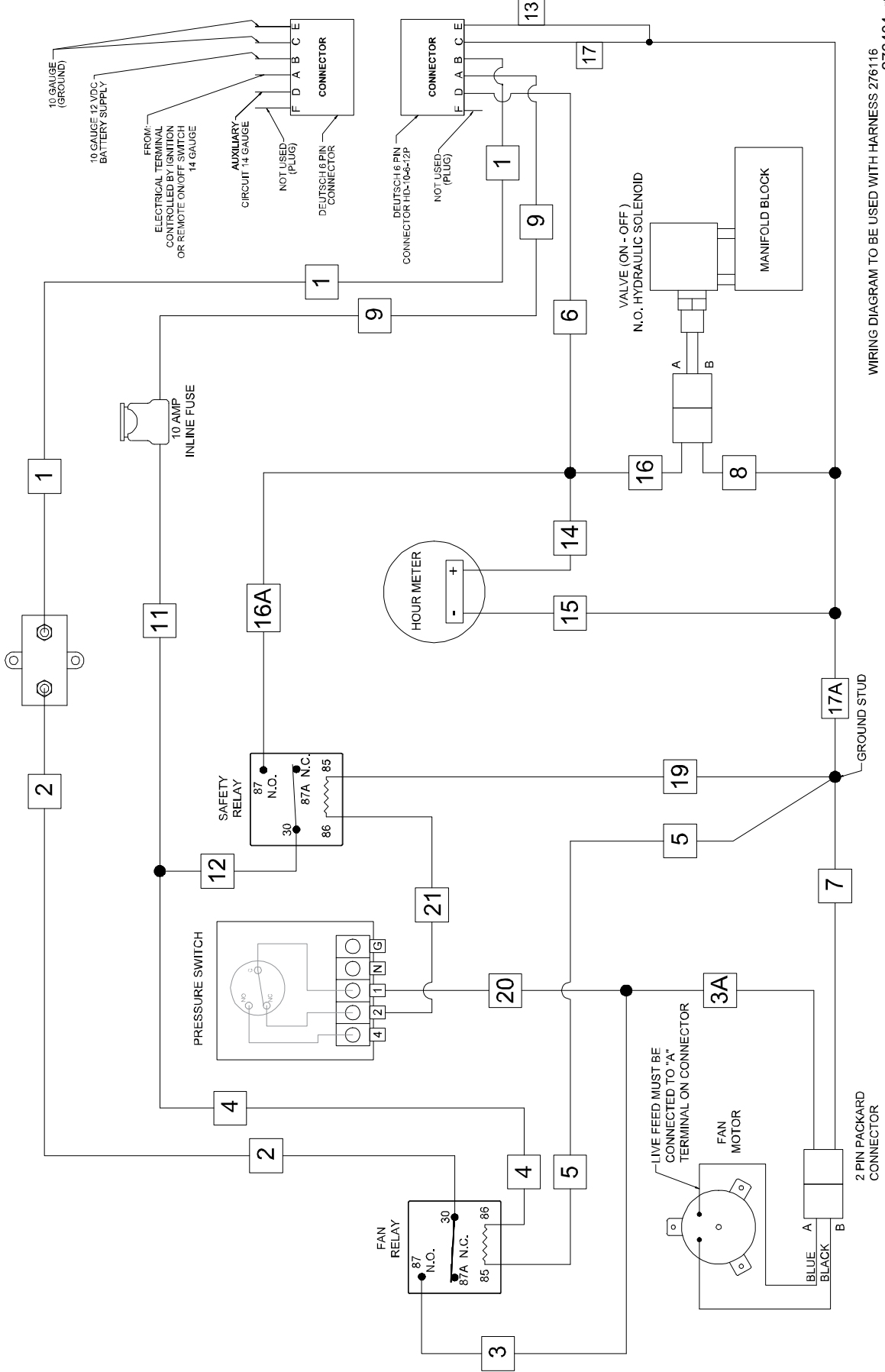


DO NOT REMOVE OR COVER ANY SAFETY DECAL. Replace any safety decal that becomes damaged or illegible.



7.14 WIRING DIAGRAM

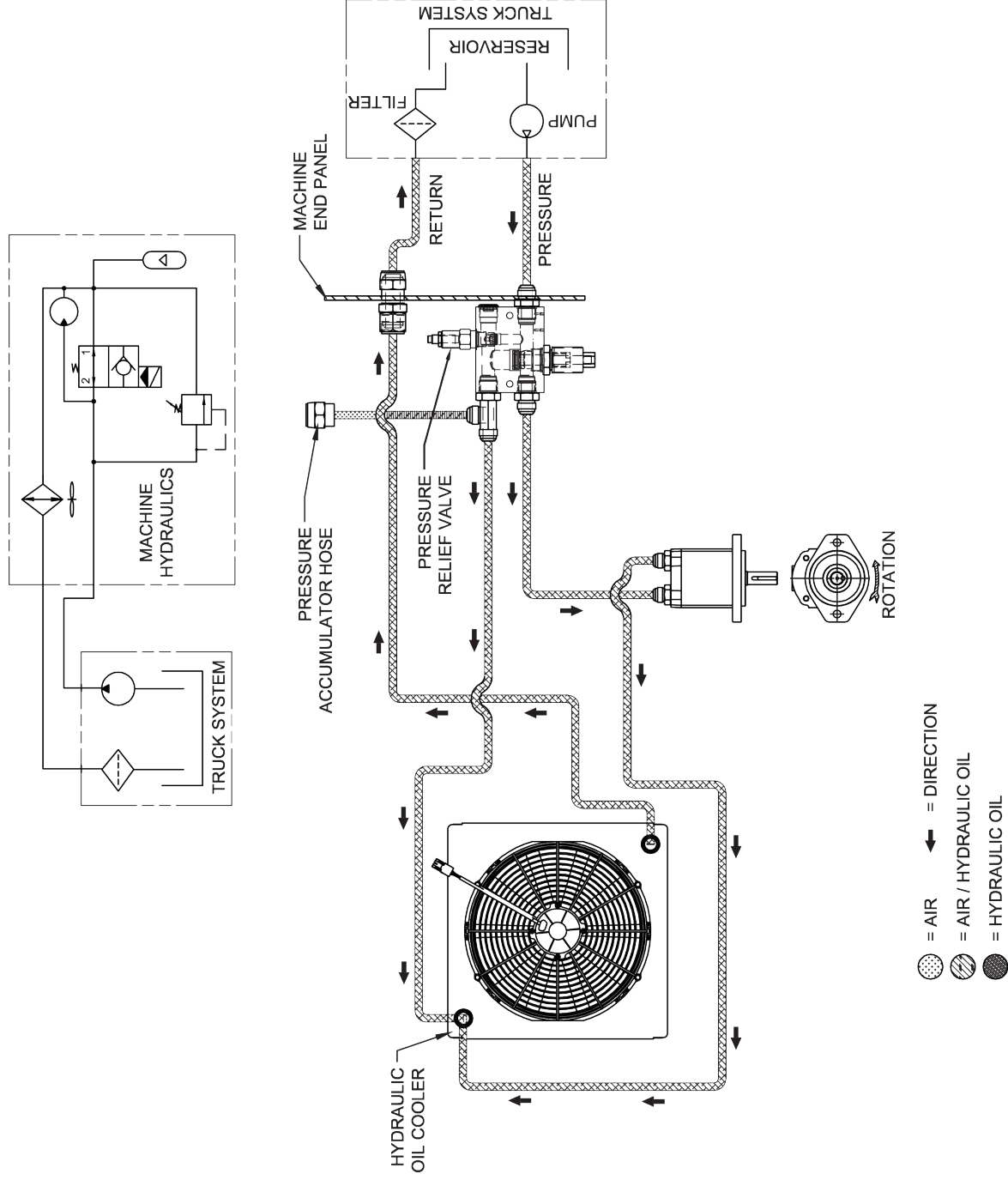
CIRCUIT BREAKER
12V SYSTEM = 30 AMP
24V SYSTEM = 20 AMP



WIRING DIAGRAM TO BE USED WITH HARNESS 276116
276404_r2



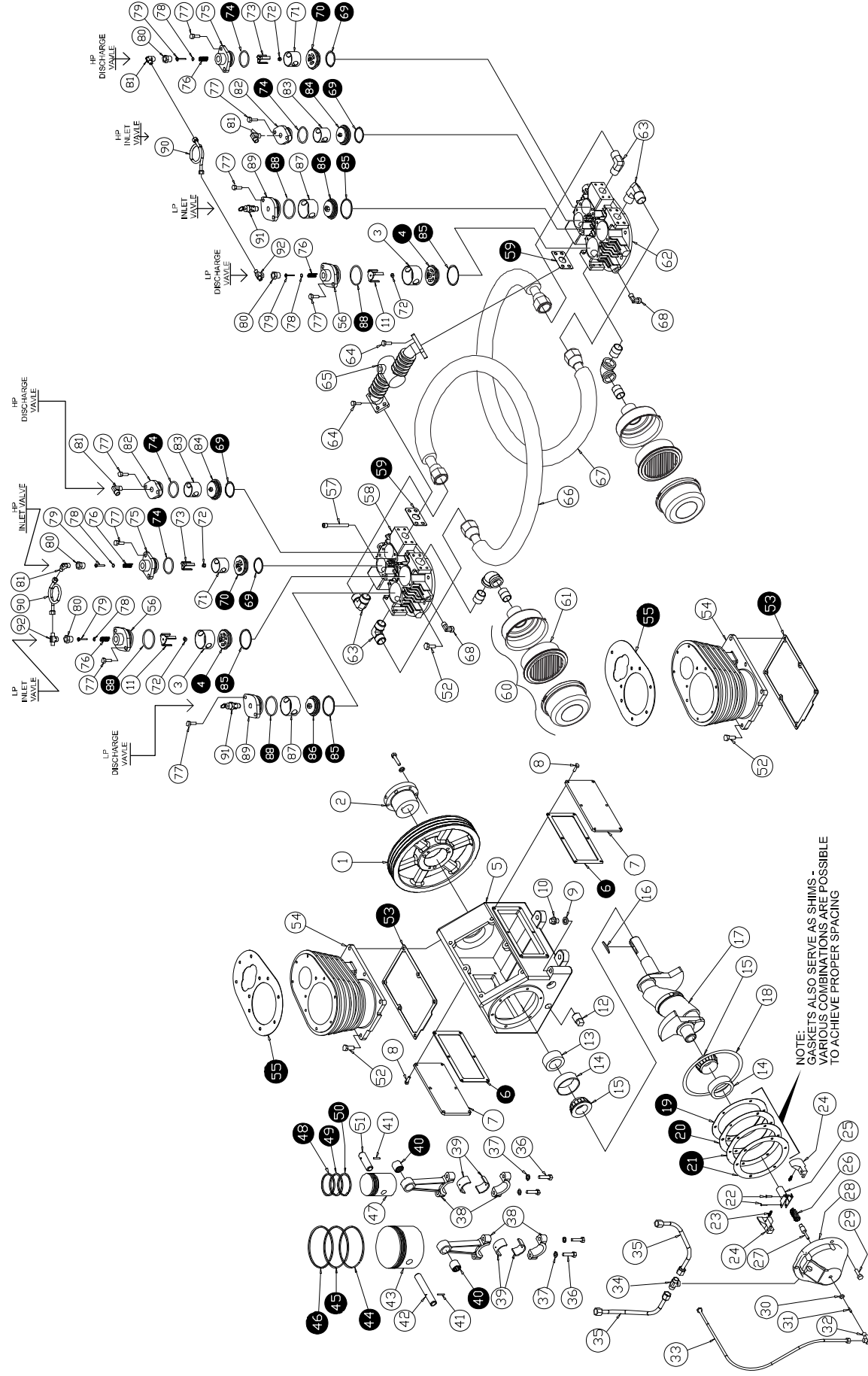
7.15 DIAGRAM - HYDRAULIC OIL FLOW



271993_r0



7.16 COMPRESSOR OVERHAUL KIT (IMT KIT NO. 7374209)





7.16 COMPRESSOR OVERHAUL KIT (IMT KIT NO. 7374209)

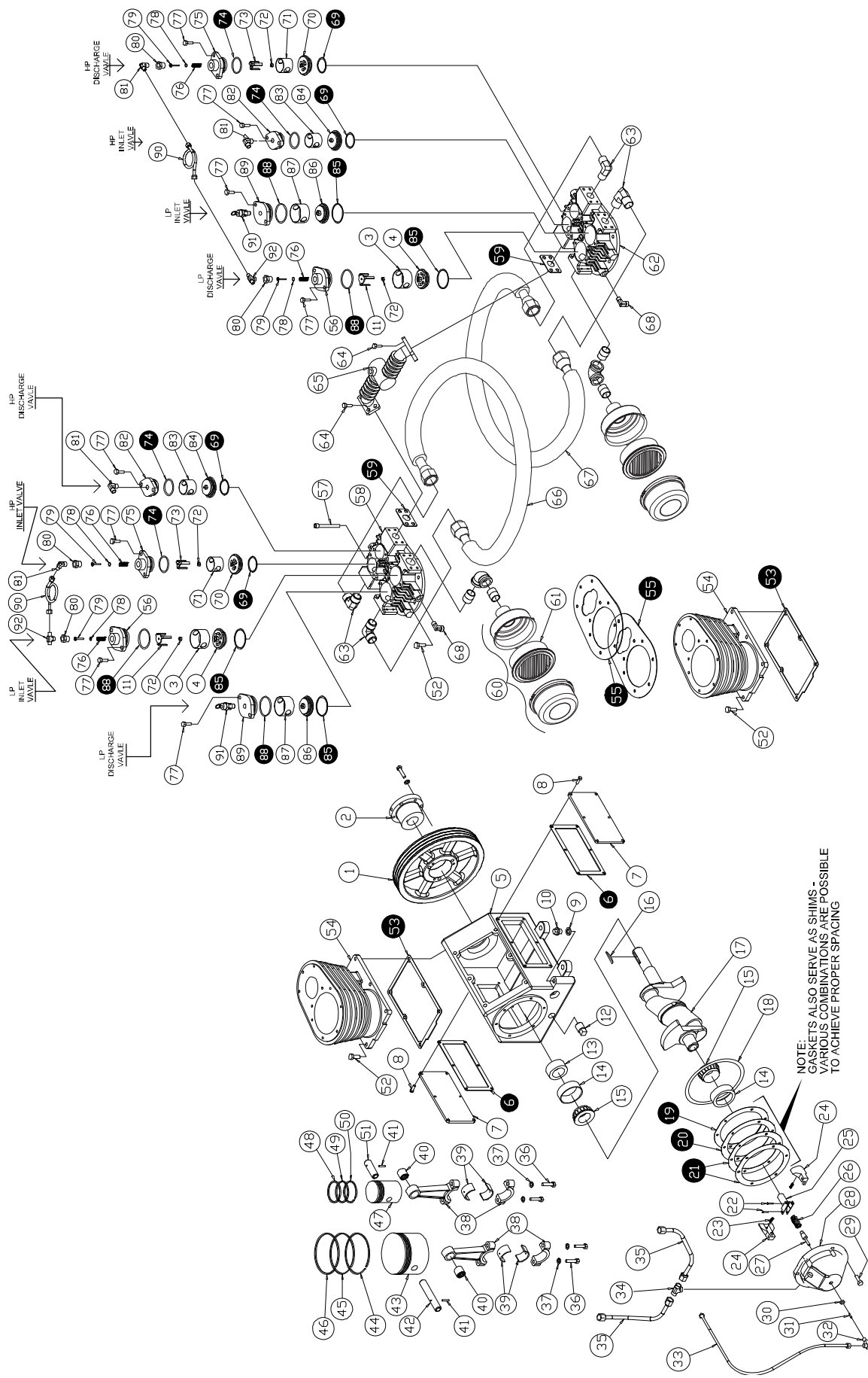
KEY NO.	DESCRIPTION	PART NUMBER	QTY	KEY NO.	DESCRIPTION	PART NUMBER	QTY	KEY NO.	DESCRIPTION	PART NUMBER	QTY
1	SHEAVE, DRIVEN	267311	1	31	ELBOW VALVE & UNLOADER		1	62	CYLINDER HEAD RIGHT	266993-065	1
2	BUSHING, SPLIT TAPER 1-3/8	267309	1	32	C.U. VALVE ASSY	266993-023	1	63	ELBOW 90, INTERCOOL CONNECTOR	266993-003	2
3	CAGE LP INLET	266993-045	2	33	UNLOADING TUBE 5/16	266993-	1	64	CAPSCR, MANIFOLD 5/16 - 18 X 7/8	266993-077	8
4 [±]	VALVE ASSEMBLY, LP INLET	266993-043	2	34	TEE, BREATHER CONNECTOR	266993-	1	65	MANIFOLD DISCHARGE	266993-020	1
5	BASE & CUP ASSEMBLY	266993-011	1	35	BREATHING TUBE	266993-	2	66	INTERCOOLER LH	266993-040	1
6 [±]	GASKET, SIDE PLATE	266993-013	2	36	ROD CAPSCREW		8	67	INTERCOOLER RH	266993-089	1
7	SIDE PLATE	266993-012	2	37	ROD LOCK WASHER		8	68	ELBOW, BREATHER CONNECTOR	266993-036	2
8	CAPSCR, SIDE PLT 1/4-20 x 5/8	266993-014	12	38	CONNECTING ROD	266993-061	4	69 [±]	VALVE GASKET HP	266993-078	4
9	OIL FILLER PLUG GASKET	266993-015	1	39	BEARING INSERT	266993-062	4	70 [±]	VALVE ASSEMBLY, HP INLET	266993-079	2
10	OIL FILLER PLUG	266993-016	1	40 [±]	NEEDLE BEARING WRISTPIN LP & HP	266993-090	4	71	CAGE HP INLET	266993-080	2
11	FINGERS LP	266993-047	2	41	ROLL PIN	266993-063	4	72	LOCKNUT	266993-046	4
12	OIL DRAIN PLUG 3/8" NPT		1	42	WRIST PIN LP	266993-064	2	73	FINGERS HP	266993-081	2
13	SEAL OIL	266993-006	1	43	PISTON LP	266993-066	2	74	O RING HP COVER	266993-083	4
14	CONE BEARING		2	44 [±]	OIL CONTROL RING LP	266993-067	2	75	HOLD DOWN COVER HP INLET	266993-084	2
15	BEARING	266993-007	2	45 [±]	BOTTOM COMPRESSION RING, LP	266993-074	2	76	SPRING LP	266993-050	4
16	KEY, 8 X 8	266993-005	1	46 [±]	TOP COMPRESSION RING, LP	266993-075	2	77	CAPSCREW HOLD DOWN 5/16 - 18 X 3/4		16
17	CRANKSHAFT	266993-008	1	47	PISTON HP	266993-070	2	78	O RING PLUNGER	266993-052	4
18	OIL FEEDER RING	266993-009	1	48 [±]	TOP COMPRESSION RING, HP	266993-073	2	79	PLUNGER	266993-051	4
19 [±]	GASKET, END COVER 0.381		5	49 [±]	BOTTOM COMPRESSION RING, HP	266993-072	2	80	3/8 NPT x 1/4 NPT BUSHING	266993-053	4
20 [±]	GASKET, END COVER 0.1524		5	50 [±]	OIL CONTROL RING HP	266993-071	2	81	TUBE ELBOW	266993-056	4
21 [±]	GASKET, END COVER 0.127		5	51	WRIST PIN HP	266993-069	2	82	HOLD DOWN COVER HP DISCHRG LFT	266993-082	2
22	RIVET		2	52	SOCKET HEAD CAPSCREW 5/16 - 18 x 1	266993-034	16	83	CAGE HP DISCHARGE	266993-087	2
23	BUMPER SPRING		2	53 [±]	GASKET, BASE	266993-032	2	84 [±]	VALVE ASSEMBLY, HP DISCHARGE	266993-086	2
24a	WEIGHT		2	54	CYLINDER	266993-033	2	85 [±]	VALVE GASKET LP	266993-041	4
24b	HOLDER UNLOADER		1	55 [±]	GASKET CYLINDER HEAD	266993-035	2	86 [±]	VALVE ASSEMBLY, LP DISCHARGE	266993-042	2
25	SPRING		1	56	HOLD DOWN COVER, LP INLET	266993-049	2	87	CAGE LP DISCHARGE	266993-044	2
26	PLUNGER		1	57	SOCKET HEAD CAPSCREW 5/16-18 x 3	266993-039	4	88 [±]	O RING, L.P. COVER	266993-048	2
27	END COVER	266993-029	1	58	CYLINDER HEAD LEFT	266993-037	1	89	HOLD DOWN COVER HP DISCHARGE	266993-049	2
28	CAPSCR, END CVR 5/16 - 18 x 1	266993-022	1	59 [±]	GASKET - DISCHARGE MANIFOLD	266993-021	2	90	UNLOADER TUBE	266993-055	2
29	LOCKNUT, END CVR		1	60	FILTER	267273	2	91	SAFETY VALVE	266993-058	2
30	AIR VALVE		1	61	FILTER ELEMENT	KIT1090	2	92	TUBE TEE 1/4 x 1/4 x 1/4 NPT	266993-054	2

[±] Denotes maintenance kit no. 7374209 part piece

PLEASE NOTE: WHEN ORDERING PARTS, INDICATE MACHINE SERIAL NUMBER.



7.17 COMPRESSOR GASKET REPLACEMENT KIT (IMT NO. 7374208)





7.17 COMPRESSOR GASKET REPLACEMENT KIT (IMT KIT NO. 7374208)

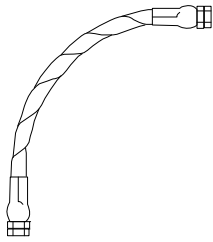
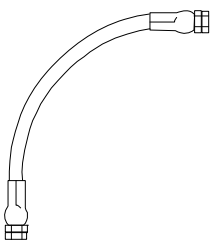
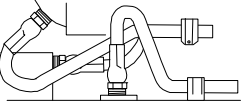
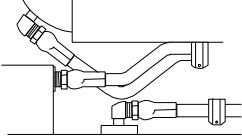

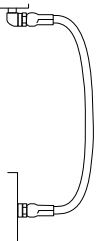
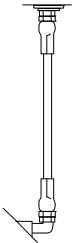

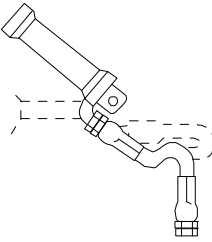
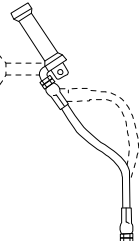
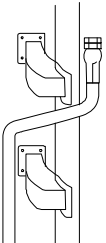
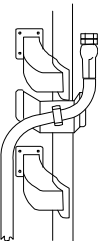
KEY NO.	DESCRIPTION	PART NUMBER	QTY	KEY NO.	DESCRIPTION	PART NUMBER	QTY	KEY NO.	DESCRIPTION	PART NUMBER	QTY
1	SHEAVE, DRIVEN	267311	1	31	ELBOW VALVE & UNLOADER		1	62	CYLINDER HEAD RIGHT	266993-065	1
2	BUSHING, SPLIT TAPER 1-3/8	267309	1	32	C.U. VALVE ASSY	266993-023	1	63	ELBOW 90, INTERCOOL CONNECTOR	266993-003	2
3	CAGE, LP INLET	266993-045	2	33	UNLOADING TUBE 5/16	266993-	1	64	CAPSCREW MANIFOLD 5/16-18 x 7/8	266993-077	8
4	VALVE ASSEMBLY, LP INLET	266993-043	2	34	TEE, BREATHER CONNECTOR	266993-	1	65	MANIFOLD DISCHARGE	266993-020	1
5	BASE & CUP ASSEMBLY	266993-011	1	35	BREATHER TUBE	266993-	2	66	INTERCOOLER LH	266993-040	1
6 [‡]	GASKET, SIDE PLATE	266993-013	2	36	ROD CAPSCREW		8	67	INTERCOOLER RH	266993-089	1
7	SIDE PLATE	266993-012	2	37	ROD LOCK WASHER		8	68	ELBOW, BREATHER CONNECTOR	266993-036	2
8	CAPSCR, SIDE PLATE 1/4-20X5/8	266993-014	12	38	CONNECTING ROD	266993-061	4	69 [‡]	VALVE GASKET HP	266993-078	4
9	OIL FILLER PLUG GASKET	266993-015	1	39	BEARING INSERT	266993-062	4	70	VALVE ASSEMBLY, HP INLET	266993-079	2
10	OIL FILLER PLUG	266993-016	1	40	NEEDLE BEARING WRISTPIN LP & HP	266993-090	4	71	CAGE HP INLET	266993-080	2
11	FINGERS LP	266993-047	2	41	ROLL PIN	266993-063	4	72	LOCKNUT	266993-046	4
12	OIL DRAIN PLUG 3/8" NPT		1	42	WRIST PIN LP	266993-064	2	73	FINGERS HP	266993-081	2
13	SEAL, OIL	266993-006	1	43	PISTON LP	266993-066	2	74	O RING HP COVER	266993-083	4
14	CONE BEARING		2	44	OIL CONTROL RING LP	266993-067	2	75	HOLD DOWN COVER HP INLET	266993-084	2
15	BEARING	266993-007	2	45	BOTTOM COMPRESSION RING, LP	266993-074	2	76	SPRING LP	266993-050	4
16	KEY, 8 X 8	266993-005	1	46	TOP COMPRESSION RING, LP	266993-075	2	77	CAPSCREW HOLD DOWN 5/16-18 x 3/4		16
17	CRANKSHAFT	266993-008	1	47	PISTON HP	266993-070	2	78	O RING PLUNGER	266993-052	4
18	OIL FEEDER RING	266993-009	1	48	TOP COMPRESSION RING, HP	266993-073	2	79	PLUNGER	266993-051	4
19 [‡]	GASKET, END COVER 0.381		5	49	BOTTOM COMPRESSION RING, HP	266993-072	2	80	3/8 NPT x 1/4 NPT BUSHING	266993-053	4
20 [‡]	GASKET, END COVER 0.1524		5	50	OIL CONTROL RING HP	266993-071	2	81	TUBE ELBOW	266993-056	4
21 [‡]	GASKET, END COVER 0.127		5	51	WRIST PIN HP	266993-069	2	82	HOLD DOWN COVER HP DISCHRG LFT	266993-082	2
22	RIVET		2	52	SOCKET HEAD CAPSCREW 5/16-18 x 1	266993-034	16	83	CAGE HP DISCHARGE	266993-087	2
23	BUMPER SPRING		2	53 [‡]	GASKET, BASE	266993-032	2	84	VALVE ASSEMBLY, HP DISCHARGE	266993-086	2
24a	WEIGHT		2	54	CYLINDER	266993-033	2	85 [‡]	VALVE GASKET LP	266993-041	4
24b	HOLDER UNLOADER		1	55 [‡]	GASKET CYLINDER HEAD	266993-035	2	86	VALVE ASSEMBLY, LP DISCHARGE	266993-042	2
25	SPRING		1	56	HOLD DOWN COVER, LP INLET	266993-049	2	87	CAGE LP DISCHARGE	266993-044	2
26	PLUNGER		1	57	SOCKET HEAD CAPSCREW 5/16-18 x 3	266993-039	4	88 [‡]	O RING, L.P. COVER	266993-048	2
27	END COVER	266993-029	1	58	CYLINDER HEAD LEFT	266993-037	1	89	HOLD DOWN COVER HP DISCHARGE	266993-049	2
28	CAPSCR, END COVER 5/16-18X1	266993-022	1	59 [‡]	GASKET -DISCHARGE MANIFOLD	266993-021	2	90	UNLOADER TUBE	266993-055	2
29	LOCKNUT, END COVER		1	60	FILTER	267273	2	91	SAFETY VALVE	266993-058	2
30	AIR VALVE		1	61	FILTER ELEMENT	KIT1090	2	92	TUBE TEE 1/4 x 1/4 x 1/4 NPT	266993-054	2

[‡] Denotes maintenance kit no. 7374208 part piece

PLEASE NOTE: WHEN ORDERING PARTS, INDICATE MACHINE SERIAL NUMBER.



7.18 HOSE INSTALLATION GUIDE

HOSE LAYOUT CONSIDERATION	WRONG	RIGHT	HOSE LAYOUT CONSIDERATION	WRONG	RIGHT
1. Hose is weakened when installed in twisted position. Pressure in twisted hose tends to loosen fitting connections. Design so that machine motion produces bending rather than twisting.			4. Use elbows or other adapters as necessary to eliminate excess hose length and to insure neater installation for easier maintenance.		
2. Ample bend radius should be provided to avoid collapsing of line and restriction of flow.			5. When hose assembly is installed in a flexing application, remember that metal hose fittings are not part of the flexible portion. Allow ample free length for flexing.		
3. Exceeding minimum bend radius will greatly reduce hose assembly life.			6. When properly routing, use clamps to secure the hose in its proper position.		



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An Oshkosh Corporation Company

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