



OPERATING INSTRUCTIONS & PARTS MANUAL  
 AC HYDRAULIC POWER UNIT  
 FOR AUTO HOISTS  
 MODEL 10596

Concentric OIPM P/N 269xxxx

revised 04/25/2013

**READ CAREFULLY BEFORE ATTEMPTING TO ASSEMBLE, INSTALL, OPERATE OR MAINTAIN THE PRODUCT DESCRIBED. PROTECT YOURSELF AND OTHERS BY OBSERVING ALL SAFETY INFORMATION. FAILURE TO COMPLY WITH INSTRUCTIONS COULD RESULT IN PERSONAL INJURY AND/OR PROPERTY DAMAGE! RETAIN INSTRUCTIONS FOR FUTURE REFERENCE.**

**Description**

The Concentric AC hydraulic power unit is specifically designed for auto hoist applications. However, it may be used for other intermittent duty applications that utilize the power up - hold - gravity lower hydraulic circuit. This hydraulic unit must be used for mounting in a vertical position (motor up/reservoir down) and is typically mounted on the side of the auto hoist frame. It is pre-wired with a push button start switch. Additional features include a load holding check valve, a manual lowering valve with "feathering" capabilities and a 3 gallon capacity reservoir. The adjustable relief valve is preset at 2200 PSI.

**⚠ WARNING! ⚠**

**THIS HYDRAULIC UNIT IS SPECIFICALLY DESIGNED FOR INTERMITTENT DUTY APPLICATIONS. ANY ATTEMPT TO RUN THE UNIT FOR EXTENDED PERIODS OF TIME MAY CAUSE DAMAGE TO THE 115/208-230 VAC ELECTRIC MOTOR.**

**Unpacking**

Check unit for any apparent shipping damage. The contents of the carton will included (1) AC hydraulic power unit and (1) breather cap and (1) 45° street elbow. If any of these components are missing or there is any noticeable damage, please contact the office where the item was purchased.

**Specifications**

- Motor ..... 2 HP, 208-230 volt, 60 Hz., 3450/2850 RPM, T.E.N.V., 56 frame, single phase
- Pump..... 1.29 cu. in./rev. displacement, performance is 1.9 GPM at 1750 PSI
- Valving..... Check Valve  
Manual release valve  
Relief valve factory set at 2200 PSI
- Porting..... 9/16-18 SAE outlet/return for single acting cylinder, 3/8-18 NPT Cylinder Vent Port
- Rotation ..... CW looking at drive end of motor
- Reservoir..... 3 gallon capacity, cylindrical
- Accessories ..... Push button momentary contact start switch
- Mounting..... Plumbed for vertical mount.

- SHAFT SEAL P/N 2120120
- GASKET KIT P/N 2260015

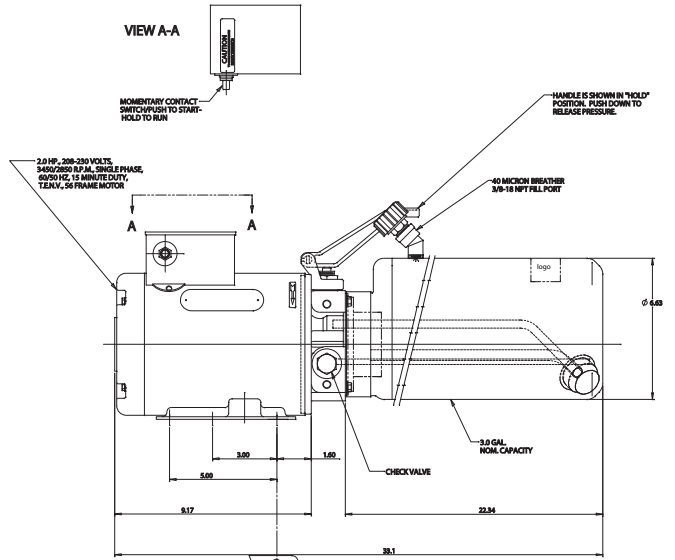
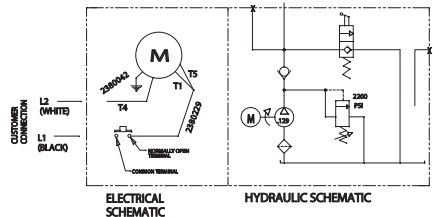
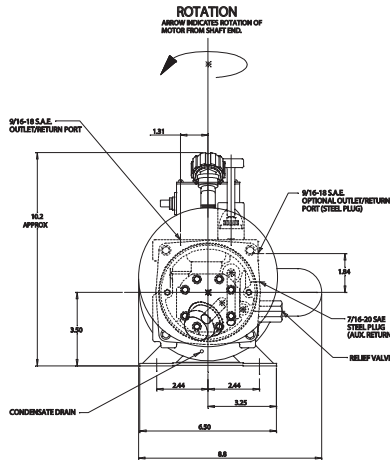


Figure 1



**AUTO HOIST POWER UNIT ORDERING DATA**

CIR	Nominal GPM @ 3450 RPM	Nominal Operating PSI	Factory Preset Relief Valve Setting	HP	RPM	Volts	PH.	Hz.	Load Amps	Min. Motor Starting Voltage	Dim. L	Dim. W	Dim. H	Stock Number	Northern Number
0.129	1.90	1900	2200	2	3450/2850	208-230	1	60	16	76	53.1	8.8	10.2	1530035	10596

### General Safety Information

#### DISCONNECT POWER BEFORE SERVICING THIS EQUIPMENT.

1. Follow all local electrical and safety codes, as well as the National Electrical Code (NEC) and the Occupational Safety and Health Act (OSHA).
2. For Single Phase Motors use 3-wire cords with 3-prong ground-type plugs.
3. Make certain that wire size is adequate for horsepower requirements.

NOTE: Voltage drop increases with the length of power cord. Larger wire diameter may be required.

4. Nameplate voltage must be available at the motor when it is operating. Avoid voltage drop with adequate wiring.
5. Replace or repair damaged or worn power cord immediately.
6. The use of 3-prong single phase adapters in Canada is prohibited by the Canadian Electrical Code.
7. **DOUBLE CHECK ROTATION!** Motor rotation is clockwise facing drive end of motor.
8. On start-up, jog the motor to prime the pump to insure adequate lubrication. After inlet line is full, motor may be operated at full speed.

#### CAUTION

#### NEVER RUN THE PUMP DRY.

9. Keep all lines as short as practical.
10. Never exceed the maximum operating pressure.
11. Do not overtighten fittings, bolts, etc., as this can damage the units.
12. Provide adequate cooling for the hydraulic oil so as not to allow oil and/or component damage due to excessive temperatures. Excessively high operating temperatures can be hazardous and may cause property damage and/or personal injury.
13. Follow safety guidelines as recommended by Auto Hoist Manufacturer.

### Assembly

The 10596 Auto Hoist unit comes fully assembled from the factory. Just remove the filler breather and fill the reservoir with oil.

### Installation

1. Select a good location to mount the hydraulic power unit. This style of unit is usually mounted on the side of the auto hoist frame. Mount at least 18.0" above the floor. Choose a clean, dry area with adequate ventilation and preferably near the electric power source.
2. This hydraulic power unit is designed for vertical mount with motor feet up and reservoir down. Choose a flat mounting surface to bolt motor base to. See unit dimensions for motor base bolt pattern.

#### CAUTION

**THIS UNIT IS INTERNALLY PLUMBED FOR VERTICAL MOUNTING AS NOTED ABOVE. MOUNTING THE UNIT IN AN INCLINED PLANE OR ANY OTHER POSITION WILL GREATLY REDUCE USABLE OIL IN THE RESERVOIR. THIS CAN CAUSE OIL FOAMING, LIMITED CYLINDER STROKE, ERRATIC MOVEMENT OR HYDRAULIC COMPONENTS, AND PUMP FAILURE.**

#### CAUTION

**TO MINIMIZE CONTAMINATION PROBLEMS, DO NOT REMOVE PLASTIC SHIPPING PLUG FROM HYDRAULIC UNIT UNTIL YOU ARE READY TO INSTALL HOSE AND FITTINGS.**

3. HYDRAULIC INSTALLATION - Make sure that work area and hydraulic components are clean and free from dirt, lint, etc.
4. Remove the vent screw and washer that is located next to the reservoir fill port with a phillips head screwdriver. When you begin filling the reservoir with hydraulic oil, this vent will allow trapped air in the reservoir to escape and reduce reservoir fill time.
5. Fill the hydraulic unit reservoir through the 90° street elbow (that you previously installed) with a good quality automatic transmission fluid (ATF). Use a clean funnel fitted with a fine mesh wire screen.
6. You will know that the reservoir is full when fluid begins to dribble from the vent screw hole.
7. Reinstall the vent screw and washer.
8. Install plastic breather in 90° street elbow.
9. Remove 9/16/18 SAE O-ring shipping plug from power unit and install appropriate hose and fittings.

#### CAUTION

**DO NOT USE TEFLON TAPE! THIS UNIT IS EQUIPPED WITH SAE O-RING TYPE PORTS.**

#### CAUTION

#### DO NOT OVERTIGHTEN FITTINGS.

10. ELECTRICAL INSTALLATION - Motor nameplate voltage must be available at the motor *when it is operating*. Choose a site that avoids long power cord runs. Voltage drop increases with the length of power cord. Larger wire diameter may be required.

### Installation (Continued)

When wiring the motor, follow all local electrical and safety codes as well as the National Electrical Code (NEC) and Occupational Safety and Health Act (OSHA).

For *Single Phase Motors* use 3-wire cords with 3-prong grounding type plugs.

#### **WARNING!**

**REPLACE OR REPAIR DAMAGED OR WORN POWER CORDS IMMEDIATELY.**

#### **WARNING!**

**DO NOT OPERATE UNITS WITHOUT PROPER GROUNDING.**

#### **CAUTION**

**DO NOT RUN HYDRAULIC UNIT DRY; SEVERE PUMP DAMAGE MAY RESULT.**

#### **CAUTION**

**Always shut electrical source off when servicing machinery.**

### Operation

#### **CAUTION**

#### **PRIOR TO OPERATION:**

1. Double check all hydraulic and electric connections.
2. Confirm that reservoir is filled with hydraulic fluid.
3. Put all equipment guards in place.
4. Clear all persons from work area.
5. Check for loose tools, equipment, or anything that might interfere with operation of equipment.

#### **CAUTION**

#### OPERATION

1. START UP - When initially starting unit up, be sure to jog the unit (intermittently run unit) several times. This will prime the pump and fill the hydraulic lines.
2. After hydraulic lines have been filled check reservoir for sufficient oil level. Replenish oil level if necessary.

#### **CAUTION**

#### **DO NOT OVERFILL.**

#### AUTO HOIST SAFETY GUIDELINES:

- A. Remain clear of lift when raising or lowering vehicle.
- B. Do not exceed weight capacity of lift.
- C. Clear area if vehicle is in danger of falling.
- D. Avoid excessive rocking of vehicle when on lift.
- E. Lift should be used by trained operator only.
- F. Use vehicle manufacturer's lift points.
- G. Always use safety stands when removing or installing heavy components.
- H. Keep feet clear of lift while lowering.
- I. Allow lift access to authorized personnel only.
- J. Read operating and safety manuals before using lift.
- K. Proper lift maintenance and inspection are necessary for safe operation.
- L. Do not operate a damaged lift.

### **Maintenance**

1. Keep the reservoir filled with hydraulic fluid. Use a good quality automatic transmission fluid (ATF). To refill the reservoir with clean oil, use a clean funnel fitted with a fine mesh wire screen. Do not use a cloth strainer. Most pump/fluid failures, valve malfunctions, and short unit life can be traced directly or indirectly to dirt or other foreign materials (water, chips, lint, etc.) entering or already in the hydraulic system.
2. Make frequent inspections of hydraulic oil and change if contaminated.
3. Regularly inspect hydraulic hoses and fittings for wear or leakage.
4. Keep the unit clean of dirt and foreign materials.
5. Keep electrical connections clean.

**Troubleshooting Chart**

<b>SYMPTOM</b>	<b>POSSIBLE CAUSE(S)</b>	<b>CORRECTIVE ACTION</b>
Motor won't start	<ol style="list-style-type: none"> <li>1. Loose connection</li> <li>2. Circuit breaker tripped</li> <li>3. Voltage drop</li> <li>4. Seized pump</li> <li>5. Start switch</li> </ol>	<ol style="list-style-type: none"> <li>1. Check wiring</li> <li>2. Reset circuit breaker</li> <li>3. Use heavier gauge wire</li> <li>4. Replace pump</li> <li>5. Replace start switch</li> </ol>
Will not pump oil (Motor runs but cylinder does not move, or moves slowly)	<ol style="list-style-type: none"> <li>1. No oil in reservoir</li> <li>2. Motor rotation wrong</li> <li>3. Oil level low</li> <li>4. Suction strainer is clogged</li> <li>5. Double acting cylinder piston seals are cut or worn out</li> <li>6. Reservoir breather is dirty or clogged</li> </ol>	<ol style="list-style-type: none"> <li>1. Check oil level, refill</li> <li>2. Rewire</li> <li>3. Add oil as needed</li> <li>4. Clean suction strainer</li> <li>5. Replace or repair cylinder</li> <li>6. Clean reservoir breather and reinstall</li> </ol>
Pump motor unit is noisy	<ol style="list-style-type: none"> <li>1. Low oil level</li> <li>2. Air in system</li> <li>3. Suction strainer or in-line filter is clogged</li> </ol>	<ol style="list-style-type: none"> <li>1. Add oil as needed</li> <li>2. Bleed air from highest fitting in system by loosening fitting very slightly and operating unit until bubbling of air stops, then tighten</li> <li>3. Clean suction strainer or in-line filter</li> </ol>
Pump does not develop full pressure	<ol style="list-style-type: none"> <li>1. System relief valve set too low or leaking</li> <li>2. Oil temp. is too high</li> <li>3. Pump is worn out</li> <li>4. Double acting cylinder piston seals are cut or worn out</li> </ol>	<ol style="list-style-type: none"> <li>1. Check system relief valve for proper setting with pressure gauge in outlet line</li> <li>2. Let oil cool below 140°F</li> <li>3. Replace worn parts or pump</li> <li>4. Replace or repair cylinder</li> </ol>