



HYDRACOM
MOBILE HYDRAULICS

MODEL HC30GSSEF

Resource Manual

Serial Number: _____

Installation Date: _____



HYDRACOM MOBILE HYDRAULICS
Kieler, Wisconsin
608-568-3257

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Congratulations—You Have Purchased the BEST



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Introduction

Congratulations for your purchase of a new HYDRACOM unit. Many years of repairing the competitor's failures inspired us to design, test and produce our version of the "perfect mouse trap". HYDRACOM's attention to using only quality materials in its manufacturing process only enhances its performance like no other. All stainless steel cabinet construction that has been precision laser cut to .0001 of an inch means reliability; great appearance and corrosion resistance just to name a few.

A HYDRACOM system is designed to cool, direct and filter hydraulic oil needed to off-load such products as propane, anhydrous, asphalt, liquid fuel, fertilizer, milk, food-grade materials, etc. HYDRACOM is engineered to run efficiently with an automatic electric fan activated by the PTO air switch, operating the fan through the entire unloading process, no toggle switches, no added circuitry, no overheating, **no problems!**

HYDRACOM Model HC30GSSEF has a full feather spool valve for rotation of an orbiting motor in both directions. It also houses a pressure relief valve in case of a "dead head" situation. When plumbed properly, HYDRACOM will perform trouble and leak free for many, many years. The HYDRACOM system was custom engineered for a specific application. If the system is operated beyond its designed specs, overheating and/or damage to the unit or personal injury may result.

WARRANTY

This warranty is extended only to the original purchaser
of this HYDRACOM product.

Subject to the following conditions:

Should the product prove defective by reason of improper workmanship of material during the period of three years from the original date of purchase, HYDRACOM will repair, or at its option, replace the product without charge.

If HYDRACOM elects to replace the product, such replacement may be accomplished with a factory reconditioned unit. The owner is responsible for all freight charges. This warranty does not apply: (a) to any product damage by accident, misuse, improper installation, lightning, fire or other acts of nature (b) if the product is altered or repaired by anyone other than HYDRACOM or one of its authorized service centers. Under no circumstances shall HYDRACOM be liable for any loss or damage, direct, consequential or incidental arising out of the use of inability to use this product.

To obtain the name of an authorized service facility, call HYDRACOM at 608-568-3257.



General Installation Procedures

Unpacking the Unit

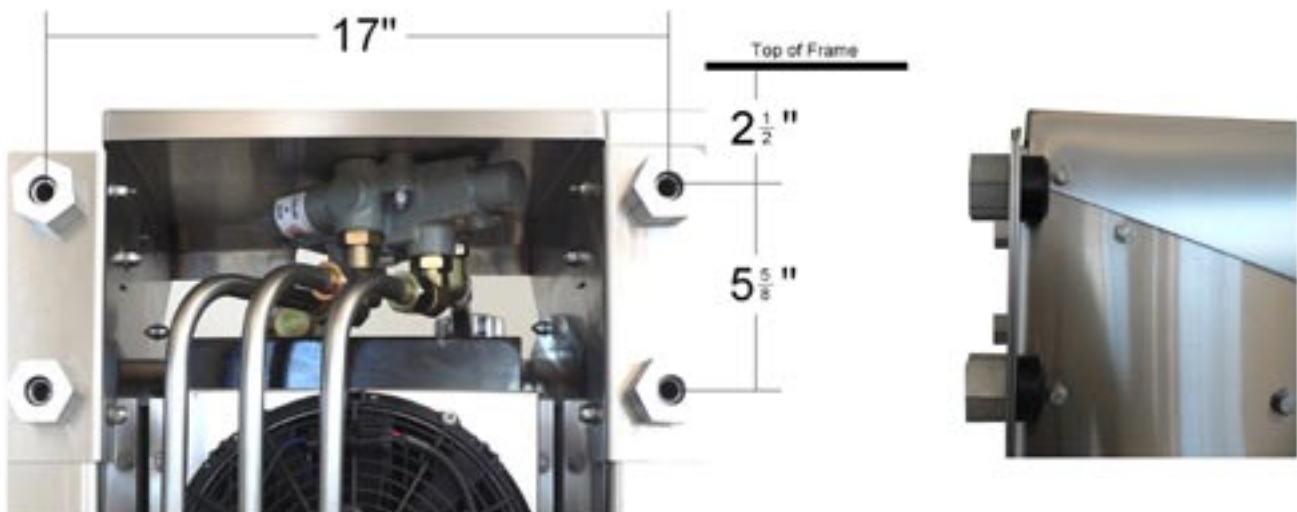
1. Please look over for any possible shipping damage.
2. Please make sure that the cooler and installation kit is complete. Please contact your local distributor if any problems occur.

Marking and Drilling the Frame

HYDRACOM is engineered to be placed anywhere on the power unit where 20" of frame is open. Rubber mounts are provided. Please refer to figure 1 for proper mount installation.

Mark the frame 2 ½ " down from the top. This will land the cooler approximately flush with the top of the frame. Hole centers are 5 5/8" x 17. This happens to be the cross member spacing on a Kenworth Chassis. Hopefully 2 of these holes can be used.

Drill frame holes with 9/16" drill.



Installing the PTO and Hydraulic Pump

Install the PTO to the transmission according to your PTO manufacturer. We recommend a direct mount rear O-ring ported pump with the appropriate GPM for your application. We recommend a 18 GPM @ 1000 pump RPM for a typical 6.2 cubic inch displacement orbit motor application to run at approximately 650 RPM. We recommend a 850 engine RPM PTO run target—approximately 117-120% PTO range. Please consult your PTO distributor to order the correct percent PTO for your application. We also recommend installing a high grade spline lube between the PTO and pump.

Hydraulic Plumbing

Please refer to the diagram on the following page.

“A” tube is pressurized when the spool is in the load position

“P” tube is the inlet line from the pump

“B” tube is pressurized when the spool is in the unload position

1 ½” pipe port is the suction port

TECH TIP

For 12-18 GPM systems we recommend a 1 ¼” suction hose and a 3/4” pressure line suction hose. A 1” pressure line and a 1 ½” suction hose will be needed for any systems above 18 GPM. We also

Electrical Wiring

Please refer to the diagram on the following page.

Red = 12 V positive

Black = Negative

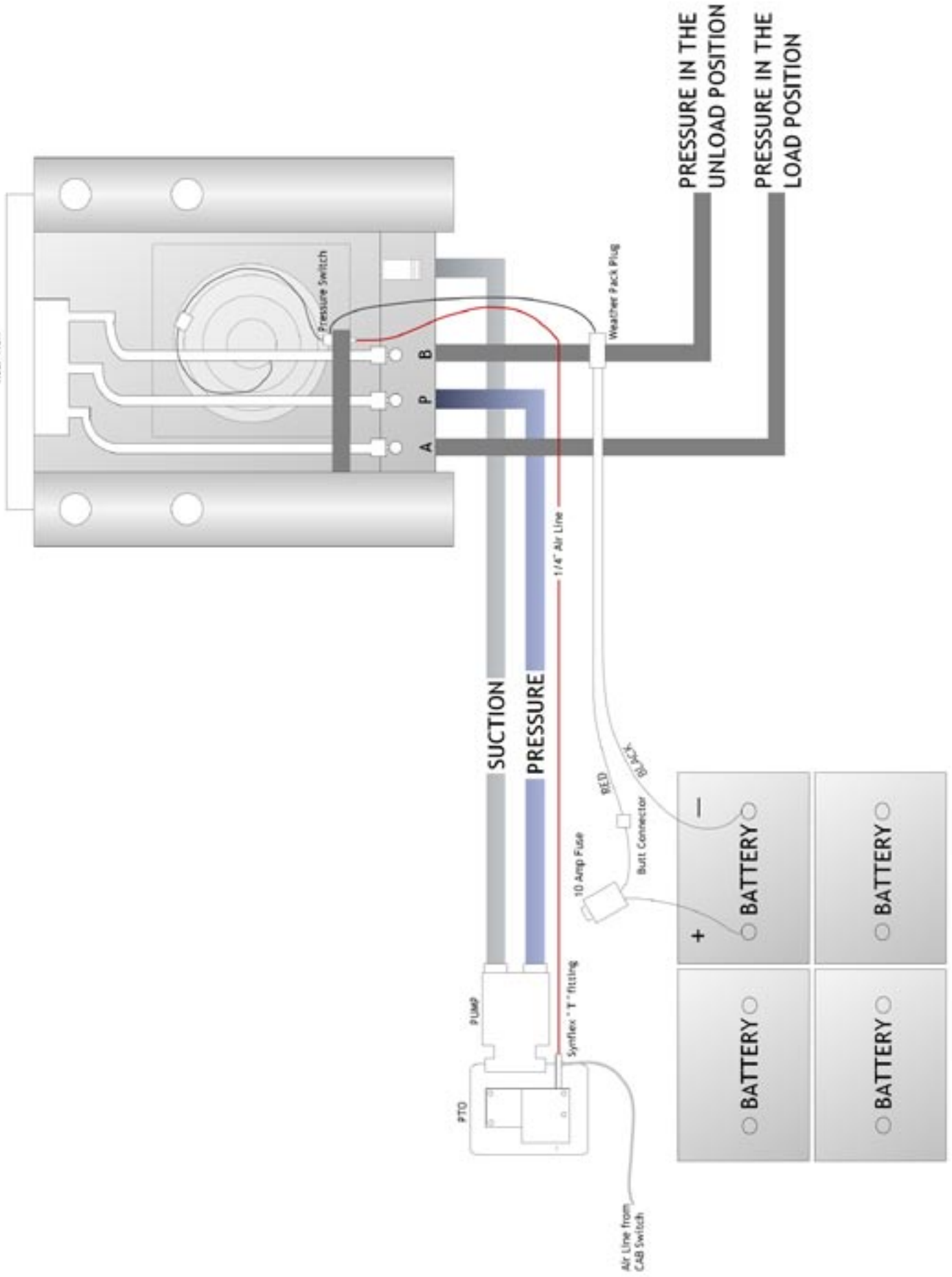
Please hook directly to the battery terminals using the sealed fuse holder provided. Hook the opposite end of the harness to the cooler weather pack plug tie up the electrical harness to the suction and pressure lines.

Air Plumbing

Install the provided T-fitting at the PTO. Plumb the existing line into the “T”. The other port will be connected to the provided synflex line and routed with the electrical and hydraulic lines to the pressure switch on the cooler. Please refer to the diagram on the following page.

HYDRACOM

Rear View



Initial Startup

Note: Before startup – Please recheck that all hydraulic lines are plumbed properly and all connections are tight.

1. Engage the PTO at idle and release the clutch slowly. Quickly depress clutch if any “unusual” noises occur.
2. Let the engine at idle and run system, recheck oil level and fill to the mid to top of sight glass.
3. Check fan operation. It should run when the PTO is engaged. If not, check for proper electrical connections.
4. Check the orbit motor or product pump speed with a photo tachometer. Slowly increase engine speed until the optimum pump speed is obtained. Do not exceed 1400 PRM with the PTO engaged. PTO damage can result. Record engine RPM and label the dash for proper pump speed.
5. Run system for 30 minutes, check for leaks, excessive heat, noise and motor performance.
6. Hook up a shop flow/pressure meter and check for proper GPM and pressure reading. Adjust pressure relief if necessary. Pressure relief is factory set @ 2200 PSI. Pressure relief adjuster is located on spool valve. Please refer to the picture below.

If all components check out, the unit is ready for operation.



System Maintenance

Drain out and replace system fluid every 12 months. We recommend when the truck is in for DOT inspection, at that time, replace the filter assembly with a HYDRACOM Part# HCP171840. We recommend Shell Donax TD hydraulic fluid or equivalent.

1. Remove the top four bolts from the filter canister
2. Remove old filter and discard
3. Install new filter and reinstall cap
4. Anti-sieze bolts and torque.

Pump – We recommend unbolting the pump from the PTO and check the spline wear, the same time the oil is drained from the cooler. Re-mount using a high-grade spline lube.



Troubleshooting

Please think Safety!!

If problems occur, please have qualified personnel diagnose your problem. More time than not, a simple problem can become a huge one if the mechanic does not know what they are doing. Hydraulic systems can be extremely dangerous. Operating pressures are at 2000 PSI and normally rotating shafts are present. Please THINK BEFORE YOU REACT! Please use caution when loosening hydraulic fittings. Pressure can still be present for a period of time after the unit is shut down.

Overheating

1. Check the fan operation, check for power at the fan with the PTO engaged
2. Check the cooling module for dirt/debris. Clean as necessary
3. Check the GPM flow rate with a meter; double check hose capacities
4. Check oil level
5. If a flow control valve is installed, added heat can be generated by adding restriction to the system

Excessive Noise

1. Check oil level
2. Check for a "dead head" flow situation. The noise is from the oil going over the pressure relief
3. Check for any excessive loops in the suction hose. Keep the hose routing as straight as possible

Motor Speed Performance

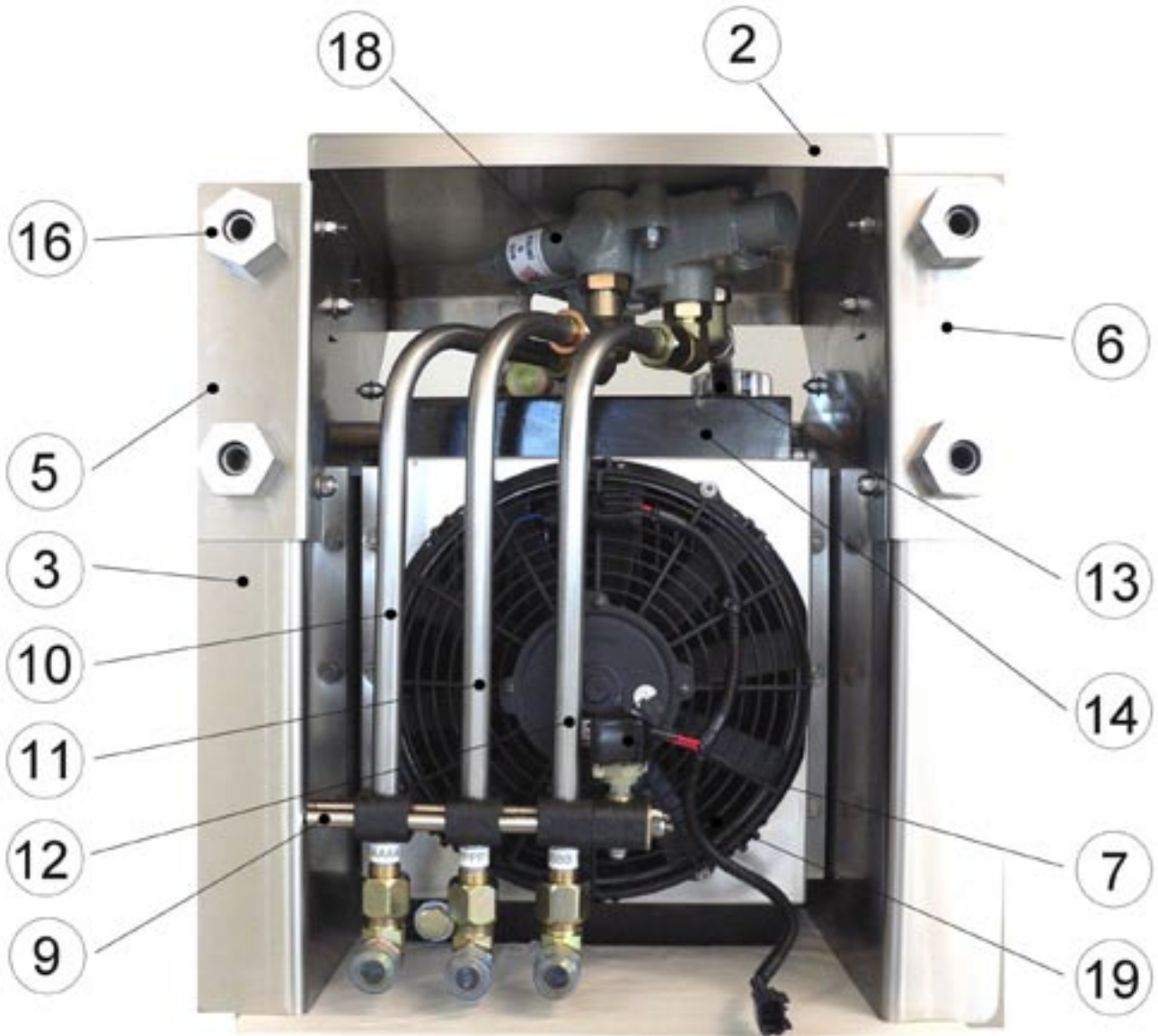
1. Check oil level
2. Check engine RPM
3. Perform a hydraulic flow/pressure check
4. Check hydraulic pump splines for wear
5. Check that the pressure line from the pump is installed to the "P" line on the cooler
6. Check for full stroke on the spool valve

Parts Breakdown

Parts Breakdown HYDRACOM MODEL HC30GSSEF

	PART NUMBER	QTY	DESCRIPTION
1	HCCAGSS	1	CABINET ASSEMBLY
2	HCCTLSS	1	TOP COVER
3	HCCLPSS	1	LEFT SIDE PANEL
4	HCCRPS	1	RIGHT SIDE PANEL
5	HCCLPRSS	1	LEFT PANEL REINFORCEMENT
6	HCCRPRSS	1	RIGHT PANEL REINFORCEMENT
7	HCSA264WMH	1	PRESSURE SWITCH
8	HC14GAX20	1	EXTENSION HARNESS
9	HC3190X8SSA	1	TUBE HOLDER ASSEMBLY
10	HC34901SSA	1	"A" TUBE ASSEMBLY
11	HC34902SSP	1	"P" TUBE ASSEMBLY
12	HC34903SSB	1	"B" TUBE ASSEMBLY
13	HC3490RSR	1	RETURN TUBE ASSEMBLY
14	HC600300P	1	HYDRAULIC COOLER
15	HC6309K36	4	RUBBER MOUNT
16	HC175HMAL	4	ALUMINUM SPACER
17	HCP562433	1	SIGHT GLASS
18	HCRD515EB5B2B1	1	HYDRAULIC VALVE
19	HC600306	1	ELECTRIC FAN
20	HC11HK	1	BOLT HARDWARE ASSEMBLY
21	HCUNLNLD	1	VALVE DECAL
22	HCHBC40	1	BREATHING CAP
23	HCK040798	1	FILTER HEAD ASSEMBLY
24	HCP171840	1	FILTER CARTRIDGE

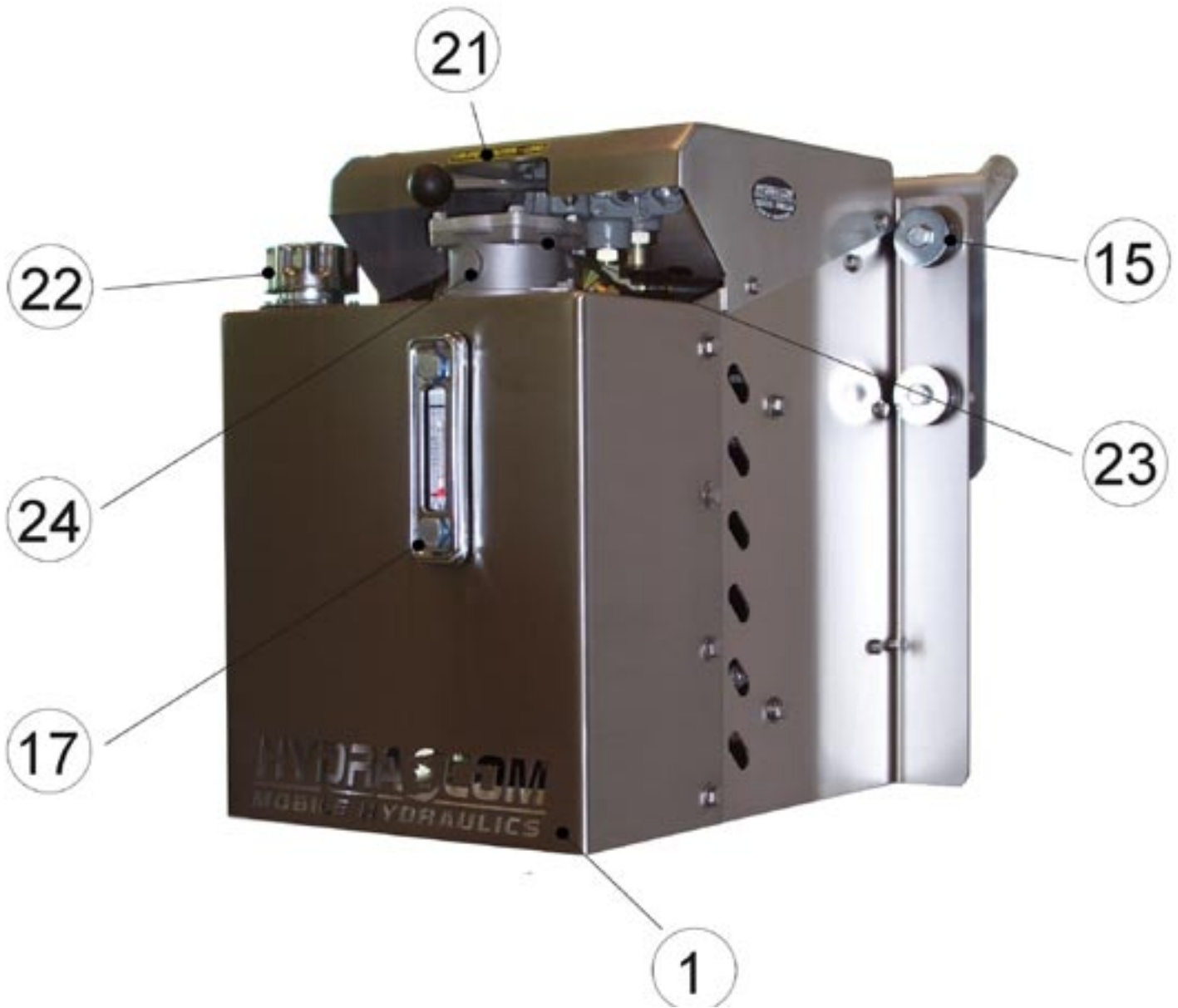
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