

MADE IN THE USA

REINERT PUMPS

ZR-430 Concrete Pump

OWNERS MANUAL

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REINERT MANUFACTURING INC.

PRODUCT WARRANTY

Reinert Manufacturing Inc. warrants each new machine manufactured by it will be free from defects in factory materials and workmanship under normal use and service for a period of ninety (90) days from the date of first use or retail delivery, whichever is earlier. Said warranty is void if the machine is subjected to misuse, neglect, accident or abuse, or if the machine is modified, customized, or repaired by the owner (or at the owner's direction) with other than Reinert Manufacturing Inc. Authorized Parts. This warranty does not apply to normal maintenance service or to normal replacement of certain machine parts which are subject to ordinary wear and tear, including, but not limited to: material piston seals, wear plates, oil filters, valve mechanisms, delivery systems or the addition of hydraulic oil or other lubricants.

Reinert Manufacturing Inc. makes no warranty with respect to trade accessories or components manufactured by third parties. Reinert Manufacturing Inc. agrees to make available, to the extent it is able to do so, any warranty made by the manufacturers of such components.

LIMITATION OF REMEDIES AND LIABILITIES. Reinert Manufacturing Inc. liability and owner's exclusive remedy pursuant to any claim of any kind, including but not limited to a claim in contract, negligence or strict liability, against Reinert Manufacturing Inc. shall be the repair or replacement, at Reinert Manufacturing Inc. option and at Reinert Manufacturing Inc., Florence, Kentucky factory, or at a point designated by Reinert Manufacturing Inc., of such parts which are determined by Reinert Manufacturing Inc. inspection to have been defective in material or workmanship. Warranty repairs will be made with Reinert Manufacturing Inc. Authorized New or Remanufactured parts. This warranty does not obligate Reinert Manufacturing Inc. to bear the cost of labor or transportation charges in connection with the replacement or repair of defective parts.

UNDER NO CIRCUMSTANCES SHALL REINERT MANUFACTURING INC. HAVE ANY LIABILITY WHATSOEVER FOR ANY COMPENSATORY, PUNITIVE, SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES.

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SECTION

A

OPERATING INSTRUCTIONS

REINERT PUMPS

OPERATING INSTRUCTIONS

DO NOT OPERATE THIS MACHINE WITHOUT TRAINING. UNDERSTAND THE WARNINGS IN THIS MANUAL AND ON THE DECALS.

⚠ WARNING ***KEEP HANDS OUT OF INLET AND DISCHARGE PORTS AT ALL TIMES. OTHERWISE THERE COULD BE POTENTIAL LOSS OF FINGERS AND HANDS.***

Engine and Pump Start-UP

CAT Diesel Engine ONLY Start-up and Throttle Instructions

1. Check the hydraulic pump switch. It must be in the “off” position.
2. Turn ignition starting switch to “start” position. When engine starts, release switch to the “run” position.
3. Adjust throttle to smooth operation and allow a few minutes for warm-up before applying load to engine.
4. Check engine instructions and make a visual inspection of the complete machine.
5. Fill the water box ½ to ¾ full with water or oil.
6. With the engine at approximately half throttle, move the hydraulic pump switch (mounted on the lower right hand side of the panel) to the “on” position. The machine is now ready to work in the forward pump cycle. As the volume control valve is turned onto the left(untighten) the flow of the oil will start to move the main pumping cylinders, thus causing the pump to cycle. The further the valve is opened, the faster the cycling. Should the pump cycle not start, check the pilot valve mounted in the center of the water box. One of the plungers should be fully depressed.

HATZ Diesel Engine ONLY Start-up *and Throttle Instructions*

1. Turn the key to the “on” position.
2. D**o not** try to start the engine until the voltmeter reads 12.5 volts-the glo-plugs are heating.
3. When the volts are at or above 12.5 the engine can be started.
4. Check engine instructions and make a visual inspection of complete machine.
5. Fill the water box 1/2 to 3/4 full with water or oil.
6. Move the hydraulic pump switch (mounted on the lower right hand side of the panel) to the “on” position. The machine is now ready to work in the forward pump cycle. As the volume control valve is turned to the left (untighten) the flow of oil will start to move the main pumping cylinders, thus causing the pump to cycle. The further the valve is opened, the faster the cycling. Should the pump cycle not start, check the pilot valve mounted in the center of the water box. One of the plungers should be fully depressed.



⚠ WARNING **THIS MACHINE IS REMOTE CONTROLLED AND MAY START AT ANY TIME. STOP THE ENGINE BEFORE SERVICING THE UNIT**

Engine and Pump Start-Up

While the machine is cycling, make the following inspections:

1. Check the hydraulic system for leaks.
2. Check the water box level
3. Make sure that the pilot valve plungers are being stroked properly. (See Section C)

Gauges

Hydraulic System Pressure Gauge

This gauge is located on the instrument panel. This gauge indicates the hydraulic force that is being applied to the main rams to move the material in the discharge line. The maximum pressure is preset to 2500 PSI by means of the compensator internally in the pump.

Hydraulic Oil Temperature Gauge

Ideal operating temperature of the hydraulic oil should be 120-140 degrees. Ambient conditions will have a definite effect on operating temperature. The system will tolerate temperatures up to 180° F. Above 180° pumping should be stopped to allow time for cooling. Allow engine to idle to cool. A fine spray of water over hydraulic components will also help reduce oil temperature. If high temperature persists, the system should be checked to determine the cause. Engine gauges and or monitors are mounted separately to the engine.

Variable Volume Pump

The ZR-430 hydraulic system is an open loop circuit.

Affixed to the discharge side of the hydraulic pump is a 2-way, normally closed valve. As the coil is energized by the switch on the panel, it opens the 2-way valve and allows flow to the system through the needle or variable volume flow valve. The flow valve, which is manually operated, controls the speed of the pumping action.

When the switch is moved to the “off” position, the 2-way valve closes, thus blocking the flow of oil, and the pump goes to the “stand by” mode.

If an electrical failure or switch failure occurs, the valve can be activated by means of pushing and turning the knob on the end of the coil, thus pressurizing the system.

Handling and Placing With The ZR-430

The ZR-430 is designed for flexibility and ease of handling operations requiring a placing rate or 20 cyph.

Consideration should be given to the following factors when setting up the pump:

Pipe size relating to the mix design

Line size selection will depend on the amount and size of coarse aggregate in the mix and the desired volume of material. Remember, larger line sizes decrease friction and required pumping pressure.

Other factors in mix design should also be considered before accepting a given specification for pumping. These would be cement content, percentage of fines and the composition, size and shape of coarse aggregate, coarse and fine aggregate graduation, slump and add mixtures.

It is important to note that trouble free pumping is possible only if the material can be pushed through the line. The composition of this material provides adequate lubrication qualities to maintain a film on the interior surfaces of the pipe and also to envelope the aggregate particles completely. Thus blockages and jamming of material will be avoided.

Location

Position the machine as close to the discharge or placing area as possible. Try to locate the machine so that it can be fed by the Ready Mix trucks from either side. This will mean less time loss in getting the trucks into position for discharging material into the hopper and permit uninterrupted pumping.

Set-Up

Set the machine on the rear jack stand then lower the front jack until the machine is setting firm and some of the load is off of the tires. Block the wheels, and connect the pipe. Do not leave the machine hooked to the towing vehicle while pumping.

Priming The System

When the material to be pumped is of the sand and cement mixture, it is only necessary to wet up the first hopper full of material to be pumped. First, add 5 gallons of 1:1 sand and cement slurry mix, plus 5 gallons for each 100 ft. of 4” hose. This amount will vary with diameter of line. At low engine RPM, move the hydraulic pump switch to the “on” position. Pump the grout into the hose or pipe system. When the hopper is near empty, start to discharge the material to be pumped from the truck into the hopper, and continue pumping.

After the material is flowing out of the pouring hose or end of the pipe, the engine speed may be increased to the desired pumping rate. When one truck is emptied and another is not immediately available, set the hydraulic pump switch to “off” and discontinue pumping. It is wise to maintain a full hopper while waiting for the next truck. This reserve material can be used to periodically pump or advance material in the line thus avoiding any tendency to harden in the hose (2 or 3 strokes every 10 minutes is recommended on models that do not have the hydraulic remixer available).
It is advisable to shut off during prolonged waits, as the vibration will increase set-up time for the material in the valves and hopper.

Blockages or Material Jams

Blockage is the consequence of the immobility of the material in the hose or pipe system. When blockage occurs, the engine will lug and the hydraulic system pressure gauge will rise immediately to the maximum setting of the relief valve. The reciprocating of the main rams will stop. When this condition occurs, the operator should immediately move the switch on the panel to the reverse cycle and allow the pump to cycle a few times, then shift back into forward cycle. If this still occurs, see item #1 below.

1. If the hose or pipe connected to the reducer cone and hose starts to move or raise up as pressure is applied, the blockage is in the hose or pipe.

2. If the reducer raises up, but the hose is soft, the plug is in the reducer.



⚠ CAUTION ***DO NOT OPEN CLAMPS OR VALVES UNTIL PRESSURE HAS BEEN RELEASED BY REVERSING PUMP. OTHERWISE THE MATERIAL DISCHARGED IS UNDER PRESSURE.***



⚠ WARNING ***KEEP HANDS OUT OF INLET AND DISCHARGE PORTS AT ALL TIMES. OTHERWISE THERE COULD BE POTENTIAL LOSS OF FINGERS AND HANDS.***

Usually blockages occur at the small diameter end of pipe or system reducers. They are caused by a number of factors, check for these situations:

1. Dirty pipe, hose or reducer sections. (Concrete left internally from previous use).
2. Leaking joints or clamps, absence of gaskets or seals, resulting in loss of cement paste or grout diminishing the lubrication properties of the concrete.
3. Difficult material proportions do not make a pumpable mix.
    - Bleeding or segregation of mix because of repelled water--water to cement ratio too high.
    - Unsuitable aggregate graduation.
    - Inadequate fine aggregate content or too high of rock or course content
    - Excessive amounts of chemical additives such as accelerators.
    - Material which sets early (High early cement Type III).
    - High cement contents per cubic yard and also extended intervals between pumping can allow setting.
4. Careless handling of the pouring hose at the end of the system. Hoses must not be kinked.

Hinged Hopper Assembly

The hopper and valve are hinged to gain access to inlet side of the S-Tube and also to change piston cups.

WARNING: DO NOT ATTEMPT to unbolt and swing the assembly open unless the hopper is empty. To open the hopper and valve, turn off the engine, uncouple the hose on the blind end cap of the right hand cylinder and cap the hose and plug the fitting at the cylinder before hinging the valve open. Some models have a quick disconnect and the cap and plug are not necessary. Unbolt the (2) hex head bolts (one on either side) and swing the assembly away for clean up or repair. Before closing the valve, be sure O-rings are in place and valve plate and hinge plate are clean. DO NOT ATTEMPT to cycle the valve when in the open position and be sure the engine is NOT running while the hinge is open.



⚠ WARNING ***KEEP HANDS OUT OF INLET AND DISCHARGE PORTS AT ALL TIMES. OTHERWISE THERE COULD BE POTENTIAL LOSS OF FINGERS OR HANDS.***

Clean Out

Immediately upon completion of placing operations, attention must be given to clean out. During some “pours” hose and pipe can be cleaned out as they are being removed from the system.

Uncouple the reducer from the discharge opening of the machine. Dump concrete from the reducer, flush out with water and open the door on the bottom of the valve. Place the machine in “forward” cycle with the engine at low idle, while the machine is pumping, wash the hopper and grate. When the hopper is clean (inside and out), place the switch in reverse position. The ram pistons will push the concrete out the bottom of the hopper. After several cycles turn the engine off with the valve fully shifted to the right or left. Using the clean out bar, loosen and remove all material in the valve and exposed material cylinder and flush with water pressure. Restart the engine and shift valve and repeat for the other cylinder.

If the machine is not to be used for several days, oil all exposed metal parts in the valving area to prevent rust.

Safety Block Information and Installation



⚠ WARNING ***KEEP HANDS OUT OF INLET AND DISCHARGE PORTS AT ALL TIMES. OTHERWISE THERE COULD BE POTENTIAL LOSS OF FINGERS OR HANDS.***

While working in and around the S-Tube Valve, whether it be for cleaning, tightening nuts and bolts, changing piston cups, or for any other reason, the safety block (See page A-7) must be bolted in place and secured with the nut and bolt furnished. No work on the S-Tube should be performed without the safety block in place.

Warning stickers should be placed near the S-Tube outlet, if they are missing, please notify Reinert Manufacturing, Inc. and they will be sent to you. All operators of the product should be notified of the availability of the safety block and manner by which it should be installed.

To install, shift the S-Tube to one side, turn the engine and hydraulic pump to the OFF position. Insert the safety block over the extended rod as shown (See Fig A-1) and bolt in place. When work is completed, unbolt and remove the block.

Pumping with Hard Line or Radio Remote Control

The operator must be at the controls at pump to assure there is not a stall-out in case of material jam. If the diesel engine is run in reverse, damage can occur.

The engine must be set at the proper RPM before moving the switch to the on position. When the remote control (radio or hard line) is shut off it is very helpful if the operator switches to the reverse cycle. When the remote is turned on the operator has the opportunity to adjust the engine to the proper RPM before moving the pump switch to the on position.

HATZ Diesel ONLY *Pumping with Hard Line or Radio Remote Control*

The engine RPM will automatically increase to 2600 RPM when the hydraulic pump switch is turned on or the remote switch is turned on. When the Remote Control is shut off it is helpful if the operator switches to the reverse cycle in case of a material jam or hose kink.

Hatz Diesel Radio Remote Function

If the Radio Remote is on and the hydraulic pump is on, the engine goes to 2600 RPM. Additional RPM can be accomplished by the Remote toggle or the throttle switch at the panel.

If the hydraulic pump is off and the Radio Remote is off at the panel, the engine goes to 1400 RPM.

If the Radio Remote is off at the Remote Box, the engine will go to 1400 RPM.

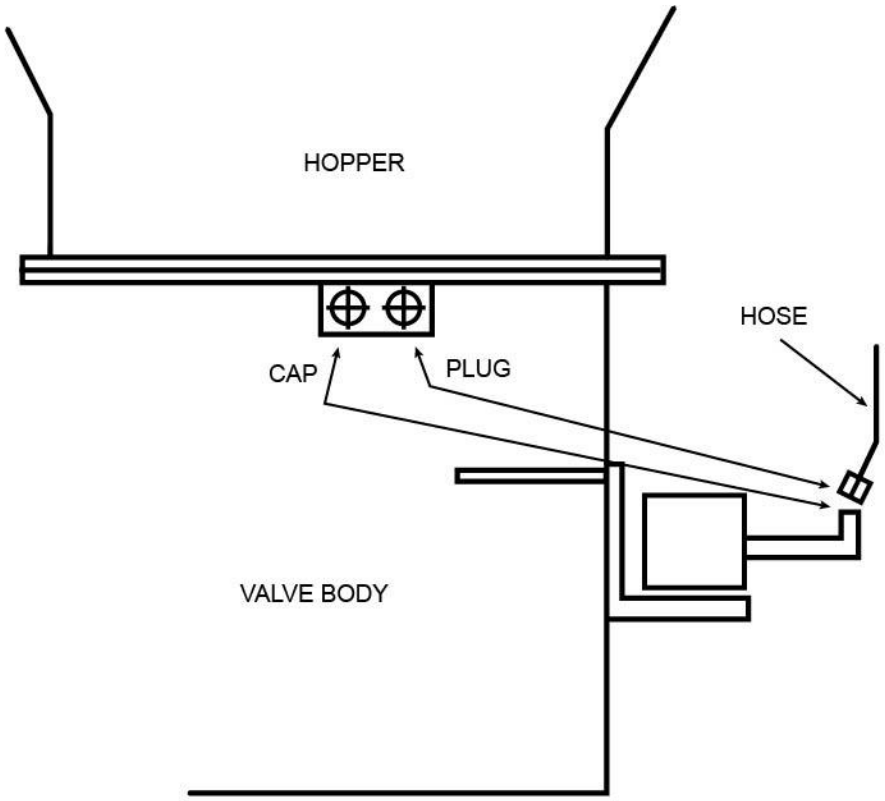

HOPPER
HOSE
CAP
PLUG
VALVE BODY

Fig. A-1

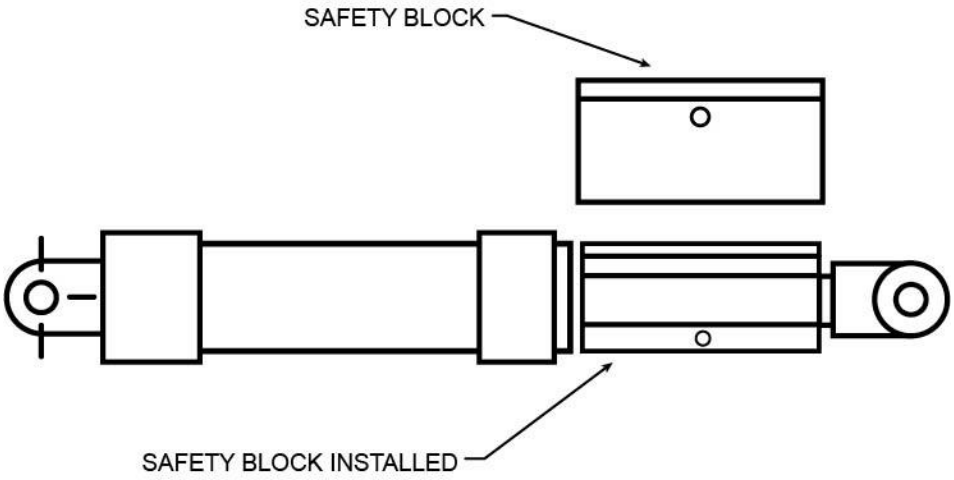

SAFETY BLOCK
SAFETY BLOCK INSTALLED

Fig. A-2

Traveling with the ZR-430

When towing, check the following points:

1. Attach safety chain.
2. Make sure the tongue jack is elevated to clear roadway.
3. Secure all covers and loose objects.
4. Connect electrical system and make sure lights are working properly.
5. Maintain 60-PSI air pressure in tires.

SECTION

B

PREVENTATIVE MAINTENANCE

REINERT PUMPS

OPERATING INSTRUCTIONS

Preventative maintenance is important to the safe operation and lasting performance of the concrete pump.

Maintenance Every 8 Hours

- Check engine daily.
- Fill fuel tank at the end of each day. This will eliminate condensation in the tank.
- Check engine oil level and air cleaner (refer to engine manual).
- Apply grease to the shaft and also to the tailpipe housing.
- Check the hydraulic system oil level. A sight gauge for this purpose is located on the right side of the reservoir. The fluid level should be midway between low and full marks.
- The following is a guideline of some oil manufacturers:

  - Mobil-ETE 15
  - Texaco-Rando HD 32
  - Hydrex 46

- Check the electrolyte level and maintain the level with distilled or approved water.
- Check the liquid level in water box (located between hydraulic cylinders and the material cylinders). Maintain the liquid level at least half full (See Section D for water box maintenance).
- Check the grease fittings on top of the main crank arm.

Maintenance Every 40 Hours



⚠ WARNING ***KEEP HANDS OUT OF WATER BOX. STOP ENGINE/MOTOR IF ACCESS IS REQUIRED. KEEP COVERS CLOSED. OTHERWISE THERE COULD BE POTENTIAL LOSS OF FINGERS AND HANDS.***

- Drain water from water box and clean thoroughly.
- Check piston cups for grout leakage.
- Check all grease fittings to assure proper lubrication.
- Clean the oil cooler mounted in front of the engine radiator
- Keep the machine clean
- Service the engine in accordance with the engine manual
- Check complete hydraulic system for leaks. Tighten all fittings that appear to be leaking .

SECTION

C

HYDRAULIC SYSTEM

REINERT PUMPS

REINERT PUMPS

HYDRAULIC SYSTEM

The ZR-430 pump has two concrete pumping cylinders powered by double acting hydraulic cylinder.

Oil flow is generated by an axial piston pump. Flow from this pump is directed into the main control valves. These valves are 4-way pilot operated, directional control. Fixed to the main pump is a 2-way normally closed solenoid-operated valve. This valve is used to start and stop the flow of oil from the main hydraulic pump. In case of an electrical failure, see instruction under variable volume pump.

The hydraulic system has one (1) main pilot valve for cycling the S-Tube. A pick-up or pilot port in each S-Tube cylinder controls the cycling of the main rams.

Should the auto-cycle fail, the mechanical pilot valve mounted on top of and in the center of the water box should be checked as follows: The mechanical linkage should be checked to assure that the plunger on the retracting side is being fully depressed by the retracting piston. This adjustment is accomplished by an adjusting screw and locking nut. With the piston in the fully retracted position, there should be a clearance of 3/16" between the activator and the main pilot valve body. The opposite plunger should be pushed out by the spring. If the plunger is being depressed properly and the S-Tube is shifted fully in either direction, the pilot circuit is functioning properly. Try to cycle the pump in reverse mode or look for material blockages in the pumping system.

Slave Circuit

The slave circuit, or timing circuit, is the oil that is on the rod end side of the hydraulic cylinders. The oil from the rod side on the left cylinder is forced through the crossover tube located on the bottom side of the front heads and causes the right piston to retract. As the retracting piston reaches the end of its stroke, it passes a pick up port. When this occurs, the over fill oil is exhausted through a small hose and into the blind end cap, through the 4-way control valve and on to the tank. When the right ram starts to extend it retracts the left ram in the same manner. Make-up oil, if needed, is added through the pick up port near the rod end as the extending ram completes its stroke through the check valve.

Reverse Mode

The pump cycle can be reversed by moving the toggle switch, mounted on the lower left side of the panel to the up position. If the switch fails, the reversing valve solenoids can be activated by manually depressing the pins in the end of the coils. Both pins have to be pushed if the problem is in the switch or the electric. If one of the coils fails, only the pin in the failing coil needs to be depressed.

SECTION

D

COMPONENT MAINTENANCE

REINERT PUMPS

COMPONENT MAINTENANCE



⚠ WARNING ***KEEP HANDS OUT OF WATER BOX. STOP ENGINE/MOTOR IF ACCESS IS REQUIRED. OTHERWISE THERE COULD BE POTENTIAL LOSS OF FINGERS AND HANDS.***

Water Box

The water box is located between the hydraulic ram cylinders and the material cylinders. It is the reservoir and connecting chamber for the water and/or oil lubrication system of the pumping cylinders. Its primary function is to lubricate the material piston seal. As indicated in Section B the liquid level should be checked periodically and maintained at least half full.

As the material piston seal wears, it will permit a fine cement paste to collect in the water box and thus color the water. Discoloration can be tolerated, as the wear increases, so will the leakage. When deposit of cement paste builds up in the bottom of the box to approximately one half inch, it should be drained, cleaned, and new piston seals installed. A plug for draining the box is located in the bottom.

Caution: In freezing temperatures, the water box should be filled just prior to starting the machine or getting ready to pump concrete. A small amount of oil mixed with the water aids in lubricating the piston seals and cylinder walls. Upon completing the clean up for the day, be sure to pull the drain plug and drain all water to prevent freeze-up. Ice in the cylinders will damage the piston seals upon start-up.

During freezing temperatures, it is a good practice to keep the hopper covered to prevent snow and water from entering the material cylinders from the hopper side. This could also damage the piston seals.

Material Piston Seal

When excessive wear and leakage has been determined, the piston seal must be replaced. The piston is attached to the ram cylinder rod by a single 3/4” hex head cap screw. It is removed through the discharge end of the material cylinder. Drain water box through the drain opening in bottom of the box.

With the engine running and the volume control valve one turn to the left or open, close the lever valve (located on top of the pilot or plunger valve at the water box) move the reverse switch on the panel to the up position. Then move the on/off switch to the “on” position.

One of the rams will extend and the S-Tube will uncover the port to expose the 3/4” bolt in the end of the piston and the hydraulic system will go to the “lock-up” mode, turn on/off switch to the off position, stop engine. Disconnect the hose on the right hand S-Tube cylinder and cap off the hose and fitting, unbolt the hopper assembly, swing the valve and hopper assembly out of the way to expose the two material cylinders.

With an 1-1/8” impact wrench, remove the 3/4” bolt, face plate, piston cup and piston. Replace the assembly and torque to 100 lbs/ft. Close the hopper. Restart engine; open the lever valve (mounted on top of the pilot valve) turn the pump switch on. As the opposite ram starts to move, close the lever valve and the opposite ram will extend and lock. Shut the engine off, uncouple the quick coupling, swing the hopper out of the way and repeat the procedure the same as the first piston. Clean hinge plate and cylinder plate and reinstall and tighten bolts to the hinge assembly.

Disassembly and Reinstallation of Wear Plate and S-Tube

⚠ CAUTION **It is not necessary to loosen the large nut on the main shaft to change the wear plate, wear ring, S-Tube, or S-Tube extension.**

Disassembly Instructions

Replacing the wear collar and/or wear plate:

1. Remove the four (4) bolts from the tailpipe.
2. Remove the five (5) bolts from the S-tube.
3. Pull swing tube to rear of hopper.
4. Remove and replace wear plate.
5. Check the wear collar and the expansion band and replace if necessary.

Reinstallation instructions

After the wear parts have been installed

1. Tighten the four (4) bolts in the S-Tube to the main shaft.
2. Install the four (4) bolts in the tailpipe housing snug (do not tighten).
3. Start the pump cycling. With the S-Tube moving from side to side, start to torque the (4) four tail pipe bolts slow and even. If the S-Tube fails to complete its stroke, retorque until S-Tube is free.
4. Install lock plate between the four (4) S-Tube bolts.

Hinged Hopper

The valve and hopper can be unbolted by 2 bolts, (1 on either side). Both bolts are to be kept in place at all times.

Prior to removing the 2 bolts to swing the valve and hopper assembly away from the machine be sure the hopper is empty. Disconnect the hose on the right hand S-tube cylinder, plug and cap the hose.

The patented hinge is exceptionally helpful to change piston cups, clean the S-Tube from the inlet side in cases of build-up from long slow pours. On the emergency side, if the engine would fail or any mechanical failures occur or hot concrete would flash set. There should be no panic. Simply follow the above instructions and clean the cylinders and tube and close the valve. Be sure to clean the mating plates and o-rings then tighten the 2 bolts.

SECTION

E

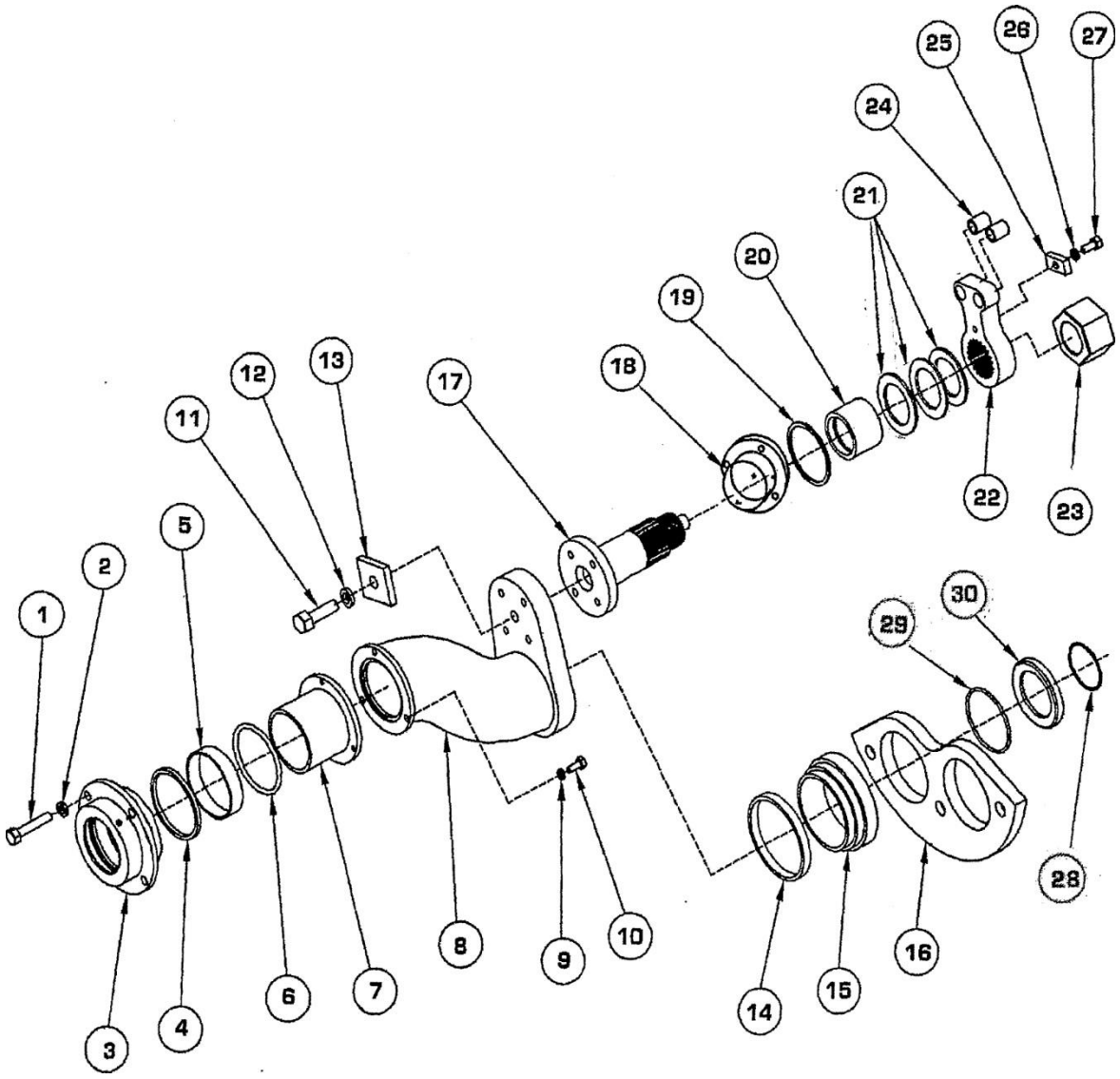
MATERIAL HANDLING COMPONENTS

REINERT PUMPS

SECTION
E

S-Tube Valve Assembly

REINERT ZR430



SECTION E

S-Tube Valve Assembly Part List

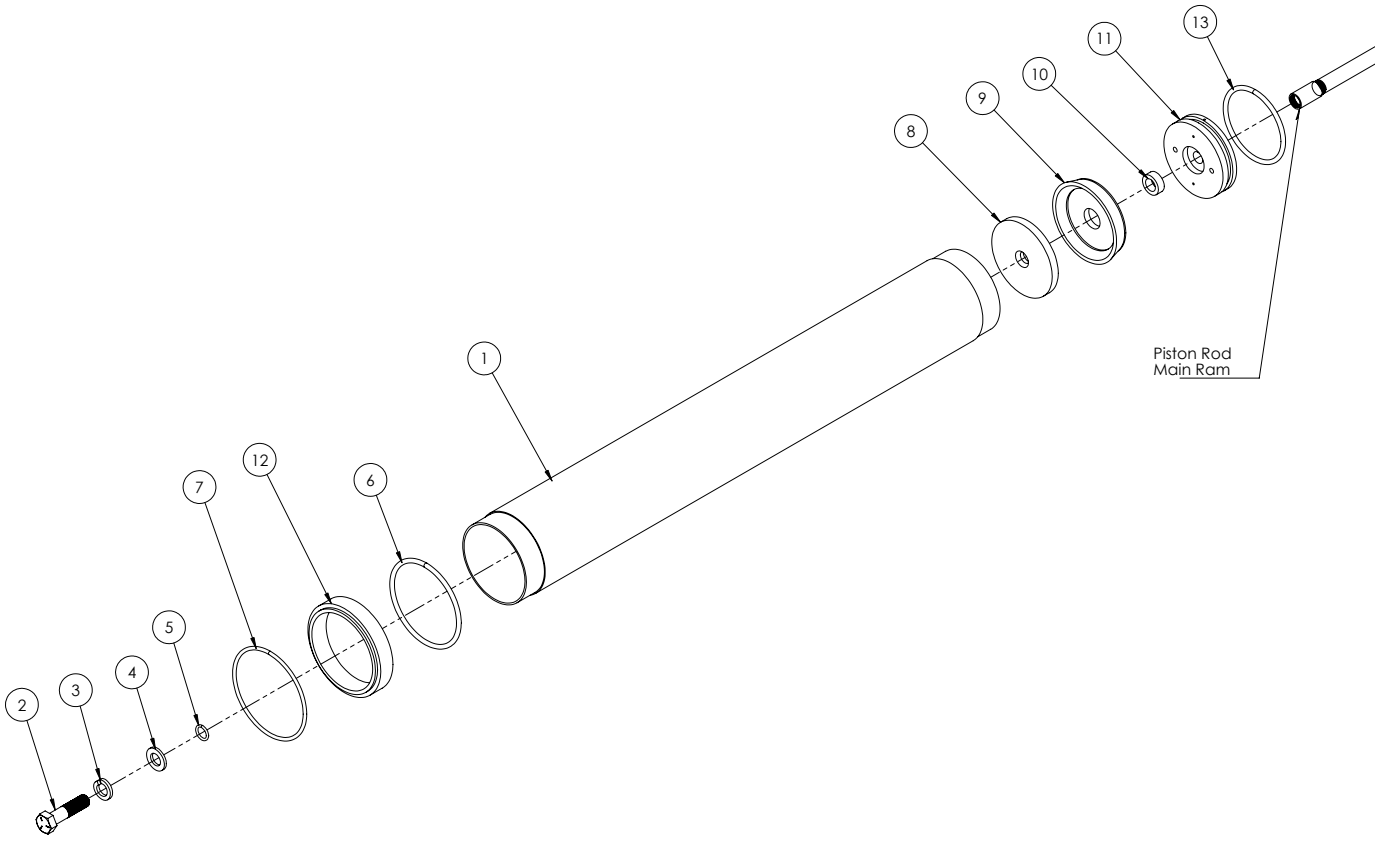
REINERT ZR430

Item	Qty	Description	Part Number
1	4	Hex Head Cap Screw	HB58112
2	4	Lockwasher	HLW58
3	1	Tailpipe Housing	B30246
4	1	Seal	P100073
5	1	Wear Strip	P100074
6	1	O-Ring	P100080
7	1	S-Tube Extension	C20137
8	1	S-Tube	C20180
9	3	Lockwasher	HLW38
10	3	Hex Head Cap Screw	HB3816112
11	1	Hex Head Cap Screw	HB340212
12	1	Lockwasher	HLW34S
13	1	Retainer Plate	A40051
14	1	Expansion Band	P100386
15	1	Wear Ring	B30167
16	1	Wear Plate	B30150
17	1	Main Shaft	B30164
18	1	Bearing Housing	B30238
19	1	O-Ring	OR335
20	1	Bearing	B30352
21	3	Thrustwasher	A40045
22	1	Crank Arm	B30118
23	1	Nut	HN21412
24	2	Bushing	P100066
25	1	Retainer Plate	A40064
26	1	Lockwasher	HLW716
27	1	Cap Screw	HB71614114
28	2	O-Ring	OR347
29	2	O-Ring Insert	A40296
30	2	O-Ring	OR348

SECTION
E

Concrete Cylinder Assembly

REINERT ZR430



SECTION E

Concrete Cylinder Assembly Part List

REINERT ZR430

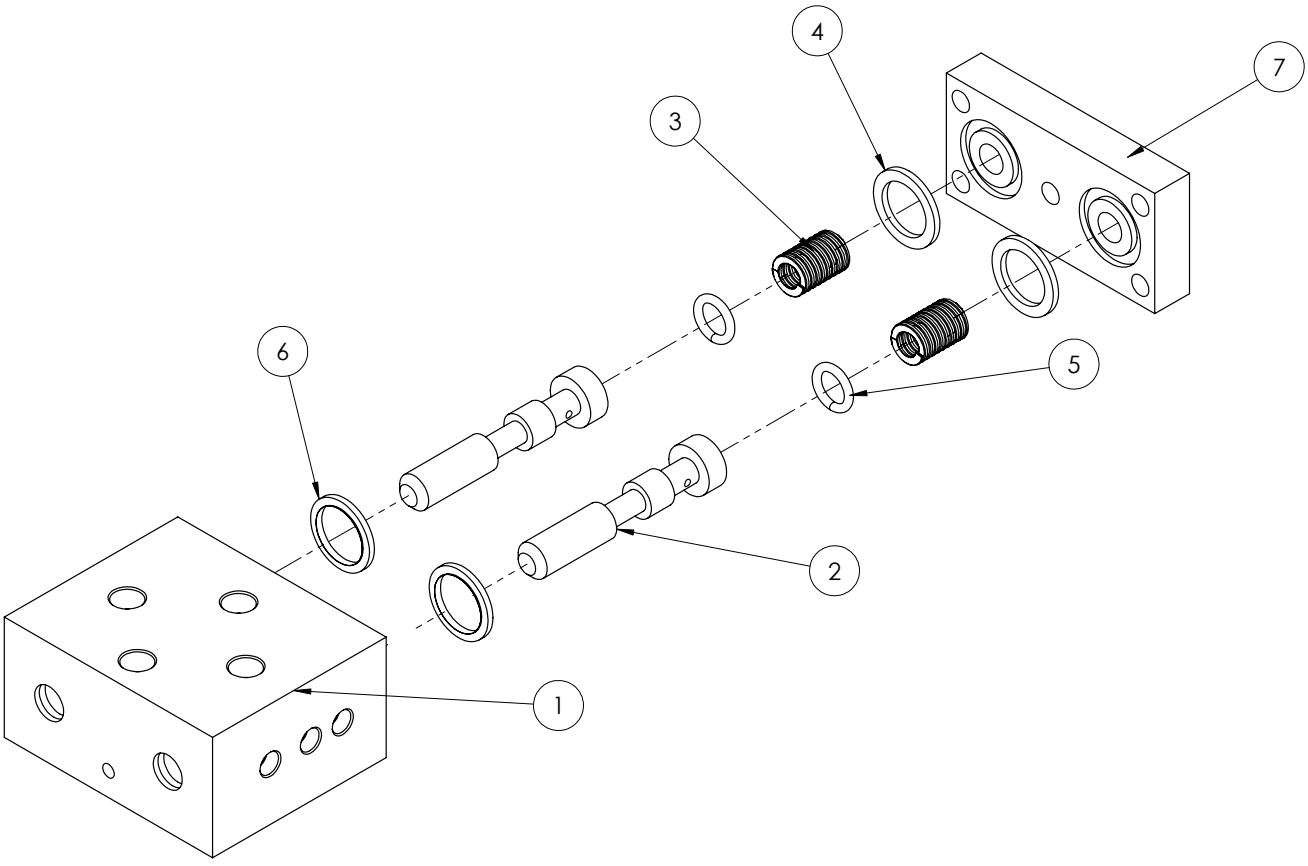
Item	Qty	Description	Part Number
1	1	Material Cylinder	B30495
2	1	Cap screw	HB34163
3	1	Lock Washer	HLW34
4	1	Flat Washer	HFW34
5	1	O-Ring	OR210
6	1	O-Ring	OR348
7	1	O-Ring	OR347
8	1	Face Plate	A40124
9	1	Piston Cup	P100185
11	1	Piston	A40124-1
12	1	Valve Plate Insert	A40296
13	8	O-Ring	OR342

SECTION E

Main Pilot Valve

REINERT ZR430

Item	Qty	Description	Part Number
1	1	Pilot Valve Body	A40180
2	2	Spool	A40182
3	2	Spring	P100327
4	2	O-Ring	OR215
5	2	O-Ring	OR114
6	2	Wiper	P100292
7	1	Cap - Main Pilot Valve	A40181

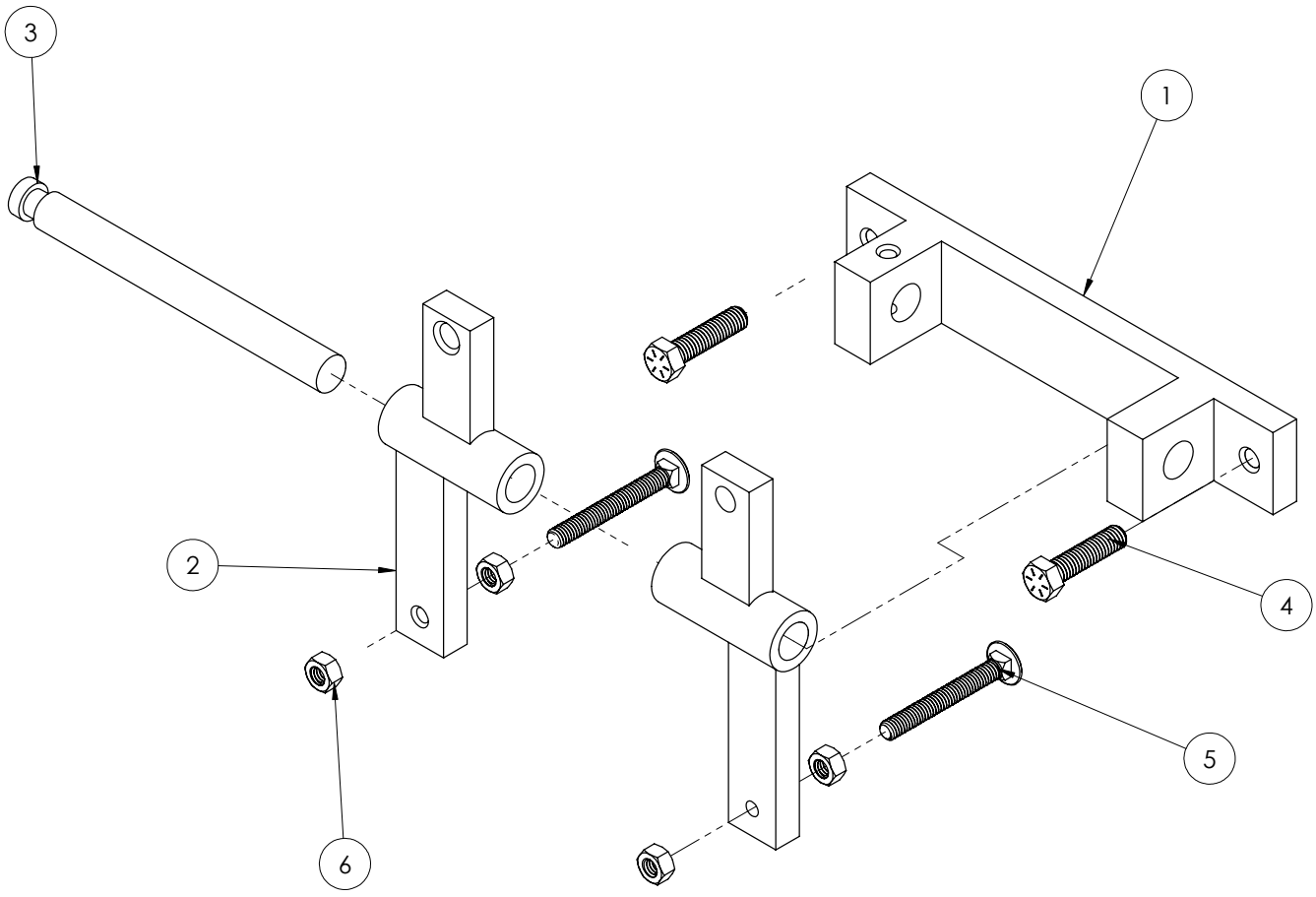


SECTION E

Trip Rod Assembly (Pilot Valve)

REINERT ZR430

Item	Qty	Description	Part Number
1	1	Trip Rod Bar	A40201-3
2	2	Trip Lever	A40201-1
3	1	Trip Lever Pin	A40201-2
4	2	Hex Head Cap Screw	HB3816112
5	2	Carriage Bolt	HB51618212C
6	4	Nut	HN516N
7	1	Trip Rod Assembly	A40201

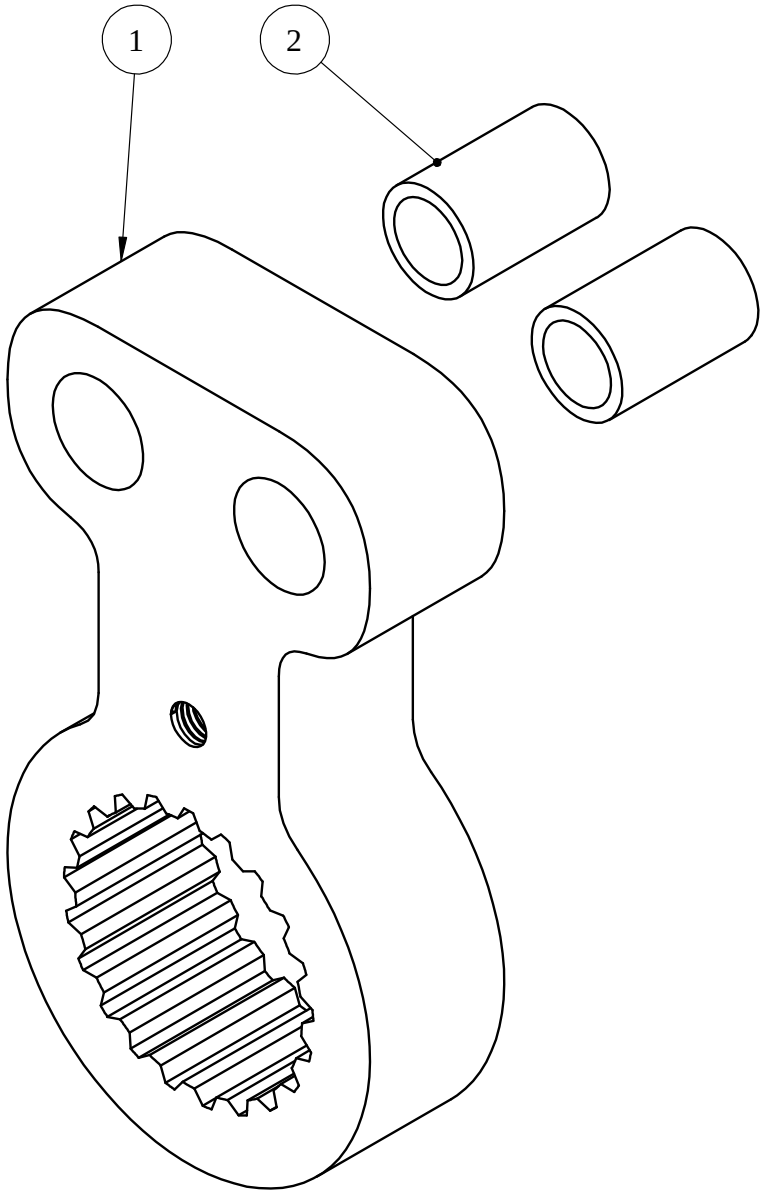


SECTION E

Crank Arm

REINERT ZR430

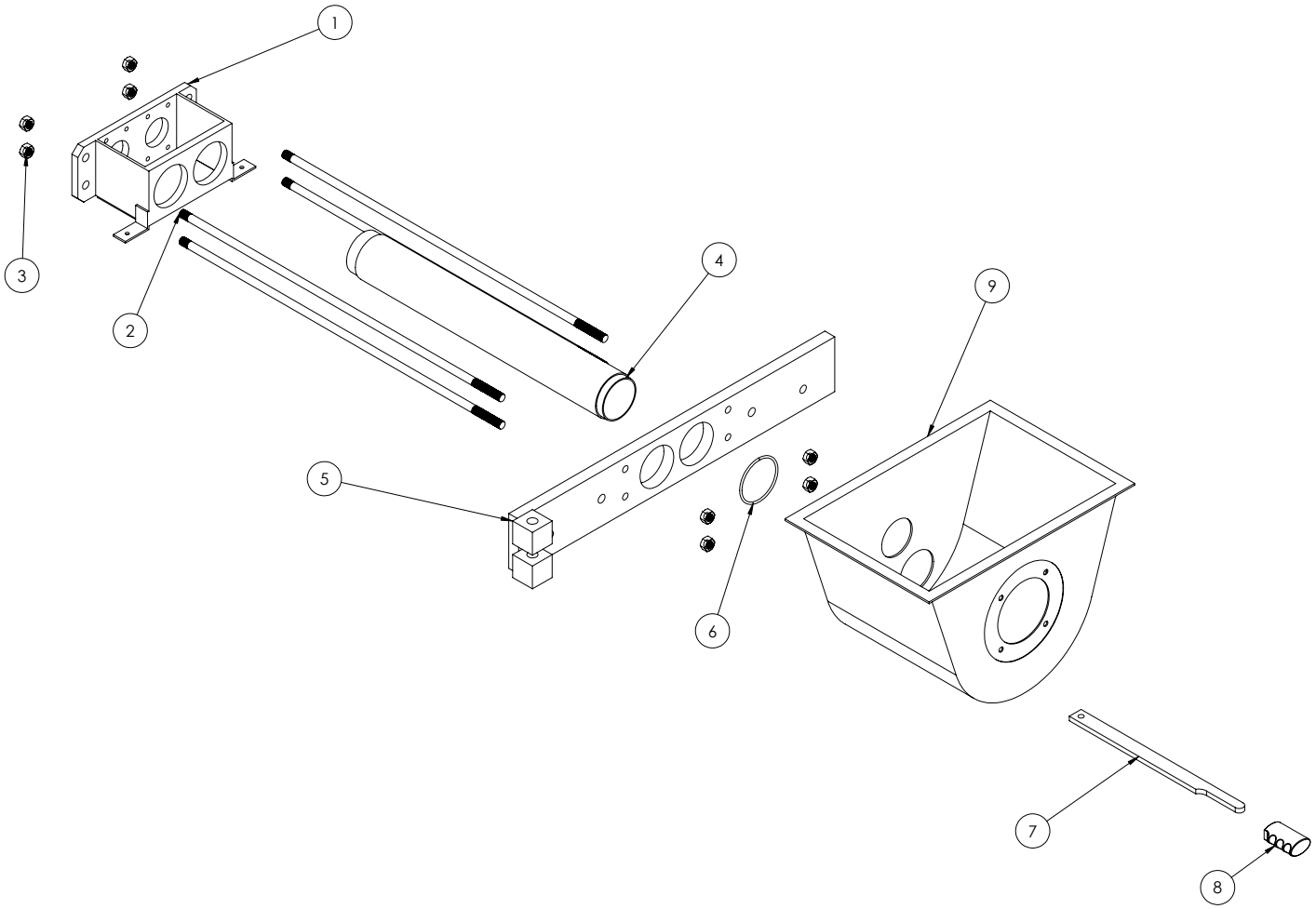
Item	Qty	Description	Part Number
1	1	Crank Arm	B30118
2	2	Bushing	P100066



SECTION
E

Pumpkit Assembly

REINERT ZR430



SECTION E

Pumpkit Assembly

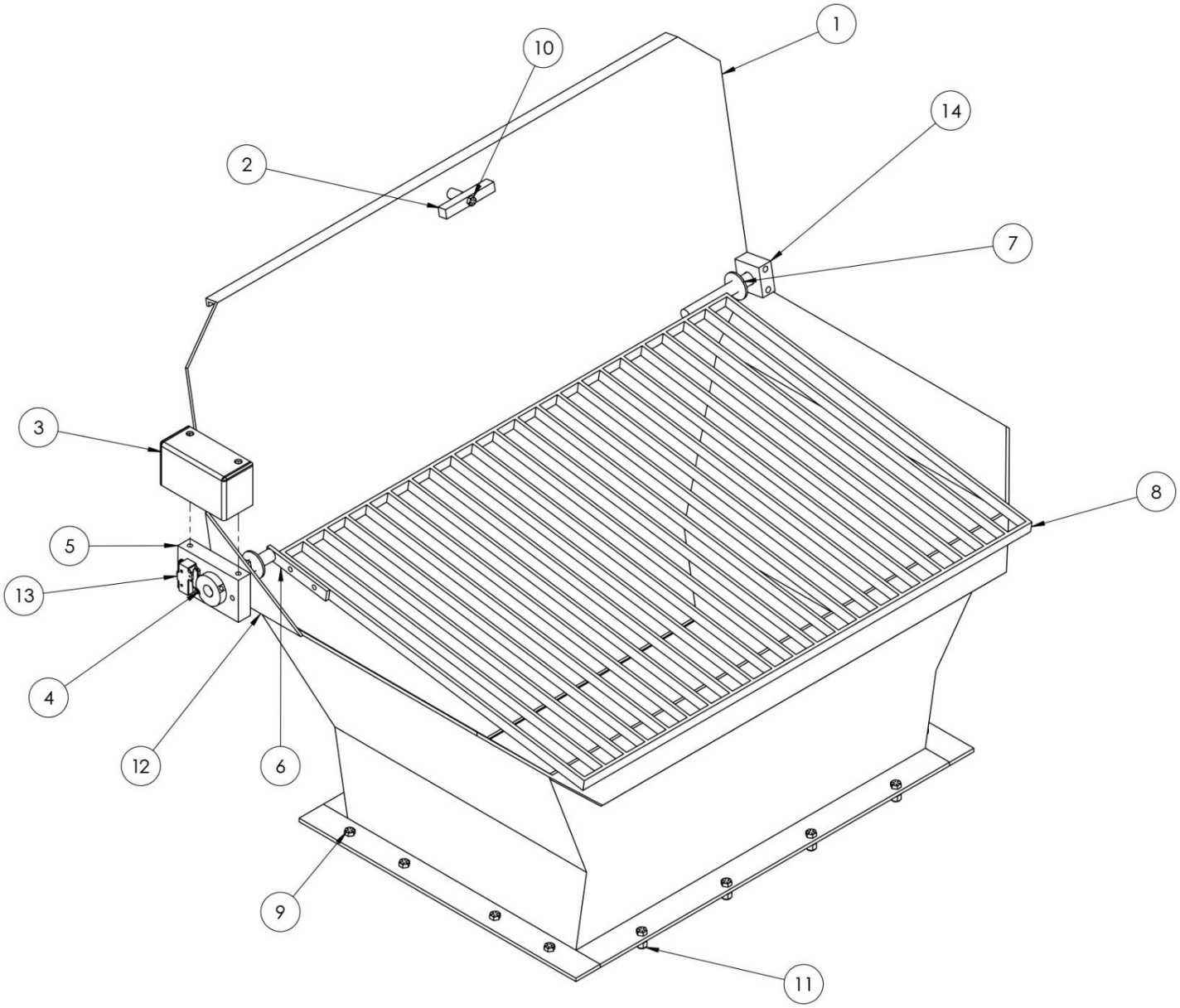
REINERT ZR430

Item	Qty	Description	Part Number
1	1	Waterbox	C20217
2	4	Tie Rod	A40544
3	4	Nut	HN3416
4	2	Material Cylinder	A40495
5	1	Hinge Plate	B30503
6	1	O-Ring	OR348
7	1	Clean Out Door Handle	A40120
8	1	Clean Out Door Grip	P100196
9	1	Valve Housing	D10166

SECTION
E

Hopper Assembly

REINERT ZR430



SECTION E

Hopper Assembly Part List

REINERT ZR430

Item	Qty	Description	Part Number
1	1	Hopper	C20173
2	1	Grate Latch	A40217
3	1	Safety Switch Cover	A40424
4	1	Safety Switch Cam	A40427
5	1	Safety Switch Block	A40429
6	1	Grate Bracket	B30152-1
7	1	Grate Bracket	B30152-2
8	1	Hopper Grate	B30512
9	14	Hex Head Cap Screw	HB38161
10	1	Hex Head Cap Screw	HB51618212
11	14	Nut	HN3816N
12	1	Safety Switch Mounting Flange	A40430
13	1	Safety Switch	P100650
14	1	Mounting Block	A40375

SECTION

F

HYDRAULIC COMPONENTS

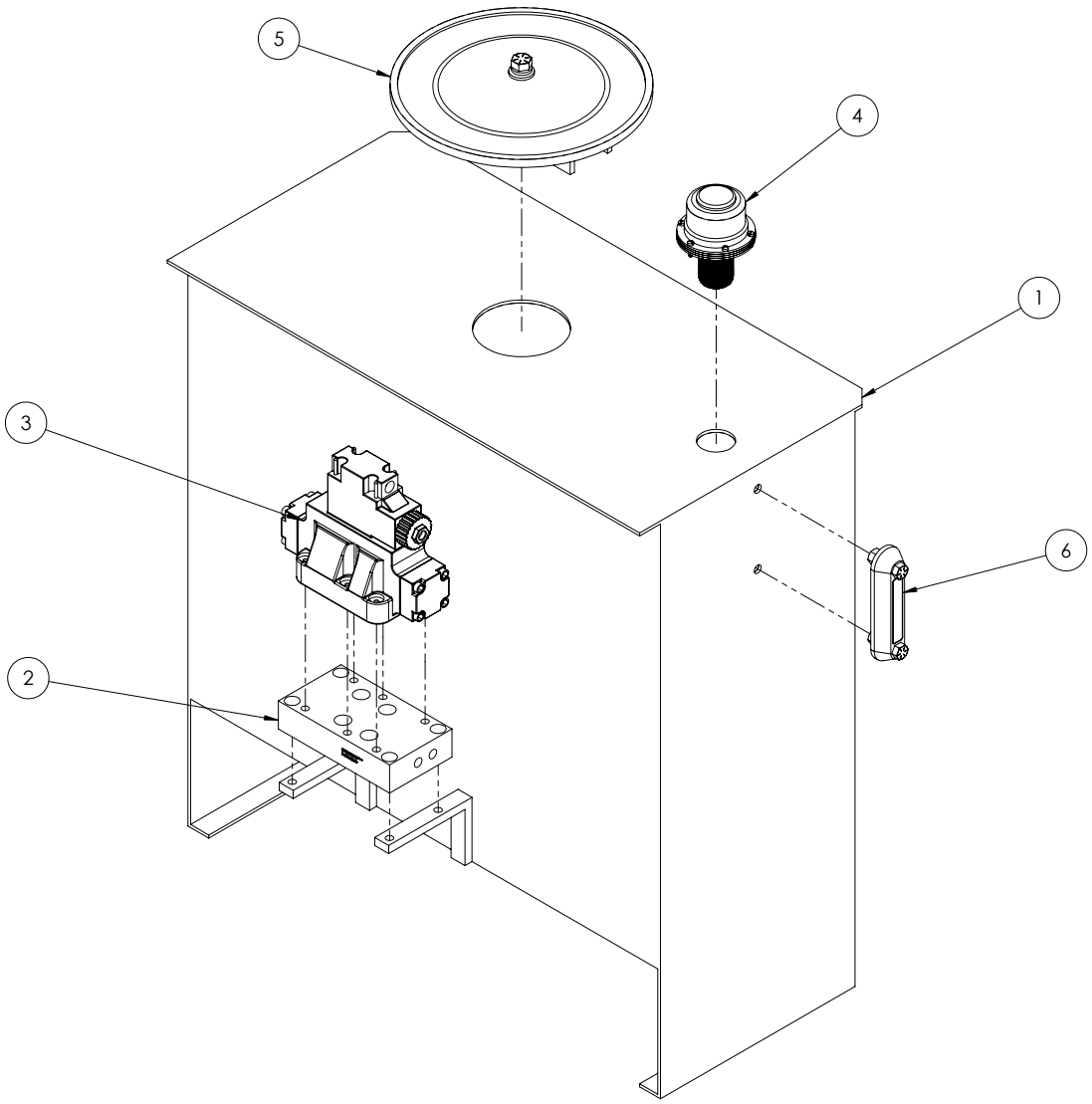
REINERT PUMPS

SECTION F

Hydraulic Tank Assembly (1 of 2)

REINERT ZR430

Item	Qty	Description	Part Number
1	1	Hydraulic Tank	B30479
2	1	Subplate	P100804
3	1	Directional Valve	P100098
4	1	Filler Cap	P100120
5	1	Tank Cover	P100719
6	1	Sight Gauge	P100119

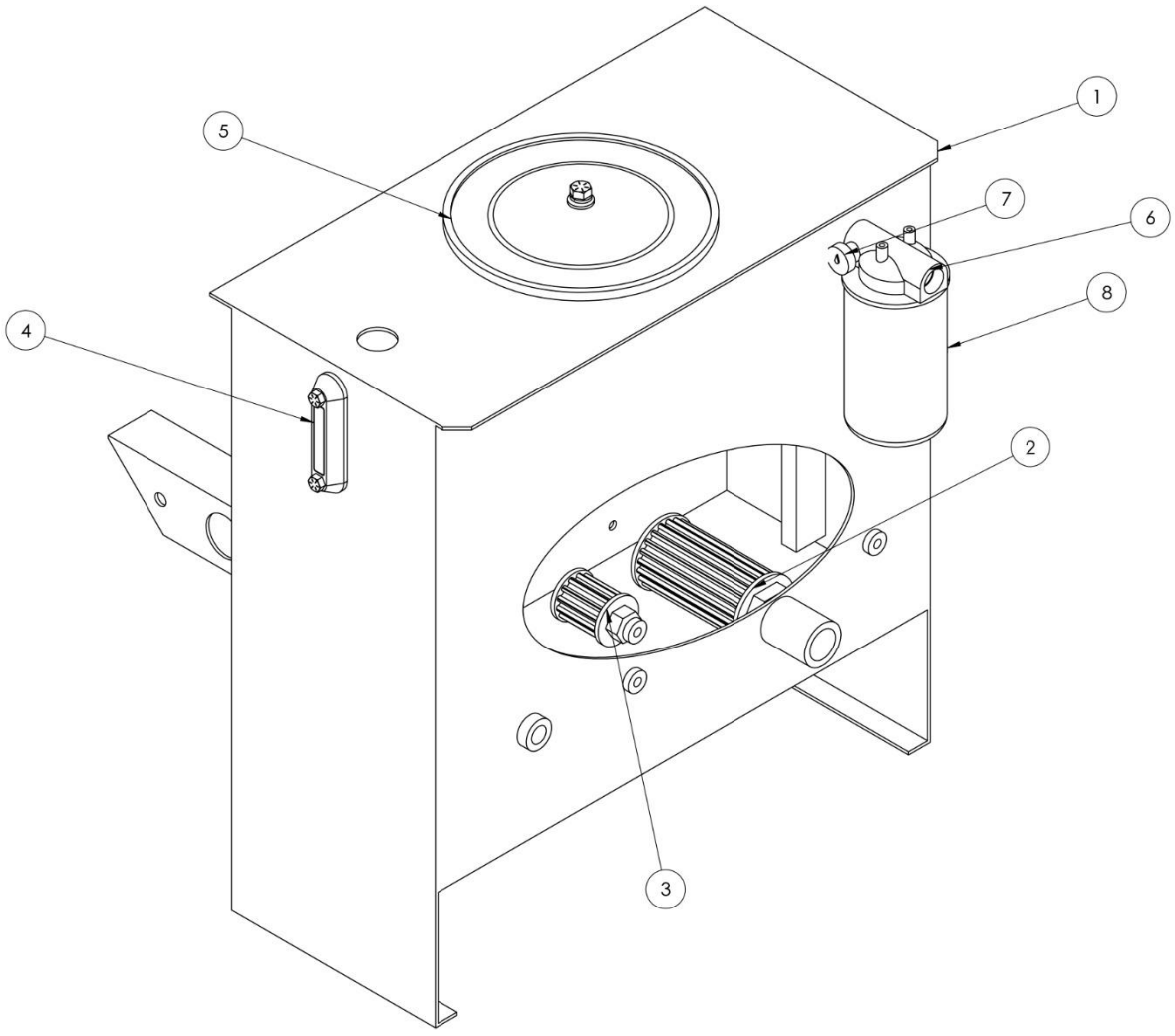


SECTION F

Hydraulic Tank Assembly (2 of 2)

REINERT ZR430

Item	Qty	Description	Part Number
1	1	Hydraulic Tank	B30479
2	1	Inlet Strainer	P100111
3	1	Cooler Pump Strainer	P100150
4	1	Sight Gauge	P100119
5	1	Hydraulic Tank Lid	P100719
6	1	Hydraulic Return Line Filter	P100637
7	1	Pressure Gauge	P100275
8	1	Hydraulic Return Line Filter Element	P100832

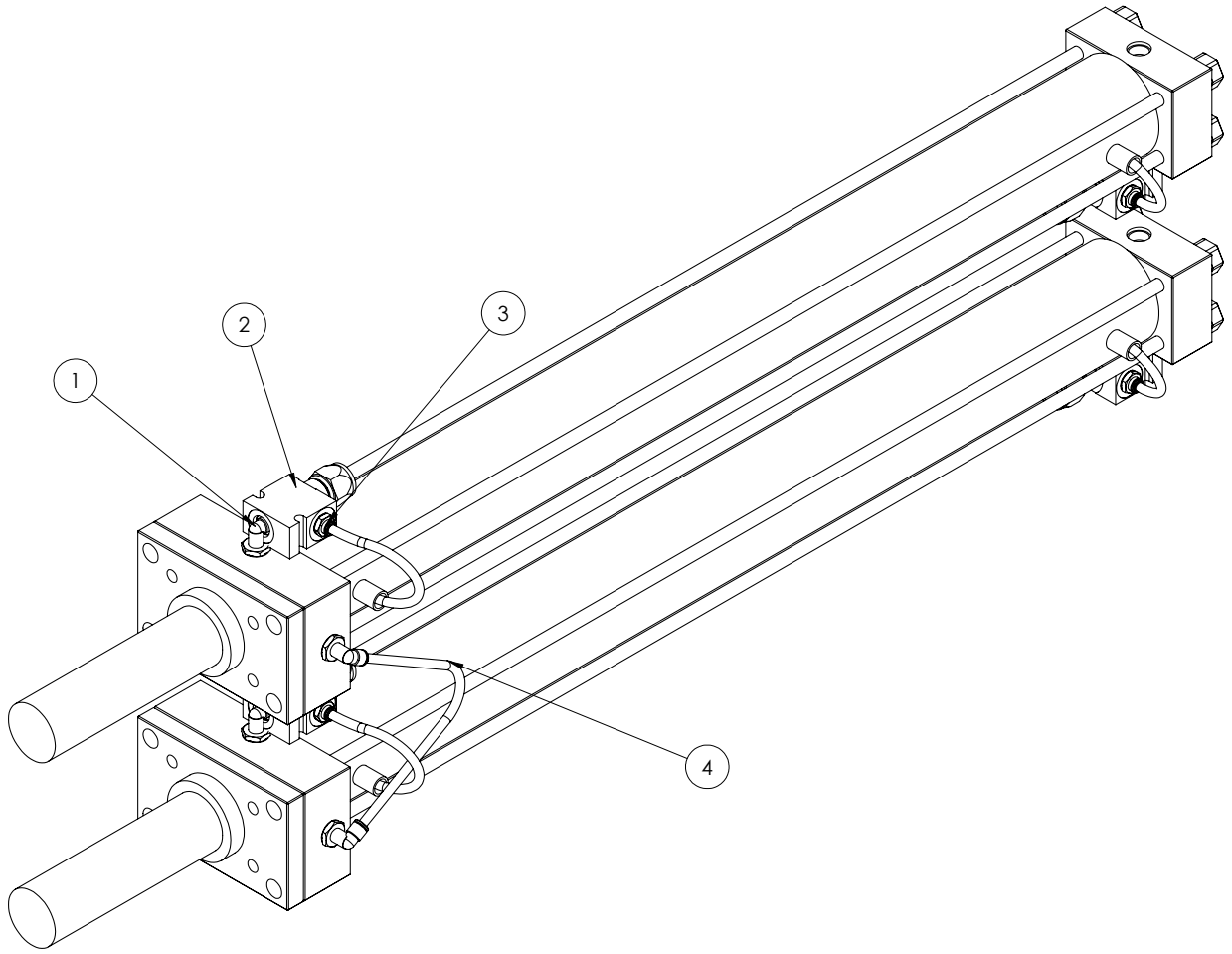


SECTION F

Slave Oil Circuit

REINERT ZR430

Item	Qty	Description	Part Number
1	4	Fitting	HF640166
2	4	Check Valve	P100068
3	4	Fitting	HF640046
4	4	Hose	HK141E14

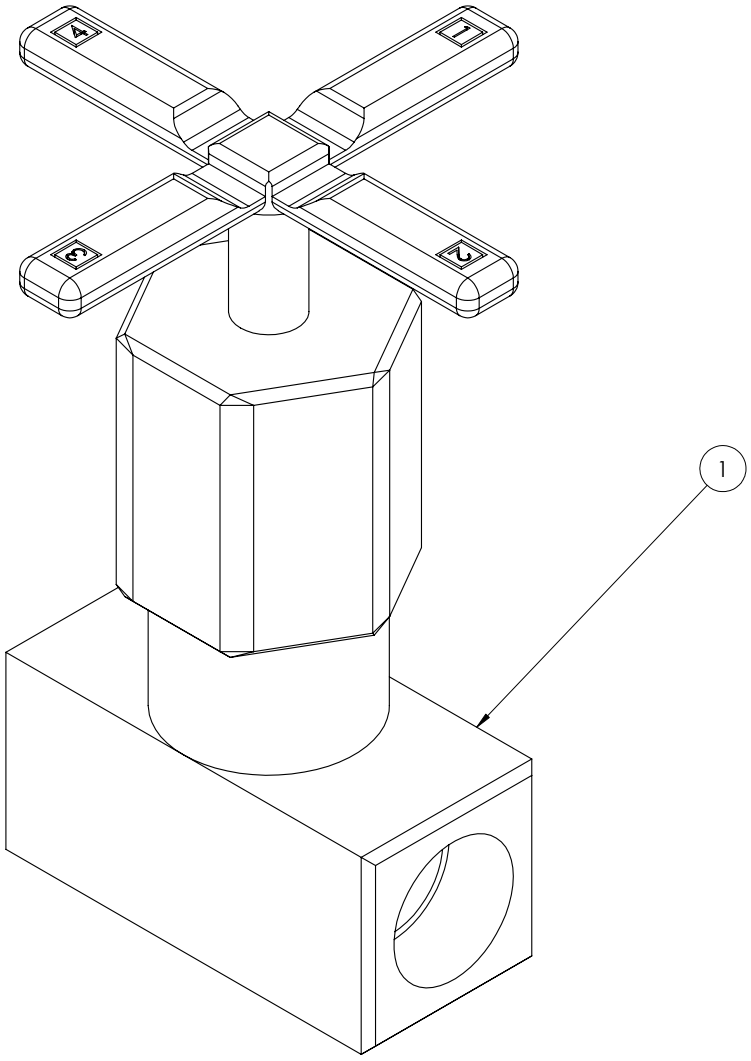


SECTION F

Volume Control Valve

REINERT ZR430

Item	Qty	Description	Part Number
1	1	Volume Control Valve	P100102

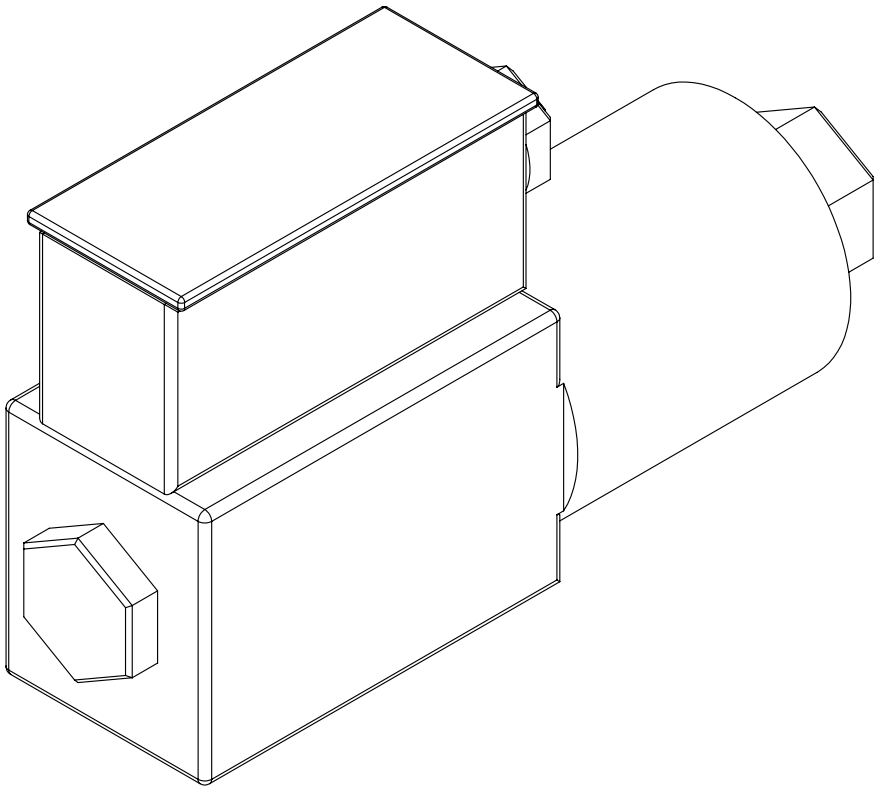


SECTION F

Solenoid Valve

REINERT ZR430

Item	Qty	Description	Part Number
1	1	Solenoid Valve	P100100

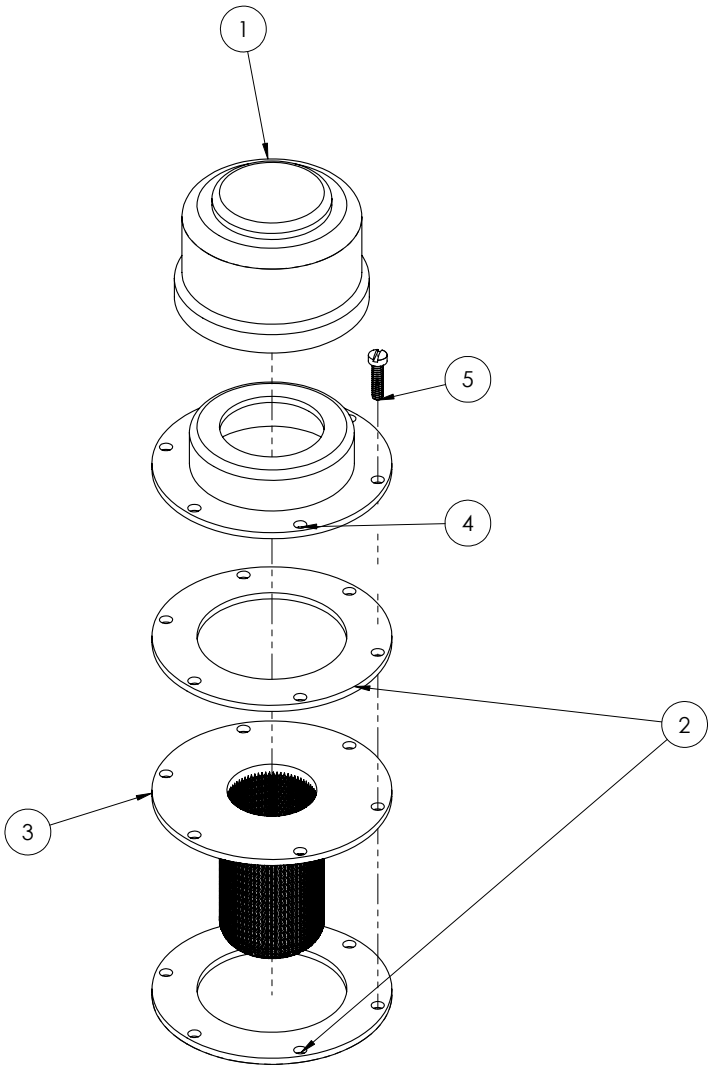


SECTION F

Hydraulic Tank Cap Assembly

REINERT ZR430

Item	Qty	Description	Part Number
1	1	Hydraulic Tank Cap	P100120
2	6	Screw	HB102434P
3	1	Cover	P100210-3
4	2	Cover Gasket	P100210-1
5	1	Screen	P100210-2

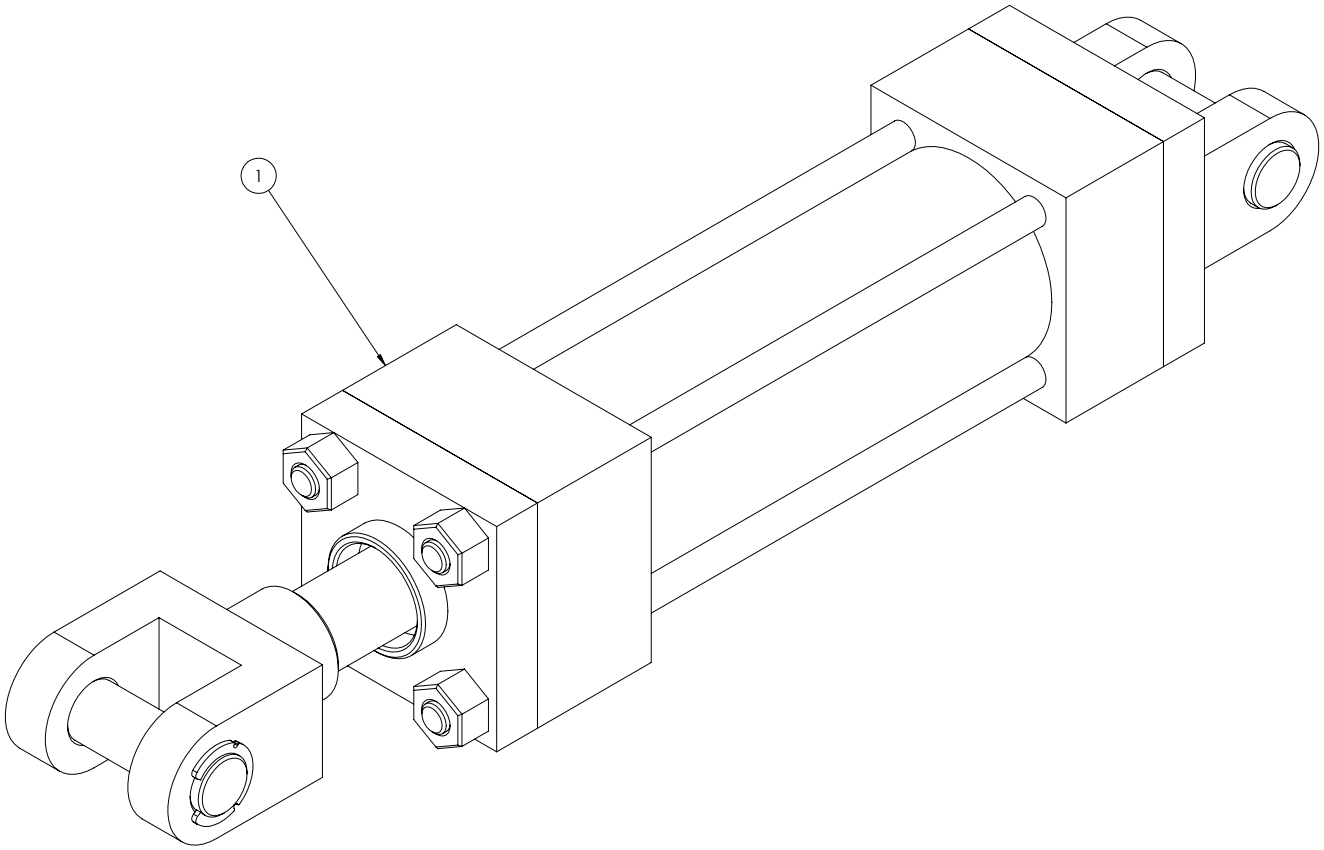


SECTION F

Hydraulic Cylinder Assembly (S-Valve)

REINERT ZR430

Item	Qty	Description	Part Number
1	1	Hydraulic Cylinder	P100738

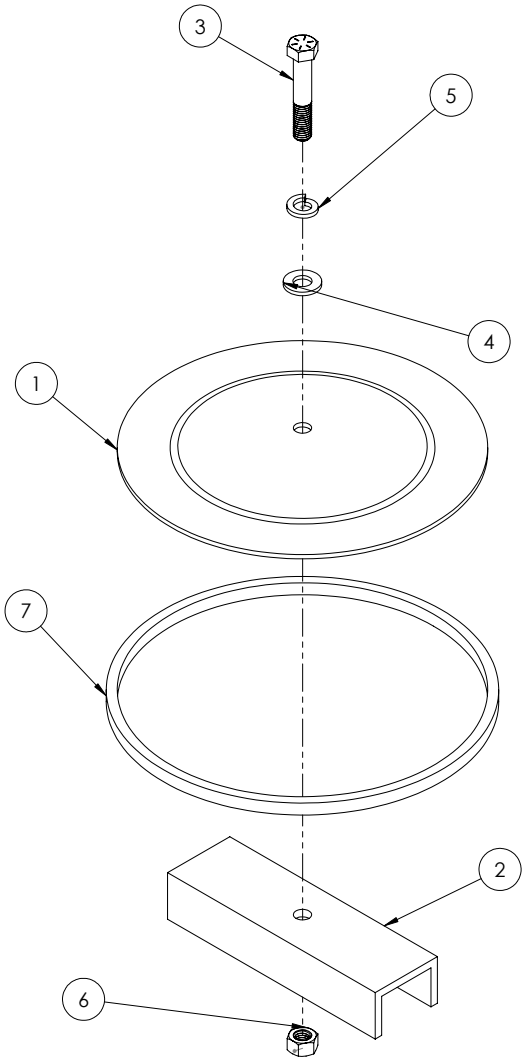


SECTION F

Hydraulic Lid Assembly

REINERT ZR430

Item	Qty	Description	Part Number
1	1	Bolt	HB5811312
2	1	Lock Washer	HLW58
3	1	Flat Washer	HFW58
4	1	Hydraulic Tank Lid	P100719
5	1	Hydraulic Tank Lid Gasket	P100343
6	1	Lock Down Channel	A40209
7	1	Nut (Tack Welded to the Channel)	HN5811N

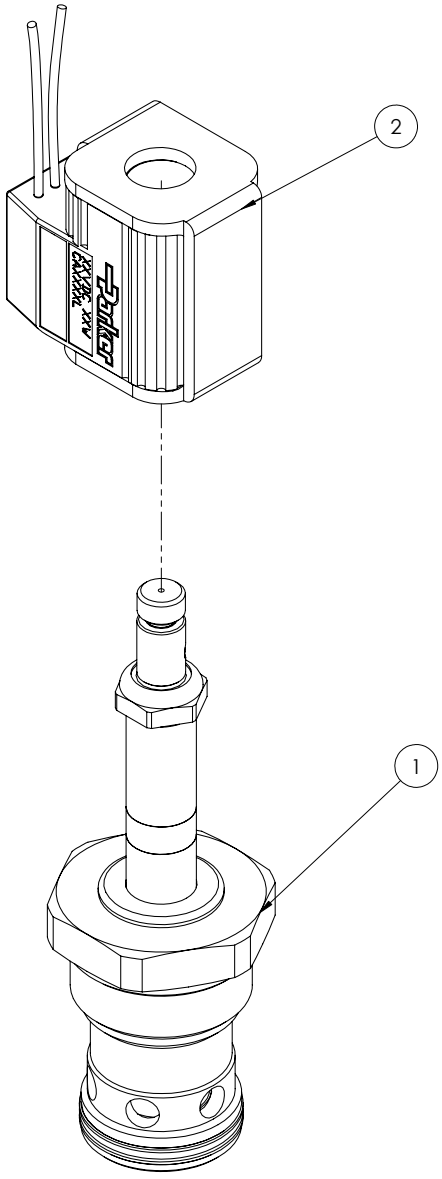


SECTION F

Cartridge Valve

REINERT ZR430

Item	Qty	Description	Part Number
1	1	Cartridge	P100200
2	1	Coil	P100201

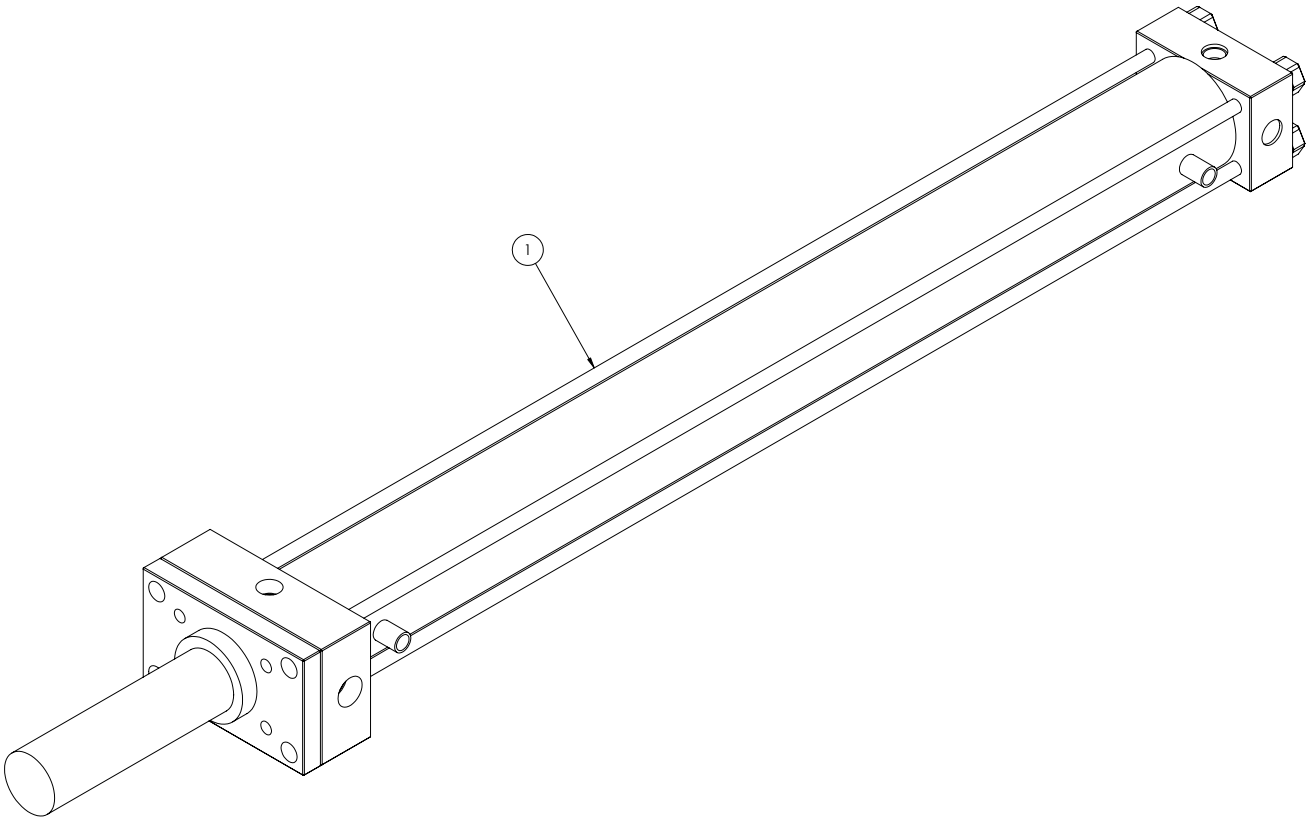


SECTION F

Main Hydraulic Cylinder

REINERT ZR430

Item	Qty	Description	Part Number
1	1	Main Hydraulic Cylinder	P100783

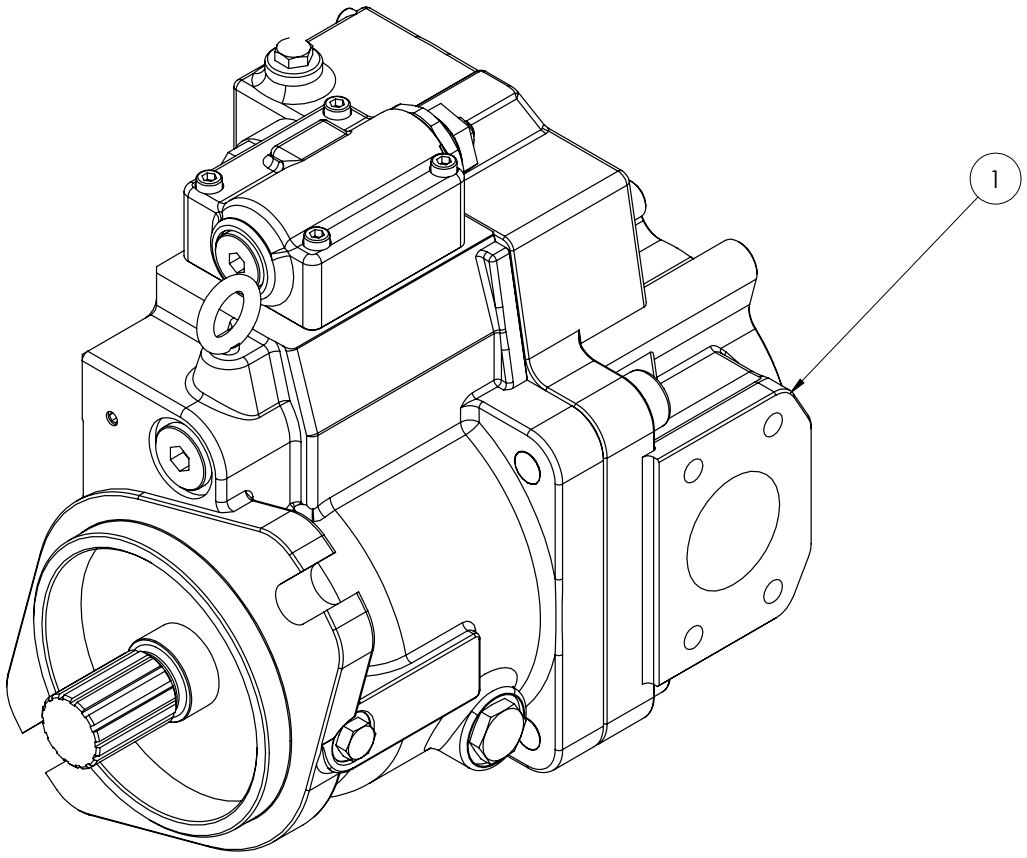


SECTION F

Hydraulic Pump

REINERT ZR430

Item	Qty	Description	Part Number
1	1	Hydraulic Pump	P100789

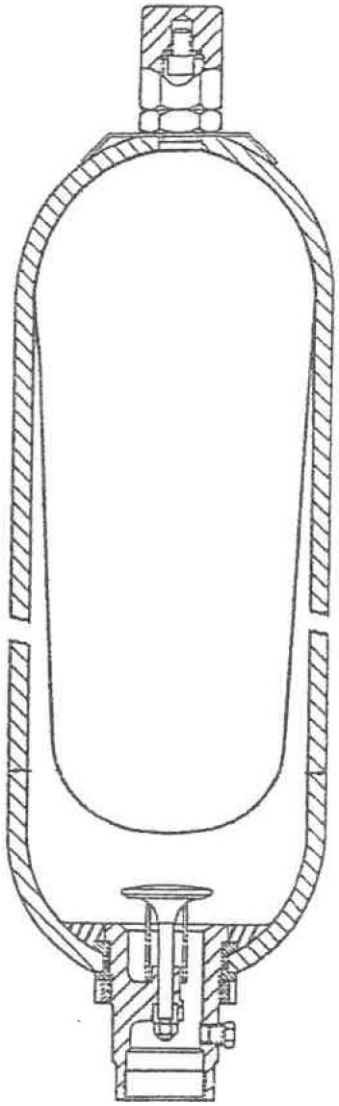


SECTION F

Accumulator

REINERT ZR430

Item	Qty	Description	Part Number
1	1	Accumulator	P100132



SECTION

G

SUB-ASSEMBLY

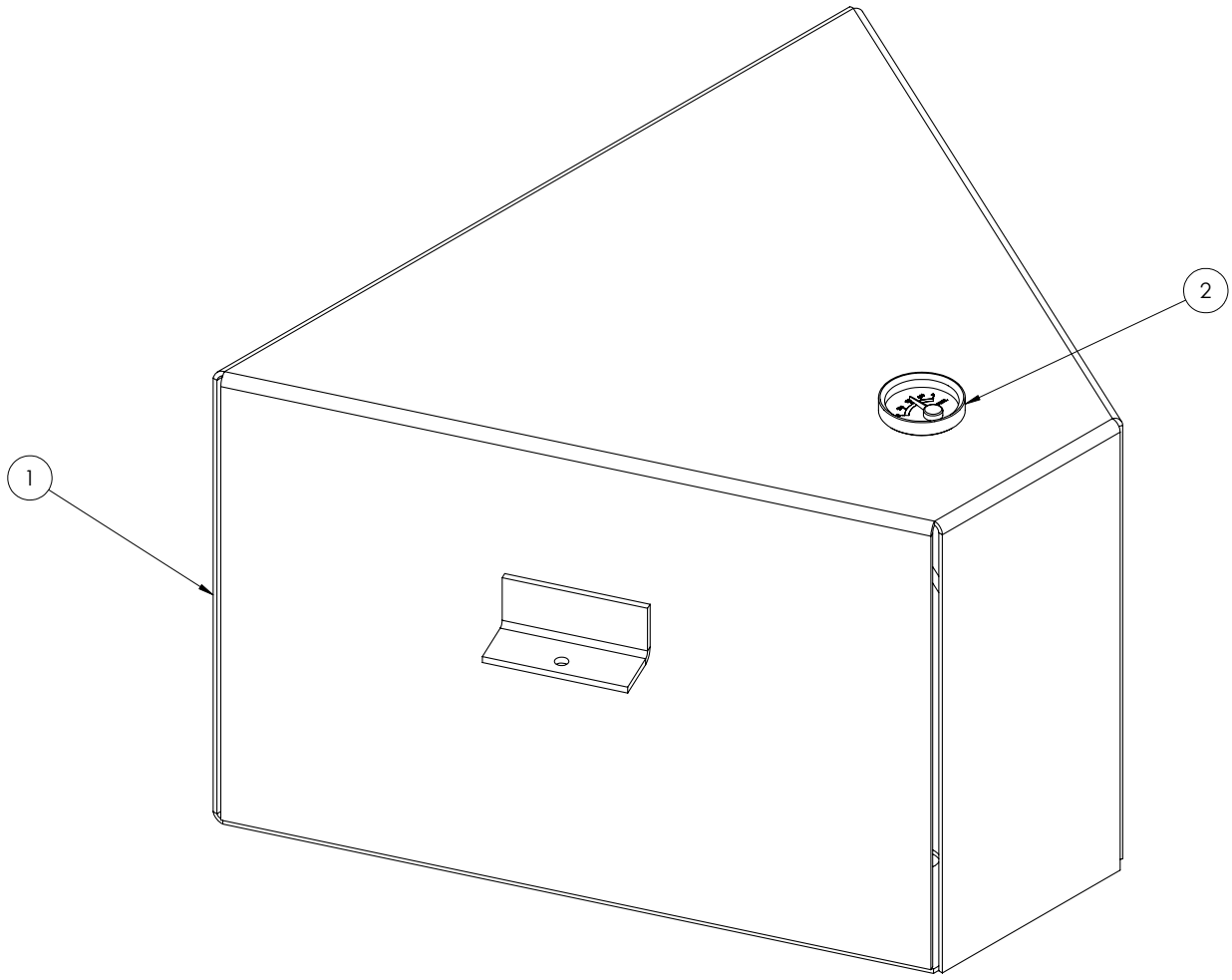
REINERT PUMPS

SECTION G

Fuel Tank

REINERT ZR430

Item	Qty	Description	Part Number
1	1	Fuel Tank	C20151
2	1	Fuel Cap Gauge	P100099

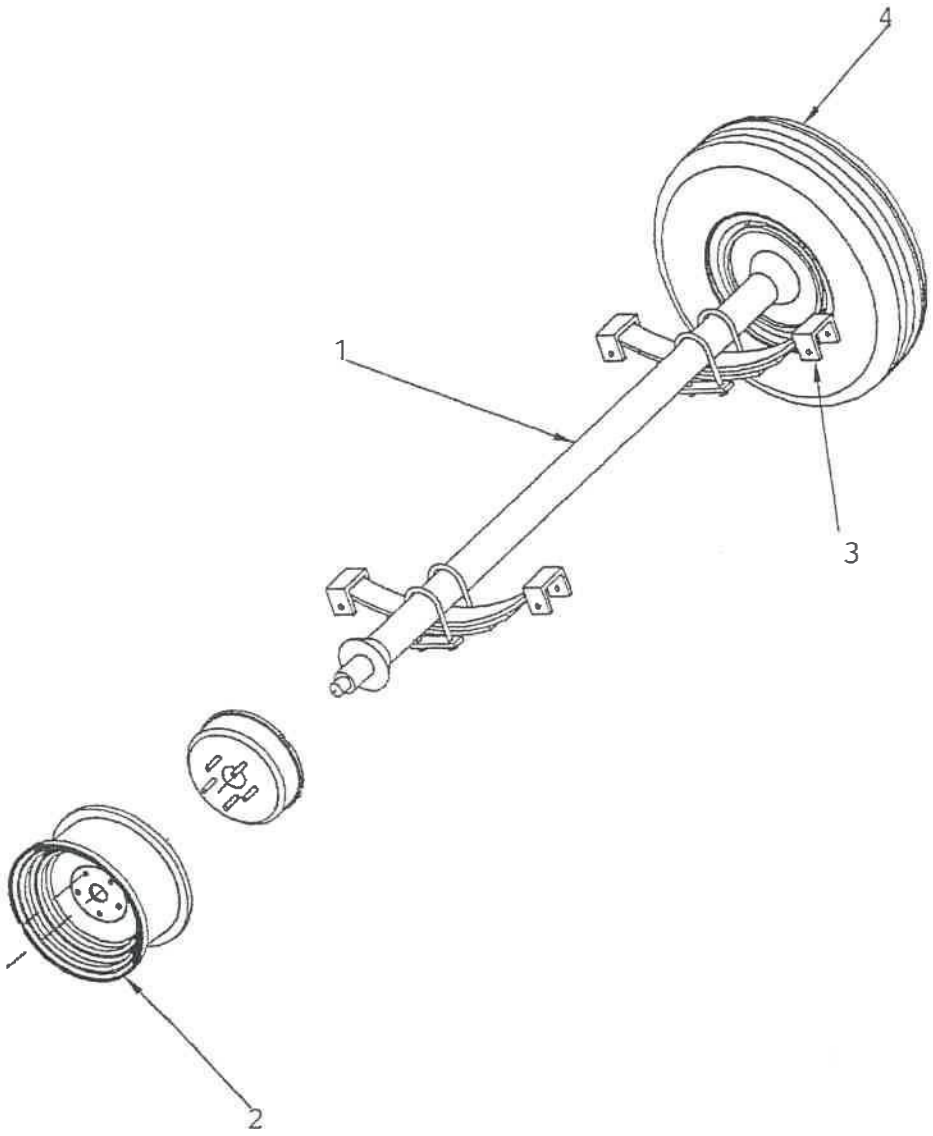


SECTION G

Axle and Wheel Assembly

REINERT ZR430

Item	Qty	Description	Part Number
1	1	Axle Assembly	P100126
2	2	Wheel	P100129
3	4	Hanger	P100127
4	2	Tire	P100130-1

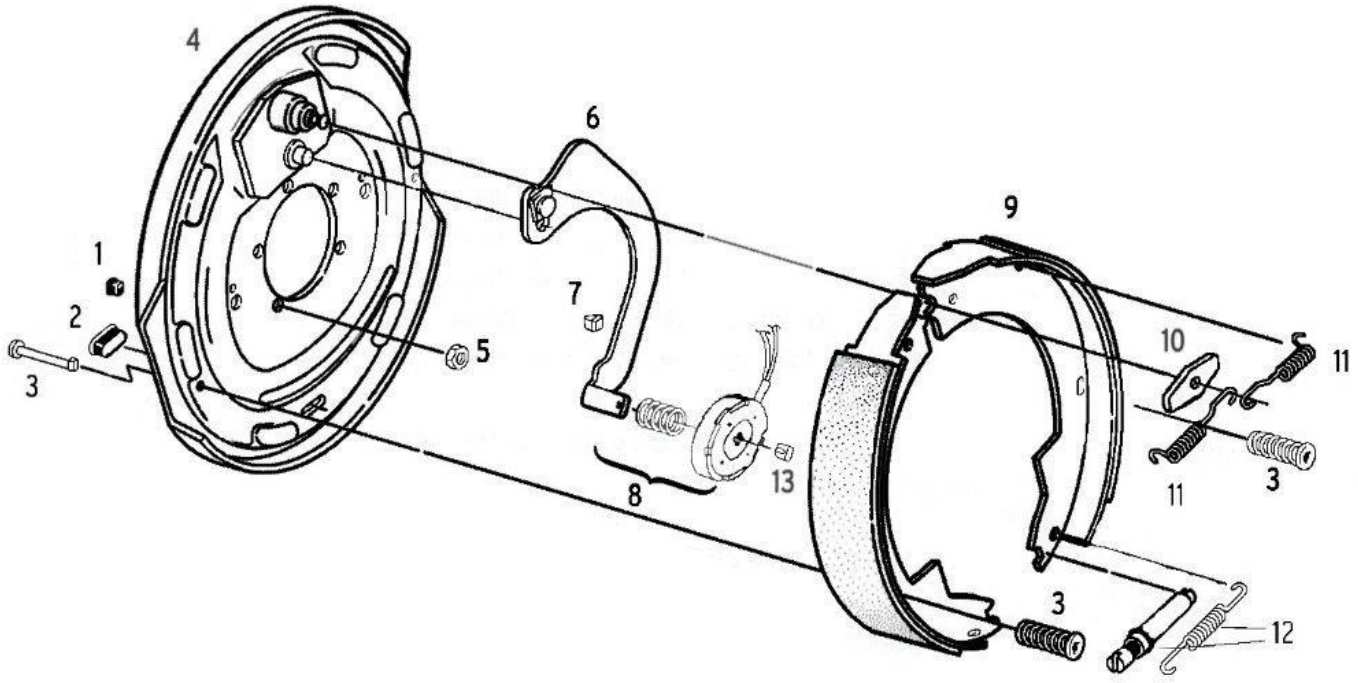


SECTION
G

Brake Assembly

REINERT ZR430

Item	Qty	Description	Part Number
1	1	Wire Grommet Dexter#046-016-00	See Mfg
2	1	Shoe Hold Down Kit Dexter#BP06-120	See Mfg
3	1	7-16"-20 Brake Mounting Kit Dexter#6-17	See Mfg
4	1	Adjuster Slot Plug 4Pk Dexter#BP10=220	See Mfg
5	1	Backing Plate Dexter#36-19-10	See Mfg
6	1	7/16"-20 Brake Mounting Stud Dexter#007-041-00	See Mfg
7	1	Magnet Actuating Arm Dexter#BP02-170	See Mfg
8	1	Magnet Wire Clip Dexter #027-005-00	See Mfg
9	1	Magnet Kit Dexter#BP0l-115	See Mfg
10	1	Shoe & Lining Dexter#K71-047-00	See Mfg
11	1	Anchor Post Washer Dexter#00S-067-00	See Mfg
12	1	Shoe Return Spring Dexter#BP07-105	See Mfg
13	1	Adjuster & Spring Dexter#BPl0-065	See Mfg
14	1	Magnet Clip-4 Pk Dexter#BP19-001	See Mfg

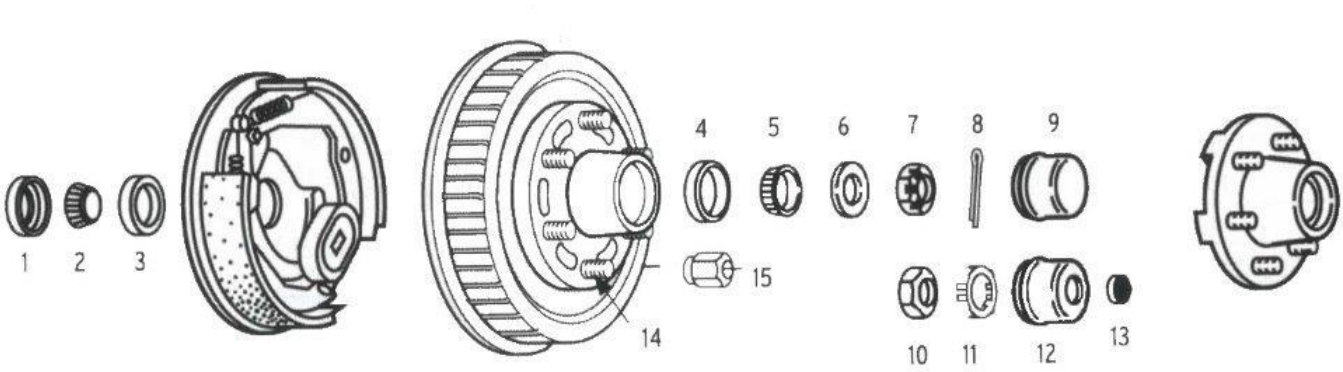


SECTION
G

Hub and Drum Assembly

REINERT ZR430

Item	Qty	Description	Part Number
1	1	Grease Seal	10-36Dexter
2	1	Inner Bearing	25580Dexter
3	1	Inner Race	25520Dexter
4	1	Outer Race	LM67010Dexter
5	1	Outer Bearing	LM67048Dexter
6	1	Spindle Washer	5-23Dexter
7	1	Spindle Nut	165686Dexter
8	1	Cotton Pin	45896Dexter
9	1	Grease Cap	21-42-1Dexter
10	1	Spindle Nut	6-190Dexter
11	1	Spindle Nut	6-191Dexter
12	1	Grease Cap	21-42-1Dexter
13	1	Rubber plug	85-1Dexter
14	1	Stud	7-150Dexter
15	1	Nut	X1023RDexter



SECTION

H

MISCELLANEOUS

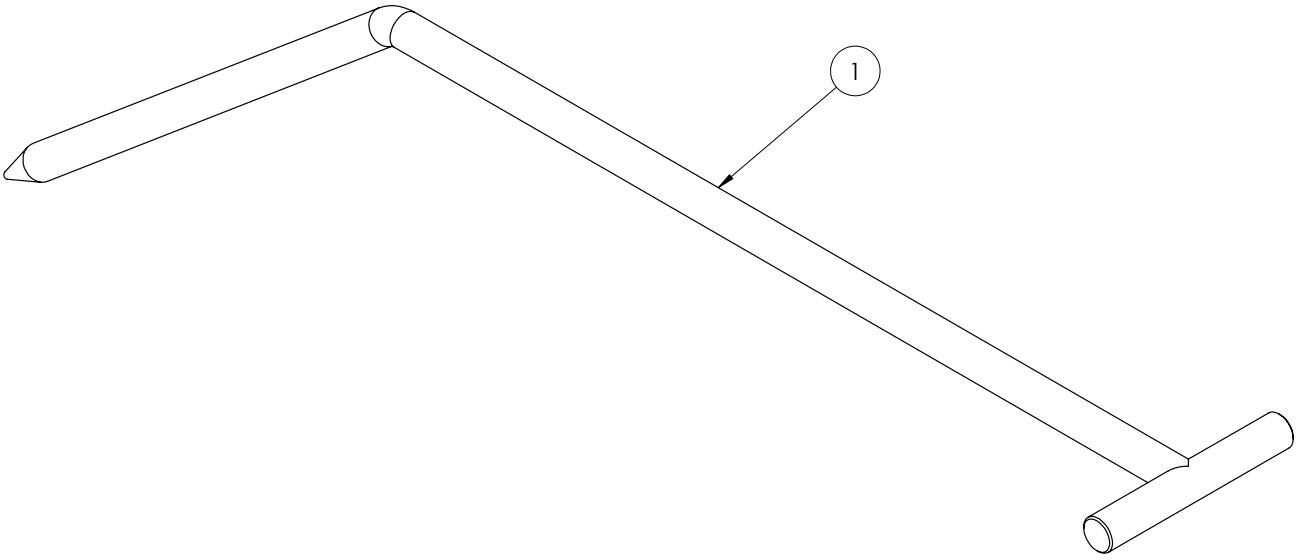
REINERT PUMPS

SECTION H

Clean-Out Bar

REINERT ZR430

Item	Qty	Description	Part Number
1	1	Clean-Out Bar	A40130

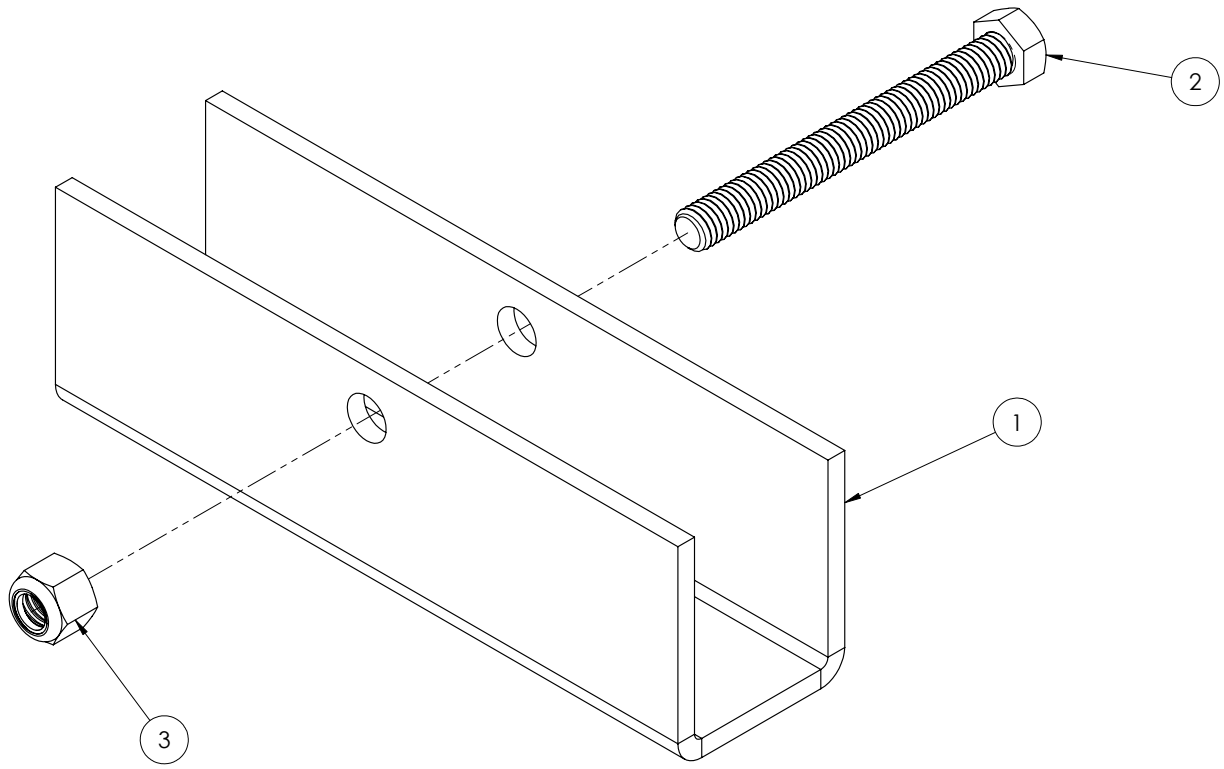


SECTION
H

Safety Block

REINERT ZR430

Item	Qty	Description	Part Number
1	1	Safety Block	A40128
2	1	Hex Head Cap Screw	HB38164
3	1	Nut	HN3816N



SECTION H

Safety Labels - Location

REINERT ZR430

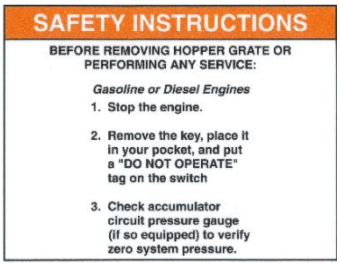
Position	Qty	Description	Part No.
1	2	Safety Instructions- Hopper Grate, Accumulator	P100841
2	1	Hydraulic Oil Only	P100305
3	2	Warning- Remote Control	P100507
4	2	Reinert Decal-Hood	P100896
5	2	ZR-430	P100891
6	2	Made in USA	P100762
7	2	Warning- Explosion Hazard relieve pressure	P100511
8	2	Warning -Do not operate without training	P100510
9	1	Diesel Only	P100319
10	1	Warning- Do not put hands in waterbox	P100509
11	1	Reinert with website-Hopper	P100887
12	2	Warning- Keep hands out	P100508
13	2	Warning-Do not operate without jack stand lowered	P100922
14	4	Warning- Keep hand out inlet and discharge	P100277
15	2	Grease Daily	P100467
16	2	Warning- Do not stand on hopper grates	P100840
17	1	Reinert website	P100892
18	1	Serial Number Plate	P100932

SECTION H

Safety Labels - Visual

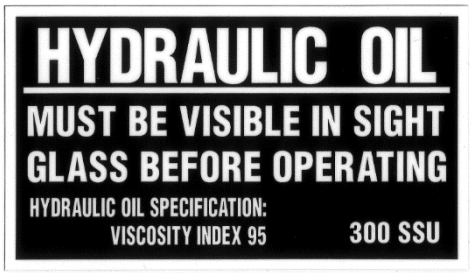
REINERT ZR430

1



P100841

2



P100305

3



P100507

4

REINERT PUMPS

P100896

5

ZR-430

P100891

6



P100762

7



P100511

8



P100510

SECTION H

Safety Labels - Visual

REINERT ZR430

9



P100319

10



P100509

11



P100887

12



P100508

13



P100922

14



P100277

15



P100467

16



P100510

SECTION H

Safety Labels - Visual

REINERT ZR430

17

REINERTCONCRETEPUMPS.COM

P100892

18



P100932

SECTION
H

Safety Labels - Visual

REINERT ZR430



SECTION

I

SCHEMATICS

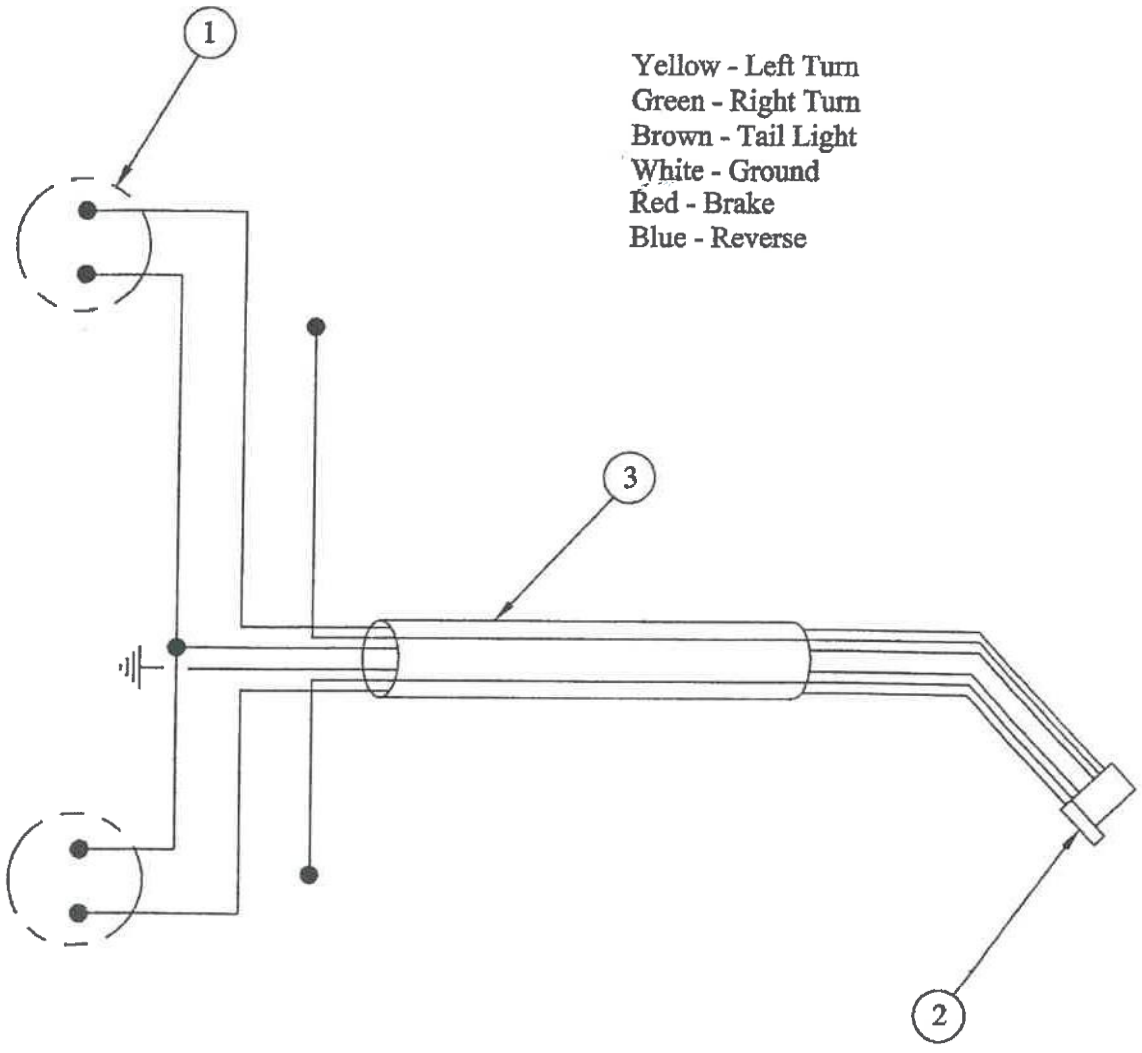
REINERT PUMPS

SECTION
I

Chassis Wiring Diagram

REINERT ZR430

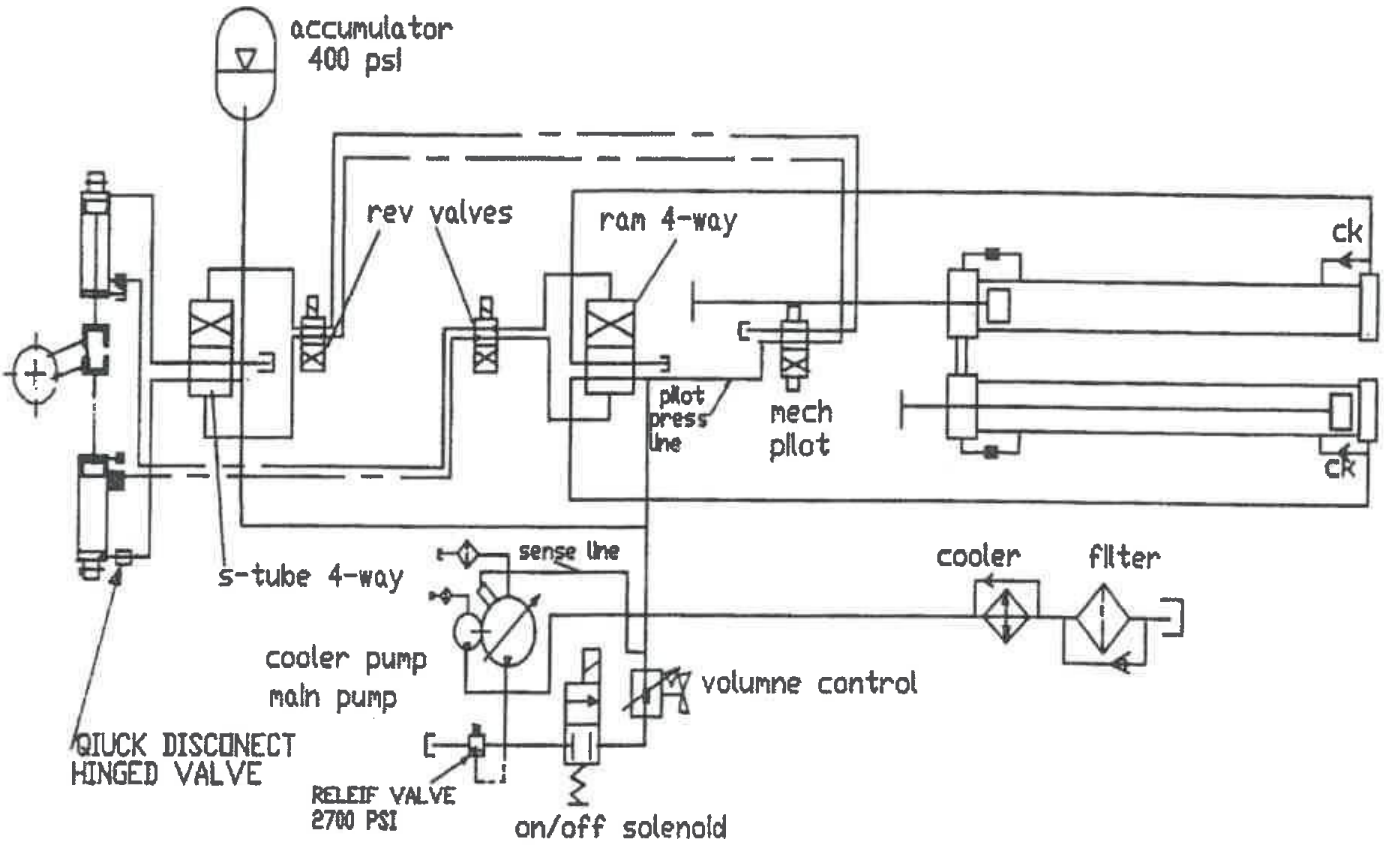
Item	Qty	Description	Part Number
1	2	Tail Light	P100096
2	1	Plug	P100436
3	2	Wiring Harness	N/A



SECTION
I

S-Tube Hydraulics

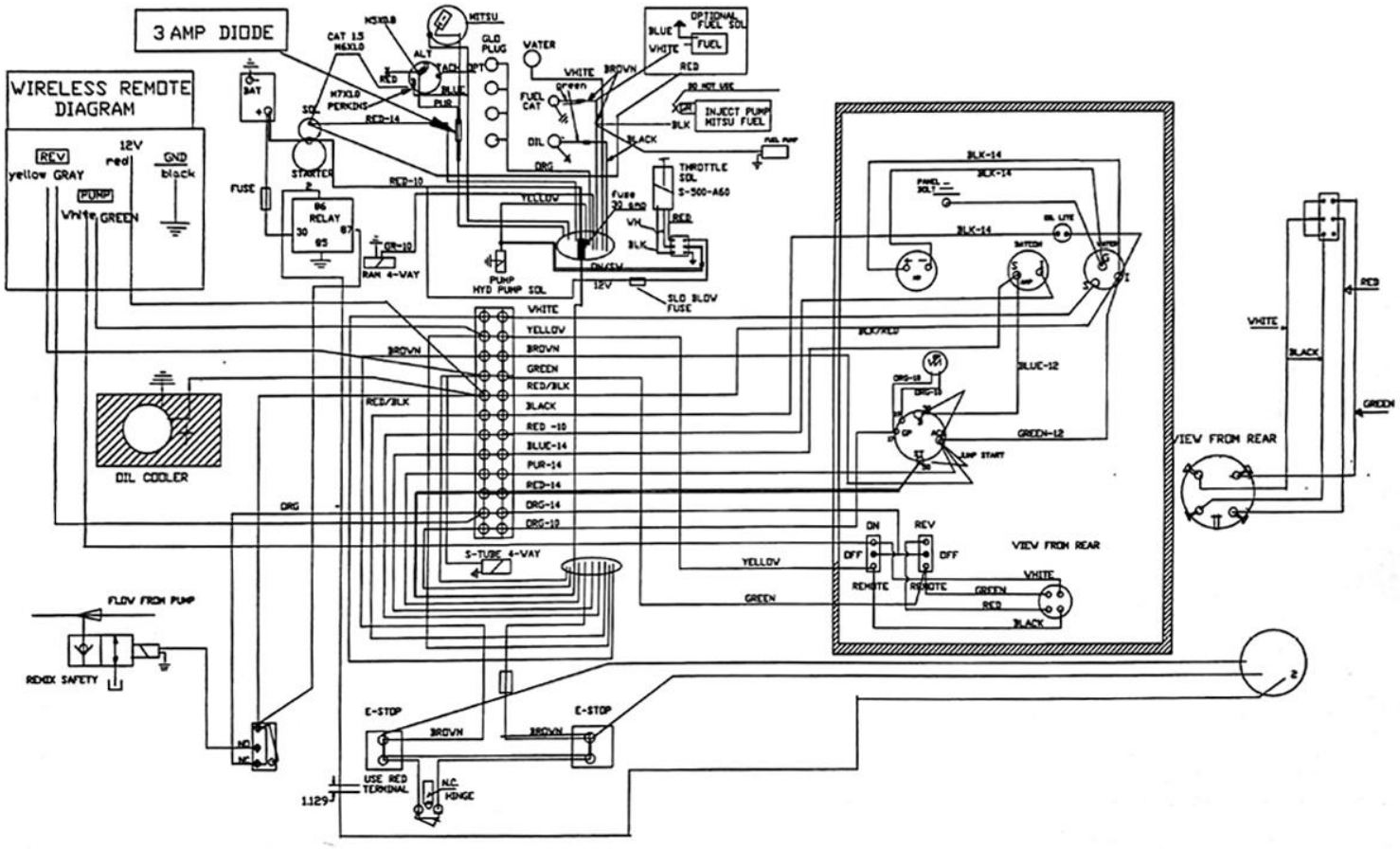
REINERT ZR430



SECTION
I

Wiring Diagram CAT Engine

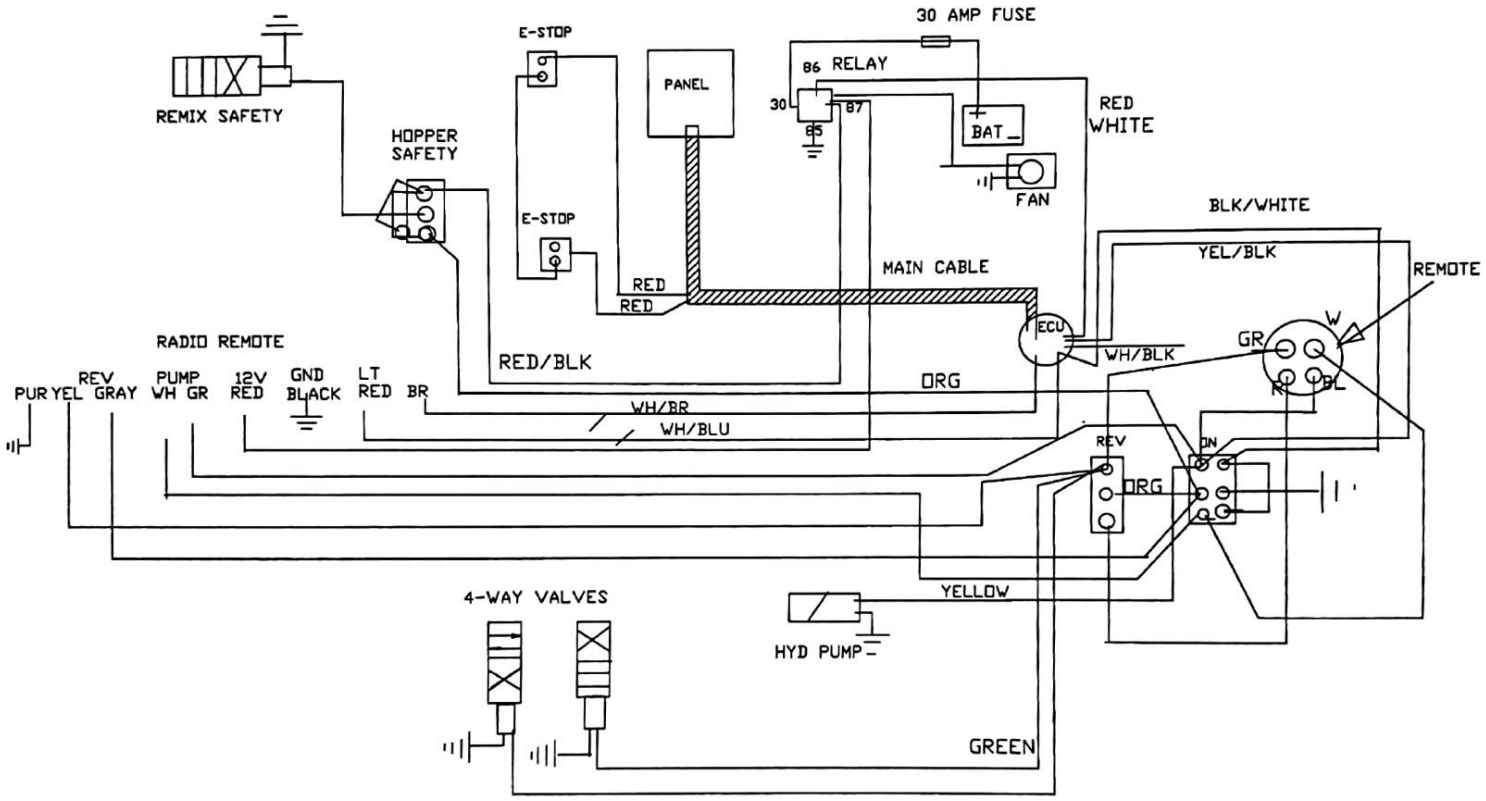
REINERT ZR430

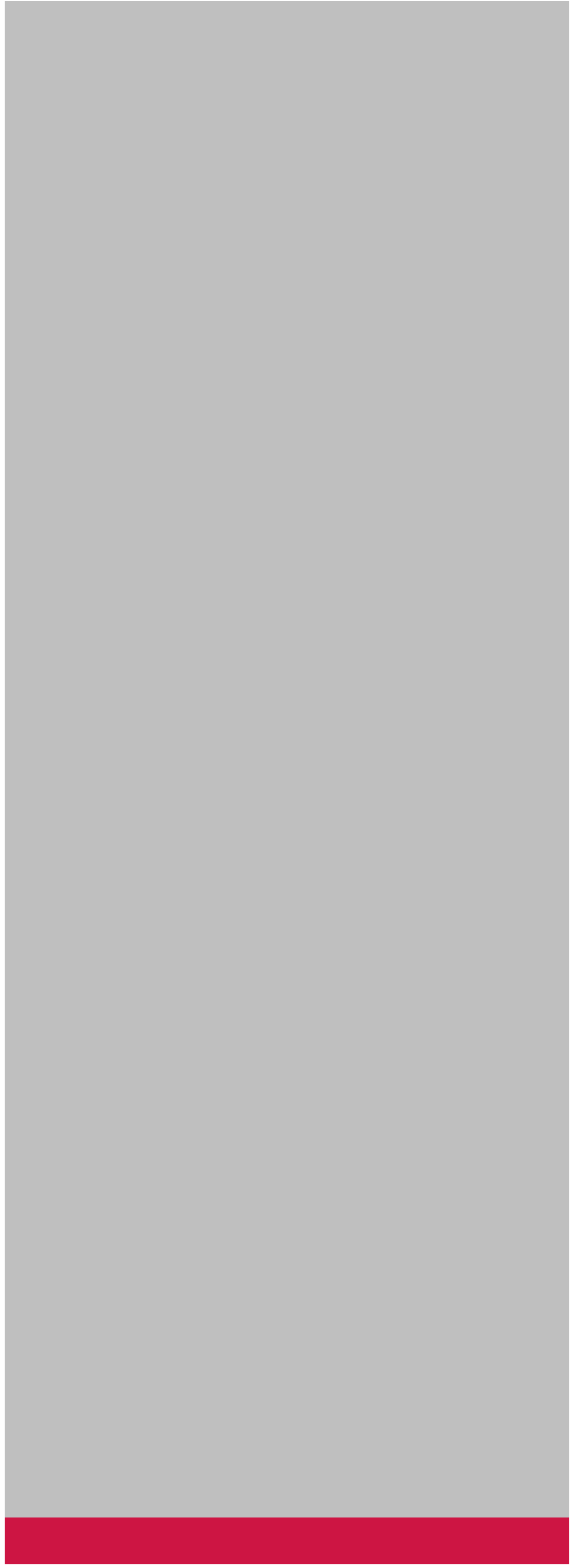


SECTION
I

Wiring Diagram Hatz Engine

REINERT ZR430





REINERT PUMPS

Reinert Manufacturing Inc.
www.reinertconcretepumps.com