



223 170 AIR/HYD PUMP  
BEER KIT# 2781 561

Code No.	Description	No. Req.	J612 Part No.	J613 Part No.
130	Air Hydraulic Pump Assembly	1	223170	223170
131	"O" Ring - Pump Assembly	1	219861	219861
132	Retaining Ring - Pump Assembly	2	221820	221820
133	Pump Cyl. & Ext. Tube Assembly	1	223198	223198
134	Gland Nut	1	223177	223177
134-A	Adaptor	1	223195	223195
135	"V" Packing - Pump Rod Gland	4	223171	223171
136	Pump Cyl. Spring	1	223174	223174
137	Teflon Packing	1	223681	223681
138	End Block	1	223193	223193
139	Adaptor	1	223196	223196
140	"V" Packing - Rubber	1	225071	225071
141	Pump Rod	1	223186	223186
142	Trip Spring	1	225384	225384
143	Trip Washer	2	223203	223203
144	Plug	1	223183	223183
145	Pump Piston Assem.	1	223678	223678
146	Hair Pin Cotter	1	223185	223185

Code No.	Description	No. Req.	J612 Part No.	J613 Part No.
147	Spring	1	223184	223184
148	Retaining Ring	1	223268	223268
149	"O" Ring	1	222288	222288
150	Lead Ball	1	220834	220834
151	Piston Assembly	1	223181	223181
151	Piston (Only)	1	224387	224387
152	"U" Cup	1	223182	223182
153	Valve Plunger Assembly	1	223187	223187
154	"U" Cup	1	221013	221013
155	Air Cylinder	1	223176	223176
156	Spring & Rubber Cushion Assem.	1	223194	223194
157	Rubber Cushion	1	225371	225371
158	Spring	1	223175	223175
159	Screen	1	223680	223680
160	Air Cyl. Cap	1	223192	223192
161	Return Spring	1	223173	223173
162	Elbow - Air Hose	1	222202	222202
163	Air Valve	1	223180	223180
164	Air Hose Assem.	1	224021	224021

**SERVICE ADJUSTMENT PROCEDURE—223170 AIR HYDRAULIC PUMP**

- I. If Air-Hydraulic Jack will not lift but sounds normal:
  - A. It is probably air bound. To correct, tip jack on its left side (as viewed from handle end) and cycle the air pump slowly.
  - B. The Hydramatic valve might be stuck open. To check, open release, pull bellcrank up to full height by hand, close the release valve while at full height and let go of the bellcrank. If it returns to low position, the trouble is in the hydraulic unit. If it holds position, lower the jack and try to make a lift with the air pump. If successful, the trouble was in the Hydramatic and raising the bellcrank by hand corrected it.
- II. If Air-Hydraulic Jack will not lift and does not sound normal, look for the following:
  - A. If the air pump is cycling unusually fast:
    1. The jack may be air bound.
    2. The suction ball in the hydraulic unit may not be seating.
  - B. If the air pump is not cycling at all, but air can be heard rushing out the exhaust port, the air pump should be removed and checked for the following:
    1. Rubber bumper on cushion spring may have been dislodged from the spring.
    2. The valve plunger assembly 223187 may be stuck open.
    3. The two weep holes in the pump retainer plug 223183 may be plugged with dirt.
    4. The return spring 223173 may be broken.
  - C. If the air pump is not cycling at all and no air is coming out of the exhaust, check for the following:
    1. The pump rod 223186 may be frozen in its packing gland.
    2. The Valve Plunger Assembly 223187 is not opening. Look for a bent Trip Washer or a bent or rusted Valve Plunger which has seized in the piston.
- III. If the jack will raise a load but much more slowly than normal, the trouble is almost certainly related to the air pump. Look for the following:
  - A. If the pump cycles very slowly:
    1. There may be a restriction in the air line between the air valve and the air pump.
    2. One of the weep holes in the 223183 Pump Retainer Plug may be plugged.
  - B. If the pump cycles very rapidly:
    1. There may be an air leak at the threads of the Pump Retainer Plug (223183), allowing the 223678 Piston (plastic) to reseat prematurely. This results in a short stroke and a rapid cycle. Correct by recoating the threads with LOCTITE-HV (1-10).
    2. The 220834 Ball Plug may have become dislodged. This part is used to block access drill hole.
    3. The "V" Packings that seal against the Pump Rod may be worn out.
    4. The 225384 Trip Spring may be deformed or broken.