3.3 DRAWWORKS CLUTCH CONTROLS
(HC-2-X Controlair Valve - P50975-3)

Maintenance: Maintenance periods should be scheduled in accordance with frequency of use and working environment of the Controlair Valves. One complete Controlair valve should be kept in stock for each four valves in service. During the maintenance period change out the complete valve with the "stand-by" unit. This will reduce production loss and afford inspection and replacement of worn parts at a more opportune time in a favorable location.

Notice that the operating portion of the valve can be removed without disturbing the pipe connections. Remove the valve from the pipe bracket by loosening studs 1 and lift the valve free.

No special tools are required to maintain the Controlair Valve.

Completely disassemble the Controlair Valve. Wash all metal parts in a non-flammable solvent and all rubber parts with soap and water. Rinse each part thoroughly and blow dry with a low pressure air jet. Arrange the parts on a clean white surface in the order of the exploded view.

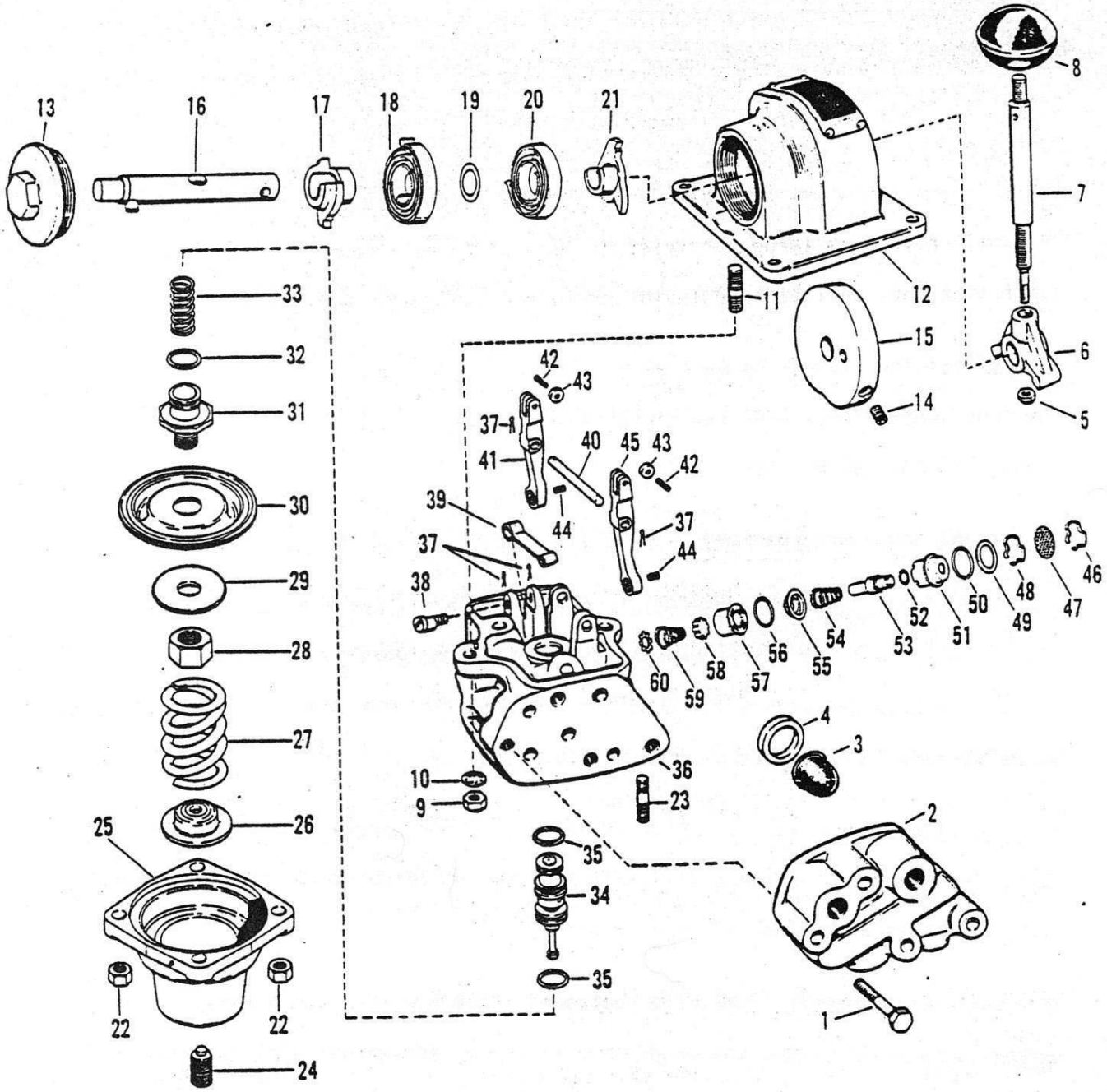
Examine each part carefully. Flex the diaphragm and packing rings; if cracked or worn, replace them. Replace all parts that may not provide satisfactory service until the next scheduled maintenance period.

As reassembly proceeds, lubricate each part. Use No. 107 Lubriplate on metal to metal surfaces and Cosmolube on all rubber parts, equivalent greases to those recommended can be used.

Store the reconditioned Controlair Valve in a moisture-proof bag.

HC-2-X (P50975-3) Valve: Handle is self-returning to the "off" position from positions in the handle travel arc.

MODEL HC-2-X CONTROLAIR® VALVE



EXPLODED VIEW

CONTROLAIR VALVE (Cont'd):

This control contains two pilotair three-way valves used to control the two-drum drawworks by a single lever. The selection between the two valves depends upon the handle movement either side of the "off" position.

The in and out ports have strainers in them. The strainers will protect the internal valve from large particles of foreign material but it is recommended that a filter and lubricator be installed in the "in" port piping.

Three adjustments can be made to the HC-2-X valve. Screw 24 varies the pressure setting, screw 44 alters the pickup point of levers 41 and 45 and pin 38 aligns the dog with cam 15.

PILOT VALVE LEVER ADJUSTMENT: Turn adjusting screw 24 in until control spring 27 is slightly compressed. Remove valve protectors 47. Move the Controlair Valve handle 7 back and forth on both sides of the "OFF" position, observing the action of levers 41 and 45. The pilot valves should be fully open after the handle moves through the first 10° travel arc. If the pilot valve levers need adjusting, place the handle in a maximum increasing pressure position. With a 3/32" Allen wrench, turn adjusting screw 44 of the activated lever (either 41 or 45) out just far enough to crack the exhaust valve. The gage will show a drop in pressure. From this point, turn the adjusting screw in a full three (3) turns. This will open the inlet valve of the pilot valve to its maximum capacity.

Move the handle to the opposite extreme position and repeat the adjustment for the other pilot valve lever.

Cam Dog Adjustment: The eccentric cam dog pin 38 aligns the cam dog 39 with the rise on cam 15. If pressure response is not identical to handle position in both quadrants, compensate this difference by turning the cam dog pin 38 either clockwise or counter-clockwise.

CONTROLAIR VALVE:(Cont'd):

Pressure Setting Adjustment: Adjusting screw 24 varies the minimum and maximum pressure setting a like amount without changing the range of pressure. Turning the adjusting screw in raises the maximum and minimum pressure; turning it out decreases the maximum and minimum pressure. The pressure range can be changed only by changing the control spring 27. These springs are interchangeable.

H-2-FX (P50494-2) VALVE: Handle is equipped with a friction brake that will hold the handle in any position selected in the handle travel arc. This valve is used for rotary table clutch control.

A filter and lubricator should be installed in the line leading to the "IN" port.

Three adjustments can be made to the H-2-FX valve. Adjusting screw 32 changes the pressure setting; the handle yoke 6 can be reversed to affect the degrees of handle arc travel and an adjustment can be made to the handle friction brake.

Pressure Setting Adjustment: Adjusting screw 32 varies the minimum and maximum pressure setting a like amount without changing the range of pressure. Turning the adjusting screw in raises the maximum and minimum pressure setting; turning it out decreases the maximum and minimum pressure setting.

The pressure range can be changed only by changing the control spring 35. These springs are interchangeable.

Handle Travel Adjustment: The handle yoke 6 is designed to permit 92° of handle travel if installed in one position and 78° of handle travel if installed in the reverse position. Compensate for the effect on pressure setting by turning the adjusting screw in or out as desired.

CONTROLAIR VALVE (Cont'd):

H-2-EX (P50925-3) VALVE: Handle is self-returning to minimum pressure position from all positions in the handle travel arc. This valve used for third drum control and also drawworks when separate valves are installed.

A filter and lubricator should be installed in the line leading to the "in" port.

Two adjustments can be made to the H-2-EX valve. See Pressure Setting Adjustment and Handle Travel Adjustment above.