SULLAIR

# INDUSTRIAL AIR COMPRESSOR TS–20 SERIES

## 100–250HP/75–187KW

## OPERATOR'S MANUAL AND PARTS LIST

**KEEP FOR FUTURE REFERENCE**

Part Number 02250059–860

# AIR CARE
# SEMINAR TRAINING

Sullair Air Care Seminars are 3–day courses that provide hands–on instruction in the proper operation, maintenance and service of Sullair equipment. Individual seminars on Industrial compressors and compressor electrical systems are presented at regular intervals throughout the year at a dedicated training facility at Sullair's corporate headquarters in Michigan City, Indiana.

Instruction includes discussion of the function and installation of Sullair service parts, troubleshooting of the most common problems, and actual equipment operation. The seminars are recommended for maintenance and service personnel.

For detailed course outlines, schedule and cost information contact:

Sullair Corporate Training Department
1–800–SULLAIR or 219–879–5451 (ext. 1816)

– Or Write –

Sullair Corporation
3700 E. Michigan Blvd.
Michigan City, IN 46360
Attn: Service Training Department

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Section 7
# RECOMMENDED SPARE PARTS LIST

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## 1.1 GENERAL

Sullair Corporation and its subsidiaries design and manufacture all of their products so they can be operated safely. However, the responsibility for safe operation rests with those who use and maintain these products. The following safety precautions are offered as a guide which, if conscientiously followed, will minimize the possibility of accidents throughout the useful life of this equipment.

The compressor should be operated only by those who have been trained and delegated to do so, and who have read and understood this Operator's Manual. Failure to follow the instructions, procedures and safety precautions in this manual may result in accidents and injuries.

**NEVER** start the compressor unless it is safe to do so. **DO NOT** attempt to operate the compressor with a known unsafe condition. Tag the compressor and render it inoperative by disconnecting and locking out all power at source or otherwise disabling its prime mover so others who may not know of the unsafe condition cannot attempt to operate it until the condition is corrected.

Install, use and operate the compressor only in full compliance with all pertinent OSHA regulations and/or any applicable Federal, State, and Local codes, standards and regulations.

**DO NOT** modify the compressor and/or controls in any way except with written factory approval.

While not specifically applicable to all types of compressors with all types of prime movers, most of the precautionary statements contained herein are applicable to most compressors and the concepts behind these statements are generally applicable to all compressors.

## 1.2 PERSONAL PROTECTIVE EQUIPMENT

Prior to installing or operating the compressor, owners, employers and users should become familiar with, and comply with, all applicable OSHA regulations and/or any applicable Federal, State and Local codes, standards, and regulations relative to personal protective equipment, such as eye and face protective equipment, respiratory protective equipment, equipment intended to protect the extremities, protective clothing, protective shields and barriers and electrical protective equipment, as well as noise exposure administrative and/or engineering controls and/or personal hearing protective equipment.

## 1.3 PRESSURE RELEASE

**A.** Install an appropriate flow–limiting valve between the service air outlet and the shut–off (throttle) valve, either at the compressor or at any other point along the air line, when an air hose exceeding 1/2" (13mm) inside diameter is to be connected to the shut–off (throttle) valve, to reduce pressure in case of hose failure, per OSHA Standard 29 CFR 1926.302(b)(7) and/or any applicable Federal, State and Local codes, standards and regulations.

**B.** When the hose is to be used to supply a manifold, install an additional appropriate flow–limiting valve between the manifold and each air hose exceeding 1/2" (13mm) inside diameter that is to be connected to the manifold to reduce pressure in case of hose failure.

**C.** Provide an appropriate flow–limiting valve at the beginning of each additional 75 feet (23m) of hose in runs of air hose exceeding 1/2" (13mm) inside diameter to reduce pressure in case of hose failure.

**D.** Flow–limiting valves are listed by pipe size and rated CFM. Select appropriate valves accordingly, in accordance with their manufacturer's recommendations.

**E. DO NOT** use air tools that are rated below the maximum rating of the compressor. Select air tools, air hoses, pipes, valves, filters and other fittings accordingly. **DO NOT** exceed manufacturer's rated safe operating pressures for these items.

**F.** Secure all hose connections by wire, chain or other suitable retaining device to prevent tools or hose ends from being accidentally disconnected and expelled.

**G.** Open fluid filler cap only when compressor **is not running and is not pressurized.** Shut down the compressor and bleed the sump (receiver) to zero internal pressure before removing the cap.

**H.** Vent all internal pressure prior to opening any line, fitting, hose, valve, drain plug, connection or other components, such as filters and line oilers, and before attempting to refill optional air line anti–icer systems with antifreeze compound.

**I.** Keep personnel out of line with and away from the discharge opening of hoses or tools or other points of compressed air discharge.

**J.** Use air at pressures less than 30 psig (2.1 bar) for cleaning purposes, and then only with effective chip guarding and personal protective equipment per OSHA Standard 29 CFR 1910.242 (b) and/or any applicable Federal, State, and Local codes, standards and regulations.

**K. DO NOT** engage in horseplay with air hoses as death or serious injury may result.

## 1.4 FIRE AND EXPLOSION

**A.** Clean up spills of lubricant or other combustible substances immediately, if such spills occur.

**B.** Shut off the compressor and allow it to cool. Then keep sparks, flames and other sources of ignition away and **DO NOT** permit smoking in the vicinity when checking or adding lubricant or when refilling air line anti–icer systems with antifreeze compound.

**C. DO NOT** permit fluids, including air line anti–icer system antifreeze compound or fluid film to accumulate on, under or around acoustical material, or on any external surfaces of the air compressor or on internal surfaces of the enclosure. Wipe down using an aqueous industrial cleaner or steam clean as required. If necessary, remove acoustical material, clean all surfaces and then replace acoustical material. Any acoustical material with a protective covering that has been torn or punctured should be replaced immediately to prevent accumulation of liquids or fluid film within the material. **DO NOT** use flammable solvents for cleaning purposes.

**D.** Disconnect and lock out all power at source prior to attempting any repairs or cleaning of the compressor or of the inside of the enclosure, if any.

**E.** Keep electrical wiring, including all terminals and pressure connectors in good condition. Replace any wiring that has cracked, cut, abraded or otherwise degraded insulation, or terminals that are worn, discolored or corroded. Keep all terminals and pressure connectors clean and tight.

**F.** Keep grounded and/or conductive objects such as tools away from exposed live electrical parts such as terminals to avoid arcing which might serve as a source of ignition.

**G.** Remove any acoustical material or other material that may be damaged by heat or that may support combustion and is in close proximity, prior to attempting weld repairs.

**H.** Keep suitable fully charged Class BC or ABC fire extinguisher or extinguishers nearby when servicing and operating the compressor.

**I.** Keep oily rags, trash, leaves, litter or other combustibles out of and away from the compressor.

**J. DO NOT** operate the compressor without proper flow of cooling air or water or with inadequate flow of lubricant or with degraded lubricant.

**K. DO NOT** attempt to operate the compressor in any classification of hazardous environment unless the compressor has been specially designed and manufactured for that duty.

### 1.5 MOVING PARTS

**A.** Keep hands, arms and other parts of the body and also clothing away from couplings, fans and other moving parts.

**B. DO NOT** attempt to operate the compressor with the fan, coupling or other guards removed.

**C.** Wear snug fitting clothing and confine long hair when working around this compressor, especially when exposed to hot or moving parts.

**D.** Keep access doors, if any, closed except when making repairs or adjustments.

**E.** Make sure all personnel are out of and/or clear of the compressor prior to attempting to start or operate it.

**F.** Disconnect and lock out all power at source and verify at the compressor that all circuits are de–energized to minimize the possibility of accidental start–up, or operation, prior to attempting repairs or adjustments. This is especially important when compressors are remotely controlled.

**G.** Keep hands, feet, floors, controls and walking surfaces clean and free of fluid, water or other liquids to minimize the possibility of slips and falls.

### 1.6 HOT SURFACES, SHARP EDGES AND SHARP CORNERS

**A.** Avoid bodily contact with hot fluid, hot coolant, hot surfaces and sharp edges and corners.

**B.** Keep all parts of the body away from all points of air discharge.

**C.** Wear personal protective equipment including gloves and head covering when working in, on or around the compressor.

**D.** Keep a first aid kit handy. Seek medical assistance promptly in case of injury. **DO NOT** ignore small cuts and burns as they may lead to infection.

### 1.7 TOXIC AND IRRITATING SUBSTANCES

**A. DO NOT** use air from this compressor for respiration (breathing) except in full compliance with OSHA Standards 29 CFR 1910 and/or any applicable Federal, State or Local codes or regulations.

**⚠ DANGER**

**Death or serious injury can result from inhaling compressed air without using proper safety equipment. See OSHA standards and/or any applicable Federal, State, and Local codes, standards and regulations on safety equipment.**

**B. DO NOT** use air line anti–icer systems in air lines supplying respirators or other breathing air utilization equipment and **DO NOT** discharge air from these systems into unventilated or other confined areas.

**C.** Operate the compressor only in open or adequately ventilated areas.

**D.** Locate the compressor or provide a remote inlet so that it is not likely to ingest exhaust fumes or other toxic, noxious or corrosive fumes or substances.

**E.** Coolants and lubricants used in this compressor are typical of the industry. Care should be taken to avoid accidental ingestion and/or skin contact. In the event of ingestion, seek medical treatment promptly. Wash with soap and water in the event of skin contact. Consult Material Safety Data Sheet for information pertaining to fluid of fill.

**F.** Wear goggles or a full face shield when adding antifreeze compound to air line anti–icer systems.

**G.** If air line anti–icer system antifreeze compound enters the eyes or if fumes irritate the eyes, they should be washed with large quantities of clean water for 15 minutes. A physician, preferably an eye specialist, should be contacted immediately.

**H. DO NOT** store air line anti–icer system antifreeze compound in confined areas.

**I.** The antifreeze compound used in air line antifreeze systems contains methanol and is toxic, harmful or fatal if swallowed. Avoid contact with the skin or eyes and avoid breathing the fumes. If swallowed, induce vomiting by administering a tablespoon of salt, in each glass of clean, warm water until vomit is clear, then administer two teaspoons of baking soda in a glass of clean water. Have patient lay down and cover eyes to exclude light. Call a physician immediately.

### 1.8 ELECTRICAL SHOCK

**A.** This compressor should be installed and maintained in full compliance with all applicable Federal, State and Local codes, standards and regulations, including those of the National Electrical Code, and also including those relative to equipment grounding conductors, and only by personnel that are trained, qualified and delegated to do so.

**B.** Keep all parts of the body and any hand–held tools or other conductive objects away from exposed live parts of electrical system. Maintain dry footing, stand on insulating surfaces and **DO NOT** contact any other portion of the compressor when making adjustments or repairs to exposed live parts of the electrical system. Make all such adjustments or repairs with one hand only, so as to minimize the possibility of creating a current path through the heart.

**C.** Attempt repairs in clean, dry and well lighted and ventilated areas only.

**D. DO NOT** leave the compressor unattended with open electrical enclosures. If necessary to do so, then disconnect, lock out and tag all power at source so others will not inadvertently restore power.

**E.** Disconnect, lock out and tag all power at source prior to attempting repairs or adjustments to rotating machinery and prior to handling any ungrounded conductors.

### 1.9 LIFTING

**A.** If the compressor is provided with a lifting bail, then lift by the bail provided. If no bail is provided, then lift by sling. Compressors to be air lifted by helicopter must not be supported by the lifting bail but by slings instead. In any event, lift and/or handle only in full compliance with OSHA standards 29 CFR 1910 subpart N and/or any applicable Federal, State, and Local codes, standards and regulations.

**B.** Inspect points of attachment for cracked welds and for cracked, bent, corroded or otherwise degraded members, and for loose bolts or nuts prior to lifting.

**C.** Make sure entire lifting, rigging and supporting structure has been inspected, is in good condition, and has a rated capacity of at least the weight of the compressor. If you are unsure of the weight, then weigh compressor before lifting.

**D.** Make sure lifting hook has a functional safety latch or equivalent, and is fully engaged and latched on the bail or slings.

**E.** Use guide ropes or equivalent to prevent twisting or swinging of the compressor once it has been lifted clear of the ground.

**F. DO NOT** attempt to lift in high winds.

**G.** Keep all personnel out from under and away from the compressor whenever it is suspended.

**H.** Lift compressor no higher than necessary.

**I.** Keep lift operator in constant attendance whenever compressor is suspended.

**J.** Set compressor down only on a level surface capable of safely supporting at least its weight and its loading unit.

**K.** When moving the compressor by forklift truck, utilize fork pockets if provided. Otherwise, utilize pallet if provided. If neither fork pockets or pallet are provided, then make sure compressor is secure and well balanced on forks before attempting to raise or transport it any significant distance.

**L.** Make sure forklift truck forks are fully engaged and tipped back prior to lifting or transporting the compressor.

**M.** Forklift no higher than necessary to clear obstacles at floor level, and transport and corner at minimum practical speeds.

**N.** Make sure pallet–mounted compressors are firmly bolted or otherwise secured to the pallet prior to attempting to forklift or transport them. **NEVER** attempt to forklift a compressor that is not secured to its pallet, as uneven floors or sudden stops may cause the compressor to tumble off, possibly causing serious injury or property damage in the process.

### 1.10 ENTRAPMENT

**A.** If the compressor enclosure, if any, is large enough to hold a man and if it is necessary to enter it to perform service adjustments, inform other personnel before doing so, or else secure and tag the access door in the open position to avoid the possibility of others closing and possibly latching the door with personnel inside.

**B.** Make sure all personnel are out of compressor before closing and latching enclosure doors.

## 2.1 INTRODUCTION

Your new Sullair lubricated rotary screw air compressor will provide you with a unique experience in improved reliability and greatly reduced maintenance.

Compared to other types of compressors, the Sullair rotary screw is unique in mechanical reliability, with “no wear” and “no inspection” required of the working parts within the compressor unit.

Read Maintenance section to see how surprisingly easy it is to keep your air compressor in top operating condition. Should any questions arise which cannot be answered in the following text, call your nearest Sullair representative or the Sullair Corporation Service Department.

## 2.2 DESCRIPTION OF COMPONENTS

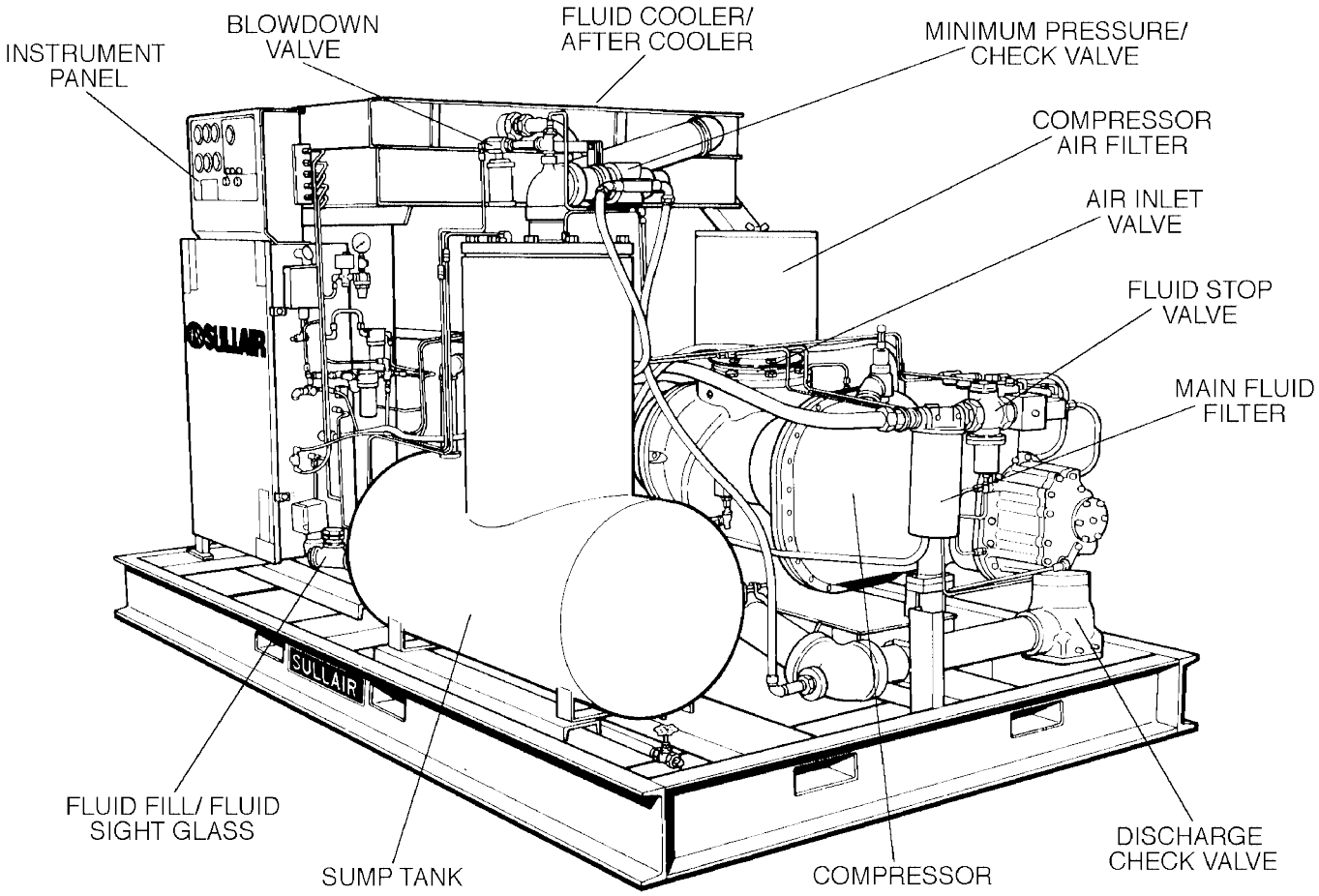
Refer to Figure 2–1. The components and assemblies of the air compressors are clearly shown. The complete package includes **compressor, electric motor, compressor inlet system, compressor discharge system, compressor cooling** and **lubrication system, capacity control system** and **instrument panel** all mounted on a heavy gauge steel frame.

On air–cooled models, a separate motor–driven fan blows air through the cooler/aftercooler assembly, thereby removing the heat of compression from the cooling fluid.

On water–cooled models, fluid is piped into a four-pass exchanger where the heat of compression is removed from the fluid. A fan is used to supply sufficient ventilating air to compressors equipped with a canopy.

Both air–cooled and water–cooled versions have easily accessible components such as the fluid fil-

*Figure 2–1 Sullair TS–20 Rotary Screw Air Compressor*



ters and control valves. The inlet air filters are also mounted for easy access and servicing.

### 2.3 SULLAIR COMPRESSOR UNIT, FUNCTIONAL DESCRIPTION

Sullair tandem air compressors feature the Sullair compressor unit, a two–stage, positive displacement fluid lubricated–type compressor. This unit provides continuous (pulse–free) air compression to meet your needs.

Fluid is injected into the compressor unit in large quantities where it mixes directly with the air as the internal rotors turn, compressing the air. The fluid flow has three basic functions:

1. As coolant, it controls the rise of air temperature normally associated with the heat of compression.
2. It seals the leakage paths between the rotors and the stator and also between the rotors themselves.
3. It acts as a lubricating film between the rotors allowing one rotor to directly drive the other, which is an idler.

After the air/fluid mixture is discharged from the compressor unit, the fluid is separated from the air. At this time, the air flows to the service line and the fluid is cooled in preparation for injection.

**NOTE**

**With a Sullair compressor, there is no maintenance or inspection of the internal parts of the compressor unit permitted in accordance with the terms of the warranty.**

### 2.4 COMPRESSOR COOLING AND LUBRICATION SYSTEM, FUNCTIONAL DESCRIPTION

Refer to Figures 2–2. The cooling and lubrication system (air–cooled version) consists of a **fan, radiator–type cooler/aftercooler assembly, full–flow fluid filter, thermal valve, fluid stop valve** and **interconnection piping**. For water–cooled models, a **shell** and **tube fluid cooler, aftercooler** and **water–flow regulating valve** are substituted for the radiator–type cooler on air–cooled compressors.

The pressure in the receiver/sump causes fluid flow by forcing the fluid from the high pressure area of the sump to an area of lower pressure in the compressor unit.

Fluid flows from the bottom of the receiver/sump to the thermal valve. The thermal valve is fully open when the fluid temperature is below 170°F (77°C). The fluid passes through the thermal valve, the main fluid filter and directly to the compressor unit where it lubricates, cools and seals the rotors and the compression chamber.

As the discharge temperature rises above 170°F (77°C), due to the heat of compression, the thermal valve begins to close and a portion of the fluid then flows through the cooler. From the cooler, the fluid flows to the fluid filter, and on to the compressor unit.

A portion of the fluid flowing to the compressor is routed to the anti–friction bearings which support the rotors inside the compressor unit.

The fluid filter has a replacement element and an integral pressure bypass valve. An associated service gauge shows red when the filter needs servicing. This gauge has a pressure setting lower than that of the bypass valve. After the initial 50 hour filter change, the gauge will rarely show red under normal operating conditions.

The fluid stop valve prevents fluid from filling the compressor unit when the compressor is shut down. When the compressor is operating, the fluid stop valve is held open by air pressure from the compressor unit allowing a free flow of fluid from the receiver/sump back to the compressor unit. On shutdown, the compressor unit pressure is reduced, causing the fluid stop valve to close and isolate the compressor unit from the cooling system.

Water–cooled versions of the compressor have a water–flow regulating valve which operates to conserve water during periods of varying load on the compressor. The same valve automatically shuts off the water supply when the compressor is shut down. In addition, water–cooled models have a water pressure switch to prevent operation with inadequate water pressure.

### 2.5 COMPRESSOR DISCHARGE SYSTEM, FUNCTIONAL DESCRIPTION

Refer to Figures 2–3. The compressor unit discharges the compressed air/fluid mixture through a discharge check valve into the combination receiver/sump. The discharge check valve prevents air in the receiver from returning to the compression chamber after the compressor has been shut down. The receiver has three basic functions:

1. It acts as a primary fluid separator.
2. It serves as the compressor fluid sump.
3. It houses the final fluid/air separator elements.

The compressed air/fluid mixture enters the receiver and is directed against the far side of the tank, where its direction of movement is changed and its velocity significantly reduced. This causes large droplets of fluid to collect, separate and fall to the bottom of the receiver/sump. The fractional percentage of fluid remaining in the compressed air collects on the surface of the dual separator elements (primary and secondary) as the compressed air flows through them. Two return lines (or scavenge tubes) lead from the bottom of each separator element to the low pressure inlet region of the compressor unit. Fluid collecting on the bottom of each separator is returned to the compressor by a pressure difference between the receiver and the compressor inlet.

*Figure 2–2 Compressor Cooling and Lubrication and Discharge System (Air–cooled)*

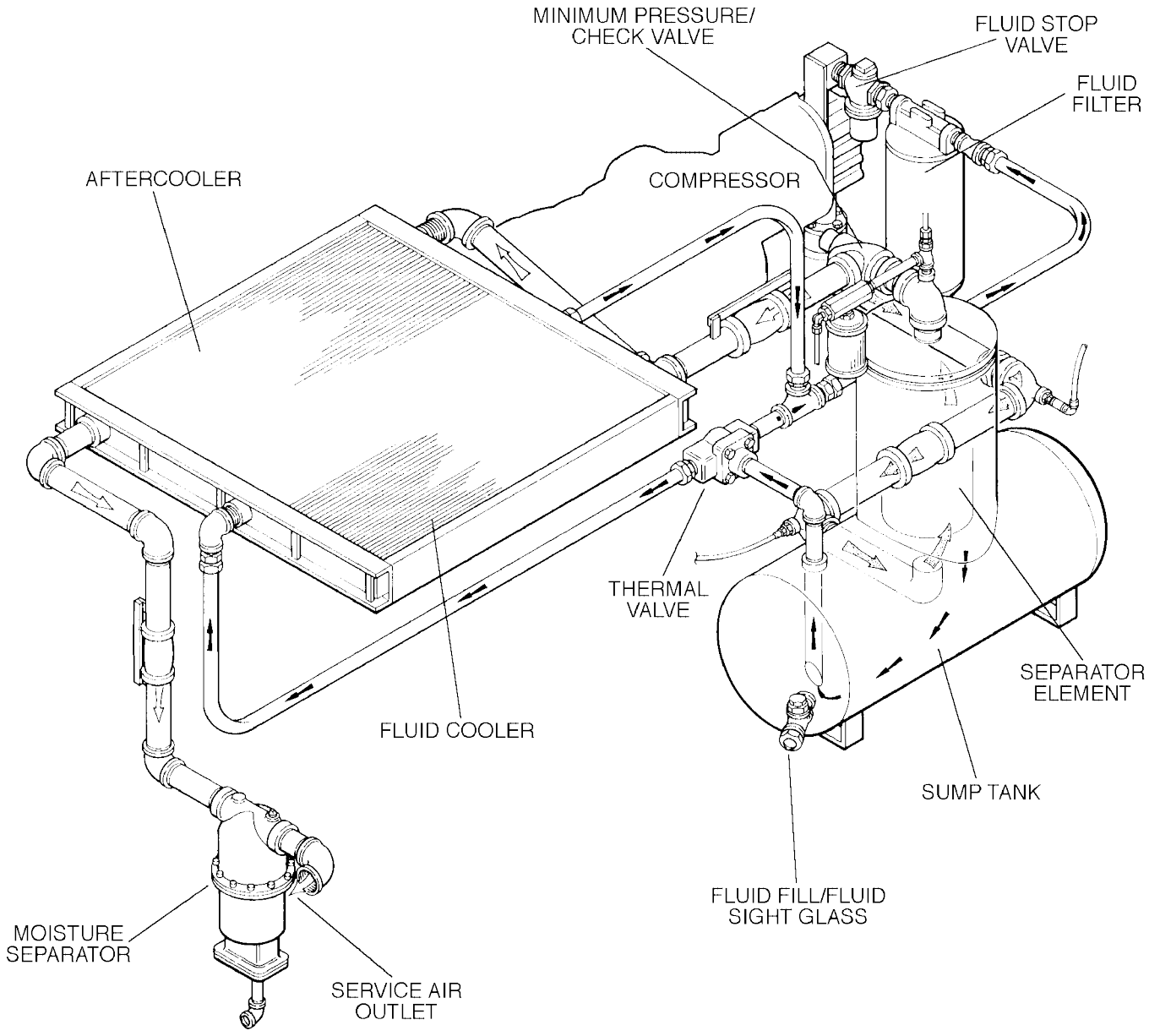
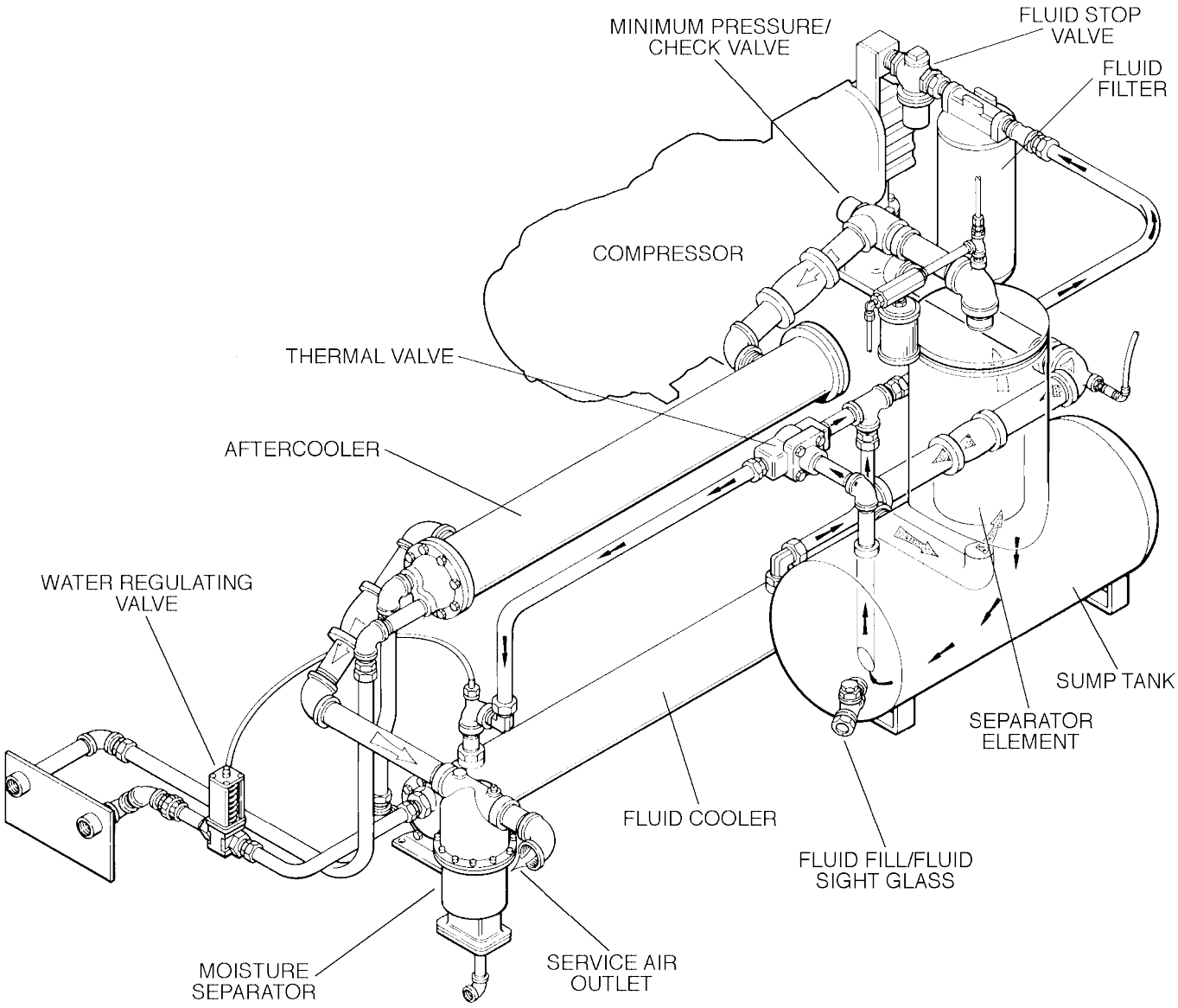


*Figure 2–3 Compressor Cooling and Lubrication and Discharge System (Water–cooled)*



Sight glasses are located in the return lines to observe this fluid flow. A gauge, located on the instrument panel, will be in the red zone when excessive pressure drop through the separator develops. At this time, separator element(s) replacement is necessary.

The receiver is an ASME pressure vessel. A combination minimum pressure/check valve, located downstream from the separator, assures a minimum receiver pressure of 50 psig (3.5 bar) during full load operation. This pressure is necessary for proper air/fluid separation and proper fluid circulation while supplying air to the system. This valve also acts as a check valve preventing compressed air in the service line from bleeding back into the receiver on shutdown and during operation on the compressor in an unloaded condition.

A pressure relief valve (located on the wet side of the separator) is set to open if the sump pressure exceeds 175 psig (12.1 bar).

All Sullair compressor models are equipped with a high pressure shutdown switch to shut down the compressor at 135 psig (9.3 bar). This prevents the pressure relief valve from opening under normal conditions, thereby preventing fluid loss through the pressure relief valve. A temperature switch will shut down the compressor if the discharge temperature reaches 240°F (116°C).

**⚠ WARNING**

**DO NOT remove caps, plugs, and/or other components when compressor is running or pressurized.**

**Stop compressor and relieve all internal pressure before doing so.**

Fluid is added to the sump via a capped fluid filler opening, placed low on the receiver tank to prevent overfilling of the sump. A sight glass enables the operator to visually monitor the sump fluid level.

## 2.6 CONTROL SYSTEM, FUNCTIONAL DESCRIPTION

Refer to Figure 2–4. The purpose of the compressor control system is to regulate the amount of air being compressed to match the amount of compressed air being used.

The **capacity control system** consists **of a Sullicon Control,** a **butterfly valve** (located on the compressor air inlet), a **spiral valve,** a **pressure switch**, two (2) **solenoid valve pressure regulators**, and two (2) **control line filters**. The functional description of the control system is described below in four distinct phases of compressor operation. The following applies to all TS–20 Series compressors. This description applies to any compressor with an operating range of 100 to 110 psi (6.9 to 7.6 bar). A compressor with any other pressure range would operate in the same manner except for the stated pressures.

**1. START MODE – 0 TO 50 PSIG (0 TO 3.5 BAR)**
When the compressor **START** button is depressed, the sump pressure will quickly rise from 0 to 50 psig (0 to 3.5 bar). During this period, the spiral valve fully closes, while the inlet butterfly valve fully opens. As a result, the compressor runs at full capacity.

**2. FULL LOAD MODE – 50 TO 100 PSI (3.5 TO 6.9 BAR)**
When the sump pressure rises above 50 psi (3.5 bar), the minimum pressure valve opens, allowing compressed air to flow into the service line. Both the spiral valve as well as the inlet butterfly valve remain in the full load position as long as the compressor is running at 100 psi (6.9 bar) or below.

**3. MODULATION MODE – 100 to 110 PSIG (6.9 TO 7.6 BAR)**
As air demand drops below the rated capacity of the compressor, the line pressure will rise above 100 psig (6.9 bar). As a result, the differential pressure regulator for the spiral valve gradually opens applying air pressure to the spiral valve actuator. Air pressure at the actuator assembly expands the diaphragm. The rack, which engages with the pinion mounted on the spiral valve shaft assembly, begins to stroke. This results in a rotary motion. As the spiral valve rotates, it starts opening the bypass ports gradually. Excess air is then being returned back to suction. Now the compressor is compressing only that amount of air which is being used. As air demand keeps on dropping further, the spiral valve opens gradually until all the bypass ports are fully open. At this point, the spiral valve has moved into the unload position.

The spiral valve provides a modulation range from 50 to 100%. During this period, the pressure rises approximately from 100 to 108 psi (6.9 to 7.5 bar). As the air pressure exceeds 108 psi (7.5 bar), the differential pressure regulator controlling the Sullicon Control opens. This allows the air pressure to the diaphragm chamber of the Sullicon Control which starts to close the inlet butterfly valve partially. The inlet butterfly valve provides modulating range from 40 to 50%. During this period, the pressure rises approximately from 108 to 110 psi (7.5 to 7.6 bar). Within this range, the spiral valve remains in the unload position.

**4. UNLOAD MODE – IN EXCESS OF 110 PSI (7.6 BAR)**
When a relatively small amount, or no air is being used, the service line pressure keeps on rising. When it exceeds 110 psig (7.6 bar), the air pressure switch opens de–energizing the solenoid valve. The line pressure through the solenoid valve holds inlet butterfly valve closed, and at the same time it opens the blowdown valve. Reduced sump pressure during blowdown results in low unload power consumption. While the compressor is running unloaded, the inlet butterfly valve remains in the un-

*Figure 2–4A Control System TS–20 (with Spiral Valve)*

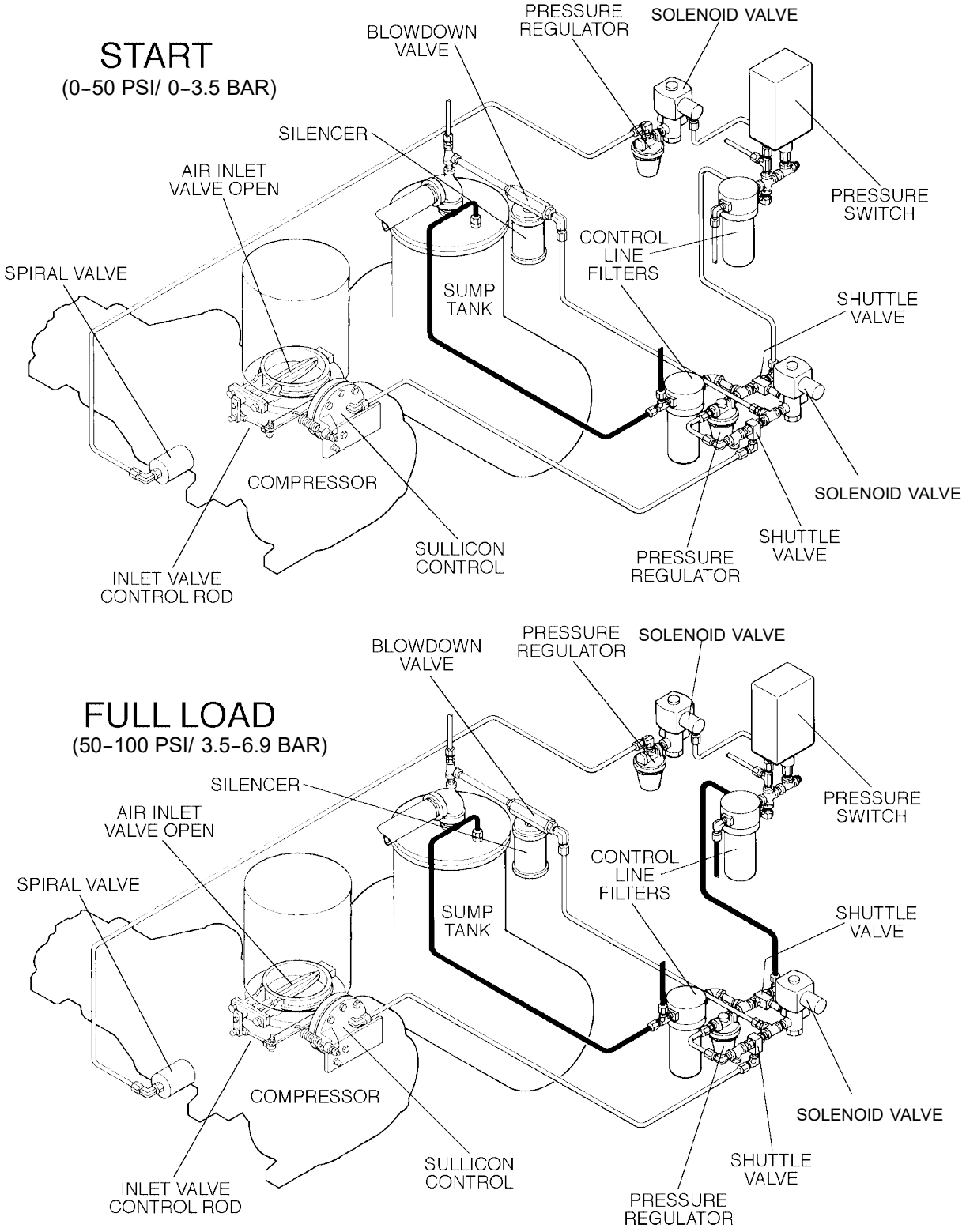
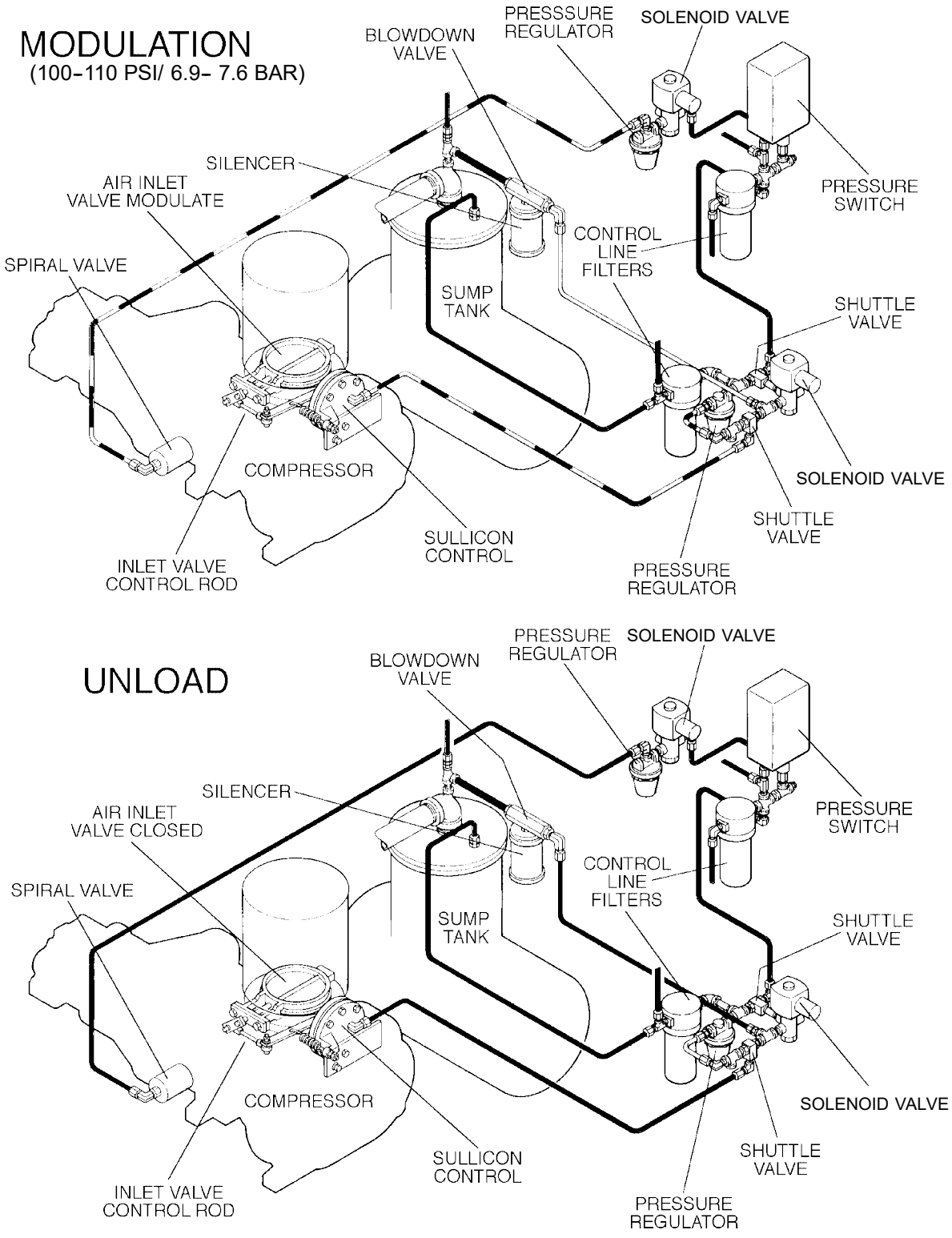


*Figure 2–4B Control System TS–20 (with Spiral Valve)*



load position. As the line pressure fluctuates between 100 and 110 psi (6.9 to 7.6 bar), the spiral valve will modulate.

When the line pressure falls to 100 psi (6.9 bar), due to an increase in the air demand, the air pressure switch closes. The solenoid valve is then energized allowing the air pressure behind the Sullicon Control to be vented through the solenoid valve exhaust port. The blowdown valve closes, and the inlet butterfly valve opens. Also at this time, the air pressure at the diaphragm of the spiral valve actuator has been released through a vent hole in the spiral valve differential pressure regulator. This allows the spiral valve to close as a result of the movement of the rack and pinion. The compressor is now running again in full load mode. The spiral valve as well as the inlet butterfly valve are in full load position.

For a compressor with varied periods of time when there are no air requirements, a “Dual Control” option is available. This option allows you to set the compressor in an automatic position whereby the compressor will shut down (time delayed) when no compressed air requirement is present and restart as compressed air is needed.

### 2.7 AIR INLET SYSTEM, FUNCTIONAL DESCRIPTION

Refer to Figure 2–5. The compressor inlet system consists of a **dry–type air filter**, a **restriction gauge** and an **air inlet valve**.

The **restriction gauge**, located on the compressor instrument panel, indicates the condition of the air filter. When the pointer reaches the red zone, filter maintenance is required.

The **butterfly–type air inlet valve** directly controls the amount of air intake by the compressor in response to the operation of the Sullicon Control (See Section 2.6).

### 2.8 INSTRUMENTATION, FUNCTIONAL DESCRIPTION

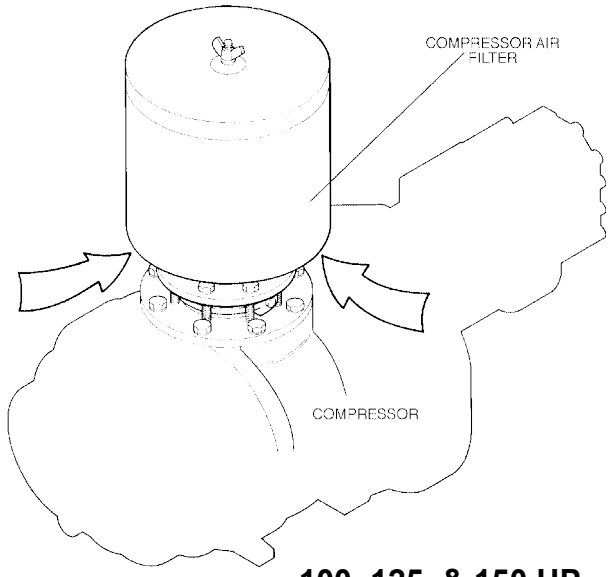
Refer to Figure 2–6 for specific location of parts described. The panel group consists of a number of gauges, buttons and status indicator lights. Refer to Figure 2–6 as you read this segment. Locate the following: **line pressure, sump pressure** and **discharge temperature gauges** and the **air filter, separator** and **fluid filter restriction gauges**, along with **start** and **stop buttons** and an **hourmeter**.

Refer to Figure 2–7 for functional locations of the following indicators and controls:

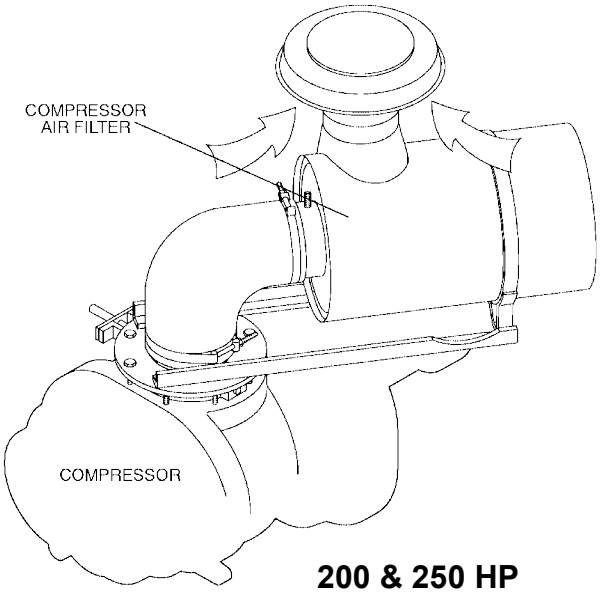
• The **line (terminal) pressure gauge** is connected to the dry side of the receiver downstream from the check valve. It continually monitors the air pressure.

• The **sump pressure gauge** continually monitors the sump pressure at the various load and/or unload conditions.

*Figure 2–5 Compressor Air Inlet System*




**100, 125, & 150 HP (75, 93, & 112 kW)**



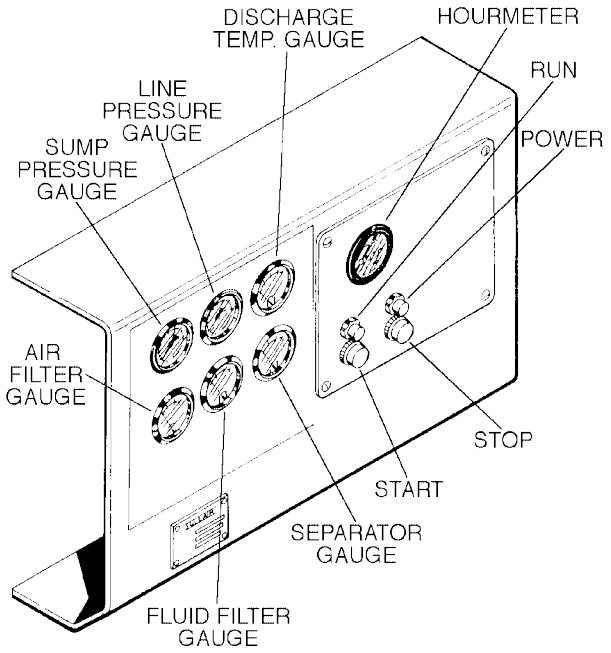

**200 & 250 HP (150 & 187 kW)**

• The **discharge temperature gauge** monitors the temperature of the air leaving the compressor unit.

• The **air filter restriction gauge** monitors the condition of the air intake filter. When pointer reaches the red zone, filter service is required (see Figure 2–6).

• The **start** pushbutton turns the compressor on and resets the compressor.

*Figure 2–6 Instrument Panel Group*




• The **stop** pushbutton turns the compressor off.

• The **hourmeter** records cumulative hours of operation of the compressor. It is useful for planning and logging service operations.

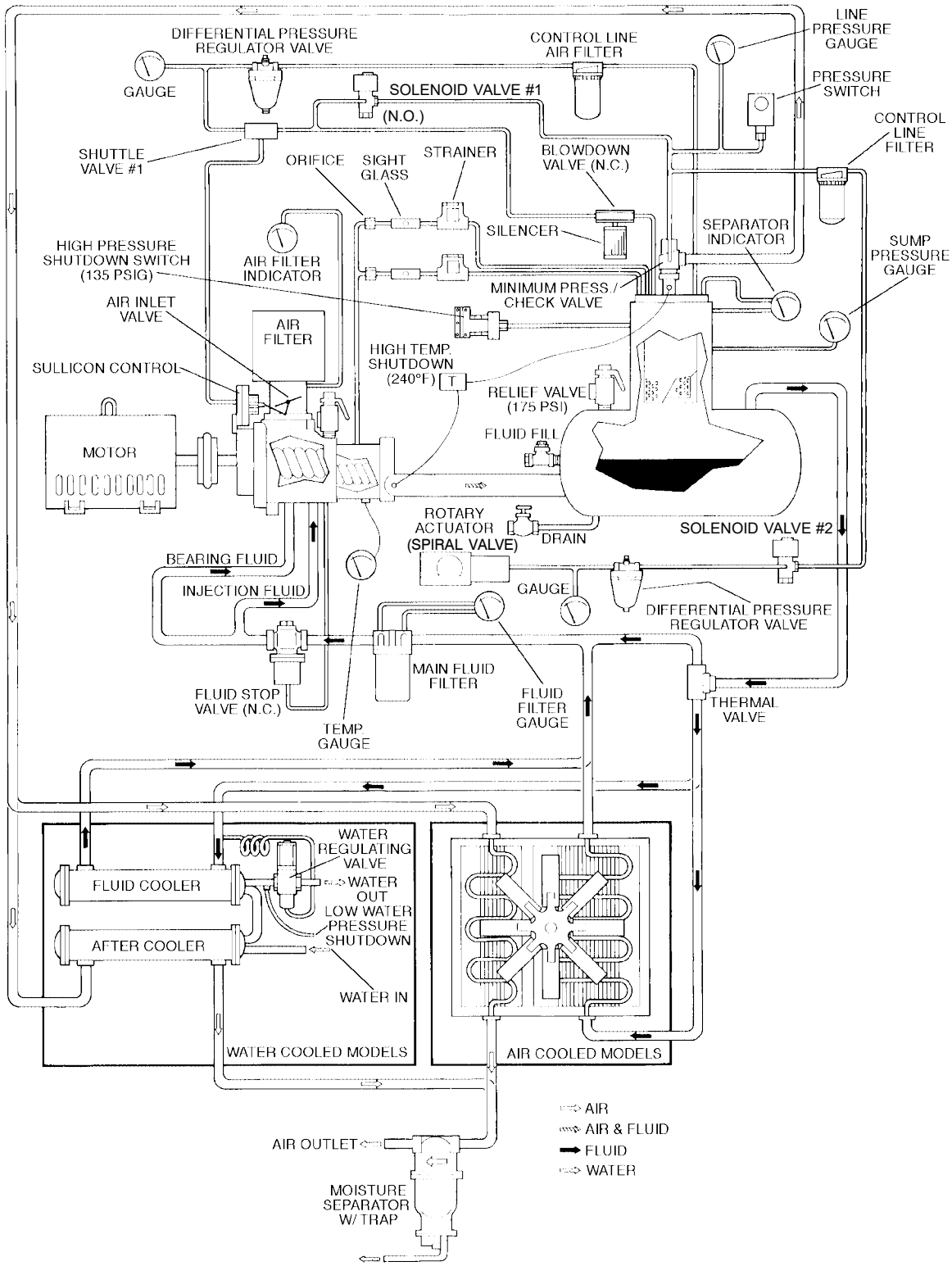
• The **separator maintenance gauge** monitors the condition of the separator elements. Pointer will move into the red zone when the elements should be replaced. This gauge is automatically reset after the elements have been replaced.

• The **fluid filter maintenance gauge** monitors the condition of the fluid filter element. Pointer will move into the red zone when the element should be replaced. This gauge is also automatically re–set after elements have been changed (for fluid filter location see Figure 2–3).

• The **red light** on the instrument panel indicates when power to the compressor is supplied.

• The **green light** indicates when the compressor is running.

*Figure 2–7 Piping and Instrument Diagram*



### 3.1 SULLAIR TS–20 SPECIFICATIONS

| 50 Hz Model | | | | DIMENSIONS | | | |
|---|---|---|---|---|---|---|---|
| TS-20 | KW | $M^3$/MIN | BAR | LENGTH (MM) | WIDTH (MM) | HEIGHT (I) (MM) | WEIGHT (II) (KG) |
| **100L** | 75 | 15 | 7.5 | 3048 | 1829 | 1727 | 3674 |
| **100H** | 75 | 14.1 | 8.5 | 3048 | 1829 | 1727 | 3674 |
| **100HH** | 75 | 12.1 | 10 | 3048 | 1829 | 1727 | 3674 |
| **125L** | 93 | 19.5 | 7.5 | 3048 | 1829 | 1727 | 3719 |
| **125H** | 93 | 17.8 | 8.5 | 3048 | 1829 | 1727 | 3719 |
| **125HH** | 93 | 16.4 | 10 | 3048 | 1829 | 1727 | 3719 |
| **150L** | 112 | 22.3 | 7.5 | 3048 | 1829 | 1727 | 3810 |
| **150H** | 112 | 20.5 | 8.5 | 3048 | 1829 | 1727 | 3810 |
| **150HH** | 112 | 19.5 | 10 | 3048 | 1829 | 1727 | 3810 |
| **200H** | 150 | 26.6 | 8.5 | 3048 | 1829 | 1727 | 3900 |
| **200HH** | 150 | 25.6 | 10 | 3048 | 1829 | 1727 | 3900 |

| 60 Hz Model | | | | DIMENSIONS | | | |
|---|---|---|---|---|---|---|---|
| TS-20 | HP | ACFM | PSIG | LENGTH (IN.) | WIDTH (IN.) | HEIGHT (I) (IN.) | WEIGHT (II) (LBS.) |
| **100L** | 100 | 560 | 110 | 120 | 72 | 68 | 8100 |
| **100H** | 100 | 515 | 125 | 120 | 72 | 68 | 8100 |
| **125L** | 125 | 694 | 110 | 120 | 72 | 68 | 8200 |
| **125H** | 125 | 635 | 125 | 120 | 72 | 68 | 8200 |
| **150L** | 150 | 827 | 110 | 120 | 72 | 68 | 8400 |
| **150H** | 150 | 755 | 125 | 120 | 72 | 68 | 8400 |
| **200L** | 200 | 1041 | 110 | 120 | 72 | 68 | 8600 |
| **200H** | 200 | 965 | 125 | 120 | 72 | 68 | 8600 |
| **250L** | 250 | 1142 | 110 | 120 | 72 | 68 | 8800 |

**(I)** 78in./198 cm required to service separator filter elements.
**(II)** With enclosure.

| **COMPRESSOR:** | **STANDARD MODELS** |
|---|---|
| Type: | Rotary Screw |
| Standard Operating Pressure **(III)** : | See Specifications |
| Bearing Type | Anti–Friction |
| Ambient Temperature (Max.) **(IV)** : | 105°F (41°C) |
| Cooling: | Pressurized Fluid |
| Lubricant: | Sullube 32 |
| Sump Capacity: | 30 gallons (114 liters) |
| Control: | Electro–Pneumatic |

| **MOTOR: (50 Hz Compressors)** | **STANDARD MODELS** |
|---|---|
| Size: | 100 – 150 HP/75 – 112KW |
| Type: | Open Dripproof, Three Phase, 50 Cycles A.C., 105°F (41°C) Maximum Ambient Temperature |
| Starter: | 380/415V Full Voltage Magnetic |
| Speed: | 1500 RPM |

**(III)** Special compressors are available for operation at higher pressures.
**(IV)** Special compressors are available for operation in higher ambient temperatures.

Section 3
# SPECIFICATIONS

**MOTOR: (60 Hz Compressors)**

| | **STANDARD MODELS** |
|---|---|
| Size: | 100 – 250 HP/75 – 187KW |
| Type: | Open Dripproof, 460V, A.C., Three Phase, 60 Cycles<br>105°F (41°C) Maximum Ambient Temperature, TEFC also Available |
| Starter: | 460V Full Voltage Magnetic<br>Options Available: 200 to 230 and 575V |
| Speed: | 1770 RPM |

## 3.2 LUBRICATION GUIDE–STANDARD COMPRESSORS

Sullair TS–20 compressors are filled with Sullube 32.

**⚠ WARNING**

**Mixing of other fluids within the compressor will voild all warranties.**

Sullube 32 fluid should be changed every 8000 hours or once a year, whichever occurs first. The fluid should be changed more frequently under severe operating conditions, such as high ambient temperatures coupled with high humidity, high particulate level, corrosive or strong oxidizing gases are present in the air.

Maintenance of all other components is still recommended as indicated in the Operator's Manual.

**APPLICATION GUIDE**

Sullair encourages the user to participate in a fluid analysis program with the fluid suppliers. This could result in a fluid change interval differing from that stated in the manual.

For more information on a fluid analysis program, contact your local Sullair representative or the Sullair Factory Service Department.

**⚠ WARNING**

**"The Plastic Pipe Institute recommends against the use of thermoplastic pipe to transport compressed air or other compressed gases in exposed above ground locations, e.g. in exposed plant piping." (I)**

**Sullube 32 should not be used with PVC piping systems. It may affect the bond at cemented joints. Certain other plastic materials may also be affected.**

**(I) Plastic Pipe Institute, Recommendation B, Adopted January 19, 1972.**

## 4.1 MOUNTING OF COMPRESSOR

A foundation or mounting capable of supporting the weight of the compressor, and rigid enough to maintain the compressor frame level and the compressor in alignment is required. The compressor frame must be leveled and secured with foundation bolts, and full uniform contact must be maintained between the frame and foundation. The compressor unit and driver must be aligned after installation as specified in the Operator's Manual. No piping loads shall be transmitted to the compressor at the external connections.

## 4.2 VENTILATION AND COOLING

For air–cooled compressors, select a location to permit sufficient unobstructed air flow in and out of the compressor cooling package to keep the operating temperature stable. The minimum distance that the compressor should be from surrounding walls is three (3) feet (91.4cm). To prevent excessive ambient temperature rise, it is imperative to provide adequate ventilation.

For water–cooled compressors, it is necessary to check the cooling water supply. The water system must be capable of supplying the following flows:

| WATER TEMP. °F (°C) | WATER FLOW (TYPICAL) (GPM/LPM) 100HP 75KW | 125HP 93KW | 150HP 112KW | 200HP 150KW | 250HP 187KW |
|---|---|---|---|---|---|
| 70 (21) | 14.0/15.3 | 17.5/66 | 21.0/79.5 | 40/151 | 49/185 |
| 80 (27) | 18.75/71 | 23.5/89 | 28.0/106 | 44/166 | 54/204 |

(Water pressure should be between 25 and 75 psig (1.7 and 5.2 bar).

Table 1 below indicates the ventilation requirements necessary to keep the compressor running at a normal operating temperature. The fan air requirement is the volume of air which must blow through the compressor for proper ventilation. The specified heat rejection requirement is the amount of heat that is radiated by the compressor. This heat must be removed to assure a normal operating temperature. With air–cooled compressors it is possible to use this heat for space heating, providing excessive pressure drop is not created across the fan. Consult a Sullair office for assistance in utilizing this heat.

**DO NOT** install a water–cooled or an air–cooled/aftercooled compressor without adequate freeze protection where it will be exposed to temperature less than 32°F(0°C).

## 4.3 SERVICE AIR PIPING

Service air piping should be installed as shown in Figure 4–1. A shut–off valve should be installed to isolate the compressor from the service line if required. Also notice that the service line should be equipped with water legs and condensate drains throughout the system.

**⚠ WARNING**

**"The Plastic Pipe Institute recommends against the use of thermoplastic pipe to transport compressed air or other compressed gases in exposed above ground locations, e.g. in exposed plant piping." (I)**

**Sullube 32 should not be used with PVC piping systems. It may affect the bond at cemented joints. Certain other plastic materials may also be affected.**

**(I) Plastic Pipe Institute, Recommendation B, Adopted January 19, 1972.**

## 4.4 COUPLING ALIGNMENT CHECK

In preparation for the factory test, the coupling supplied with your compressor is properly aligned for operation. However, due to shipping and handling, it is necessary to recheck the coupling alignment. Refer to Coupling Alignment procedure explained in the Maintenance Section of this manual.

## 4.5 FLUID LEVEL CHECK

Your air compressor is also supplied with the proper amount of fluid. However, it is necessary to check the fluid level at installation. The level is checked by looking at the sight glass located on the sump. If the sump is properly filled, the coolant level should fill the sight glass.

## 4.6 ELECTRICAL PREPARATION

Interior electrical wiring is performed at the factory. Any other wiring should be performed by a qualified electrician and in full compliance with OSHA, National Electrical code and/or any applicable Federal, State and Local codes, standards and regulations concerning isolation switches, fuse disconnects etc. Customer wiring is very minimal. Sullair provides a wiring diagram for use by the installer.

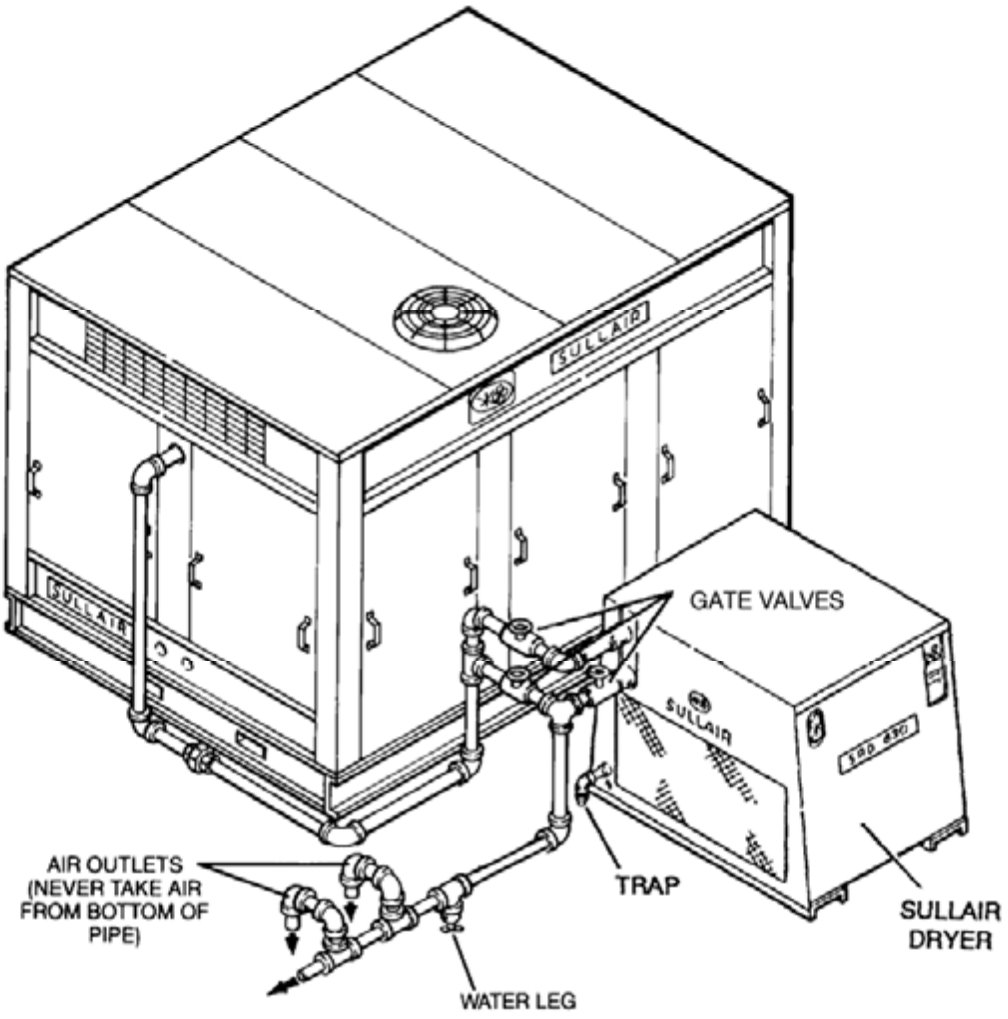
A few electrical checks should be made for a trouble–free start–up.

**TABLE 1 VENTILATION REQUIREMENTS (TYPICAL)**

| Cooling Type | Air–cooled | | | | | Water–cooled | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Motor HP/KW:** | 100/75 | 125/93 | 150/112 | 200/150 | 250/187 | 100/75 | 125/93 | 150/112 | 200/150 | 250/187 |
| **Vent Fan Flow CFM/ $M^3$/MIN:** (I) | 13,000/368 | 14,500/411 | 14,500/411 | 19,000/538 | 19,000/538 | 2,370/67 | 2,370/67 | 2,370/67 | 2,370/67 | 2,370/67 |
| **Heat Rejection BTU/Hour** | 285,100 | 353,940 | 412,500 | 545,040 | 699,875 | 22,410 | 28,110 | 33,610 | 50,390 | 55,990 |
| **KCAL/HR:** | 71848 | 89196 | 103954 | 137355 | 176375 | 5648 | 7084 | 8470 | 12700 | 14110 |

(I) Applies to compressors with canopy only (vent fan).

*Figure 4 – 1 Service Air Piping (Typical Installation)*




**⚠ DANGER**

**Lethal shock hazard inside.**

**Disconnect all power at source before opening or servicing starter or control panel.**

1. Check incoming voltage. Be sure that the incoming voltage is the same voltage that the compressor was wired for.
2. Check starter and overload heater sizes (see electrical parts in Parts Manual).
3. Check all electrical connections for tightness.
4. "DRY RUN" the electrical controls by disconnecting the three (3) motor leads from the starter. Energize the control circuits by pushing the START button and check all protective devices to be sure that they will de – energize the starter coil when activated.
5. Re – connect the three (3) motor leads and jog the motor for a direction of rotation check, as explained in Section 4.7.

## 4.7 MOTOR ROTATION DIRECTION CHECK

After the electrical wiring has been done, it is necessary to check the direction of the motor rotation. This can be done by jogging the **START** and **STOP** buttons on the instrument panel. When looking at the motor from the end opposite the compressor unit, the shaft should be turning clockwise. If the motor shaft is not turning in the proper direction, disconnect the power to the starter and exchange any two of the three power input leads, then re – check rotation. A "Direction of Rotation" decal is located on the coupling guard between the motor and compressor to show proper motor/compressor rotation.

## 5.1 GENERAL

While Sullair has built into this compressor a comprehensive array of controls and indicators to assure you that it is operating properly, you will want to recognize and interpret the reading which will call for service or indicate the beginning of a malfunction. Before starting your Sullair compressor, read this section thoroughly and familiarize yourself with the controls and indicators – their purpose, location and use.

## 5.2 PURPOSE OF CONTROLS

| CONTROL OR INDICATOR | PURPOSE |
|---|---|
| START PUSHBUTTON | Depress to turn the compressor ON. |
| STOP PUSHBUTTON | Depress to turn the compressor OFF. |
| HOURMETER | Records cumulative hours of compressor operation; useful for planning and logging service schedules. |
| LINE PRESSURE GAUGE | Continually monitors service line air pressure. Located on dry side of receiver downstream from check valve. |
| SUMP PRESSURE GAUGE | Continually monitors receiver/sump pressure at various load and/or unloaded conditions. |
| DISCHARGE TEMPERATURE GAUGE | Monitors temperature of the air leaving the compressor unit. For both air and water–cooled compressors, the normal reading should be approximately 180°F to 205°F (82°C to 96°C ) for ambient temperatures up to 105° F. |
| FLUID FILTER MAINTENANCE GAUGE | Indicates when a fluid filter element change is required. It shows red when the pressure drop through the filter is excessive. |
| SEPARATOR MAINTENANCE GAUGE | Indicates when separator element change is required. It shows red when pressure drop through the separator is excessive. |
| “POWER ON” LIGHT (RED) | Indicates when the starter is energized. |
| “RUNNING” LIGHT (GREEN) | Indicates when compressor is in operation. |
| FLUID LEVEL SIGHT GLASS | Monitors fluid level in the sump. Proper level should fill the sight glass. Check the level when the compressor is shut down. **DO NOT OVERFILL**. |
| SEPARATOR RETURN LINE SIGHT GLASSES | Used to indicate fluid flow in the return lines. When the compressor is running at full load, fluid flow should be visible in these sight glasses. There may be little or no flow when the compressor is running unloaded, but a sluggish flow at full load indicates a need to clean the return line strainers. |
| FLUID STOP VALVE | Cuts off flow of fluid to compressor unit at compressor shut–down and allows flow of fluid to the unit on start–up. |
| DISCHARGE CHECK VALVE | Cuts off the reverse flow of air/fluid mixture through compressor discharge system at compressor shutdown. |
| THERMAL VALVE | Regulates the flow of fluid to and around the cooler. Designed to maintain a minimum operating temperature of 170°F (77°C); used for fast warm–up on start–up. |

### 5.2 PURPOSE OF CONTROLS (continued)

| CONTROL OR INDICATOR | PURPOSE |
|---|---|
| MINIMUM PRESSURE/CHECK VALVE | Maintains minimum of 50 psig (3.5 bar) in the compressor sump when the compressor is loaded. Valve piston restricts receiver air discharge from receiver/sump when pressure falls to 40 psig (2.8 bar). Prevents line pressure backflow into the sump during unload conditions and after shutdown. |
| COMPRESSOR DISCHARGE TEMPERATURE SWITCHES | Designed to shut the compressor down when the discharge temperature reaches 240°F (116°C). |
| HIGH PRESSURE SHUTDOWN SWITCH | An added protective device designed to shut down the compressor when the pressure becomes too high. This switch is set for shut–down at approximately 135 psi (9.3 bar). |
| WATER PRESSURE SWITCH (water–cooled compressors only) | Prevents compressor operation if water pressure is insufficient. |
| PRESSURE RELIEF VALVE | Opens sump pressure to the atmosphere should pressure inside the sump become too high (175 psi [12.1 bar]). Operation of this valve indicates that the high pressure switch is either faulty or out of adjustment. |
| SULLICON CONTROL | Regulates the amount of air allowed to enter the air inlet valve. This regulation is determined by the amount of air being used at the service line. |
| PRESSURE REGULATOR (SULLICON) | Opens a pressure line between the sump and Sullicon Control allowing the Sullicon Control to regulate air delivery according to the air demand. |
| PRESSURE REGULATOR (SPIRAL VALVE) | Opens a pressure line between the service line and the spiral valve actuator allowing the spiral valve to regulate air delivery according to air demand. |
| SOLENOID VALVE | Bypasses the pressure regulator valve causing the Sullicon Control to hold the inlet valve closed when the compressor reaches maximum operating pressure. |
| PRESSURE SWITCH | Senses service line pressure. When line pressure reaches maximum setting the pressure switch signals the solenoid valve to unload the compressor. |
| BLOWDOWN VALVE | Vents sump pressure to the atmosphere during unload conditions and shutdown. |
| WATER REGULATING VALVE (water–cooled only) | Regulates the amount of cooling water used in the wacooler to keep the compressor running at a normal operating temperature. |

### 5.3 INITIAL START–UP PROCEDURE

The following procedure should be used to make the initial start–up of the compressor:

1. Read the preceding pages of this manual thoroughly.
2. Be sure that all preparations and checks described in the Installation Section have been made.
3. Crack open the shut off valve to the service line.
4. Start the compressor by pushing the START button.
5. Check for possible leaks in piping.
6. Slowly close the shut–off valve and check that the setting on the pressure switch is set correctly. If set correctly, the compressor will unload at the desired unload pressure. If adjustments are necessary, see Control System Adjustments in the Maintenance Section of the manual.

7. Observe the operating temperature. If the operating temperature exceeds 205°F (96°C), the cooling system or installation environment should be checked.
8. Observe return line sight glasses and maintenance indicators.
9. Open shut–off valve to service line.
10. Reinspect the compressor for temperature and leaks the following day.

**5.4 SUBSEQUENT START–UP PROCEDURE**

On subsequent start–ups, check that the proper level is visible in the fluid sight glass and press the **START** button. When the compressor is running, observe the instrument panel and maintenance indicators.

**5.5 SHUTDOWN PROCEDURE**

To shut the compressor down, press the **STOP** button.

# NOTES

### 6.1 GENERAL

As you proceed in reading this section, it will be easy to see that the Maintenance Program for the air compressor is quite minimal yet important. The use of the service indicators provided for the fluid filter, air filter and fluid separator will alert you when service maintenance is required. When the maintenance gauge shows red, maintenance for that specific item is required. See instructions for each item in Section 6.7, Parts Replacement and Adjustment Procedures.

### 6.2 DAILY OPERATION

Prior to starting the compressor, it is necessary to check the fluid level in the sump. Should the level be low, simply add the necessary amount. Frequent fluid additions to maintain correct level would be indicative of excessive fluid consumption, and should be investigated – see the Troubleshooting Section of this manual for probable cause and remedy.

After a routine start has been made, observe the instrument panel gauges and be sure they monitor the correct readings for that particular phase of operation. After the compressor has warmed up, it is recommended that a general check of the overall compressor and instrument panel be made to assure that the compressor is running properly.

**⚠ WARNING**

**DO NOT remove caps, plugs, and/or other components when compressor is running or pressurized.**

**Stop compressor and relieve all internal pressure before doing so.**

### 6.3 MAINTENANCE AFTER INITIAL 50 HOURS OF OPERATION

After the initial 50 hours of operation, a few maintenance requirements are needed to rid the system of any possible foreign materials. Perform the following maintenance operations to avoid operational problems:

1. Clean the return line strainers.
2. Clean the return line orifices.
3. Clean the compressor unit gear housing, bearing and shaft seal orifices.
4. Change the fluid filter element.
5. Clean the control line filters.

### 6.4 MAINTENANCE AFTER 1000 HOURS

After 1000 hours of operation, it will be necessary to perform the following:

1. Clean the return line strainers.
2. Lubricate the Sullicon Control linkage.
3. Replace the fluid filter element.
4. Clean the control line filters.

### 6.5 FILTER MAINTENANCE

Replace the fluid filter under any of the following conditions:

1. As indicated by the maintenance gauge.
2. Every 1000 hours.
3. Every 6 months.
4. Every fluid change.

### 6.6 SEPARATOR MAINTENANCE

Replace the separator elements when your separator maintenance gauge shows red or after one (1) year, whichever comes first. The separator elements must be replaced. **DO NOT** clean the separator elements.

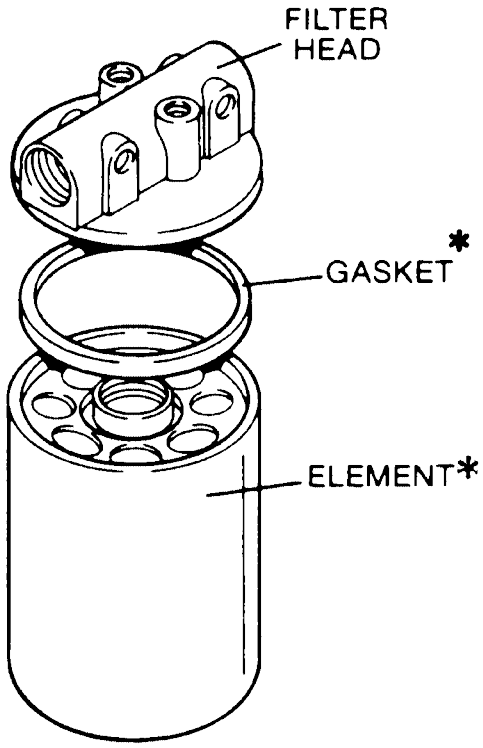
### 6.7 PARTS REPLACEMENT AND ADJUSTMENT PROCEDURES

**FLUID FILTER ELEMENT REPLACEMENT (100–150HP/75–112KW)**

Refer to Figure 6–1.

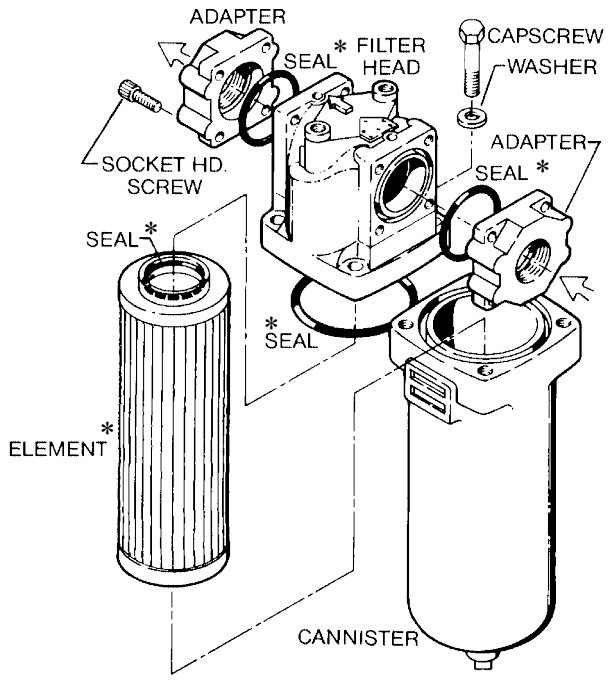
1. Using a strap wrench, remove the old element and gasket.
2. Clean gasket seating surface.
3. Apply a light film of fluid to the new gasket.
4. Hand–tighten new element until new gasket is seated in the gasket groove.

*Figure 6–1 Compressor Fluid Filter (P/N 250025–522)(100–150HP/75–112KW)*




* Replacement Element Kit P/N 250025–526

*Figure 6–2 Compressor Fluid Filter (P/N 250007–219) 200 & 250HP/150 & 187KW)*




* Replacement element kit P/N 250008–956

5. Continue tightening element by hand an additional 1/2 to 3/4 turn.
6. Re–start the compressor and check for leaks.

**⚠ CAUTION**

**To minimize the possibility of filter element rupture, it is important that ONLY replacement elements identified with the Sullair name, logo and appropriate part numbers be used, and that substitute elements NOT be used, due to the fact that such filters may have inadequate or questionable working pressure ratings.**

### FLUID FILTER REPLACEMENT (200 & 250HP/150 & 187KW)

Refer to Figure 6–2. The main filter (P/N 250007–219) is located schematically between the compressor cooler and the compressor injection port. When servicing the main filter, shut the compressor down and follow the instructions below. For element replacement order kit number 250008–956.

**⚠ CAUTION**

**To minimize the possibility of filter element rupture, it is important that ONLY replacement elements identified with the Sullair name, logo and appropriate part numbers be used, and that substitute elements NOT be used, due to the fact that such filters may have inadequate or questionable working pressure ratings.**

1. Remove the four (4) capscrews which secure the filter head to the canister.
2. Pull the canister away from the filter head. The filter element will be attached to the head.
3. Separate the element from the canister.
4. Remove the canister seal.
5. Thoroughly clean the filter head and canister in solvent.
6. Lubricate the new seals with the same type of fluid used in the compressor and position each seal in its appropriate place.
7. Carefully push the element back into position on the filter head.
8. Hold the canister in position under the housing and replace the capscrews, securing the canister and filter head.

### AIR FILTER MAINTENANCE 100–150HP/75–112KW

Refer to Figure 6–3. Air filter (P/N 408399) maintenance should be performed when the maintenance gauge is showing red or once a year, whichever occurs first. If the filter needs to be replaced, order element no. 405158. Below you will find procedures on how to replace the air filter element.

### AIR FILTER ELEMENT REPLACEMENT

1. Clean the exterior of the air filter housing.
2. Remove the air filter cover by loosening the wing bolt securing the cover.
3. Remove element and clean interior of housing using a damp cloth. **DO NOT** blow dirt out with compressed air.
4. At this time, replace the element.
5. Re–assemble in reverse order of the disassembly.

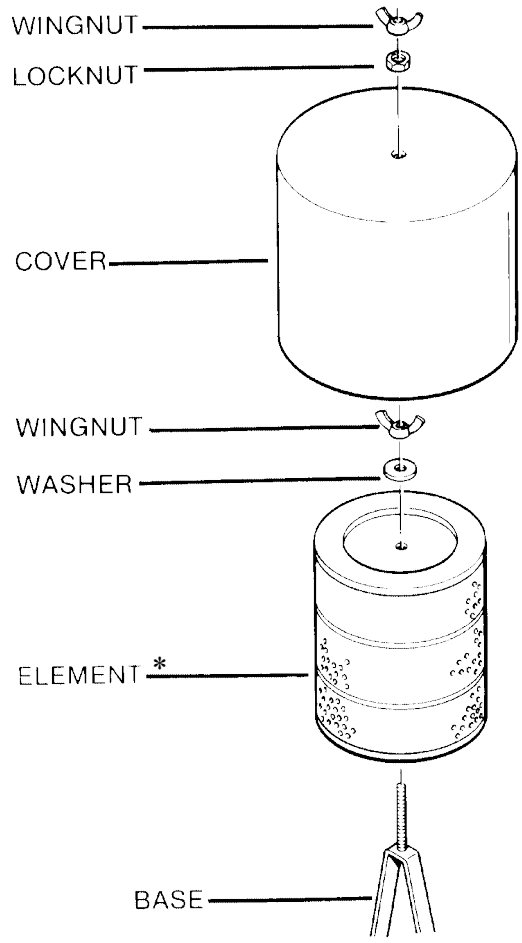
### ELEMENT INSPECTION

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

### AIR FILTER MAINTENANCE (200 & 250HP/150 & 187KW)

Refer to Figure 6–4. Air filter (P/N 048456) maintenance should be peformed when the air filter main-

*Figure 6–3 Air Filter (P/N 408399)*
*(100,125 & 150HP/75, 93 & 112KW)*




* Replacement Element Kit P/N 405158

tenance indicator shows red. The maintenance indicator is located on the filter outlet. The air filter is equipped with a primary element and a secondary element. As previously stated, the restriction indicator will alert you as to when primary element maintenance is necessary. When removing the primary element, always check the secondary element for visible dirt, grease or damage. The secondary element must be changed after every third element change or once a year, whichever comes first.

**DO NOT** reconnect the secondary element once it is removed.

**ELEMENT REMOVAL**

1. Clean the exterior of the air filter housing.
2. Remove the cover assembly by loosening the wingnut securing the cover clamp.
3. Remove the element assembly from the housing by unscrewing the wingnut.
4. Clean the interior of the housing by using a damp cloth. **DO NOT** blow dirt with compressed air as this may introduce dust downstream.
5. Inspect the secondary element restriction indicator. Replacement element if necessary.
6. To remove the secondary element, unscrew the secondary restriction indicator from the threaded rod running through the element. Pull the element out of the housing.
7. Install the new secondary element and replace the restriction indicator.
8. With the secondary element in place, replace the primary element.

**ELEMENT INSPECTION**

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

**PRIMARY ELEMENT REPLACEMENT**

1. Place the element in position on the cover and replace the lockring to secure the cover and element.
2. Install the cover/element assembly and replace the wingnut. Tighten the wingnut so to fully seat the element gasket.

**SEPARATOR ELEMENTS REPLACEMENT**

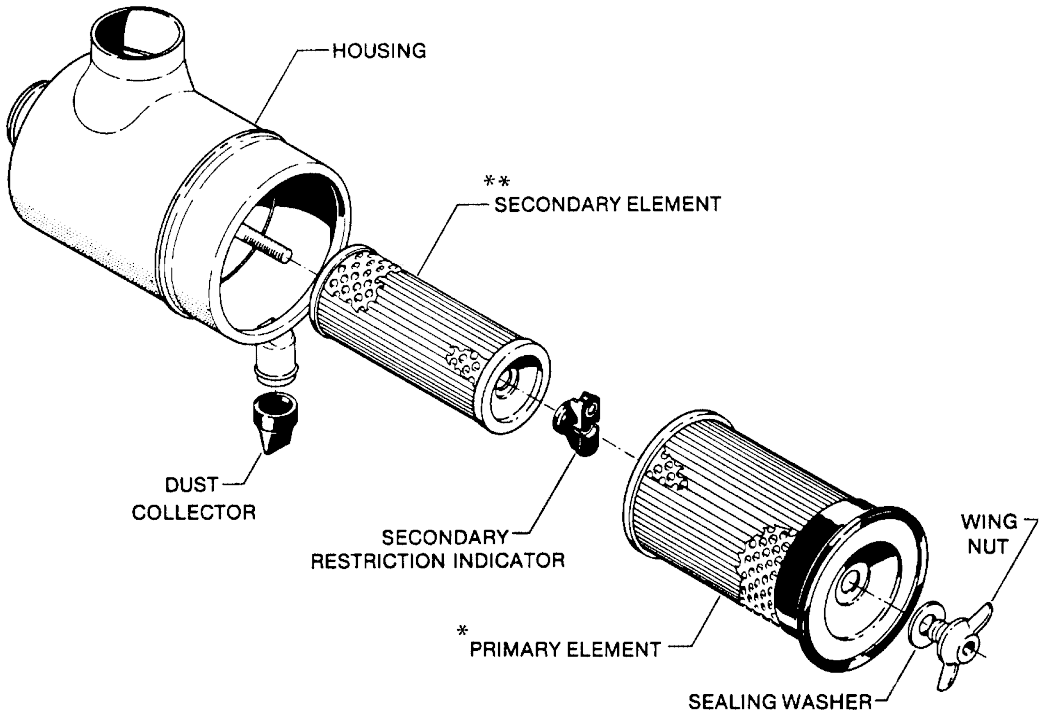
Refer to Figure 6–5. The separator elements must be changed when the maintenance gauge is showing red, or once a year whichever occurs first. Order separator elements no. 250034–121 (primary) and no. 250034–134 (secondary). Follow the procedure explained below for separator element replacement.

**⚠ WARNING**

**Relieve all pressure from the separator and all compressor lines prior to disconnecting any pipes, tubing, etc.**

1. Disconnect all piping connected to the separator cover to allow removal (return lines, service lines, etc.).
2. Loosen and remove the twelve (12) hex head 3/4" x 2 1/2"capscrews from the cover plate.
3. Lift the cover plate from the sump.
4. Remove the primary and secondary separator elements.
5. Scrape the old gasket material from the cover and flange on the sump being careful not to let the scraps fall in the sump.
6. Inspect the receiver/sump for rust, dirt, etc.
7. **DO NOT** remove grounding staples from the gaskets. **DO NOT** use any type of gasket eliminator.

*Figure 6–4 Air Filter (P/N 048456) 200 & 250HP/150 & 187KW*




* Replacement Element Kit P/N 048462 (primary)
** Replacement Element Kit P/N 048463 (secondary)

Re–insert the separator element with the gaskets attached into the sump taking care not to dent it against the tank opening.

8. Clean the underside of the receiver/sump tank lid and remove any rust. Paint surface with an epoxy paint as required.
9. Replace the cover plate, washers and capscrews. Torque to 200 ft.–lbs. (272 Nm).
10. Re–connect all piping making sure return line tubes extend to the bottom or 1/4" (6mm) above the bottom of the separator element. This will assure proper fluid return flow to the compressor.
11. Check the return line strainer before re–starting the compressor.

**CONTROL SYSTEM ADJUSTMENT**

Refer to Figures 6–6 and 6–7. Prior to adjusting the control system, it is necessary to determine the desired operating pressure range and also the maximum pressure at which your compressor is to operate. **(The pressure must not exceed the maximum operating pressure which is stamped on the compressor serial number nameplate).** The following explanation applies to a typical installation with a desired operating range of 100 to 110 psi (6.9 to 7.6 bar). This information applies to a compressor with any other operating range except for the stated pressures.

With the shut–off valve closed or slightly cracked open, start the compressor. Observe the line pressure gauge and pressure switch contacts. When the line pressure reaches the desired unload (maximum) pressure, the pressure switch contacts should open. If the pressure switch contacts **DO NOT** open, or they open prior to the desired pressure, the pressure switch setting will require adjustment (refer to Figure 6–6).

**⚠ DANGER**

**DO NOT touch the electrical contacts, terminal or leads with any metallic object. Severe electrical shock may occur.**

**PRESSURE RANGE ADJUSTMENT**:

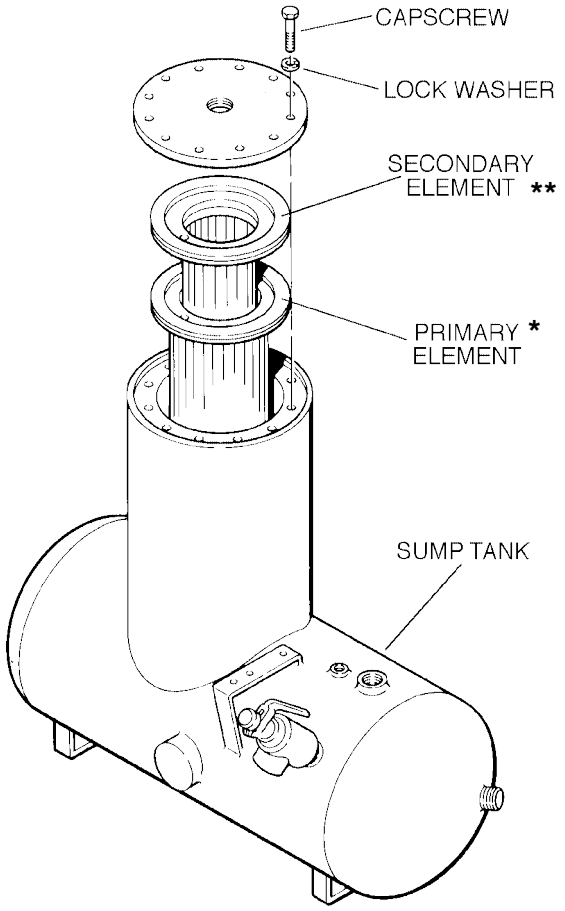
1. Remove cover to pressure switch.
2. Turn the range–adjusting screw to the high pressure setting. Turning the screw counterclockwise lowers both the high and low pressure equally.

**DIFFERENTIAL ADJUSTMENT:**

Differential is the difference between the high and low pressure settings; 10 psi (0.7 bar) is typical.

Turn the differential adjusting screw to the lower (reset) setting. Turning the screw counterclockwise widens the differential by lowering the re–set (lower) setting only.

*Figure 6–5 Separator Elements*




* Primary replacement element P/N 250034–121
** Secondary replacement element P/N 250034–133

When the pressure switch adjustment is complete, the pressure regulators should be adjusted for the pressure at which modulation of air delivery should begin. In this case, that pressure will be 100 psi (6.9 bar) for the spiral valve, and 108 psi (7.4 bar) for the Sullicon. The regulator is adjusted by loosening the jam nut on the end of the cone–shaped cover of the pressure regulator. When the jam nut is loosened, turn the adjusting screw clockwise to increase or counterclockwise to decrease the setting.

Above 100 psi (6.9 bar), the regulator should allow pressure to flow into the control chamber of the spiral valve. Movement of the spiral valve is indicated by an indicating rod that protrudes from the sump tank side of the first stage stator. When the rod is fully extended, the spiral valve is fully open (unloaded position). The spiral valve rack should start to move at this time.

Above 108 psi (7.4 bar), the regulator should allow pressure to flow into the control chamber of the Sullicon. The Sullicon lever should start to move at this time. Cycle the Control System several times and re–check all pressure settings.

**DRIVE COUPLING INSTALLATION AND ALIGNMENT)**

Refer to Figures 6–8, 9 for coupling installation and alignment, the tools required are a straight edge, a measuring scale, one set of feeler gauges, a set of standard Allen wrenches, one set of standard socket wrenches and a set of dial indicators are recommended.

The first step in coupling installation is assembling the taper lock bushings to each hub. Proceed according to the following instructions for assembly of the bushings and hubs:

*Figure 6–6 Pressure Switch (P/N 040694)*

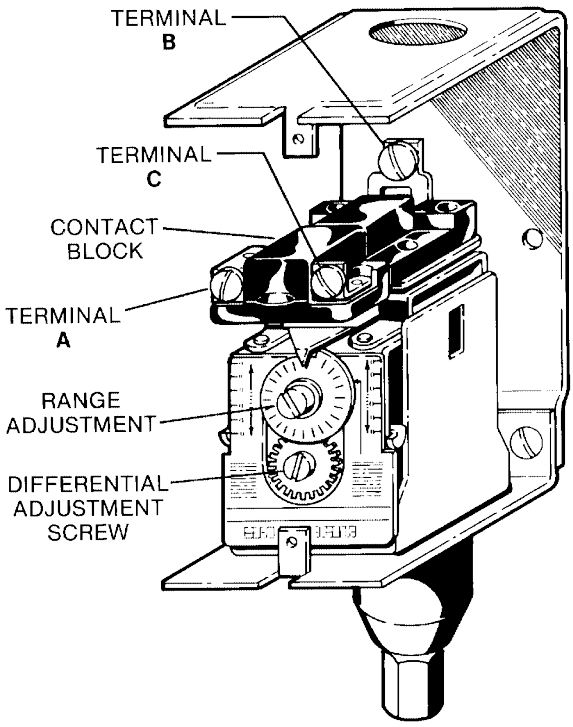
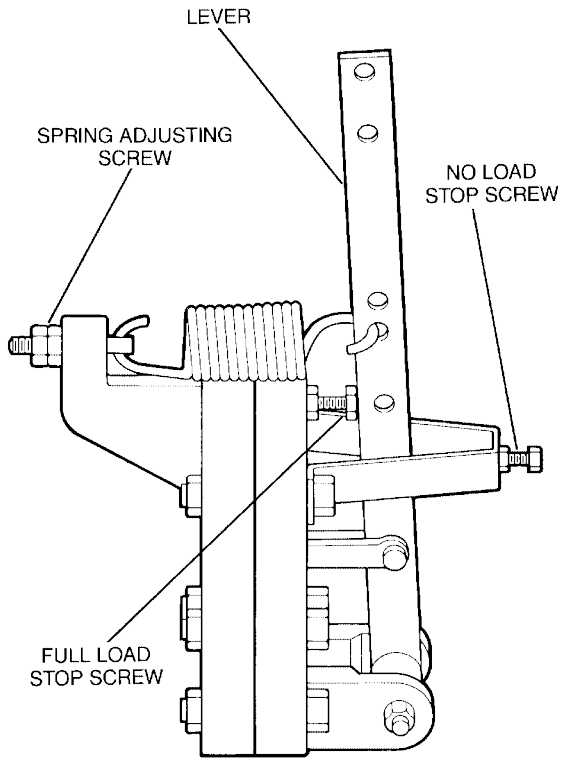


*Figure 6–7 Sullicon Control (P/N 011682–003)*




* Repair Kit P/N 250020–353

*Figure 6–8 Drive Coupling Alignment*

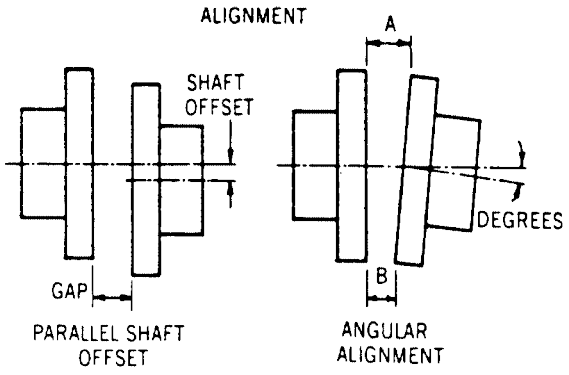



**TABLE 1 INSTALLATION DATA**

| Tightening Torque in.–lbs. | Coupling Gap ±0.30 in./7.6mm | Max. Operating Misalignment: Coupling Parallel Offset inches | Capscrew Angular degrees | Capscrew Angular in./mm (I) |
|---|---|---|---|---|
| | | T.I.R. (II) | | |
| 370 | 1.50 | .005 | .5 | .005 |
| 41.8Nm | 38mm | .127mm | .5 | .127mm |

(I) Angular misalignment (length) equals maximum A minus minimum B as shown in Figure 6–8. **DO NOT** exceed values in Table above.
(II) Total Indicator Run–out.

**⚠ WARNING**

**Disconnect all power lines at their source before attempting maintenance or adjustments.**

1. Clean the shafts, bores, keys and keyseats. Be sure the keys fit properly – file if necessary.
2. Place the bushing in the hub and match the half holes of the bushing with the half holes of the hub.
3. Oil the threads and points on the setscrews. Place the setscrews in the holes loosely.
4. Be sure the bushing is in the hub loosely and then slip the assembly onto the shaft.
5. Tighten the setscrews alternately and evenly until they are pulled up securely. Torque to 410 in.–lbs. (46.1 Nm).
6. Hammer against the large end of the bushing, using sleeve or block to avoid damage. Turn setscrews slightly. Repeat this procedure until the screws will no longer turn. **DO NOT** exceed 410 in.–lbs. (46.1 Nm).

## 6.8 TROUBLESHOOTING

The information contained in the Troubleshooting chart is based upon both actual applied situations and extensive testing at the factory. It contains symptoms and usual causes for the described problems. However, **DO NOT** assume that these are the only problems that may occur. All available data concerning the trouble should be systematically analyzed before undertaking any repair or component replacement procedures.

A detailed visual inspection is worth performing for almost any problems which may prevent unnecessary damage to the compressor. Always remember to:

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

Should your problem persist after making the recommended check, consult your nearest Sullair representative or the Sullair Corporation factory.

## TROUBLESHOOTING

| SYMPTOM | PROBABLE CAUSE | REMEDY |
|---|---|---|
| COMPRESSOR WILL NOT START | Main Disconnect Switch Open | Close switch. |
| | Line Fuse Blown | Replace fuse. |
| | Control Transformer Fuse Blown | Replace fuse. |
| | Motor Starter Overloads Tripped | Re−set. Should trouble persist, check whether motor starter contacts are functioning properly. |
| | Low Incoming Line Voltage | Check voltage. Should voltage check low, consult power company. |
| COMPRESSOR SHUTS DOWN WITH AIR DEMAND PRESENT | Loss of Control Voltage | Re−set. If trouble persists, check that line pressure does not exceed maximum operating pressure of the compressor (specified on nameplate). |
| | Low Incoming Voltage | Consult power company. |
| | Excessive Operating Pressure | Defect in pressure switch; check pressure at which contact points open. |
| | | Separator requires maintenance; check maintenance indicator under full load condi−tions. |
| | | High pressure shutdown switch is adjusted too low; re−adjust to 135 psig (9.3 bar). |
| | | Defective solenoid valve; solenoid valve should cause control lever to move to unload stop when the pressure switch contacts open. Repair if defective. |
| | | Defective blowdown valve; blowdown valve should exhaust sump pressure to 40 to 55 psi (2.7 to 3.8 bar) when maximum operating pressure is reached. Repair if defective. |
| | Discharge Temperature Switch Open | Cooling water temperature too high; increase water flow (water−cooled only). |
| | | Cooling water flow insufficient; check water lines and valves (water−cooled only). |
| | | Cooler plugged; clean tubes. If plugging persists, install water conditioner (water−cooled only). |
| | | Cooling air flow restricted; clean cooler and check for proper ventilation. |
| | | Ambient temperature is too high; provide suffi−cient ventilation. |
| | Low Fluid Pressure | Low fluid level; add fluid. |
| | | Clogged filter; inspect the fluid filter element and/or change the fluid filter element if main−tenance indicator is showing red. |
| | | Thermal valve not functioning properly; change (air−cooled only). |
| | Low Water Pressure | Water flow regulating valve not functioning properly; change (water−cooled only). |
| | | Defective discharge temperature switch; check for a short or open circuit to probe and correct wiring. |
| | | Check the fluid stop valve to be sure it is opening properly on start−up of compressor. |
| COMPRESSOR WILL NOT BUILD .UP FULL DISCHARGE PRESSURE | Air Demand is Too Great | Check service lines for leaks or open valves. |
| | Dirty Air Filter | Check the filter indicator and change element if required. |

**TROUBLESHOOTING (continued)**

| SYMPTOM | PROBABLE CAUSE | REMEDY |
|---|---|---|
| COMPRESSOR WILL NOT BUILD UP FULL DISCHARGE PRESSURE (CONTINUED) | Pressure Regulators Out of Adjustment | Adjust regulators for spiral valve and inlet butterfly valve according to control adjustment instructions in the Maintenance Section. |
| | Defective Pressure Regulator | Check diaphragm and replace if necessary (kit available). |
| LINE PRESSURE RISES ABOVE CUT–OUT PRESSURE SETTING ON PRESSURE SWITCH | Leak in Control System Causing Loss of Pressure Signals | Check for leaks. |
| | Defective Pressure Switch | Check that diaphragm and contacts are functioning properly and are not damaged. Replace if necessary. |
| | Defective Solenoid Valve | Check that Sullicon Control lever might have moved to unload stop when the pressure switch contacts open. Repair or replace if necessary (kit available). |
| | Defective Blowdown Valve | Check that sump pressure is exhausted to the atmosphere when the pressure switch contacts open; repair or replace if necessary (kit available). |
| | High Pressure Shutdown is Defective or Adjustment is Incorrect | Re–adjust or replace. |
| | Plugged Control Line Filter | Clean or repair if necessary. |
| EXCESSIVE COMPRESSOR FLUID CONSUMPTION | Clogged Return Line or Orifice | Clean strainer (screen and o–ring replace–ment kit available).<br>Clean orifice. |
| | Separator Element Damaged or Not Functioning Properly | Change separator. |
| | Leak in the Lubrication System | Check all pipes, connections and components. |
| | Excess Fluid Foaming | Drain and change. |
| | Fluid Level Too High | Drain until level acceptable level occurs. |
| | Running with Pressure Too Low | Check control adjustments and plant air usage. |
| PRESSURE RELIEF VALVE OPEN REPEATEDLY | High Pressure Shutdown Switch is Defective or Out of Adjustment (135 psig [9.3 bar]) | Re–adjust below pressure relief valve setting (175 psig [12.1 bar]) or replace. |
| | Defective Pressure Relief Valve | Replace pressure relief valve. |
| | Check Separator Differential (Plugged) | |
| LIQUID WATER IN COMPRESSED AIR LINES | Water Vapor Condensation From Cooling and Compression Occurs Naturally | Remove the water vapor from compressed air prio to distribution through the air system. Check operation of aftercooler and moisture separator. Install a compressed air dryer sized for the flow and dryness level required. (Note: Filters may also be required to remove particulates, liquid oil aerosols or for oil vapor removal. Change cartridges as recommended by the filter manufacturer.) Check all drain traps routinely to insure their proper operation. Maintain them regularly. |

# RECOMMENDED SPARE PARTS LIST

## 7.1 PROCEDURE FOR ORDERING PARTS

Parts should be ordered from the nearest Sullair Representative or the Representative from whom the compressor was purchased. If for any reason parts cannot be obtained in this manner, contact the factory directly at the address, fax or phone numbers below.

When ordering parts always indicate the **Serial Number** of the compressor. This can be obtained from the Bill of Lading for the compressor or from the Serial Number Plate located on the compressor.


**SULLAIR CORPORATION**
**Subsidiary of Sundstrand Corporation**
**3700 East Michigan Boulevard**
**Michigan City, Indiana 46360 U.S.A.**
**Telephone: 1–800–SULLAIR (U.S. Only) or**
**1–219–879–5451**
**Fax: (219) 874–1273**
**Fax: (219) 874–1835 (Parts)**
**Fax: (219) 874–1805 (Service)**

**SULLAIR ASIA, LTD.**
**ROOM 2304A**
**Shartex Plaza Ctr.**
**No. 88 Zun Yi Nan Rd.**
**Shanghai, P.R.C.**
**Telephone: 21–2192066**
**Fax: 21–2196568**

**SULLAIR EUROPE, S.A.**
**Chemin de Genas BP 639**
**69800 Saint Priest, France**
**Telephone: 33–72 23 24 25**
**Fax: 33–78 90 71 68**


## 7.2 RECOMMENDED SPARE PARTS LIST

| DESCRIPTION | KIT NUMBER | QUANTITY |
|---|---|---|
| element for air filter 408399 | **405158** | **1** |
| element for air filter 048456 (primary) | **048462** | **1** |
| element for air filter 048456 (secondary) | **048463** | **1** |
| repair kit for fluid filter 250025–522 | **250025–526** | **1** |
| repair kit for fluid filter 250007–219 | **250008–956** | **1** |
| repair kit for primary separator element | **250034–121** | **1** |
| repair kit for secondary separator element | **250034–133** | **1** |
| repair kit for Sullicon Control 011682–003 | **250020–353** | **1** |
| replacement seal for compressor shaft seal | **02250049–020** | **1** |
| tool kit for shaft seal installation | **606174–001** | **1** |
| repair kit for thermal valve 014512 | **001168** | **1** |
| repair kit for flexible coupling 040648 | **040649** | **2** |
| repair kit for flexible coupling 040327 | **040523** | **2** |
| repair kit for flexible coupling 041085 | **041353** | **2** |
| lubricant, Sullube 32 (5 gallon/20 liters) **(I)** | **250022–669** | **30 Gal** |
| repair kit for fluid stop valve 016742 | **001684** | **1** |
| repair kit for strainer 241771 | **241772** | **1** |
| repair kit for minimum pressure/check valve 242405 | **001176** | **1** |
| repair kit for minimum pressure/check valve 250033–821 | **250018–262** | **1** |
| repair kit for blowdown valve 250030–276 | **02250045–132** | **1** |
| repair kit for control air filter 408389 | **250031–245** | **1** |
| repair kit for solenoid valve 409067 | **250010–377** | **1** |
| repair kit for solenoid valve 250038–674 | **02250055–940** | **1** |
| replacement coil for solenoid valve 250038–674 | **250031–738** | **1** |
| repair kit for water separator 410143 | **250033–038** | **1** |
| repair kit for water separator 410144 | **250033–038** | **1** |
| repair kit for water separator 250007–787 | **250033–036** | **1** |
| repair kit for air cylinder 250016–183 **(II)** | **608311–001** | **1** |
| repair kit for discharge check valve 018435 | **606206–001** | **1** |
| repair kit for pressure regulator valve 406929 | **250028–693** | **1** |
| repair kit for pressure regulator valve 408275 | **041742** | **1** |

**(I)** Sullube 32 available in 55 gallon/115 liter drum (P/N 250022–670).

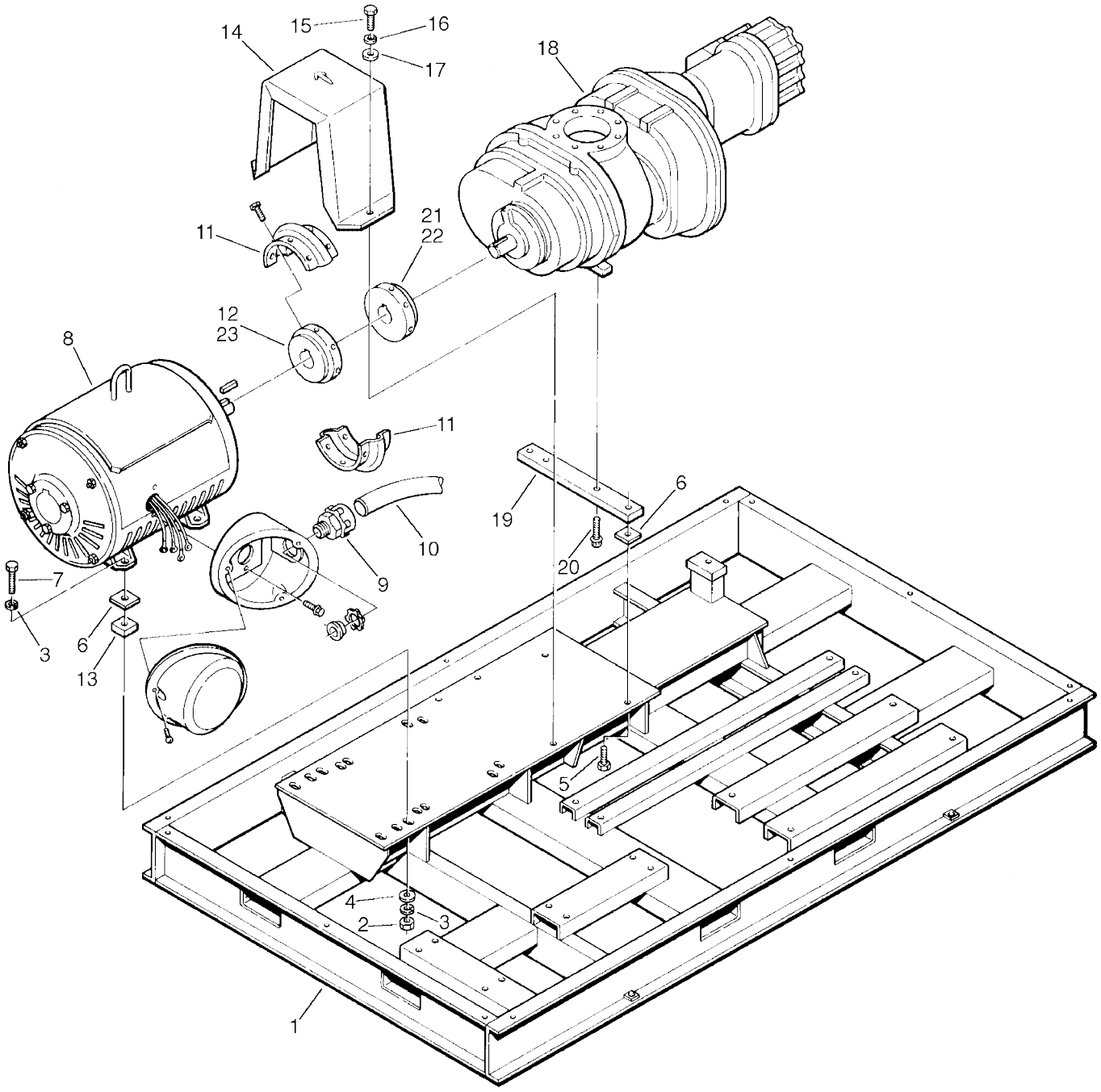
**(II)** Order actuator diaphragm repair tool kit no. 02250052–625.

**PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR**

Section 7

# ILLUSTRATIONS AND PARTS LIST

### 7.3 MOTOR, COMPRESSOR AND FRAME – 100, 125, 150 & 200HP/75, 93, 112 & 150KW



### 7.3 MOTOR, COMPRESSOR AND FRAME – 100, 125, 150 & 200HP/75, 93, 112 & 150KW

| *key number* | *description* | *part number* | *quantity* |
|---|---|---|---|
| 1 | frame, assy | 250027–308 | 1 |
| 2 | nut, hex 3/4"–10 | 824212–665 | 4 |
| 3 | washer, springlock 3/4" | 837512–188 | 4 |
| 4 | washer, wide 3/4" | 837312–174 | 4 |
| 5 | capscrew, hex gr5 5/8"–11 x 2" | 828610–200 | 3 |
| 6 | shim set, motor mtg. | 020293 | 4 |
| 7 | capscrew, hex gr5 3/4"–10 x 2 1/4" | 828612–225 | 4 |
| 8 | motor, 100HP/75KW | (I) | 1 |
| | •motor, 125HP/93KW | (I) | 1 |
| | •motor, 150HP/112KW | (I) | 1 |
| | •motor, 200HP/150KW | (I) | 1 |
| 9 | grip, cord #1/0 (100HP/75KW) | 250014–560 | 2 |
| | •grip, cord #1/0 (125 & 150HP/93 & 112KW) | 250014–561 | 2 |
| | grip, cord #4/0 (200HP/150KW) | 250014–564 | 2 |
| 10 | wire, type g–gc #1 ga (100HP/75KW) | 250014–309 | 4 ft. |
| | •wire, type g–gc #1/0 (125HP/93KW) | 250014–310 | 4 ft. |
| | •wire, type g–gc #2/0 (150HP/112KW) | 250014–311 | 5 ft. |
| | •wire, type g–gc #4/0 (200HP/150KW) | 250014–313 | 4.5ft. |
| 11 | element, coupling (100 & 125HP/75 & 93KW) | 406632 | 1 |
| | •element, coupling (150HP/112KW) | 406631 | 1 |
| | •element, coupling (200HP/150KW) | 046999 | 1 |
| 12 | hub, coupling (100 & 125HP/75 & 93KW) | 407988 | 2 |
| | •hub, coupling 2 3/8" motor (150HP/112KW) | 407988 | 1 |
| | •hub, coupling 2 3/8" motor (200HP/150KW) | 250004–635 | 1 |
| 13 | bar, motor support (100,125 & 200HP/75, 93 & 150KW) | 028084 | 4 |
| 14 | guard, coupling | 225907 | 1 |
| 15 | capscrew, hex gr5 3/8"–16 x 1 1/4" | 828606–125 | 3 |
| 16 | washer, springlock 3/8" | 837506–094 | 3 |
| 17 | washer, reg 3/8" | 837206–071 | 3 |

(I) Motor may vary for each compressor. Consult factory with machine serial number.

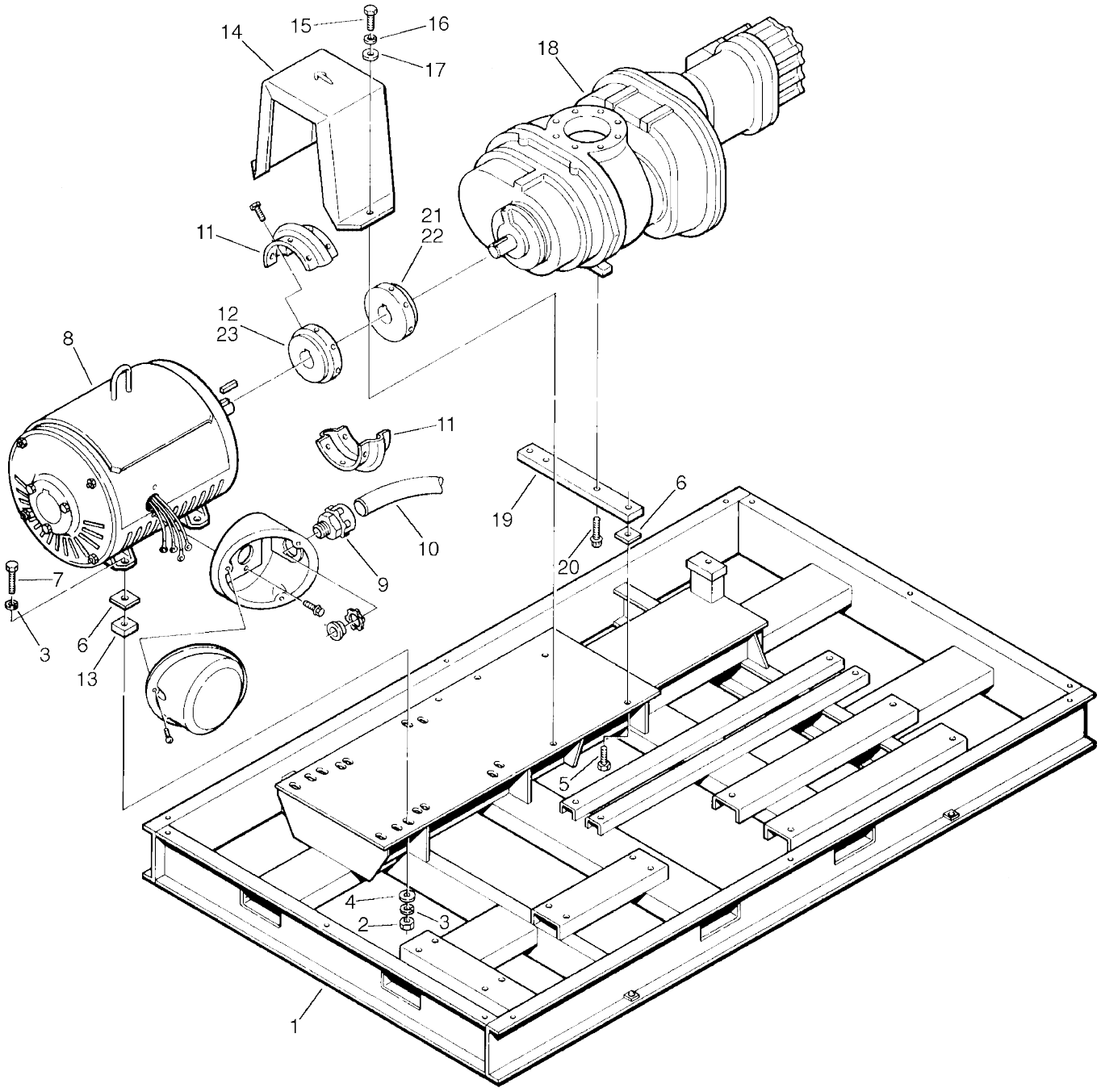
(Continued on Page 35)

**PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR**

Section 7

# ILLUSTRATIONS AND PARTS LIST

### 7.3 MOTOR, COMPRESSOR AND FRAME – 100, 125, 150 & 200HP/75, 93, 112 & 150KW



### 7.3 MOTOR, COMPRESSOR AND FRAME – 100, 125, 150 & 200HP/75, 93, 112 & 150KW (Continued)

| *key number* | *description* | *part number* | *quantity* |
|---|---|---|---|
| 18 | compressor, unit (II) | – | 1 |
| 19 | bar, unit support | 250032–544 | 1 |
| 20 | capscrew, ferry hd 5/8"–11 x 2 1/4" | 828410–225 | 2 |
| 21 | hub, coupling 2" compressor (150HP/112KW) | 407985 | 1 |
| | •hub, coupling 2" compressor (200HP/150KW) | 250021–401 | 1 |
| 22 | bushing, taperlock 2" (100 & 125HP/75 & 93KW) | 044763 | 1 |
| 23 | bushing, taperlock 2 1/8" (100 &125HP/75 & 93KW) | 046389 | 1 |

(II) There is an exchange program whereby a remanufactured compressor unit can be obtained from Sullair distributors or the factory at less cost than the owner could repair the unit. For information regarding the unit exchange program, contact your nearest Sullair representative or the Sullair Corporation.

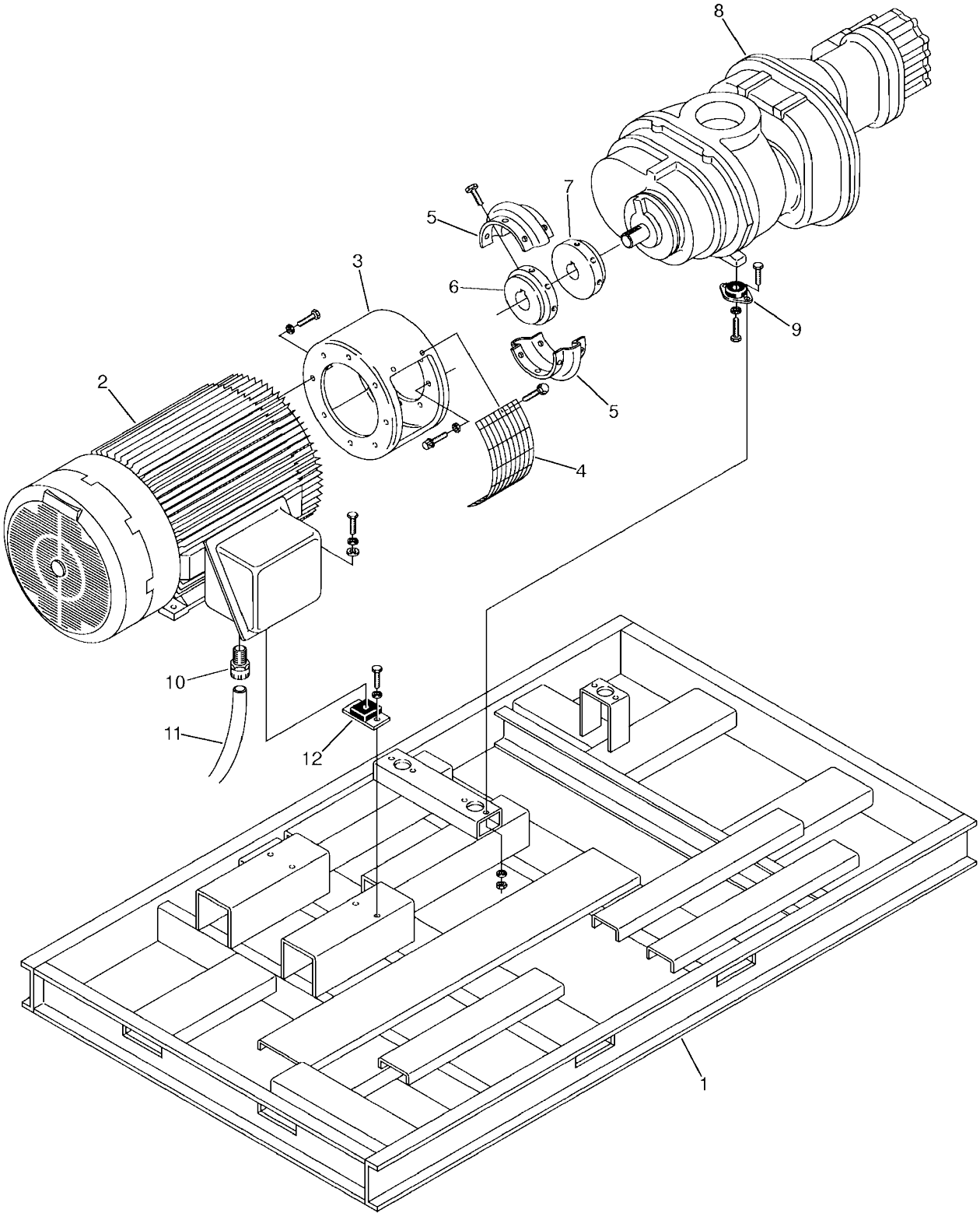
The shaft seal is not considered part of the compressor unit in regard to the two year warranty. The normal Sullair parts warranty applies. For shaft seal repairs order replacement seal kit no. 02250049–020.

**PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR**

Section 7

# ILLUSTRATIONS AND PARTS LIST

### 7.4 MOTOR, COMPRESSOR AND FRAME – 250HP/187KW



### 7.4 MOTOR, COMPRESSOR AND FRAME – 250HP/187KW

| *key number* | *description* | *part number* | *quantity* |
|---|---|---|---|
| 1 | frame, assy. | 02250056–003 | 1 |
| 2 | motor, 250HP/187KW | 02250056–432 | 1 |
| 3 | adapter, compressor & motor | 250042–487 | 1 |
| 4 | guard, adapter | 02250050–131 | 2 |
| 5 | element, coupling | 02250056–425 | 1 |
| 6 | hub, coupling 2 3/8” | 02250056–427 | 1 |
| 7 | hub, coupling 2” | 02250056–426 | 1 |
| 8 | compressor, unit (I) | – | 1 |
| 9 | isolator, vibration | 250042–541 | 3 |
| 10 | grip, cord | 250014–567 | 2 |
| 11 | wire, type g–gc | 250014–316 | 5 ft. |
| 12 | isolator, vibration | 250042–757 | 2 |

(I) There is an exchange program whereby a remanufactured compressor unit can be obtained from Sullair distributors or the factory at less cost than the owner could repair the unit. For information regarding the unit exchange program, contact your nearest Sullair representative or the Sullair Corporation.

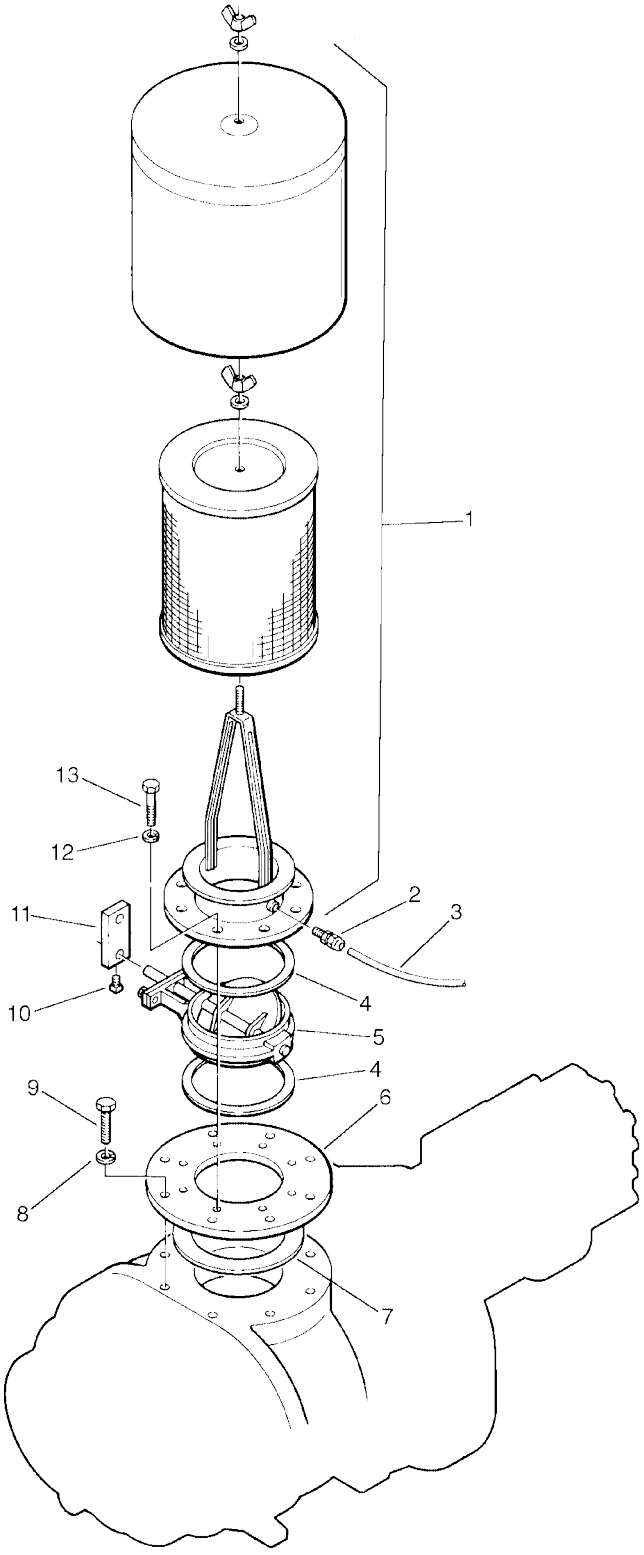
The shaft seal is not considered part of the compressor unit in regard to the two year warranty. The normal Sullair parts warranty applies. For shaft seal repairs order replacement seal kit no. 02250049–020.

**PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR**

Section 7

# ILLUSTRATIONS AND PARTS LIST

### 7.5 AIR INLET SYSTEM – 100, 125 & 150HP/75, 93 & 112KW



### 7.5 AIR INLET SYSTEM – 100, 125 & 150HP/75, 93 & 112KW

| *key number* | *description* | *part number* | *quantity* |
|---|---|---|---|
| 1 | filter, air assembly (I) (II) | 408399 | 1 |
| 2 | connector, tube–m 1/4" x 1/8" | 250024–684 | 1 |
| 3 | tubing, thermoplastic 1/4" od | 250024–745 | 8.5 ft. |
| 4 | gasket | 040696 | 2 |
| 5 | valve, butterfly 6" | 040336 | 1 |
| 6 | adapter, air inlet 8" to 6" | 250002–615 | 1 |
| 7 | gasket | 040422 | 1 |
| 8 | washer, springlock 3/4" | 837512–188 | 8 |
| 9 | capscrew, hex hd gr5 3/4"–10 x 2" | 828612–200 | 8 |
| 10 | screw, set square hd 5/16"–18 x 3/4" | 408383 | 1 |
| 11 | lever, inlet valve | 020687 | 1 |
| 12 | washer, springlock 1/2" | 837508–125 | 8 |
| 13 | capscrew, hex hd gr5 1/2"–13 x 2 1/2" | 828608–250 | 8 |

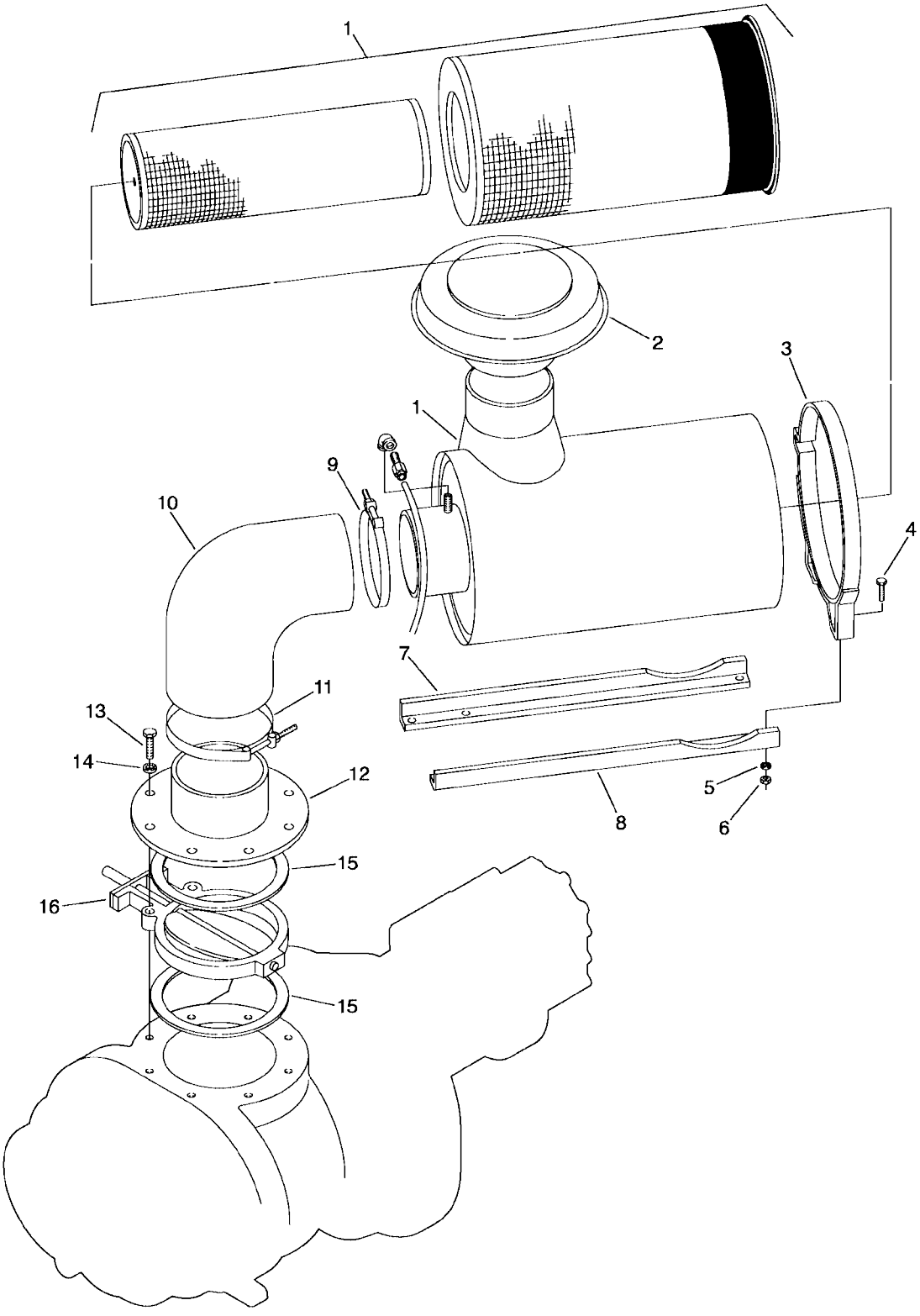
(I) For maintenance on air filter no. 408399, order replacement element no. 405158.

(II) For conversion to heavy duty air filter option, order no. 070004–097 (air–cooled) and no. 070004–098 (water–cooled).

**PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR**

Section 7
# ILLUSTRATIONS AND PARTS LIST

### 7.6 AIR INLET SYSTEM – 200 & 250HP/150 & 187KW



### 7.6 AIR INLET SYSTEM – 200 & 250HP/150 & 187KW

| *key number* | *description* | *part number* | *quantity* |
|---|---|---|---|
| 1 | filter, air (I) | 048456 | 1 |
| 2 | cap, air inlet | 046307 | 1 |
| 3 | band, mounting 16” | 044248 | 1 |
| 4 | capscrew, hex gr5 3/8”–16 x 3/4” | 828606–075 | 2 |
| 5 | washer, springlock 3/8” | 837506–094 | 2 |
| 6 | nut, hex 3/8”–16 | 824206–337 | 2 |
| 7 | angle, air filter support | 250023–752 | 1 |
| 8 | angle, air filter support | 250023–751 | 1 |
| 9 | clamp, hose 7” | 041992 | 1 |
| 10 | elbow, rubber 90 8” x 7” | 245796 | 1 |
| 11 | clamp, hose 8” | 043598 | 1 |
| 12 | adapter, air inlet | 013127 | 1 |
| 13 | capscrew, hex gr5 3/4”–10 x 2 3/4” | 828612–275 | 8 |
| 14 | washer, springlock 3/4” | 837512–188 | 8 |
| 15 | gasket | 040422 | 2 |
| 16 | valve, butterfly 8” | 040338 | 1 |

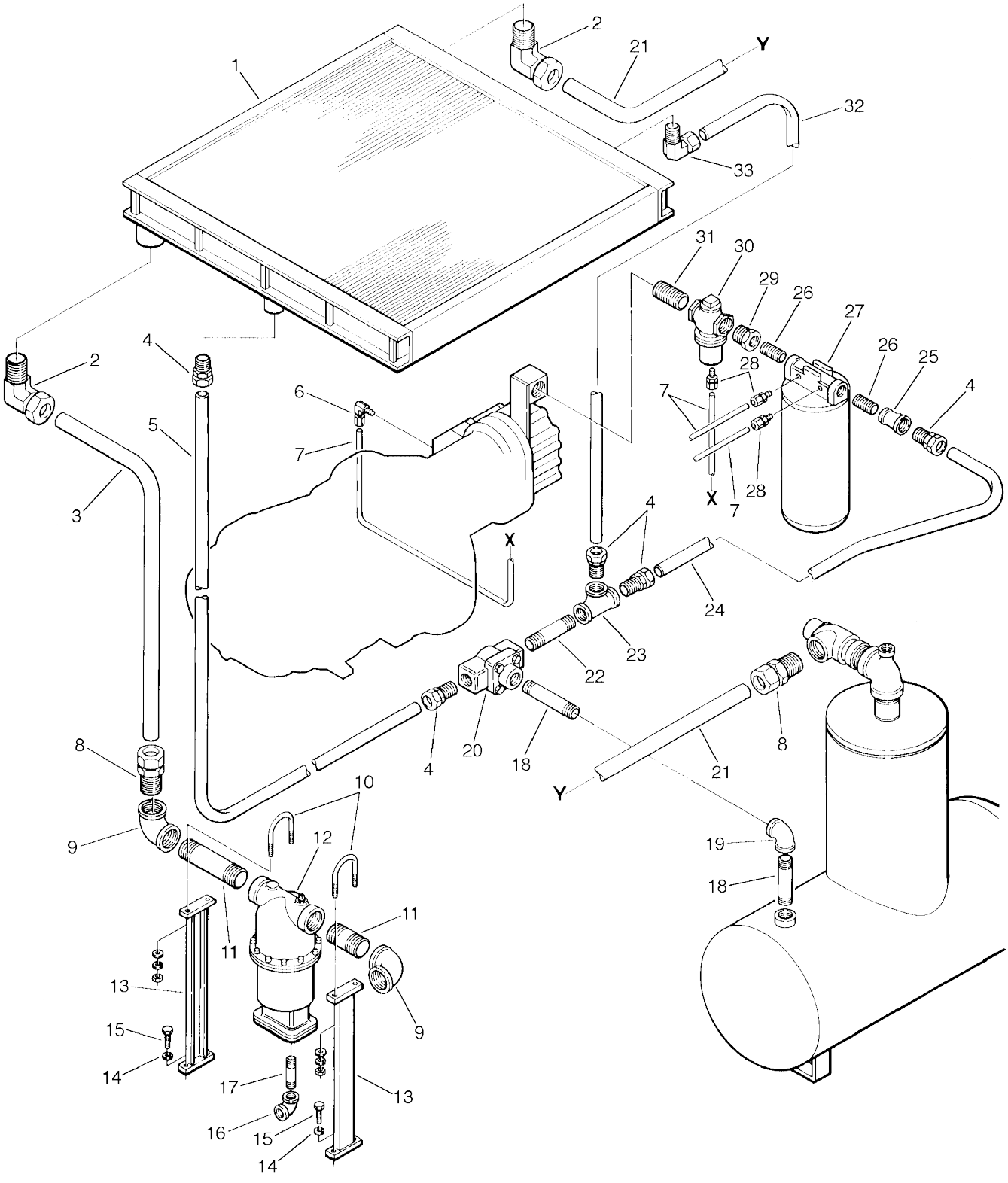
(I) For maintenance on air filter no. 048456, order primary element kit no. 048462 and secondary element kit no. 048463.

**PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR**

Section 7

# ILLUSTRATIONS AND PARTS LIST

### 7.7 COMPRESSOR COOLING AND LUBRICATION SYSTEM – 100HP/75KW (AIR–COOLED)



### 7.7 COMPRESSOR COOLING AND LUBRICATION SYSTEM – 100HP/75KW (AIR–COOLED)

| *key number* | *description* | *part number* | *quantity* |
|---|---|---|---|
| 1 | cooler, after/fluid | 250038–020 | 1 |
| 2 | elbow, tube–m 2" x 2" | 810532–200 | 1 |
| 3 | tube, aftercooler/moisture separator 2" | 250035–644 | 1 |
| 4 | connector, tube–m 1 1/2" x 1 1/2" | 810224–150 | 6 |
| 5 | tube, thermal valve/cooler 1 1/2" | 250033–661 | 1 |
| 6 | elbow, tube 90m 1/2" x 1/4" | 810504–025 | 1 |
| 7 | tubing, steel 1/4" | 841015–004 | 20 ft. |
| 8 | connector, tube–m 2" x 2" | 810232–200 | 3 |
| 9 | elbow, pipe 90 2" | 801515–080 | 2 |
| 10 | clamp, exhaust | 043203 | 2 |
| 11 | nipple, pipe 2" x 6" | 822132–060 | 2 |
| 12 | separator, water 2" | 410143 | 1 |
| 13 | support, moisture separator | 250023–077 | 2 |
| 14 | washer, springlock 1/2" | 837508–125 | 4 |
| 15 | capscrew, hex hd gr5 1/2"–13 x 1 1/4" | 828608–125 | 8 |
| 16 | elbow, pipe 90 3/4" | 801515–030 | 1 |
| 17 | nipple, pipe 3/4" x 3" | 822112–030 | 1 |
| 18 | nipple, pipe 1 1/2" x 9" | 822124–090 | 2 |
| 19 | elbow, pipe 90 1 1/2" | 801515–060 | 1 |
| 20 | valve, thermal **(I)** | 014512 | 1 |
| 21 | tube, minimum pressure check/aftercooler 2" | 250035–643 | 1 |
| 22 | nipple, pipe 1 1/2" x 3 1/2" | 822124–035 | 1 |
| 23 | tee, pipe 1 1/2" | 802415–060 | 1 |
| 24 | tube, thermal valve/filter 1 1/2" | 250033–663 | 1 |
| 25 | coupling, reducing 1 1/2" x 1 1/4" | 801012–010 | 1 |
| 26 | nipple, pipe 1 1/4" x close | 822220–000 | 2 |
| 27 | filter, fluid **(II)** | 250025–522 | 1 |
| 28 | connector, tube–m 1/4" x 1/4" | 810204–025 | 3 |
| 29 | bushing, reducing hex 2" x 1 1/4" | 802108–050 | 1 |
| 30 | valve, fluid stop **(III)** | 016742 | 1 |
| 31 | nipple, pipe 2" x close | 822232–000 | 3 |
| 32 | tube, thermal valve bypass/cooler 1 1/2" | 250033–662 | 1 |
| 33 | elbow, tube–m 1 1/2" x 1 1/2" | 810524–150 | 2 |

**(I)** For maintenance on thermal valve no. 014512, order repair kit no. 001168.

**(II)** For maintenance on fluid filter no. 250025–522, order replacement kit no. 250025–526.

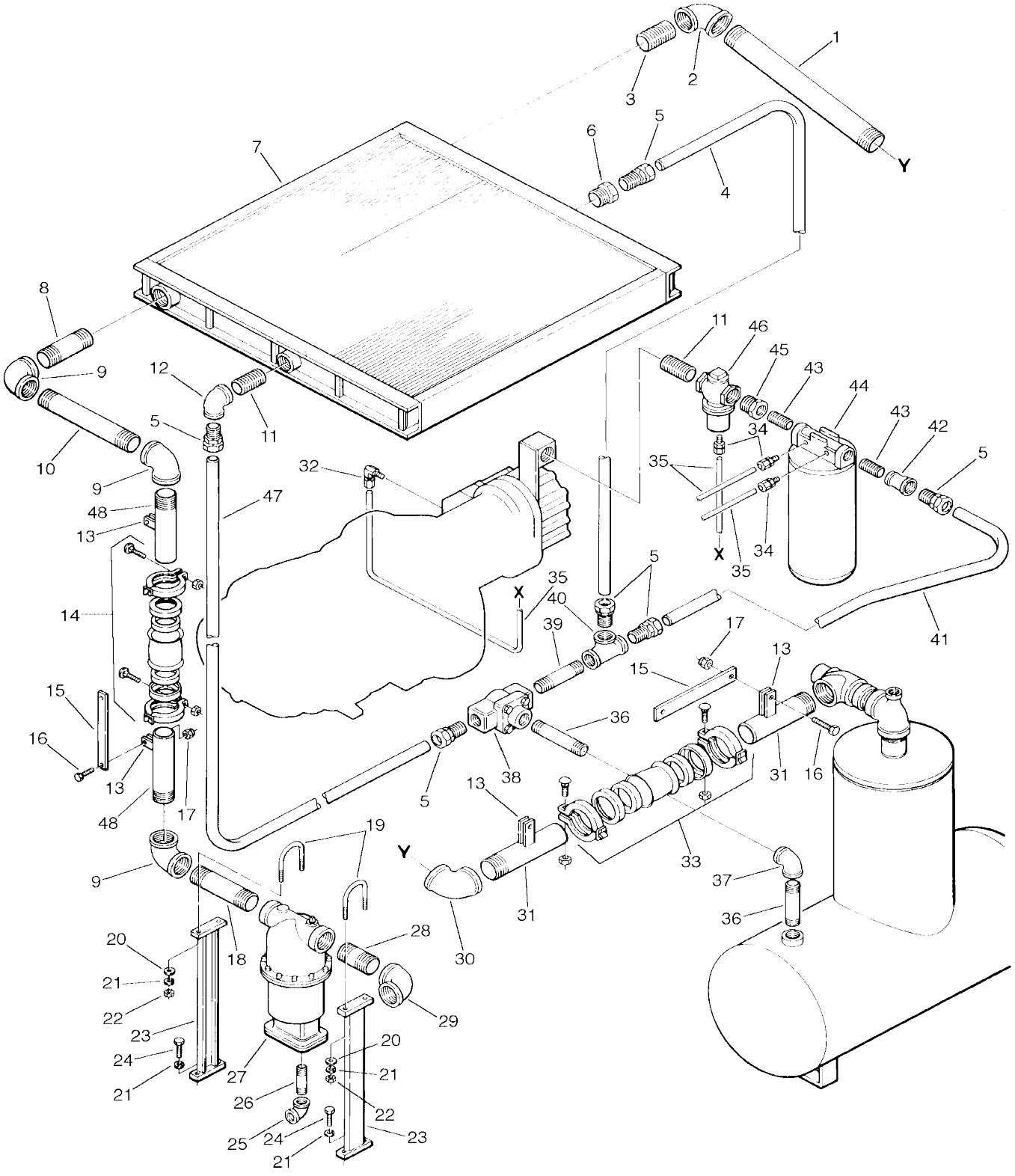
**(III)** For maintenance on fluid stop valve no. 016742, order repair kit no. 001684.

**PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR**

Section 7

# ILLUSTRATIONS AND PARTS LIST

### 7.8 COMPRESSOR COOLING AND LUBRICATION SYSTEM – 125 & 150HP/93 & 112KW (AIR–COOLED)



### 7.8 COMPRESSOR COOLING AND LUBRICATION SYSTEM – 125 & 150HP/93 & 112KW (AIR–COOLED)

| *key number* | *description* | *part number* | *quantity* |
|---|---|---|---|
| 1 | nipple, pipe 3” x 25” | 822148–250 | 1 |
| 2 | elbow, reducing 3” x 2 1/2” | 801612–100 | 1 |
| 3 | nipple, pipe 2 1/2” x close | 822240–000 | 1 |
| 4 | tube, 1 1/2” od | 250025–662 | 1 |
| 5 | connector, tube–m 1 1/2” x 1 1/2” | 810224–150 | 6 |
| 6 | bushing, reducing hex 2” x 1 1/2” | 802108–060 | 1 |
| 7 | cooler, combination fluid and after | 250022–529 | 1 |
| 8 | nipple, pipe 2 1/2” x 5 1/2” | 822140–055 | 1 |
| 9 | elbow, pipe 90 2 1/2” | 801515–100 | 3 |
| 10 | nipple, pipe 2 1/2” x 16” | 822140–160 | 1 |
| 11 | nipple, pipe 2” x close | 822232–000 | 1 |
| 12 | elbow, reducing 2” x 1 1/2” | 801608–060 | 1 |
| 13 | reinforcement, flexible 3” | 227152 | 8 |
| 14 | coupling, flexible 2 1/2” **(I)** | 040648 | 1 |
| 15 | reinforcement, 13” | 227154 | 2 |
| 16 | capscrew, hex hd gr5 5/16”–18 x 1 1/2” | 828605–150 | 4 |
| 17 | nut, hex locking 5/16”–18 | 825505–166 | 4 |
| 18 | nipple, pipe 2 1/2” x 10” | 822140–100 | 1 |
| 19 | u–bolt, 1/2” x 3” | 829008–300 | 2 |
| 20 | washer, reg 1/2” | 837208–112 | 4 |
| 21 | washer, springlock 1/2” | 837508–125 | 12 |
| 22 | nut, hex 1/2”–13 | 824208–448 | 12 |
| 23 | support, moisture separator | 250023–077 | 2 |
| 24 | capscrew, hex hd gr5 1/2”–13 x 1 1/4” | 828608–125 | 8 |
| 25 | elbow, pipe 90 3/4” | 801515–030 | 1 |
| 26 | nipple, pipe 3/4” x 3” | 822112–030 | 1 |
| 27 | separator, water (125 &150HP/93 &112KW) | 410144 | 1 |
| 28 | nipple, pipe 2 1/2” x 5” | 822140–050 | 1 |
| 29 | elbow, reducing 3” x 2 1/2” | 8016162–100 | 1 |
| 30 | elbow, pipe 90 3” | 801515–120 | 1 |
| 31 | nipple, half 3” x 9” | 822848–090 | 2 |
| 32 | elbow, tube–m 90 1/4” x 1/4” | 810504–025 | 1 |
| 33 | coupling, flexible 3” **(II)** | 040327 | 2 |
| 34 | connector, tube–m 1/4” x 1/4” | 810204–025 | 1 |
| 35 | tubing, steel 1/4” | 841015–004 | 20 ft. |

(Continued on Page 47)

**(I)** For maintenance on flexible coupling no. 040648, order replacement gasket no. 040649 (2 required).

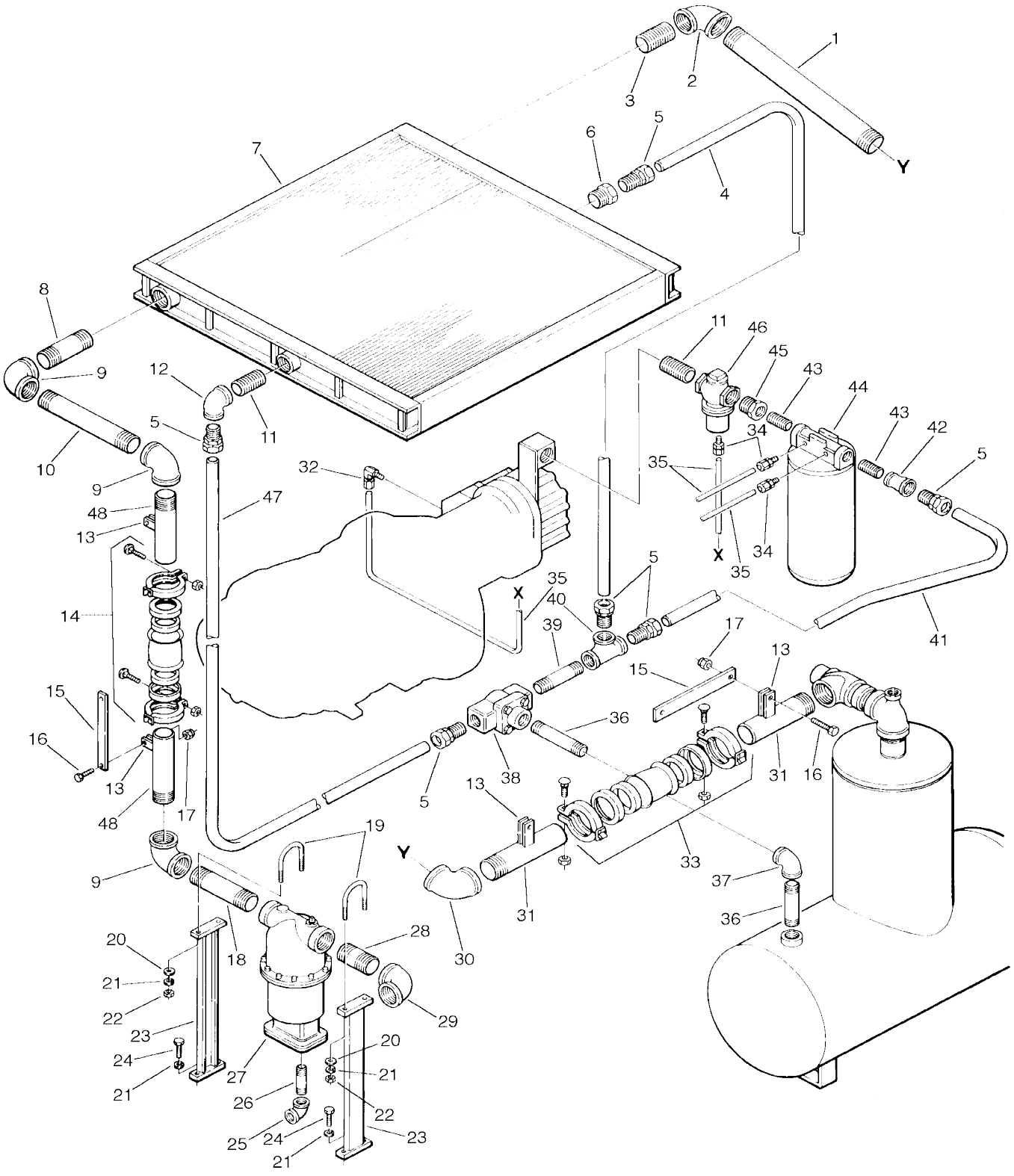
**(II)** For maintenance on flexible coupling no. 040327, order replacement gasket no. 040523 (2 required).

**PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR**

Section 7

# ILLUSTRATIONS AND PARTS LIST

### 7.8 COMPRESSOR COOLING AND LUBRICATION SYSTEM – 125 & 150HP/93 & 112KW (AIR–COOLED)



### 7.8 COMPRESSOR COOLING AND LUBRICATION SYSTEM – 125 & 150HP/93 & 112KW (AIR–COOLED) (Continued)

| *key number* | *description* | *part number* | *quantity* |
|---|---|---|---|
| 36 | nipple, pipe 1 1/2" x 9" | 822124–090 | 2 |
| 37 | elbow, pipe 90 1 1/2" | 801515–060 | 1 |
| 38 | valve, thermal **(III)** | 014512 | 1 |
| 39 | nipple, pipe 1 1/2" x 3 1/2" | 822124–035 | 1 |
| 40 | tee, pipe 1 1/2" | 802415–060 | 1 |
| 41 | tube, 1 1/2" | 250025–663 | 1 |
| 42 | coupling, reducing 1 1/2" x 1 1/4" | 801012–010 | 1 |
| 43 | nipple, pipe 1 1/4" x close | 822220–000 | 2 |
| 44 | filter, fluid **(IV)** | 250025–522 | 1 |
| 45 | bushing, reducing hex 2" x 1 1/4" | 802108–050 | 1 |
| 46 | valve, fluid stop **(V)** | 016742 | 1 |
| 47 | tube | 250033–662 | 1 |
| 48 | nipple, pipe half 3" X 12" | 822848–120 | 2 |

**(III)** For maintenance on thermal valve no. 014512, order repair kit no. 001168.

**(IV)** For maintenance on fluid filter no. 250025–522, order replacement element no. 250025–526.

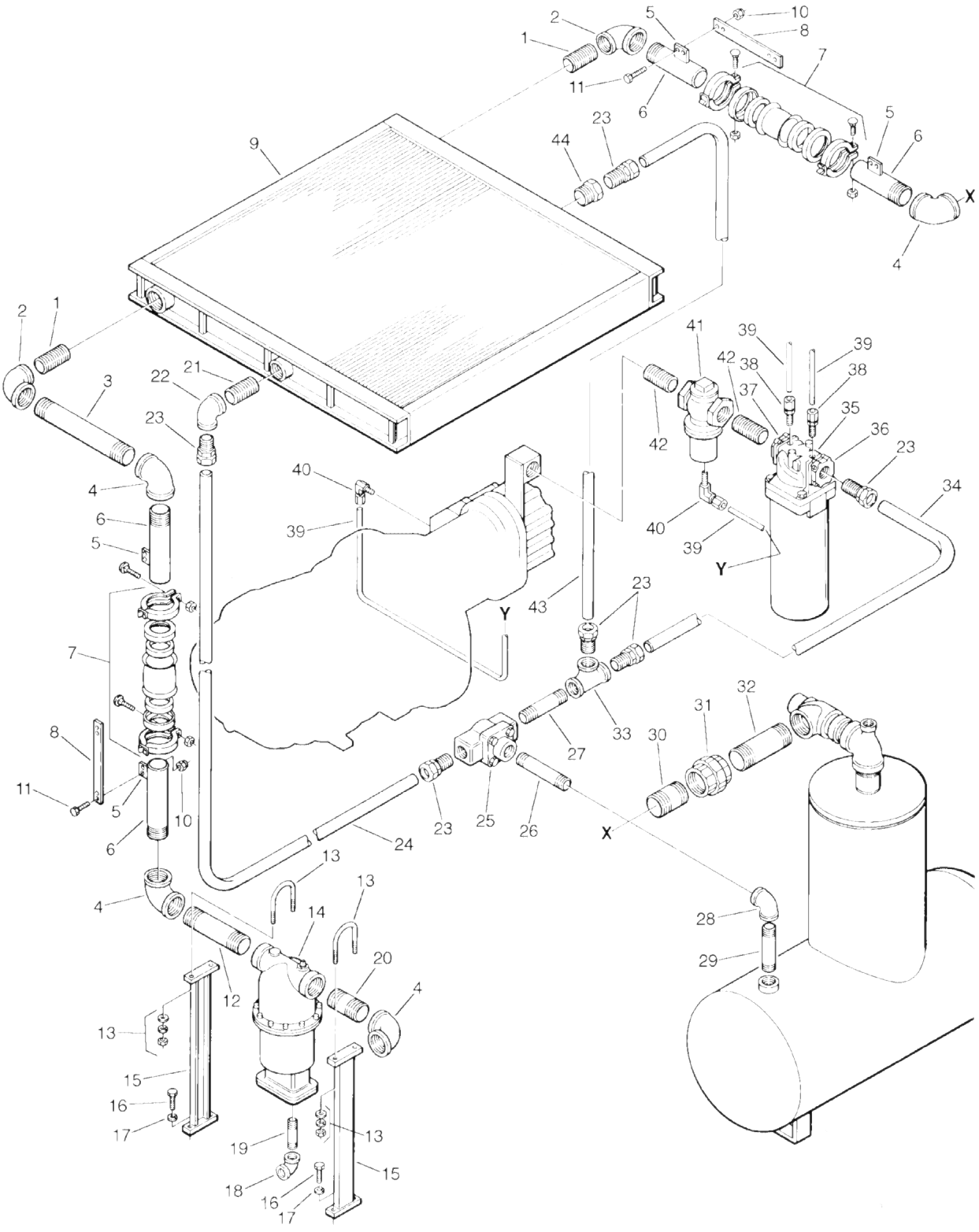
**(V)** For maintenance on fluid stop valve no. 016742, order repair kit no. 001684.

**PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR**

Section 7

# ILLUSTRATIONS AND PARTS LIST

### 7.9 COMPRESSOR COOLING AND LUBRICATION SYSTEM – 200HP/150KW (AIR–COOLED)



### 7.9 COMPRESSOR COOLING AND LUBRICATION SYSTEM – 200HP/150KW (AIR–COOLED)

| *key number* | *description* | *part number* | *quantity* |
|---|---|---|---|
| 1 | nipple, pipe 2 1/2" x close | 822240–000 | 2 |
| 2 | elbow, reducing 3" x 2 1/2" | 801612–100 | 2 |
| 3 | nipple, pipe 3" x 10" | 822148–100 | 1 |
| 4 | elbow, pipe 90 3" | 801515–120 | 4 |
| 5 | reinforcement,3" x 2.5" | 250035–136 | 4 |
| 6 | nipple, pipe half 3" X 12" | 822848–120 | 4 |
| 7 | coupling, flexible 3" (I) | 040327 | 2 |
| 8 | reinforcement, 15.5" | 250035–138 | 2 |
| 9 | cooler, fluid and after | 250022–529 | 1 |
| 10 | nut, hex F 3/8"–16 | 825306–347 | 4 |
| 11 | capscrew, hex GR5 3/8"–16 x 1 1/2" | 828606–150 | 4 |
| 12 | nipple, pipe 3" x 16" | 822148–160 | 1 |
| 13 | u–bolt, 1/2" x 3" pipe | 829008–300 | 2 |
| 14 | separator, moisture | 250007–787 | 1 |
| 15 | support, moisture separator | 250023–077 | 2 |
| 16 | capscrew, hex gr5 1/2"–13 x 1 1/4" | 828608–125 | 8 |
| 17 | washer, springlock 1/2" | 837508–125 | 12 |
| 18 | elbow, pipe 90 3/4" | 801515–030 | 1 |
| 19 | nipple, pipe 3/4" x 3" | 822112–030 | 1 |
| 20 | nipple, pipe 3" x 5" | 822148–050 | 1 |
| 21 | nipple, pipe 2" x close | 822232–000 | 1 |
| 22 | elbow, reducing 2" x 1 1/2" | 801608–060 | 1 |
| 23 | connector, tube–M 1 1/2" x 1 1/2" | 810224–150 | 6 |
| 24 | tube, thermal valve to cooler 1 1/2" | 250033–661 | 1 |
| 25 | thermal, valve (II) | 014512 | 1 |
| 26 | nipple, pipe 1 1/2" x 8" | 822124–080 | 1 |
| 27 | nipple, pipe 1 1/2" x close | 822224–000 | 1 |
| 28 | elbow, pipe 90 1 1/2" | 801515–060 | 1 |
| 29 | nipple, pipe 1 1/2" x 4" | 822124–040 | 1 |
| 30 | nipple, pipe 3" x 6 1/2" | 822148–065 | 1 |
| 31 | union, pipe 3" | 802515–120 | 1 |
| 32 | nipple, pipe 3" x 6 1/2" | 822148–065 | 1 |
| 33 | tee, pipe 1 1/2" | 802415–060 | 1 |
| 34 | tube, thermal valve to filter 1 1/2" | 250033–663 | 1 |

(Continued on Page 51)

(I) For maintenance on flexible coupling no. 040327, order replacement gasket no. 040523 (2 required).

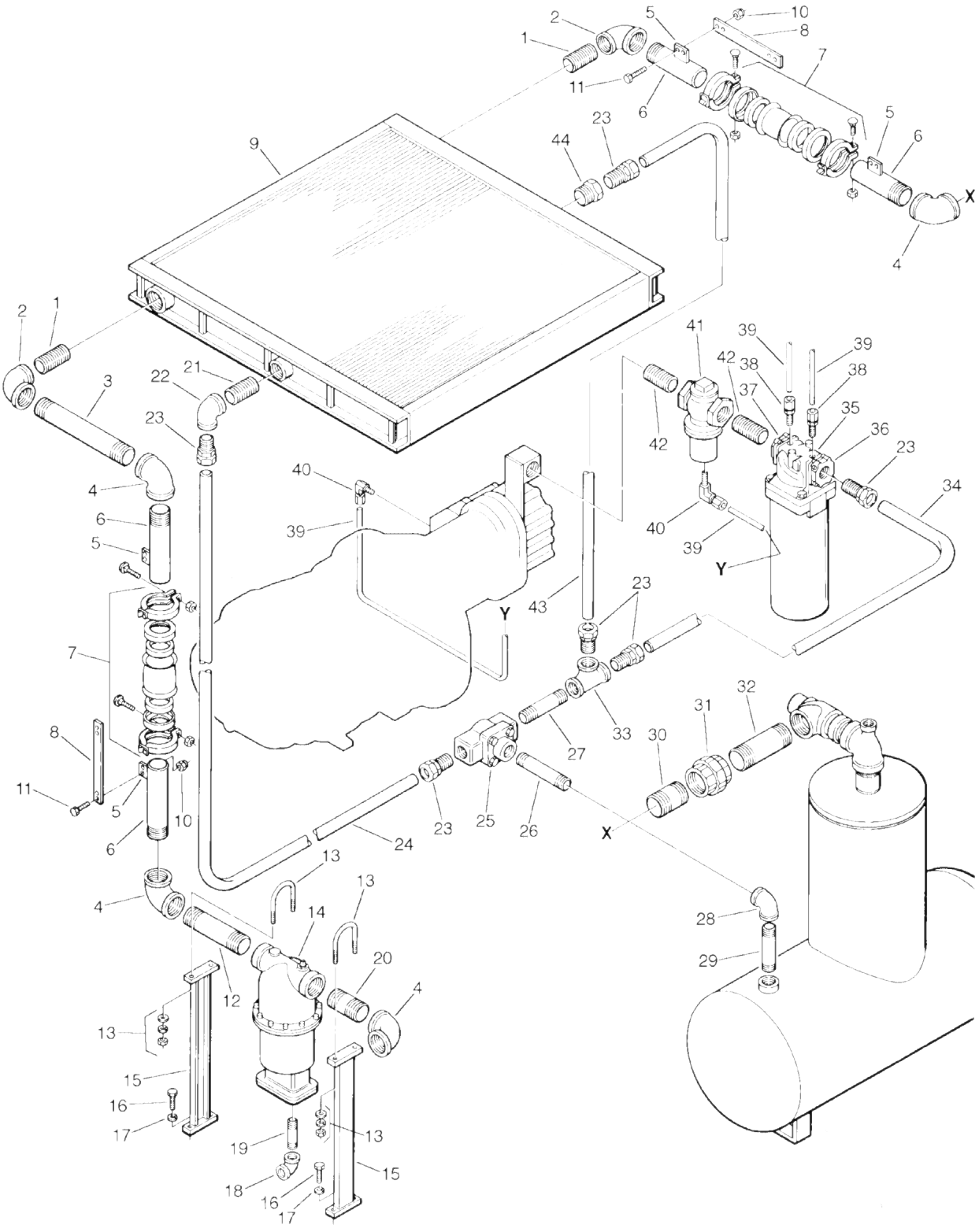
(II) For maintenance on thermal valve no. 014512, order repair kit no. 001168.

**PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR**

Section 7

# ILLUSTRATIONS AND PARTS LIST

### 7.9 COMPRESSOR COOLING AND LUBRICATION SYSTEM – 200HP/150KW (AIR–COOLED)



### 7.9 COMPRESSOR COOLING AND LUBRICATION SYSTEM – 200HP/150KW (AIR–COOLED) (Continued)

| *key number* | *description* | *part number* | *quantity* |
|---|---|---|---|
| 35 | filter, fluid **(III)** | 250007–219 | 1 |
| 36 | adapter, port 1 1/2" | 250007–221 | 1 |
| 37 | adapter, port 2" | 250007–220 | 1 |
| 38 | connector, tube–M 1/4" x 1/4" | 810204–025 | 2 |
| 39 | tube, steel 1/4" | 841015–004 | 20 ft. |
| 40 | elbow, tube–M 1/4" x 1/4" | 810504–025 | 2 |
| 41 | valve, fluid stop **(IV)** | 016742 | 1 |
| 42 | nipple, pipe 2" x close | 822232–000 | 2 |
| 43 | tube, cooler to thermal valve 1 1/2" | 250033–662 | 1 |
| 44 | bushing, reducing hex 2" x 1 1/2" | 802108–060 | 1 |

**(III)** For maintenance on fluid filter no. 250007–219, order repair kit no. 250008–956.

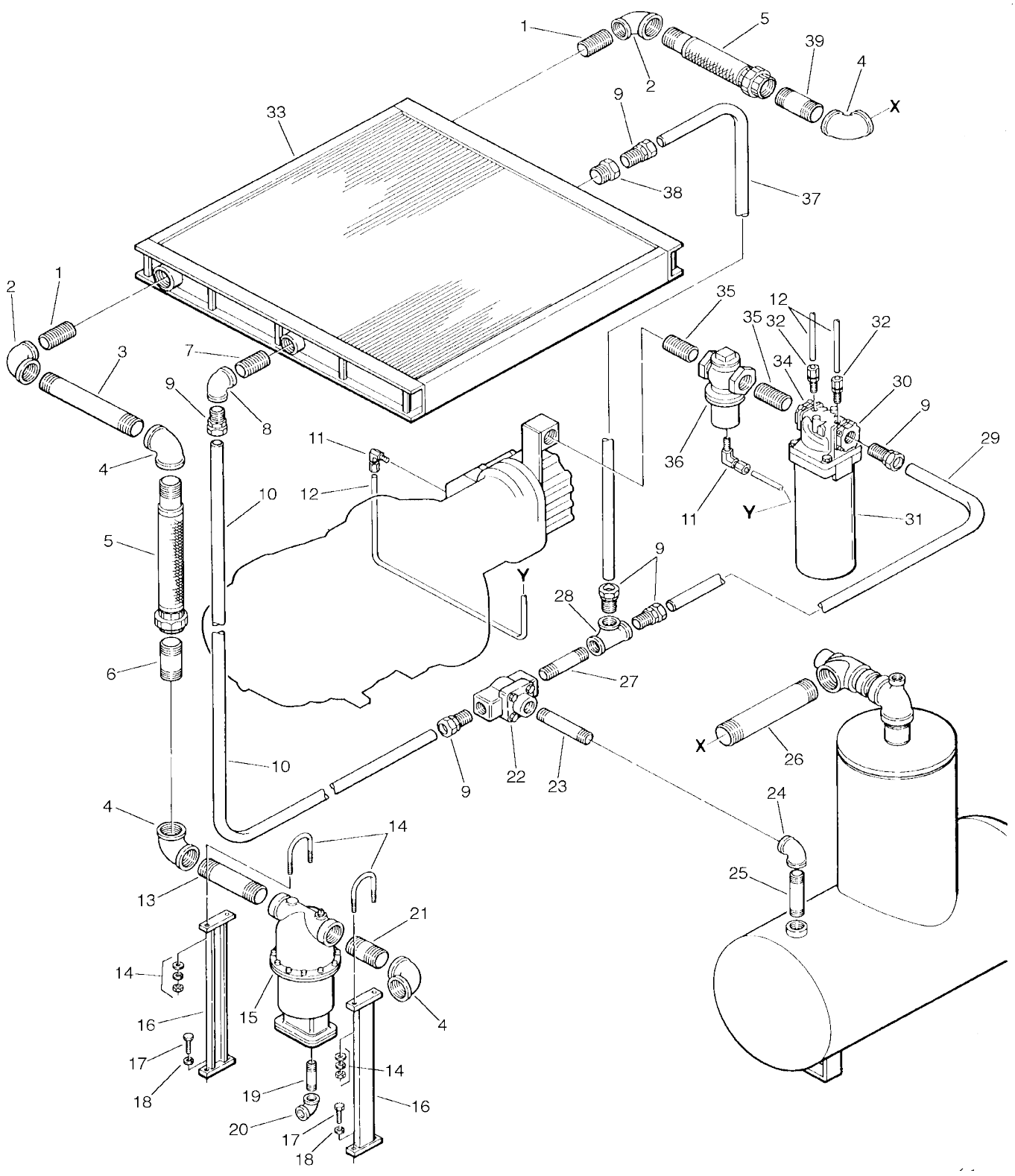
**(IV)** For maintenance on fluid stop valve no. 016742, order repair kit no. 001684.

**PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR**

Section 7

# ILLUSTRATIONS AND PARTS LIST

### 7.10 COMPRESSOR COOLING AND LUBRICATION SYSTEM –250HP/187KW (AIR–COOLED)



### 7.10 COMPRESSOR COOLING AND LUBRICATION SYSTEM –250HP/187KW (AIR–COOLED)

| *key number* | *description* | *part number* | *quantity* |
|---|---|---|---|
| 1 | nipple, pipe 2 1/2" x close | 822240–000 | 2 |
| 2 | elbow, reducing 3" x 2 1/2" | 801612–100 | 2 |
| 3 | nipple, pipe 3" x 10" | 822148–100 | 1 |
| 4 | elbow, pipe 90 3" | 801515–120 | 4 |
| 5 | joint, expansion | 02250058–939 | 2 |
| 6 | nipple, pipe 3" x 4" | 822148–040 | 2 |
| 7 | nipple, pipe 2" x close | 822232–000 | 3 |
| 8 | elbow, reducing 2" x 1 1/2" | 801608–060 | 1 |
| 9 | connector, tube–m 1 1/2" x 1 1/2" | 810224–150 | 6 |
| 10 | tube, thermal valve/cooler 1 1/2" | 02250056–439 | 1 |
| 11 | elbow, tube–m 1/4" x 1/4" | 810504–025 | 2 |
| 12 | tube, steel 1/4" | 841015–004 | 20 ft. |
| 13 | nipple, pipe 3" x 16" | 822148–160 | 1 |
| 14 | u–bolt, 1/2" x 3" pipe | 829008–300 | 2 |
| 15 | separator, combination trap **(I)** | 250007–787 | 1 |
| 16 | support, separator | 250023–077 | 2 |
| 17 | capscrew, hex gr5 1/2"–13 x 1 1/4" | 828608–125 | 12 |
| 18 | washer, springlock 1/2" | 837508–125 | 12 |
| 19 | nipple, pipe 3/4" x 3" | 822112–030 | 1 |
| 20 | elbow, pipe 90 3/4" | 801515–030 | 1 |
| 21 | nipple, pipe 3" x 5" | 822148–050 | 1 |
| 22 | valve, thermal **(II)** | 014512 | 1 |
| 23 | nipple, pipe 1 1/2" x 8" | 822124–080 | 1 |
| 24 | elbow, pipe 90 1 1/2" | 801515–060 | 1 |
| 25 | nipple, pipe 1 1/2" x 4" | 822124–040 | 1 |
| 26 | nipple, pipe 3" x 14" | 822148–140 | 1 |
| 27 | nipple, pipe 1 1/2" x close | 822224–000 | 1 |
| 28 | tee, pipe 1 1/2" | 802415–060 | 1 |
| 29 | tube, thermal valve to filter 1 1/2" | 02250056–441 | 1 |
| 30 | adapter, port 1 1/2" | 250007–221 | 1 |
| 31 | filter, fluid **(III)** | 250007–219 | 1 |
| 32 | connector, tube M 1/4" x1/4" | 810204–025 | 2 |
| 33 | cooler, fluid | 02250053–217 | 1 |

(Continued on Page 55)

**(I)** For maintenance on water separator no. 250007–787, order repair kit no. 250033–036.

**(II)** For maintenance on thermal valve no. 014512, order repair kit no. 001168.

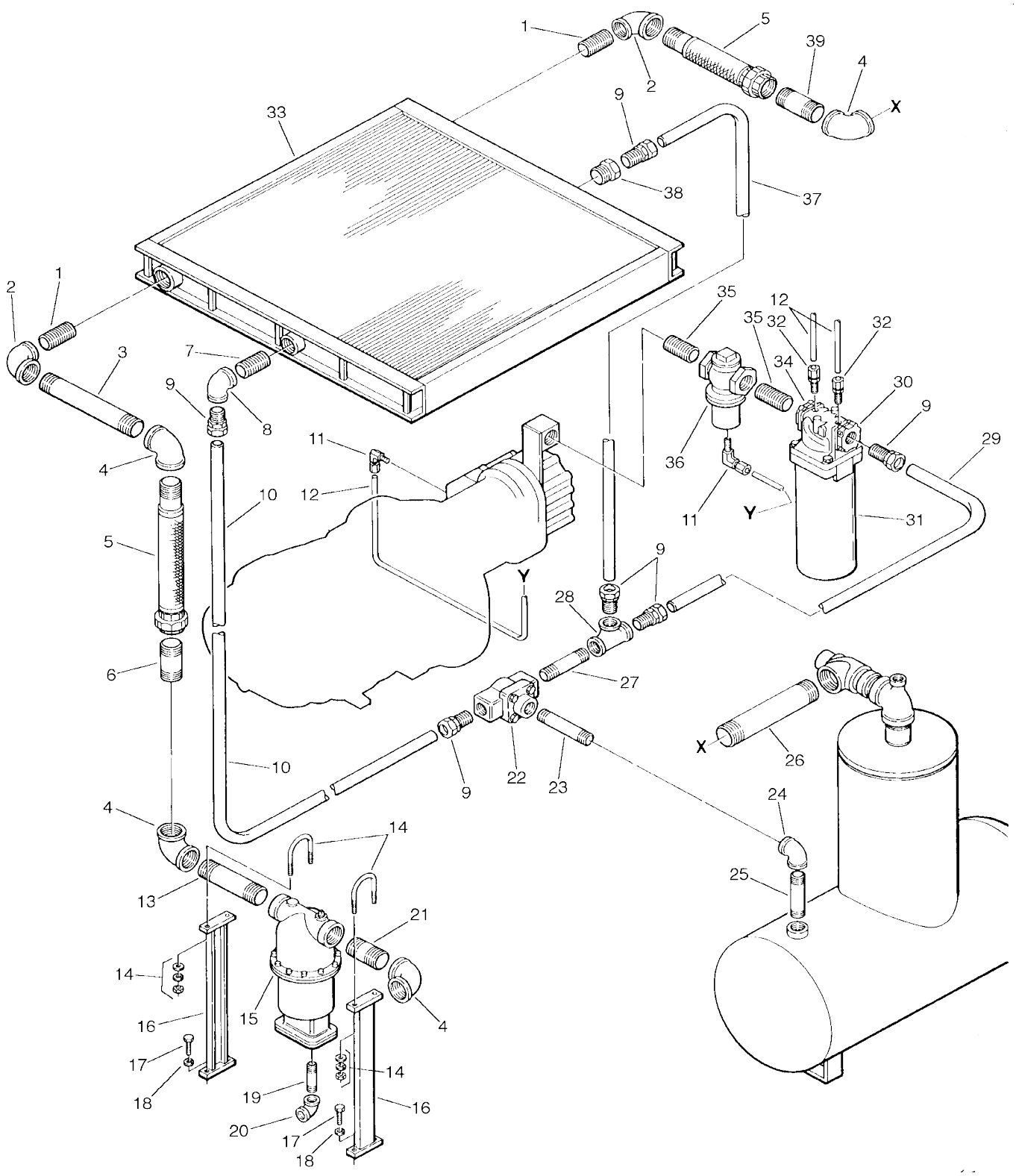
**(III)** For maintenance on fluid filter no. 250007–219, order repair kit no. 250008–956.

**PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR**

Section 7

# ILLUSTRATIONS AND PARTS LIST

### 7.10 COMPRESSOR COOLING AND LUBRICATION SYSTEM –250HP/187KW (AIR–COOLED)



### 7.10 COMPRESSOR COOLING AND LUBRICATION SYSTEM –250HP/187KW (AIR–COOLED) (Cont'd.)

| *key number* | *description* | *part number* | *quantity* |
|---|---|---|---|
| 34 | adapter, port 2" | 250007–220 | 1 |
| 35 | nipple, pipe 2" x close | 822232–000 | 1 |
| 36 | valve, fluid stop (IV) | 016742 | 1 |
| 37 | tube, cooler to thermal valve | 02250056–440 | 1 |
| 38 | bushing, reducing hex 2" x 1 1/2" | 802108–060 | 1 |
| 39 | nipple, pipe 3" x 6" | 822148–060 | 1 |

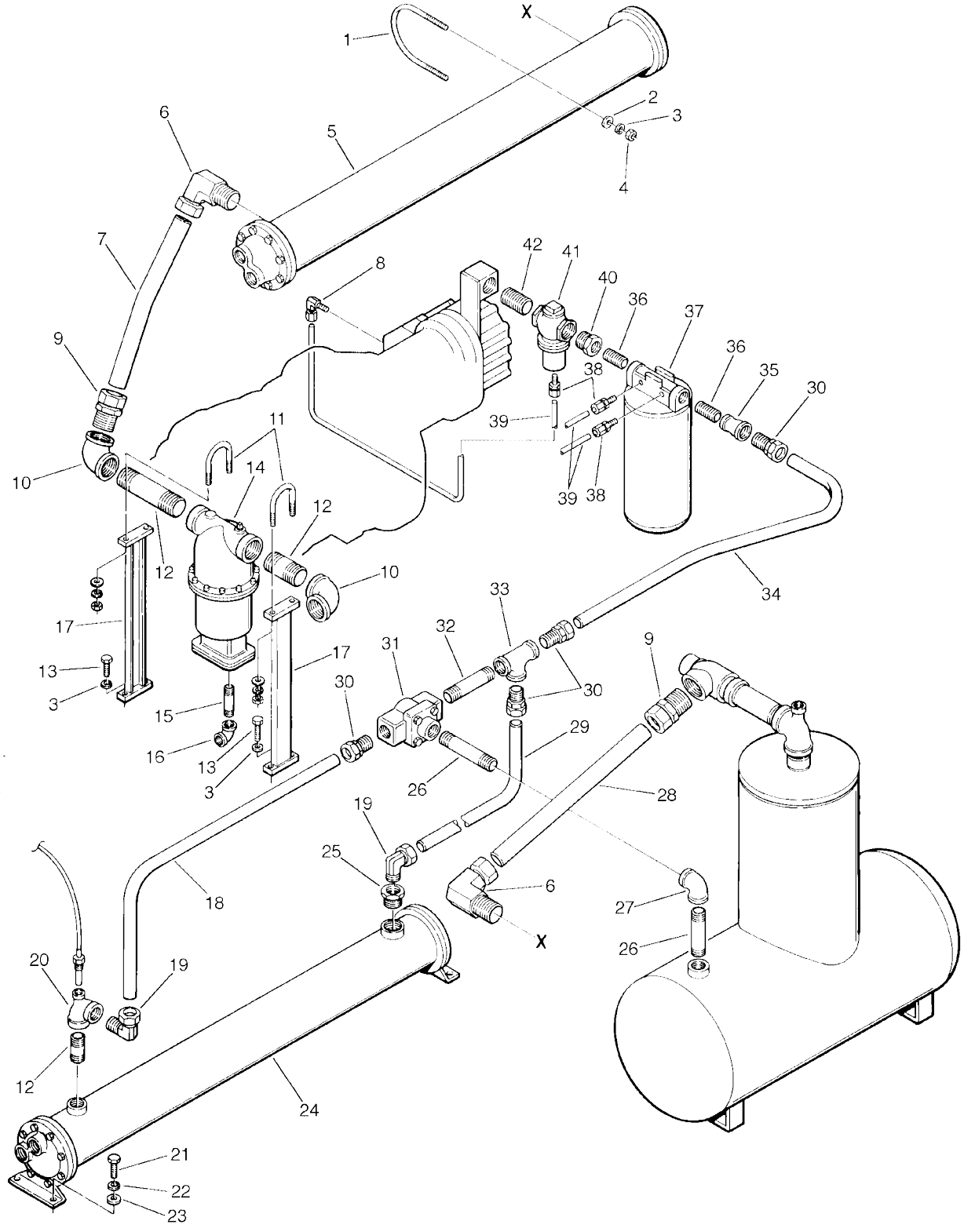
(IV) For maintenance on fluid stop valve no. 016742, order repair kit no. 001684.

**PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR**

Section 7

# ILLUSTRATIONS AND PARTS LIST

### 7.11 COMPRESSOR COOLING AND LUBRICATION SYSTEM – 100HP/75KW (WATER–COOLED)



### 7.11 COMPRESSOR COOLING AND LUBRICATION SYSTEM – 100HP/75KW (WATER–COOLED)

| *key number* | *description* | *part number* | *quantity* |
|---|---|---|---|
| 1 | u–bolt, 1/2" x 5" pipe | 829008–500 | 2 |
| 2 | washer, reg 1/2" | 837208–112 | 12 |
| 3 | washer, springlock 1/2" | 837508–125 | 16 |
| 4 | nut, hex 1/2"–13 | 824208–448 | 8 |
| 5 | aftercooler, 6" x 36" | 042008 | 1 |
| | aftercooler, 6" x 48" | 043009 | 1 |
| 6 | elbow, tube 90 2" x 2" | 810532–200 | 2 |
| 7 | tube, aftercooler/separator | 250035–642 | 1 |
| 8 | elbow, tube 1/4" x 1/4" | 810504–025 | 1 |
| 9 | connector, tube–m 2" x 2" | 810232–200 | 2 |
| 10 | elbow, pipe 90 2" | 801515–080 | 2 |
| 11 | clamp, exhaust | 043203 | 2 |
| 12 | nipple, pipe 2" x 6" | 822132–060 | 1 |
| 13 | capscrew, hex gr5 1/2"–13 x 1 1/4" | 828608–125 | 8 |
| 14 | separator, water 2" **(I)** | 410143 | 1 |
| 15 | nipple, pipe 3/4" x 3" | 822112–030 | 1 |
| 16 | elbow, pipe 3/4" | 801515–030 | 1 |
| 17 | support, moisture separator | 250023–077 | 2 |
| 18 | tube, 1 1/2" | 250033–968 | 1 |
| 19 | elbow, tube–m 90 1 1/2" x 1 1/2" | 810524–150 | 2 |
| 20 | tee, reducing 2" x 1/2" x 1 1/2" | 802208–026 | 1 |
| 21 | capscrew, hex gr8 3/8"–16 x 1" | 828206–100 | 4 |
| 22 | washer, springlock 3/8" | 837506–094 | 4 |
| 23 | washer, plain 3/8" | 837206–071 | 4 |
| 24 | cooler, fluid | 040751 | 1 |
| 25 | bushing, reducing hex 2" x 1 1/2" | 802108–060 | 1 |
| 26 | nipple, pipe 1 1/2" x 9" | 822124–090 | 2 |
| 27 | elbow, pipe 1 1/2" | 801515–060 | 1 |
| 28 | tube, minimum pressure check/aftercooler 2" | 250035–641 | 1 |
| 29 | tube, 1 1/2" | 250003–967 | 1 |
| 30 | connector, tube 1 1/2" x 1 1/2" | 810224–150 | 4 |
| 31 | valve, thermal **(II)** | 014512 | 1 |
| 32 | nipple, pipe 1 1/2" x 6" | 822124–060 | 1 |
| 33 | tee, straight 1 1/2" | 802415–060 | 1 |
| 34 | tube, 1 1/2" | 250033–663 | 1 |

(Continued on Page 59)

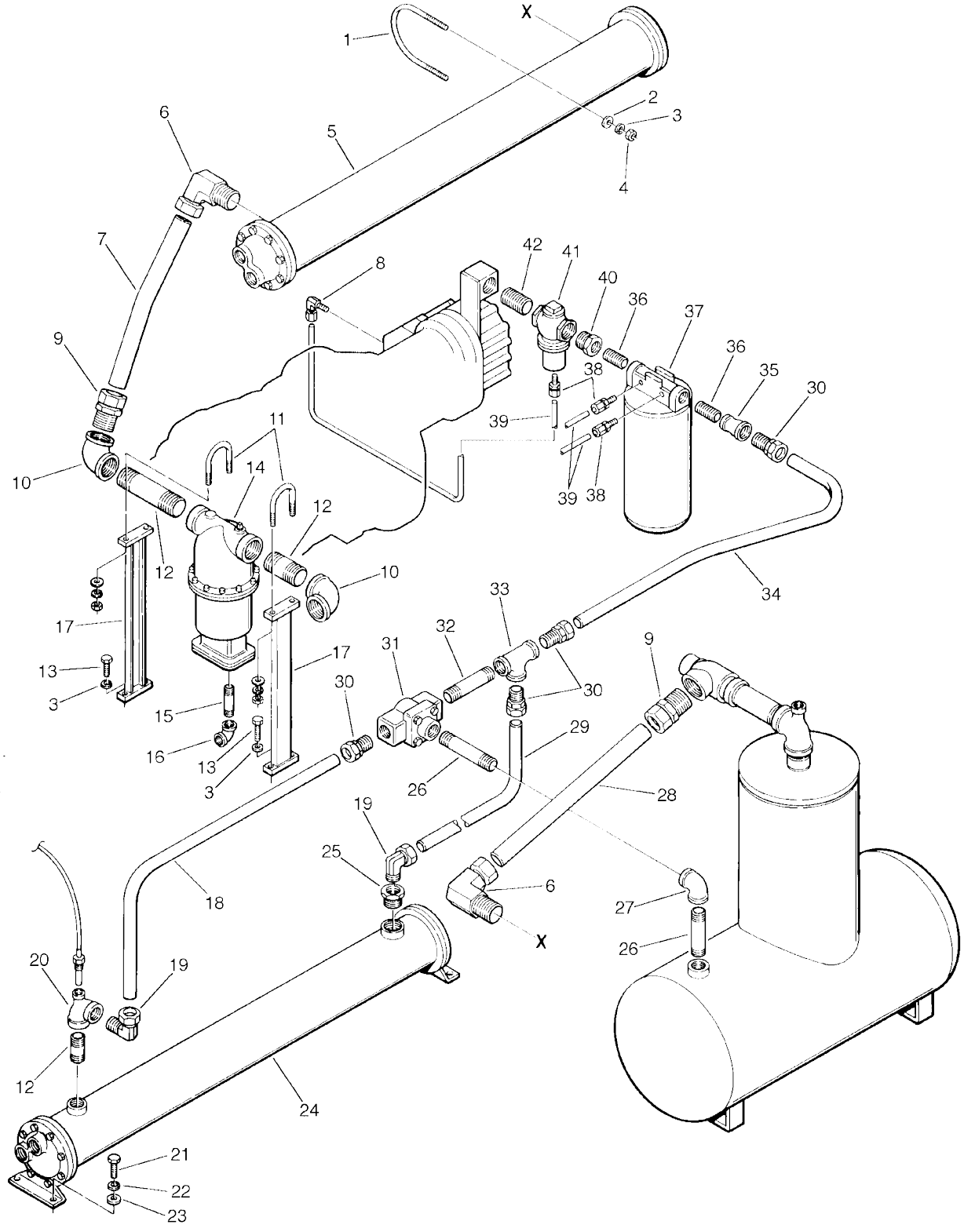
**(I)** For maintenance on water separator no. 410143, order repair kit no. 250033–038.

**(II)** For maintenance on thermal valve no. 014512, order repair kit no. 001168.

**PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR**

Section 7
# ILLUSTRATIONS AND PARTS LIST

### 7.11 COMPRESSOR COOLING AND LUBRICATION SYSTEM – 100HP/75KW (WATER–COOLED)



### 7.11 COMPRESSOR COOLING AND LUBRICATION SYSTEM – 100HP/75KW (WATER–COOLED) (Continued)

| *key number* | *description* | *part number* | *quantity* |
|---|---|---|---|
| 35 | coupling, reducing 1 1/2" x 1 1/4" | 801012–010 | 1 |
| 36 | nipple, pipe 1 1/4" x close | 822220–000 | 2 |
| 37 | filter, fluid **(III)** | 250025–522 | 1 |
| 38 | connector, tube–m 1/4" x 1/4" | 810204–025 | 3 |
| 39 | tubing, steel 1/4" | 841015–004 | 20 ft. |
| 40 | bushing, reducing hex 2" x 1 1/4" | 802108–050 | 1 |
| 41 | valve, fluid stop **(IV)** | 016742 | 1 |
| 42 | nipple, pipe 2" x close | 822232–000 | 1 |

**(III)** For maintenance on fluid filter no. 250025–522, order repair kit 250025–526.

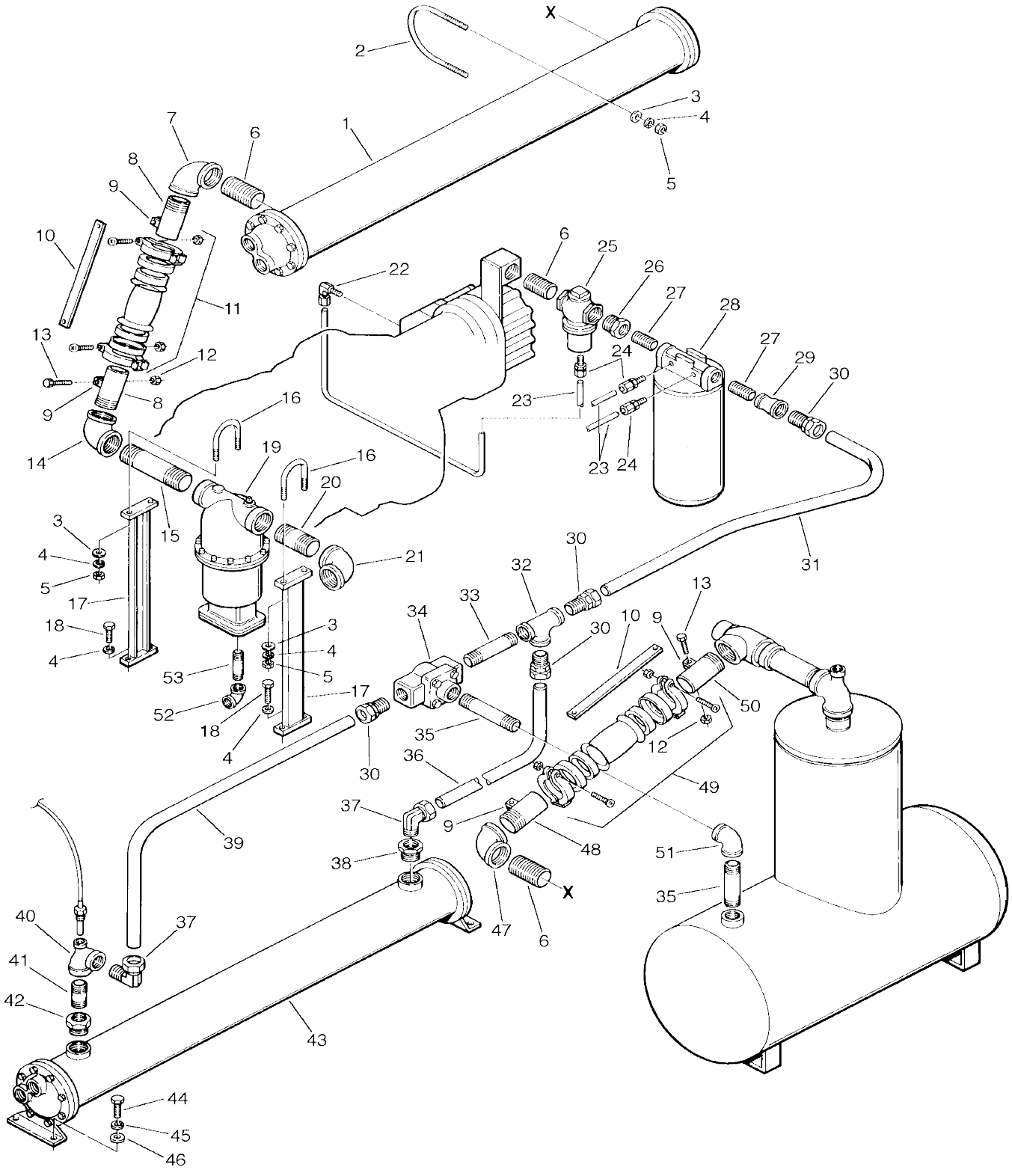
**(IV)** For maintenance on fluid stop valve no. 016742, order repair kit no. 001684.

**PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR**

Section 7

# ILLUSTRATIONS AND PARTS LIST

### 7.12 COMPRESSOR COOLING AND LUBRICATION SYSTEM – 125 & 150HP/93 & 112KW (WATER–COOLED)



### 7.12 COMPRESSOR COOLING AND LUBRICATION SYSTEM – 125 & 150HP/93 & 112KW (WATER–COOLED)

| *key number* | *description* | *part number* | *quantity* |
|---|---|---|---|
| 1 | aftercooler, 6” x 48” | 043009 | 1 |
| 2 | u–bolt, 1/2” x 6” pipe | 829008–600 | 1 |
| 3 | washer, reg 1/2” | 837208–112 | 12 |
| 4 | washer, springlock 1/2” | 837508–125 | 16 |
| 5 | nut, hex 1/2”–13 | 824208–448 | 8 |
| 6 | nipple, pipe 2” x close | 822232–000 | 1 |
| 7 | elbow, reducing 2 1/2” x 2” | 801610–080 | 1 |
| 8 | nipple, half 2 1/2” x 8” | 822840–080 | 2 |
| 9 | reinforcement, 3” | 227152 | 8 |
| 10 | reinforcement, 13” | 227154 | 2 |
| 11 | coupling, flexible 2 1/2” **(I)** | 040648 | 1 |
| 12 | nut, hex locking 5/16”–18 | 825505–166 | 4 |
| 13 | capscrew, hex gr5 5/16”–18 x 1 1/2” | 828605–150 | 4 |
| 14 | elbow, pipe 90 2 1/2” | 801515–100 | 1 |
| 15 | nipple, pipe 2 1/2” x 10” | 822140–100 | 1 |
| 16 | u–bolt, 1/2” x 3” pipe | 829008–300 | 2 |
| 17 | support, moisture separator | 250023–077 | 2 |
| 18 | capscrew, hex gr5 1/2”–13 x 1 1/4” | 828608–125 | 8 |
| 19 | separator, water 2 1/2” **(II)** | 410144 | 1 |
| 20 | nipple, pipe 2 1/2” x 5 1/2” | 822140–055 | 1 |
| 21 | elbow, reducing 3” x 2 1/2” | 801612–100 | 1 |
| 22 | elbow, tube–m 90 1/4” x 1/4” | 810504–025 | 1 |
| 23 | tubing, steel 1/4” | 841015–004 | 20 ft. |
| 24 | connector, tube–m 1/4” x 1/4” | 810204–025 | 3 |
| 25 | valve, fluid stop 2” **(III)** | 016742 | 1 |
| 26 | bushing, reducing hex 2” x 1 1 /4” | 802108–050 | 1 |
| 27 | nipple, pipe 1 1/4” x close | 822220–000 | 4 |
| 28 | filter, fluid **(IV)** | 250022–522 | 1 |
| 29 | coupling, reducing 1 1/2” x 1 1/4” | 801012–010 | 1 |
| 30 | connector, tube–m 1 1/2” x 1 1/2” | 810224–150 | 8 |
| 31 | tube, 1 1/2”od | 250033–663 | 1 |
| 32 | tee, pipe 1 1/2” | 802415–060 | 1 |
| 33 | nipple, pipe 1 1/2” x 6” | 822124–060 | 1 |

(Continued on Page 63)

**(I)** For maintenance on flexible coupling no. 040648, order replacement gasket no. 040649 (2 required).

**(II)** For maintenance on water separator no. 410144, order repair kit no. 250033–038.

**(III)** For maintenance on fluid stop valve no. 016742, order repair kit no. 001684.

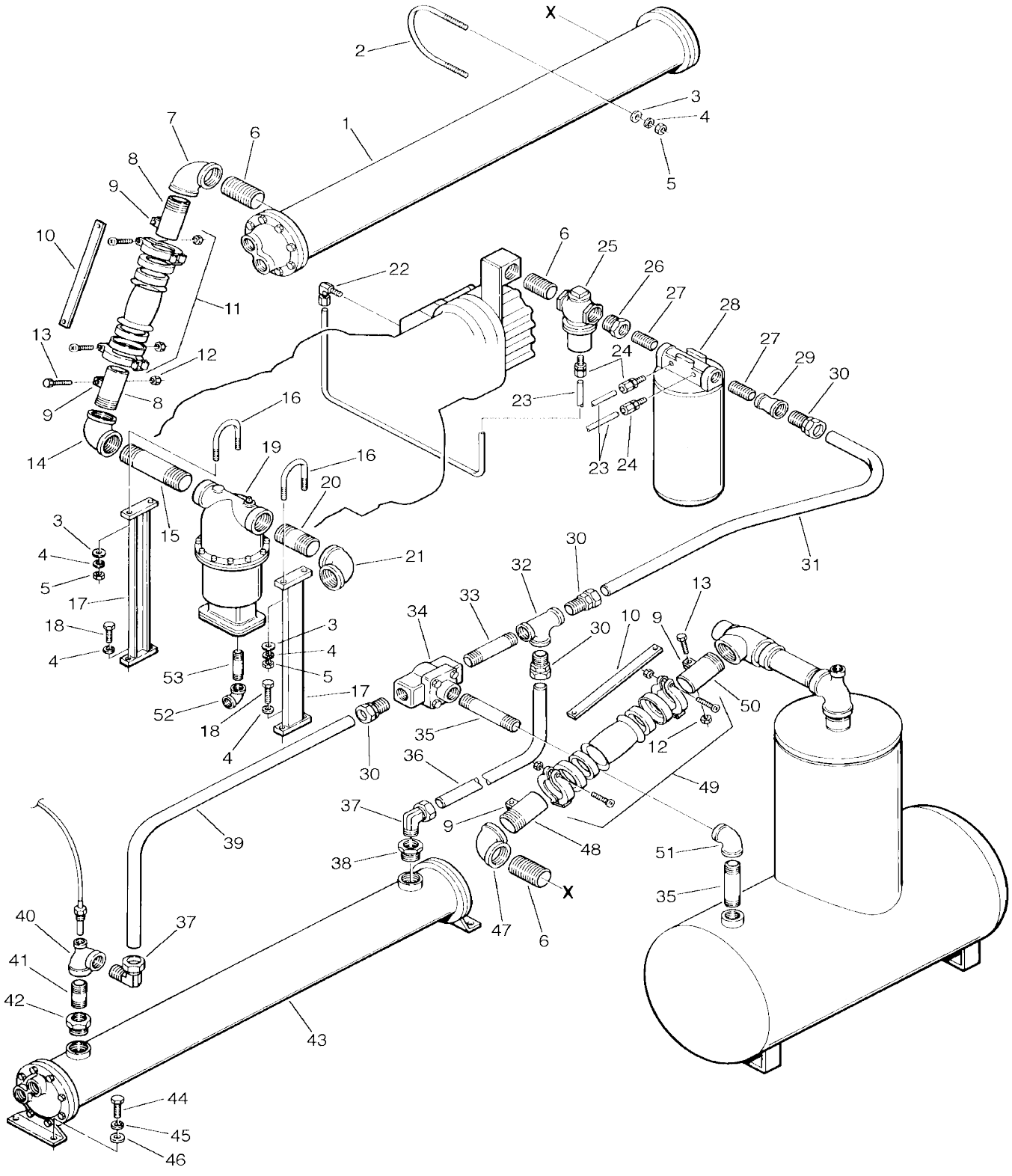
**(IV)** For maintenance on fluid filter no. 250022–522, order repair kit no. 250025–526.

**PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR**

Section 7

# ILLUSTRATIONS AND PARTS LIST

### 7.12 COMPRESSOR COOLING AND LUBRICATION SYSTEM – 125 & 150HP/93 & 112KW (WATER–COOLED)



### 7.12 COMPRESSOR COOLING AND LUBRICATION SYSTEM – 125 & 150HP/93 & 112KW (WATER–COOLED) (Continued)

| *key number* | *description* | *part number* | *quantity* |
|---|---|---|---|
| 34 | valve, thermal (V) | 014512 | 1 |
| 35 | nipple, pipe 1 1/2" x 9" | 822124–090 | 2 |
| 36 | tube, 1 1/2"od | 250033–967 | 1 |
| 37 | elbow, tube–m 1 1/2" x 1 1/2" | 810524–150 | 2 |
| 38 | bushing, reducing hex 3" x 1 1/2" | 802112–060 | 1 |
| 39 | tube, 1 1/2" | 250033–968 | 1 |
| 40 | tee, reducing 2" x 1/2" x 1 1/2" | 802208–026 | 1 |
| 41 | nipple, pipe 2" x 6" | 822132–060 | 1 |
| 42 | bushing, reducing hex 3" x 2" | 802112–080 | 1 |
| 43 | heat exchanger, 8" x 48" | 043031 | 1 |
| 44 | capscrew, hex hd gr5 1/2"–13 x 1 1/4" | 828608–125 | 4 |
| 45 | washer, springlock 1/2" | 837508–125 | 4 |
| 46 | washer, flat 1/2" | 837208–112 | 4 |
| 47 | elbow, reducing 3" x 2" | 801612–080 | 1 |
| 48 | nipple, half 3" x 10" | 822848–100 | 1 |
| 49 | coupling, flexible 3" (VI) | 040327 | 1 |
| 50 | nipple, half 3" x 6" | 822848–060 | 1 |
| 51 | elbow, pipe 90 1 1/2" | 801515–060 | 2 |
| 52 | elbow, pipe 90 3/4" | 801515–030 | 1 |
| 53 | nipple, pipe 3/4" x 3" | 822112–030 | 1 |

(V) For maintenance on thermal valve no. 014512, order repair kit no. 001168.

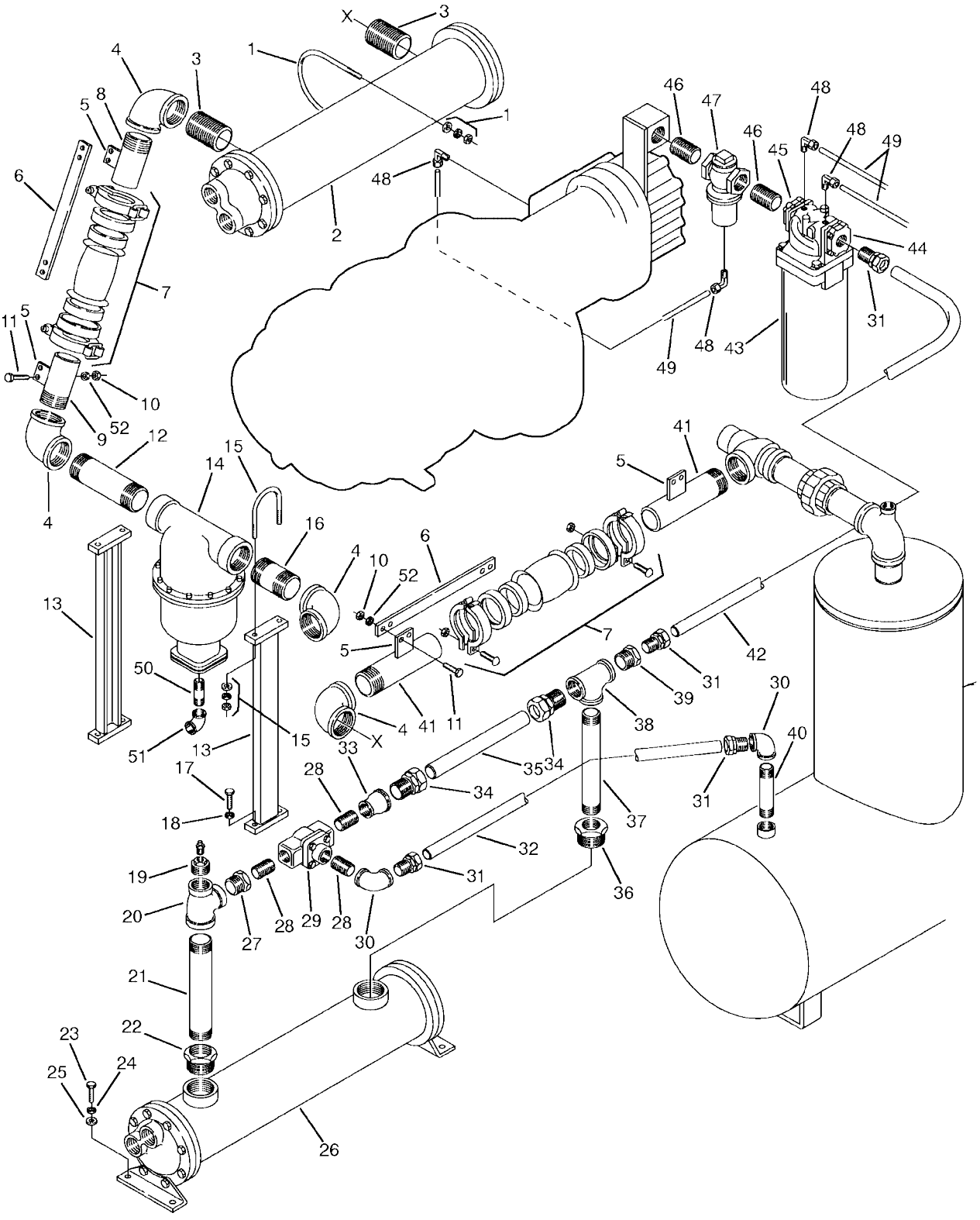
(VI) For maintenance on flexible coupling no. 040327, order replacement gasket no. 040523 (2 required).

**PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR**

Section 7

# ILLUSTRATIONS AND PARTS LIST

### 7.13 COMPRESSOR COOLING AND LUBRICATION SYSTEM – 200HP/150KW (WATER – COOLED)



### 7.13 COMPRESSOR COOLING AND LUBRICATION SYSTEM–200HP/150KW (WATER–COOLED)

| *key number* | *description* | *part number* | *quantity* |
|---|---|---|---|
| 1 | u–bolt, 1/2" x 8" | 829008–000 | 2 |
| 2 | aftercooler | 042541 | 1 |
| 3 | nipple, pipe 3" x close | 822248–000 | 2 |
| 4 | elbow, pipe 90 3" | 801515–120 | 3 |
| 5 | reinforcement, 3" x 2.5" | 250035–136 | 4 |
| 6 | reinforcement, 15.5" | 250035–138 | 2 |
| 7 | coupling, flexible 3" **(I)** | 040327 | 1 |
| 8 | nipple, pipe half 3" x 7" | 822848–070 | 1 |
| 9 | nipple, pipe half 3" x 12" | 822848–120 | 1 |
| 10 | nut, hex unfin 3/8"–16 | 824206–337 | 2 |
| 11 | capscrew, hex GR5 3/8"–16 x 1" | 828606–100 | 2 |
| 12 | nipple, pipe 3" x 9" | 822148–090 | 1 |
| 13 | support, moisture separator | 250023–077 | 2 |
| 14 | separator, moisture | 250007–787 | 1 |
| 15 | clamp, exhaust 3 1/2" | 040284 | 2 |
| 16 | nipple, pipe 3" x 4 1/2" | 822148–045 | 1 |
| 17 | capscrew, hex hd GR5 1/2"–13 x 1 1/4" | 828608–125 | 8 |
| 18 | washer, springlock 1/2" | 837508–125 | 16 |
| 19 | bushing, reducing hex 2" x 1" | 802108–040 | 1 |
| 20 | tee, reducing 2 1/2" x 2" x 2" | 802210–088 | 1 |
| 21 | nipple, pipe 2 1/2" x 15 1/2" | 822140–155 | 1 |
| 22 | bushing, reducing hex 3" x 2 1/2" | 802112–100 | 1 |
| 23 | capscrew, hex GR5 3/8"–16 x 1" | 823606–100 | 4 |
| 24 | washer, springlock 3/8" | 837506–094 | 4 |
| 25 | washer, reg 3/8" | 837206–071 | 4 |
| 26 | exchanger, heat | 043031 | 1 |
| 27 | bushing, reducing hex 2" x 1 1/2" | 802108–060 | 1 |
| 28 | nipple, pipe 1 1/2" x close | 822224–000 | 3 |
| 29 | valve, thermal **(II)** | 014512 | 1 |
| 30 | elbow, pipe 1 1/2" 90 | 801515–060 | 2 |
| 31 | connector, tube–M 1 1/2" x 1 1/2" | 810224–150 | 8 |
| 32 | tube | 250033–967 | 1 |
| 33 | reducer, bell conector | 801012–010 | 1 |
| 34 | connector, tube–M 1 1/2" x 1 1/2" | 810224–150 | 2 |
| 35 | tube | 250033–663 | 1 |

(Continued on Page 67)

**(I)** For maintenance on flexible coupling no. 040327, order replacement gasket no. 040523 (2 required).

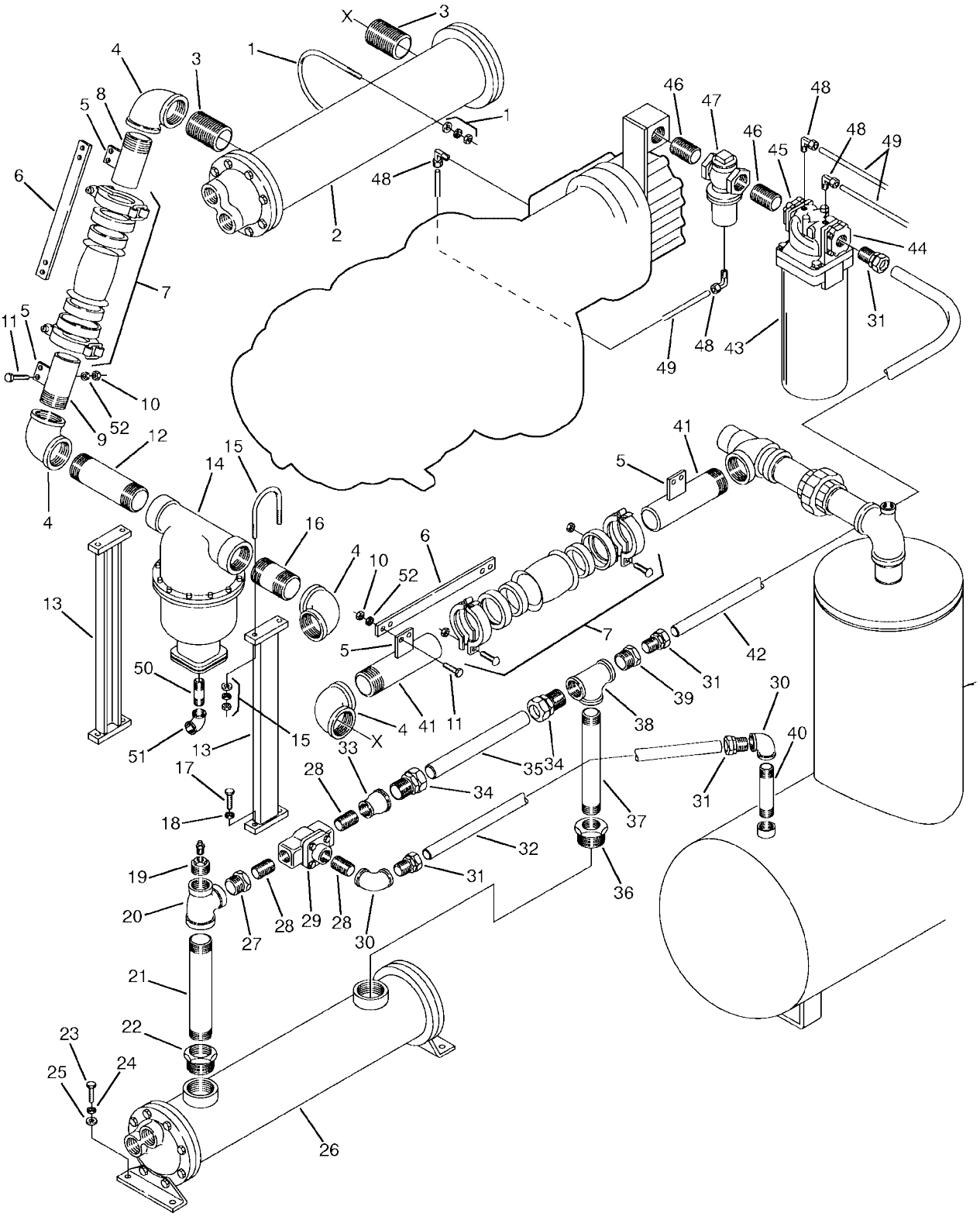
**(II)** For maintenance on thermal valve no. 014512, order repair kit no. 001168.

**PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR**

Section 7

# ILLUSTRATIONS AND PARTS LIST

### 7.13 COMPRESSOR COOLING AND LUBRICATION SYSTEM – 200HP/150KW (WATER – COOLED)



### 7.13 COMPRESSOR COOLING AND LUBRICATION SYSTEM–200HP/150KW (WATER–COOLED) (Continued)

| *key number* | *description* | *part number* | *quantity* |
|---|---|---|---|
| 36 | bushing, reducing hex 3" x 1 1/2" | 802112–060 | 1 |
| 37 | nipple, pipe 1 1/2" x 15" | 822124–150 | 1 |
| 38 | tee, straight 1 1/2" | 802415–060 | 1 |
| 39 | bushing, reducing hex 2" x 1 1/2" | 802108–060 | 1 |
| 40 | nipple, pipe 1 1/2" x 6" | 822124–060 | 1 |
| 41 | nipple, pipe half 3" x 12" | 822848–120 | 2 |
| 42 | tube, thermal valve to filter 1 1/2" | 250033–663 | 1 |
| 43 | filter, fluid **(III)** | 250007–219 | 1 |
| 44 | adapter, port 1 1/2" | 250007–221 | 1 |
| 45 | adapter, port 2" | 250007–220 | 1 |
| 46 | nipple, pipe 1 1/4" x close | 822220–000 | 1 |
| 47 | valve, fluid stop **(IV)** | 016742 | 1 |
| 48 | elbow, tube 90 M 1/4" x 1/4" | 810504–025 | 1 |
| 49 | tube, steel | 841015–004 | 20 ft. |
| 50 | nipple, pipe 3/4" x 3" | 822112–030 | 1 |
| 51 | elbow, pipe 90 3/4" | 801515–030 | 1 |
| 52 | washer, springlock 1/4" | 837506–094 | 2 |

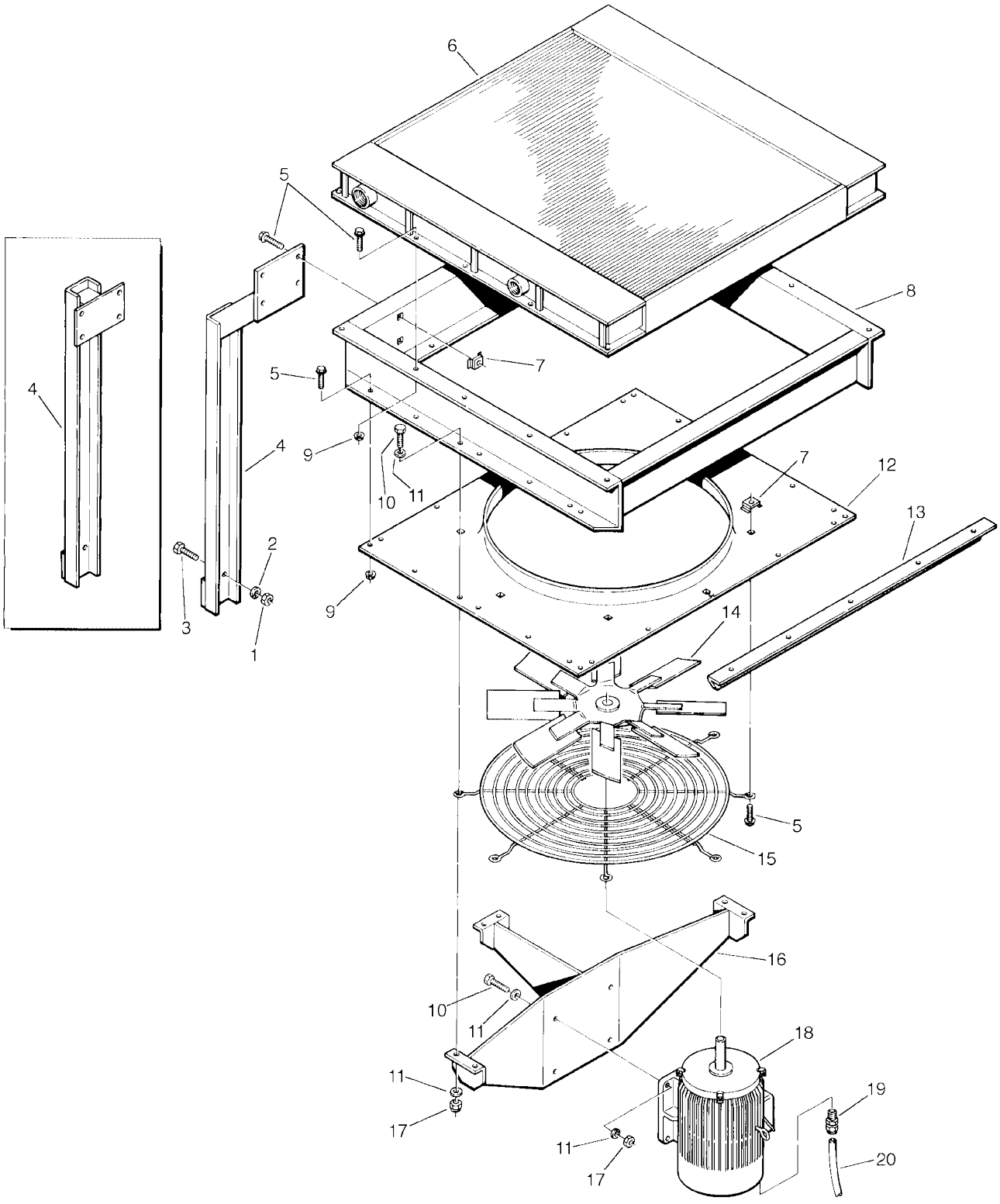
**(III)** For maintenance on fluid filter no. 250007–219, order repair kit no. 250008–956.

**(IV)** For maintenance on fluid stop valve no. 016742, order repair kit no. 001684.

**PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR**

Section 7
# ILLUSTRATIONS AND PARTS LIST

### 7.14 COOLER ASSEMBLY – ALL MODELS



### 7.14 COOLER ASSEMBLY – ALL MODELS

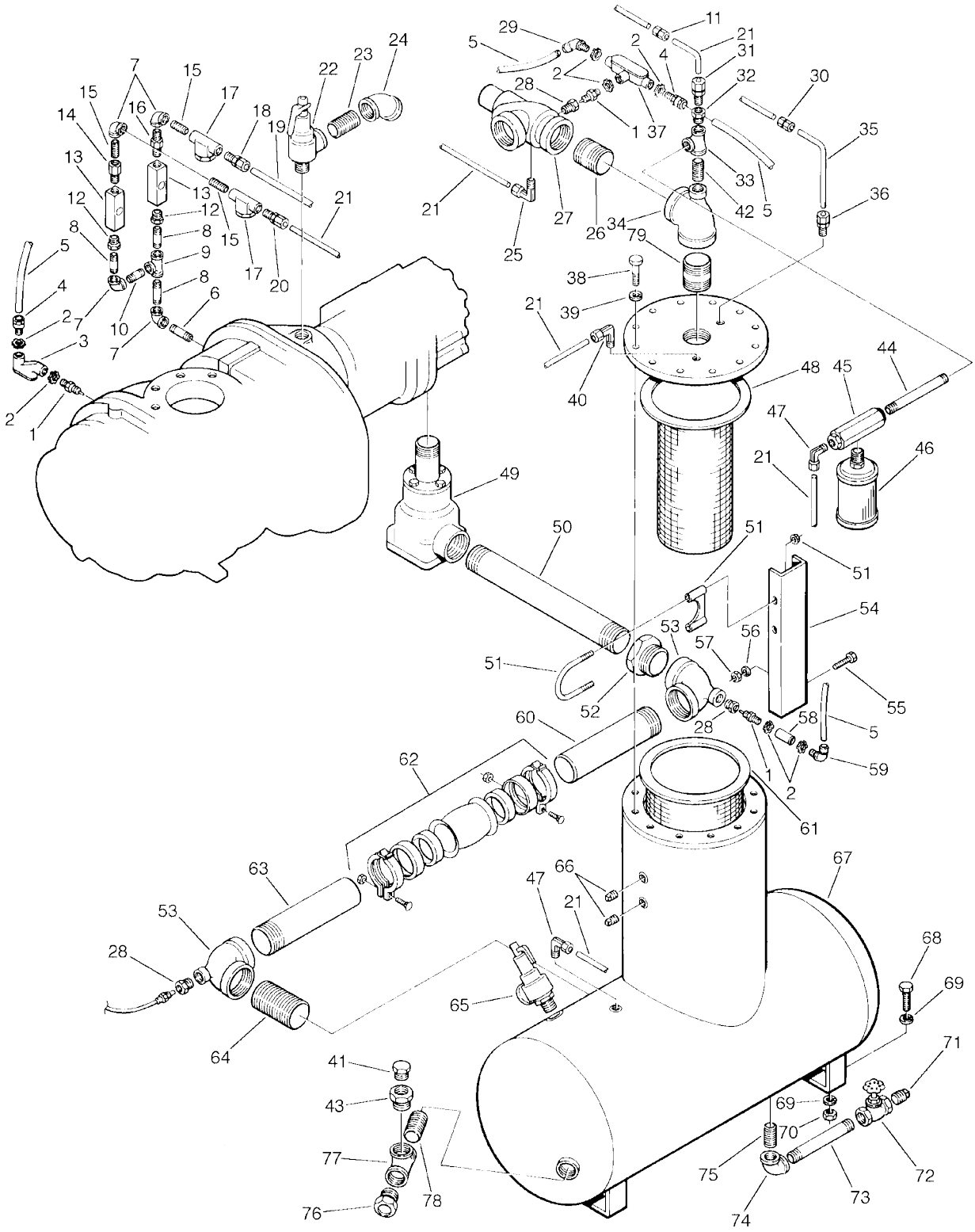
| *key number* | *description* | *part number* | *quantity* |
|---|---|---|---|
| 1 | nut, hex 1/2"–13 | 824208–448 | 4 |
| 2 | washer, springlock 1/2" | 837508–125 | 10 |
| 3 | capscrew, hex hd GR5 1/2"–13 x 1 1/4" | 828608–125 | |
| 4 | support, cooler (100–200HP/75–150KW) | 250027–038 | 2 |
| | support, cooler (250HP/187KW) | 02250056–273 | 2 |
| 5 | screw, hex ser washer 5/16" x 3/4" | 829705–075 | 48 |
| 6 | cooler, combo fluid and aftercooler (100HP/75KW) | 250038–020 | 1 |
| | •cooler, combo fluid and aftercooler (125, 150 & 200/ 93,112 &150KW) | 250022–529 | 1 |
| | •cooler, combo fluid and aftercooler (250HP/187KW) | 02250053–217 | 1 |
| 7 | nut, retainer 5/16"–18 | 861405–092 | 22 |
| 8 | adapter, venturi panel (100–200HP/75–150KW) | 250022–715 | 1 |
| | •adapter, venturi panel (250HP/187KW) | 02250056–198 | 1 |
| 9 | nut, hex flgd 5/16"–18 | 825305–283 | 26 |
| 10 | capscrew, hex hd GR5 3/8" x 1" | 828606–100 | 10 |
| 11 | washer, reg 3/8" | 837206–071 | 14 |
| 12 | panel, venturi 36" | 245579 | 1 |
| | panel, venturi 42" | 02250056–197 | 1 |
| 13 | angle, 2" x 2" x 47 1/2" | 250022–720 | 1 |
| 14 | fan, 36" (100HP/75KW) | 410126 | 1 |
| | •fan, 36" (125 & 150HP/93 &112KW) | 405103 | 1 |
| | •fan, 36" (200HP/150KW) | 250022–605 | 1 |
| | •fan, 42" (250HP/187KW) | 250004–688 | 1 |
| 15 | guard, fan 38" (100–200HP/75–112KW) | 248744 | 1 |
| | •guard, fan 38" (250HP/187KW) | 250042–676 | 1 |
| 16 | support, fan motor (100–150HP/75–112KW) | 015641 | 1 |
| | •support, fan motor (200HP/150KW) | 250022–721 | 1 |
| | •support, fan motor (250HP/187KW) | 02250056–077 | 1 |
| 17 | nut, hex locking 3/8"–16 | 825506–198 | 10 |
| 18 | motor, 3HP (100HP/75KW) | 050257 | 1 |
| | •motor, 5HP (125 & 150HP/93&112KW) | 050774 | 1 |
| | •motor, 7.5HP (200HP/150KW) | 050795 | 1 |
| | •motor, 5HP (250HP/187KW) | 02250055–586 | 1 |
| 19 | connector, start liq–tite 1/2" | 846400–050 | 1 |
| 20 | conduit, csa flex 1/2" | 846315–050 | 4 ft. |

**PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR**

Section 7

# ILLUSTRATIONS AND PARTS LIST

### 7.15 COMPRESSOR DISCHARGE SYSTEM – 100, 125 & 150HP/75, 93 & 112KW



### 7.15 COMPRESSOR DISCHARGE SYSTEM – 100, 125 & 150HP/75, 93 & 112KW

| *key number* | *description* | *part number* | *quantity* |
|---|---|---|---|
| 1 | probe, thermistor | 046867 | 3 |
| 2 | locknut, conduit | 847200–050 | 7 |
| 3 | elbow, entrance | 847715–050 | 1 |
| 4 | connector, start lq–tite | 846400–050 | 2 |
| 5 | conduit, csa flex 1/2" | 846315–050 | 6 |
| 6 | nipple, pipe 1/4" x 4" | 822104–040 | 1 |
| 7 | elbow, pipe 90 1/4" | 803515–010 | 4 |
| 8 | nipple, pipe 1/4" x 2 1/2" | 822104–025 | 3 |
| 9 | tee, straight 1/4" | 804415–010 | 1 |
| 10 | nipple, pipe 1/4" x 1 1/2" | 822104–015 | 1 |
| 11 | union, tube hex 1/4" | 811304–025 | 1 |
| 12 | bushing, reducing 1/2" x 1/4" | 807602–010 | 2 |
| 13 | glass, sight | 046559 | 2 |
| 14 | orifice, restrictor 1/32" | 040381 | 1 |
| 15 | nipple, pipe 1/4" x close | 822104–000 | 3 |
| 16 | orifice, .062 | 027443 | 1 |
| 17 | strainer, v–type 300 psi (20.1 bar) 1/4" **(I)** | 241771 | 2 |
| 18 | connector, tube 5/16" x 1/4" | 810205–025 | 1 |
| 19 | tubing, steel 5/16" | 841015–005 | 8 ft. |
| 20 | connector, tube 1/4" x 1/4" | 810204–025 | 1 |
| 21 | tubing, steel 1/4" | 841015–004 | 9 ft. |
| 22 | valve, relief 1 1/4" x 1 1/2" | 250027–279 | 1 |
| 23 | nipple, pipe 1 1/4" x close | 822220–000 | 1 |
| 24 | elbow, pipe 90 1 1/4" | 801515–050 | 1 |
| 25 | elbow, tube–m 90 1/4" x 1/8" | 810504–012 | 1 |
| 26 | nipple, pipe 2" x 11" (100HP/75KW) | 822132–110 | 1 |
| | •nipple, pipe 3" x 4"(125 &150HP/93 &112KW) (air–cooled) | 822148–040 | 1 |
| | •nipple, pipe 3" x 12" (125 & 150HP/93 &112KW) (water–cooled) | 822148–120 | 1 |
| 27 | valve, minimum press/check 2" (100HP/75KW) **(II)** | 242405 | 1 |
| | •valve, minimum press/check 3" (125, 150 & 200/93,112 &150KW) **(III)** | 250033–821 | 1 |

(Continued on Page 73)

**(I)** For maintenance on v–type strainer no. 241771, order repair kit no. 241772.

**(II)** For maintenance on minimum pressure/check valve no. 242405, order repair kit no. 001176.

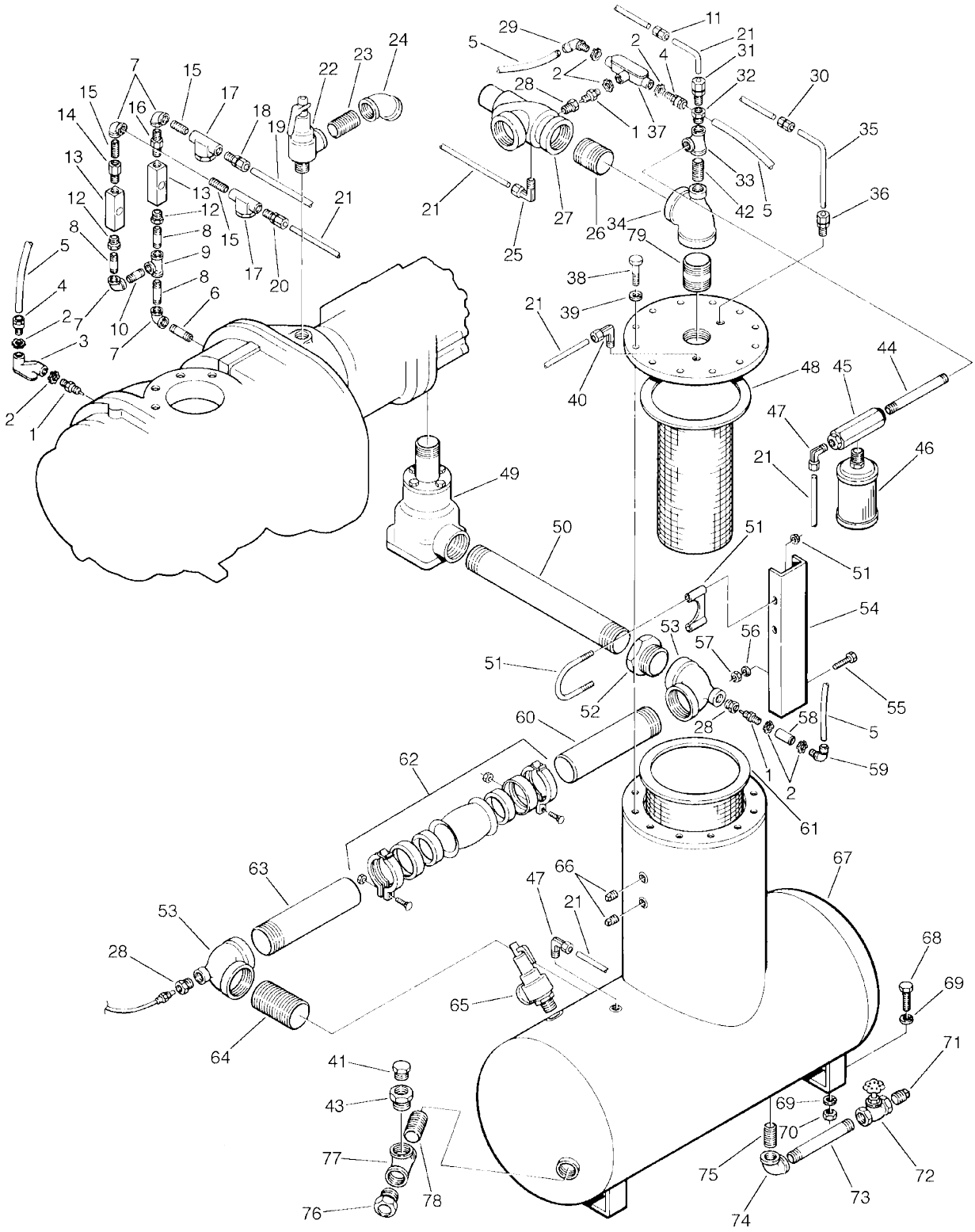
**(III)** For maintenance on minimum pressure/check valve no. 250033–821, order repair kit no. 250018–262.

**PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR**

Section 7

# ILLUSTRATIONS AND PARTS LIST

### 7.15 COMPRESSOR DISCHARGE SYSTEM – 100, 125 & 150HP/75, 93 & 112KW



### 7.15 COMPRESSOR DISCHARGE SYSTEM – 100, 125 & 150HP/75, 93 & 112KW (Continued)

| *key number* | *description* | *part number* | *quantity* |
|---|---|---|---|
| 28 | bushing, reducing hex 3/4" x 1/2" (100HP/75KW) | 802103–020 | 1 |
| | •bushing, reducing hex 1" x 1/2" (125 & 150HP/93&112KW) | 802104–020 | 2 |
| 29 | elbow, 90 lq–tite 1/2" | 846600–050 | 2 |
| 30 | union, tube hex 5/16" x 5/16" | 811305–031 | 1 |
| 31 | connector, flex 1/4"t x 1/4"p | 020169 | 1 |
| 32 | bushing, reducing hex 1/2" x 1/4" | 802102–010 | 1 |
| 33 | tee, reducing 3/4" x 1/2" x 1/2" | 802203–022 | 1 |
| 34 | tee, reducing 2" x 3/4" x 3" (100HP/75KW) | 802208–038 | 1 |
| | •tee, reducing 3" x 3/4" x 3" (125 &150HP/93 &112KW) | 802212–032 | 1 |
| 35 | tube, 5/16" | 020672 | 1 |
| 36 | fitting, flex 5/16" x 1/4" | 020501 | 1 |
| 37 | unilet, type–t 1/2" | 847615–050 | 1 |
| 38 | capscrew, hex gr5 3/4" x 2 1/2" | 828612–250 | 12 |
| 39 | washer, springlock 3/4" | 837512–188 | 12 |
| 40 | elbow, tube–m 1/4" x 1/4" | 810504–025 | 2 |
| 41 | plug, o–ring 1 1/4" | 040029 | 1 |
| 42 | nipple, pipe 3/4" x close | 822212–000 | 1 |
| 43 | adapter, filler | 020044 | 1 |
| 44 | nipple, pipe 1/2" x 4 1/2" | 822108–045 | 1 |
| 45 | valve, blowdown 1/2" **(IV)** | 250030–276 | 1 |
| 46 | silencer, air 1/2" | 041006 | 1 |
| 47 | elbow, tube–m 90 1/4" x 1/4" | 810504–025 | 2 |
| 48 | separator, secondary | 250034–133 | 1 |
| 49 | valve, discharge check 3" **(V)** | 018435–003 | 1 |
| 50 | nipple, pipe 3" x 25" (100HP/75KW) | 822148–250 | 1 |
| | •nipple, pipe 3" x 24" (125HP & 150HP/93 &112KW) | 822148–240 | 1 |
| 51 | clamp, exhaust 3 1/2" | 040284 | 1 |
| 52 | bushing, reducing hex 4" x 3" (125 & 150HP/93 & 112KW only) | 802116–120 | 1 |
| 53 | tee, reducing 3" x 3/4" x 3" | 802212–032 | 2 |
| | •tee, reducing 4" x 1" x 4" (125 &150HP/93 &112KW) | 802216–046 | 2 |
| 54 | support, discharge pipe | 250033–187 | 1 |

(Continued on Page 75)

**(IV)** For maintenance on blowdown valve no. 250030–276, order repair kit no. 02250045–132.

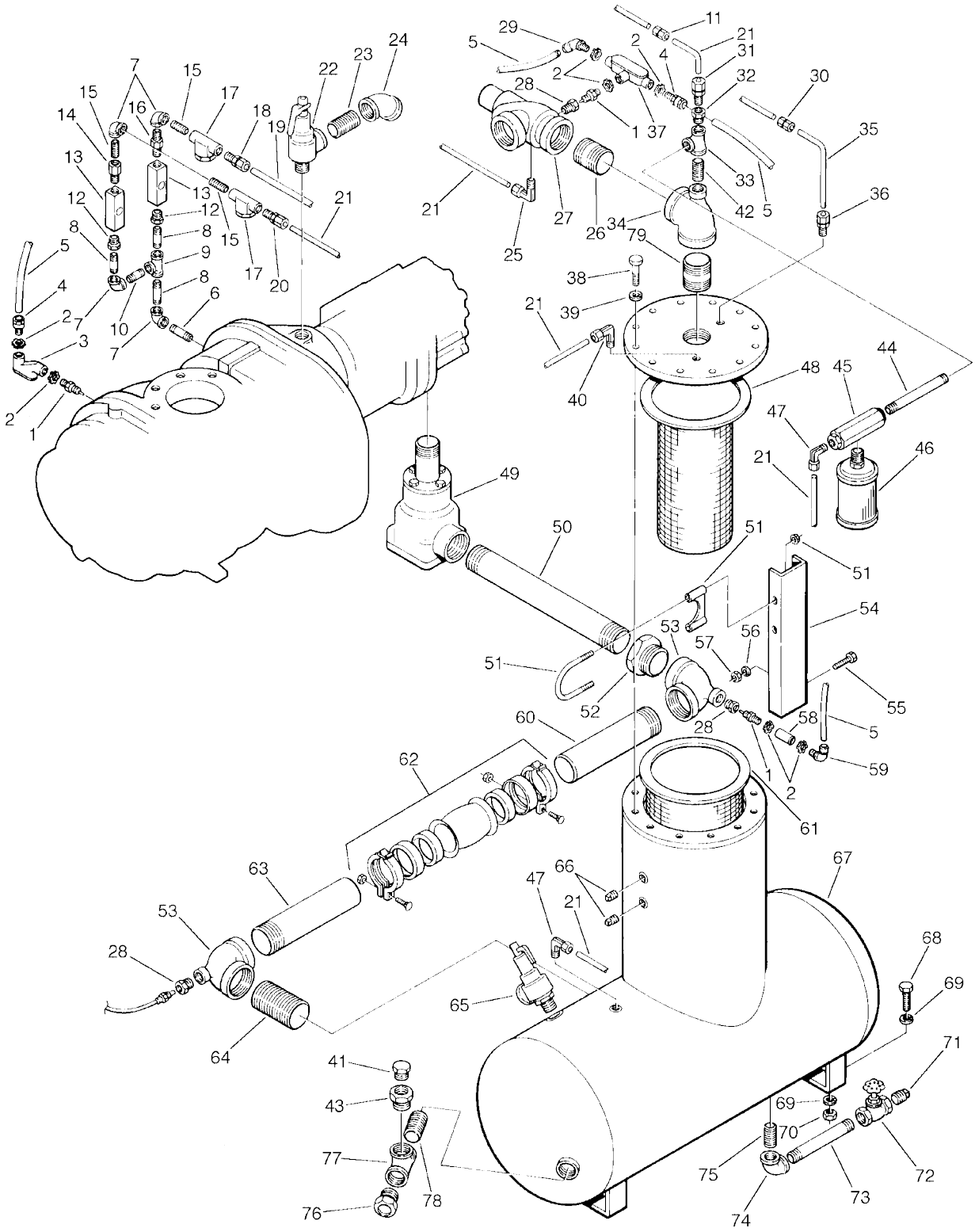
**(V)** For maintenance on discharge deck valve no, 018435, order repair kit no. 606206–001.

**PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR**

Section 7

# ILLUSTRATIONS AND PARTS LIST

### 7.15 COMPRESSOR DISCHARGE SYSTEM – 100, 125 & 150HP/75, 93 & 112KW



### 7.15 COMPRESSOR DISCHARGE SYSTEM – 100, 125 & 150HP/75, 93 & 112KW (Continued)

| *key number* | *description* | *part number* | *quantity* |
|---|---|---|---|
| 55 | capscrew, hex gr5 3/8"–16 x 1 1/4" | 828606–125 | 2 |
| 56 | washer, springlock 3/8" | 837506–094 | 2 |
| 57 | nut, hex unfinished 3/8"–16 | 824206–337 | 2 |
| 58 | coupling, pipe 1/2" 150# | 801215–020 | 1 |
| 59 | elbow, 90 lq–tite 1/2" | 846600–050 | 2 |
| 60 | nipple, half 3" x 13" (100HP/75KW) | 822848–130 | 1 |
| | •nipple, half 4" x 11" (125 & 150HP/ 93 & 112KW) | 822864–110 | 1 |
| 61 | separator, primary | 250034–121 | 1 |
| 62 | coupling, flexible 3" (100HP/75KW) **(VI)** | 040327 | 1 |
| | •coupling, flexible 4" (125 & 150HP/93 &112KW) **(VII)** | 041085 | 1 |
| 63 | nipple, half 3" x 12" (100/75KW) | 822848–120 | 1 |
| | •nipple, half 4" x 12" (125 & 150HP/93 &112KW) | 822864–120 | 1 |
| 64 | nipple, pipe 3" x 4" (100HP/75KW) | 822148–040 | 1 |
| | •nipple, pipe 4" x close (125&150HP/93 &112KW) | 822264–000 | 1 |
| 65 | valve, relief 1 1/4" | 410103 | 1 |
| 66 | plug, pipe 1/4" | 807800–010 | 2 |
| 67 | tank, fluid (100HP) | 248585 | 1 |
| | •tank, fluid (125 & 150HP/93 &112KW) | 250020–340 | 1 |
| 68 | capscrew, hex hd gr5 1/2"–13 x 1 1/2" | 828608–150 | 4 |
| 69 | washer, springlock 1/2" | 837508–125 | 4 |
| 70 | nut, hex 1/2"–13 | 824208–448 | 4 |
| 71 | plug, pipe 3/4" | 807800–030 | 1 |
| 72 | valve, globe 3/4" | 040520 | 1 |
| 73 | nipple, pipe 3/4" x 12" | 822112–120 | 1 |
| 74 | elbow, pipe 90 3/4" | 801515–030 | 1 |
| 75 | nipple, pipe 3/4" x 2 1/2" | 822112–025 | 1 |
| 76 | glass, fluid level 1 1/2" | 040279 | 1 |
| 77 | tee, pipe 1 1/2" | 802415–060 | 1 |
| 78 | nipple, pipe 1 1/2" x close | 822224–000 | 1 |
| 79 | nipple, pipe 2" x 4" (100HP/75KW) | 822132–040 | 1 |
| | •nipple, pipe 3" x 4" (125 & 150HP/93 &112KW) | 822148–040 | 1 |

**(VI)** For maintenance on flexible coupling no. 040327, order replacement gasket no. 040523 (2 required).

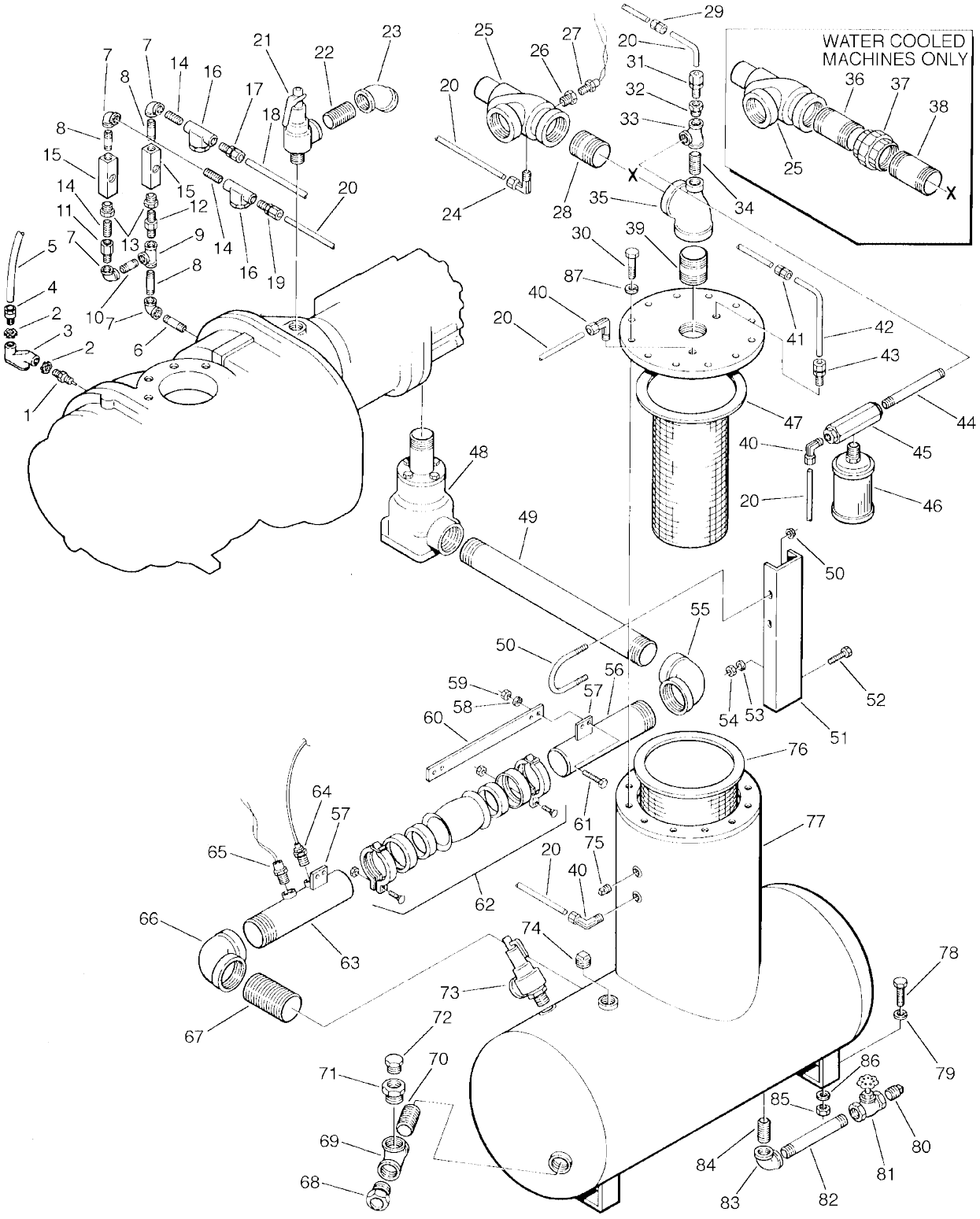
**(VII)** For maintenance on flexible coupling no. 041085, order replacement gasket no. 041353 (2 required).

**PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR**

Section 7

# ILLUSTRATIONS AND PARTS LIST

### 7.16 COMPRESSOR DISCHARGE SYSTEM – 200HP/150KW



### 7.16 COMPRESSOR DISCHARGE SYSTEM – 200HP/150KW

| *key number* | *description* | *part number* | *quantity* |
|---|---|---|---|
| 1 | probe, thermistor | 046867 | 3 |
| 2 | locknut, conduit | 847200–050 | 7 |
| 3 | elbow, entrance | 847715–050 | 1 |
| 4 | connector, straight lq–tite | 846400–050 | 2 |
| 5 | conduit, CSA flex 1/2” | 846315–050 | 6 ft. |
| 6 | nipple, pipe 1/4” x 4” | 822104–040 | 1 |
| 7 | elbow, pipe 90 1/4” | 803515–010 | 4 |
| 8 | nipple, pipe 1/4” x 2 1/2” | 822104–025 | 3 |
| 9 | tee, pipe 1/4” | 804415–010 | 1 |
| 10 | nipple, pipe 1/4” x 1 1/2” | 822104–015 | 1 |
| 11 | orifice, restrictor 1/32” | 040381 | 1 |
| 12 | orifice, .062” | 027443 | 1 |
| 13 | bushing, reducing hex 1/2” x 1/4” | 807602–010 | 2 |
| 14 | nipple, pipe 1/4” x close | 822104–000 | 3 |
| 15 | glass, sight | 046559 | 2 |
| 16 | strainer, v–type 1/4” **(I)** | 241771 | 2 |
| 17 | connector, tube 5/16” x 1/4” | 810205–025 | 1 |
| 18 | tubing, steel 5/16” | 841015–005 | 8 ft. |
| 19 | connector, tube 1/4” x 1/4” | 810204–025 | 1 |
| 20 | tubing, steel 1/4” | 841015–004 | 9 ft. |
| 21 | valve, relief 1 1/4” x 1 1/2” | 250027–279 | 1 |
| 22 | nipple, pipe 1 1/4” x close | 822220–000 | 1 |
| 23 | elbow, pipe 45 1 1/4” | 801415–050 | 1 |
| 24 | elbow, tube 90 M 1/4” x 1/4” | 810504–012 | 1 |
| 25 | valve, minimum pressure check 3” **(II)** | 250033–821 | 1 |
| 26 | bushing, reducing hex 3/4” x 1/2” | 802103–020 | 1 |
| 27 | probe | 046867 | 1 |
| 28 | nipple, pipe 3” x close | 822248–000 | 1 |
| 29 | union, tube hex 1/4” | 811304–025 | 1 |
| 30 | capscrew, hex GR5 3/4” x 2 1/2” | 828612–250 | 12 |
| 31 | connector, flex 1/4”t x 1/4”p | 020169 | 1 |
| 32 | bushing, reducing hex 1/2” x 1/4” | 802102–010 | 1 |
| 33 | tee, reducing 3/4” x 1/2” x 1/2” | 802203–022 | 1 |
| 34 | nipple, pipe 3/4” x close | 822212–000 | 1 |

(Continued on Page 79)

**(I)** For maintenance on v–type strainer no. 241771, order repair kit no. 241772.

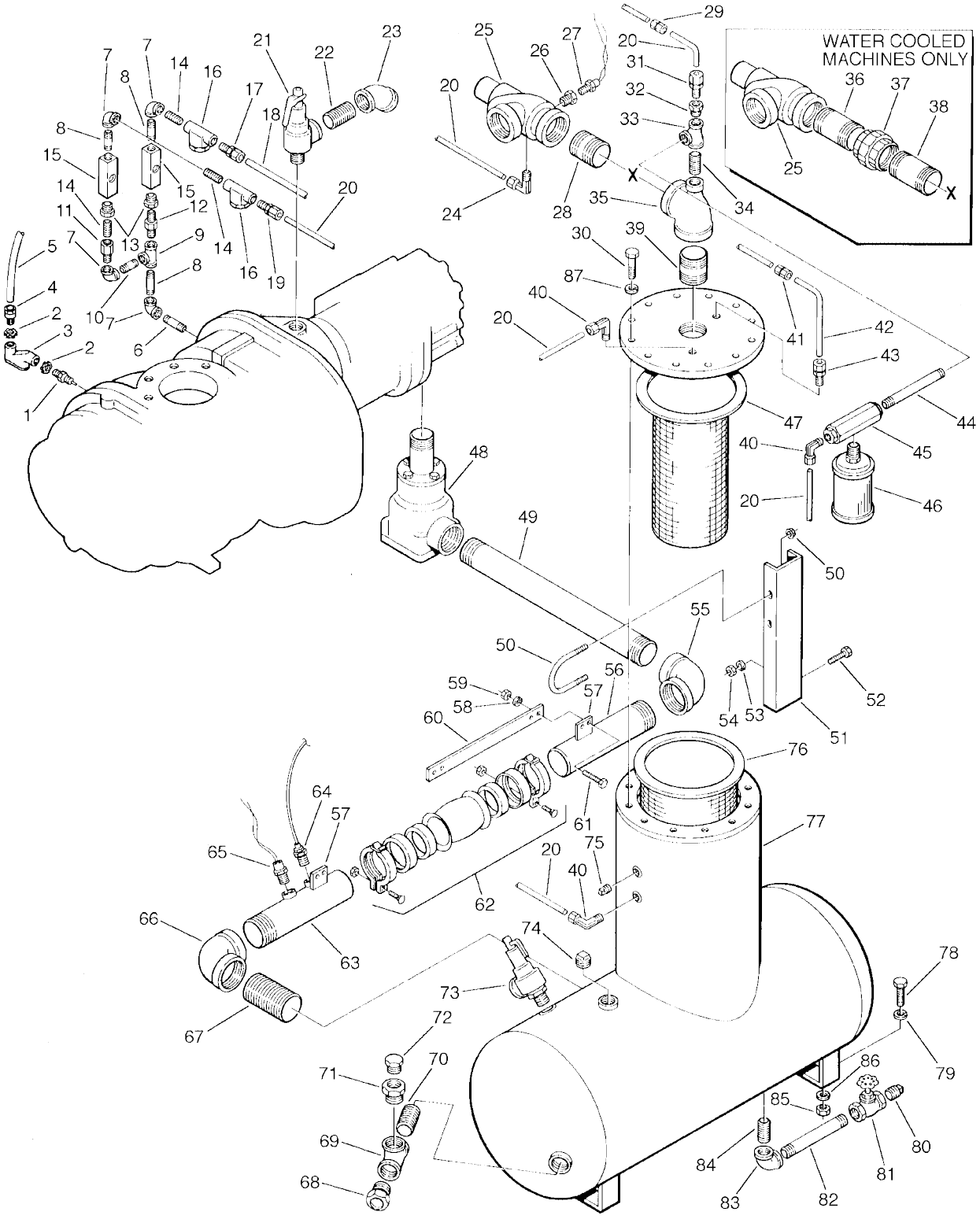
**(II)** For maintenance on minimum pressure/check valve no. 250033–821, order repair kit no. 250018–262.

**PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR**

Section 7

# ILLUSTRATIONS AND PARTS LIST

### 7.16 COMPRESSOR DISCHARGE SYSTEM – 200HP/150KW



### 7.16 COMPRESSOR DISCHARGE SYSTEM – 200HP/150KW (Continued)

| *key number* | *description* | *part number* | *quantity* |
|---|---|---|---|
| 35 | tee, reducing 3" x 3/4" x 3" | 802212–032 | 1 |
| 36 | nipple, pipe 3" x 3 1/2" | 822148–035 | 1 |
| 37 | union, pipe 3" | 802515–120 | 1 |
| 38 | nipple, pipe 3" x 6" | 822148–060 | 1 |
| 39 | nipple, pipe 3" x 4" | 822148–040 | 1 |
| 40 | elbow, tube–M 1/4" x 1/4" | 810504–025 | 2 |
| 41 | union, tube hex 5/16" x 5/16" | 811305–031 | 1 |
| 42 | tube, 5/16" | 020672 | 1 |
| 43 | fiting, flex 5/16" x 1/4" | 020501 | 1 |
| 44 | nipple, pipe 1/2" x 4 1/2" | 822108–045 | 1 |
| 45 | valve, blowdown 1/2" **(III)** | 250030–276 | 1 |
| 46 | silencer, air 1/2" | 041006 | 1 |
| 47 | element, separator secondary | 250034–133 | 1 |
| 48 | valve, discharge **(IV)** | 018435–003 | 1 |
| 49 | nipple, pipe 3" x 24 1/2" | 822148–245 | 1 |
| 50 | clamp, exhaust 3 1/2" | 040284 | 1 |
| 51 | support, discharge pipe | 250033–187 | 1 |
| 52 | capscrew, hex GR5 3/8"–16 x 1 1/4" | 828606–125 | 2 |
| 53 | washer, springlock 3/8" | 837506–094 | 2 |
| 54 | nut, hex 3/8"–16 | 824206–337 | 2 |
| 55 | elbow, pipe reducing 4" x 3" | 801616–120 | 1 |
| 56 | nipple, half 4" x 12" | 822864–110 | 1 |
| 57 | reinforcement | 227152 | 2 |
| 58 | washer, springlock 3/8" | 837506–094 | 2 |
| 59 | nut, hex 3/8"–16 | 824206–337 | 2 |
| 60 | reinfocement | 227154 | 1 |
| 61 | capscrew, hex GR5 3/8"–16 x 1 1/4" | 828606–125 | 2 |
| 62 | coupling, flexmaster 4" **(V)** | 041085 | 1 |
| 63 | nipple, half 4" x 11" | 02250043–173 | 1 |
| 64 | probe | 042582 | 1 |
| 65 | probe, thermistor | 046867 | 1 |
| 66 | elbow, pipe 90 | 801515–160 | 1 |
| 67 | nipple, pipe 4" x close | 822264–000 | 1 |
| 68 | glass, fluid level sight 1 1/2" | 040279 | 1 |
| 69 | tee, pipe 1 1/2" | 802415–060 | 1 |

(Continued on Page 81)

**(III)** For maintenance on blowdown valve no. 250030–276, order repair kit no. 02250045–132.

**(IV)** For maintenance on discharge check valve no. 018432–003, order repair kit no. 606206–001.

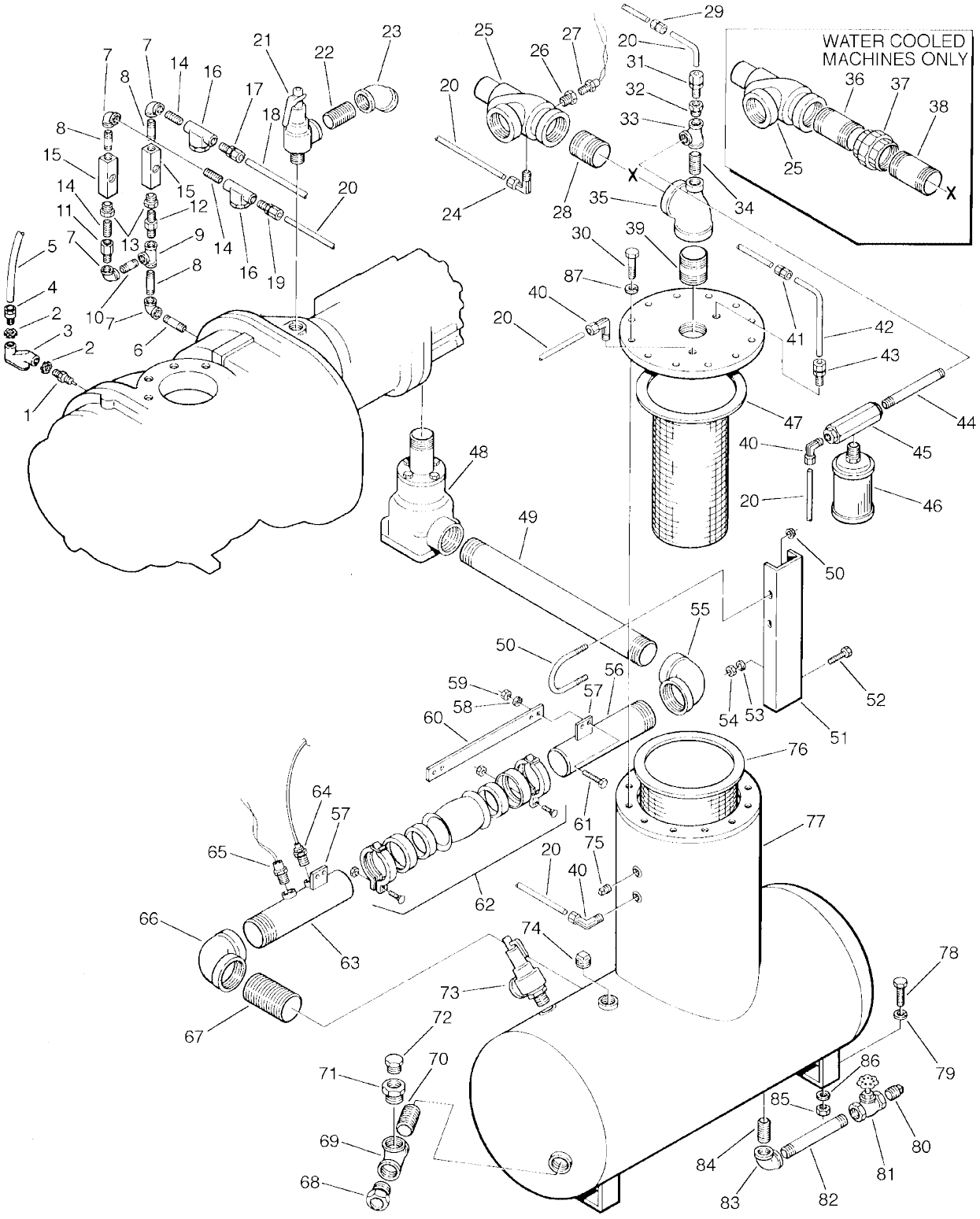
**(V)** For maintenance on flexible coupling no. 041085, order replacement gadget no. 041353 (2 required).

**PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR**

Section 7

# ILLUSTRATIONS AND PARTS LIST

### 7.16 COMPRESSOR DISCHARGE SYSTEM – 200HP/150KW



### 7.16 COMPRESSOR DISCHARGE SYSTEM – 200HP/150KW (Continued)

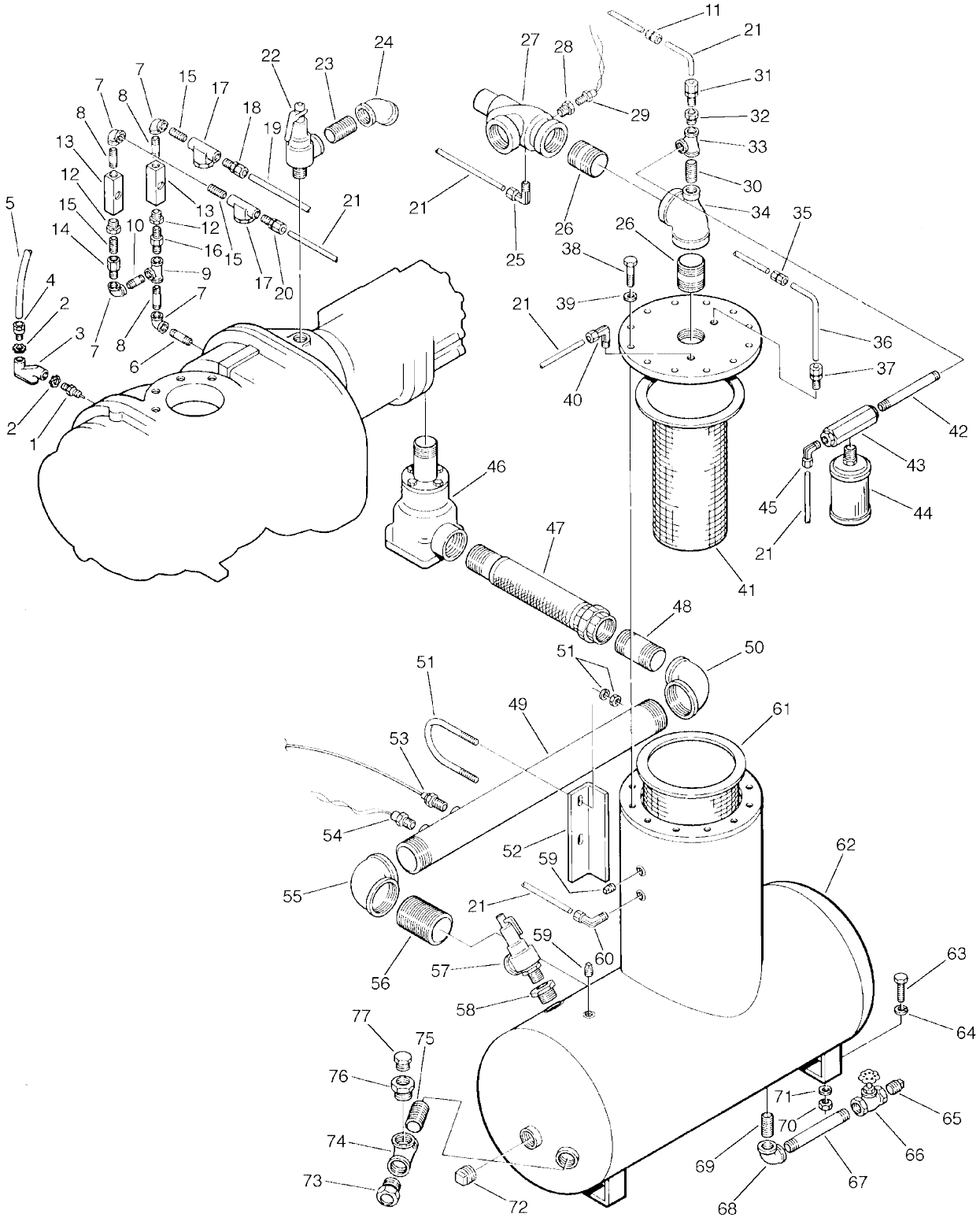
| *key number* | *description* | *part number* | *quantity* |
|---|---|---|---|
| 70 | nipple, pipe 1 1/2” | 822224–000 | 1 |
| 71 | adapter, filler | 020044 | 1 |
| 72 | plug, o–ring boss 1 1/4” | 040029 | 1 |
| 73 | valve, relief 1 1/4” | 410103 | 1 |
| 74 | plug, pipe 1/4” | 807800–010 | 1 |
| 75 | plug, pipe 1/4” | 807800–010 | 2 |
| 76 | element, primary | 250034–121 | 1 |
| 77 | tank, 20” fluid separator | 250020–340 | 1 |
| 78 | capscrew, hex GR5 1/2”–13 x 1 1/2” | 828608–150 | 4 |
| 79 | washer, springlock 1/2” | 837508–125 | 4 |
| 80 | plug, pipe 3/4” | 807800–030 | 1 |
| 81 | valve, globe 3/4” | 040520 | 1 |
| 82 | nipple, pipe 3/4” x 13” | 822112–120 | 1 |
| 83 | elbow, pipe 90 3/4” | 801515–030 | 1 |
| 84 | nipple, pipe 3/4” x 1 1/2” | 822112–015 | 1 |
| 85 | nut, hex 1/2”–13 | 824208–448 | 4 |
| 86 | washer, springlock 1/2” | 837508–125 | 4 |
| 87 | washer, springlock 3/4” | 837512–188 | 12 |

**PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR**

Section 7

# ILLUSTRATIONS AND PARTS LIST

### 7.17 COMPRESSOR DISCHARGE SYSTEM – 250HP/187KW



### 7.17 COMPRESSOR DISCHARGE SYSTEM – 250HP/187KW

| *key number* | *description* | *part number* | *quantity* |
|---|---|---|---|
| 1 | probe, thermistor | 046867 | 3 |
| 2 | locknut, conduit | 847200–050 | 7 |
| 3 | elbow, entrance | 847715–050 | 1 |
| 4 | connector, straight lq–tite | 846400–050 | 2 |
| 5 | conduit, CSA flex 1/2” | 846315–050 | 6 ft. |
| 6 | nipple, pipe 1/4” x 4” | 822104–040 | 1 |
| 7 | elbow, pipe 90 1/4” | 803515–010 | 4 |
| 8 | nipple, pipe 1/4” x 2 1/2” | 822104–025 | 3 |
| 9 | tee, pipe 1/4” | 804415–010 | 1 |
| 10 | nipple, pipe 1/4” x 1 1/2” | 822104–015 | 1 |
| 11 | union, tube hex 1/4” | 811304–025 | 1 |
| 12 | bushing, reducing 1/2” x 1/4” | 807602–010 | 2 |
| 13 | glass, sight | 046559 | 2 |
| 14 | orifice, restrictor 1/32” | 040381 | 1 |
| 15 | nipple, pipe 1/4” x close | 822104–000 | 3 |
| 16 | orifice, .062 | 027443 | 1 |
| 17 | strainer, v–type 300 psi (20.1 bar) 1/4” **(I)** | 241771 | 2 |
| 18 | connector, tube 1/4” | 810205–025 | 1 |
| 19 | tubing, steel 5/16” | 841015–005 | 8 ft. |
| 20 | connector, tube–m 1/4” x1/4” | 810204–025 | 1 |
| 21 | tubing, steel 1/4” | 841015–004 | 9 |
| 22 | valve, relief 1 1/4” x 1 1/2” | 250027–279 | 1 |
| 23 | nipple, pipe 1 1/4” x close | 822220–000 | 1 |
| 24 | elbow, pipe 90 1 1/4” | 801515–050 | 1 |
| 25 | elbow, tube–m 90 1/4” x 1/8” | 810504–012 | 1 |
| 26 | nipple, pipe 3” x 4” | 822148–040 | 1 |
| 27 | valve, minimum pressure/check 3” **(II)** | 250033–821 | 1 |
| 28 | bushing, reducing hex 3/4” x 1/2” | 802103–020 | 1 |
| 29 | probe | 046867 | 1 |
| 30 | nipple, pipe 3/4” x close | 822212–000 | 1 |
| 31 | connector, flex 1/4”t x 1/4”p | 020169 | 1 |
| 32 | bushing, reducing hex 1/2” x 1/4” | 802102–010 | 1 |
| 33 | tee, reducing 3/4” x 1/2” x 1/2” | 802203–022 | 1 |

**(I)** For maintenance on v–type strainer no. 241771, order repair kit no. 241772.

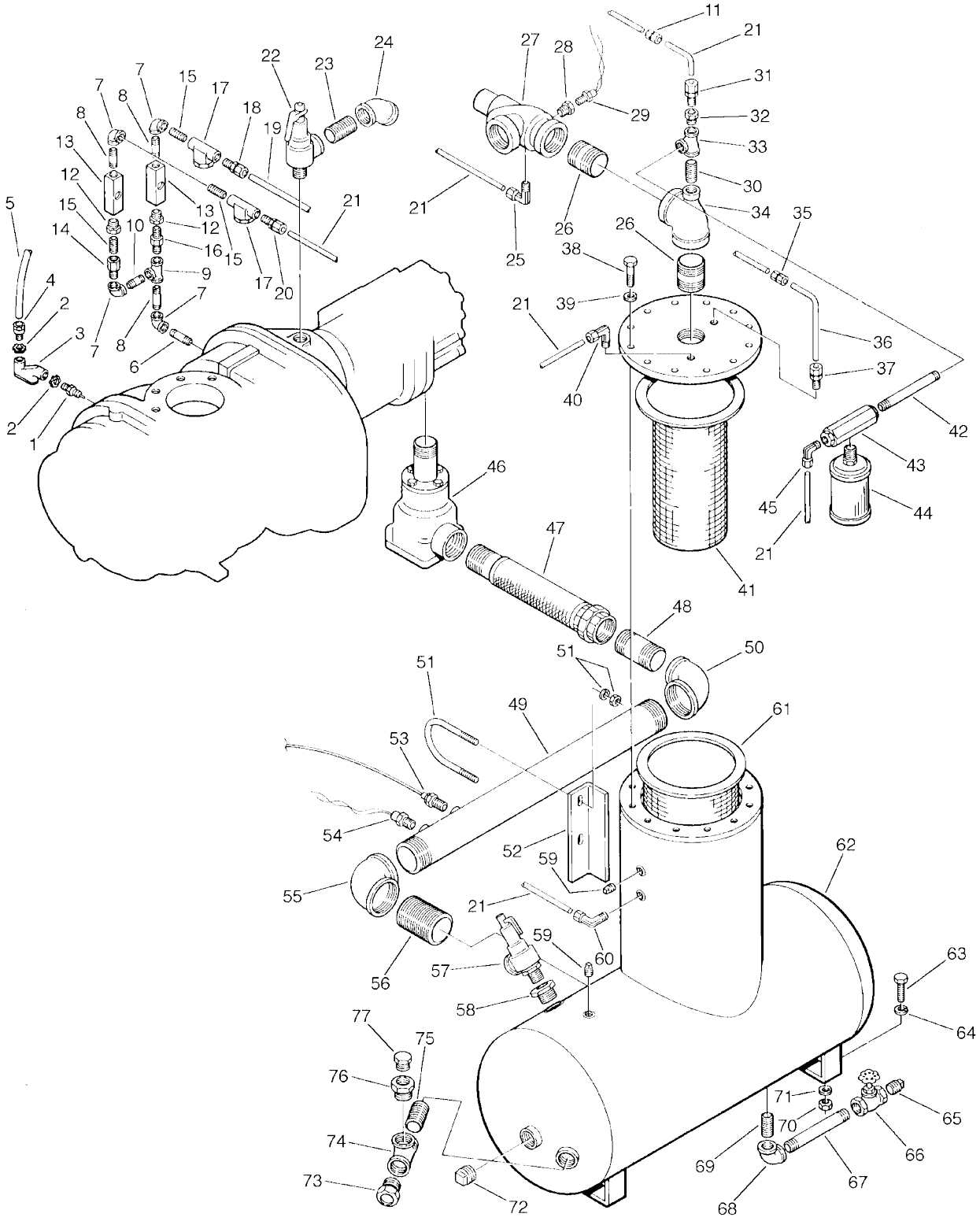
**(II)** For maintenance on minimum pressure valve no. 250033–821, order repair kit no. 250018–262.

**PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR**

Section 7

# ILLUSTRATIONS AND PARTS LIST

### 7.17 COMPRESSOR DISCHARGE SYSTEM – 250HP/187KW



### 7.17 COMPRESSOR DISCHARGE SYSTEM – 250HP/187KW (Continued)

| *key number* | *description* | *part number* | *quantity* |
|---|---|---|---|
| 34 | tee, reducing 3” x 3/4” x 3” | 802212–032 | 1 |
| 35 | union, tube hex 5/16” x 5/16” | 811305–031 | 1 |
| 36 | tube, 5/16” | 020672 | 1 |
| 37 | fitting, flex 5/16” x 1/4” | 020501 | 1 |
| 38 | capscrew, hex gr5 3/4” x 2 1/2” | 828612–250 | 12 |
| 39 | washer, springlock 3/4” | 837512–188 | 12 |
| 40 | elbow, tube–m 1/4” x 1/4” | 810504–025 | 2 |
| 41 | element, secondary | 250034–133 | 1 |
| 42 | nipple, pipe 1/2” x 4 1/2” | 822108–045 | 1 |
| 43 | valve, blowdown 1/2” **(III)** | 250030–276 | 1 |
| 44 | silencer, air 1/2” | 041006 | 1 |
| 45 | elbow, tube–m 90 1/4” x 1/4” | 810504–025 | 2 |
| 46 | valve, discharge check 3” **(IV)** | 018435–003 | 1 |
| 47 | joint, expansion | 02250058–939 | 1 |
| 48 | nipple, pipe 3” x 6” | 822148–060 | 1 |
| 49 | pipe, assembly 4” x 25” | 02250061–637 | 1 |
| 50 | elbow, reducing 4” x 3” | 801616–120 | 1 |
| 51 | u–bolt, 1/2” x 5” pipe | 829008–500 | 1 |
| 52 | support | 250031–749 | 1 |
| 53 | probe | 042582 | 1 |
| 54 | probe | 046867 | 1 |
| 55 | elbow, pipe 4” 90 | 801515–160 | 1 |
| 56 | nipple, pipe 4” x close | 822264–000 | 1 |
| 57 | valve, relief | 410103 | 1 |
| 58 | bushing, reducing hex 1 1/2” x 1 1/4” | 802106–050 | 1 |
| 59 | plug, pipe 1/4” | 807800–010 | 2 |
| 60 | elbow, tube–m 90 1/4” x 1/4” | 810504–025 | 2 |
| 61 | element, primary | 250034–121 | 1 |
| 62 | tank, fluid | 250020–340 | 1 |
| 63 | capscrew, hex gr5 1/2”–13 x 1 1/2” | 828608–150 | 4 |
| 64 | washer, springlock 1/2” | 837508–125 | 4 |
| 65 | plug, pipe 3/4” | 807800–030 | 1 |
| 66 | valve, globe 3/4” | 040520 | 1 |
| 67 | nipple, pipe 3/4” x 12” | 822112–120 | 1 |
| 68 | elbow, pipe 90 3/4” | 801515–030 | 1 |
| 69 | nipple, pipe 3/4” x 2 1/2” | 822112–025 | 1 |

(Continued on Page 87)

**(III)** For maintenance on blowdown vavle no. 250030–276, order repair kit no.02250045–132.

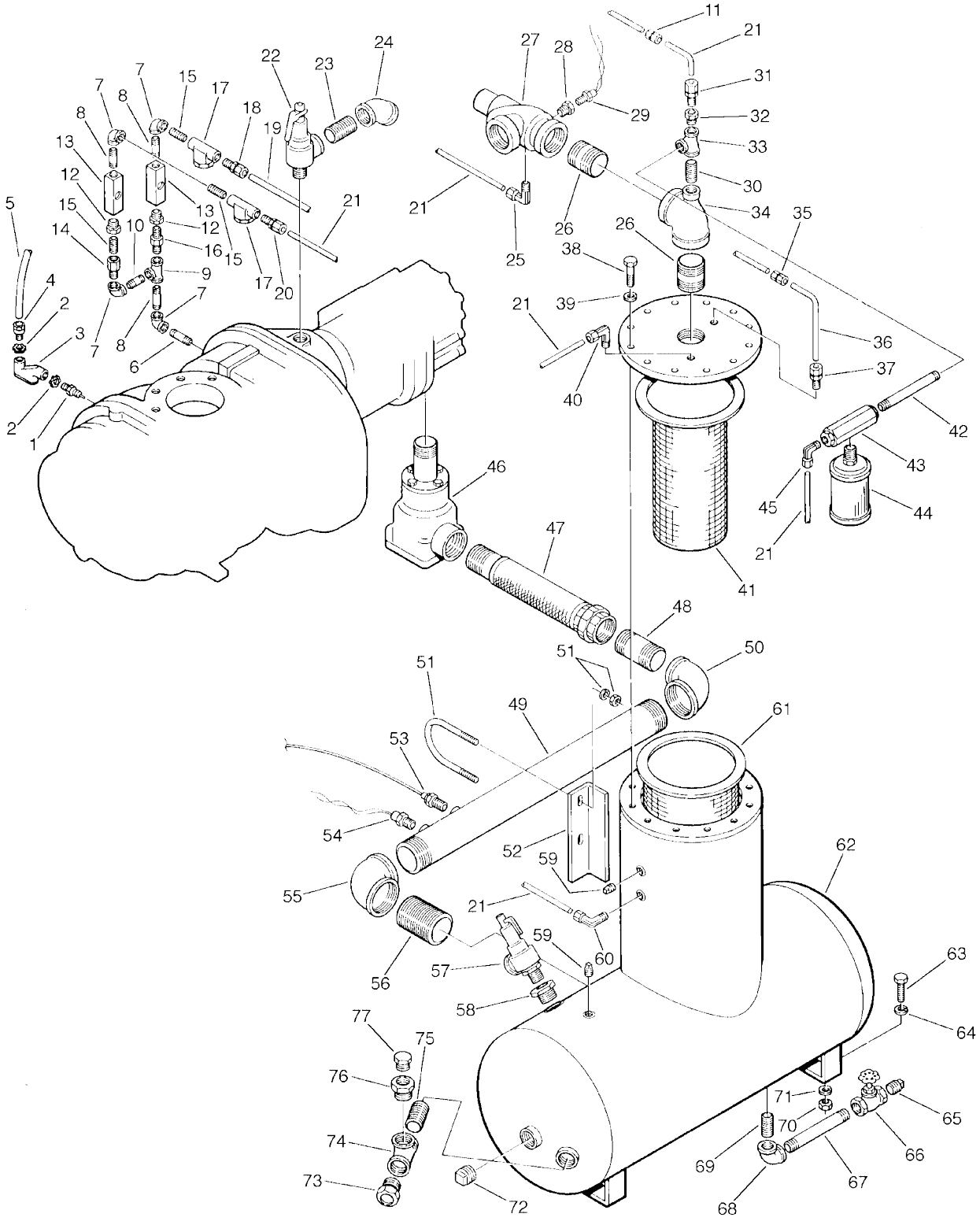
**(IV)** For maintenance on discharge check valve no. 018435–003, order repair kit no. 606206–001.

**PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR**

Section 7

# ILLUSTRATIONS AND PARTS LIST

### 7.17 COMPRESSOR DISCHARGE SYSTEM – 250HP/187KW



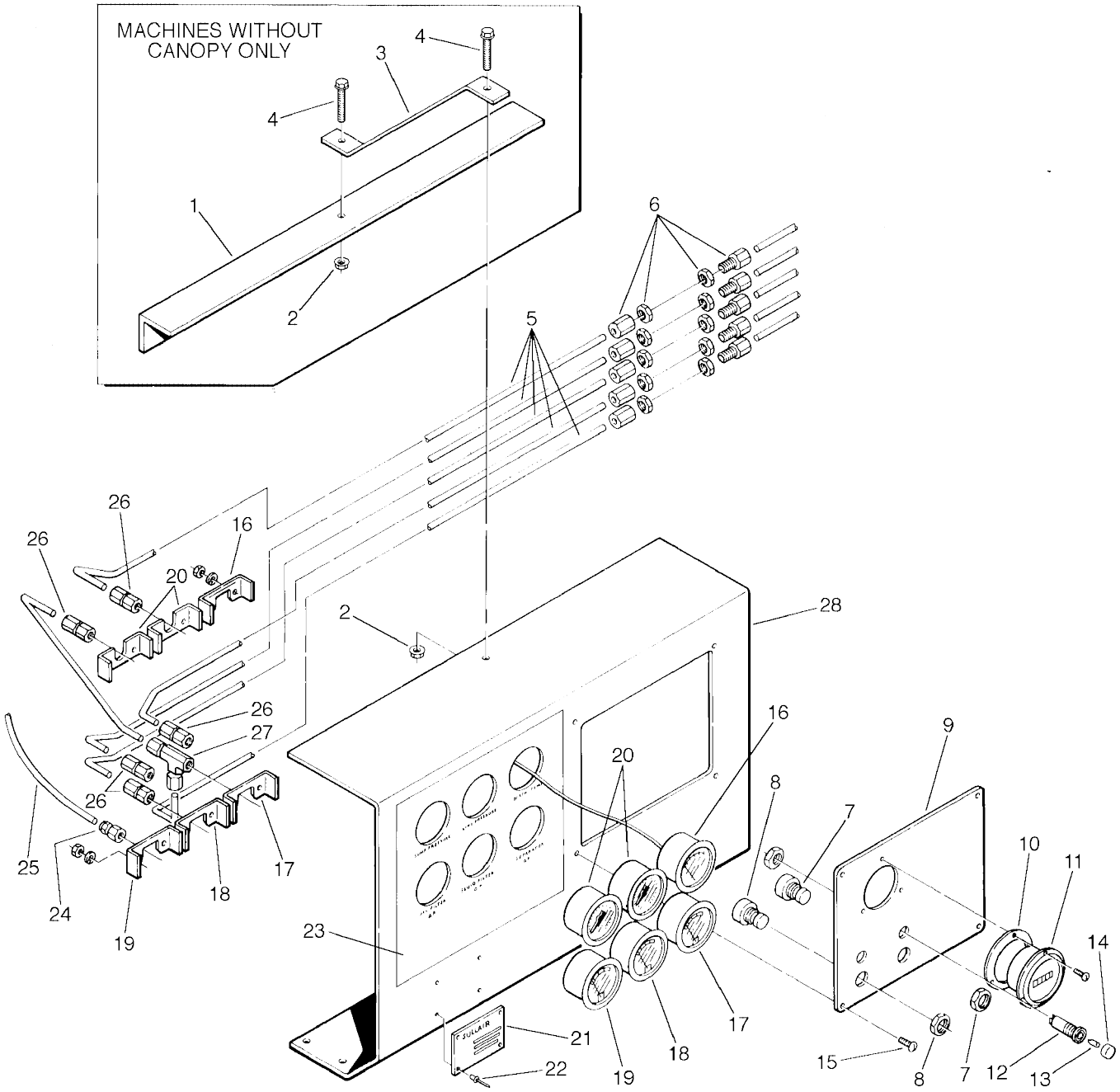
### 7.17 COMPRESSOR DISCHARGE SYSTEM – 250HP/187KW (Continued)

| *key number* | *description* | *part number* | *quantity* |
|---|---|---|---|
| 70 | nut, hex 1/2"–13 | 824208–448 | 4 |
| 71 | washer, springlock 1/2" | 837508–125 | 4 |
| 72 | plug | 499046–002 | 1 |
| 73 | glass, fluid level 1 1/2" | 040279 | 1 |
| 74 | tee, pipe 1 1/2" | 802415–060 | 1 |
| 75 | nipple, pipe 1 1/2" x close | 822224–000 | 1 |
| 76 | adapter, filler | 020044 | 1 |
| 77 | plug, o–ring 1 1/4" | 040029 | 1 |

**PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR**

Section 7
# ILLUSTRATIONS AND PARTS LIST

### 7.18 INSTRUMENT PANEL – ALL MODELS



### 7.18 INSTRUMENT PANEL – ALL MODELS

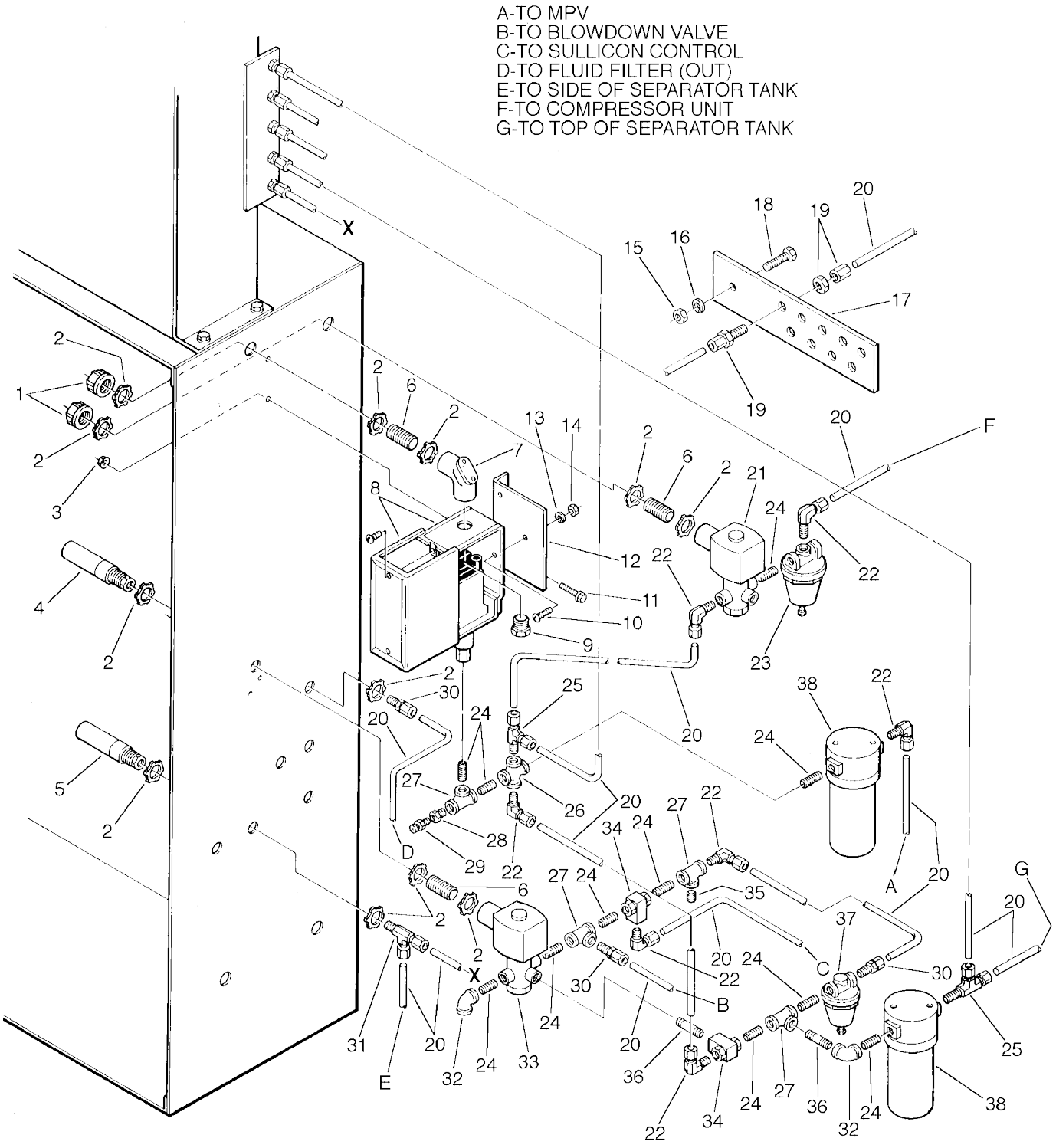
| *key number* | *description* | *part number* | *quantity* |
|---|---|---|---|
| 1 | angle, instrument panel support | 02250044–916 | 1 |
| 2 | nut, hex F 5/16"–18 | 825305–283 | 2 |
| 3 | support, instrument panel | 02250044–405 | 1 |
| 4 | capscrew, hex GR5 5/16"–18 x 1/2" | 829105–050 | 2 |
| 5 | tubing, steel 1/4" | 841015–004 | 8 ft. |
| 6 | union, tube 1/4" x 1/4" | 811104–025 | 5 |
| 7 | switch, push button red | 250016–350 | 1 |
| 8 | switch, push button green | 250016–351 | 1 |
| 9 | panel, electric | 250015–471 | 1 |
| 10 | gasket, hourmeter | 410353 | 1 |
| 11 | hourmeter | 250015–715 | 1 |
| 12 | holder, lamp | 043383 | 2 |
| 13 | bulb, 120 PSB | 043386 | 2 |
| 14 | lens, red | 043384 | 1 |
| | •lens, green | 043385 | 1 |
| 15 | screw, TC–F pan #8–32 x 1/2" | 835601–050 | 4 |
| 16 | gauge, temperature | 42582 | 1 |
| 17 | gauge, differential pressure 0–30 psi | 250003–799 | 1 |
| 18 | gauge, differential pressure 0–15 psi | 250003–798 | 1 |
| 19 | gauge, vacuum 0–30 water | 250003–797 | 1 |
| 20 | gauge, pressure 2" 0–200# | 250005–185 | 2 |
| 21 | nameplate, SULLAIR w/serial # | consult factory | 1 |
| 22 | rivet, pop 1/8" x 3/8" | 843102–038 | 4 |
| 23 | decal, instrument panel | 02250051–301 | 1 |
| 24 | connector, tube–M 1/4" x 1/8" | 813604–125 | 1 |
| 25 | hose, nylon 1/4" | 842215–004 | 7 ft. |
| 26 | connector, tube–F 1/4" x 1/8" | 810104–012 | 5 |
| 27 | tee, tube 1/4" x 1/8" | 811004–012 | 1 |
| 28 | panel, instrument | 250019–481 | 1 |

**PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR**

Section 7

# ILLUSTRATIONS AND PARTS LIST

### 7.19 PNEUMATIC CONTROLS – ALL MODELS



### 7.19 PNEUMATIC CONTROLS – ALL MODELS

| *key number* | *description* | *part number* | *quantity* |
|---|---|---|---|
| 1 | bushing, conduit 1/2” | 848815–050 | 4 |
| 2 | locknut, conduit 3/4” | 847200–050 | 9 |
| 3 | nut, hex 1/4”–20 | 824204–226 | 2 |
| 4 | switch, pressure N.O. 10 psi | 250017–992 | 1 |
| 5 | switch, pressure N.C. 135 psi | 250017–991 | 1 |
| 6 | nipple, conduit 1/2” x 1 1/8” | 250007–168 | 2 |
| 7 | elbow, corner pull 1/2” | 846915–050 | 2 |
| 8 | switch, pressure 0–150# | 040694 | 1 |
| 9 | nipple, chase conduit 1/2” | 847815–050 | 1 |
| 10 | screw, mach rd hd #10–24 x 1/2” | 831602–050 | 2 |
| 11 | capscrew, hex 1/4”–20 x 1/2” | 827905–050 | 2 |
| 12 | bracket, pressure switch | 250018–146 | 1 |
| 13 | washer, springlock #10 | 837502–047 | 2 |
| 14 | nut, hex #10–24 | 827905–050 | 2 |
| 15 | nut, hex | 824208–448 | 1 |
| 16 | washer, springlock 1/2” | 837508–125 | 1 |
| 17 | bracket | 250014–757 | 1 |
| 18 | capscrew, hex GR5 5/16”–18 x 1” | 828608–150 | 1 |
| 19 | union, bulkhead 1/4” | 811104–025 | 8 |
| 20 | tubing, steel 1/4” | 841015–004 | 45 ft. |
| 21 | valve, solenoid 1/4” 3–way **(I)** | 409067 | 1 |
| 22 | elbow, tube 1/4” x 1/4” | 810504–025 | 8 |
| 23 | valve, pressure reg 100psi **(II)** | 408275 | 1 |
| 24 | nipple, pipe 1/4” x close | 823204–000 | 15 |
| 25 | tee, tube–M run 1/4” x 1/4” | 810904–025 | 1 |
| 26 | cross, pipe 1/4” | 803315–010 | 1 |
| 27 | tee, straight 1/4” | 804414–010 | 6 |
| 28 | bushing, reducing 1/4” x 1/8” | 807699–005 | 1 |
| 29 | valve, drain–self close 1/8” npt | 041111 | 1 |
| 30 | connector, tube–M 1/4” x 1/4” | 810204–025 | 3 |
| 31 | tee, tube run–M 1/4” x 1/4” x 1/8” | 810904–012 | 1 |
| 32 | elbow, pipe 1/4” | 803515–010 | 5 |
| 33 | valve, solenoid 1/4” 3–way **(III)** | 250038–674 | 1 |

(Continued on Page 93)

**(I)** For maintenance on solenoid valve no. 409067, order repair kit no. 250010–377.

**(II)** For maintenance on pressure regulator valve no. 408275, order repair kit no. 250028–693.

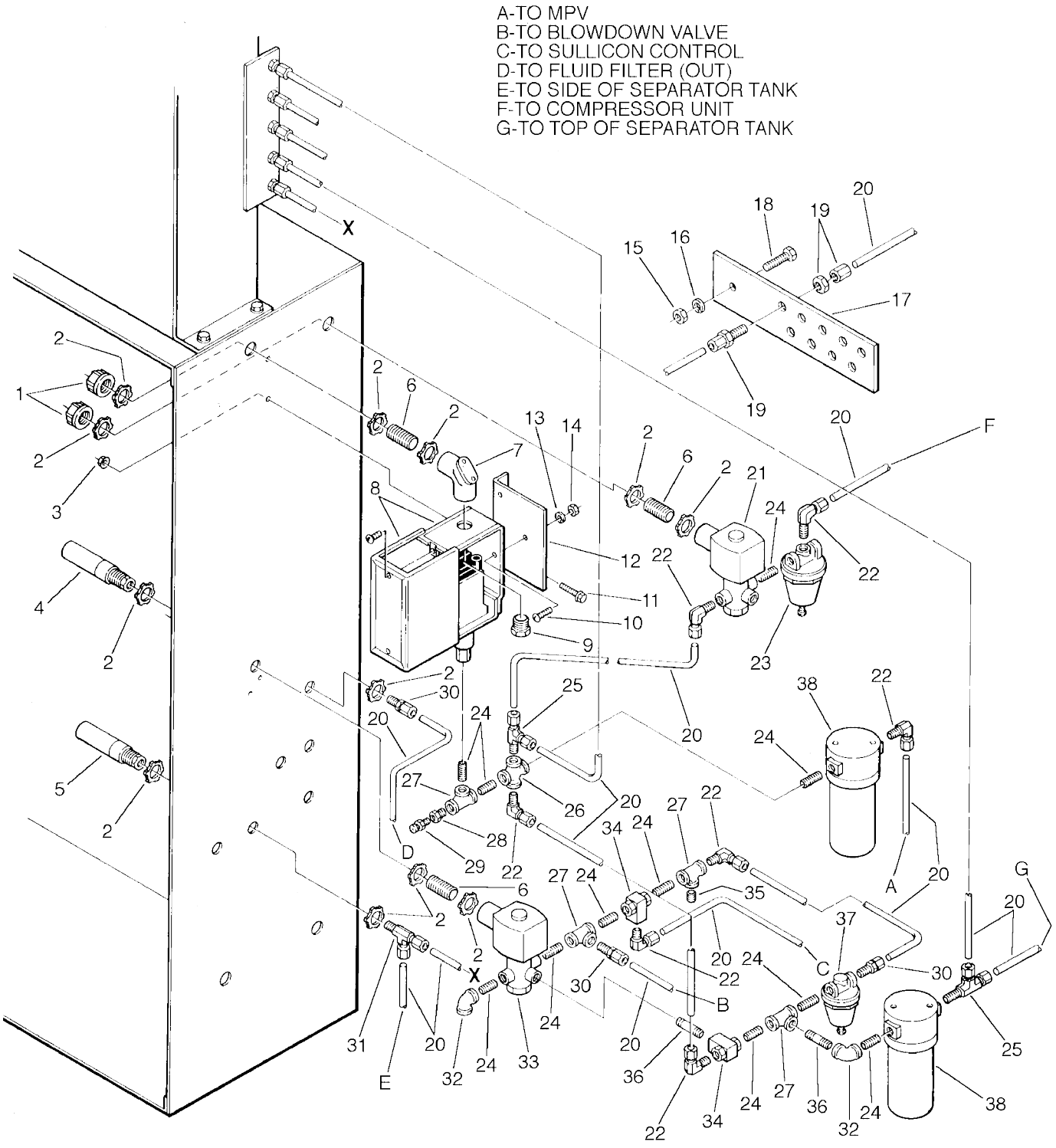
**(III)** For maintenance on solenoid valve no. 250038–674, order repair kit no. 02250055–940, replacement coil for 250038–674, order no. 250031–738.

**PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR**

Section 7

# ILLUSTRATIONS AND PARTS LIST

### 7.19 PNEUMATIC CONTROLS – ALL MODELS



### 7.19 PNEUMATIC CONTROLS – ALL MODELS (Continued)

| *key number* | *description* | *part number* | *quantity* |
|---|---|---|---|
| 34 | valve, shuttle 1/4” | 408893 | 2 |
| 35 | orifice, pipe plug 1/4” | 232874 | 1 |
| 36 | nipple, pipe 1/4” x 1 1/2” | 823104–015 | 2 |
| 37 | valve, pressure regulator **(IV)** | 406929 | 1 |
| 38 | filter, control air 1/4”**(V)** | 408389 | 2 |

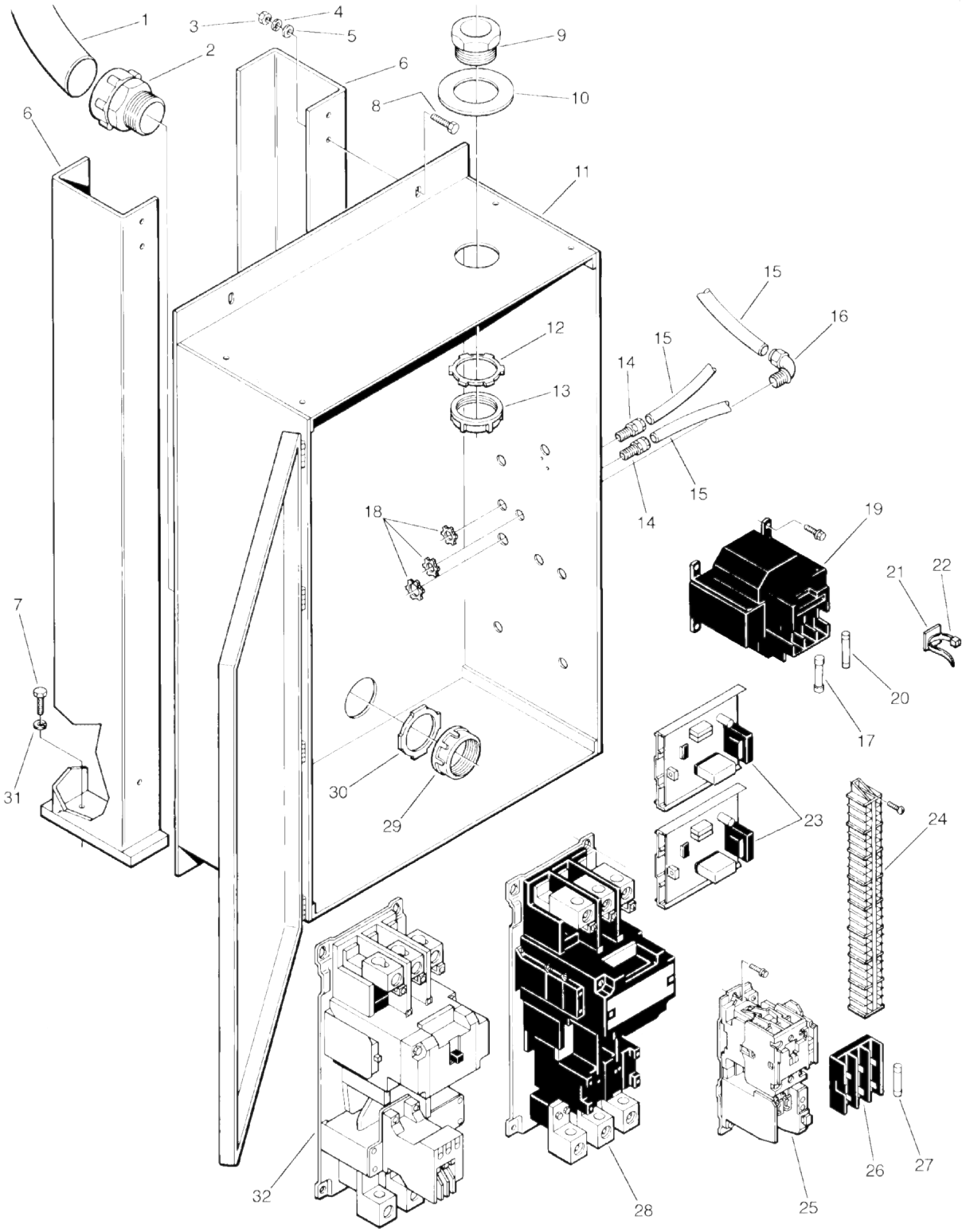
**(IV)** For maintenance on pressure regulator valve no. 406929, order replacement kit no. 041742.

**(V)** For maintenance on control air filter no. 408389, order repair kit no. 250031–245.

**PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR**

Section 7
# ILLUSTRATIONS AND PARTS LIST

### 7.20 ELECTRIC CONTROL BOX – ALL MODELS



### 7.20 ELECTRIC CONTROL BOX – ALL MODELS

| *key number* | *description* | *part number* | *quantity* |
|---|---|---|---|
| 1 | wire, type g–gc 2/0 | 250014–311 | 5 ft. |
| 2 | grip, cord #1/0 | 250014–561 | 2 |
| 3 | nut, hex 3/8"–16 | 825206–337 | 4 |
| 4 | washer, springlock 3/8" | 838006–094 | 4 |
| 5 | washer, reg 3/8" | 838206–071 | 4 |
| 6 | support, starter and cooler | 250022–657 | 2 |
| 7 | capscrew, hex hd gr5 1/2"–13 x 1 1/4" | 828608–125 | 4 |
| 8 | capscrew, hex hd gr5 3/8"–16 x 1 1/4" | 828606–125 | 4 |
| 9 | nipple, chase conduit 1 1/4" | 847815–125 | 1 |
| 10 | gasket, instrument panel | 250019–557 | 1 |
| 11 | starter, assembly size 4 | (I) | 1 |
| | •starter, assembly size 5 | (I) | 1 |
| | •starter, assembly size 5 5DP •(250 HP/187KW) | 250030–563 | 1 |
| 12 | locknut, conduit 1 1/4" | 847200–125 | 1 |
| 13 | bushing, conduit plastic 1 1/4" | 848815–125 | 1 |
| 14 | connector, straight liquid–tite 1/2" | 846400–050 | 2 |
| 15 | conduit, csa flex 1/2" | 846315–050 | 6 |
| 16 | elbow, 90 liquid–tite 1/2" | 846600–050 | 2 |
| 17 | fuse | (I) | 1 |
| 18 | locknut, conduit 1/2" | 250026–650 | 9 |
| 19 | transformer, control | (I) | 1 |
| 20 | fuse, KLDR 5 | (I) | 1 |
| 21 | plate, ty–rap mounting | 409796 | 3 |
| 22 | wrap, tie plastic | 84300–025 | 3 |
| 23 | control, temperature | 409270 | 2 |
| 24 | terminal, block | 250041–102 | 1 |
| 25 | starter, size 0 (100 & 125HP/75 & 93KW) | (I) | 1 |
| | •starter, size 1 (150HP/125KW) | (I) | 1 |
| | •starter, (200HP/150KW) | (I) | 1 |
| 26 | holder, fuse | 250019–773 | 1 |
| 27 | fuse | (I) | 3 |
| 28 | starter, size 4 (100 & 125HP/75 & 93KW) | (I) | 1 |
| | •starter, size 5 (150HP/112KW) | (I) | 1 |
| | •coil, size 4 and 5 (120V) | (I) | 1 |
| | •coil, size 4 and 5 (240/480V) | (I) | 1 |
| 29 | bushing, conduit plastic | 848815–200 | 1 |
| 30 | locknut, conduit | 847200–200 | 1 |
| 31 | washer, springlock 1/2" | 838008–125 | 4 |
| 32 | starter, (250HP/187KW) size 5DP | 02250045–426 | 1 |

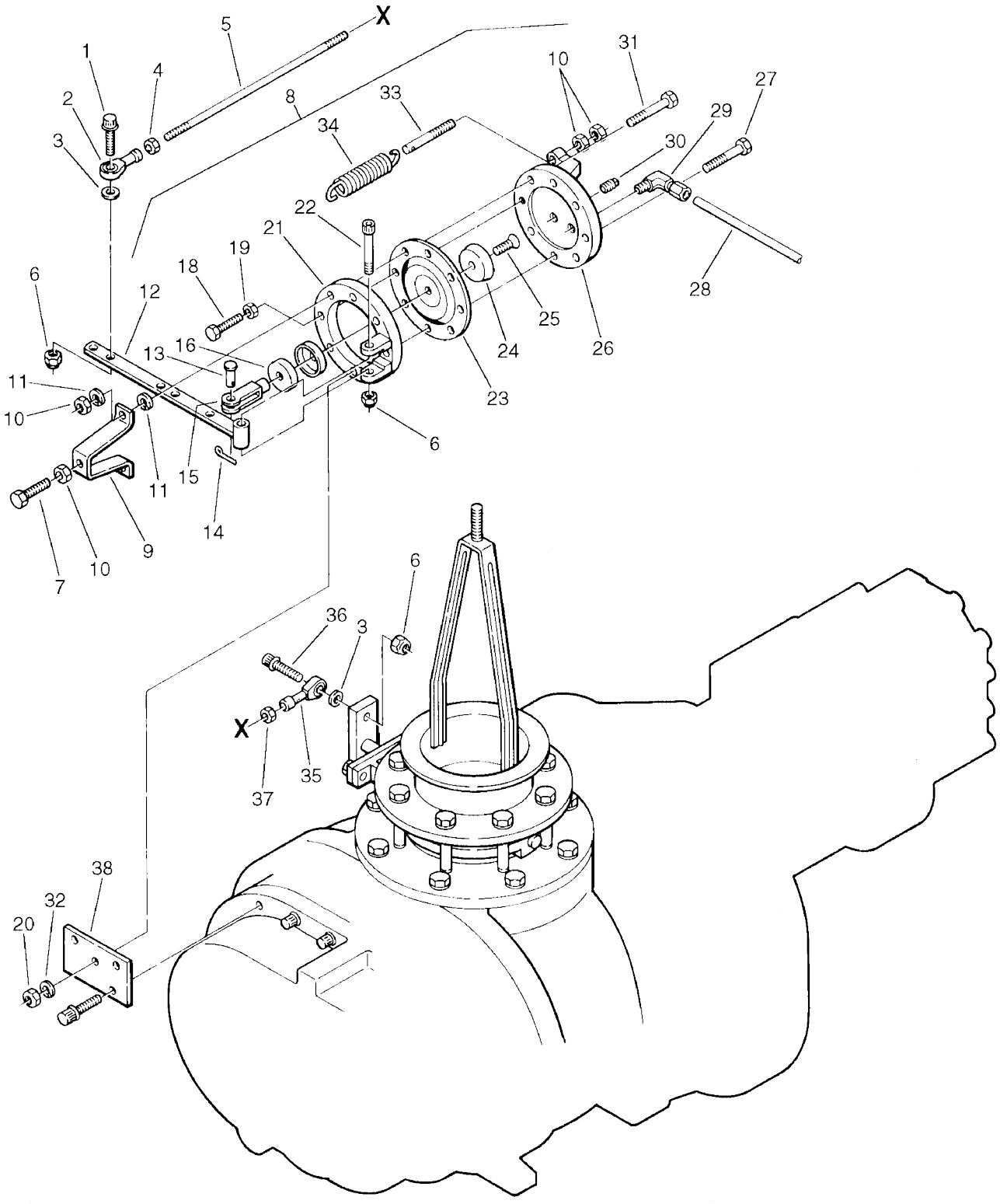
(I) This part varies with compressor. Consult factory with machine serial number.

**PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR**

Section 7

# ILLUSTRATIONS AND PARTS LIST

### 7.21 SULLICON CONTROL – 100, 125 & 150HP/75, 93, & 112KW



### 7.21 SULLICON CONTROL – 100, 125 & 150HP/75, 93, & 112KW

| *key number* | *description* | *part number* | *quantity* |
|---|---|---|---|
| 1 | capscrew, ferry hd 5/16"–18 x 1 1/4" | 828405–125 | 1 |
| 2 | rod end, spherical 5/16" – right hand | 040136 | 1 |
| 3 | washer, springlock 5/16" | 837505–078 | 2 |
| 4 | nut, jam 5/16"–24 – right hand | 824605–195 | 1 |
| 5 | rod, link 5/16"–24 x 9 1/2" | 250038–027 | 1 |
| 6 | nut, hex locking 5/16"–18 | 825505–166 | 2 |
| 7 | screw, machine hex 3/8"–16 x 2" | 830106–200 | 1 |
| 8 | control, Sullicon (less bracket) (I) | 011682–003 | 1 |
| 9 | bracket, control stop | 020864 | 1 |
| 10 | nut, hex 3/8"–16 | 824206–337 | 7 |
| 11 | washer, springlock 3/8" | 837506–094 | 6 |
| 12 | lever, control | 011084 | 1 |
| 13 | pin, yoke 1/4" | 040065 | 1 |
| 14 | pin, cotter 1/16" x 3/4" | 827101–075 | 1 |
| 15 | yoke, rod end 1/4"–28 | 040138 | 1 |
| 16 | plunger | 020094 | 1 |
| 17 | seal, cup | 042538 | 1 |
| 18 | screw, machine hex 5/16"–24 | 831105–200 | 1 |
| 19 | nut, hex jam 5/16"–24 – right hand | 824605–195 | 1 |
| 20 | nut, hex locking 5/16"–18 | 825505–166 | 1 |
| 21 | body, control | 021635 | 1 |
| 22 | screw, machine shoulder 3/8" x 2" | 830506–200 | 1 |
| 23 | diaphragm, Sullicon | 250020–028 | 1 |
| 24 | washer, back–up | 021172 | 1 |
| 25 | screw, sealing 1/4"–28 x 3/4" | 041264 | 1 |
| 26 | cover, control | 021654 | 1 |
| 27 | capscrew, hex gr5 5/16"–18 x 2 1/2" | 828605–250 | 2 |
| 28 | tubing, steel 1/4"od | 841115–004 | 16 ft. |
| 29 | elbow, tube–m 1/4" x 1/4" | 810504–025 | 1 |
| 30 | plug, pipe 1/4" | 807800–010 | 2 |
| 31 | capscrew, hex hd gr5 3/8"–16 x 2 1/2" | 828606–250 | 4 |
| 32 | washer, springlock 5/16" | 837505–078 | 2 |
| 33 | bolt, adjusting Sullicon spring | 250009–134 | 1 |
| 34 | spring, control | 250006–526 | 1 |
| 35 | rod end, spherical 5/16" – left hand | 042004 | 1 |
| 36 | capscrew, ferry hd 5/16"–18 x 1 1/2" | 828405–150 | 1 |
| 37 | nut, hex jam 5/16"–24 – left hand | 824705–195 | 1 |
| 38 | bracket, control | 026862 | 1 |

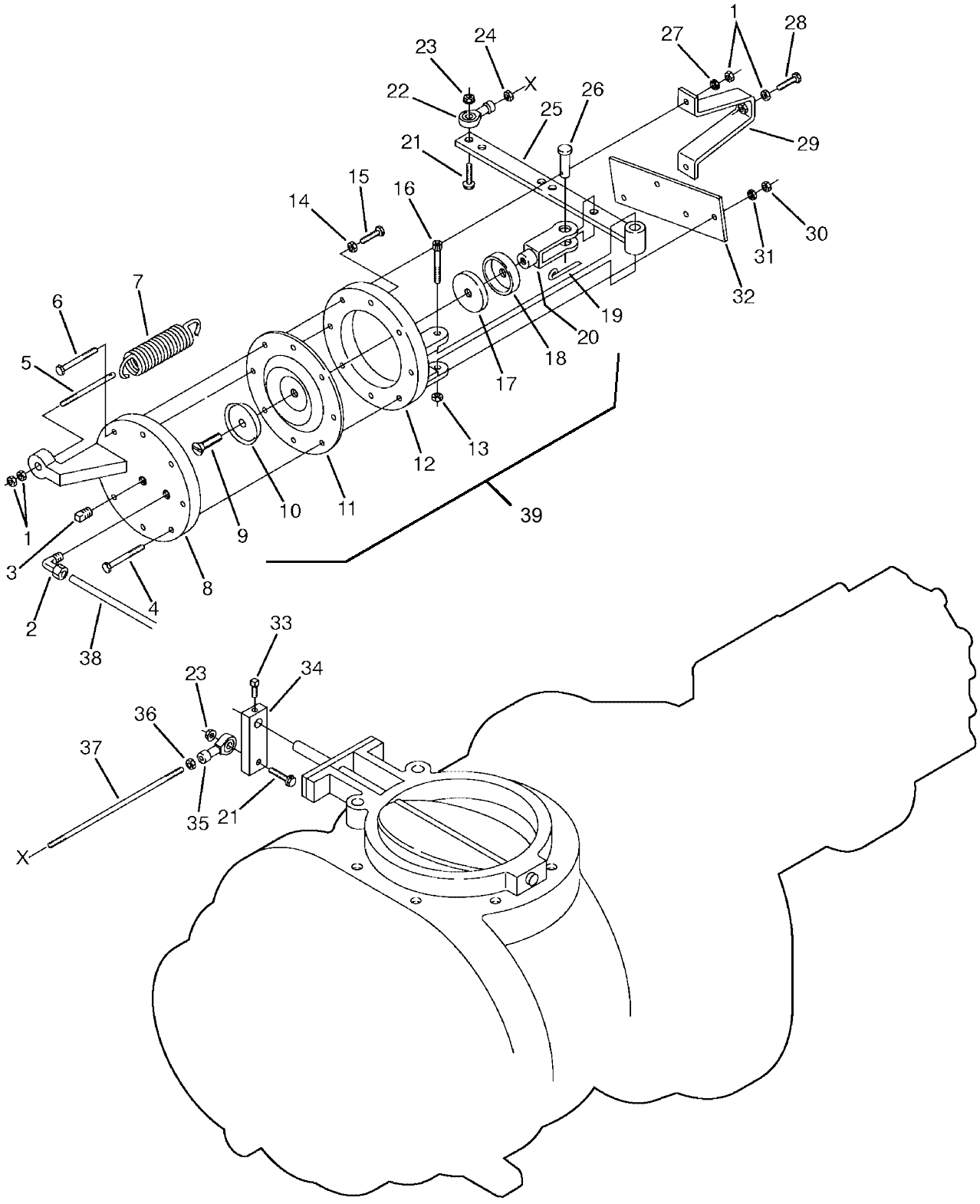
(I) For maintenance on Sullicon Control no. 011682–003, order repair kit no. 250020–353.

**PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR**

Section 7

# ILLUSTRATIONS AND PARTS LIST

### 7.22 SULLICON CONTROL – 200 & 250HP/150 & 187KW



### 7.22 SULLICON CONTROL – 200 & 250HP/150 & 187KW

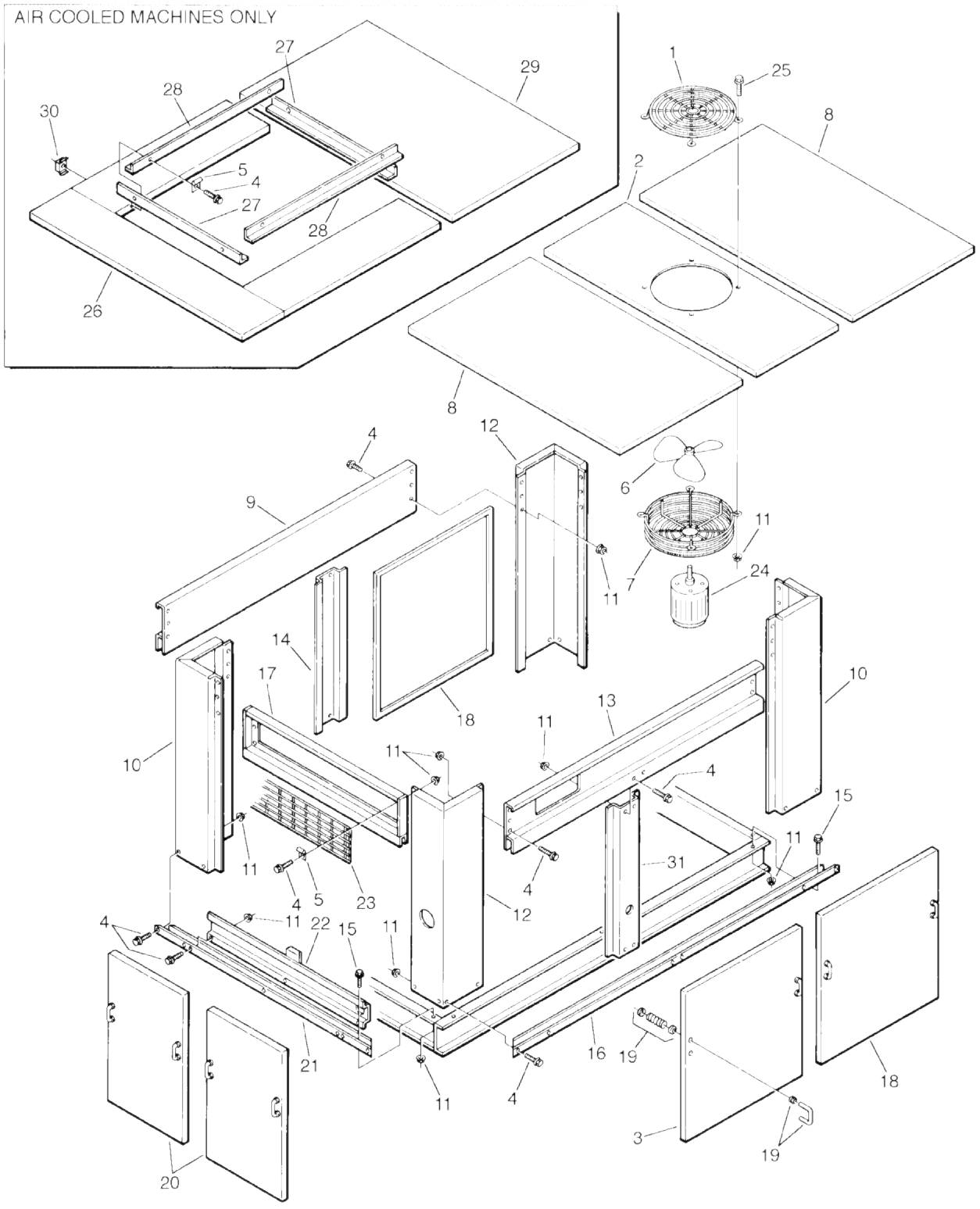
| *key number* | *description* | *part number* | *quantity* |
|---|---|---|---|
| 1 | nut, hex 3/8"–16 | 824206–337 | 7 |
| 2 | elbow, tube–M1/4" x 1/4" | 810504–025 | 1 |
| 3 | plug, pipe 1/4" | 807800–010 | 2 |
| 4 | capscrew, hex GR5 5/16"–18 x 2 1/2" | 828605–250 | 2 |
| 5 | bolt, adjusting spring | 250009–134 | 1 |
| 6 | capscrew, hex GR5 3/8"–16 x 2 1/2" | 828606–250 | 4 |
| 7 | spring, control | 250006–526 | 1 |
| 8 | cover, control | 021654 | 1 |
| 9 | screw, sealing 1/4"–28 x 3/4" | 041264 | 1 |
| 10 | washer, back–up | 021172 | 1 |
| 11 | diaphragm, sullicon | 250020–028 | 1 |
| 12 | body, control | 021635 | 1 |
| 13 | nut, hex locking 5/16"–18 | 825505–166 | 2 |
| 14 | nut, hex jam RH 5/16"–24 | 824605–195 | 1 |
| 15 | screw, mach hex 5/16"–24 x 2" | 831105–200 | 1 |
| 16 | screw, machine sholder 3/8" x 2" | 830506–200 | 1 |
| 17 | seal, cup | 042538 | 1 |
| 18 | plunger | 020094 | 1 |
| 19 | pin, cotter 1/16" x 3/4" | 827101–075 | 1 |
| 20 | yoke, rod end 1/4"–28 | 040138 | 1 |
| 21 | capscrew, ferry hd 5/16"–18 x 1 1/4" | 828405–125 | 1 |
| 22 | rod end, spherical RH 5/16" | 040136 | 1 |
| 23 | nut, hex locking 5/16"–18 | 825505–166 | 1 |
| 24 | nut, jam RH 5/16"–24 | 824605–195 | 1 |
| 25 | lever, control | 011084 | 1 |
| 26 | pin, yoke 1/4" | 040065 | 1 |
| 27 | washer, springlock 3/8" | 837506–094 | 6 |
| 28 | screw, mach hex 3/8"–16 x 2" | 830106–200 | 1 |
| 29 | bracket, control stop | 020864 | 1 |
| 30 | nut, hex 5/16"–18 | 824205–273 | 3 |
| 31 | washer, springlock 5/16" | 837505–078 | 3 |
| 32 | bracket, control | 026862 | 1 |
| 33 | screw, set sq hd 5/16"–18 x 3/4" | 408383 | 1 |
| 34 | lever, inlet valve | 020687 | 1 |
| 35 | rod end, spherical LH 5/16" | 042004 | 1 |
| 36 | nut, jam LH 5/16"–24 | 824705–195 | 1 |
| 37 | rod, 5/16"–24 x 8 3/4" | 020863 | 1 |
| 38 | tube | 841004–004 | 1 |
| 39 | control, Sullicon (less bracket) (I) | 011682–003 | 1 |

(I) For maintenance on Sullicon Control no. 011682–003, order repair kit no. 250020–353.

**PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR**

Section 7
# ILLUSTRATIONS AND PARTS LIST

### 7.23 CANOPY – ALL MODELS



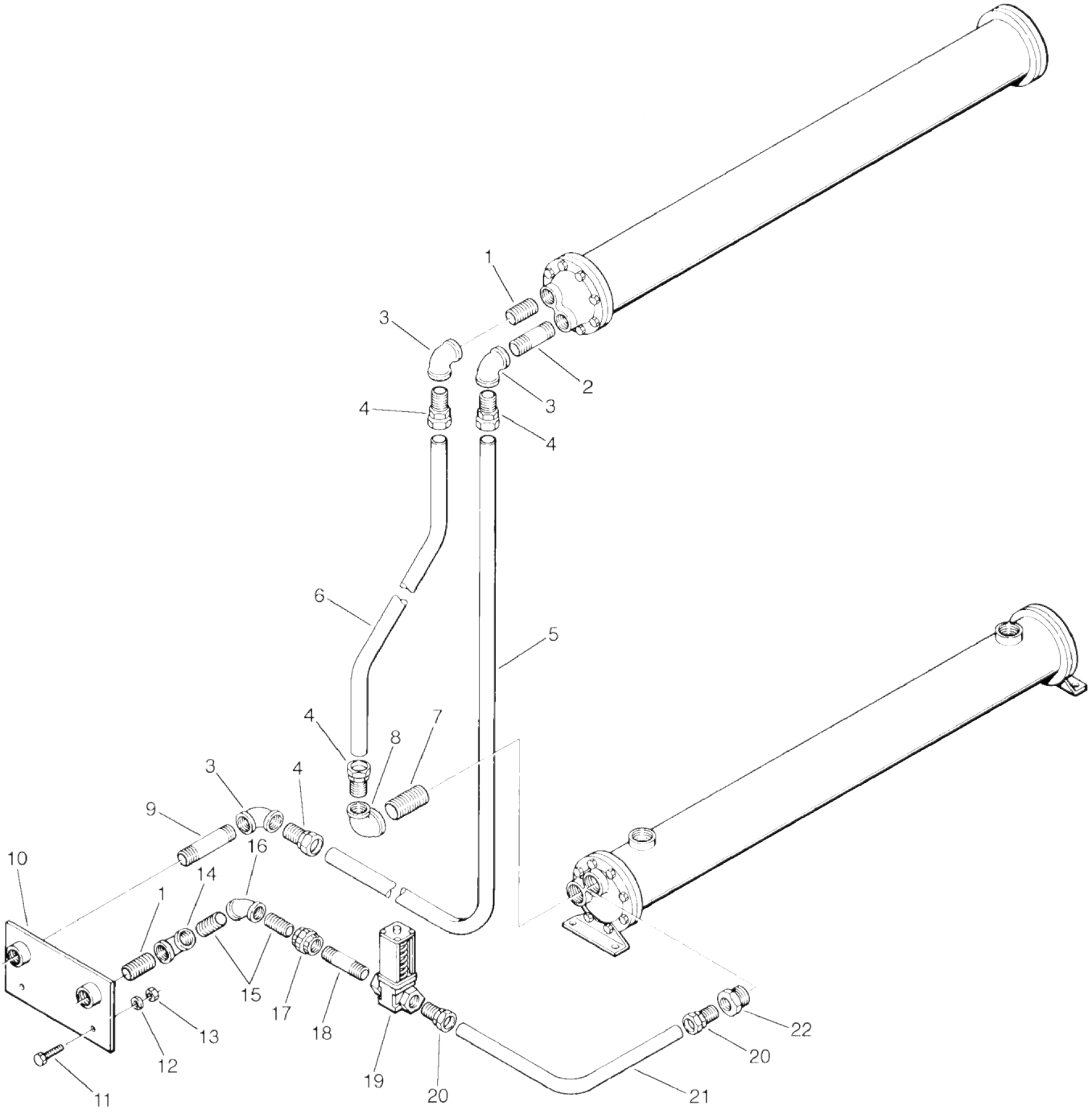
### 7.23 CANOPY– ALL MODELS

| *key number* | *description* | *part number* | *quantity* |
|---|---|---|---|
| 1 | guard, fan | 241137 | 1 |
| 2 | panel, roof | 250022–724 | 1 |
| 3 | panel, side | 250024–012 | 1 |
| 4 | screw, hex serrated washer 5/16” x 3/4” | 829705–075 | 76 |
| 5 | clamp, wire | 043194 | 16 |
| 6 | fan, vent 18” dia. | 410358 | 1 |
| 7 | guard, exhaust fan 20” dia | 410179 | 1 |
| 8 | panel, roof | 250028–574 | 2 |
| 9 | panel, enclosure rear 84” | 250041–073 | 1 |
| 10 | panel, corner RH | 250042–880 | 2 |
| 11 | nut, hex flanged 5/16” | 825305–283 | 66 |
| 12 | panel, corner LH | 250042–879 | 2 |
| 13 | panel, enclosure front | 250041–072 | 1 |
| 14 | support | 231516 | 1 |
| 15 | screw, hex serrated washer 5/16” x 1” | 829705–100 | 34 |
| 16 | channel, bottom | 250028–543 | 2 |
| 17 | panel, end | 250041–074 | 2 |
| 18 | panel, side access | 017231 | 3 |
| 19 | handle, retractable | 405087 | 16 |
| 20 | panel, end access | 018922 | 4 |
| 21 | channel, bottom | 250022–772 | 2 |
| 22 | channel, air/water connection | 019603 | 2 |
| 23 | grille | 249651 | 2 |
| 24 | motor, vent fan 1/4 HP 230/460 V | 250000–031 | 1 |
| 25 | screw, hex serrated washer 5/16” x 1 1/2” | 829705–150 | 4 |
| 26 | panel, roof cooler ass’y | 250041–129 | 1 |
| 27 | angle, enclosure roof | 250041–134 | 2 |
| 28 | angle, formed enclosure | 232876 | 2 |
| 29 | panel, roof enclosure | 250028–574 | 1 |
| 30 | nut, retainer 5/16”–18 | 861405–092 | 39 |
| 31 | support, member | 02250042–983 | 1 |

**PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR**

Section 7
# ILLUSTRATIONS AND PARTS LIST

### 7.24 COOLER/AFTERCOOLER WATER PLUMBING – 100, 125 & 150HP/75, 93 & 112KW



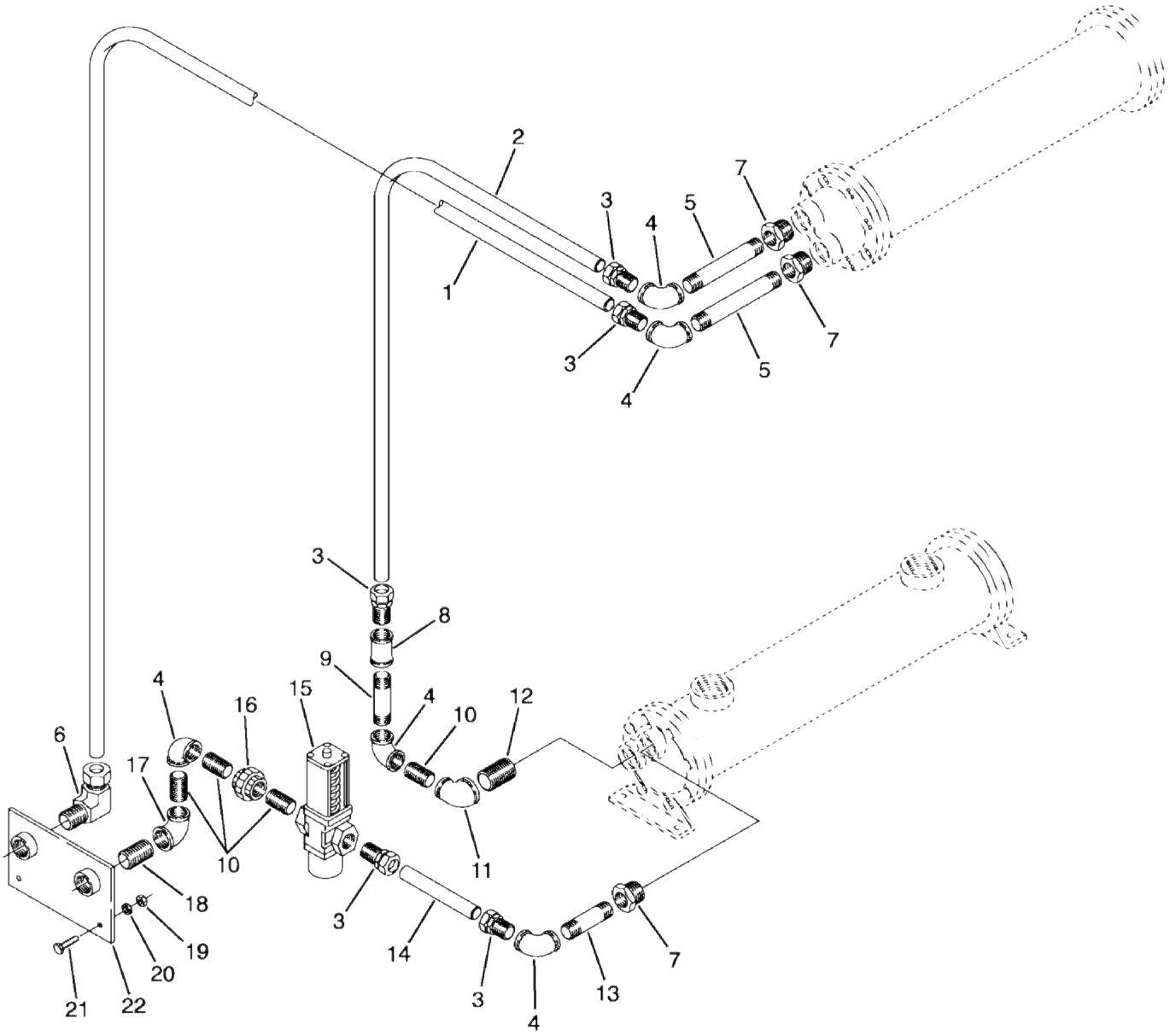
### 7.24 COOLER/AFTERCOOLER WATER PLUMBING – 100, 125 & 150HP/75, 93 & 112KW

| *key number* | *description* | *part number* | *quantity* |
|---|---|---|---|
| 1 | nipple, pipe 1 1/2" x close | 822224–000 | 2 |
| 2 | nipple, pipe 1 1/2" x 4" | 822124–040 | 1 |
| 3 | elbow, pipe 90 1 1/2" | 801515–060 | 3 |
| 4 | connector, tube–m 1 1/2" x 1 1/2" | 810224–150 | 8 |
| 5 | tube, 1 1/2" | 250033–969 | 1 |
| 6 | tube, 1 1/2" | 250033–970 | 1 |
| 7 | nipple, pipe 1 1/2" x close (100HP/75KW) | 822224–000 | 1 |
| | •nipple, pipe 2" x close (125 & 150HP/93 &112KW) | 822232–000 | 1 |
| 8 | elbow, pipe 1 1/2" (100HP/75KW) | 801515–060 | 1 |
| | •elbow, reducing 2" x 1 1/2 (125 &150HP/93 &112KW) | 801608–060 | 1 |
| 9 | nipple, pipe 1 1/2" x 6" | 822124–060 | 1 |
| 10 | bracket, water connection 1 1/2" | 250027–022 | 1 |
| 11 | capscrew, hex hd gr5 1/2"–13 x 1 1/4" | 828608–125 | 8 |
| 12 | washer, springlock 1/2" | 837508–125 | 16 |
| 13 | nut, hex 1/2"–13 | 824208–448 | 8 |
| 14 | elbow, reducing 1 1/2" x 1 1/4" | 801606–050 | 1 |
| 15 | nipple, pipe 1 1/4" x close | 822220–000 | 1 |
| 16 | elbow, pipe 45 1 1/4" | 801415–050 | 1 |
| 17 | union, pipe 1 1/4" | 802515–050 | 1 |
| 18 | nipple, pipe 1 1/4" x 3" | 822120–030 | 1 |
| 19 | valve, water regulating 1 1/4" | 049474 | 1 |
| 20 | connector, tube–m 1 1/4" x 1 1/4" | 810220–125 | 2 |
| 21 | tube, 1 1/4" | 250033–971 | 1 |
| 22 | bushing, reducing hex 1 1/2" x 1 1/4" (100HP/75KW) | 802106–050 | 1 |
| | •bushing, reducing hex 2" x 1 1/4" (125 & 150HP/93 &112KW) | 802108–050 | 1 |

**PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR**

Section 7
# ILLUSTRATIONS AND PARTS LIST

### 7.25 COOLER/AFTERCOOLER WATER PIPING – 200HP/150KW



### 7.25 COOLER/AFTERCOOLER WATER PIPING – 200HP/150KW

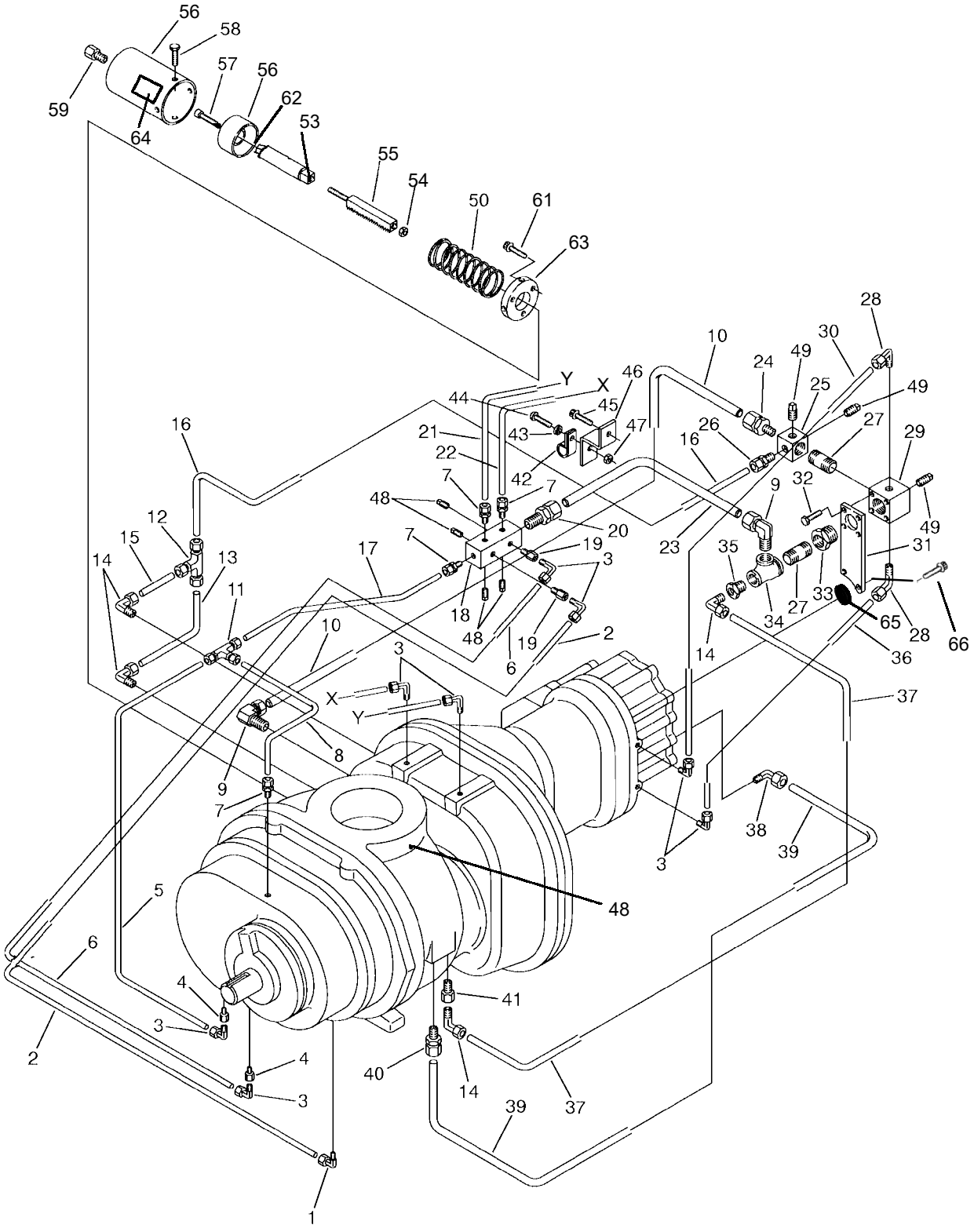
| *key number* | *description* | *part number* | *quantity* |
|---|---|---|---|
| 1 | tube, bracket to aftercooler 1 1/2” | 250033–969 | 1 |
| 2 | tube, aftercooler to fluid cooler 1 1/2” | 250033–970 | 1 |
| 3 | connector, tube–M 1 1/2” x 1 1/2” | 810224–150 | 8 |
| 4 | elbow, pipe 90 1 1/2” | 801515–060 | 2 |
| 5 | nipple, pipe 1 1/2” x 9” | 822124–090 | 2 |
| 6 | elbow, tube 90 M 1 1/2” x 1 1/2” | 810524–150 | 1 |
| 7 | bushing, reducing hex 2” x 1 1/2” | 802108–060 | 2 |
| 8 | connector, pipe 1 1/2” | 801215–060 | 1 |
| 9 | nipple, pipe 1 1/2” x 6” | 822124–060 | 1 |
| 10 | nipple, pipe 1 1/2” x close | 822224–000 | 3 |
| 11 | elbow, reducing 2” x 1 1/2” | 801608–060 | 1 |
| 12 | nipple, pipe 2” x close | 822232–000 | 1 |
| 13 | nipple, pipe 1 1/2” x 4” | 822124–040 | 1 |
| 14 | tube, fluid cooler to water valve 1 1/4” | 250033–971 | 1 |
| 15 | valve, water regulating | 049474 | 1 |
| 16 | union, pipe 1 1/2” | 802515–050 | 1 |
| 17 | elbow, pipe | 801515–050 | 1 |
| 18 | nipple, pipe 1 1/2” x close | 822224–000 | 1 |
| 19 | nut, hex 1/2”–13 | 824208–448 | 2 |
| 20 | washer, springlock 1/2” | 837508–125 | 2 |
| 21 | capscrew, hex GR5 1/2”–13 x 1 1/4” | 828608–125 | 2 |
| 22 | bracket, water connection | 250027–022 | 1 |

**PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR**

Section 7

# ILLUSTRATIONS AND PARTS LIST

### 7.26 UNIT TUBING AND SPIRAL VALVE – ALL MODELS



### 7.26 UNIT TUBING AND SPIRAL VALVE – ALL MODELS

| *key number* | *description* | *part number* | *quantity* |
|---|---|---|---|
| 1 | elbow, tube–M 3/8" x 1/8" | 810506–012 | 1 |
| 2 | tube, .38" | 221083 | 1 |
| 3 | elbow, tube–M 3/8" x 1/4" | 810506–025 | 8 |
| 4 | orifice, 1/8"M x 1/4"F x .188" | 220959 | 2 |
| 5 | tube, .38" | 221081 | 1 |
| 6 | tube, .38" | 221082 | 1 |
| 7 | connector, tube–M 3/8" x 1/4" | 810206–025 | 4 |
| 8 | tube, .038" | 221080 | 1 |
| 9 | elbow, tube–M 3/4" x 3/4" | 810512–075 | 2 |
| 10 | tube, .75" | 250033–990 | 1 |
| 11 | tee, tube union 3/8" | 811406–038 | 1 |
| 12 | tee, tube union 1/2" | 811408–050 | 1 |
| 13 | tube, .50" | 250033–995 | 1 |
| 14 | elbow, tube–M 1/2" x 1/2" | 810508–050 | 4 |
| 15 | tube, .50" | 250033–994 | 1 |
| 16 | tube, .50" | 250033–993 | 1 |
| 17 | tube, .38" | 221079 | 1 |
| 18 | manifold, .75"in x .25"out | 220945 | 1 |
| 19 | orifice, .062" x .25"M x .25"F | 028831 | 2 |
| 20 | connector, tube–M 3/4" x 3/4" | 810212–075 | 1 |
| 21 | tube, .38" | 250033–991 | 1 |
| 22 | tube, .38" | 250033–992 | 1 |
| 23 | tube, .75" | 250033–989 | 1 |
| 24 | connector, tube–M 3/4" x 1/2" | 810212–050 | 1 |
| 25 | manifold, 1.00"in x .50"out | 250000–574 | 1 |
| 26 | connector, tube–M 1/2" x 1/2" | 810208–050 | 1 |
| 27 | nipple, pipe 1" x 2" | 822116–020 | 2 |
| 28 | elbow, tube–M 3/8" x 1/2" | 810506–050 | 2 |
| 29 | manifold, 2.00"in x .50"out | 250023–950 | 1 |
| 30 | tube, .38" | 250033–998 | 1 |
| 31 | support, manifold | 250023–965 | 1 |
| 32 | capscrew, hex GR8 3/8"–16 x 3/4" | 828206–075 | 4 |
| 33 | bushing, reducing hex 1 1/4" x 1" | 802105–040 | 1 |
| 34 | tee, reducing 1" x 3/4" x 3/4" | 802204–033 | 1 |
| 35 | bushing, reducing 3/4" x 1/2" | 807603–020 | 1 |
| 36 | tube, .38" | 250033–999 | 1 |
| 37 | tube, .50" | 250033–988 | 1 |

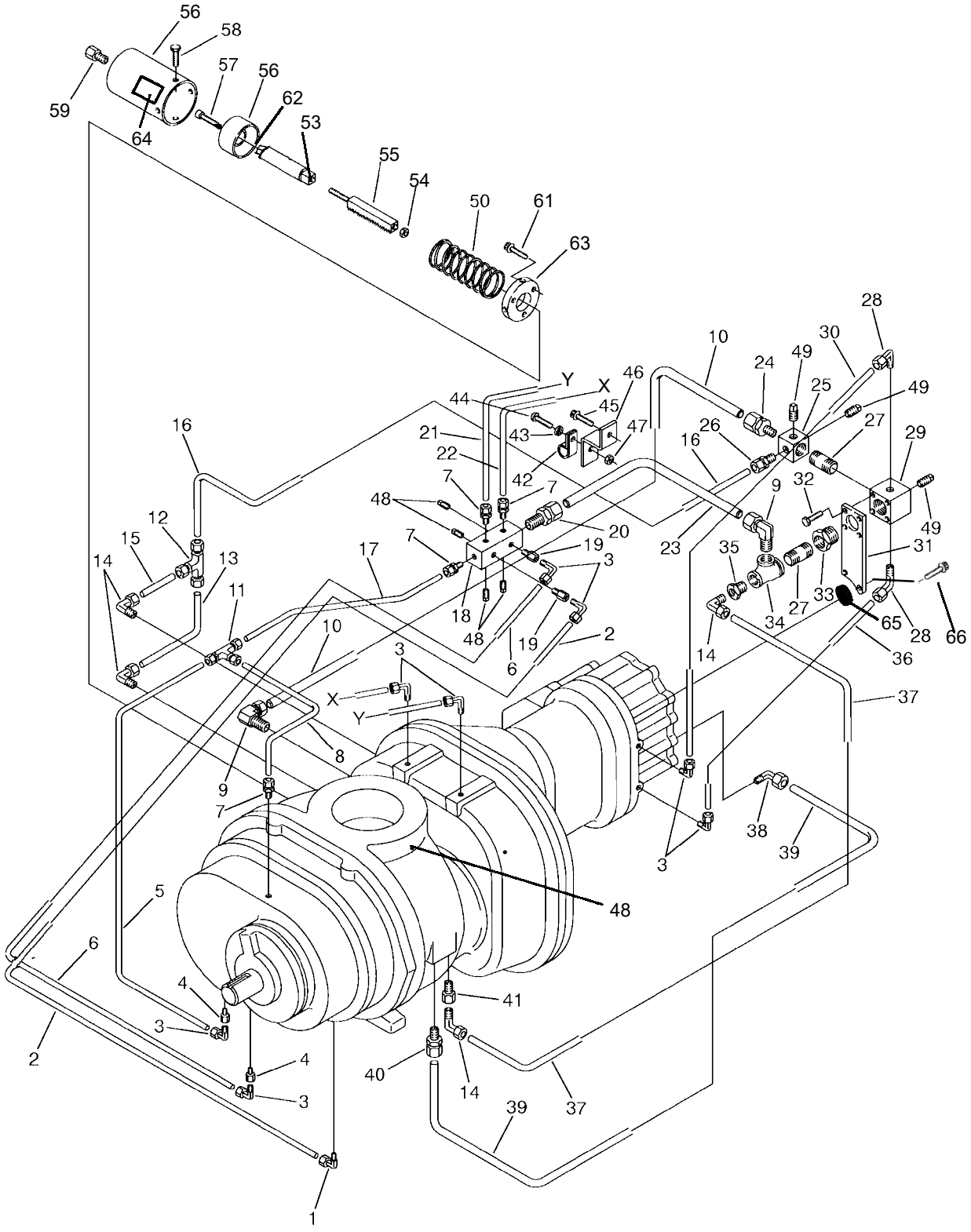
(Continued on Page 109)

**PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR**

Section 7

# ILLUSTRATIONS AND PARTS LIST

### 7.26 UNIT TUBING AND SPIRAL VALVE – ALL MODELS



### 7.26 UNIT TUBING AND SPIRAL VALVE – ALL MODELS (Continued)

| *key number* | *description* | *part number* | *quantity* |
|---|---|---|---|
| 38 | elbow, tube–M 5/8" x 3/8" | 810510–038 | 1 |
| 39 | tube, .625" | 02250055–802 | 1 |
| 40 | connector, tube–M 5/8" x 1/2" | 810210–050 | 1 |
| 41 | orifice, 1/2"M x 1/2"F x .140" | 234125–140 | 1 |
| 42 | clamp, tube 3/4" | 02250046–540 | 1 |
| 43 | washer, springlock #10 | 837502–047 | 2 |
| 44 | screw, machine round hd #10–24 x 1" | 831602–100 | 1 |
| 45 | capscrew, ferry hd 1/2"–13 x 3/4" | 828408–075 | 1 |
| 46 | support, tube | 02250050–181 | 1 |
| 47 | nut, hex #10–24 | 825202–130 | 1 |
| 48 | plug, pipe 1/4" | 807800–010 | 5 |
| 49 | plug, pipe 1/2" | 807800–020 | 4 |
| 50 | spring, comp | 250016–394 | 1 |
| 53 | shaft | 250027–276 | 1 |
| 54 | nut, hex jam | 824906–227 | 1 |
| 55 | rack and gear | 250016–197 | 1 |
| 56 | cylinder, air (I) | 250016–183 | 1 |
| 57 | capscrew, socket | 828906–400 | 1 |
| 58 | capscrew, hex head | 828204–050 | 4 |
| 59 | orifice | 028831 | 1 |
| 61 | capscrew, ferry head | 828405–125 | 3 |
| 62 | spacer, (not shown) | 250029–245 | 1 |
| 63 | mount, air cylinder | 250016–188 | 1 |
| 64 | decal, warning act | 250029–836 | 1 |
| 65 | spacer | 250034–302 | 2 |
| 66 | capscr, 1/2–13 X 2 1/4 | 828408–225 | 2 |

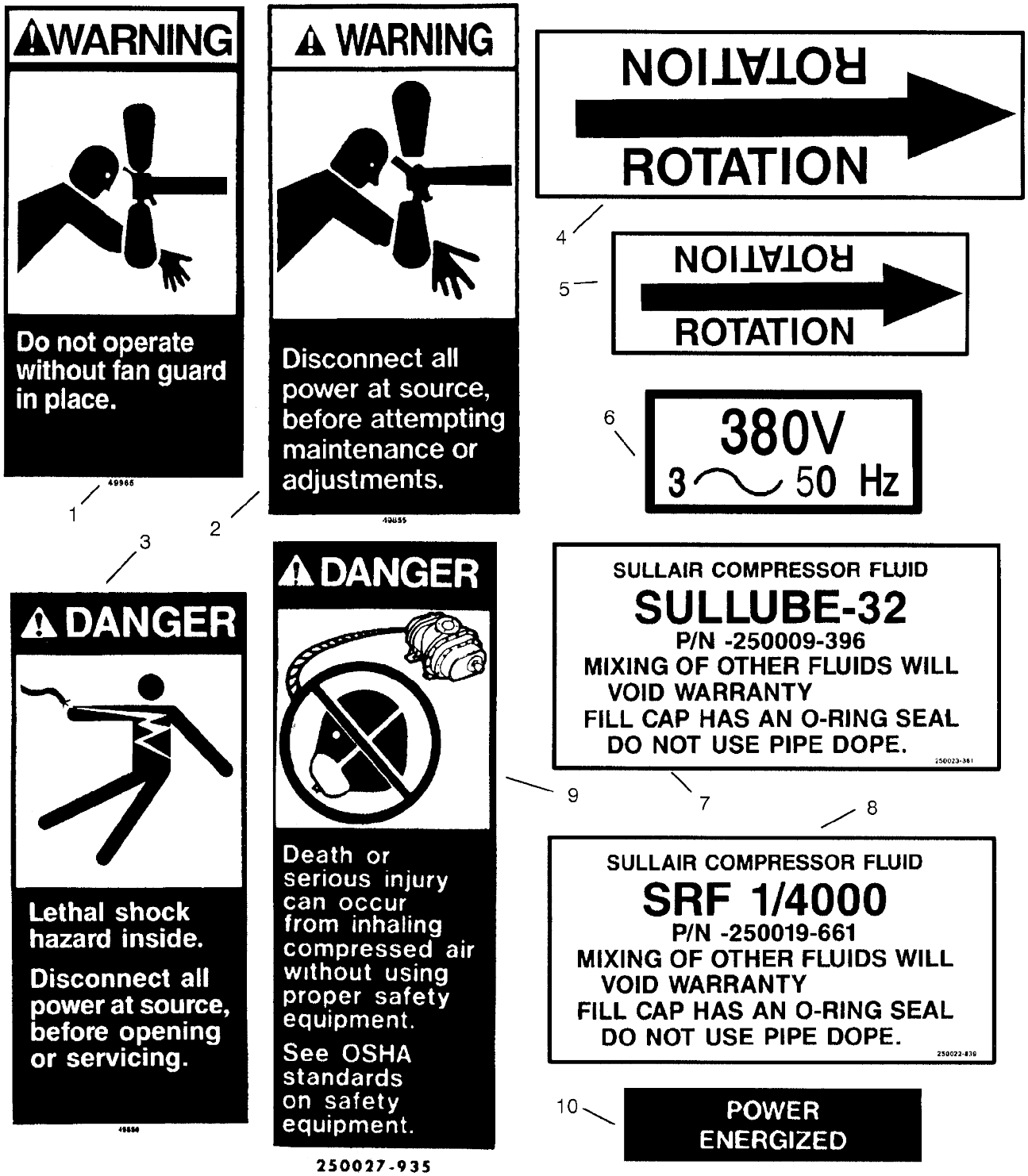
(I) For maintenance on air cylinder no. 250016–183, order repair kit no. 608311–001 and actuator diaphragm repair tool kit no. 02250052–625.

**PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR**

Section 7

# ILLUSTRATIONS AND PARTS LIST

### 7.27 DECAL GROUP




250027-935

### 7.27 DECAL GROUP

| *key number* | *description* | *part number* | *quantity* |
|---|---|---|---|
| 1 | sign, warning sever – fan port | 049965 | 2 |
| 2 | sign, warning sever – fan | 049855 | 1 |
| 3 | sign, danger electrocution | 049850 | 1 |
| 4 | decal, rotation | 250021–286 | 1 |
| 5 | decal, rotation | 250021–564 | 1 |
| 6 | decal, 460 volt | 040631 | 1 |
| | •decal, 380 volt (not shown) (I) | 241926 | 1 |
| | •decal, 415 volt (not shown) (I) | 241927 | 1 |
| | •decal, 525 volt (not shown) (I) | 02250047–898 | 1 |
| | •decal, 575 volt (not shown) (I) | 041124 | 1 |
| 7 | decal, compressor fluid Sullube–32 | 250023–361 | 1 |
| 8 | decal, SRF 1/4000 fluid | 250022–839 | 1 |
| 9 | sign, air breathing (danger) | 250027–935 | 1 |
| 10 | sign, power energized | 249544–049 | 1 |

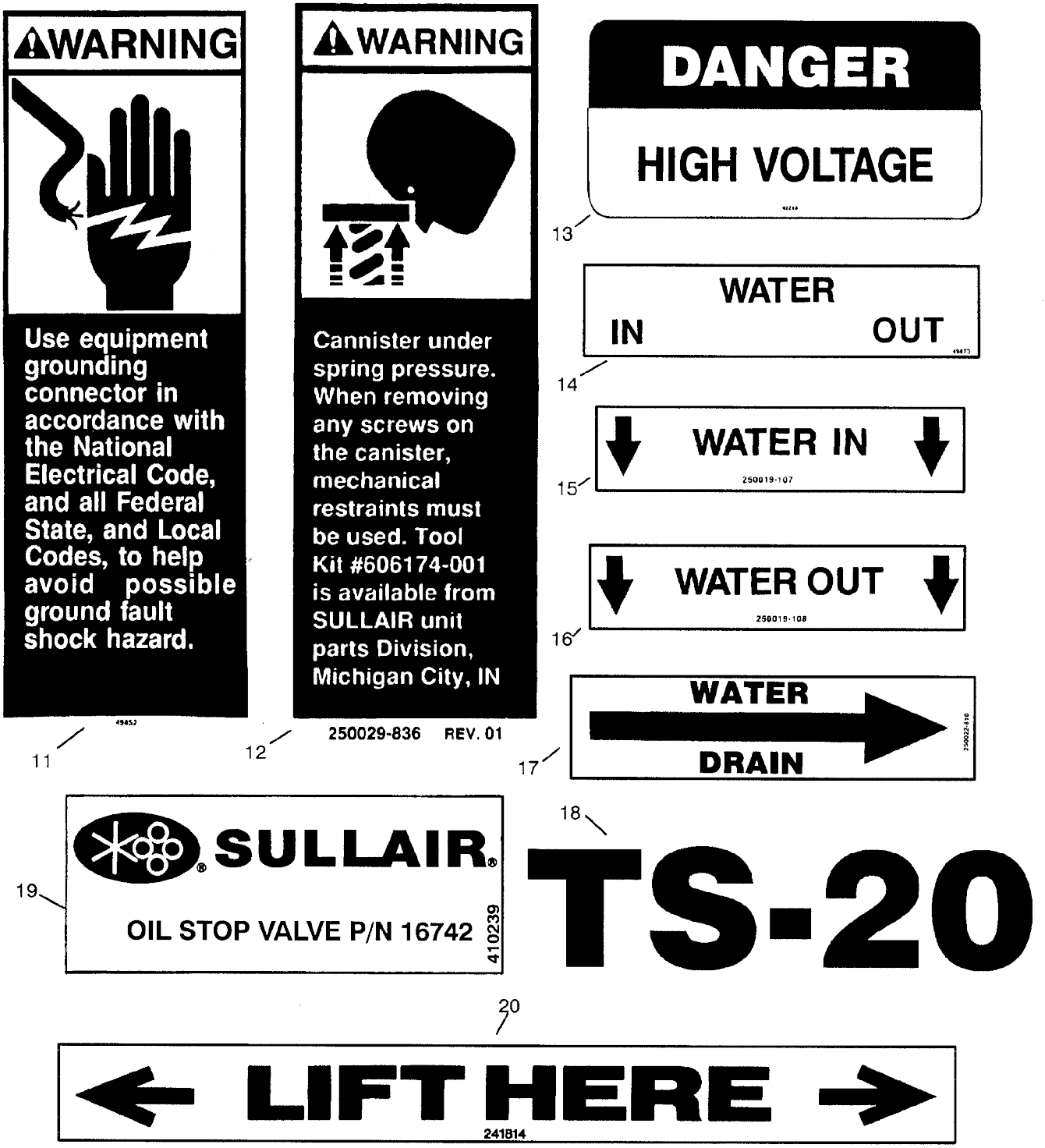
(Continued on Page 113)

(I) Decal is for optional voltage (not shown).

**PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR**

Section 7
# ILLUSTRATIONS AND PARTS LIST

### 7.27 DECAL GROUP



**7.27 DECAL GROUP (Continued)**

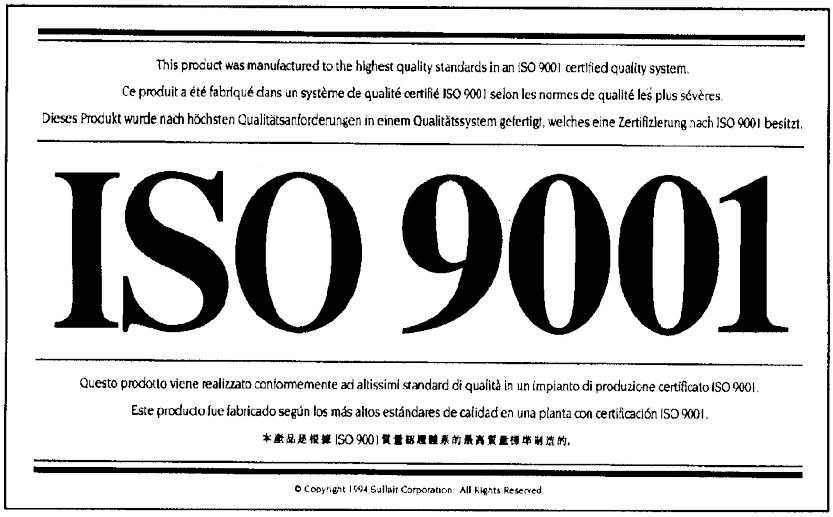
| *key number* | *description* | *part number* | *quantity* |
|---|---|---|---|
| 11 | sign, warning ground fault | 049852 | 1 |
| 12 | decal, warning actuator | 250029–836 | 1 |
| 13 | decal, danger high voltage | 042218 | 1 |
| 14 | decal, water inlet–outlet | 049873 | 1 |
| 15 | decal, water in | 250019–107 | 1 |
| 16 | decal, water out | 250019–108 | 1 |
| 17 | decal, water drain | 250022–810 | 1 |
| 18 | decal, TS–20 | 02250061–374 | 1 |
| | •decal, TS–20 canopy (not shown) | 02250061–376 | 1 |
| 19 | decal, fluid stop valve P/N 016742 | 410239 | 4 |
| 20 | decal, fork lifting | 241814 | 4 |

(Continued on Page 115)

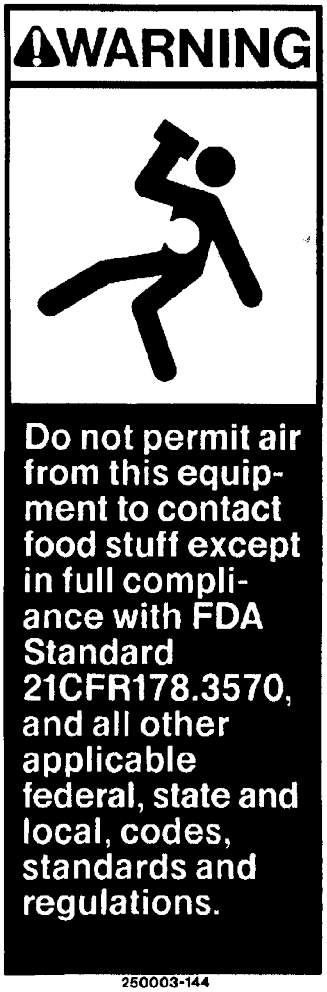
**PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR**

Section 7
# ILLUSTRATIONS AND PARTS LIST

## 7.27 DECAL GROUP

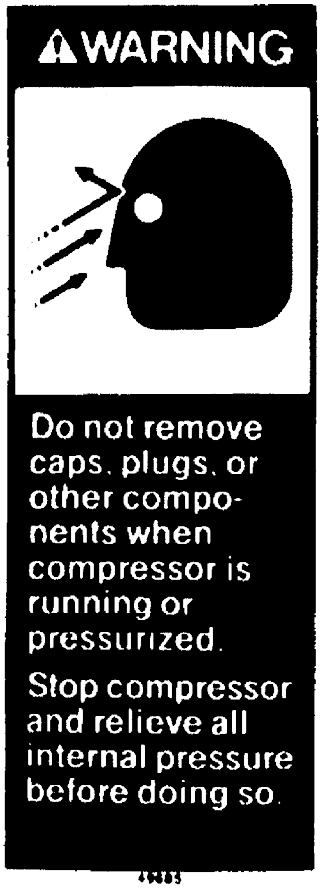



21



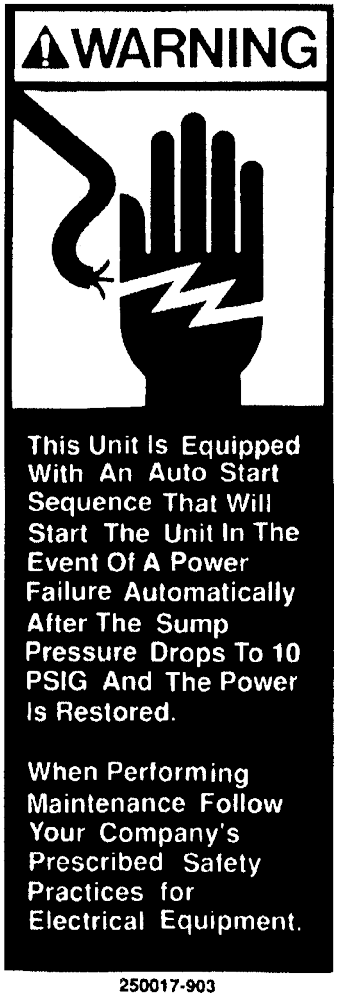

250003-144

23




24

22




250017-903

**7.27 DECAL GROUP (Continued)**

| *key number* | *description* | *part number* | *quantity* |
|---|---|---|---|
| 21 | decal, ISO 9001 | 02250057–624 | 1 |
| 22 | decal, warning auto start | 250017–903 | 1 |
| 23 | sign, warning “food grade” lube | 250003–144 | 1 |
| 24 | sign, warning “compressor fluid fill cap” | 049685 | 1 |

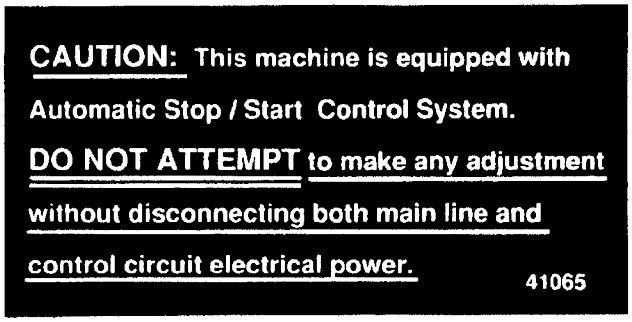
(Continued on Page 117)

**PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR**

Section 7
# ILLUSTRATIONS AND PARTS LIST

### 7.27 DECAL GROUP


25




26

27

SULLAIR®

MACH. S/N _____ MODEL # _____
CUST. NAME _____
ADDRESS _____
CITY / STATE _____ ZIP _____
CUST. PRODUCT _____
BRAND OF FLUID _____
HOURS ON MACH. _____ FLUID _____
DATE SAMPLE TAKEN: _____
DISCHARGE TEMP. _____ °F
AMBIENT TEMP. _____ °F
FLUID USAGE RATE - GAL / MO. _____
SAMPLE TAKEN FROM: _____
COMMENTS: _____

28

29

**7.27 DECAL GROUP (Continued)**

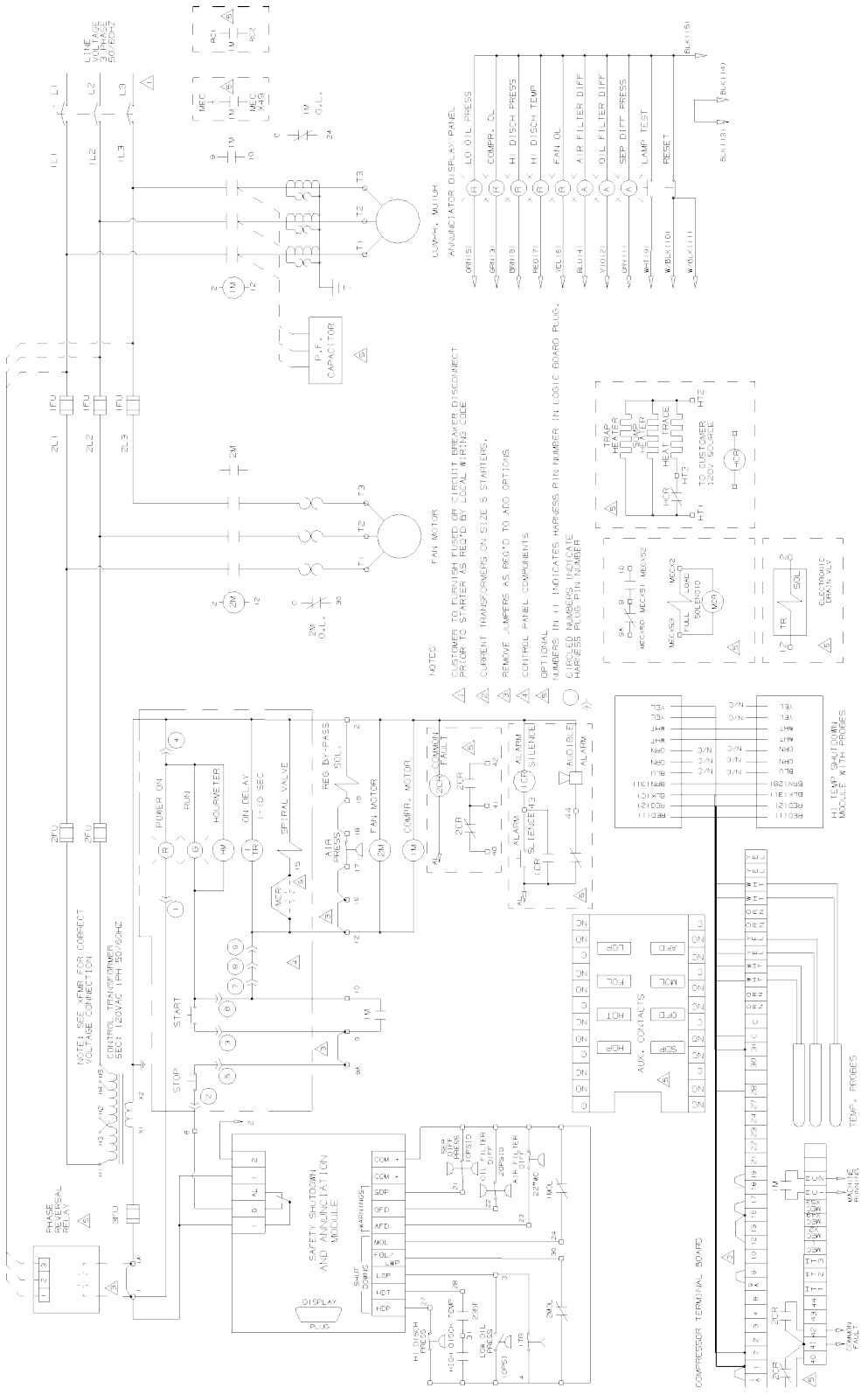
| *key number* | *description* | *part number* | *quantity* |
|---|---|---|---|
| 25 | decal, logo SRF 1/4000 | 250021–483 | 1 |
| 26 | decal, autostart | 041065 | 1 |
| 27 | decal, Sullair logo | 02250059–048 | 2 |
| 28 | decal, fluid sample | 250022–675 | 1 |
| 29 | decal, earth ground | 02250075–046 | 1 |
| 30 | decal, instrument panel (not shown) | 02250051–301 | 1 |

**PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR**

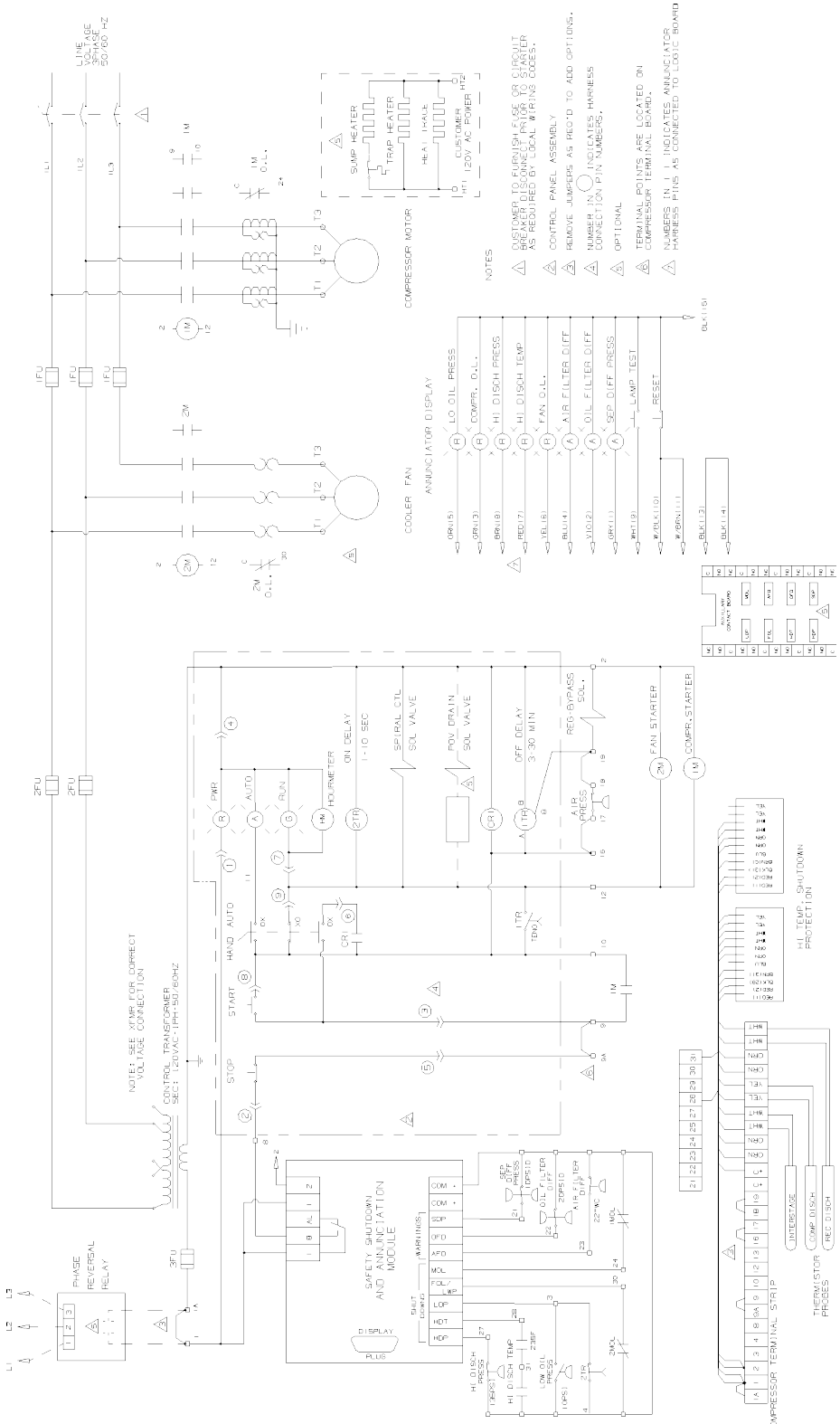
Section 7

# ILLUSTRATIONS AND PARTS LIST

## 7.28 WIRING DIAGRAM – SINGLE CONTROL



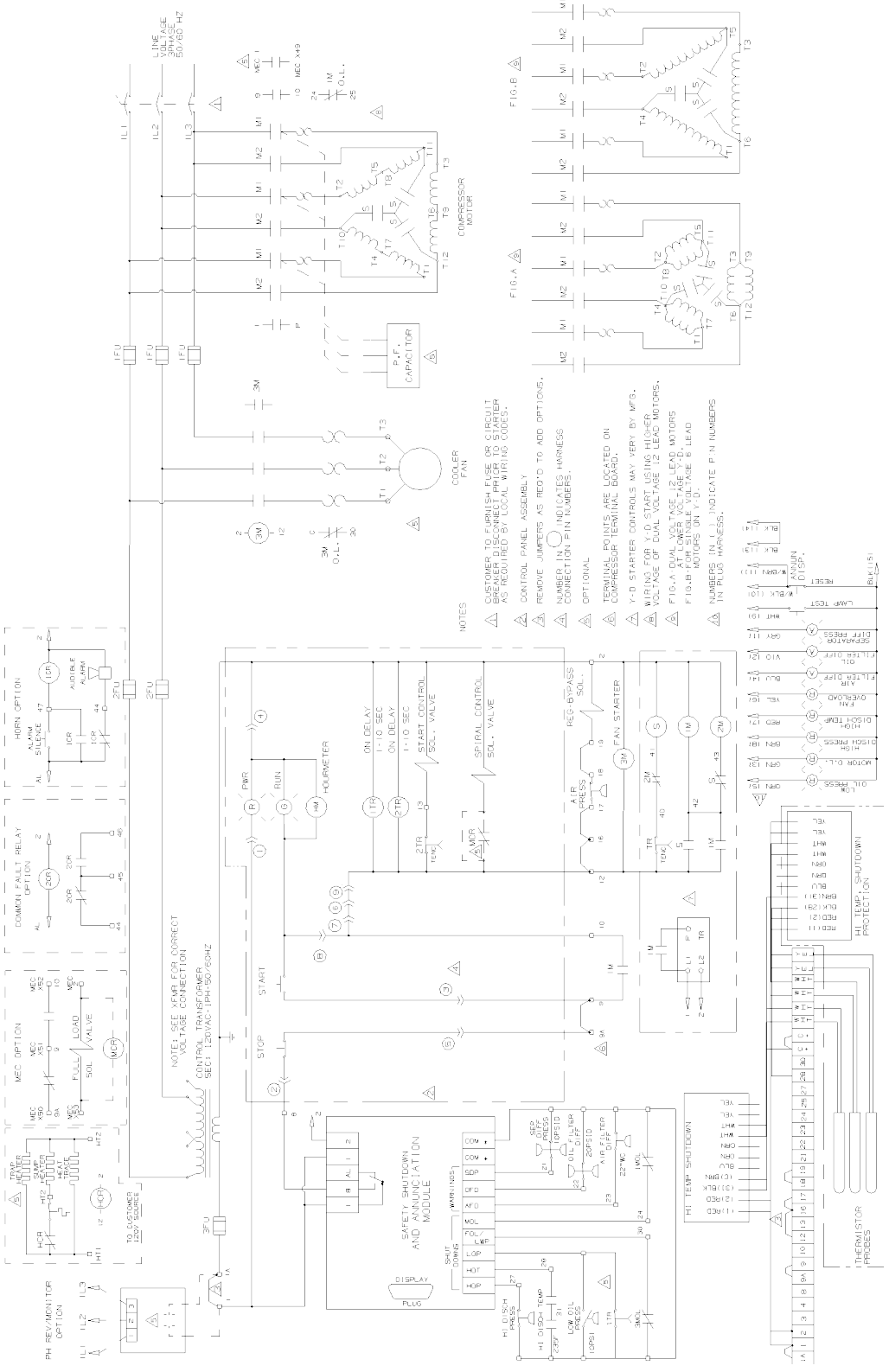
## 7.29 WIRING DIAGRAM -- DUAL CONTROL



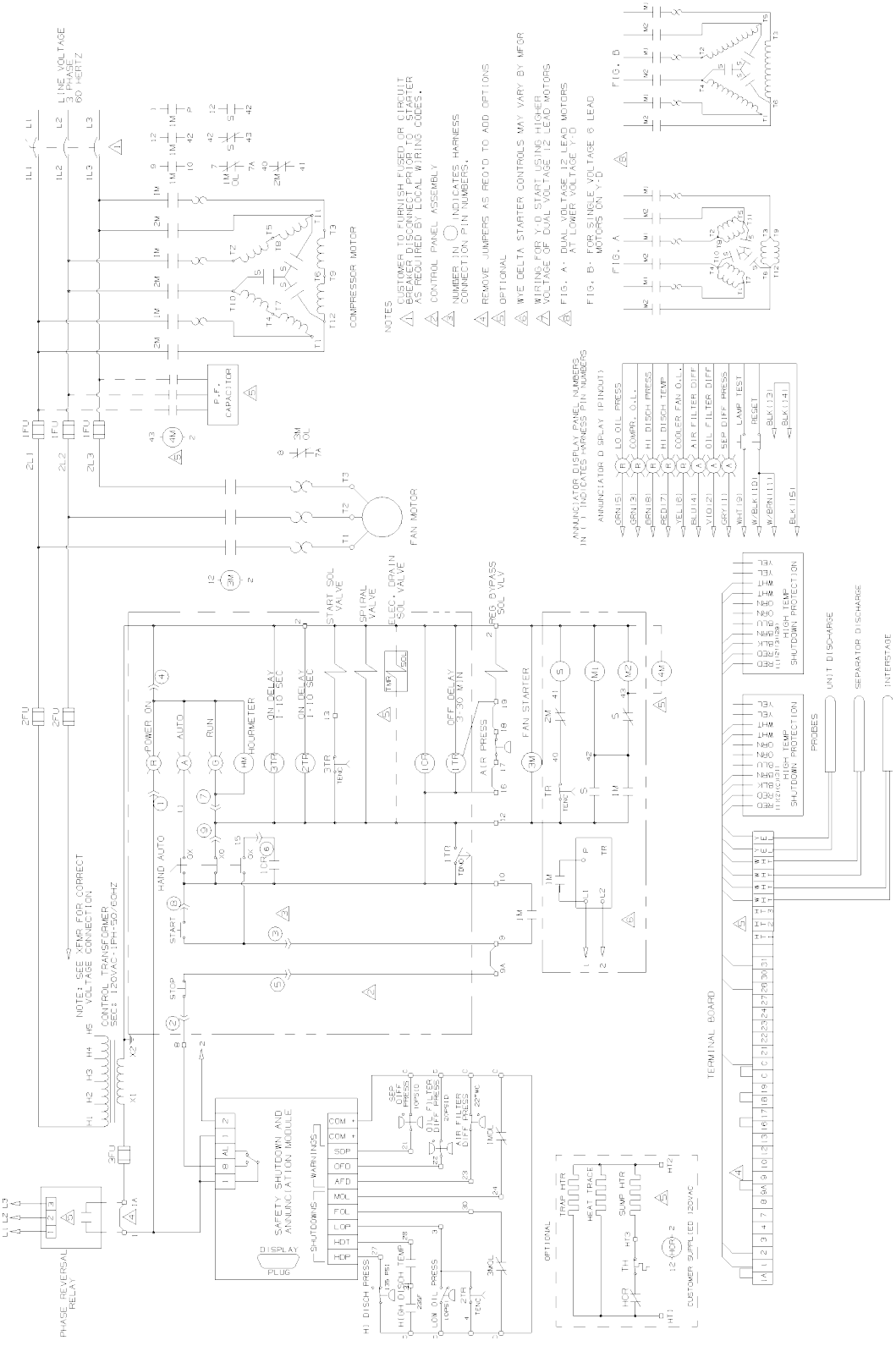
Section 7

# ILLUSTRATIONS AND PARTS LIST

## 7.30 WIRING DIAGRAM – WYE – DELTA – SINGLE CONTROL



## 7.31 WIRING DIAGRAM – WYE – DELTA – DUAL CONTROL



# NOTES

# NOTES

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