OPERATING, MAINTENANCE & PARTS MANUAL

MODEL
XHP–600–S–CAT
XHP–750–S–CAT

PART NO. 35366004

November, 1992

SERIAL NUMBER RANGE

(Apply Serial No. Label Here)

⚠ DANGER

STATEMENT CONCERNING THE USE OF THIS EQUIPMENT

FOR BREATHING AIR AND/OR AQUA LUNG SERVICE

If the model number on this air compressor contains the letters "BAP", the compressor is suitable for use in breathing air services. In the absence of such a designation, the compressor is not considered as capable of producing air of breathing quality. For a compressor to be capable of use in breathing air services, it must be fitted with additional specialized equipment to properly filter and/or purify the air to meet all applicable federal, state and local laws, rules, regulations and codes, such as, but not limited to, OSHA 29 CFR. 1910.134, Compressed Gas Association Commodity Specification G–7.1–1966, Grade D Breathing Air, and/or Canadian Standards Association. Should the Purchaser and/or User fail to add such specialized equipment and proceeds to use the compressor for breathing air service, the Purchaser/User assumes all liability resulting therefrom without any responsibility or liability being assumed by Ingersoll–Rand Company.

The Purchaser is urged to include the above provision in any agreement for any resale of this compressor.

Doosan purchased Bobcat Company from Ingersoll-Rand Company in 2007. Any reference to Ingersoll-Rand Company or use of trademarks, service marks, logos, or other proprietary identifying marks belonging to Ingersoll-Rand Company in this manual is historical or nominative in nature, and is not meant to suggest a current affiliation between Ingersoll-Rand Company and Doosan Company or the products of either.

DANGER

Air discharged from this machine may contain carbon monoxide or other contaminants which will cause severe injury or death. Do not breathe this air.

Never operate the engine of this machine inside a building without adequate ventilation. Avoid breathing exhaust fumes when working on or near the machine.

WARNING

Improper operation of this machine. Can result in severe injury or death. Read Safety Warnings and Operating Manual supplied with this machine before operating or servicing.

WARNING

Unexpected starting of this machine. Can result in severe injury or death. Disconnect battery(s) before servicing.

WARNING

Modification or alteration of this machine. Can result in severe injury or death. Do not modify or alter without the express written consent of Ingersoll–Rand Co.

WARNING

Combustible gas. Can cause severe burns, blindness or death. Keep sparks and open flame away from batteries.

WARNING

TAMPERING WITH NOISE CONTROL SYSTEM PROHIBITED

Federal law prohibits the following acts or the causing thereof:

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

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

(1) Removal or rendering inoperative any of the following:
   a. the engine exhaust system or parts thereof
   b. the air intake system or parts thereof
   c. enclosure or parts thereof

(2) Removal of any of the following:
   a. fan shroud
   b. vibration mounts
   c. sound absorption material

(3) Operation of the compressor with any of the enclosure doors open.

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WARNING

This machine produces loud noise with the doors open or service valve vented. Extended exposure to loud noise can cause hearing loss. Always wear hearing protection when doors are open or service valve is vented.

This machine contains high pressure air which can cause severe injury or death from hot oil and flying parts. Always relieve pressure before removing caps, plugs, covers or other parts from the pressurized air system.

Air pressure can remain trapped in an air supply line which can result in serious injury or death. Always vent air supply line at tool or vent valve before performing any service.

Unrestricted air flow through a hose end will result in a whipping action which can cause severe injury or death. Always attach a safety flow restrictor to each hose "at the source of supply or branch line" in accordance with OSHA Reg. 29CFR Sect. 1926.302(b).

Hot pressurized fluid. Can cause severe burns. Do not open radiator while hot.

Towing this vehicle at excessive speeds or with underrated tow vehicle can result in loss of driving control and greater stopping distances. Always determine the maximum safe towing speed and tow vehicle rating before towing. See General Data Decal located on machine or specifications in this manual, Section 2 for maximum speed and gross weight for comparison.

Rotating fan blade can cause severe injury. Stop this machine before performing maintenance.

Never run unit with guards, covers or screens removed. Keep hands, hair, clothing, tools, blow gun tips, etc. well away from moving parts.

Do not use petroleum products (solvents or fuels) under high pressure as this can penetrate the skin and result in serious illness. Wear eye protection while cleaning unit with compressed air to prevent debris from injuring eye(s).

Always make sure wheels, tires and tow bar connectors are in safe operating condition and tow bar is properly connected before towing.

Do not store or transport material in or on the unit.

CAUTION

Ether is an extremely volatile, highly flammable gas. Use sparingly! If too much is injected, the uncontrolled explosion may result in costly damage to the engine.

Use extreme care to avoid contacting hot surfaces (engine exhaust manifold and piping, air receiver and air discharge piping, etc.).

Do not connect the air discharge on this unit onto a common header with any other unit of any description, or any other source of compressed air, without first making sure a check–valve is used between the header and the unit. If this unit is connected in parallel with another unit of higher discharge pressure and capacity, a safety hazard could occur in a back–flow condition.

Never allow the unit to sit stopped with pressure in the receiver–separator system. As a precaution, open the service valve.

LOOK FOR THESE SIGNS WHICH POINT OUT POTENTIAL HAZARDS TO THE SAFETY OF YOU AND OTHERS. READ AND UNDERSTAND THOROUGHLY. HEED WARNINGS AND FOLLOW INSTRUCTIONS. IF YOU DO NOT UNDERSTAND, INFORM YOUR SUPERVISOR.

(Red Background)

Indicates the presence of a hazard which WILL cause severe injury, death or property damage, if ignored.

(Orange Background)

Indicates the presence of a hazard which CAN cause severe injury, death or property damage, if ignored.

(Yellow Background)

Indicates the presence of a hazard which WILL or can cause injury or property damage, if ignored.

(Blue Background)

Indicates important set–up, operating or maintenance information.

TABLE OF CONTENTS

FOREWORD

During the preparation of this manual every effort was made to ensure the adequacy and accuracy of the contents. Only in this manner can the owner be provided with a tool that will aid him in obtaining maximum performance and trouble–free service from the compressor. Since all classes of equipment require a certain amount of attention, the purpose of this manual is to acquaint an operator with the functions, operation and lubrication of the compressor. This manual also provides the owner with the maintenance requirements applicable to the various components designed or selected for incorporation into this unit. Special attention has been given in an effort to make sure that only components built with the very best materials and the finest workmanship have been used, thus reducing the maintenance requirement to a bare minimum.

Before starting the compressor, the instructions should be carefully read to obtain a thorough knowledge of the duties to be performed. Take pride in the compressor, keep it clean, and in good mechanical condition.

For complete protection and minimum down–time to facilitate the maintenance effort that is required, it is suggested that a complete set of recommended spares be kept on hand during and after the first few months of operation. For recommended spares, replacement parts or information regarding the condition or operation of your unit or for major servicing not covered in this manual, consult your nearest sales office, autonomous company or authorized distributor. Be sure to specify the model and serial number of the compressor during any correspondence with a company representative.

In addition to preventive maintenance, the compressor airend may require overhauling to maintain maximum output and performance of the unit. Your Ingersoll–Rand Company Construction Equipment Group Sales Offices and authorized distributors as well as Ingersoll–Rand International autonomous companies and authorized distributors now have a compressor airend exchange program, therefore we do not recommend overhaul of the airend by the customer. However, we do recognize the fact that circumstances may warrant field overhaul of the airend. Prior to any disassembly or reassembly of the airend we strongly suggest the owner contact the Customer Service Department, Ingersoll–Rand Company, Mocksville, North Carolina, 27028 for their advice and suggestions.

NOTICE

For the purpose of encouraging proper maintenance,Ingersoll–Rand Company is providing a Maintenance Log Book (Form PCD685) with each compressor shipped from the factory. This Log Book contains a performance schedule for all required noise emission control maintenance. Space is provided in this log book so that the owner of this compressor can note what maintenance was done, by whom, where and when.

SECTION 2 – GENERAL DATA

MODEL:

XHP–( )–S–CAT	600	750

Rated Delivery:

–cfm	600	750
–(litres/sec)	(285)	(355)

Rated Operating Pressure:

–psi (kPa)	350 (2400)	300 (2070)

Safety Valve Setting:

–psi (kPa)	400 (2760)	400 (2760)

ENGINE – (DIESEL)

Manufacturer	Caterpillar Tractor Company
Model	3306 TA
Full Load Speed – rpm	2100
No Load Speed – rpm	1200
Electrical System–volt	24

FLUID CAPACITIES

Compressor Lubricant	42 U.S. gallons (159 litres)
Engine Crankcase Lubricant (including filters)	23 quarts (22 litres)
Engine Coolant Capacity	55 quarts (52 litres)
Fuel Tank (Diesel)	144 U.S. gal. (540 litres)

UNITS MEASUREMENTS/WEIGHTS

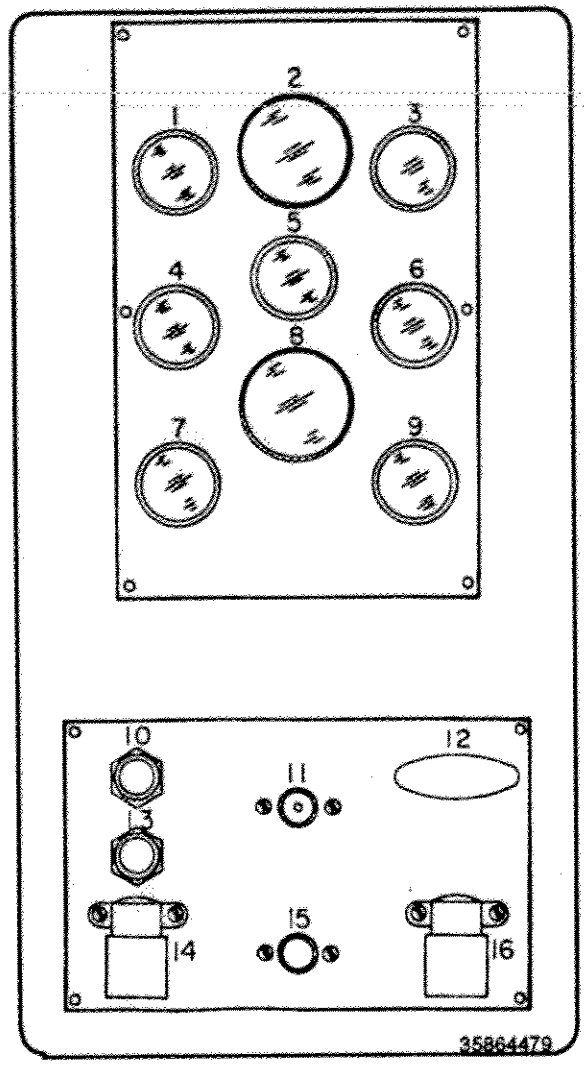
Overall Length	12.54 feet (3.82 meters)
Overall Height	7.09 feet (2.16 meters)
Overall Width	6.69 feet (2.04 meters)
Net Weight (including lube oil)	10,600 lbs. (4800 kg)
Gross Weight (including fuel and coolant)	12,100 lbs. (5500 kg)

RUNNING GEAR

Tire Size	8.00 x 16.5, Load Range E
Inflation Pressure (Cold)	75 psi (520 kPa)
Towing Speed (Maximum)	20 mph (32 km/hr)

WARNING! Modification or alteration of this machine. Can result in severe injury or death. Do not modify or alter without the express written consent of Ingersoll–Rand Co.

OPERATING CONTROLS AND INSTRUMENTS (STANDARD)



1. **Engine Oil Pressure Gauge –** Indicates lubricating oil pressure in the engine. See engine manual for normal range.
2. **Compressor Discharge Pressure Gauge –** Indicates pressure in receiver tank, normally from 0 psi (kPa) to the rated pressure of the machine.
3. **Engine Coolant Temperature Gauge–** Indicates coolant temperature in the engine, with normal maximum from 180°F (82°C) to 200°F (93°C). The red band indicates an over heating condition.
4. **Engine Fuel Pressure –** Can be used to determine when filters are clogged by comparing with pressure when clean.
5. **Discharge Air Temperature Gauge –** Indicates air temperature in °F and °C. Normal range is 190°F (88°C) to 230°F (110°C).
6. **Voltmeter –** Indicates voltage of the electrical system, normally approximately 28 volts.
7. **Fuel Level –** Indicates level in tanks, from empty to full.
8. **Engine Tachometer/Hourmeter –** Indicates engine speed, from 0 rpm at stop to 2100 rpm at full load. Records running time in hours for maintenance purposes.
9. **Ammeter –** Indicates charging rate of alternator, normally slightly positive (+).
10. **Start Button –** Activates the engine starter.
11. **Service Air Button –** A 2–way valve that should be tripped (pushed) after engine is warmed up to obtain full air pressure at the service outlet.
12. **Stop Handle–** Is connected by cable to lever on the engine governor.
13. **Safety Circuit Bypass Button –** Switch that bypasses the engine low oil pressure sensor in the safety shutdown system during start–up.

14/16. Air Service Indicators –Indicates acceptable (green flag) or excessive (red flag) restriction within engine or compressor air filter.

15. **Pressure Regulator Knob –** Valve that can be adjusted to automatically limit the operating pressure from 150 psi (1035 kPa) to 300 psi (2070 kPa).

Cold Starting Aid (Right of Control Panel) – A valve for injecting a measured shot of ether from a pressurized can.

Fuel Primer Pump (On side of engine) – Manually operate to prime fuel system.

Air Inlet Valve Handle – (Left of Control Panel) – For use when ambient temperature is below 32°F (0°C).

SECTION 3 – OPERATING INSTRUCTIONS

WARNING

- Failure to follow these instructions could result in very serious personal injury or death.
- Do not store or transport material or equipment in or on compressor.
- Do not transport personnel in or on compressor.
- Do not climb on top of machine.

BEFORE MOVING

- Insure that the tires, wheels and running gear are in good condition and secure.
- Insure that the tires are inflated to 75 psi (520 kPa).
- Do not tow this unit in excess of 20 mph (32 km/hr).
- Use a vehicle whose towing capacity is greater than the gross weight of this unit.

SETTING UP

- All fluid levels (engine oil, compressor oil and radiator coolant) should be checked and topped off while the unit is level and maintained at this level. Do not overfill either the engine crankcase or the compressor oil reservoir.
- Place the unit in a position as level as possible. The design of these units permits a 15 degree lengthwise and a 15 degree sidewise limit on out–of–level operation.
- Chock the wheels of the compressor unit.

CAUTION

Do not connect the air discharge on this unit into a common header with any other unit of any description, or any other source of compressed air, without first making sure a check–valve is used between the header and the unit. If this unit is connected in parallel with another unit of higher discharge pressure and capacity, a safety hazard could occur in a back–flow condition.

BEFORE STARTING

Open manual blowdown valve on the receiver–separator tank to insure pressure is relieved in the system. Close this valve and all service valves.

Check battery for proper connections and conditions.

WARNING

Exercise extreme caution when using a booster battery to start, as a spark in the presence of battery gases could cause an explosion and result in serious personal injury. To jumpstart, connect the ends of one booster cable to the positive (+) terminals of each battery (booster and weak). Then connect one end of the other cable to the negative (–) terminal of the booster battery and the other end to the engine block (NOT TO THE NEGATIVE (–) TERMINAL OF THE WEAK BATTERY).

After starting:

a. Reduce engine speed to idle.
b. Disconnect the negative (–) cable from engine block; then from booster battery.
c. Disconnect positive (+) cable from both batteries.

• Check the compressor lubricating oil level. The proper oil level is mid–way on the sight gauge. Add oil if the level falls to the bottom of the sight gauge when the unit is not running. DO NOT OVERFILL. If necessary, refer to Section 5 – Lubrication for recommended lubricant.

• Check the engine lubricating oil level. Add oil if low on dipstick. Refer to the engine Operator's Manual for recommended lubricant.

CAUTION

No smoking, sparks or open flame near fuel.

•Check the fuel level. Use only CLEAN diesel fuel. Refer to engine Operator's Manual for specifications. To minimize condensation (water) in the fuel tank, it is recommended to fill the tank at the end of each day.

•Check the service indicators on both air cleaners. If the flag in either shows red, refer to Section 4 – Preventive Maintenance, for service instructions.

WARNING

Do not remove the cap from a HOT engine radiator. The sudden release of pressure from a heated cooling system can result in a loss of coolant and possible severe personal injury.

•Check the coolant level in the radiator. The coolant must cover the tubes in the top tank (approximately 1 inch high on a clean measuring rod stuck down filler neck).

WARNING

Insure that all guards (fan, etc.) are in place and that all high pressure air and oil lines are safely connected.

NOTICE

When operating in ambient temperatures above 90°F (32°C) and high humidity, drain any condensate from the receiver tank daily. Also inspect compressor oil for milky appearance. If found, refer to Section 5 – Lubrication.

STARTING

•Make sure the MANUAL SPEED CONTROL/STOP handle is pushed in all the way.

•Manually operate the hand–primer pump on side of engine to insure fuel pressure.

BELOW 60°F (16°C)

CAUTION

Ether is an extremely volatile, highly flammable gas. Use sparingly! If too much is injected, the uncontrolled explosion may result in costly damage to the engine.

It may be necessary to use the cold starting aid (ether bottle and valve located adjacent to instrument panel). If so, operate the valve handle once prior to and SPARINGLY during cranking.

BELOW 32°F/0°C

It is essential to close the compressor air inlet valve prior to cranking.

1. Pull and lock the handle on the left side of the control panel.

2. As soon as the engine speed reaches 1200 rpm, immediately unlock and GRADUALLY push in on the handle. The air inlet valve must be opened as quickly as possible to prevent oil pump cavitation and loss of airend lubrication.

•Press the START button and the SAFETY CIRCUIT BYPASS button at the same time.

Note: If the engine oil pressure does not rise within 5 seconds, stop the engine and trouble shoot. Refer to Section 7 – Trouble Shooting, of this manual.

•Release the BYPASS button when the air discharge pressure reaches approximately 40 psi (275 kPa).

•Allow the engine to warm–up for 5 to 10 minutes, depending upon the ambient temperature, or until the coolant temperature reaches 140°F (60°C).

•Push the SERVICE AIR button (2–way valve). The engine should go to full speed and the discharge pressure rise to approximately 325 psi (400 psi for XHP600). If there is no air being consumed, the compressor will "unload" (intake will be closed) and the engine speed drop to an idle.

•Compressor is now ready to furnish air when the service valve is opened.

Note: If the engine stops unexpectedly, refer to Section 7 – Trouble Shooting, for assistance.

STOPPING

•Close all service valves.

•Allow unit to run at idle for 3 to 5 minutes. This will allow engine components to cool gradually and thus promote longer engine life.

•Pull the STOP handle and hold it out until the engine comes to a complete stop.

Note: Once the engine stops, the automatic blowdown valve will begin to relieve all pressure from the receiver–separator system.

CAUTION

Never allow the unit to sit stopped with pressure in the receiver–separator system. As a precaution, open the manual blowdown.

WARNING

Even after pressure is relieved from the receiver–separator system, any air supply line from the compressor to a tool or machine could remain under pressure and cause very serious personal injury or death. After the compressor stops, carefully open a valve at any tool or machine to exhaust the pressure in any line prior to removal or servicing.

AUTOMATIC SHUTDOWN

Should any of three problem situations (engine overheat, low engine oil pressure, excessive discharge air temperature) occur, the unit will automatically stop. This occurs when the solenoid at the injection pump shuts off the fuel supply to the engine.

EQUIPMENT PROTECTION

NOTICE

Do NOT wire around or bypass a shutdown sensor or switch.

This family of machines is protected by three (3) sensors or switches at the following locations:

(1) High engine COOLANT temperature in the engine.

(2) Low engine oil pressure, in the engine.

(3) High Discharge AIR temperature, at the airend outlet.

Complete Machine Registration

Machines shipped to locations within the United States do not require a warranty registration unless the machine status changes (i.e. change of ownership).

Machines shipped outside the United States require notification be made to initiate the machine warranty.

Fill out the Warranty Registration Form in this section, keep a copy for your records and mail form to:

Ingersoll–Rand Company
Portable Compressor Division
P.O. Box 868
Mocksville, North Carolina 27028
Attn: Warranty Department

Note: Completion of this form validates the warranty.

Engine Registration:

Caterpillar Engine does not require a separate warranty engine registration.

INGERSOLL-RAND®
AIR COMPRESSORS

Warranty Registration Form

Completion of this form validates the warranty

Selling Distributor	Servicing Distributor	WARRANTY REGISTRATION
Name _____	Name _____	Owner/User Name _____
Address _____	Address _____	Address _____
City _____	City _____	City _____
County _____	County _____	County _____
State _____	State _____	State _____
Zip Code _____	Zip Code _____	Zip Code _____
Telephone _____	Telephone _____	Telephone _____

Complete the Applicable Blocks

Owner/User Type of Business (check one only)

☐ Construction–Heavy (highway, excavation, etc.)	☐ Asphalt Contractor	☐ Coal Mining	☐ Other Mining
☐ Construction–Light (carpentry, plumbing, pools, mason, etc.)	☐ Government (municpal, state, county, etc.)	☐ Quarry	☐ Shallow Oil & Gas
☐ Rental (rental center, rental fleet, etc.)	☐ Building Contractor	☐ Waterwell	☐ Utility Company (gas, electric, water, etc.)
☐ Industrial (plant use)	☐ Other specify _____	☐ Exploration	☐ Utility Contractor

Model	Unit S/N	Engine S/N	Date Delivered

Unit–Hours	Airend S/N	Truck S/N	Truck Engine S/N

SERVICING DISTRIBUTOR/USER ACKNOWLEDGEMENT

1. The Purchaser has been instructed and/or has read the manual and understands proper preventative maintenance, general operation and safety precautions.
2. The warranty and limitation of liability has been reviewed and understood by the owner/user.
3. In the event that this unit is to be used within a nuclear facility, the owner/user shall notify Ingersoll–Rand of such use so that Ingersoll–Rand may arrange for appropriate nuclear liability protection from the owner–licensee of the facility.
4. Ingersoll–Rand reserves the right to make design changes or modifications of Ingersoll–Rand products at anytime without incurring any obligation to make similar changes or modifications on previously sold units.

I hereby acknowledge acceptance of above and the conditions on reverse side.

Owner/User _____ Date _____

I hereby certify that the above is accurate and complete.

Distributor/I–R Rep. _____ **Date** _____

fold

Ingersoll–Rand Company
Portable Compressor Division
P.O. Box 868
Mocksville, North Carolina 27028

Attention: Warranty Department

SECTION 4 – PREVENTIVE MAINTENANCE

GENERAL

In addition to periodic inspections, many of the components in these units require periodic servicing to provide maximum output and performance. Servicing may consist of pre–operation and post– operation procedures to be performed by the operating or maintenance personnel. The primary function of preventive maintenance is to prevent failure, and consequently, the need for repair. Preventive maintenance is the easiest and the least expensive type of maintenance. Maintaining your unit and keeping it clean at all times will facilitate servicing.

Refer to the engine Operator's Manual furnished with the unit for the specific requirements on preventive maintenance for the engine.

SCHEDULED MAINTENANCE

The schedule on page 4–9 is based on normal operation of the unit. This page can be reproduced and used as a checklist by the service personnel. In the event unusual environmental operating conditions exist, the schedule should be adjusted accordingly.

COMPRESSOR OIL LEVEL

The optimum operating level is midway of the sight window on the side of the receiver tank. A totally filled sight window in which the level is not visible indicates an over–full condition and requires that oil be drained. Add oil when the level is near the bottom of the window. DO NOT OVERFILL.

AIR CLEANER

Inspect daily the air cleaner service indicator. Never guess about restriction in the air cleaner, always know what condition your air cleaner is in with the assistance of the service indicator. If it is not working properly, or is missing, replace it. Maximum compressor and engine protection against the ravages of dust is possible only if the air cleaner is serviced at regular intervals or whenever the service indicator shows red. Visually inspect the position of the flag in the air cleaner restriction indicator. Normally, the flag in a service indicator shows green indicating that the filter element is still serviceable. If the flag shows red when the unit is operating at full speed or stopped, it is an indication that proper servicing of the filter element is necessary. Also squeeze the precleaner dumps (rubber valve) to insure that they are not clogged.

To service the air cleaners on all units, proceed as follows:

1. Remove and empty the rubber valve. Loosen wing nut and remove end cover and outer (primary) element. Remove inner (safety) element.

2. Inspect air cleaner housing for any condition that might cause a leak and correct as necessary.

3. Wipe inside of air cleaner housing with a clean, damp cloth to remove any dirt accumulation, especially in the area where the element seals against the housing.

NOTICE

The safety element is not intended to be cleaned. For maximum protection, replace with a new safety element every third primary element change.

4. Inspect new elements closely for shipping damage.

5. Install new elements in the reverse order to the above. Tighten wing nuts firmly.

6. Inspect to ensure that the end cap seals tightly 360 degrees around the air cleaner body.

In the event that the filter element must be reused, compressed air cleaning (as follows) is recommended since the element must be thoroughly dry. Direct compressed air through the element in the direction opposite to the normal air flow through the element.

NOTICE

To prevent damage to the element, never exceed a maximum air pressure of 100 psi (700 kPa).

Move the nozzle up and down while rotating the element. Be sure to keep the nozzle at least one inch (25.4 mm) from the pleated paper. Thoroughly inspect the element by placing a bright light inside and rotating element slowly. If any holes or tears are found, this element must be discarded.

In the event the element is contaminated with dry dirt, oil or greasy dirt deposits,and a new element is not available, cleaning can be accomplished by washing, using the air cleaner element manufacturer's recommendations.

In addition, the air cleaner system (housing and piping) should be inspected every month for any leakage paths or inlet obstructions. Make sure the air cleaner mounting bolts and clamps are tight. Check the air cleaner housing for dents or damage which could lead to a leak. Inspect the air transfer tubing from the air cleaner to the compressor and the engine for holes. Make sure that all clamps and flange joints are tight.

GAUGES

The instruments or gauges are essential for safety, maximum productivity and long service life of the machine. Inspect the gauges prior to start–up. During operation observe the gauges for proper functioning. Refer to page 2–2, Operating Controls, for the normal readings.

FUEL TANK

This unit is equipped with multiple tanks. Using CLEAN fuel in the fuel tanks is vitally important and every precaution should be taken to ensure that only clean fuel is either poured or pumped into the tank.

When filling the fuel tank on this unit, by methods other than a pump and hose, use a CLEAN non–metallic funnel.

Every six months the drain plugs should be removed from the tanks so that any sediment or accumulated condensate may be drained. When replacing the drain plugs, make sure they are tightened securely.

BATTERY

Heavy–duty, diesel cranking type batteries were installed at the factory and these should be inspected weekly. Keep the battery posts–to–cable connections clean, tight and lightly coated with a grease. Also the electrolyte level in each cell should cover the top of the plates. If necessary, top–up with clean distilled water.

TIRES

A weekly inspection is recommended. The proper inflation pressure for the tires is listed in Section 2– Specifications. Tires that have cuts or cracks or little tread should be repaired or replaced. Monthly check the wheel lug nuts for tightness.

AUTOMATIC SHUTDOWN SYSTEM

NOTICE

Do NOT wire around or bypass a shutdown sensor or switch. Do not short–circuit fuses.

The operation of the automatic shutdown system should be checked every month, or whenever it appears not to be operating properly. The three switches in this system are listed in Section 3 on page 3–4. The operation of these switches is extremely important in order to protect the engine and the compressor airend. The engine oil pressure switch prevents the engine from being damaged due to oil starvation. Two switches help protect the engine and compressor from high temperatures.

Once a month remove a wire from the engine oil pressure switch to check the shutdown solenoid for proper operation.

Once a year, the temperature switches should be tested by removing from the unit and tested with an ohmmeter. There should be 0 ohms between the wire terminals. When the switch is placed in the heated oil bath and its contact open, the ohmmeter should indicate infinite ohms.

The high discharge air temperature switch will require approximately 248°F (120°C) to actuate. The engine coolant temperature switch will require approximately 215°F (102°C) to actuate. Replace any defective switch before continuing to operate the unit.

A low oil pressure switch may be tested by removing it and connecting it to a source of controlled pressure while monitoring an ohmmeter connected to the switch terminals. As pressure is applied slowly from the controlled source, the switch should close at 12 psi (80 kPa) and show continuity through the contacts. As the pressure is slowly decreased to 8 psi (55 kPa) the contacts should open and the ohmmeter should show lack of continuity (infinite ohms) through the contacts. Replace a defective switch before continuing to operate the unit.

COMPRESSOR OIL COOLER

The compressor lubricating and cooling oil is cooled by means of the fin and tube–type oil cooler, located beside the radiator. The lubricating and cooling oil, flowing internally through the core section, is cooled by the air stream from the cooling fan flowing past the core section. When grease, oil and dirt accumulate on the exterior surfaces of the oil cooler, its efficiency is impaired.

Each month it is recommended that the oil cooler be cleaned by directing compressed air which contains a nonflammable safety solvent through the core of the oil cooler. This should remove the accumulation of grease, oil and dirt from the exterior surfaces of the oil cooler core so that the entire cooling area can transmit the heat of the lubricating and cooling oil to the air stream.

In the event foreign deposits, such as sludge and lacquer, accumulate in the oil cooler to the extent that its cooling efficiency is impaired, a resulting high discharge air temperature is likely to occur, causing shut down of the unit. To correct this situation it will be necessary to clean it using a cleaning compound in accordance with the manufacturer's recommendations. Use only a dependable cleaning compound. This is of prime importance because different cleaners vary in concentration and chemical composition. After completing the cleaning procedure, the oil cooler must be flushed before returning to service.

RADIATOR

WARNING

Do not remove the cap from a HOT engine radiator. The sudden release of pressure from a heated cooling system can result in a loss of coolant and possible severe personal injury.

The engine cooling system is filled at the factory with a 50/50 mixture of water and ethylene glycol. This permanent type antifreeze contains rust inhibitors and provides protection to –35°F (–37°C). The use of such a mixture is recommended for both summer and winter operation. When using water alone, be sure to add a reputable brand of rust inhibitor to prevent internal corrosion.

It is recommended to test the freezing protection of the coolant every six months or prior to freezing temperatures. Replenish with a fresh mixture every twelve months. A drain for the system is located in the bottom radiator tank. An alternate method would be to disconnect a bottom radiator hose.

Each month, inspect the radiator exterior for obstructions (dirt, bugs, etc.). If present, blow water or compressed air containing a nonflammable solvent between the fins in a direction opposite the normal air flow. Should the radiator be clogged internally, standard automotive practices should be followed.

HOSES

Each month it is recommended that all of the intake lines to and from the air cleaners, the engine cooling system hoses and all of the flexible hoses used for air, oil, and fuel be inspected.

To ensure freedom from air leaks, all rubber hose joints and the screw–type hose clamps must be absolutely tight. Regular inspection of these connections for wear or deterioration is a definite "must" if regulator servicing of the air cleaners is not to prove futile. Premature wear of both the engine and compressor is ASSURED whenever dust–laden air is permitted to enter the engine's combustion chamber or the compressor intake practically unfiltered.

The flexible hoses used in the fuel, oil and air lines on these units are primarily used for their ability to accommodate relative movement between components. It is extremely important they be periodically inspected for wear and deterioration. Clamps are used to prevent hose cover abrasion through vibration. This abrasion may occur when two hose lines cross, or when a hose line rubs against a fixed point; therefore, it is necessary that all clamps be replaced if missing. It is also important the operator does not use the hoses as convenient hand hold or steps. Such use can cause early cover wear and hose failure.

NOTICE

Piping systems operating at less than 150 psi (1050 kPa) may use a special nylon tubing. The associated fittings are also of a special "push–in" design. If so, features are as follows:

Pulling on the tubing will cause the inner sleeve to withdraw and compress, thus tightening the connection. The tubing can be withdrawn only while holding the sleeve against the fitting. The tubing can be removed and replaced numerous times without losing its sealing ability.

To install the nylon tubing, make a mark (with tape or grease pencil) approximately 7/8 inch from the end of the tubing. Insert the tubing into the sleeve and "push–in" past the first resistance to the bottom. The mark should be approximately 1/16 inch from the sleeve, for the 3/8 inch O.D. tubing; 1/8 inch for the 0.25 inch O.D. tubing. This will ensure that the tubing is fully engaged in the sealing mechanism.

COMPRESSOR OIL FILTERS

The compressor lubrication and cooling oil system includes dual spin–on, throw away type oil filters, each with an internal bypass valve. With a clean, new filter element, all of the oil flows through the full element area, from the outside/inside. As each element becomes contaminated with dirt, a pressure differential is created in the filter housing between the oil inlet and outlet ports. As this differential approaches 25 psi (175 kPa), the bypass valve starts to open, thus permitting a small quantity of oil to bypass the filter. As the contaminants continue to build up, more and more of the oil bypasses the filter media itself.

This does not provide any filtration but does allow a maximum flow of compressor lubricating and cooling oil to preclude any possible damage from loss of oil. Also the design of the filter prevents any washing–off of any dirt during oil bypassing.

NOTICE

The oil filter must be replaced every 500 hours of operation. On new or overhauled units, replace the element after the first 50 and 150 hours of operation; thereafter, service the oil filter every 500 hours.

To service the oil filters it will first be necessary to shut the unit down. Wipe off any external dirt and oil from the exterior of the filter to minimize any contamination from entering the lubrication system. Proceed as follows:

WARNING

High pressure air can cause severe injury or death from hot oil and flying parts. Always relieve pressure before removing caps, plugs, covers or other parts from pressurized air system.

1. Open the service air valve(s) to ensure that system is relieved of all pressure. Close the valve(s).

2. Turn spin–on filter element counterclockwise to remove it from the filter housing. Inspect the filter element and then discard.

NOTICE

If there is any indication of formation of varnishes, shellacs or lacquers on the oil filter element, it is a warning the compressor lubricating oil has improper characteristics and should be immediately changed. See Section 5 – Lubrication.

3. Inspect filter gasket contact area for cleanliness and damage. Clean or repair as necessary.

4. Install new filter by turning element clockwise until gasket makes initial contact. Tighten an additional 1/2 to 3/4 turn.

5. Start unit and allow to build up to rated pressure. Check for leaks before placing unit back into service.

FASTENERS

Visually check entire unit in regard to bolts, nuts and screws being properly secured. Spot check several capscrews and nuts for proper torque. If any are found loose, a more thorough inspection must be made. Take corrective action.

COMPRESSOR OIL

The lubricating and cooling oil must be replaced every 1000 hours of operation or six (6) months, whichever comes first. Refer to Section 5 – Lubrication for detailed instructions and specifications.

RUNNING GEAR

Every month or 500 miles, tighten the wheel lug nuts to 85 – 95 lbs.–ft. If the unit has a steerable wheel axle assembly, lubricate the grease fittings every six months.

Every six months the wheel bearings, grease seals and axle spindles should be inspected for damage (corrosion, etc.) or excessive wear. Replace any damaged or worn parts. Repack wheel bearings. Use a wheel bearing grease conforming to specification MIL–G–10924 and suitable for all ambient temperatures. Grease can be replaced in a wheel bearing using a special fixture or by hand as follows.

Place a spoonful of grease in the palm of one hand and take the bearing in the other hand. Push a segment of the wider end of the bearing down into the outer edge of the grease pile closest to the thumb. Keep lifting and pushing the bearing down into the edge of the grease pile until grease oozes out both from the top and from between the rollers. Then rotate the bearing to repeat this operation on the next segment. Keep doing this until you have the entire bearing completely filled with grease.

Before installing bearing, place a light coat of grease on the bearing cups which are pressed in the hub.

NOTICE

Excessive grease in the hub or grease cap serves no purpose due to the fact that there is no way to force the grease into the bearing.

If bearing adjustment is required or the hub has been removed for any reason, the following procedure must be followed to ensure a correct bearing adjustment of 0.001 to .012 free play.

1. While rotating hub slowly to seat the bearings, tighten spindle nut to approximately 15 lbs.–ft. Grasp the tire at the top and bottom and rock, in and out. There should be no evidence of looseness (free play) at the bearing.
2. Loosen nut to remove preload torque. Do not rotate hub.
3. Finger tighten nut until just snug. Loosen nut until the first nut castellation lines up with cotter pin hole in spindle. Insert cotter pin.
4. Ensure a definite but minimal amount of free play by rocking the tire.
5. Bend over cotter pin legs to secure nut and clear grease cap.
6. Nut should be free to move with only restraint being the cotter pin.

RECEIVER–SEPARATOR SYSTEMS

WARNING

High pressure air can cause severe injury or death from hot oil and flying parts. Always relieve pressure before removing caps, plugs, covers or other parts from pressurized air system.

*** Open service valve at end of machine.**

*** Ensure pressure is relieved, with BOTH:**
- **Discharge air pressure gauge reads zero (0).**
- **No air discharging from service valve.**

* When draining oil, remove and replace (make tight) plug at bottom of separator tank.

* When adding oil, remove and replace (make tight) plug on side of separator tank.

In the compressor lubricating and cooling system, separation of the oil from the compressed air takes place in the receiver–separator tank. As the compressed air enters the tank, the change in velocity and direction drop out most of the oil from the air.

Additional separation takes place in the oil separator element which is located in the top of the tank.

Any oil accumulation in this separator element is continuously drained off by means of a scavenge tube which returns the accumulated oil to the system.

The life of the oil separator element is dependent upon the operating environment (soot, dust, etc.) and should be replaced every twelve months or 2000 hours. To replace the element proceed as follows:

* Ensure the tank pressure is zero.

* Disconnect large hose from the fitting in service valve.

* Remove scavenge tube from tank cover.

* Remove (12) cover mounting screws.

* Remove cover and element.

* Remove any gasket material left on cover or tank.

NOTICE

Do not remove staples from the element/gasket connection.

*Install new element, with drain holes to the bottom, as marked on element.

*Reposition cover (use care not to damage gaskets).

*Replace cover mounting screws: tighten in a crisscross pattern to 600 lb–ft.

*Clean and replace scavenge tube. Reconnect large hose.

*Close service valve. Start unit and look for leaks.

LUBE PUMP OIL STRAINER

There is a special oil strainer located near the inlet of the oil pump on this high–pressure airend.

The 40–mesh screen element should be removed from the strainer and cleaned every 500 hours of compressor operation, which is the same recommended interval for servicing the compressor oil filter element. Failure to clean the strainer element could cause damage to the strainer element, oil pump, and/or airend. The strainer element should be replaced if it cannot be cleaned thoroughly or is damaged.

SCAVENGER LINE

The scavenger line originates at the receiver–separator tank cover and terminates at the compressor. Once a year or every 2000 hours of operation, whichever comes first, remove this line, thoroughly clean, then re–assemble.

NOTE

Excessive oil carry–over may be caused by an oil–logged separator element. Do not replace element without first performing the following maintenance procedure:

1. Check oil level. Maintain as indicated earlier in this section.
2. Thoroughly clean scavenger line.
3. Assure minimum pressure valve has proper setting.
4. Run unit at rated operating pressure for 30 to 40 minutes to permit element to clear itself.

EXTERIOR FINISH CARE

This unit was painted at the factory with a high quality acrylic modified alkyd enamel. The following care will ensure the longest possible life from this finish.

1. Allow 30 days, if possible, before washing with anything but clean water. If necessary to remove dust, pollen, etc. from housing, rinse off with only a hose. Do not scrub with a rough cloth, pad. etc.

2. Do not use strong solvents or harsh abrasive cleaners to remove road film or tar. Use only mild tar removers or mild household detergents or detergents especially for automotive finishes.

3. If necessary to remove oxidized pigment and restore the gloss, do not use coarse rubbing compound. Use any automotive polish or wax.

WARNING

- Any unauthorized modification or failure to maintain this equipment may make it unsafe and out of factory warranty.
- If performing more than visual inspections, disconnect battery cables and open manual blowdown valve.
- Never operate this machine with any guards removed.

CAUTION

- Use extreme care to avoid contacting hot surfaces (engine exhaust manifold and piping, air receiver and air discharge piping, etc.).
- Inch and metric hardware was used in the design and assembly of this unit. Consult the parts manual for clarification of usage.

PREVENTIVE MAINTENANCE SCHEDULE

If operating in extreme environments (very hot, cold, dusty or wet), these time periods should be reduced.

	Daily	Wkly	MO.	3 MO. 500 HRS	6 MO. 1000 HRS	12 MO. 2000 HRS
Compressor Oil Level	C					
Engine Oil Level	C					
*Radiator Coolant Level	C					
Gauges/Lamps	C					
*Air Cleaner Service Indicators	C					
Fuel tank (Fill At End of Day)	C				DRAIN	
*Fuel/Water Separator Drain	C					
Air Cleaner Precleaner Dumps		C				
Fan/Alternator Belts		C				
Battery Connections/Electrolyte		C				
*Tire Pressure and Surface		C				
*Wheel Lug Nuts			C			
Hoses (Oil, Air, Intake, Etc.)			C			
Automatic Shutdown System Test			C			
Air Cleaner System Visual			C			
Compressor Oil Cooler Exterior			C	CLEAN		
*Engine Radiator Exterior			C	CLEAN		
Fasteners, Guards				C		
Air Cleaner Elements				WI		
*Fuel/Water Separator Element					R	
Compressor Oil Filter Element				R		
Compressor Oil					R	
*Wheels (Bearings, Seals, etc.)					C	
*Engine Coolant Test					C	R
Shutdown Switch Settings Test						C
Scavenger Orifice & Related Parts						CLEAN
Oil Separator Element						R
*Brake Fluid/Lines;Pintle Eye Bolts	Before Towing					
*Brake Shoes/Actuator					C	
Engine (Oil Changes, Filters, Etc.)	REFER TO ENGINE OPERATOR'S MANUAL					

*Disregard if not appropriate for this particular machine. R=Replace
C=Check (and adjust or replace if necessary). WI=OR when Indicated.

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Special: If operating in high humidity or high ambients, drain condensate from receiver tank daily. Clean element in strainer (near compressor oil pump) every 500 hours of operation.

Notes

SECTION 5 – LUBRICATION

Contents

GENERAL INFORMATION

Lubrication is an essential part of preventive maintenance, affecting to a great extent the useful life of the unit. Different lubricants are needed and some components in the unit require more frequent lubrication than others. Therefore, it is important that the instructions regarding types of lubricants and the frequency of their application be explicitly followed. Periodic lubrication of the moving parts reduces to a minimum the possibility of mechanical failures.

The lubrication chart on page 5–2 shows those items requiring regular service and the interval in which they should be performed. A regular service program should be developed to include all items and fluids. These intervals are based on average operating conditions. In the event of extremely severe (hot, cold, dusty or wet) operating conditions, more frequent lubrication than specified may be necessary. Details concerning lubrication of the running gear are in Section 4 – Maintenance.

All filters and filter elements for air and compressor lubricant must be obtained through Ingersoll–Rand to assure the proper size and filtration for the compressor.

COMPRESSOR OIL CHANGE

These units are normally furnished with an initial supply of oil sufficient to allow operation of the unit for approximately 1000 hours; however, if a unit has been completely drained of all oil, it must be refilled with new oil before it is placed in operation. Refer to specifications in table on page 5–2.

NOTICE

Some oil types are incompatible when mixed and result in the formation of varnishes, shellacs, or lacquers which may be insoluble. Such deposits can cause serious troubles including clogging of the filters. Where possible, do not mix oils of different types and avoid mixing different brands. A type or brand change is best made at the time of a complete oil drain and refill.

If the unit has been operated for 1000 hours, it should be completely drained of oil. If the unit has been operated under adverse conditions, or after long periods in storage, an earlier change period may be necessary as oil deteriorates with time as well as by operating conditions.

Complete replacement of the old oil with clean new oil every 1000 operating hours (or every six months, whichever comes first), depending upon operating conditions, is not only desirable, but is good insurance against the accumulation of dirt, sludge, or oxidized oil products.

WARNING

High pressure air can cause severe injury or death from hot oil and flying parts. Always relieve pressure before removing caps, plugs, covers or other parts from pressurized air system. Ensure the following conditions are met:

– Discharge air pressure gauge reads zero (0).
– No air discharging from manual blowdown valve.

Completely drain the receiver– separator, piping, and oil cooler. If the oil is drained immediately after the unit has been run for some time, most of the sediment will be in suspension and, therefore, will drain more readily. However, the fluid will be hot and care must be taken to avoid contact with the skin or eyes.

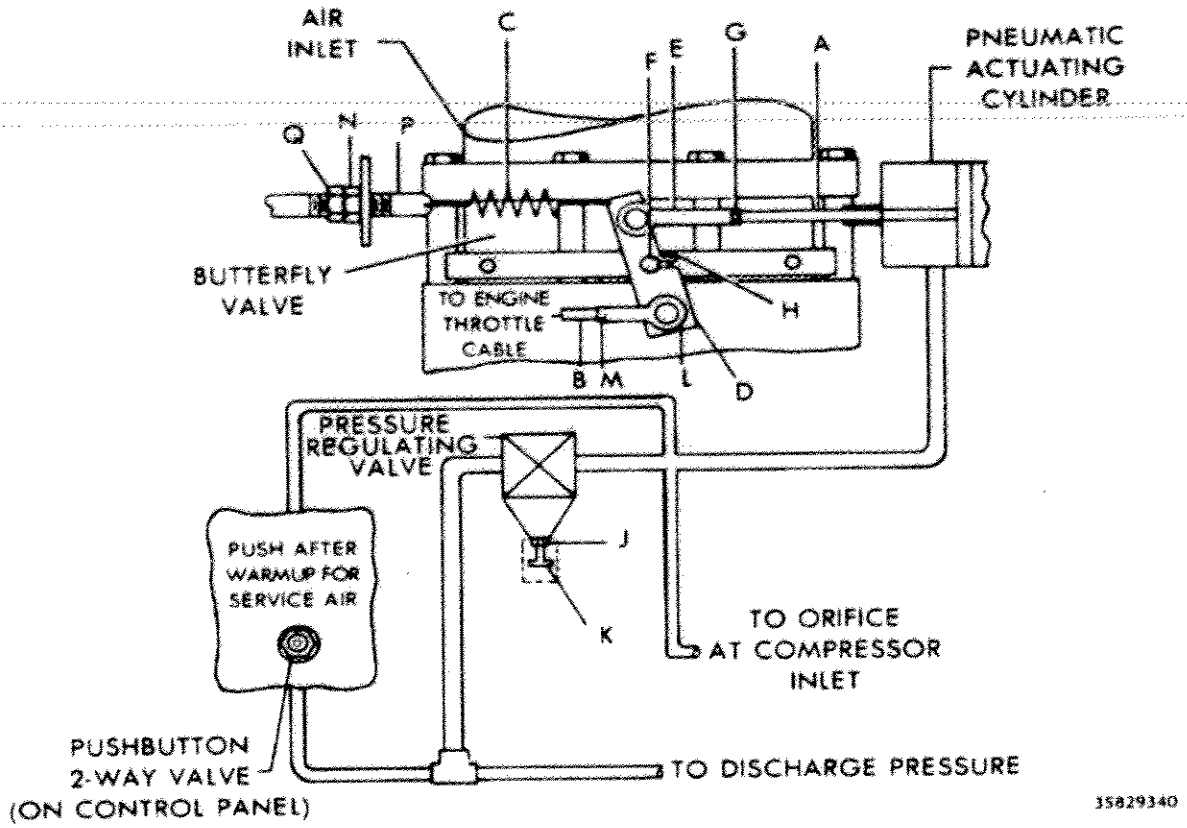
After the unit has been completely drained of all old oil, close the drain valve. Add oil in the specified quantity at the filler plug. Tighten the filler plug and run the machine to circulate the oil. Stop the unit and after a few minutes, check the level in sight window. If not near mid–way, make corrections. DO NOT OVERFILL.

FLUIDS AND LUBRICANTS TABLE

ITEM	FLUID	AMBIENT TEMP.	SPECIFICATION
Compressor Models: VHP–(200 + psi) HP–(150 psi) XP–(125 psi) P–(100 psi)	Airend Lubricant	–10°F to 125°F (–23°C to 52°C)	• Dexron ® or Dexron ® II ATF • MIL–L–46152 SAE 10W, API CC
		–40°F to 125°F (–40°C to 52°C)	• I–R P/N 35382472 Synthetic Fluid
XHP (300 psi)		–10°F to 125°F (–23°C to 52°C)	Dexron ® II ATF • I–R XHP 505 Synthetic or Equivalent
XHP (350 psi)		–10°F to 100°F (–23°C to 38°C) 70°F to 125°F (21°C to 52°C)	• I–R XHP 505 Synthetic or Equivalent • I–R XHP 1001 Synthetic or Equivalent
Engine:	• Oil • Coolant • Fuel	Refer to Engine Operator's Manual or Manufacturer's Representative	
Running Gear •Wheel Bearings •Other	Grease Grease	All All	MIL–G–10924 Multi–Purpose

DEXRON® – Reg. T.M. of General Motors Corp.

SECTION 6



ADJUSTING INSTRUCTIONS

Normally, regulation requires no adjusting, but if proper adjustment is lost, proceed as follows:

Before Starting Unit

1. With unit stopped, assure pneumatic actuating cylinder rod (A) is fully extended by adjusting engine throttle cable (B) NOTE: Engine governor must be at full speed position.

2. Disconnect ballast spring (C) from butterfly valve pivot lever (D).

3. Adjust rod end bearing (E) until butterfly valve pivot lever (D) moves approximately 30° past vertical toward engine side of butterfly valve shaft (F). Tighten locknuts (G) to protect adjustment.

4. Loosen screw (H) on butterfly valve pivot lever (D) and turn shaft (F) until scribed end of shaft is approximately 70° above the horizontal.

5. Tighten screw (H). Rotate butterfly valve open and closed several times to assure that linkages are not binding.

After Starting Unit

6. Allow unit to warm up, then push "Service Air" button (2–way valve) on control panel .

7. Adjust service valve to obtain 300 psi (21.1 kgf per cm2) on the discharge pressure gauge. NOTE: Pneumatic cylinder must be fully extended and discharge pressure at 300 psi (21.1 kgf per cm2) during steps 8 and 9. If this pressure cannot be obtained without pneumatic cylinder beginning to retract, loosen pressure regulator locknut (J) and adjust adjusting screw (K) "in" until 300 psi (21.1 kgf per cm2) can be maintained with pneumatic cylinder rod fully extended.

8. Adjust regulator adjusting screw (K) "in" an additional revolution. Adjust engine throttle cable (B) to obtain full load engine speed at 300 psi (21.1 kgf per cm2). Throttle cable adjustment can be made by screwing rod end bearing (L) "in" for increased speed and "out" for lower speed. Screw locknut (M) against rod end to protect adjustment.

9. When full load engine speed is attained, readjust pressure adjusting screw (K) "out" until pneumatic cylinder just begins to retract while still maintaining 300 psi (21.1 kgf per cm2). This adjustment is important to limit regulation range. Tighten locknut (J) to protect adjustment.

10. Close service valve. Engine will slow to idle speed and butterfly valve will close. Observe idle speed, then shut unit down.

11. Adjust butterfly valve opening to change idle speed by first loosening screw (H) and then adjusting butterfly valve shaft (F). Open butterfly valve to reduce idle speed and close it to increase idle speed. Retighten screw (H). Restart unit and, after warm–up, push "Service Air" button. Recheck idle speed and repeat step, if necessary. NOTE: Idle speed should not be adjusted unless unit is fully warmed up.

WARNING

Do not attempt to adjust idle speed while engine is running, as personal injury may result.

12. Connect ballast spring (C) to butterfly valve pivot lever (D). Adjust spring using nut (N) on threaded rod (P) to assure there is no tension on spring when unit is operating at full load condition.

13. Slowly open service valve. If engine speed does not stabilize, increase tension on ballast spring (C). After speed stabilizes, lock adjustment with locknut (Q).

14. To select any pressure range between 150 psi and unit's rated pressure, change adjustment of screw (K) to obtain desired discharge pressure at full load engine speed. Always lock and protect pressure setting of adjustment screw (K).

SECTION 7 – TROUBLE SHOOTING

Contents

INTRODUCTION

Trouble shooting for a portable air compressor is an organized study of a particular problem or series of problems and a planned method of procedure for investigation and correction. The trouble shooting chart that follows includes some of the problems that an operator may encounter during the operation of a portable compressor.

The chart does not attempt to list all of the troubles that may occur, nor does it attempt to give all of the answers for correction of the problems. The chart does give those problems that are most apt to occur. To use the trouble shooting chart:

A. Find the "complaint" in the top horizontal line.

B. Follow down that column to find the potential cause or causes. The numbers (1,2,3 etc.) suggest an order to follow in trouble shooting.

C. A reference for most causes is indicated in the extreme right column and the footnotes. For example, "M" stands for Maintenance – Section 4 in this manual.

ACTION PLAN

A. Think Before Acting

Study the problem thoroughly and ask yourself these questions:

(1) What were the warning signals that preceded the trouble?
(2) Has a similar trouble occurred before?
(3) What previous maintenance work has been done?
(4) If the compressor will still operate, is it safe to continue operating it to make further checks?

B. Do The Simplest Things First

Most troubles are simple and easily corrected. For example, most complaints are "low capacity" which may be caused by too low an engine speed or "compressor over– heats" which may be caused by low oil level.

Always check the easiest and most obvious things first; following this simple rule will save time and trouble.

Note: For trouble shooting electrical problems, refer to the Wiring Diagram Schematic found in Section 9 – Parts List.

C. Double Check Before Disassembly

The source of most compressor troubles can be traced not to one component alone, but to the relationship of one component with another. Too often, a compressor can be partially disassembled in search of the cause of a certain trouble and all evidence is destroyed during disassembly. Check again to be sure an easy solution to the problem has not been overlooked.

D. Find And Correct Basic Cause

After a mechanical failure has been corrected, be sure to locate and correct the cause of the trouble so the same failure will not be repeated. A complaint of "premature breakdown" may be corrected by repairing any improper wiring connections, but something caused the defective wiring. The cause may be excessive vibration.

TROUBLE SHOOTING I-R PORTABLE COMPRESSOR

Numbers (1, 2, 3, Etc.) Suggest Order To Follow In Trouble Shooting

CAUSE \ COMPLAINT	Short Air Cleaner Life	Excessive Oil In Air	Oil Seal Leak	Oil In Air Cleaner	Excessive Comp. Oil Temperature	Engine RPM Drops	Will Not Unload	Safety Valve Releases	Low CFM	Unit Shutdown	Unit Fails To Shutdown	Excessive Vibration	Won't Start/Run	Alternator Lamp Stays On	Alternator Lamp Stays Off	Low Water Lamp Stays On	Low Water Lamp Stays Off	Engine Water Temp. Too High	Engine Oil Pressure Too Low	REFER TO SECTION*
Dirty Operating Conditions	1		1		7				4									4		M
Wrong Air Filter Element	6					8			13											P
Defective Service Indicator	3																			P
Inadequate Element Cleaning	2								4											M
High Oil Level		1																		M
Out Of Level > 15°		2			3													6	3	O
Clogged Scavenge Orifice		3																		M
Defective Separator Element		8				9		7	12											P
Scavenge Tube Blocked		4																		M
Defective Scavenge Check Valve		5																		M
Defective Minimum Pressure Valve		7			15				11											P
Contaminated Lube Oil			2																	M
Malfunctioning Seal			6																	P
Scored Shaft			7																	P
Malfunctioning Inlet Unloader	5			3			5	6	9											P
Incorrect Stopping Procedure	4			1																O
Dirty Cooler					6													5		M
Low Oil Level					4														2	M
Clogged Oil Filter Elements					8														5	M
Wrong Lube Oil			3		5														4	L
Malfunctioning Thermostat					13													11		P
Defective Oil Cooler Relief Valve					14															P
Recirculation Of Cooling Air					11													10		RA
Operating Pressure Too High			5		10	2		1	8									8		O A
Loose Or Broken Belts					9							1		1				7		M P
Blocked Or Restricted Oil Lines			4		16														6	—
Incorrect Linkage Adjustment						5			5											A
Clogged Fuel Filters						1							5							EM
Incorrect Pressure Regulator Adjustment						3	3	3	6											A
Ruptured Inlet Unloader Diaphragm				2			2	5												P
Defective Discharge Air Temp. Switch										7	1		11							P/M
Defective Engine Water Temp. Switch										8	2		12							P/M
Defective Engine Oil Pressure Switch										9	3		13							P/M
Defective Shutdown Solenoid										10	4		14							P/M
Malfunctioning Relay										11	5		15							P/M
Loose Wire Connection										6			10	2	2		3			W P
Defective Master Off-On Switch										12	6		16		3		2			P
Blown Fuse										1			3							P
Low Battery Voltage													2	3						—
Malfunctioning Start Switch													4							P
Defective Safety Bypass Switch											7		17							P
<16 Volts At Shutdown Solenoid										13			1							—
Malfunctioning Alternator														4						P
Bulb Burnt Out															1		1			P
Low Water Level																1		3		M
Malfunctioning Probe																3	5			P
Malfunctioning Circuit Module																2	4			P
Ambient Temp. >125°F (52°C)					2													2		RA
Ice In Regulation Lines/Orifice						10	6	8	14											RA
Sep. Tank Blown Down Too Quickly		6																		O
Malfunctioning Gauge					1													1	1	P
Dirty Air Filter						6			1											M
Malfunctioning Pressure Regulator						4	4	4	7						1					P
Malfunctioning Air Cylinder						7			10											P
Leaks In Regulator Piping							1	2	2											—
Compressor Oil Temp. Too High										3			7							TC
Engine Water Temp. Too High										4			8							TC
Engine Oil Pressure Too Low										5			9							TC
Out Of Fuel										2			6							—
Malfunctioning Fan					12							3						9		P
Rubber Mounts Damaged												2								P
Engine Malfunctioning						11				14		5	18					12	7	EM
Drive Coupling Defective												4								P
Airend Malfunctioning					17	12						6	19							P
Defective Safety Valve								9												P

*M – Maintenance (4)　O – Operating (3)　RA – Review Application　EM – Engine Manual　TC – Trouble Complaint
P – Parts (9)　L – Lubrication (5)　A – Adjustments (6)　W – Wiring Diagram (9)

SECTION 8 – PARTS ORDERING INFORMATION

GENERAL

This publication, which contains an illustrated parts breakdown, has been prepared as an aid in locating those parts which may be required in the maintenance of the unit. All of the compressor parts, listed in the parts breakdown, are manufactured with the same precision as the original equipment. For the greatest protection always insist on genuine Ingersoll–Rand Company parts for your compressor.

NOTICE

Ingersoll–Rand Company can bear no responsibility for injury or damages resulting directly from the use of non–approved repair parts.

Ingersoll–Rand Company service facilities and parts are available worldwide. There are Ingersoll– Rand Company Construction Equipment Group Sales Offices and authorized distributors located in the principal cities of the United States. In Canada our customers are serviced by the Canadian Ingersoll–Rand Company, Limited. There are also Ingersoll–Rand International autonomous companies and authorized distributors located in the principal cities throughout the free world.

Special order parts may not be included in this manual. Contact the Mocksville Parts Department with the unit serial number for assistance with these special parts.

All parts orders pertaining to your engine should be referred to your particular engine manufacturer's authorized distributor or dealer.

DESCRIPTION

The illustrated parts breakdown illustrates and lists the various assemblies, subassemblies and detailed parts which make up this particular machine. This covers the standard models and the more popular options that are available. A series of illustrations show each part distinctly and in location relative to the other parts in the assembly. The part number, the description of the part and the quantity of parts required are shown on each illustration or on adjacent page. The quantities specified are the number of parts used per one assembly and are not necessarily the total number of parts used in the machine. Where no quantity is specified the quantity is assumed to be one.

Each description of a part is based upon the "noun first" method, i.e., the identifying noun or item name is always the first part of the description. The noun name is generally followed by a single descriptive modifier. The descriptive modifier may be followed by words or abbreviations such as upper, lower, inner, outer, front, rear, RH, LH, etc. when they are essential.

In referring to the rear, the front or to either side of the unit, always consider the **drawbar end** of the unit as the **front.** Standing at the rear of the unit facing the drawbar (front) will determine the right and left sides.

FASTENERS

Both SAE/inch and ISO/metric hardware have been used in the design and assembly of these units. In the disassembly and reassembly of parts, extreme care must be taken to avoid damaging threads by the use of wrong fasteners. In order to clarify the proper usage and for exact replacement parts, all standard fasteners have been identified by part number, size and description. This will enable a customer to obtain fasteners locally rather than ordering from the factory. These parts are identified in tables that will be found at the rear of the parts illustrations. Any fastener that has not been identified by both part number and size is a specially engineered part that must be ordered by part number to obtain the exact replacement part. Refer to Section 10 – Common Fasteners.

MARKINGS AND DECALS

NOTICE

Do not paint over safety warnings or instructional decals. If safety warning decals become illegible, immediately order replacements from the factory.

Part numbers for sets of original–type exterior markings (IR logotype, etc.) and warnings/ instructional decals are listed on the index page of Section 9 – Parts List. Part numbers for original individual decals are shown within Section 9 – Parts List. These are available as long as a particular model is in production.

Afterwards, service sets of exterior decals and current production safety warning decals are available. Contact the Product Support Group at Mocksville for your particular needs and availability.

HOW TO USE PARTS LIST

a. Turn to Section 9 – Parts List.

b. Locate the area or system of the compressor in which the desired part is used and find illustration page number.

c. Locate the desired part on the illustration by visual identification and make note of part number and description.

HOW TO ORDER

The satisfactory ordering of parts by a purchaser is greatly dependent upon the proper use of all available information. By supplying your nearest sales office, autonomous company or authorized distributor, with complete information, you will enable them to fill your order correctly and to avoid any unnecessary delays.

In order that all avoidable errors may be eliminated, the following instructions are offered as a guide to the purchaser when ordering replacement parts:

a. Always specify the model number of the unit as shown on the general data decal attached to the unit.

b. Always specify the serial number of the unit. THIS IS IMPORTANT. The serial number of the unit will be found stamped on a plate attached to the unit. (The serial number on the unit is also permanently stamped in the metal of the frame side rail.)

c. Always specify the number of the parts list publication.

d. Always specify the quantity of parts required.

e. Always specify the part number, as well as the description of the part, or parts, exactly as it is given on the parts list illustration.

In the event parts are being returned to your nearest sales office, autonomous company or authorized distributor, for inspection or repair, it is important to include the serial number of the unit from which the parts were removed.

TERMS AND CONDITIONS ON PARTS ORDERS

Acceptance: Acceptance of an offer is expressly limited to the exact terms contained herein. If purchaser's order form is used for acceptance of an offer, it is expressly understood and agreed that the terms and conditions of such order form shall not apply unless expressly agreed to by Ingersoll–Rand Company ("Company") in writing. No additional or contrary terms will be binding upon the Company unless expressly agreed to in writing.

Taxes: Any tax or other governmental charge now or hereafter levied upon the production, sale, use or shipment of material and equipment ordered or sold is not included in the Company's price and will be charged to and paid for by the Purchaser.

Delivery: Shipping dates are approximate. The Company will use best efforts to ship by the dates specified; however, the Company shall not be liable for any delay or failure in the estimated delivery or shipment of material and equipment or for any damages suffered by reason thereof.

Shipping dates shall be extended for delays due to acts of God, acts of Purchaser, acts of Government, fires, floods, strikes, riot, war, embargo, transportation shortages, delay or default on the part of the Company's vendors, or any other cause beyond the Company's reasonable control.

Should Purchaser request special shipping instruction, such as exclusive use of shipping facilities, including air freight when common carrier has been quoted and before change order to purchase order can be received by the Company, the additional charges will be honored by the Purchaser.

Warranty: The Company warrants that parts manufactured by it will be as specified and will be free from defects in materials and workmanship. The Company's liability under this warranty shall be limited to the repair or replacement of any part which was defective at the time of shipment provided Purchaser notifies the Company of any such defect promptly upon discovery, but in no event later than three (3) months from the date of shipment of such part by the Company. The only exception to the previous statement is the extended warranty as it applies to the special airend exchange program.

Repairs and replacements shall be made by the Company F.O.B. point of shipment. The Company shall not be responsible for costs of transportation, removal or installation.

Warranties applicable to material and equipment supplied by the Company but wholly manufactured by others shall be limited to the warranties extended to the Company by the manufacturer which are able to be conveyed to the Purchaser.

THE COMPANY MAKES NO OTHER WARRANTY OR REPRESENTATION OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED,
EXCEPT THAT OF TITLE, AND ALL IMPLIED WARRANTIES, INCLUDING ANY WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY DISCLAIMED.

Limitation of Liability:

The remedies of the Purchaser set forth herein are exclusive, and the total liability of the Company with respect to this order whether based on contract, warranty, negligence, indemnity, strict liability or otherwise, shall not exceed the purchase price of the part upon which such liability is based.

The Company shall in no event be liable to the Purchaser, any successors in interest or any beneficiary of this order for any consequential, incidental, indirect, special or punitive damages arising out of this order or any breach thereof, or any defect in, or failure of, or malfunction of the parts hereunder, whether based upon loss of use, lost profits or revenue, interest, lost goodwill, work stoppage, impairment of other goods, loss by reason of shutdown or non–operation, increased expenses of operation or claims of customers of Purchaser for service interruption whether or not such loss or damage is based on contract, warranty, negligence, indemnity, strict liability or otherwise.

AIREND EXCHANGE PROGRAM

Your Ingersoll–Rand Company Construction Equipment Group Sales Offices and authorized distributors as well as Ingersoll–Rand International autonomous companies and authorized distributors now have an airend exchange program to benefit portable compressor users.

On the airend exchange program the exchange price is determined by the age and condition of the airend and may be classified by one of the following categories.

Category "A": The airend must not be over two years old and must have reusable rotor housing(s) and rotor(s).

Category "B": The airend must be between two and five years old and returned with two or more reusable major castings.

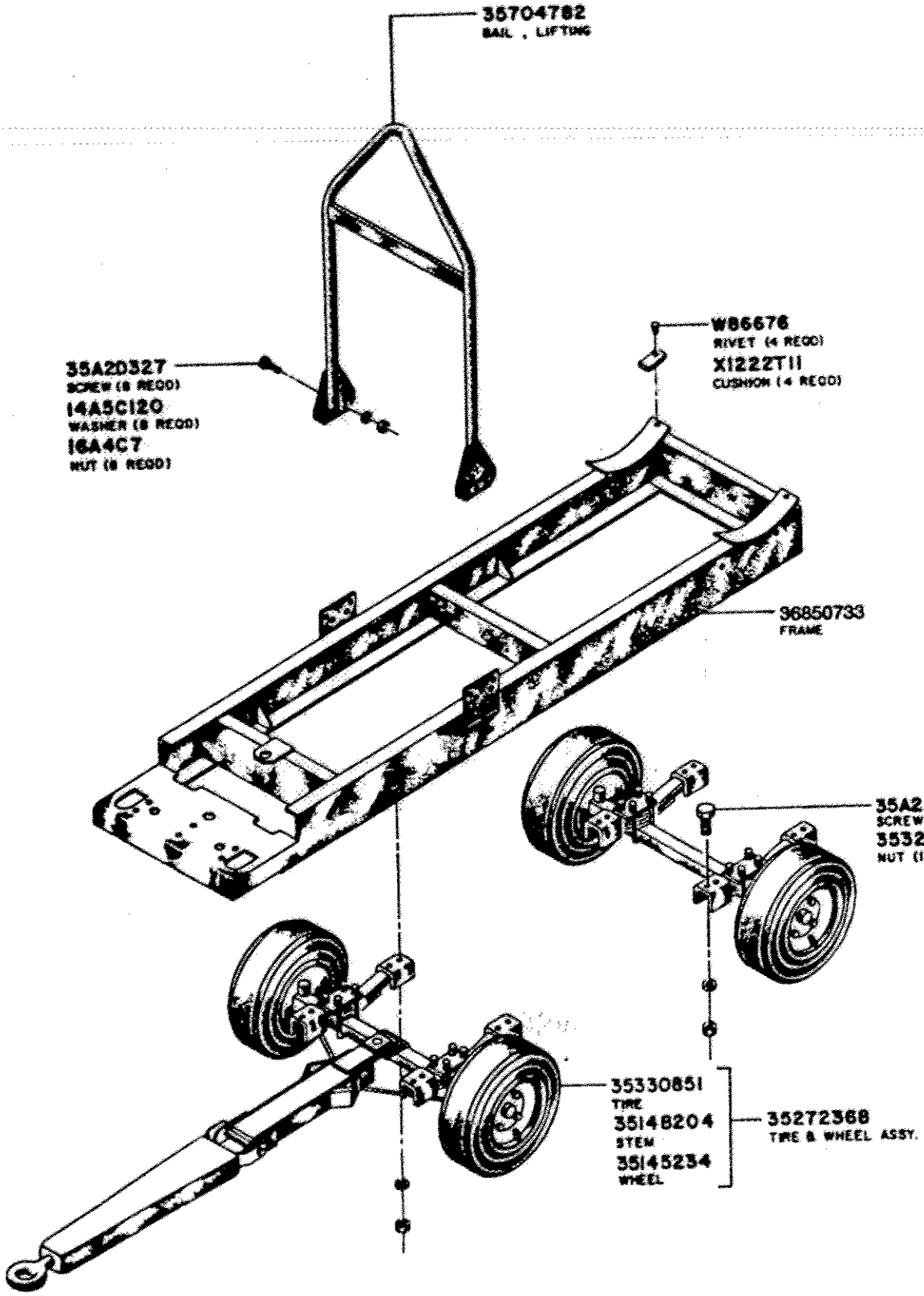
Category "C": The airend must be over five years old.

Your nearest sales office, autonomous company or authorized distributor must first contact the Parts Service Department at the factory at which your portable air compressor was manufactured for an airend exchange number. The airend must be tagged with this preassigned number and returned to the factory prepaid. The airend must be intact, with no excluded parts, otherwise the exchange agreement may be cancelled. The warranty on an exchange or factory rebuilt airend is 365 days.

NOTICE

Airends being returned to the factory in connection with a WARRANTY CLAIM must be processed through the Customer Service Department. If returned without a Warranty MRR (Material Return Request) Number, no warranty claim will be considered.

SECTION 9 – PARTS LIST



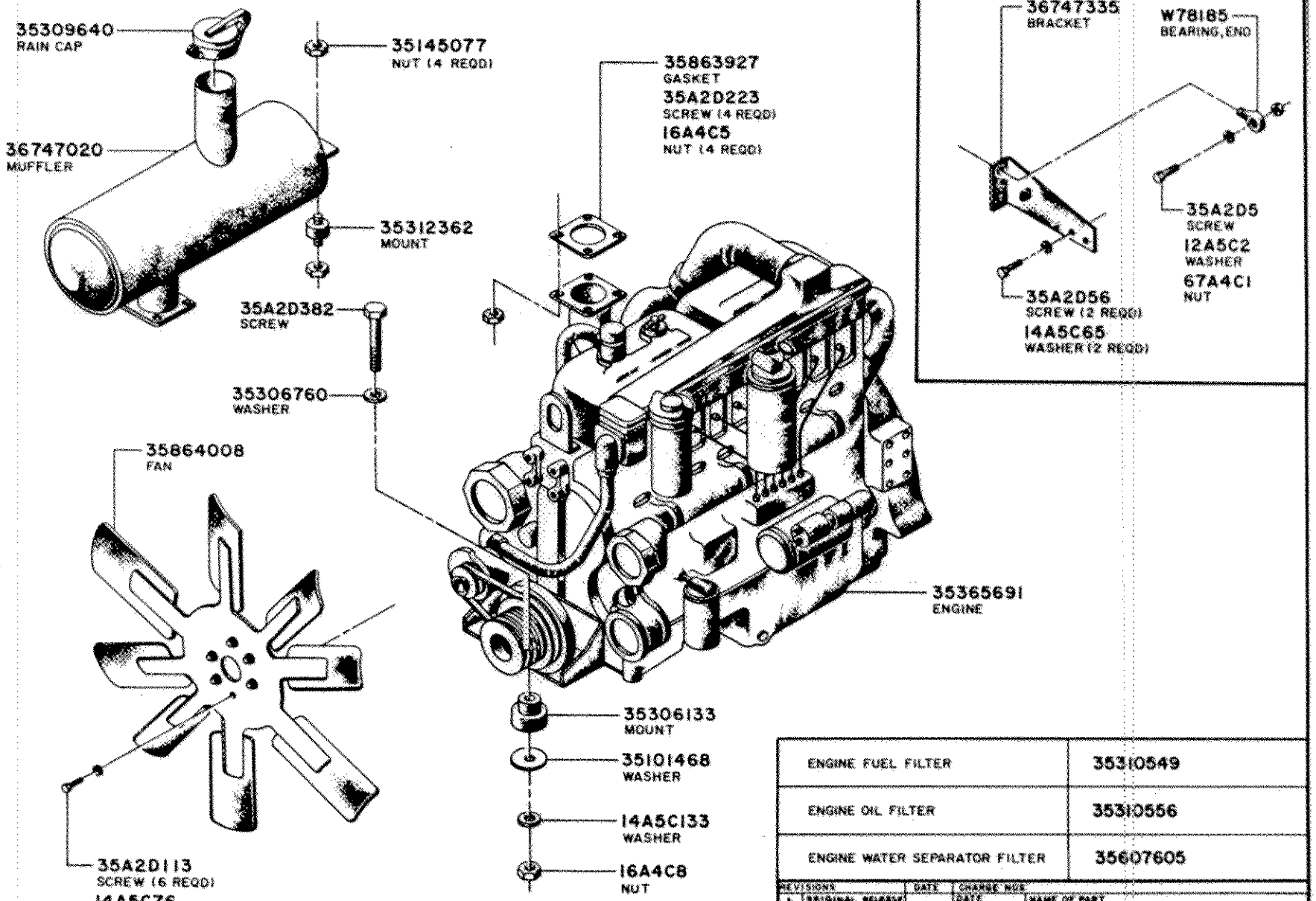
WORTHINGTON COMPANY

FRAME AND RUNNING GEAR

PORT NO. X15P-750-1-CAT

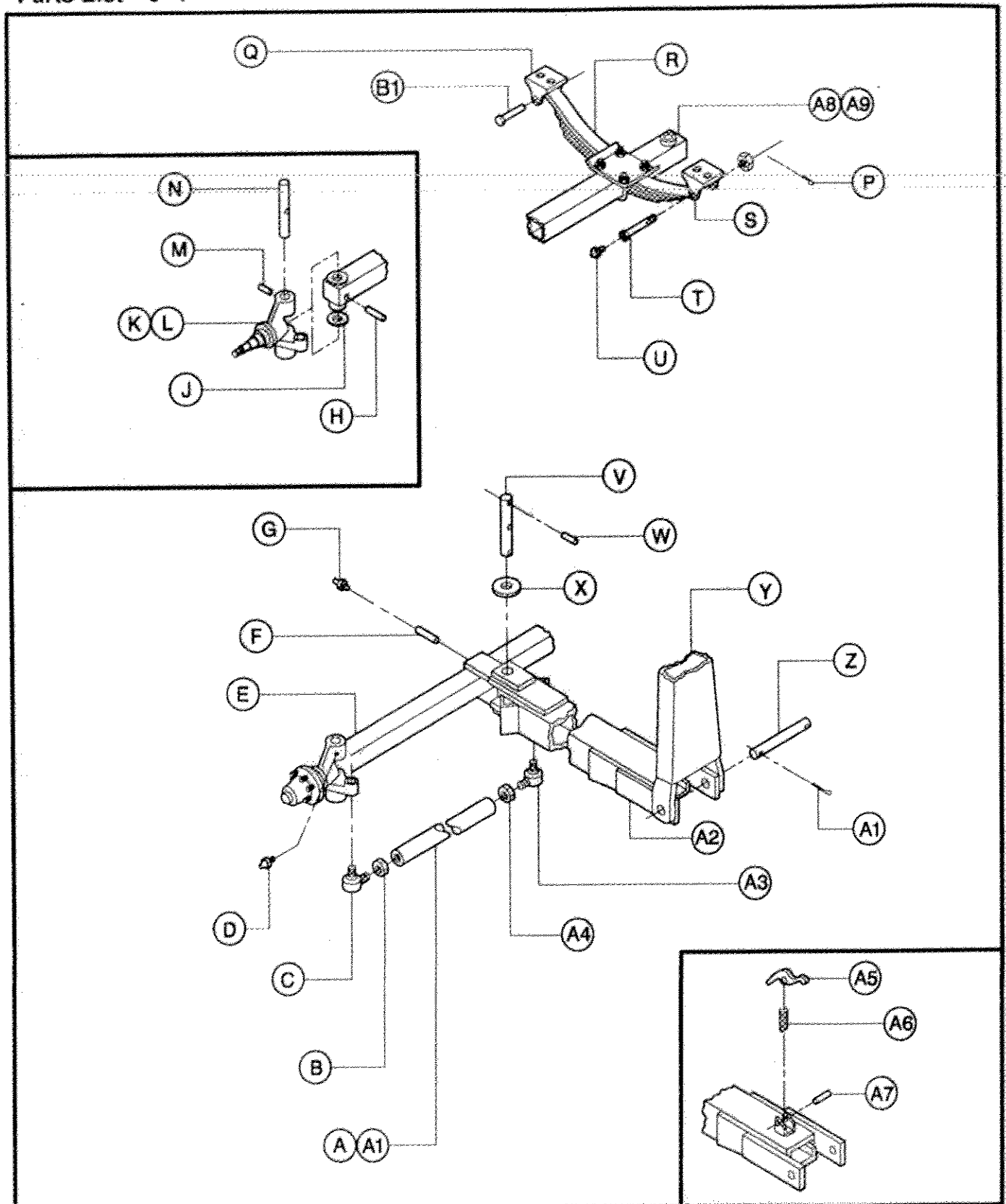
ASSEMBLY NO. 35864485

PART NO. 23771



ENGINE FUEL FILTER	35310549
ENGINE OIL FILTER	35310556
ENGINE WATER SEPARATOR FILTER	35607605

REVISIONS		DATE	CHANGE NUM.		
A	ORIGINAL RELEASE PER ECO 21993	4-28-86	DATE 5-30-86	NAME OF PART ENGINE ASSEMBLY	
B			NAME W. POOLE	INGERSOLL-RAND COMPANY	
C			E/C NO.	MODEL NO. XHP-750-S-CAT	DRAWING NO. 35864511
D					



CHK.	APPR.	REV.	DESCRIPTION	DATE
		A	ORIGINAL RELEASE PER E/C 27091 WAP	5 - 13 - 93
		B		
		C		
		D		

INGERSOLL - RAND COMPANY
PORTABLE COMPRESSOR DIVISION

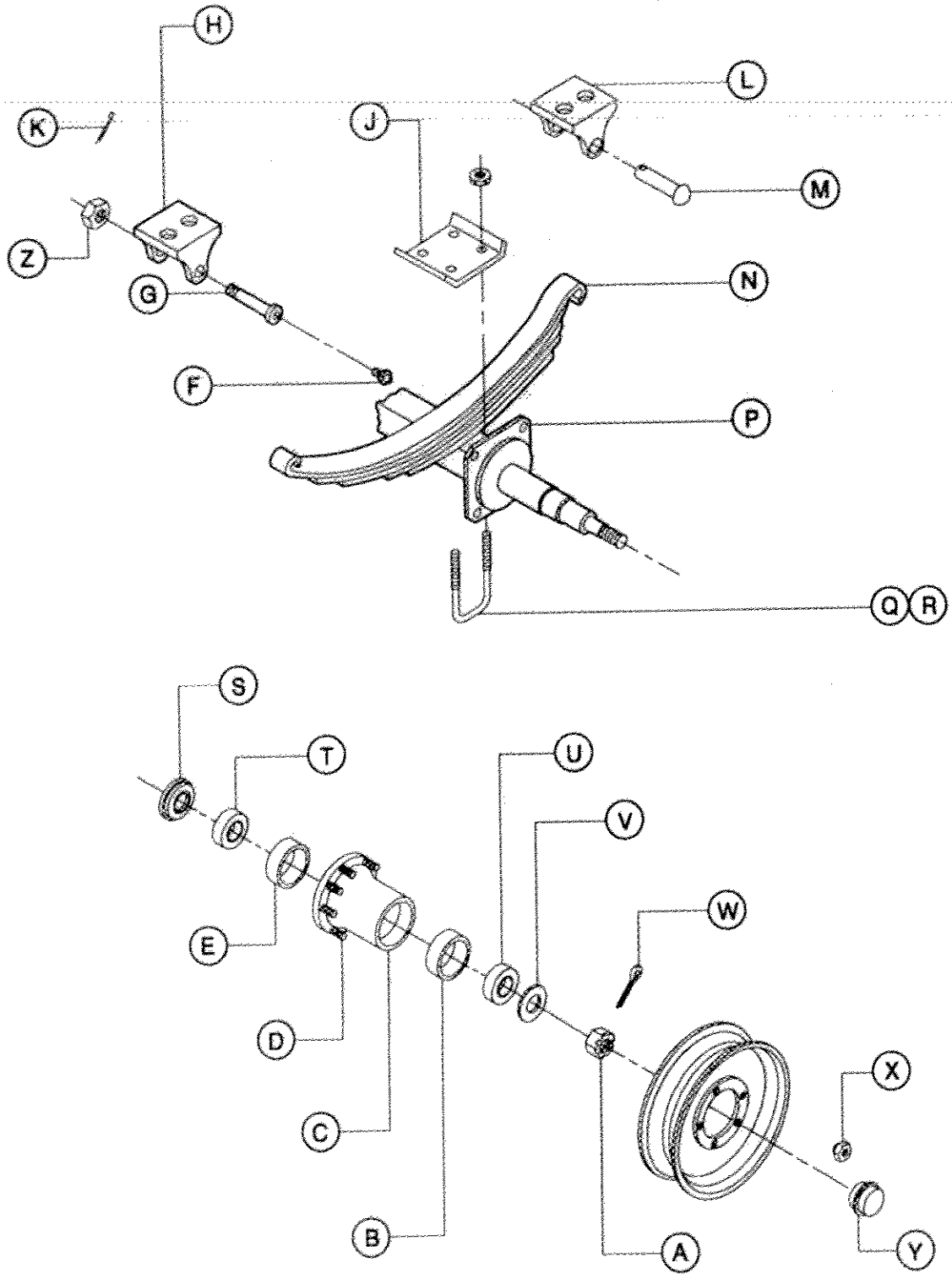
DESCRIPTION
FRONT AND REAR AXLE ASSEMBLY

MODEL NO.	ILLUSTRATION NO.	SHEET NO.	E/C
XHP750S	36521359	1 OF 4	27091

A	35324805	ROD , TIE	U	250A10X1613C	FITTING , LUBE
B	36140730	NUT , JAM	V	35324326	PIN , CENTER
C	35588961	BALL JOINT , OUTER	W	25A13C298	PIN , ROLL
D	W86707	FITTING , LUBE	X	12A5D13Z1	WASHER
E	35335488	AXLE , FRONT	Y	36719557	DRAWBAR
F	25A13C283	PIN , ROLL	Z	35107168	PIN , HINGE
G	W86707	FITTING , LUBE	A1	11A13C83E	PIN , COTTER
H	25A13C301	PIN , ROLL	A2	35324771	ARM , CENTER
J	95239927	WASHER	A3	35588953	BALLJOINT , INNER
K	36854982	L.H. KNUCKLE ASSEMBLY	A4	35140722	NUT , JAM
L	36854990	R.H. KNUCKLE ASSEMBLY	A5	36719219	LATCH
M	25A13C281	PIN , ROLL	A6	35141167	SPRING
N	35319045	PIN , KING	A7	25A13C332	PIN , ROLL
P	11A13C66E	PIN , COTTER	A8	36853851	FRONT AXLE ASSEMBLY
Q	36719169	BRACKET	A9	36853869	REAR AXLE ASSEMBLY
R	36720605	SPRING	B1	35588839	RIVET
S	36719177	BRACKET	B2	35324797	TIE ROD ASSEMBLY (INCLUDES A,B,C,G,A3,A4)
T	35359686	BOLT , SHACKLE	B3	35359694	NUT

INGERSOLL-RAND COMPANY PORTABLE COMPRESSOR DIVISION			
DESCRIPTION: FRONT AND REAR AXLE ASSEMBLY			
MODEL NO.	ILLUSTRATION NO.	SHEET NO.	E/C
XHP750S	36521359	2 OF 4	27091

REV.	DESCRIPTION	DATE	CHK.	APPR.
A	ORIGINAL RELEASE PER E/C 27091 WAP	5-13-93		
B				
C				
D				



CHK.	APPR.	REV.	DESCRIPTION	DATE
		A	ORIGINAL RELEASE PER E/O 27381 WAP	5-19-93
		B		
		C		
		D		

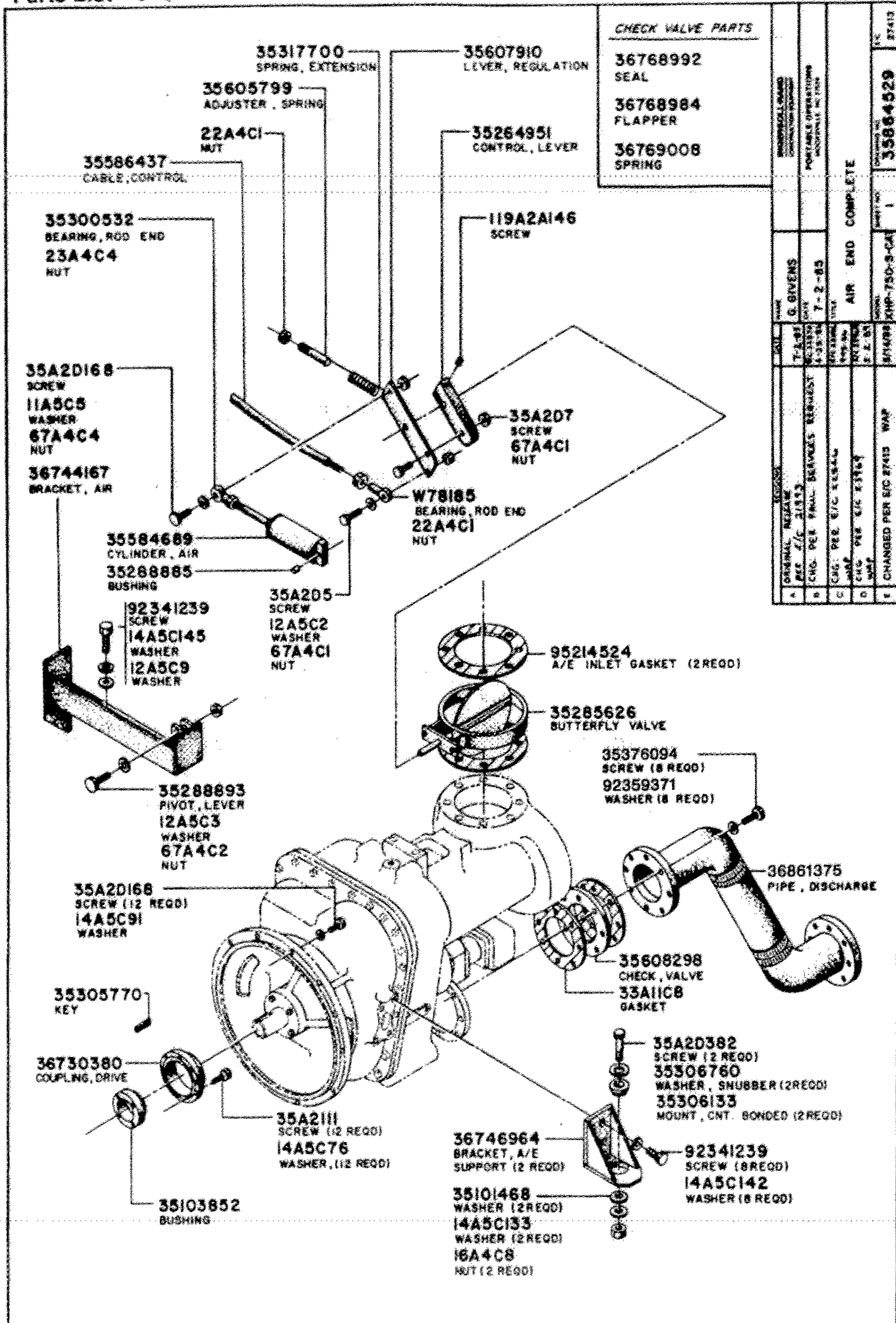
INGERSOLL - RAND COMPANY
PORTABLE COMPRESSOR DIVISION

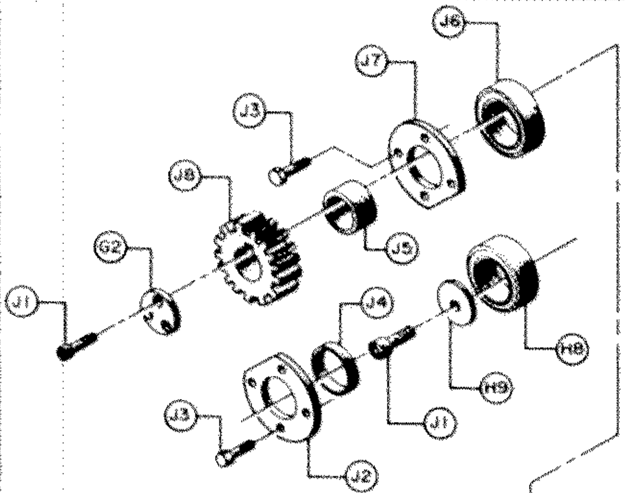
DESCRIPTION
FRONT AND REAR AXLE ASSEMBLY

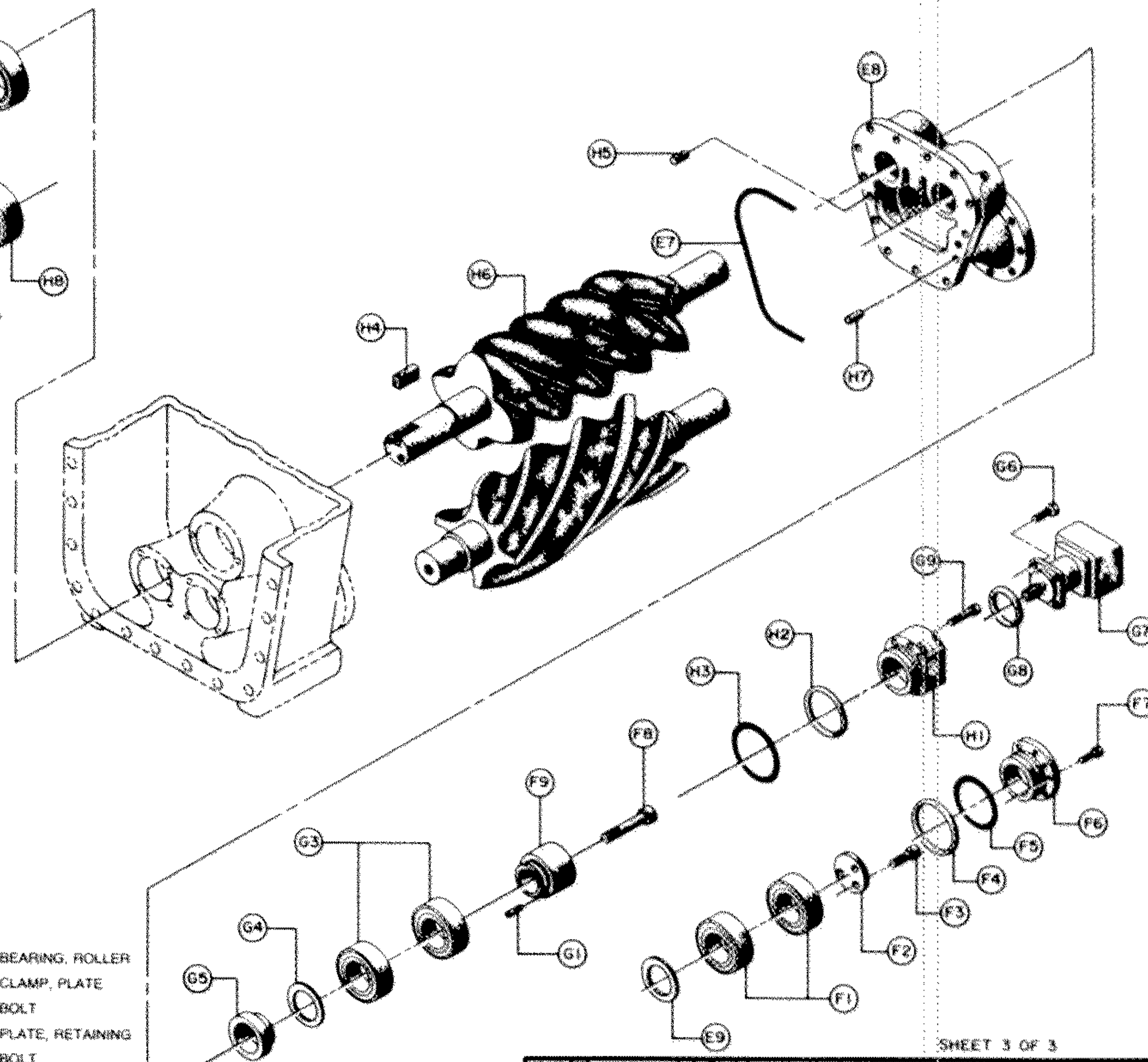
MODEL NO.	ILLUSTRATION NO.	SHEET NO.	E/O
XHP750S	36521359	3 OF 4	27091

A	36853091	NUT	P	36853216	AXLE , REAR
B	36851616	OUTER RACE	Q	35324391	U – BOLT
C	36853133	HUB ASSEMBLY (INCLUDES B,D,E)	R	35324409	NUT
D	35319698	STUD	S	36855054	SEAL
E	36855039	INNER RACE	T	36851590	BEARING
F	250A10X1613C	FITTING , LUBE	U	36855013	BEARING
G	35359686	BOLT	V	36855120	WASHER
H	36719177	BRACKET	W	11A13C413E	PIN , COTTER
J	35324417	PLATE , CLAMP	X	35319706	NUT
K	11A13C66E	PIN , COTTER	Y	36855062	CAP , GREASE
L	36719169	BRACKET	Z	35359694	NUT
M	35588839	RIVET	A1	36853158	KIT , WHEEL BEARING (INCLUDES S,T,U,X,Y)
N	36720605	SPRING	A2	36855112	KIT , SPINDLE NUT (INCLUDES A,V,W)

INGERSOLL – RAND COMPANY PORTABLE COMPRESSOR DIVISION				REV.	DESCRIPTION	DATE	CHK.	APPR.
DESCRIPTION FRONT AND REAR AXLE ASSEMBLY				A	ORIGINAL RELEASE PER E/C 27091 WAP	6 – 13 – 93		
				B				
				C				
MODEL NO. XHP750S	ILLUSTRATION NO. 36521359	SHEET NO. 4 OF 4	E/C 27091	D				


CHECK VALVE PARTS
36768992
SEAL
36768984
FLAPPER
36769008
SPRING
35317700
SPRING, EXTENSION
35607910
LEVER, REGULATION
35605799
ADJUSTER, SPRING
22A4C1
NUT
35264951
CONTROL, LEVER
35586437
CABLE, CONTROL
35300532
BEARING, ROD END
23A4C4
NUT
119A2A146
SCREW
35A2D168
SCREW
11A5C5
WASHER
67A4C4
NUT
36744167
BRACKET, AIR
35A2D7
SCREW
67A4C1
NUT
W78185
BEARING, ROD END
22A4C1
NUT
35584689
CYLINDER, AIR
35288885
BUSHING
35A2D5
SCREW
12A5C2
WASHER
67A4C1
NUT
92341239
SCREW
14A5C145
WASHER
12A5C9
WASHER
95214524
A/E INLET GASKET (2 REQD)
35285626
BUTTERFLY VALVE
35376094
SCREW (8 REQD)
92359371
WASHER (8 REQD)
35288893
PIVOT, LEVER
12A5C3
WASHER
67A4C2
NUT
36861375
PIPE, DISCHARGE
35A2D168
SCREW (12 REQD)
14A5C91
WASHER
35608298
CHECK, VALVE
33A11C8
GASKET
35305770
KEY
35A2D382
SCREW (2 REQD)
35306760
WASHER, SNUBBER (2 REQD)
35306133
MOUNT, CNT. BONDED (2 REQD)
36730380
COUPLING, DRIVE
35A2111
SCREW (12 REQD)
14A5C76
WASHER, (12 REQD)
36746964
BRACKET, A/E
SUPPORT (2 REQD)
92341239
SCREW (8 REQD)
14A5C142
WASHER (8 REQD)
35101468
WASHER (2 REQD)
14A5C133
WASHER (2 REQD)
16A4C8
NUT (2 REQD)
35103852
BUSHING
G. GIVENS
7-2-85
AIR END COMPLETE
XHP-750-3-CA
35864529





E7	35355791	O-RING
E8	36738128	HOUSING, REAR BEARING
E9	35355874	SHIM SET
F1	35600113	BEARING, TAPERED
F2	35355957	CLAMP, PLATE
F3	35311463	BOLT
F4	95026290	O-RING
F5	35355924	SHIM SET
F6	35856350	COVER, REAR BEARING
F7	35271188	BOLT
F8	35369438	BOLT
F9	35864644	COUPLING
G1	95069522	PIN, DOWEL
G2	35300193	CLAMP, PLATE
G3	35600113	BEARING, TAPERED
G4	35355874	SHIM SET
G5	35355940	PISTON, THRUST
G6	35272533	BOLT
G7	35366657	PUMP, OIL
G8	20A11EM155	O-RING
G9	39125000	BOLT
H1	36500734	COVER, BEARING
H2	95026290	O-RING
H3	35355916	SHIM SET
H4	35355817	KEY
H5	35336122	DOWEL
H6	35088954	ROTOR SET, 2nd STAGE
H7	35336130	DOWEL
H8	35600014	BEARING, ROLLER
H9	35300201	CLAMP, PLATE
J1	35311463	BOLT
J2	35355899	PLATE, RETAINING
J3	35273406	BOLT
J4	35355973	SPACER, BEARING
J5	35355866	SPACER
J6	35600022	BEARING, ROLLER
J7	35355965	PLATE, RETAINING

SHEET 3 OF 3

REVISIONS		DATE	CHANGE NOS	
A	ORIGINAL RELEASE	6-16-87	DATE 6-16-87	NAME OF PART AIR END ASSEMBLY
B	CHG. PER E/C 23054	9-11-87	NAME W.POOLE	INGERSOLL-RAND COMPANY
C	CHG. PER E/C 23244	3-8-88	E/C NO.	MODEL NO. HR-2
D	REVISE TEXT ERROR CORRECTION	7-13-88		DRAWING NO. 36505865

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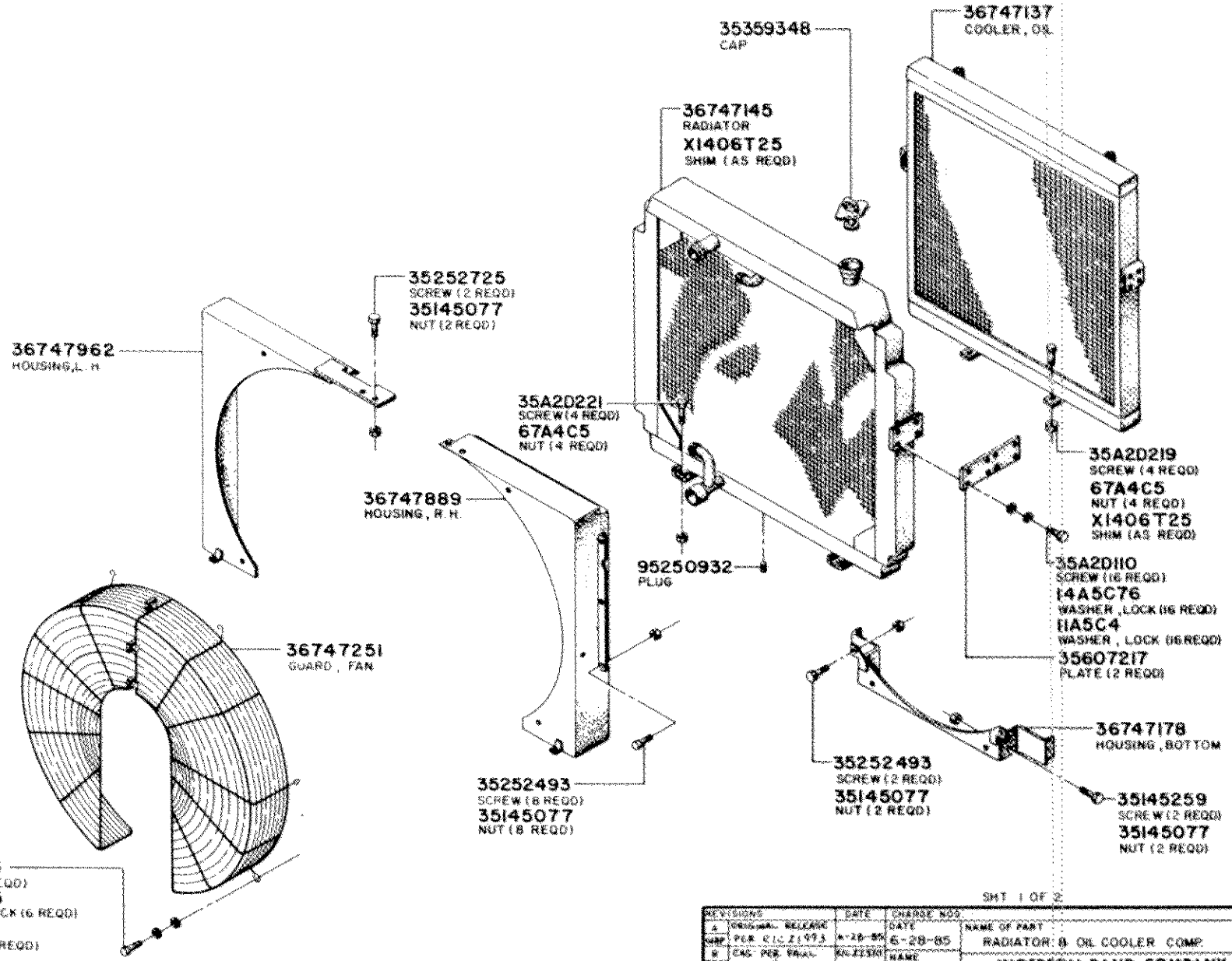
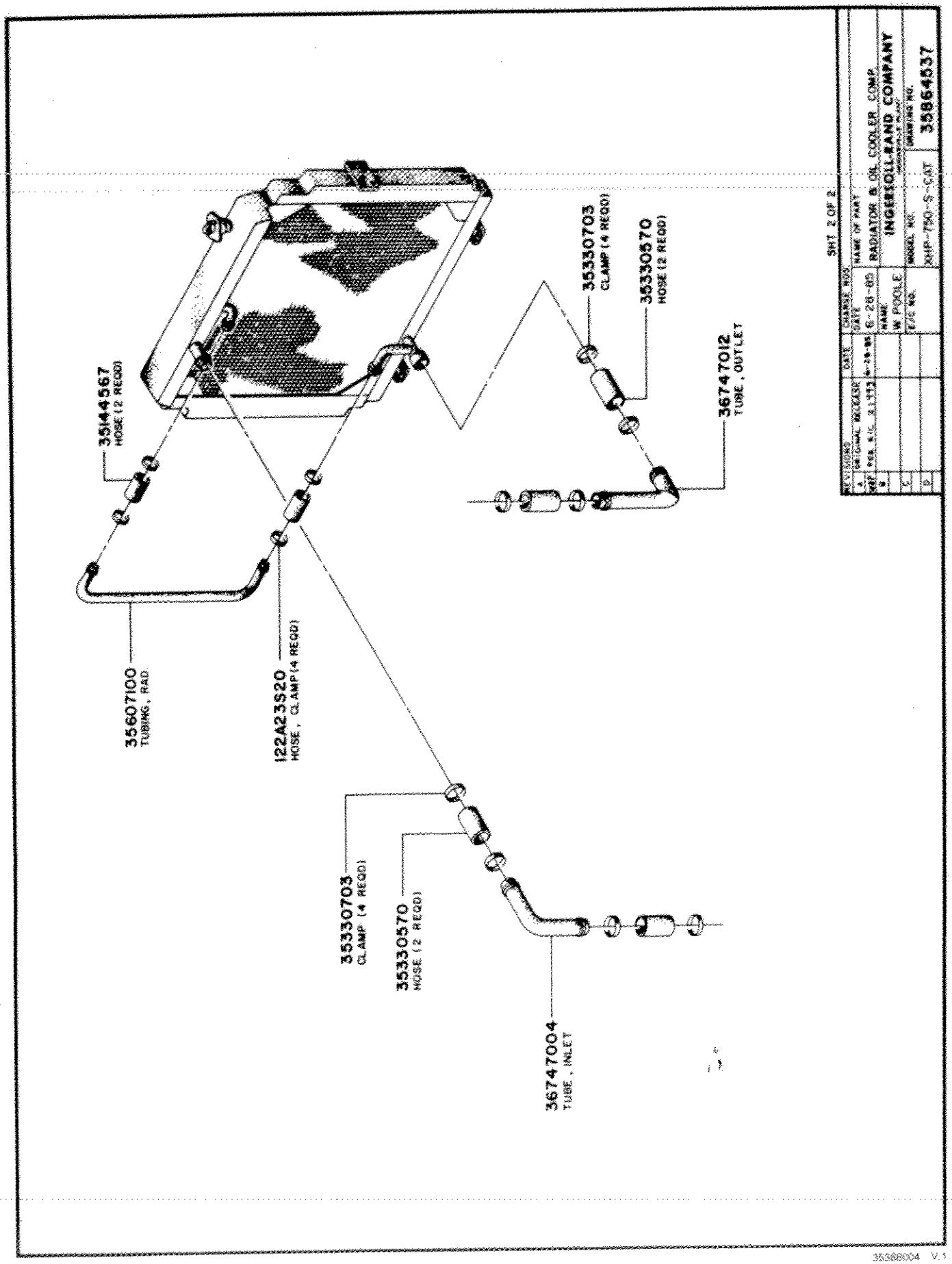
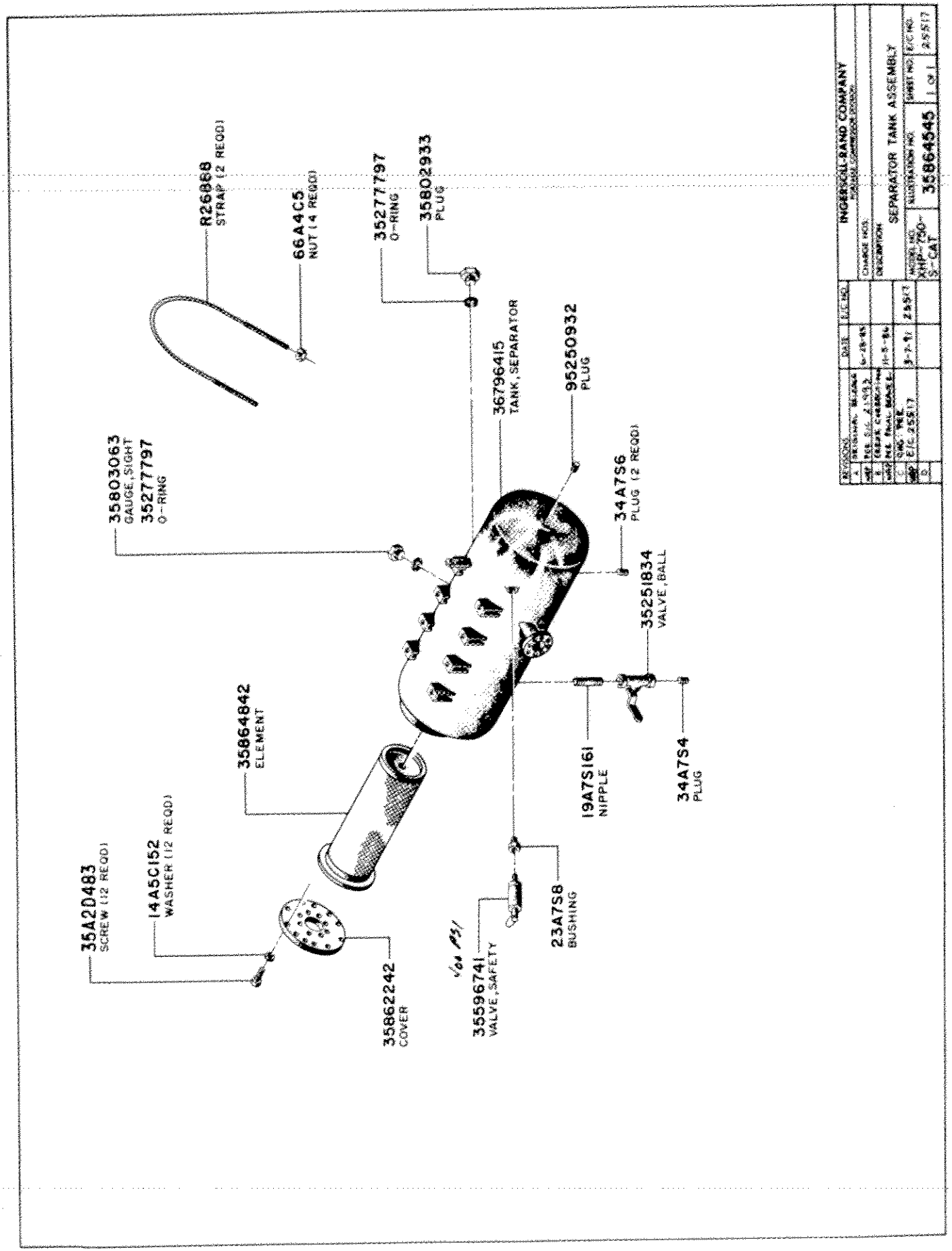


SHT 1 OF 2

REVISIONS		DATE	CHARGE NO.	
A	ORIGINAL RELEASE PER ECC 21993	4-26-85	DATE 6-28-85	NAME OF PART RADIATOR & OIL COOLER COMP.
B	CHG. PER FAIL. SUBJECT TO EXCHANGE	EC 22320 4-25-86	NAME W. POOLE	INGERSOLL-RAND COMPANY
C			E/C NO.	MODEL NO. XHP-750-5-CAT
D				DRAWING NO. 35864537


35144567
HOSE (2 REQD)
35607100
TUBING, RAD
122A23S20
HOSE, CLAMP (4 REQD)
35330703
CLAMP (4 REQD)
35330570
HOSE (2 REQD)
36747004
TUBE, INLET
35330703
CLAMP (4 REQD)
35330570
HOSE (2 REQD)
36747012
TUBE, OUTLET
SHT 2 OF 2
NAME OF PART
RADIATOR & OIL COOLER COMP.
INGERSOLL-RAND COMPANY
MODEL NO.
XHP-750-S-CAT
DRAWING NO.
35864537
6-28-85
W POOLE
35368004 V.1


R26868
STRAP (2 REQD)
66A4C5
NUT (4 REQD)
35277797
O-RING
35802933
PLUG
35803063
GAUGE, SIGHT
35277797
O-RING
36796415
TANK, SEPARATOR
95250932
PLUG
34A7S6
PLUG (2 REQD)
35251834
VALVE, BALL
35864842
ELEMENT
19A7S161
NIPPLE
34A7S4
PLUG
35A20483
SCREW (12 REQD)
14A5C152
WASHER (12 REQD)
23A7S8
BUSHING
35862242
COVER
35596741
VALVE, SAFETY
INGERSOLL-RAND COMPANY
SEPARATOR TANK ASSEMBLY
35864545

MINIMUM PRESSURE VALVE COMPLETE
PART NO. 35820901

INGERSOLL-RAND COMPANY
PORTABLE COMPRESSOR DIVISION

DESCRIPTION: MINIMUM PRESSURE VALVE ASSEMBLY
REFER TO PARTS LIST NO. 35057579
DATE: 3 8 82
ILLUSTRATION NO. 35830926
SHEET NO. 1 OF 1
Y/C

35273366
NUT

35272566
NUT, STEM

39125000
SCREW (6 REQD)

35576149
WHEEL

35575349
STEM

35585587
SPRING

35585579
COVER

35284678
SCREW

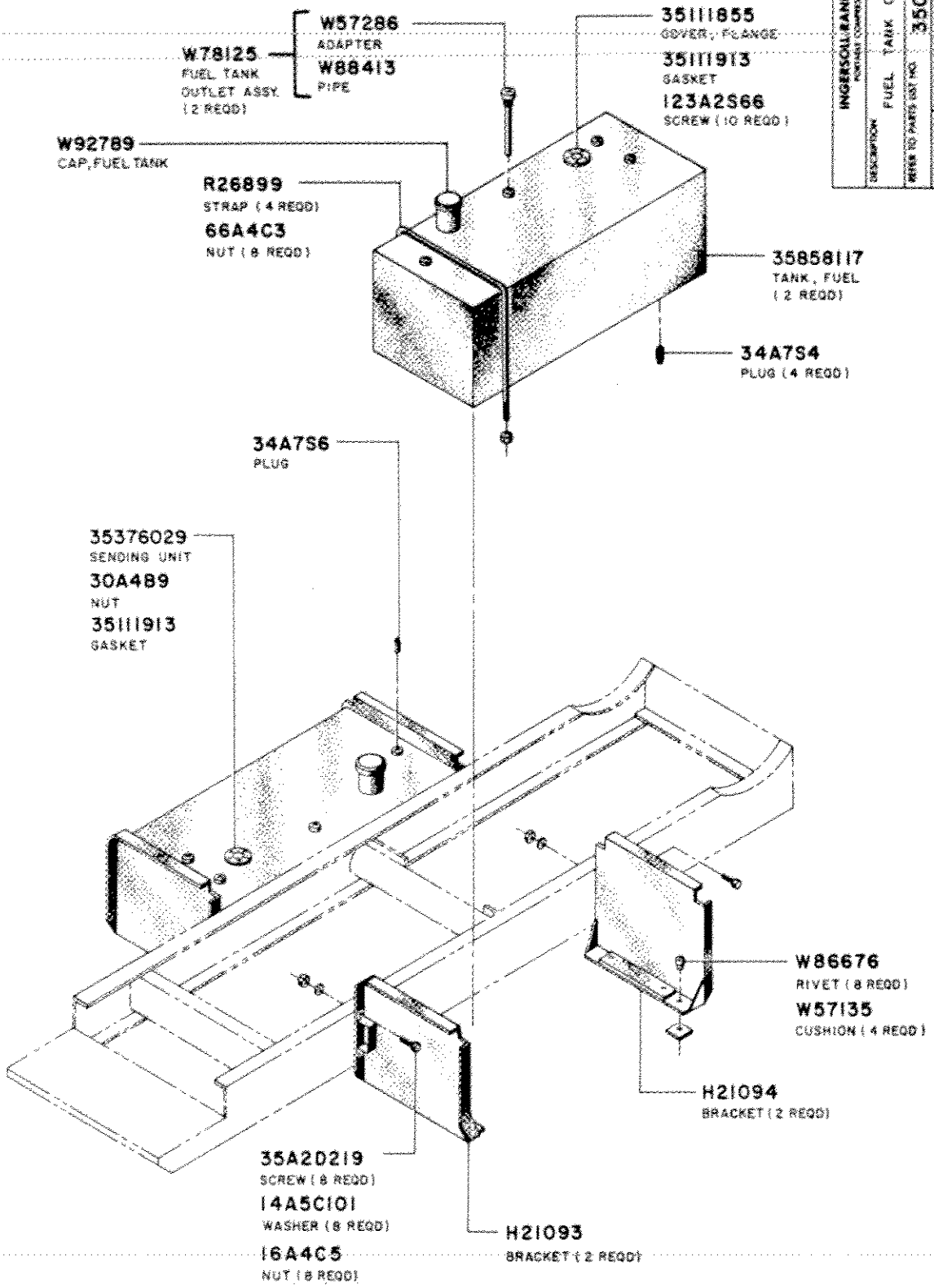
35305101
SPACER

20AIICM232
O-RING (2 REQD)

35575281
PISTON

36711653
BODY

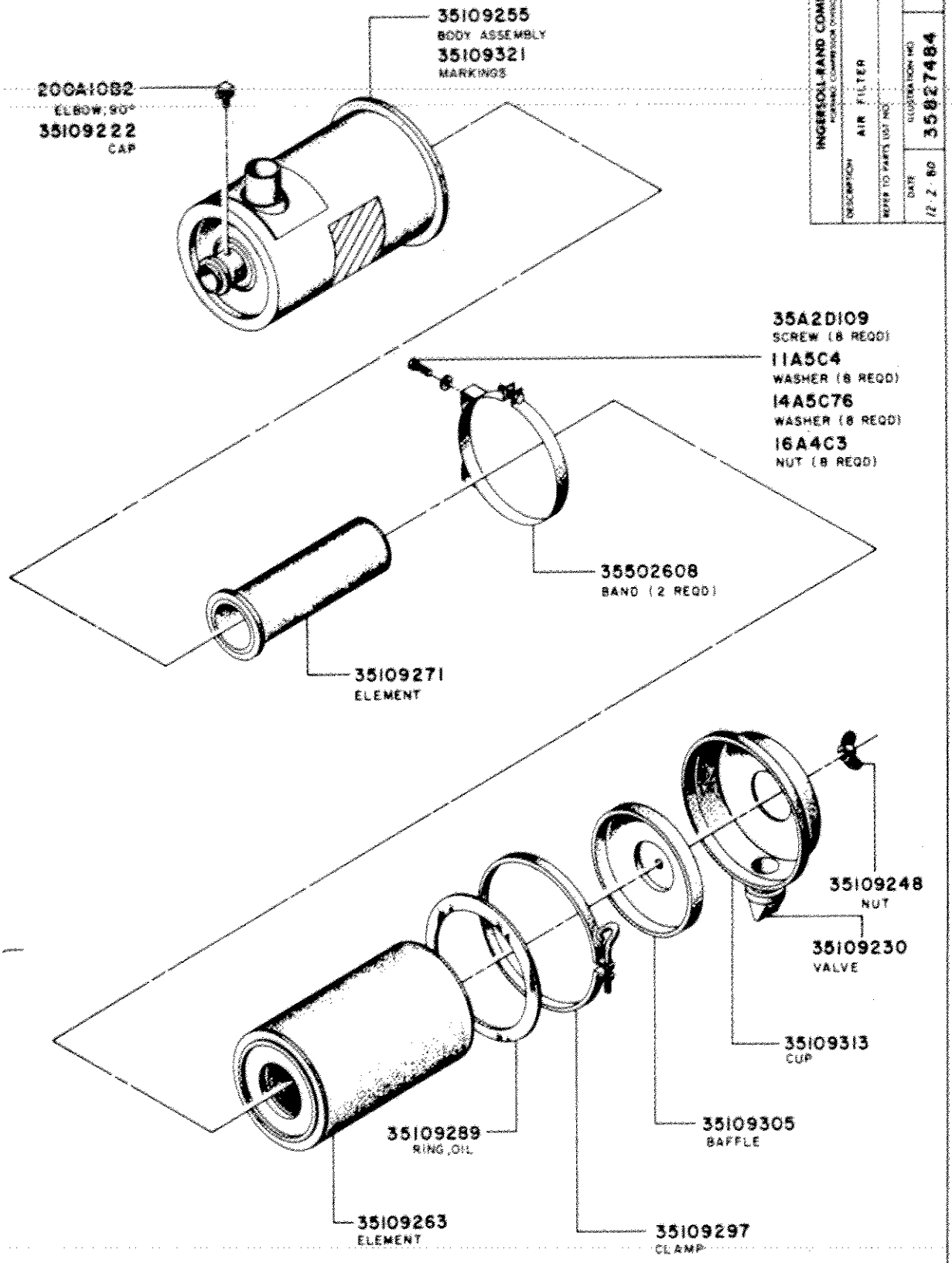
9


INGERSOLL-RAND COMPANY
PORTABLE COMPRESSOR DIVISION
DESCRIPTION
FUEL TANK COMPLETE
REFER TO PARTS LIST NO.
35057587
ILLUSTRATION NO.
35832955
SHEET NO.
1 OF 1
DATE
10-10-90
E/C
W57286
ADAPTER
W78125
FUEL TANK OUTLET ASSY. (2 REQD)
W88413
PIPE
35111855
COVER, FLANGE
35111913
GASKET
123A2S66
SCREW (10 REQD)
W92789
CAP, FUEL TANK
R26899
STRAP (4 REQD)
66A4C3
NUT (8 REQD)
35858117
TANK, FUEL (2 REQD)
34A7S4
PLUG (4 REQD)
34A7S6
PLUG
35376029
SENDING UNIT
30A489
NUT
35111913
GASKET
W86676
RIVET (8 REQD)
W57135
CUSHION (4 REQD)
H21094
BRACKET (2 REQD)
35A2D219
SCREW (8 REQD)
14A5C101
WASHER (8 REQD)
16A4C5
NUT (8 REQD)
H21093
BRACKET (2 REQD)

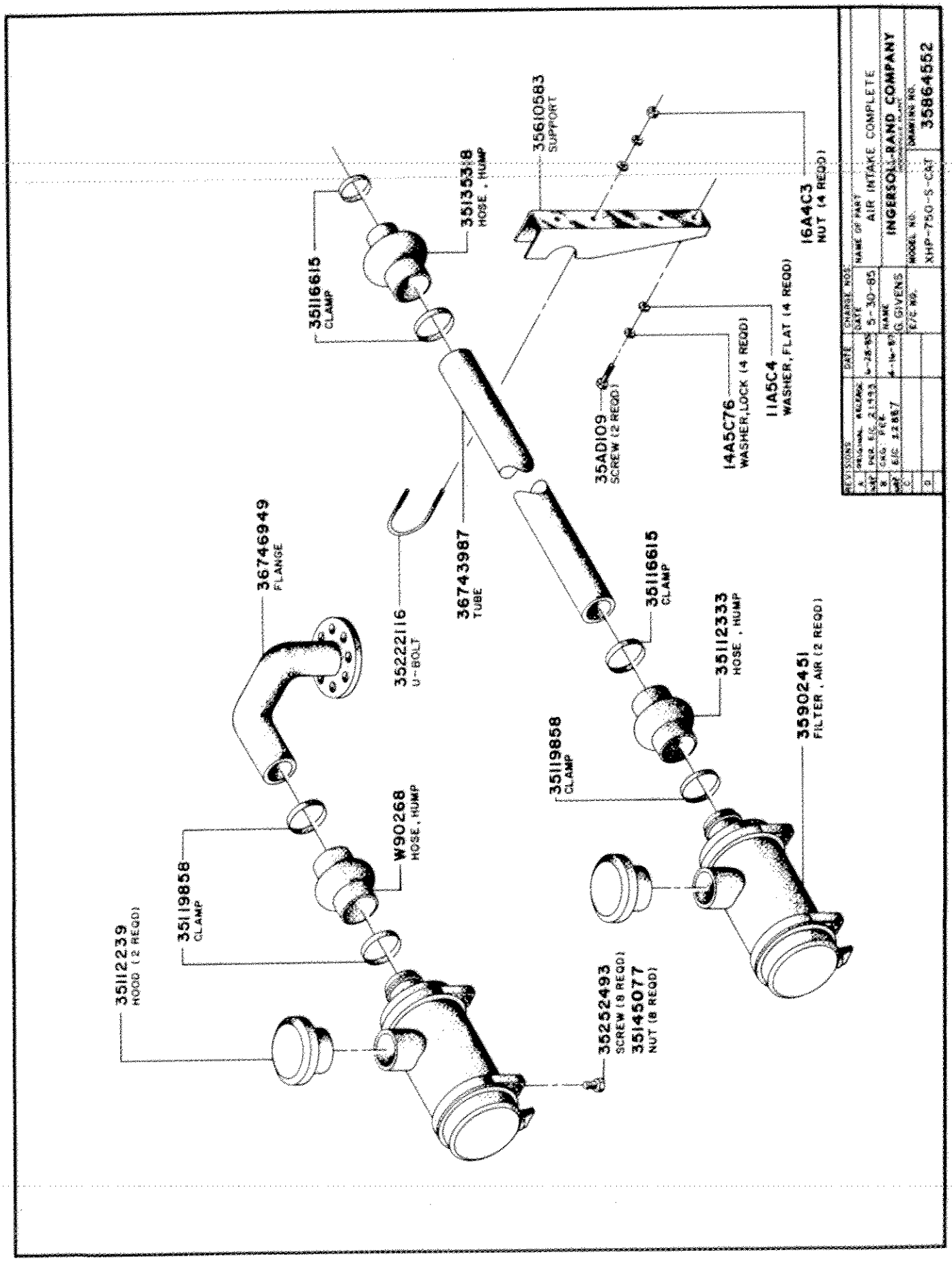
9

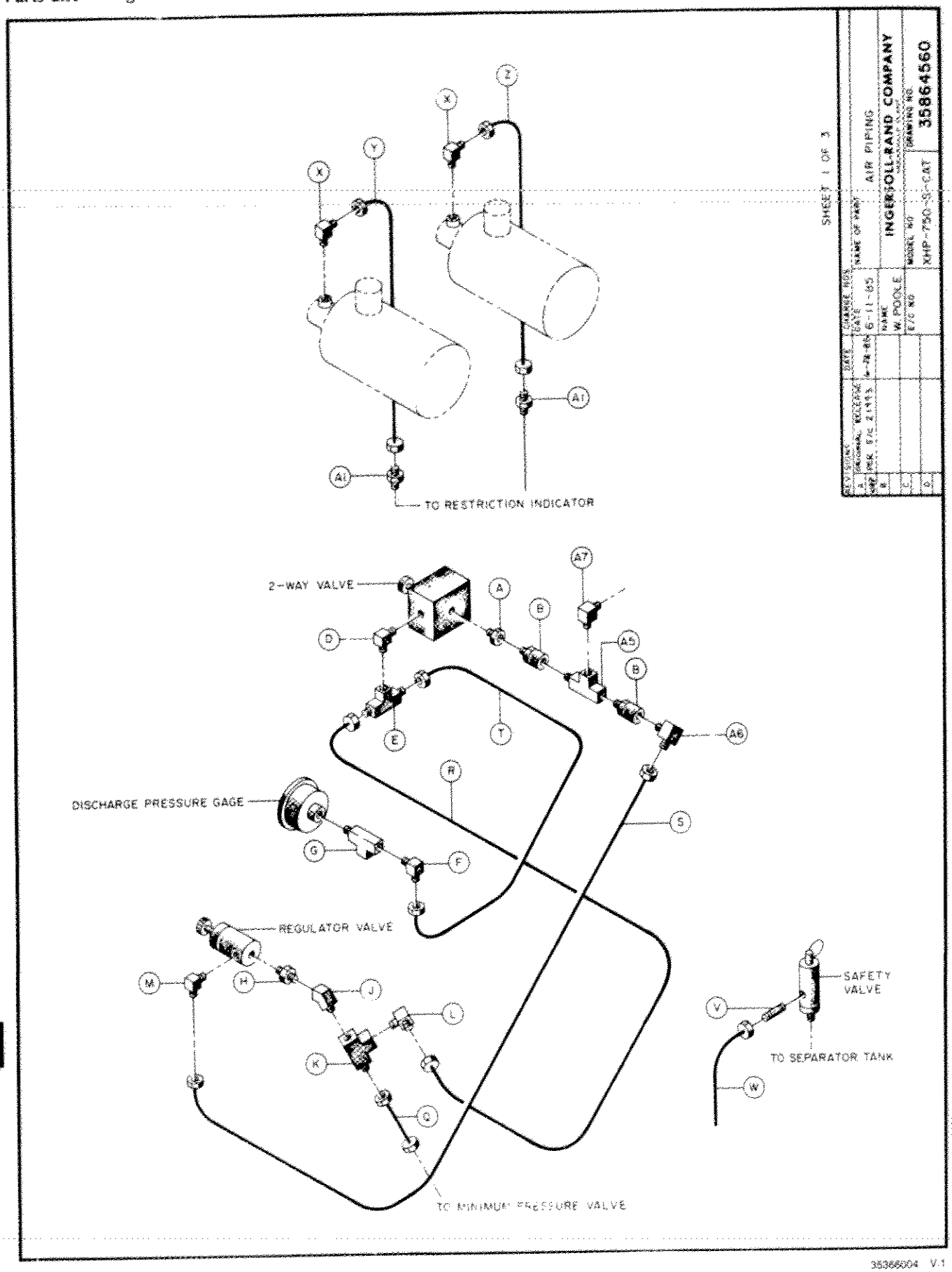
AIR FILTER COMPLETE
PART NO. 35902451
(2 REQD)

INGERSOLL-RAND COMPANY
DESCRIPTION AIR FILTER
DATE 12-2-80
ILLUSTRATION NO. 35827484
SHEET NO. 1 OF 1
E.C.

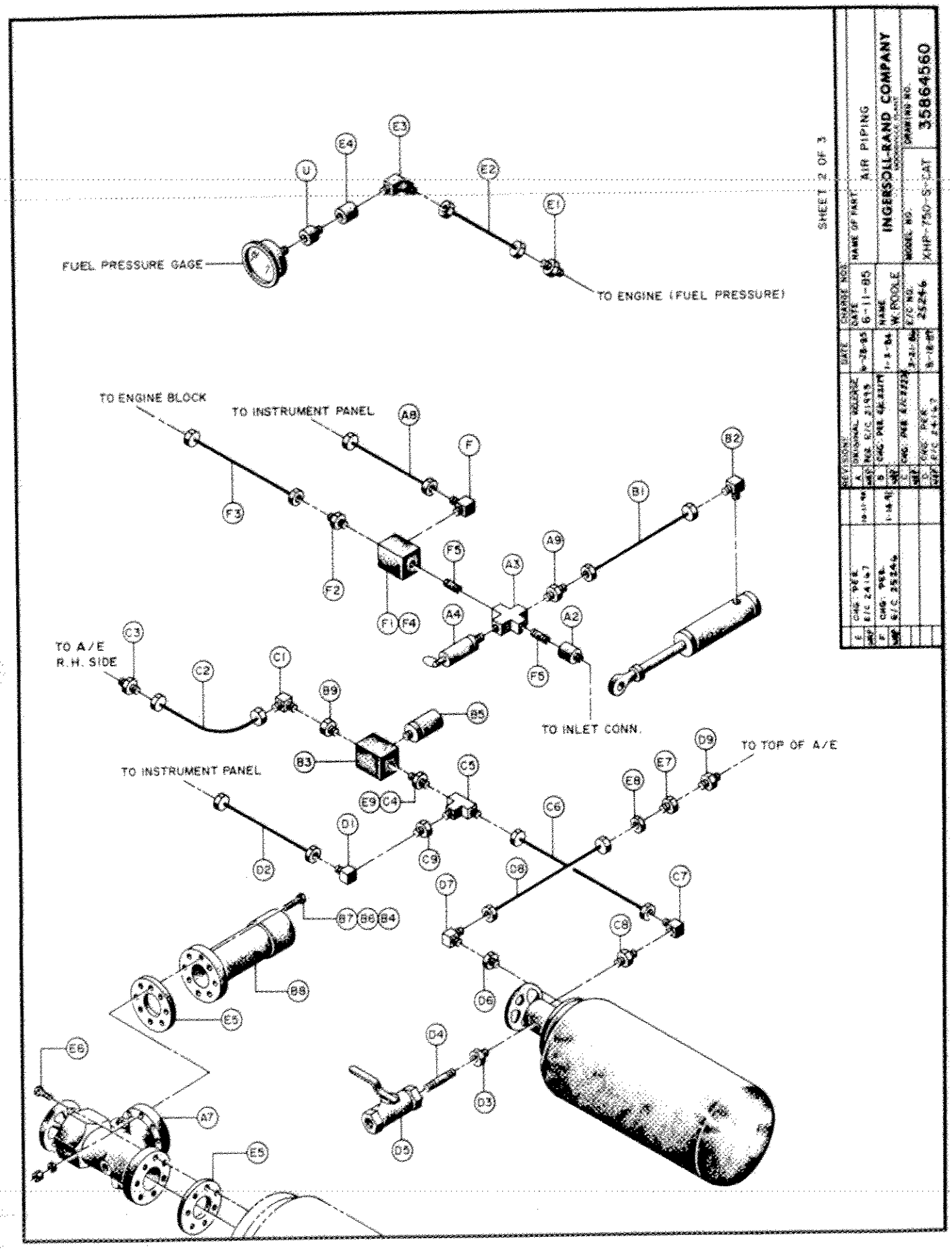


9


35112239
HOOD (2 REQD)
35119858
CLAMP
W90268
HOSE, HUMP
36746949
FLANGE
35222116
U-BOLT
36743987
TUBE
35116615
CLAMP
35133318
HOSE, HUMP
35610583
SUPPORT
35AD109
SCREW (2 REQD)
14A5C76
WASHER, LOCK (4 REQD)
11A5C4
WASHER, FLAT (4 REQD)
16A4C3
NUT (4 REQD)
35116615
CLAMP
35112333
HOSE, HUMP
35119858
CLAMP
35902451
FILTER, AIR (2 REQD)
35252493
SCREW (8 REQD)
35145077
NUT (8 REQD)
REVISIONS
DATE
CHANGE NOS.
NAME OF PART
AIR INTAKE COMPLETE
INGERSOLL-RAND COMPANY
MODEL NO.
XHP-750-S-CAT
DRAWING NO.
35864552


Z
X
Y
X
A1
A1
TO RESTRICTION INDICATOR
2-WAY VALVE
A7
A
B
D
A5
B
E
T
A6
R
DISCHARGE PRESSURE GAGE
S
G
F
REGULATOR VALVE
M
H
J
L
K
Q
TO MINIMUM PRESSURE VALVE
SAFETY VALVE
V
TO SEPARATOR TANK
W
SHEET 1 OF 3
AIR PIPING
INGERSOLL-RAND COMPANY
XHP-750-S-CAT
3586560

9



35366004 V.6 E/C 25246

A	35302314	ADAPTER
B	35248145	VALVE, CHECK
C	35287143	CONNECTOR
D	35279827	ELBOW, 90°
E	35283084	TEE
F	35279934	ELBOW, 90°
G	105A7M1	TEE
H	35284082	CONNECTOR
J	35283100	ELBOW, 45°
K	35283084	TEE
L	35283068	ELBOW, 90°
M	35301126	ELBOW, 90°
N	35283084	TEE
P	35283068	ELBOW, 90°
Q	35294701	HOSE
R	35282961	HOSE
S	35283282	HOSE
T	35282961	HOSE
U	X1086T110	CONNECTOR
V	19A7S55	NIPPLE
W	36780765	TUBE
X	35301225	ELBOW, 90°
Y	35310226	HOSE
Z	35306661	HOSE
A1	108A23S2	ADAPTER
A2	35248319	ORIFICE
A3	73A7MZ2	CROSS
A4	35325133	VALVE, SAFETY
A5	35321272	TEE
A6	35280098	ELBOW
A7	35820901	VALVE, MIN. PRESS.
A8	35283001	HOSE
A9	35284082	CONNECTOR
B1	35283282	HOSE
B2	35301126	ELBOW, 90°
B3	35849215	VALVE, BLOWDOWN
B4	16A4C7	NUT
B5	35132299	MUFFLER
B6	14A5C120	WASHER
B7	35A2D331	SCREW
B8	35824630	PIPE, SERVICE
B9	23A7S2	BUSHING
C1	35283464	ELBOW, 90°
C2	35310226	HOSE
C3	35287903	CONNECTOR
C4	108A23S12D	ADAPTER
C5	35287739	TEE
C6	35294693	HOSE
C7	35294735	ELBOW, 90°
C8	35295880	CONNECTOR
C9	35321165	REDUCER
D1	35283068	ELBOW, 90°
D2	35289578	HOSE
D3	35279116	ADAPTER
D4	19A7S5	NIPPLE
D5	35576115	VALVE, BALL
D6	23A7S2	BUSHING
D7	35283464	ELBOW, 90°
D8	35291269	HOSE
D9	35283076	CONNECTOR
E1	35287903	CONNECTOR
E2	35315431	HOSE
E3	104A23S1	ELBOW, 45°
E4	11A7S1	COUPLING
E5	35586304	GASKET
E6	35A2D327	SCREW
E7	35306091	REDUCER
E8	35306109	NUT
E9	35324987	NUT
F1	35322379	VALVE, BLOWDOWN
F2	35283472	CONNECTOR
F3	35321231	HOSE
F4	W48119	CLAMP (USE WITH ITEM (W))
F5	36793776	NIPPLE

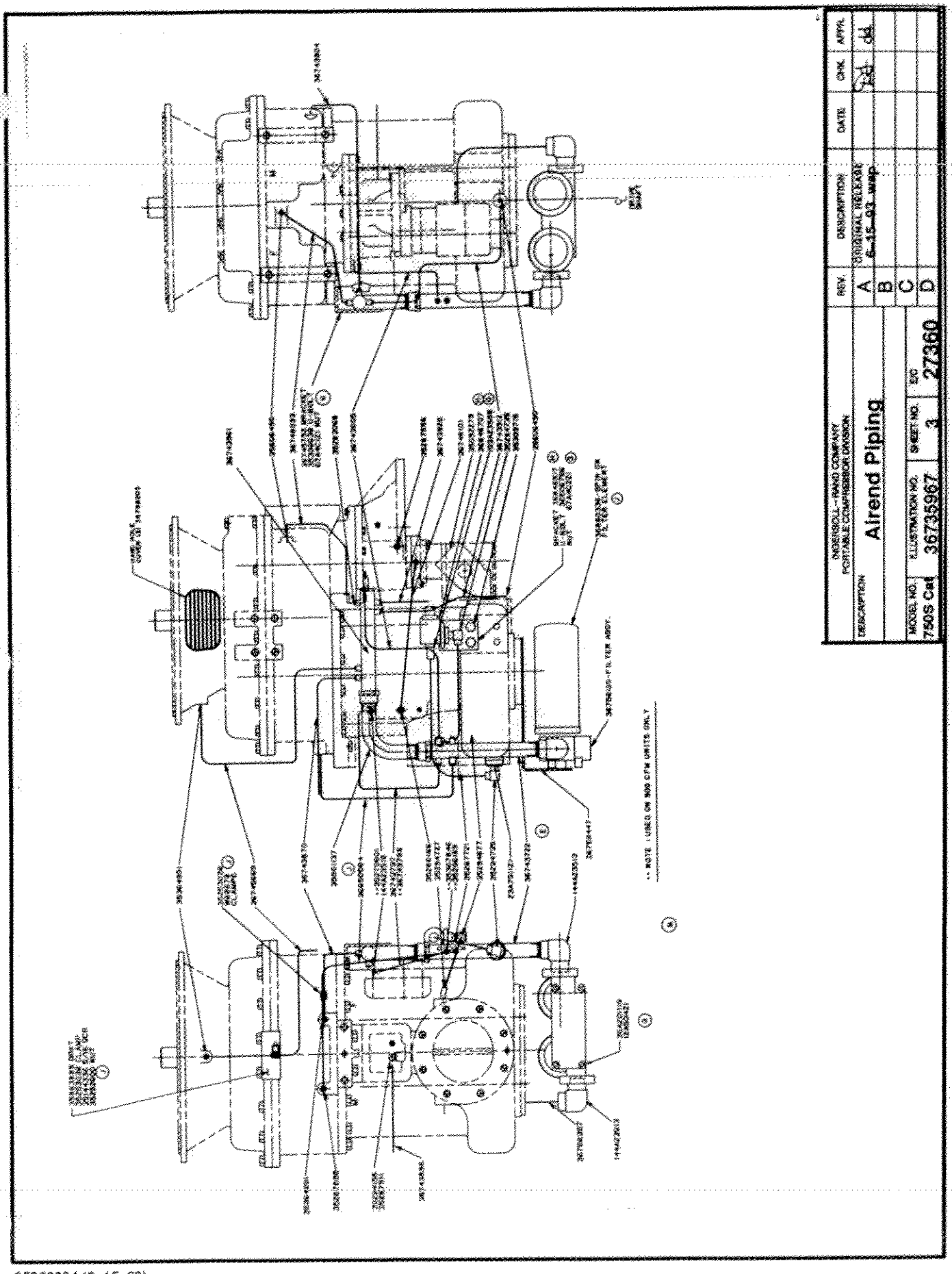
SHEET 3 OF 3

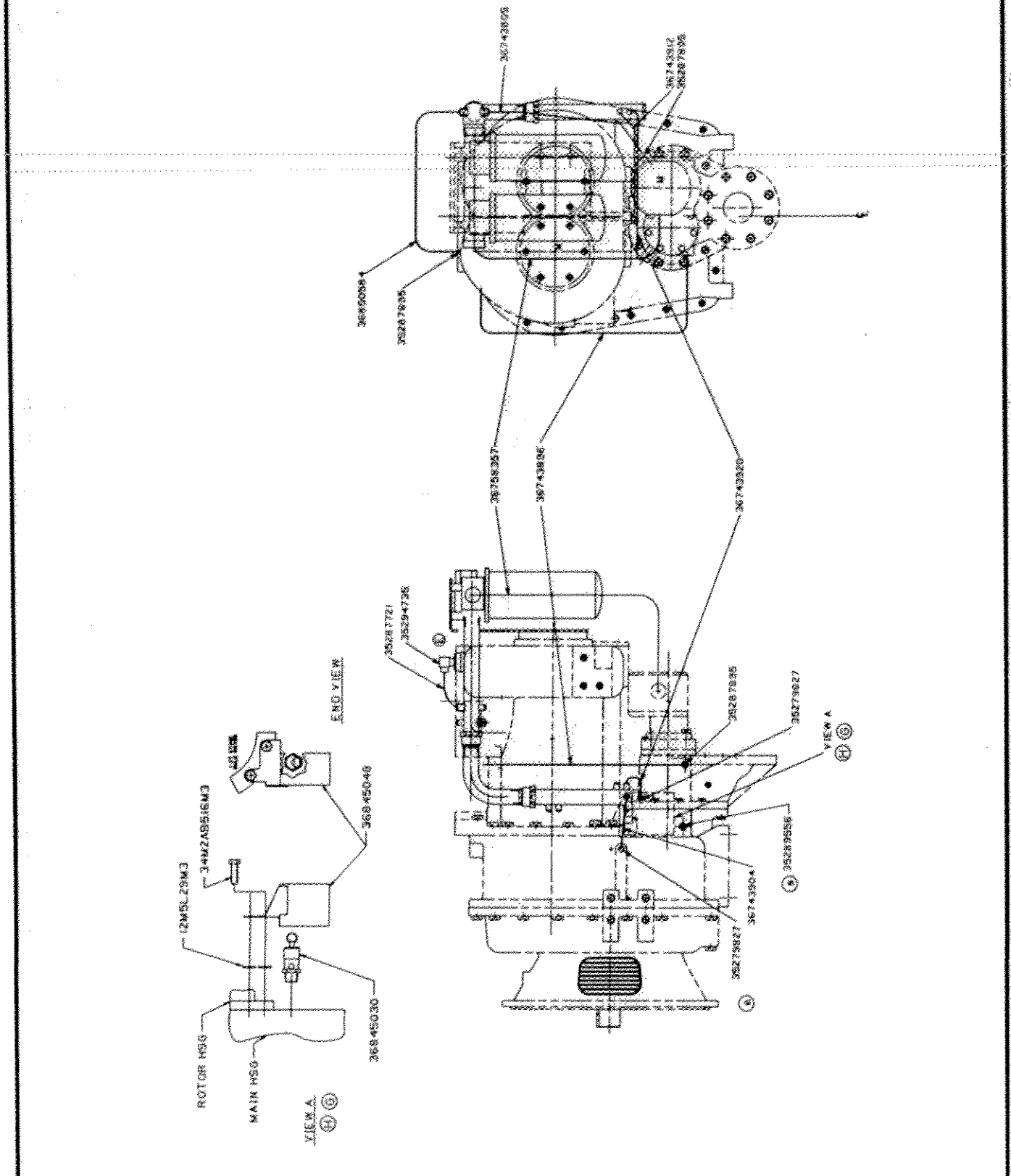
NAME OF PART: AIR PIPING

INGERSOLL-RAND COMPANY

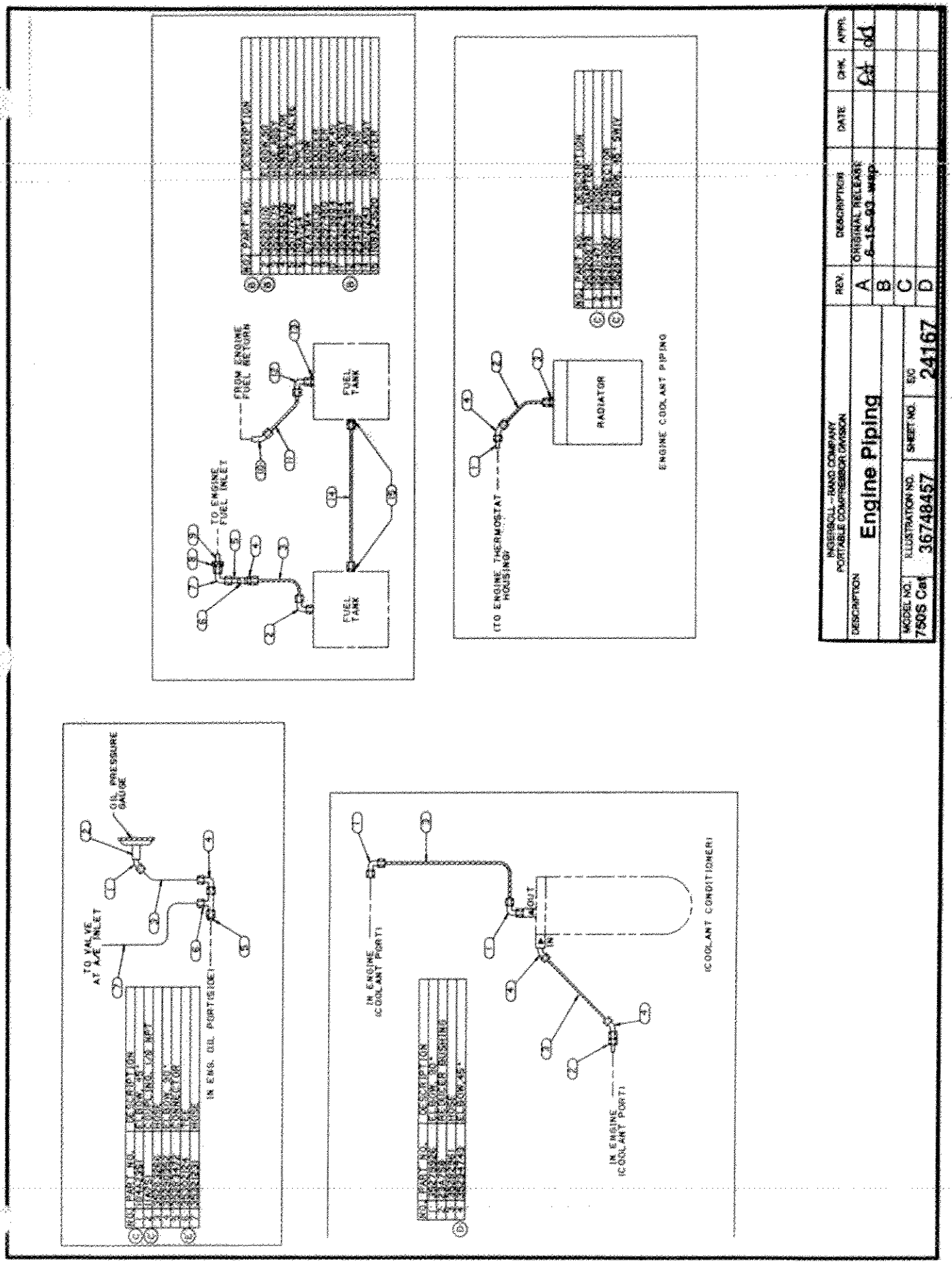
DATE: 6-11-85
NAME: W. POOLE
E/C NO: 25246
MODEL NO: XHP-750-S-CAT
DRAWING NO: 35864560

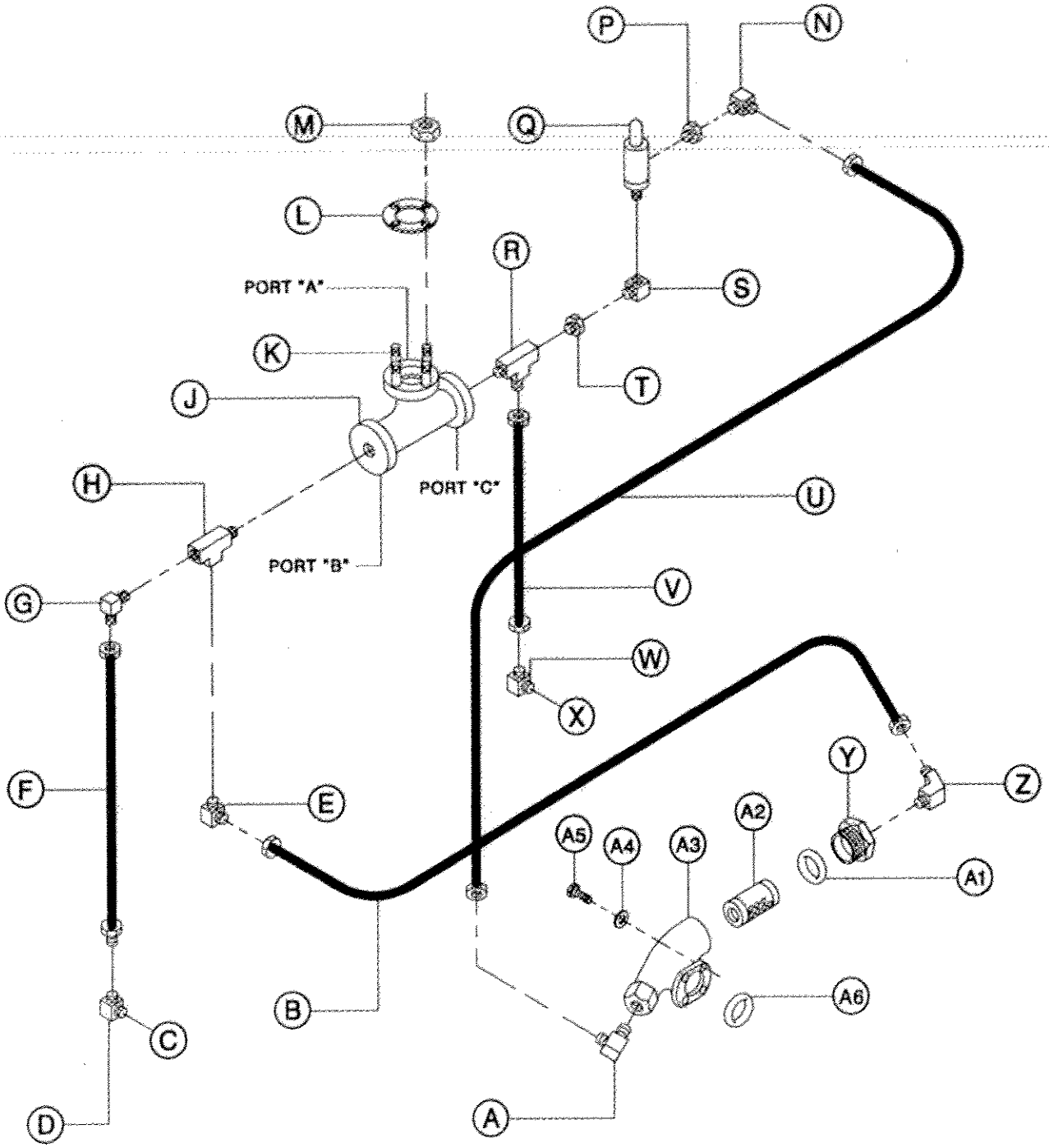
9


INGERSOLL – RAND COMPANY
PORTABLE COMPRESSOR DIVISION
DESCRIPTION
Alrend Piping
REV.
DESCRIPTION
DATE
CHK.
APPR.
A ORIGINAL RELEASE
B 6–15–93 wmp
C
D
MODEL NO.
750S Cat
ILLUSTRATION NO.
36735967
SHEET NO.
3
SIZE
27360
** NOTE : USED ON 900 CFM UNITS ONLY



INGERSOLL–RAND COMPANY PORTABLE COMPRESSOR DIVISION		REV.	DESCRIPTION	DATE	CHK.	APPR.
DESCRIPTION: **Airend Piping**		A	ORIGINAL RELEASE 6–15–93 wap			
		B				
		C				
		D				
MODEL NO.	ILLUSTRATION NO.	SHEET NO.	EC			
750S Cat	36735967	4	27360			


FROM ENGINE FUEL RETURN
TO ENGINE FUEL INLET
FUEL TANK
FUEL TANK
RADIATOR
(TO ENGINE THERMOSTAT HOUSING)
ENGINE COOLANT PIPING
TO VALVE AT A/E INLET
OIL PRESSURE GAUGE
IN ENG. OIL PORT(S)(E)
IN ENGINE (COOLANT PORT)
IN ENGINE (COOLANT PORT)
(COOLANT CONDITIONER)
INGERSOLL - RAND COMPANY
PORTABLE COMPRESSOR DIVISION
DESCRIPTION
Engine Piping
MODEL NO. 750S Cat
ILLUSTRATION NO. 36748457
SHEET NO.
ENG 24167
REV.
DESCRIPTION
DATE
CHK.
APPR.
A ORIGINAL RELEASE 6-15-93 wsp
B
C
D



CHK.	APPR.	REV.	DESCRIPTION	DATE
		J	CHANGED PER E/C 26837 WAP	5-11-93
		K		
		L		
		M		

INGERSOLL-RAND COMPANY
PORTABLE COMPRESSOR DIVISION

DESCRIPTION: OIL PIPING

MODEL NO.	ILLUSTRATION NO.	SHEET NO.	E/C
XHP750S	35864578	1 OF 2	26837

A	35294750	ELBOW , 90°	R	36859965	TEE , RUN
B	35309236	HOSE ASSEMBLY	S	67A7M5Z1	ELBOW , 90°
C	TO OIL COOLER OUTLET		T	23A7S11Z1	BUSHING
D	109A23S24	ELBOW , 90°	U	35295807	HOSE ASSEMBLY
E	35326172	ELBOW , 45°	V	35113729	HOSE ASSEMBLY
F	35113729	HOSE ASSEMBLY	W	109A23S24	ELBOW , 90°
G	35296417	ELBOW , 90°	X	TO OIL COOLER INLET	
H	35334945	TEE , RUN	Y	35609098	PLUG
J	36852747	VALVE , OIL TEMP.	Z	35296417	ELBOW , 90°
K	11A3J463G	SCREW (4 REQD)	A1	35277797	O – RING
L	36786580	GASKET	A2	35370063	FILTER
M	16A4C8Z1	NUT (4 REQD)	A3	36751295	STRAINER
N	35294735	ELBOW , 90°	A4	14A5C101	WASHER (4 REQD)
P	23A7S11Z1	BUSHING	A5	119A2A254	SCREW (4 REQD)
Q	35321876	VALVE , SAFETY	A6	20A11C2M225	O – RING

INGERSOLL – RAND COMPANY PORTABLE COMPRESSOR DIVISION			
DESCRIPTION OIL PIPING			
MODEL NO. XHP750S	ILLUSTRATION NO. 35864578	SHEET NO. 2 OF 2	E/C 26837

REV.	DESCRIPTION	DATE	CHK.	APPR.
A	ORIGINAL RELEASE PER E/C 26837 WAP	6–15–93	DA	dd
B				
C				
D				

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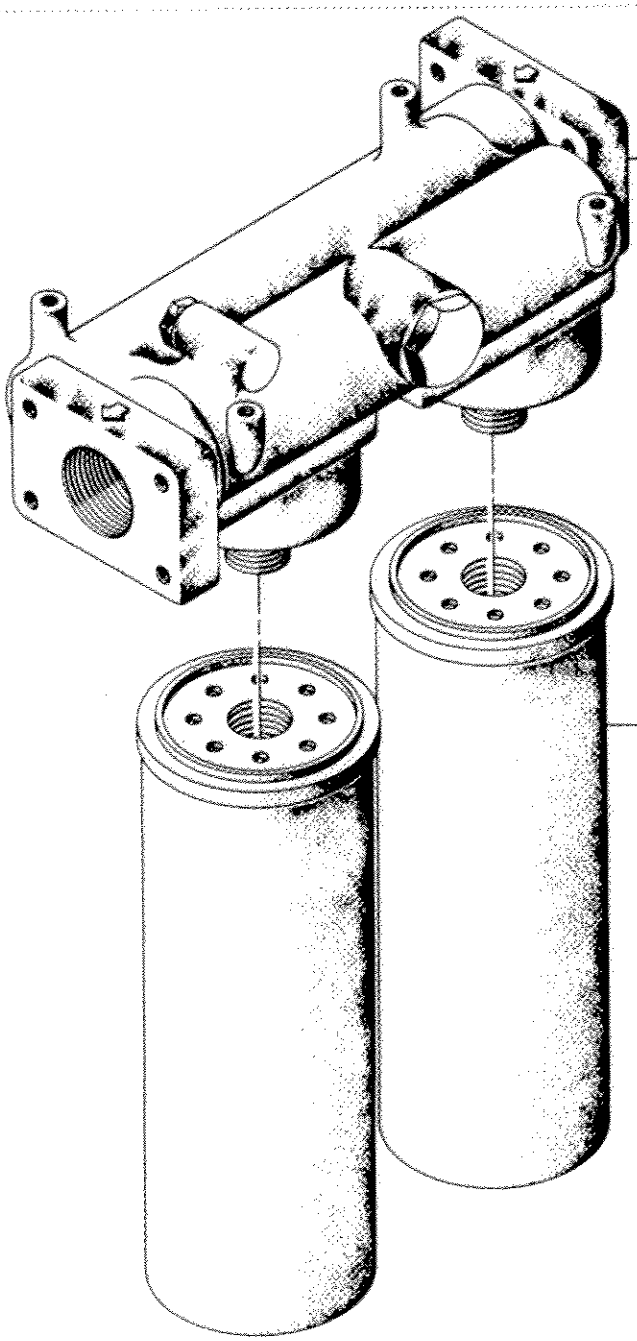
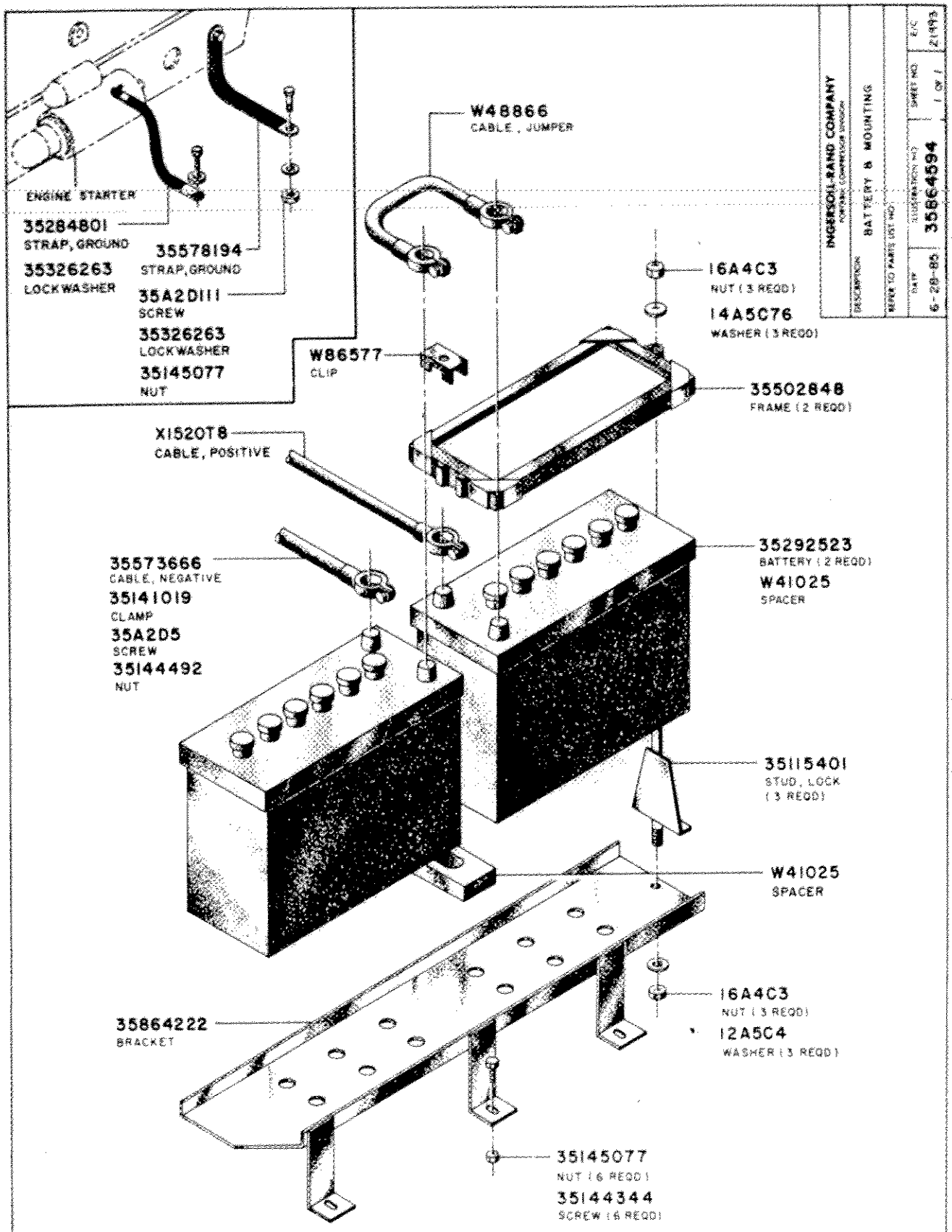
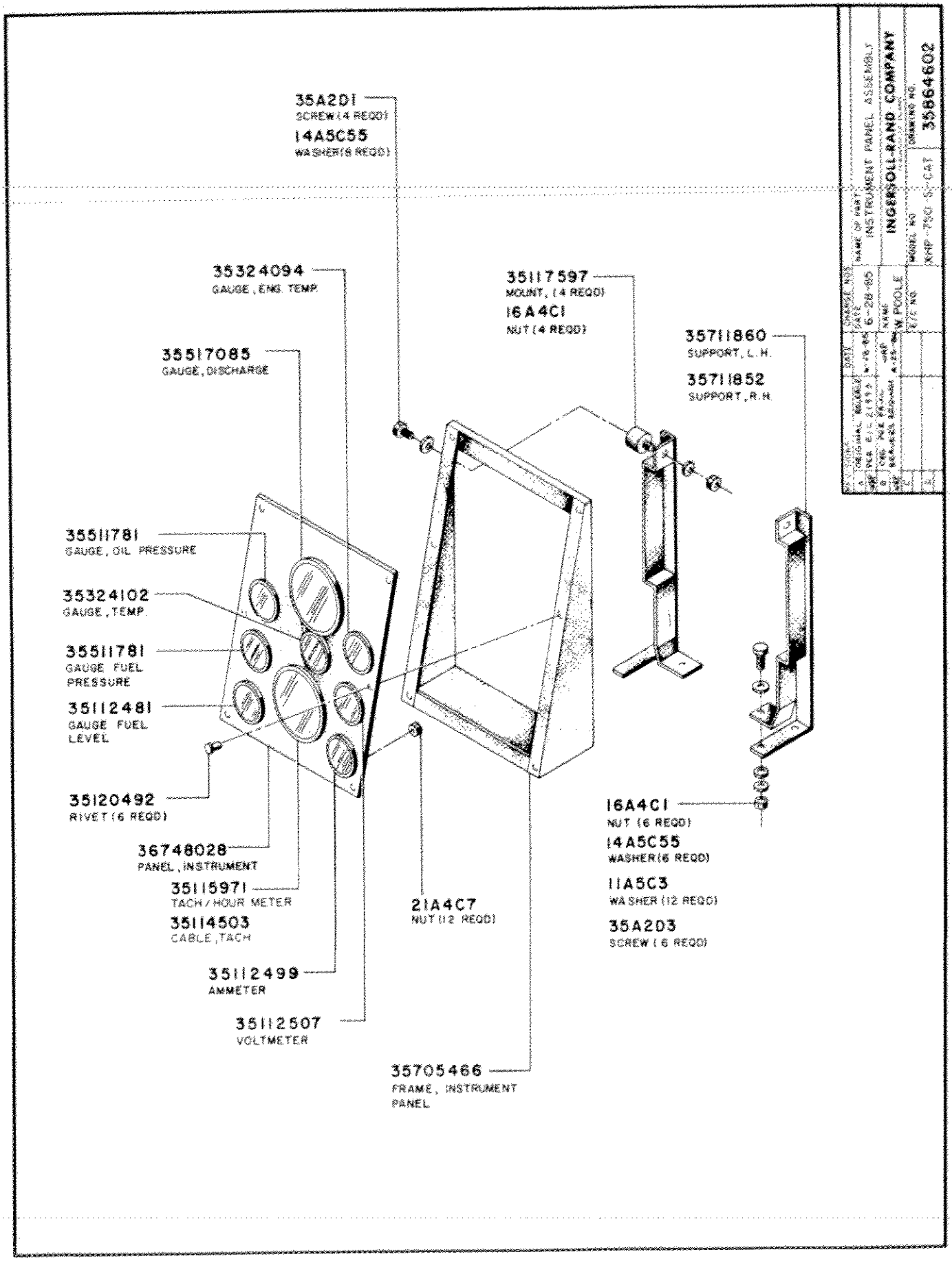


NAME OF PART	COMPRESSOR OIL FILTER ASSY
	INGERSOLL-RAND COMPANY
MODEL NO	P-1600-W-CU XHP-750-S-CAT
DRAWING NO	36507846

REVISIONS	DATE	DRAWN	DATE	NAME	E/C NO
A Revised per E/C 23344	3-14-88		3-14-88	W.POOLE	23344

9


INGERSOLL-RAND COMPANY
DESCRIPTION
BATTERY & MOUNTING
REFER TO PARTS LIST NO.
DATE
6-28-85
DESIGNATION NO.
35864594
SHEET NO.
1 OF 1
ECC
21993
ENGINE STARTER
35284801
STRAP, GROUND
35326263
LOCKWASHER
35578194
STRAP, GROUND
35A2D111
SCREW
35326263
LOCKWASHER
35145077
NUT
W48866
CABLE, JUMPER
16A4C3
NUT (3 REQD)
14A5C76
WASHER (3 REQD)
W86577
CLIP
35502848
FRAME (2 REQD)
X1520T8
CABLE, POSITIVE
35573666
CABLE, NEGATIVE
35141019
CLAMP
35A2D5
SCREW
35144492
NUT
35292523
BATTERY (2 REQD)
W41025
SPACER
35115401
STUD, LOCK
(3 REQD)
W41025
SPACER
16A4C3
NUT (3 REQD)
12A5C4
WASHER (3 REQD)
35864222
BRACKET
35145077
NUT (6 REQD)
35144344
SCREW (6 REQD)


35A2D1
SCREW (4 REQD)
14A5C55
WASHER (8 REQD)
35324094
GAUGE, ENG. TEMP
35117597
MOUNT, (4 REQD)
16A4C1
NUT (4 REQD)
35517085
GAUGE, DISCHARGE
35711860
SUPPORT, L.H.
35711852
SUPPORT, R.H.
35511781
GAUGE, OIL PRESSURE
35324102
GAUGE, TEMP.
35511781
GAUGE FUEL PRESSURE
35112481
GAUGE FUEL LEVEL
35120492
RIVET (6 REQD)
36748028
PANEL, INSTRUMENT
35115971
TACH/HOUR METER
35114503
CABLE, TACH
35112499
AMMETER
35112507
VOLTMETER
35705466
FRAME, INSTRUMENT PANEL
21A4C7
NUT (12 REQD)
16A4C1
NUT (6 REQD)
14A5C55
WASHER (6 REQD)
11A5C3
WASHER (12 REQD)
35A2D3
SCREW (6 REQD)
NAME OF PART
INSTRUMENT PANEL ASSEMBLY
INGERSOLL-RAND COMPANY
MODEL NO.
XHP-750 SS-CAT
DRAWING NO.
35864602

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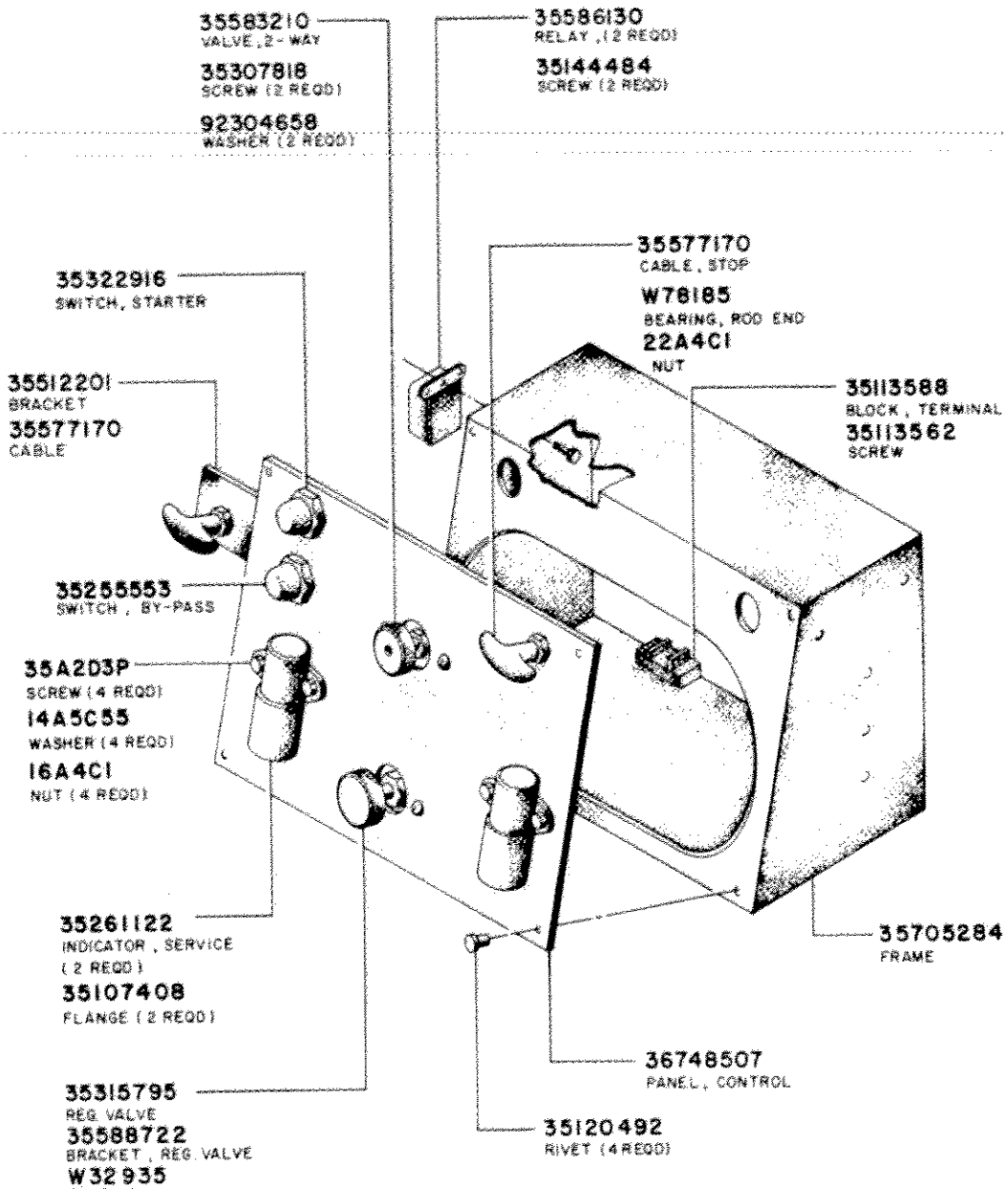
35583210
VALVE, 2-WAY
35307818
SCREW (2 REQD)
92304658
WASHER (2 REQD)
35586130
RELAY, (2 REQD)
35144484
SCREW (2 REQD)
35577170
CABLE, STOP
W78185
BEARING, ROD END
22A4C1
NUT
35322916
SWITCH, STARTER
35512201
BRACKET
35577170
CABLE
35113588
BLOCK, TERMINAL
35113562
SCREW
35255553
SWITCH, BY-PASS
35A2D3P
SCREW (4 REQD)
14A5C55
WASHER (4 REQD)
16A4C1
NUT (4 REQD)
35261122
INDICATOR, SERVICE
(2 REQD)
35107408
FLANGE (2 REQD)
35705284
FRAME
36748507
PANEL, CONTROL
35315795
REG. VALVE
35588722
BRACKET, REG. VALVE
W32935
BOLT-U
14A5C55
WASHER (4 REQD)
35A2D3P
SCREW (2 REQD)
16A4C1
NUT (4 REQD)
35120492
RIVET (4 REQD)
NAME OF PART
CONTROL PANEL ASSEMBLY
INGERSOLL-RAND COMPANY
MODEL NO.
XHP-750-S-CAT
DRAWING NO.
35864610

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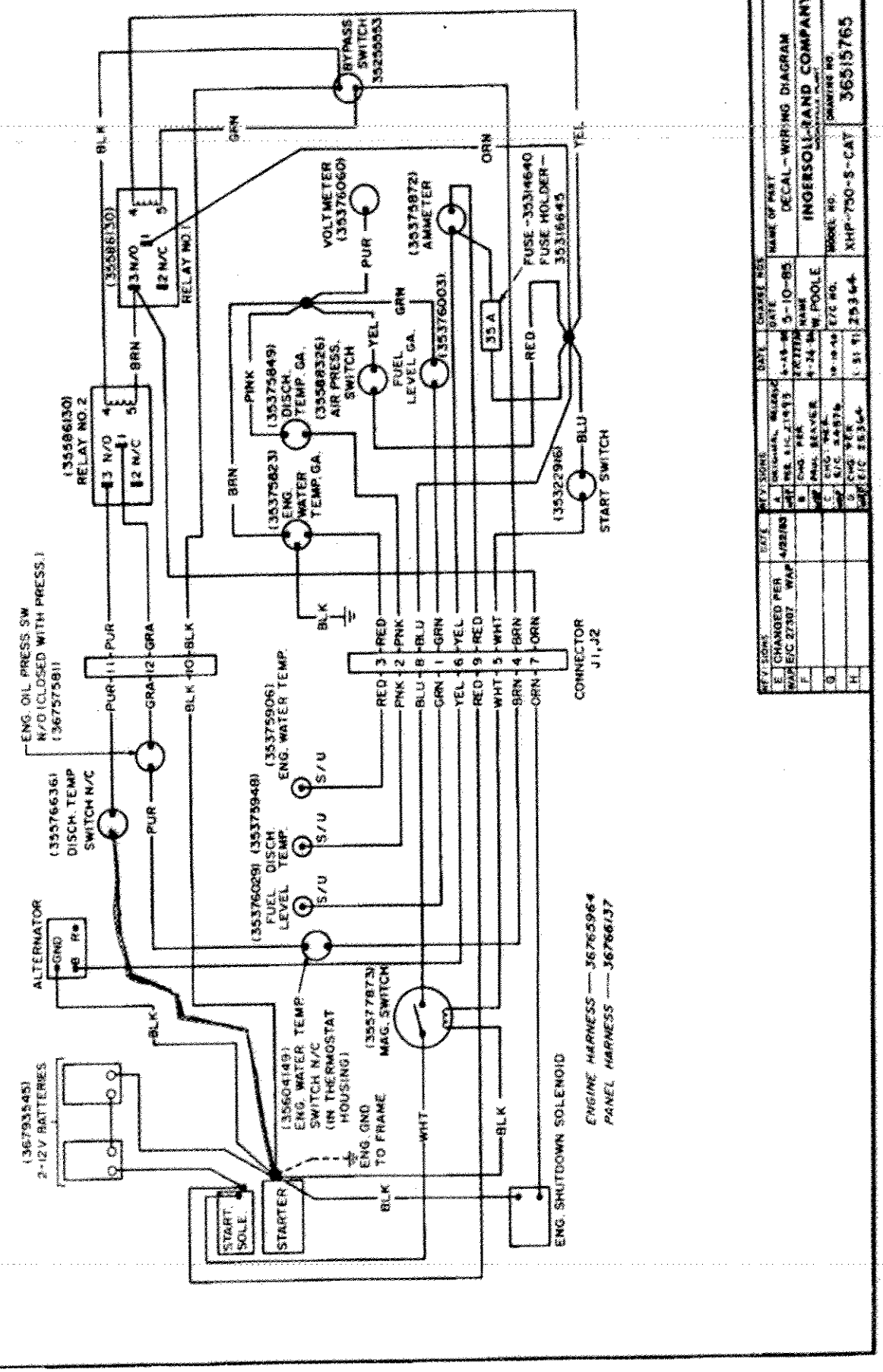
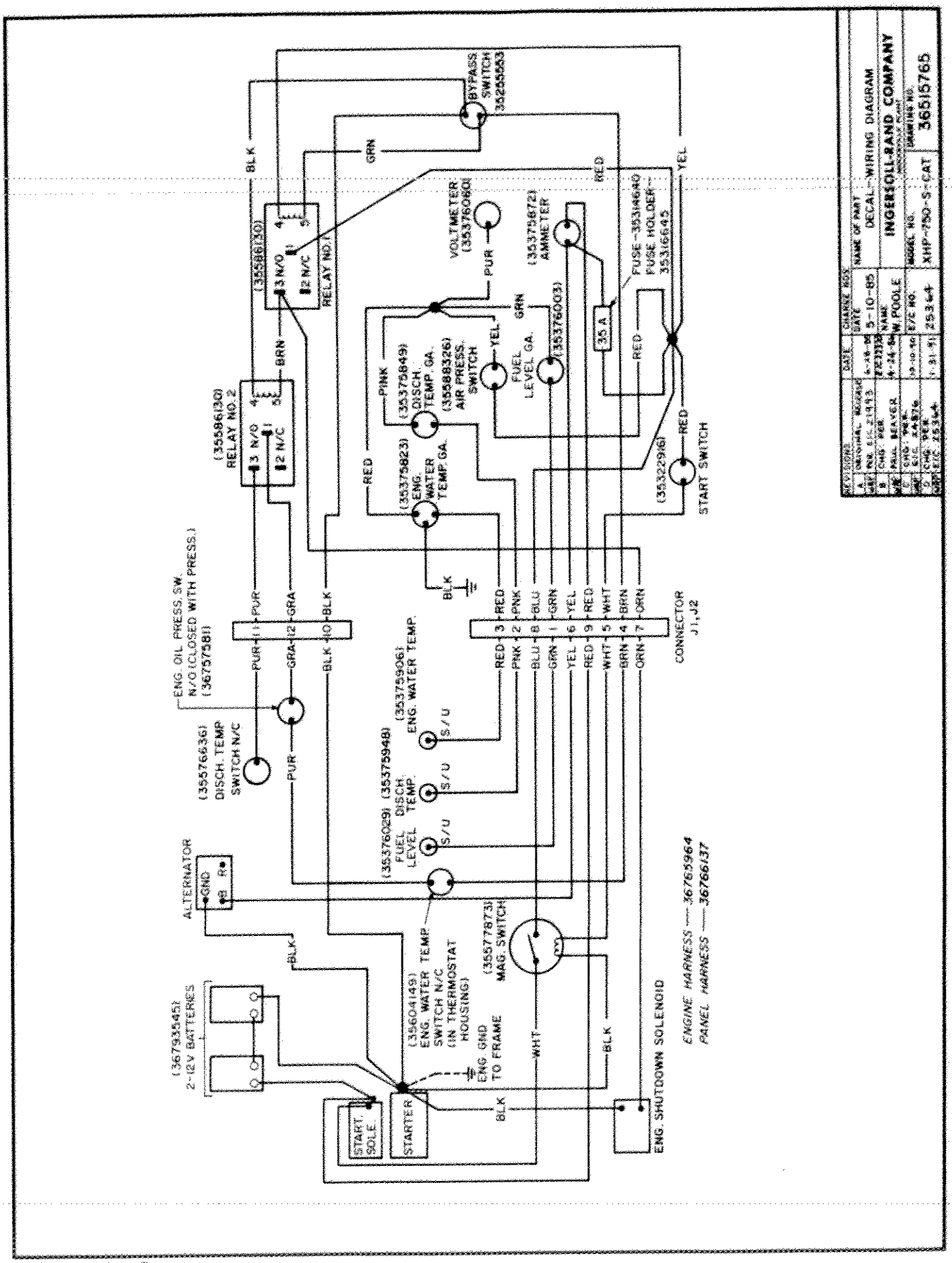

(35586130) RELAY NO.2
(35586130) RELAY NO.1
BYPASS SWITCH 35255553
VOLTMETER (35376060)
(35375872) AMMETER
FUSE -35314640 FUSE HOLDER- 35316645
35 A
(35322966) START SWITCH
(35375823) ENG. WATER TEMP GA.
(35375849) DISCH. TEMP GA.
(35380326) AIR PRESS. SWITCH
FUEL LEVEL GA. (35376003)
ENG. OIL PRESS SW N/O (CLOSED WITH PRESS.) (36757581)
(35376636) DISCH. TEMP SWITCH N/C
(35375906) ENG. WATER TEMP.
(35375948) DISCH TEMP.
(35376029) FUEL LEVEL
ALTERNATOR
(35604149) ENG. WATER TEMP SWITCH N/C (IN THERMOSTAT HOUSING)
(35377873) MAG. SWITCH
(3679354S) 2-12V BATTERIES
START SOLE.
STARTER
ENG GND TO FRAME
ENG. SHUTDOWN SOLENOID
CONNECTOR J1, J2
ENGINE HARNESS — 36765964
PANEL HARNESS — 36766137
INGERSOLL-RAND COMPANY
DECAL-WIRING DIAGRAM
XHP-750-S-CAT
36515765



9

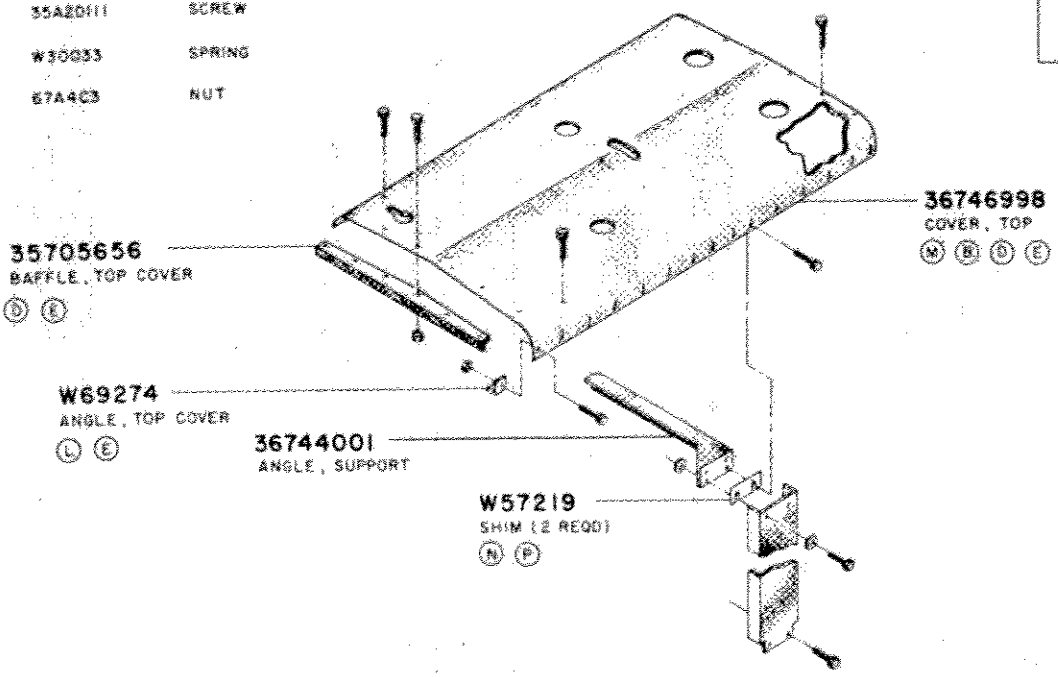
35368004 V-4 S/C 25364-C

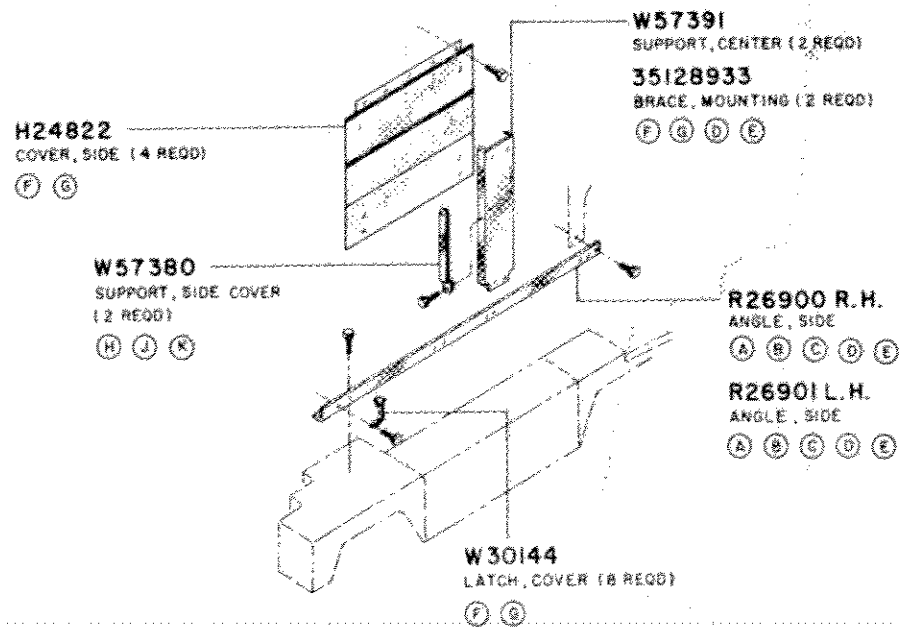
V.S E/C 27307

APR 2 8 1993

(A)	35252568	SCREW	(L)	35145259	SCREW
(B)	35252818	NUT	(M)	35252758	SCREW
(C)	35144344	SCREW	(N)	11A5C4	WASHER
(D)	35252493	SCREW	(P)	14A5C76	WASHER
(E)	35145077	NUT			
(F)	35144484	SCREW			
(G)	35144492	NUT			
(H)	35A2D111	SCREW			
(J)	W30033	SPRING			
(K)	67A4C3	NUT			

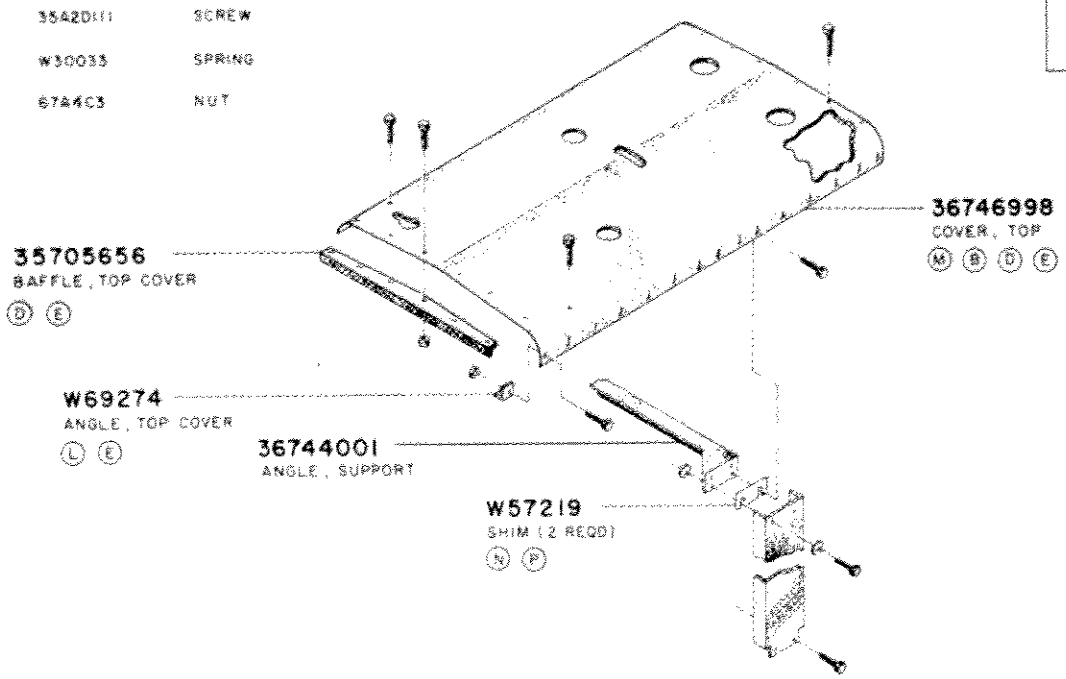
INGERSOLL-RAND COMPANY
PORTABLE COMPRESSOR DIVISION
DESCRIPTION: ENCLOSURE COMPLETE
REFER TO PARTS LIST NOS.
DATE: 6-27-95
REGISTRATION NO.: 35864636
SHEET NO.: 4 / OF 4
S.C.

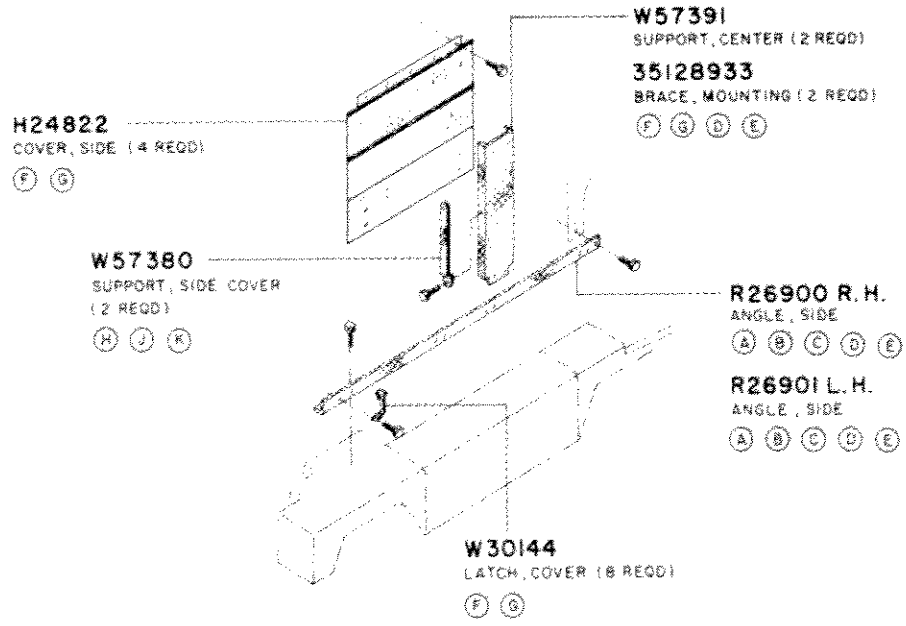




(A)	35252568	SCREW	(L)	35145259	SCREW
(B)	35252618	NUT	(M)	35252758	SCREW
(C)	35144344	SCREW	(N)	11ASC4	WASHER
(D)	35252493	SCREW	(P)	14ASC76	WASHER
(E)	35145077	NUT			
(F)	35144484	SCREW			
(G)	35144492	NUT			
(H)	35A2D111	SCREW			
(J)	W30035	SPRING			
(K)	67A4C3	NUT			

INGERSOLL-RAND COMPANY
DESCRIPTION: ENCLOSURE COMPLETE
REFER TO PARTS LIST NO.
DATE: 6-27-85
ILLUSTRATION NO.: 35864636
SHEET NO.: 1 OF 1
E.C.

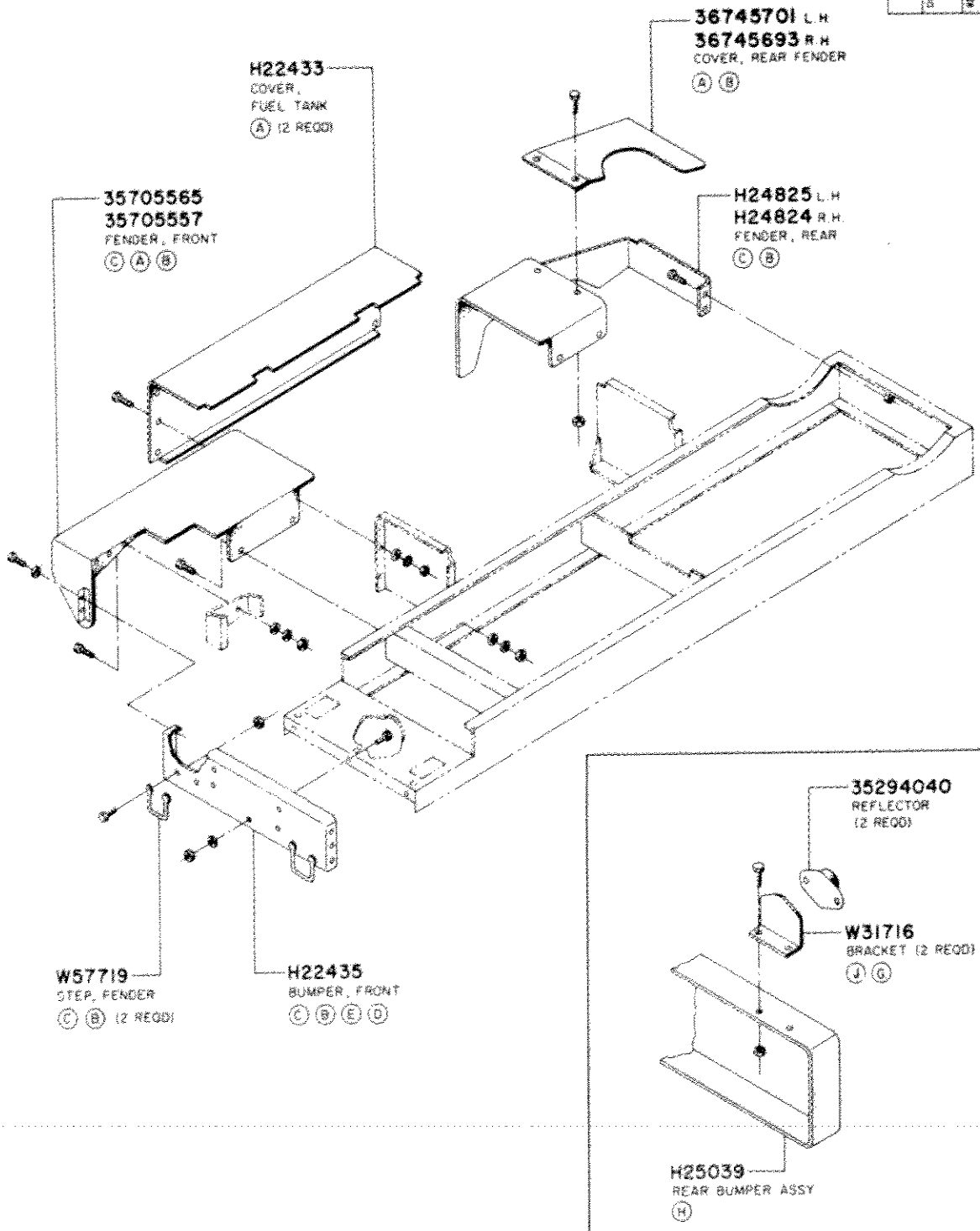




9

(A)	35252493	SCREW
(B)	35145077	NUT
(C)	35144344	SCREW
(D)	35A20109	SCREW
(E)	14A5C76	WASHER
(F)	35A2D55	SCREW
(G)	35252600	NUT
(H)	35252618	NUT
(J)	35144336	SCREW

INGERSOLL-RAND COMPANY
PORTABLE COMPRESSOR DIVISION
DESCRIPTION: ENCLOSURE COMPLETE
REFER TO PARTS LIST NO.:
DATE: 6-28-85
REGISTRATION NO.: 35864636
SHEET NO.: 1 OF 4
ETC



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(A)	35252493	SCREW	(K)	38A2D107	SCREW
(B)	35145077	NUT	(L)	14A5C4	WASHER
(C)	35252725	SCREW	(M)	14A5C76	WASHER
(D)	35144484	SCREW	(N)	35252568	SCREW
(E)	35144492	NUT	(P)	35252618	NUT
(F)	83A2C97	SCREW			
(G)	14A5C36	WASHER			
(H)	21A4C9	NUT			
(J)	35144344	SCREW			

INGERSOLL-RAND COMPANY

ENCLOSURE COMPLETE

35864636

35705441
PANEL, TOP, FILLER
(K) (L) (M)

35704766
SUPPORT, REAR
(J) (B)

35504604
STRIP, L. H. FILLER
(A) (B)

36746972
SUPPORT, REAR HOUSING
(N) (P)

35504596
STRIP, R. H. FILLER
(A) (B)

35518885
BRACE

35705623
HOUSING, L. H. REAR
(A) (B)

35705615
HOUSING, R. H. REAR
(A) (B)

DECAL SET PART NO. 35086933

9

A	35252568	SCREW
B	35252618	NUT
C	35252758	SCREW
D	35A20224	SCREW
E	14A5C101	WASHER
F	35252493	SCREW
G	35A20110	SCREW
H	14A5C76	WASHER
J	35144344	SCREW
K	35134527	NUTSERT
L	35A20115	SCREW
M	16A4C3	NUT
N	35A20109	SCREW
P	11A5C4	WASHER
Q	14A5C101	WASHER

INGERSOLL-RAND COMPANY
PORTABLE COMPRESSOR DIVISION

DESCRIPTION: ENCLOSURE, COMPLETE

REFER TO PARTS LIST NO

DATE: 6-28-95

NUMBER NO: 35864636

SHEET NO: 4 OF 4

R/C

R26756
SUPPORT, RADIATOR L.H.
(B)(C)(D)(E)(Q)

35911387
HOUSING, RAD. TOP
(K)(L)(H)(M)

35837608
SUPPORT, TOP
(N)(P)(H)

W57146
BRACKET, TOP COVER SUPPORT
(F) (2 REQD)

W57720
HANDLE (2 REQD)
(G)(H)

R26755
SUPPORT, RADIATOR R.H.
(B)(C)(D)(E)(Q)

36721421
GUARD, OIL COOLER
(J)

35705094
CHANNEL, R.H.

35705102
CHANNEL, L.H.

H21097
BRACKET, SUPPORT (2 REQD)
(A)(B)

9

DECAL – PARTS LIST

Part Number	Description
35821883	Decal, Export Only
36519049	Decal, General Data (600)
36500767	Decal, General Data (750)
35864701	Decal, Operating Instruction
35864719	Decal, Prev. Maintenance List
35864727	Decal, Reg. Adj. Instruction
36515765	Decal, Wiring Diagram
35810357	Decal, Oil Filler
35864735	Decal, Danger General
35863760	Decal, Danger Discharge Air
35852664	Decal, Caution
36500064	Decal, Cold Start
36508356	Decal, Notice
36507820	Decal, Req'd Maintenance
36504942	Decal, Warning High Pressure
36507424	Decal, Warning Whipping Hose
36508976	Decal, Warning Air Pressure
36507416	Decal, Danger Breathing Air
36513430	Decal, Rotating Fan