

SUPPLEMENTAL INSTRUCTIONS FOR AUXILIARY HYDRAULIC POWER UNIT PP0208 FOR 60', 70' OR 85' SINGLE BELT CONVEYORS

The attached information is for use in installing and operating the auxiliary hydraulic power unit on a 60', 70' or 85' Single Belt Conveyor. It is intended to supplement the information provided in the Owner's and Operator's manual for these conveyors.

IMPORTANT: Read through the main Owner's manual and become familiar with all safety alerts and warnings.

IMPORTANT: Read through the manual provided with the Haldex Hydraulic Power Unit (Part No. 1028724).

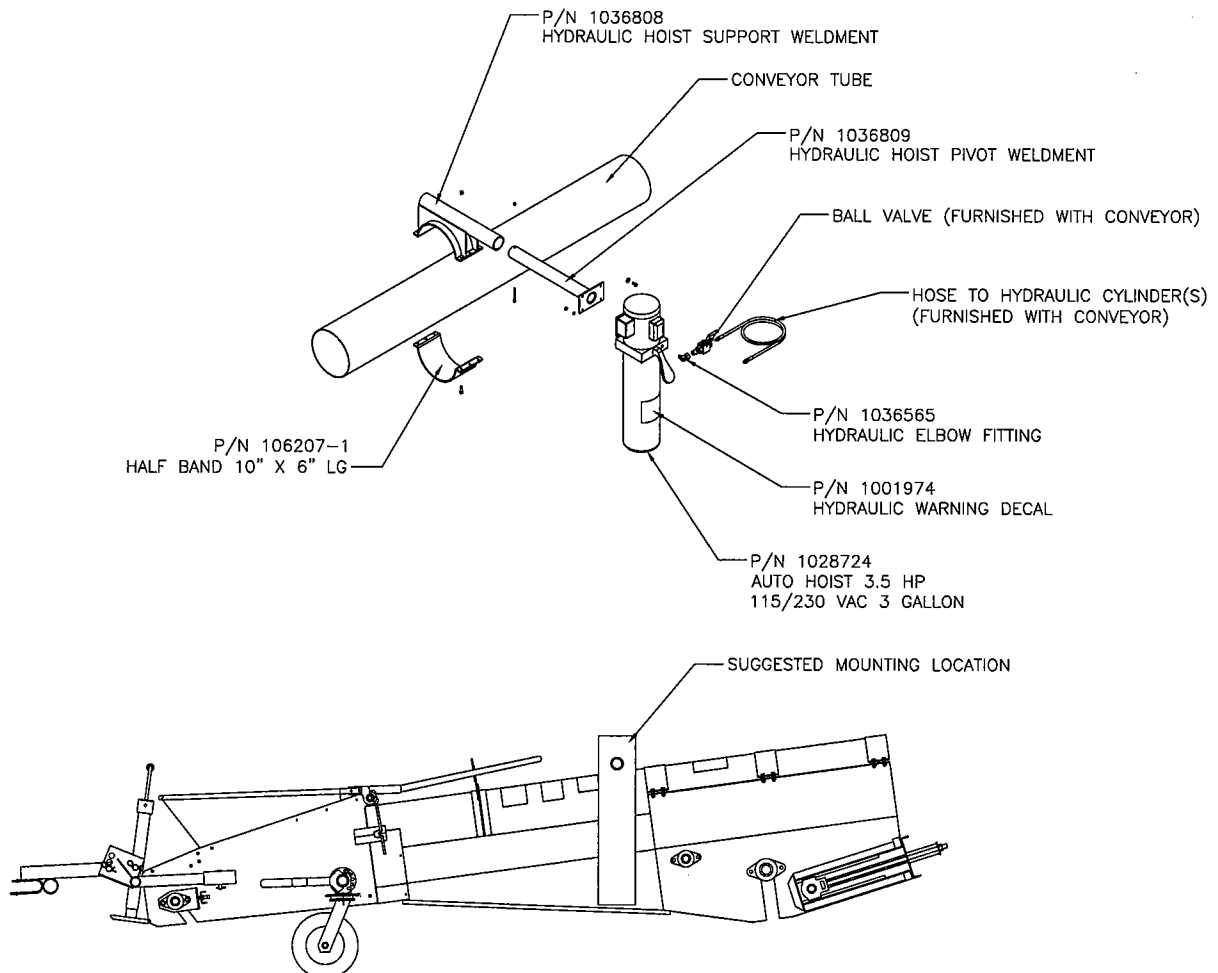
NOTE: The power unit is shipped without oil and must be filled prior to operation. Refer to the filling instructions provided in the Haldex manual. During initial start up, oil will be consumed to fill hoses and cylinder bores, so additional oil will need to be added at that time. This power unit has enough reservoir capacity for one 4" x 24" stroke cylinder (60' single belt), one 4" x 36" stroke cylinder (70' single belt) or two 4" x 24" stroke cylinders (85' single belt). The pump will displace 1.9 GPM at 1750 PSI, so it will take approximately 45 seconds to fully extend one 24" stroke cylinder or approximately 60 seconds to fully extend one 36" stroke cylinder. It will take approximately 85 seconds to fully extend two 24" stroke cylinders.

WARNING: The hydraulic power unit is specifically designed for intermittent duty applications. Any attempt to run the unit for extended periods of time may cause damage to the unit. The hydraulic unit must also be used for vertical mounting only (motor up/reservoir down).

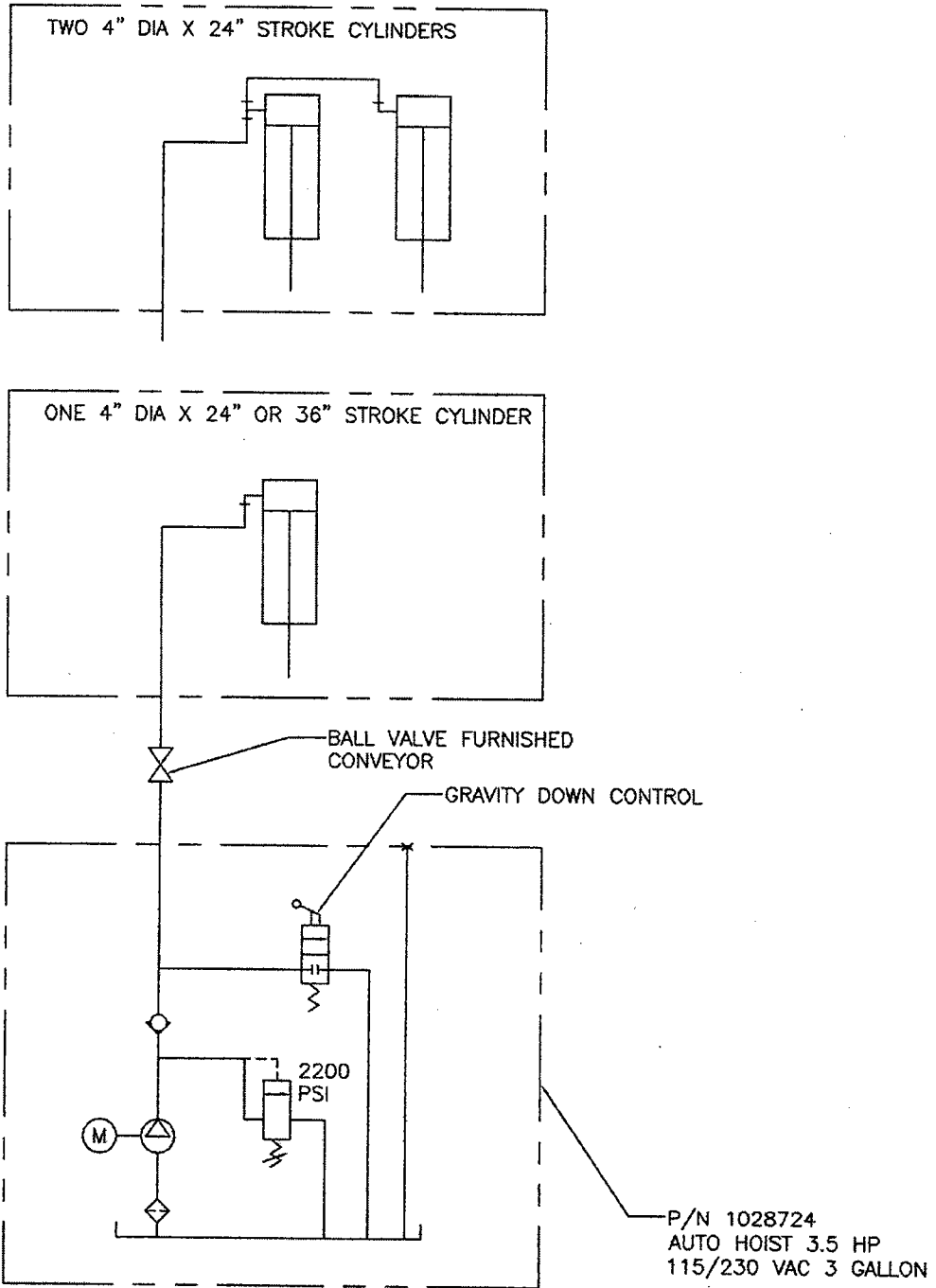
INSTALLATION INSTRUCTIONS

ASSEMBLY

1. Mount the hydraulic hoist support weldment to the conveyor tube using the half band provided and six 3/8" x 1-1/4" bolts and nylon lock nuts.
2. Slide the hydraulic hoist pivot weldment into the support weldment just installed and capture with a 1/4" x 3" bolt and nylon locknut.
3. Mount the support base of the auto hoist to the hydraulic hoist pivot weldment, using four 5/16" x 3/4" bolts, flat washers, lock washers and non-lock nuts.
4. Install the hydraulic warning decal provided to the visible side of the auto hoist reservoir.
5. Thread the hydraulic elbow fitting provided into the outlet port of the auto hoist.
6. Attach the ball valve on the end of the hydraulic hose, which feeds the conveyor lift cylinder(s) to the elbow fitting just installed.



AUXILIARY HYDRAULIC POWER UNIT SCHEMATIC





OPERATING INSTRUCTIONS
& PARTS MANUAL

AC HYDRAULIC POWER UNITS
FOR AUTO HOISTS

MODEL 10590

FORM

HALDEX OIPM P/N 2690162

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 Haldex 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.

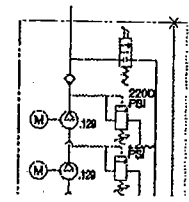
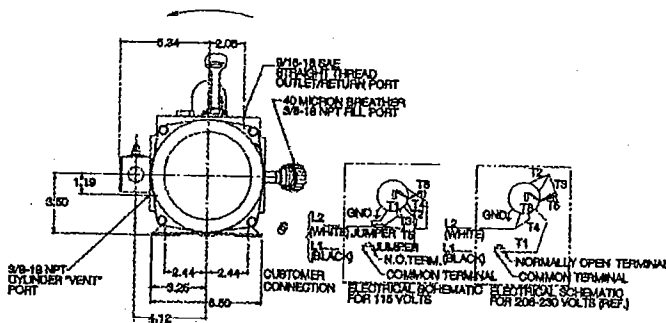
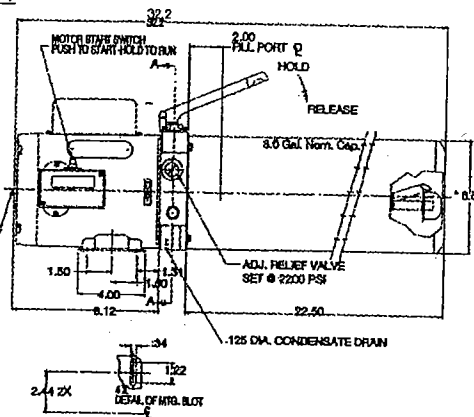
Unpacking

Check unit for any apparent shipping damage. The contents of the carton will include (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 3.5 HP, 115/208-230 volt, 60 Hz., 3450 RPM, T.E.N.V., 56 frame, single phase
- Pump 129 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.

Figure 1



AUTO HOIST POWER UNIT ORDERING DATA

CIR	Nominal GPM @ 3450 RPM	Nominal Factory Preset Operating Relief Valve PSI	Setting	HP	RPM	Volts	PH	Hz	Load Starting AMPS	Dimen. Voltage	Dimen. L	Dimen. W	Dimen. H	Stock Number	Northern Number
0.129	1.90	1900	2200	3.5	3450	115/208-230	1	60	35	99	32.2	8.8	9.07	1280624	10590

General Safety Information

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 grounding 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 10590 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 OF 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.

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 is necessary for safe operation.
- L. Do not operate a damaged lift.

Maintenance

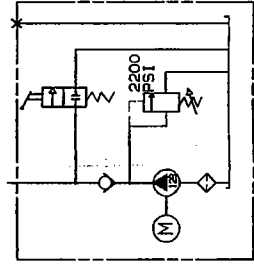
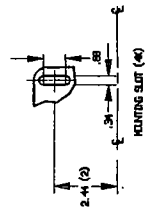
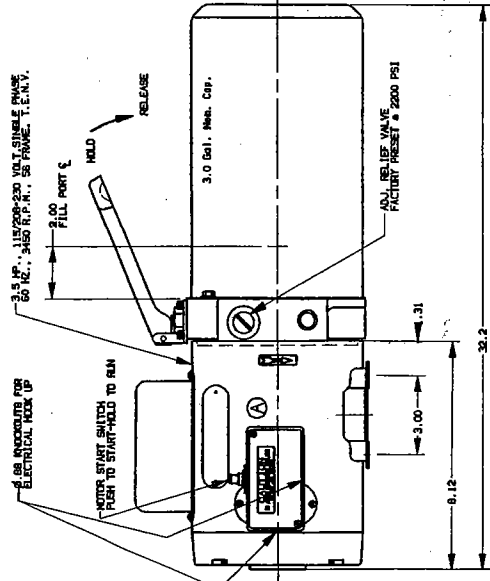
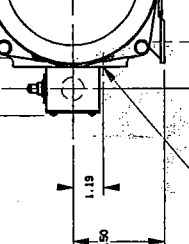
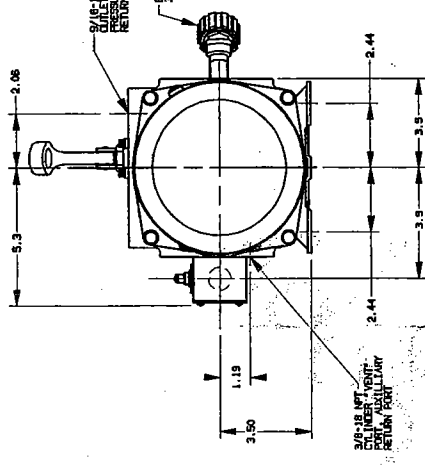
1. Keep the reservoir filled with hydraulic fluid. Use a good quality automatic transmission fluid (ATF). To fill the reservoir with clean oil, use a clean funnel fitted with a fine mesh wire screen. Do not use a cloth strainer. Most pump/fluid motor failures, valve malfunctions, and short unit life 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 a frequent inspection of hydraulic fluid and change if contaminated.
3. Regularly inspect hydraulic hoses and fittings for wear or leakage.
4. Keep the unit clear of dirt and foreign materials.
5. Keep electrical connections clean.

Troubleshooting Chart

SYMPTOM	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
Motor won't start	<ol style="list-style-type: none"> 1. Loose connection 2. Circuit breaker tripped 3. Voltage drop 4. Seized pump 5. Start switch 	<ol style="list-style-type: none"> 1. Check wiring 2. Reset circuit breaker 3. Use heavier gauge wire 4. Replace pump 5. Replace start switch
Will not pump oil (Motor runs but cylinder does not move, or moves slowly)	<ol style="list-style-type: none"> 1. No oil in reservoir 2. Motor rotation wrong 3. Oil level low 4. Suction strainer is clogged 5. Double acting cylinder piston seals are cut or worn out 6. Reservoir breather is dirty or clogged 	<ol style="list-style-type: none"> 1. Check oil level, refill 2. Rewire 3. Add oil as needed 4. Clean suction strainer 5. Replace or repair cylinder 6. Clean reservoir breather and reinstall
Pump motor unit is noisy	<ol style="list-style-type: none"> 1. Low oil level 2. Air in system 3. Suction strainer or inlet filter is clogged 	<ol style="list-style-type: none"> 1. Add oil as needed 2. Bleed air from highest fitting in system by loosening fitting very slightly and operating unit until bubbling of air stops, then tighten 3. Clean suction strainer or inlet filter
Unit does not develop full pressure	<ol style="list-style-type: none"> 1. System relief valve set too low, or leaking 2. Pump worn out 3. Suction strainer or inlet filter is clogged 	<ol style="list-style-type: none"> 1. Check system relief valve for proper setting with pressure gauge in outlet line 2. Replace worn parts or pump 3. Clean suction strainer or inlet filter
Lift drifts down	<ol style="list-style-type: none"> 1. Contaminant holding lowering valve open 2. Contaminant holding check valve open 3. Bad check or release valve seat 	<ol style="list-style-type: none"> 1. Depress motor start switch and lower valve handle at the same time to flush valve seat area 2. Remove check valve, depress check ball, and flush 3. Replace valve

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- NOTES:**
1. CAUTION! FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN DAMAGE TO THE PUMP-MOTOR ASSEMBLY. MAKE SURE ALL ELECTRICAL POWER IS DISCONNECTED UNTIL THE PUMP HAS BEEN FILLED. FILL WITH A SUITABLE HYDRAULIC OIL PRIOR TO OPERATION. PRESENT ALL THE BLANK AND BREATHER. EXAMPLE: HYDRAULIC OIL DESIGN #11
 2. UNIT IS VERTICAL (MOTOR 80 UP) OR HORIZONTAL MOUNT.
 3. MOTOR FACTORY PREWIRED FOR 115 VOLTS AS SHOWN.



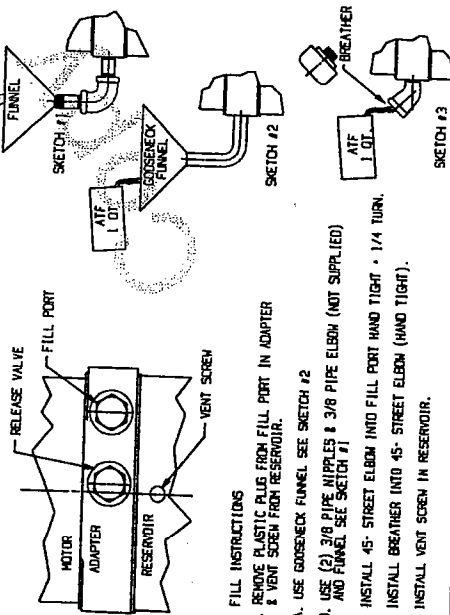
THIS DRAWING IS APPLICABLE TO THE FOLLOWING P/N'S:
 JSB P/N 1280624
 NORTHERN HYDRAULICS P/N 10550

REV. 01	A	RELOCATED CAUTION LABEL	SLD	MS	11/3/97
REV. 01	BY	DATE	BY	DATE	DATE
Halidex Northern Hydraulics 2222 15TH STREET, ROCKFORD, IL, USA 214 JAMES FARM RD, STATESVILLE, NC, USA SELTGENHES 12 D-95028, HOF GERMANY					
MODEL SUPPLEMENTED BY SUPERSEDED BY DISTRIBUTION SCALE TITLE NUMBER					
DRN RHC DRK DHE ENG APP REG APP DATE 95/08/30 DATE 95/08/30 DATE ASSEMBLY					
INSTALLATION DRAWING					
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J.S.B. P/N 2650062



FILL INSTRUCTIONS

1. REMOVE PLASTIC PLUG FROM FILL PORT IN ADAPTER & VENT SCREEN FROM RESERVOIR.
- 2A. USE GOOSENECK FUNNEL SEE SKETCH #2
- 2B. USE (2) 3/8 PIPE NIPPLES & 3/8 PIPE ELBOW (NOT SUPPLIED) AND FUNNEL SEE SKETCH #1
3. INSTALL 45° STREET ELBOW INTO FILL PORT HAND TIGHT - 1/4 TURN.
4. INSTALL BREATHER INTO 45° STREET ELBOW (HAND TIGHT).
5. INSTALL VENT SCREEN IN RESERVOIR.

ITEM NO.	QTY.	DESCRIPTION	REVISION	DATE
1	1	ADAPTER		
2	1	RESERVOIR		
3	1	FUNNEL		
4	1	GOOSENECK FUNNEL		
5	1	BREATHER		
6	1	VENT SCREEN		
7	1	3/8" PIPE NIPPLE		
8	1	3/8" PIPE ELBOW		
9	1	5 GALS. CONTAINER		
10	1	1/4" PIPE		
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