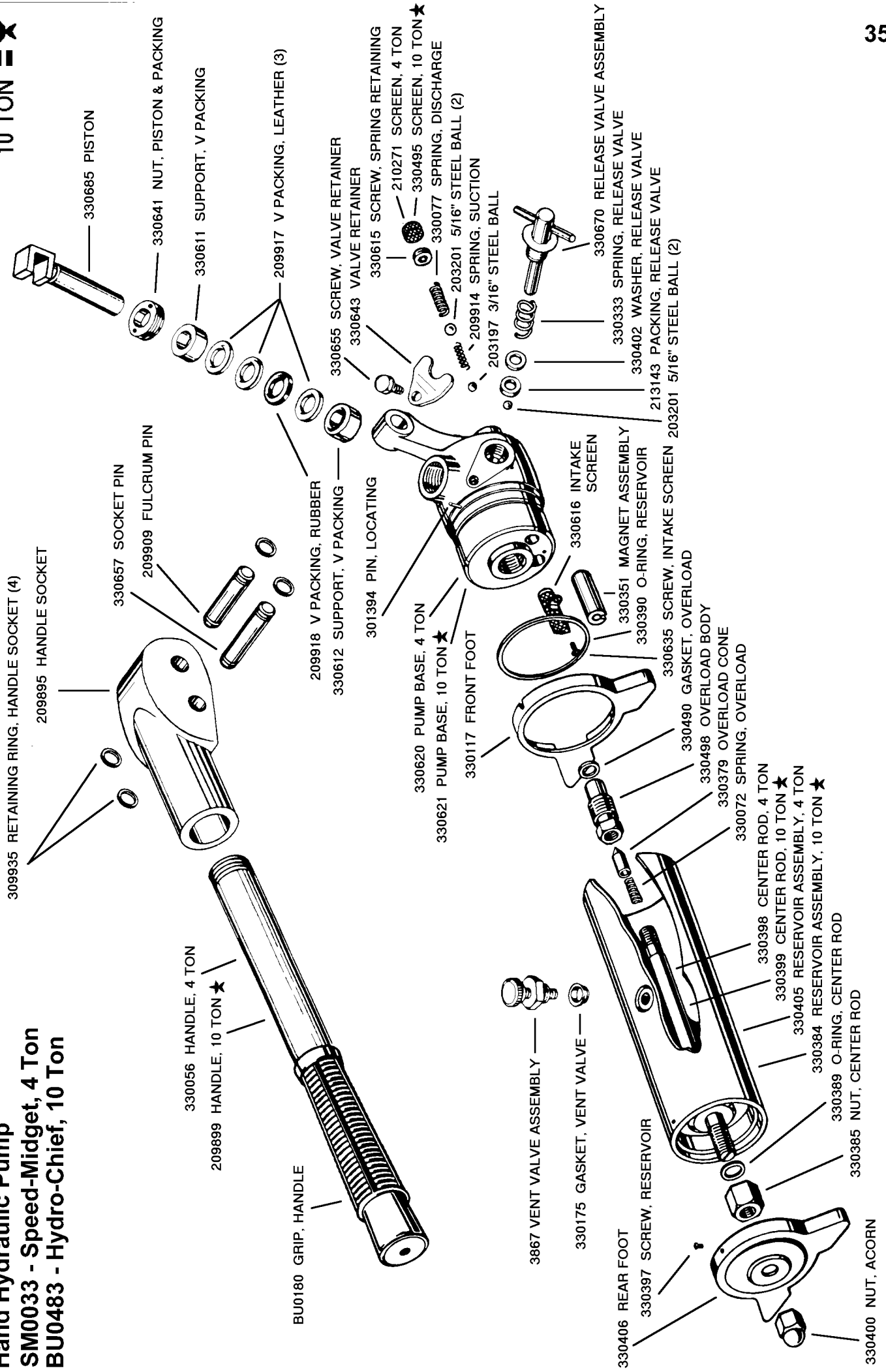


**Hand Hydraulic Pump**  
**SM0033 - Speed-Midget, 4 Ton**  
**BU0483 - Hydro-Chief, 10 Ton**

10 TON ★



**Disassembly:**

1. Remove handle fulcrum pins (330657 & 209909) and handle (209889 or 330056) with socket (209895).
2. Remove tank vent valve assembly (3867) and drain oil.
3. **Pump Piston:**  
Pull out piston (330685). Unscrew gland nut (330641) using an adjustable spanner and remove V-packing support (330611), leather packings (3 ea. 209917), rubber packing (209918) and brass spreader (330612).
4. **Suction and Discharge Valves:**  
Pry out and discard filter screen (210271 or 330495) from hose hole. Remove spring retainer (330615), spring (330077), 5/16" ball (203201), spring (209914) and 3/16" ball (203197.)
5. **Release Valve:**  
Remove screw (330655) and valve retainer (330643). Unscrew release valve assembly (330670). Remove spring (330333), steel washer (330402), packing (213143) and 5/16" ball (203201).
6. **Tank Disassembly:**  
To disassemble the tank, remove acorn nut (330400), screw (330397), rear foot (330406), hex nut (330385) and "O" ring (330389). The reservoir tank (330405 or 330384) can then be twisted off the pump body (330620 or 330621). Remove front foot (330117) and tank rubber seal (330390).
7. **Magnet Assembly:**  
Magnet assembly (330351) is pressed into oil return hole with the end of the aluminum tube holding the magnet facing out. The magnet assembly should be cleaned of chips.
8. **Intake Screen:**  
Remove holding screw (330635) and discard screen (330616). Clean recessed hole into which screen sets. Replace new screen (330616) being sure that the screen is seated on bottom of hole. Insert screw (330635) and tighten securely.
9. **Overload Relief Valve:**  
If the overload release valve has been disassembled – check the inside of overload body (330498) and remove any foreign particles by a thorough cleaning. Clean cone (330379), spring (330072) and rod (330398 or 330399). Inspect hole in end of rod for clear passage.

Assemble Cone (330379) into body (330498) followed by spring (330072). Screw adjusting rod (330398 or 330399) into body (330620 or 330621) and turn the rod in until there is a resistance from the spring on the rod. Back off on the rod one (1) turn. This will seat spring firmly into counterbore on end of rod. Then continue to turn adjusting rod in until it just bottoms on solid spring. Back off 2-1/2 turns and leave at this point until a later test for final pressure relief setting. Follow instructions under tank assembly.

**Assembly:**

1. Clean and inspect all parts. Replace all packings and gaskets.
2. **Pump Piston:**  
Insert brass spreader (330612) in base, flat side down. Slide V-packing support (330611) onto piston (330685), with the V away from groove in piston. Apply medium consistency, high temperature, bearing grease and assemble over bottom end of piston two (2) leather packings (209917), one (1) rubber packing (209918) and one leather packing (209917). V on packing must nest on brass spreader. Place assembly bushing (S00022) into top of hole in pump body. Insert piston with packings on it into bell mouth of assembly bushing. Slip packing seating tool (S00135) over piston. Using a medium weight hammer on seating tool, drive piston and packings down solid. Remove packing guide. Install and tighten gland nut (330641).
3. **Suction and Discharge valves:**  
Insert 3/16" ball (203197), suction valve spring (209914), 5/16" ball (203201), discharge valve spring (330077), spring retaining screw (330615) and filter screen (210271 or 330495).
4. **Release Valve Assembly:**  
Insert 5/16" ball (203201), (coin lightly if necessary), rubber packing (213143), steel washer (330402) and spring (330333) in base. Assemble release lever (330670) into base and turn down against ball. DO NOT force down tight. Attach retainer (330643) by inserting hex head screw (330655) and tighten. Try release knob action to see if closing is positive. Release valve should work free and valve should close firmly. An improperly operating release valve means improper assembly and an inoperative pump.
5. **Tank Assembly:**  
Replace magnet assembly (330351). Assemble front foot (330117), rubber seal (330390) and tank assembly (330405 or 330384). Install new "O" ring (330389), assemble hex nut (330385) with countersunk end against "O" ring (330389) and tighten lightly. Rotate tank so that filler hole is on top and in line with pump handle. Tighten hex nut (330385).
6. **Overload Valve Pressure Test:**  
Fill oil tank to proper level with P-F hydraulic oil (HG0004). Connect a 10,000 P.S.I. pressure gauge to the outlet hole. Operate the pump until pressure builds and overload valve unloads. Proper setting for SM0033 is between 6700-7300 P.S.I. Proper setting for BU0483 is between 8000-8600 P.S.I. If pressure goes too high, turn the center rod (330398 or 330399) counterclockwise by screwdriver slot in the end. Restart and readjust if necessary until proper setting is obtained. If pressure is too low, turn tie rod clockwise and repeat as above. When proper pressure is obtained, tighten hex nut (330385) keeping screwdriver in end of the tie rod to make sure the tie rod does not turn with the nut. Finally, assemble rear foot (330406) to reservoir assembly with screw (330397) and acorn nut (330400).