Bailey

SECTION
P92-33

PRODUCT INSTRUCTIONS

POSITIONER PT. NO. 5321030-□

FOR AIR SUPPLY OF 51 TO 100 PSIG

INDEX

Bailey Positioner Pt No 5321030 □ for high pressure supply service is a pneumatic relay device which is applied to a double-acting power operator to accurately position a regulating device (control valve, damper, etc) in response to the control demand Overall mounting dimensions and connections for pneumatic tubing are shown in Figure 1

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L THO N U S A

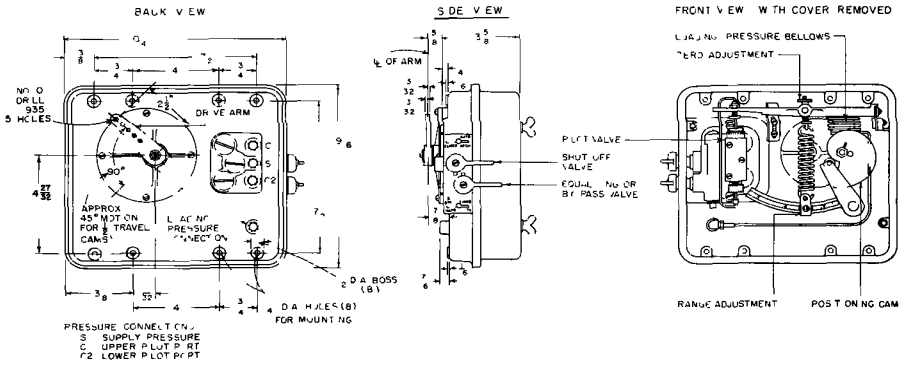

FIGURE 1 Overall and Mounting Dimensions

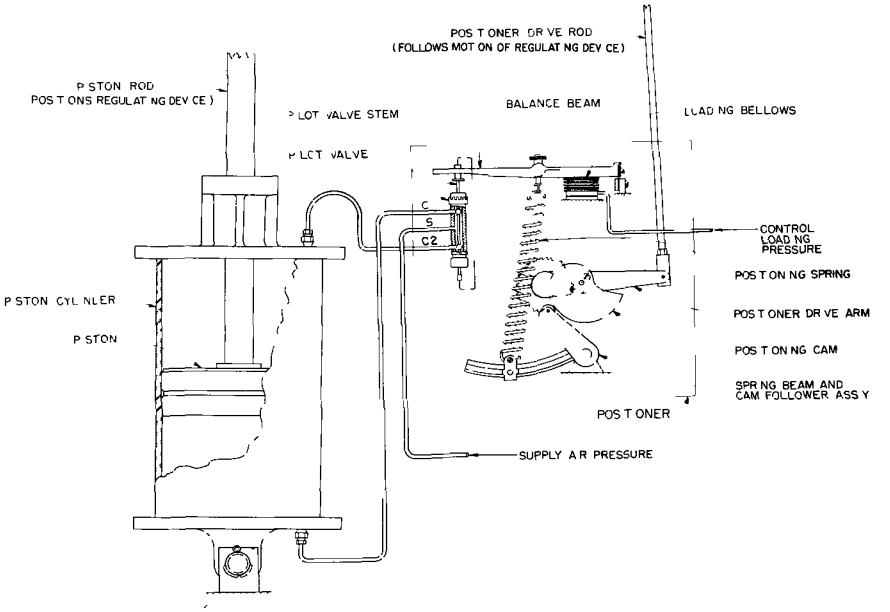

FIGURE 2 Schematic of Positioner Applied to Double Acting Air Cylinder and Piston Assembly

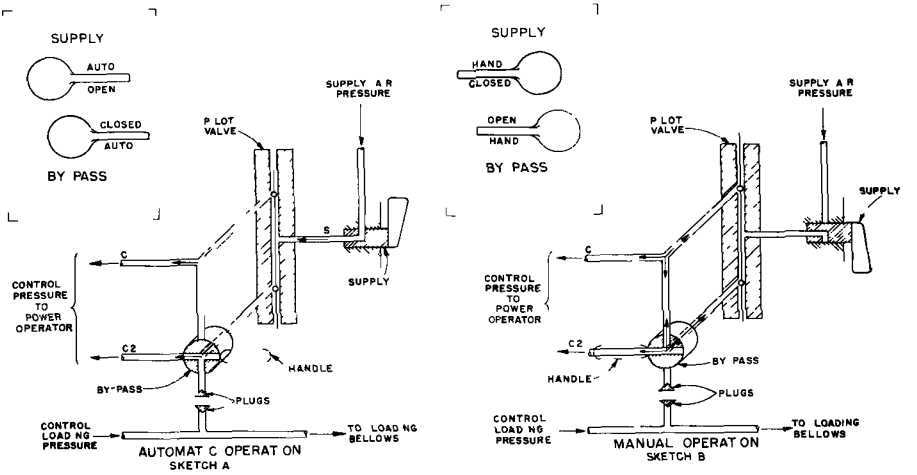

FIGURE 3 Positioner Supply and Bypass Valve Operation

DESCRIPTION OF OPERATION

A typical application of the Bailey Positioner is shown in Figure 2 The power operator to which the Positioner is applied is a double acting air cylinder and piston assembly The piston rod may be connected thru suitable link age to position a valve, damper, or other reg ulating device

The Positioner consists essentially of two opposing forces balanced against each other When the Positioner is balanced, the force exerted upward on the balance beam by the loading bellows is equal to the downward force exerted by the positioning spring The force exerted by the bellows depends upon the control loading pressure established by the system in relation to the demand for the controlled medium The force exerted by the positioning spring de pends upon the position of the power operator piston and the shape of the positioning cam

The position of the power operator piston is tied back to the Positioner drive arm thru the Positioner drive rod (a drive rod is the usual means used to tie back the motion of the power operator however other methods may be used depending on the application) Therefore, for every position of the power operator, the Posi tioner drive arm assumes a corresponding position The drive arm is geared to the posi tioning cam which is shaped to give a desired characteristic of power operator position vs control loading pressure

Automatic Positioning

When the forces exerted by the loading bel lows and positioning spring (Figure 2) are bal anced against each other, the balance beam holds the pilot valve stem in its "neutral" posi- tion, i e , the pilot valve stem lands are cen tered at the pilot ports, creating equal pres sures on either side of the piston Thus, the position of the power operator is maintained

When the control system indicates that the power operator should be repositioned, the force exerted on the balance beam by the load ing bellows increases or decreases as a result of the increase or decrease in control loading pressure Movement of the beam raises or lowers the pilot valve stem, increasing or de creasing the air pressure applied to either side of the piston As the piston is moved by the dif ferential in pressure thus created, positioning spring tension increases or decreases until (1) the forces exerted by the bellows and spring are again at balance, (2) the pilot valve stem returns to its "neutral position, and (3) the piston as sumes a new position

Control Loading Arrangements

The Positioner is normally furnished mounted on the power operator with all tubing connections made between the operator and Positioner De pending upon the specific application, the Positioner may be adjusted for either direct or re verse loading operation as described below

Direct loading (Figure 2) is that arrangement whereby upward movement of the piston rod causes a valve, damper, or other regulating device to open as control loading pressure to the Positioner bellows increases Control air pressure from the upper port of the Positioner pilot valve is supplied to the underside of the piston The positioning cam is assembled (red concentric and radial lines visible) so that when the cam turns in a counterclockwise direction, tension on the positioning spring will increase.

Reverse loading is that arrangement whereby downward movement of the piston rod causes a valve, damper, etc to close as control loading pressure to the Positioner bellows increases For applications requiring reverse loading, it is necessary to switch air line connections to the cylinder and reverse the positioning cam (black concentric and radial lines visible) so that when the cam turns in a clockwise direction, tension on the positioning spring will increase To reverse the positioning cam

1 Remove cam (Figure 4)

2 Remove locating set screw

3 Reassemble set screw in tapped hole in other side of cam hub

4 Reassemble positioning cam so that op posite side of cam faces outward

OPERATION

After adjusting the Positioner for the speci fic service as outlined on page 6, and with supply and control pressure applied, the power operator may be operated either manually or automatically by proper manipulation of the Positioner supply and bypass valves (Figure 3) This arrangement is for use with either direct or reverse loading operation

A safety latch is provided to lock supply and bypass valves in position when set for automatic op eration The latch sets itself and prevents valves from being bumped or jarred out of position

Manual Operation

1. Supply valve in HAND CLOSED position

2 Bypass valve in OPEN-HAND position

3 Manually position power operator (by handjack, hand lever, pneumatic manual loader or other available means)

4 To position power operator i i accordance with the demand from the control system

a. Remove Positioner cover,

b Manually position the operator so that Positioner balance beam is centered midway between upper and lower stops

Transfer from Manual to Automatic Operation

1 Remove Positioner cover

2 Adjust loading pressure to Positioner so that balance beam is centered between upper and lower stops

3 Turn Positioner bypass valve to CLOSED AUTO

4 Slowly turn supply valve to AUTO OPEN.

The above procedure is somewhat awkward for routine transfers If transfers are made often, determine the position of the power oper ator for various loading pressure values, omit steps 1 and 2 and note power operator position (from an indicator or by other means) then set appropriate loading pressure without referring to the Positioner balance beam A small pressure gage installed in the loading pressure line at the power operator is convenient for reference

Another alternate procedure is to position the power operator with i espect to existing load ing pressure, rather than the reverse, if the change in regulating device position will not have adverse effects upon the process in operation. To follow this procedure, omit steps 1 and 2 above

Automatic Operation

1 Supply valve in AUTO-OPEN position

2 Bypass valve in CLOSED AUTO position

Transfer from Automatic to Manual Operation

1 Press IN on safety latch (assembled with supply and bypass valves)

2 Turn bypass valve to OPEN HAND

3. Turn supply valve to HAND CLOSED.

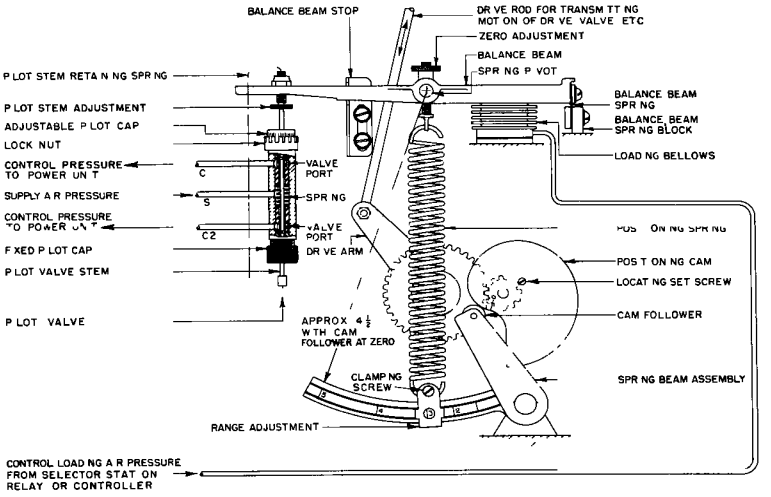

FIGURE 4 Positioner Adjustments

ADJUSTMENTS

Make the following adjustment checks to in sure correct operation of the power operator and Positioner before making any adjustments to adapt the power operator to its particular application as described under "Calibration Adjustments" on page 6

Adjustment Checks

Refer to Figure 4. The adjustments below are based on the direct loading arrangement shown in Figure 2 If the power operator is ar ranged for reverse loading, note that its move ments and position will be opposite of those for direct loading applications

Normally, the regulating device (valves, dampers, etc) used in the direct loading ar-rangement will be in its CLOSED position when the power operator piston is at the bottom of the cylinder and in its OPEN position when the pis ton is at the top of the cylinder. Therefore, the words OPEN and CLOSED used below refer to these positions.

1. Use B. straight line, positioning cam which has been shipped in place in Positioner assembly.

2 Make supply air connection at back of Positioner case (51 to 100 psig) Maintain this supply pressure throughout adjustment proce dures and during operation

3. Make certain fixed pilot cap, adjustable pilot cap, and locknut (one finger of locknut en gaged in groove in cap) are tightened securely If pilot valve stem lands do not line up correctly with pilot valve ports, adjust pilot valve and stem as outlined in steps 13 and 14

4 Turn supply valve to AUTO OPEN and bypass valve to CLOSED AUTO Set control loading pressure at zero psig Piston should move to CLOSED position.

5 If cam follower is not at zero mark on positioning cam with piston in CLOSED position, disconnect and adjust Positioner drive rod (or other connecting linkage used to tie back to power operator) until Positioner drive arm as sumes position which places follower on zero mark Reconnect drive rod

6 Set control loading at minimum range value (3 psig) Piston should remain in its CLOSED position, and Positioner balance beam should be horizontal and midway between upper and lower stop (see Figure 4).

a If beam is horizontal, but not midway between stops, loosen screws holding stops and correctly reposition stops Tighten screws

b If beam is not horizontal, turn zero adjustment nut to adjust spring tension until position is correct

7 If piston begins to move away from its CLOSED position, turn zero adjustment nut clockwise to increase positioning spring tension until piston just returns to CLOSED position

8 Increase loading pressure above minimum range value (3 psig) If piston does not begin to leave CLOSED position immediately after applying increased pressure, turn zero adjustment nut counterclockwise until such movement is obtained

9 Return control loading pressure to minimum range value (3 psig) Piston should return to CLOSED position, balance beam should be centered, and cam follower should be at zero mark on cam If these conditions have not been met, repeat steps 6, 7, 8 and 9

NOTE For best operating results, when cam follower is at zero on cam, distance between top of spring beam (at both marks 1 and 5) and center of spring pivot on balance beam (Figure 4) should be 4 1/2 inches ±1/16 inch Repeat steps 6, 7, 8, and 9 until dimension is obtained If material has been removed from cam at zero point, it is impossible to meet this dimension

10 Set loading pressure at maximum range value (15 or 27 psig) If piston does not move to its OPEN position, loosen clamping screw of range adjustment and slide range adjustment along spring beam until piston reaches OPEN position Tighten clamping screw to insure that adjustment will remain locked

11 Decrease loading pressure below maximum range value (15 or 27 psig) If piston does not begin to leave its OPEN position immediately after decreasing loading pressure turn range adjustment until such movement is obtained

12 Apply 50% (9 or 15 psig) of loading pressure range to Positioner loading bellows Check that piston is at mid travel position and balance beam is horizontal Adjust pilot stem adjustment until piston assumes mid travel position

13 Turn off supply air to Positioner, then remove pipe plug at top of piston cylinder (Figure 2) and mount an accurate pressure gage in pipe plug hole. (If cylinder has no plug, remove connecting tubing and insert a tee connection to which both pressure gage and connecting tubing can be attached) Turn on supply air

14 Apply 50% (9 or 15 psig) loading pressure range to Positioner loading bellows If pressure gage reading is not within ±1 psig of 50% of supply pressure (51 to 100 psig) value

a unlock finger of locknut which is engaged in adjustable pilot cap groove (Figure 4),

b turn adjustable pilot cap until pressure reading on gage is correct,

c turn locknut on adjustable cap until it is tight against pilot valve body, press locknut finger in place with corresponding groove in adjustable pilot cap

15 Repeat steps 1 thru 12, then remove pressure gage (or tee connection) from piston cylinder and replace pipe plug or tubing

Calibration Adjustments

The Positioner adjustments described below may be used to improve the operation of the power operator system either by itself or in relation to other systems or parts of a multiple system

1 Zero or Suppression Adjustment By means of the zero adjustment (Figure 4) an initial tension may be imposed upon the positioning spring so that the piston will not start to move from its minimum position until the control loading pressure has increased (from 3 psig) to any value up to 15 (or 27) psig This adjustment is of value when two or more power operators are to be operated in sequence, where the power operator is equipped with a minimum stop, or where the characteristic of the device which the operator is moving must be matched with that of another regulated device

2 Range Adjustment The range adjustment (Figure 4) affords a variation of power operator motion for a given range of control loading pressure The amount of variation extends, roughly, from full piston travel for a 3 to 15 psig change in control loading pressure to one half piston travel for a 3 to 27 psig control loading pressure change. In combination with the zero adjustment described above, full piston travel may be obtained for as small a loading pressure change as 10 psi -e g , a range of 10 to 20 psig Range adjustments available with each of the three Positioner cams furnished are shown in Figures 5, 6, and 7 This adjustment is of value when the device being regulated by the power operator is oversized, since the adjustment allows operation of the power operator thru its useful motion for the desired full change in control loading pressure It is also useful in matching the loading vs position characteristic of the power operator with those of related power devices in the same control system

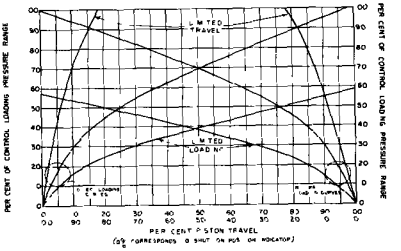

FIGURE 5 Cam A, Square Root Relation

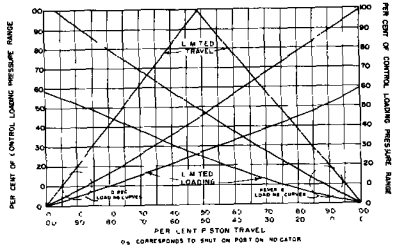

FIGURE 6 Cam B, Straight Line Relation

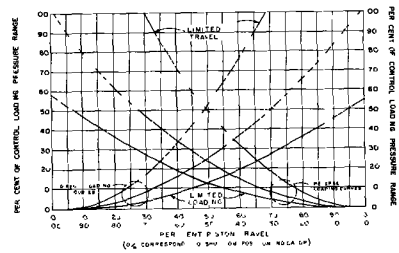

FIGURE 7 Cam C, Square Relation

3 Speed Adjustment - When the system involves only a single power operator, a high positioning speed is usually an advantage In a complex control system, however, it is generally desirable to operate all power devices at the same speed in order to avoid interaction between units or undesirable process conditions during load changes The speed of operation of the power operator may be decreased as described on page 9 under "Speed Control"

4 Cam Characteristic Adjustment This adjustment involves selecting or shaping the proper positioning cam in order to obtain that characteristic of piston position vs control loading pressure which will afford the desired characteristic of controlled medium vs control loading pressure Positioning cams A, B, and C are furnished with each Positioner (the B cam is shipped assembled in place and the A and C cams are attached inside Positioner case) The characteristics for which the cams are shaped are listed in Table 2 and are shown in Figures 5, 6, and 7 The figures show a family of curves for each cam, each curve representing a Range Adjustment when used with that specific cam Table 1 shows pressure values of the various control loading ranges equivalent to the control loading per cent values in Figures 5, 6, and 7

CONTROL LOADING PRESSURE		
PER CENT VALUE	PRESSURE VALUE (PSIG) Control System Ranges	
	3 27	3 15
0	3.0	3 0
10	5 4	4 2
20	7 8	5 4
30	10 2	6 6
40	12 6	7 8
50	15 0	9 0
60	17 4	10 2
70	19 8	11 4
80	22 2	12 6
90	24 6	13 8
100	27 0	15 0

TABLE 1 Conversion Table for Control System Ranges

Positioning Cam, Any Stroke	Piston Position (P) vs Control Loading, (L)	Figure No
A	Square Root ($L = \sqrt{P}$)	5
B	Straight Line ($L = P$)	6
C	Square ($L = P^2$)	7

TABLE 2 - Positioning Cam Characteristics

If the system involves a single power operator, it is probable that the B straight line cam will be satisfactory However, one of the other cams may be used to provide a more uniform controlled medium vs loading pressure characteristic, providing stable control over a wide range of operation with a given proportional band adjustment on the controller The definition of "controlled medium" used here is the rate of action of that medium (water, air, etc) being

controlled For a power operator which is an integral part of a complex control system, the cams provide a selection of characteristics which, together with the range adjustment, should afford close paralleling of the controlled medium vs loading pressure characteristic

Refer to "Characterized Cams" below for selecting or shaping the proper positioning cam for a power operator which is to be part of a complex control system

Characterized Cams

In order to match the inherent characteristics of the regulated device to that of a similar auxiliary, valve, variable speed control, etc , it may be practical to reduce the controlled medium vs piston position characteristic of each device in the system to a straight line relationship with regard to control loading pressure This straight line relationship is established by calibrating the Positioner with respect to the correct positioning cam by the following method

1 Use straight line cam, B, to determine the actual controlled medium vs power operator piston position characteristic (see Figure 8) (Determine piston position by observing the power operator position indicator, if included)

2 Decide upon the exact controlled medium vs control loading pressure characteristic desired (see Figure 9)

3 From steps 1 and 2 above, determine the exact control loading pressure vs piston position characteristic (see Figure 10)

4 Select the positioning cam whose characteristic curve, shown in Figure 5, 6, and 7, most closely matches the loading vs piston position characteristic determined in step 3

5 If necessary, set the range and zero adjustments to match the loading vs piston position characteristic more accurately

6 If the required characteristic cannot be matched by the above procedure, or if a more exact characteristic is required, alter the shape of the cam as described under "Cam Shaping Method" on page 9

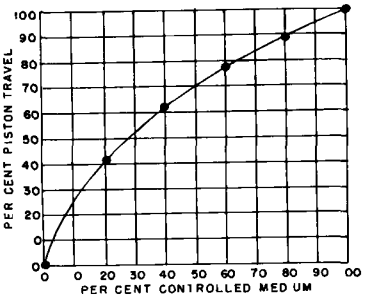

FIGURE 8 Regulated Device Characteristic

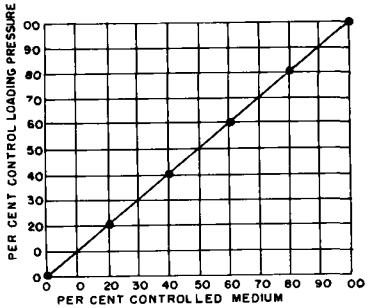

FIGURE 9 Desired Control

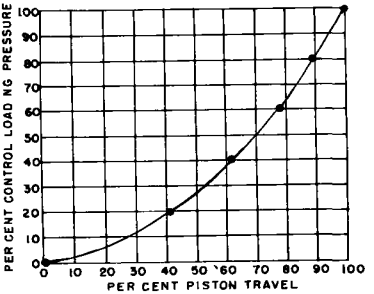

FIGURE 10 - Cam Characteristic

Cam Shaping Method

To assist in the alteration process, cams are marked with radial lines spaced for equal power operator piston position increments and concentric lines spaced for equal control load ing pressure increments The ten concentric lines on the cam correspond to the actual control loading pressure increments shown in Table 1 for the specific control system range being used

Alter the cam shape in the following manner

1 On the cam selected in step 4 (see 'Characterized Cams"), locate for each increment of control loading pressure (concentric lines) that power operator piston position (radial lines) required for the specific loading pressure, as determined on page 8 Refer to Figure 11 for the method of locating these points

2 A curve drawn thru the points located on the cam in step 1 is the desired cam shape. Ei ther alter cam or cut a new cam to this shape Caution There is danger of the cam follower becoming locked when the cam shape has too steep a rise When a cam shape is required that includes such a rise, it is necessary to intro duce sufficient angularity in the regulating de vice linkage to allow a less radical cam shape

Speed Control

If it is necessary to reduce the speed of operation, speed control orifices are available for insertion in the control lines from the pilot valve to the power operator cylinder To insert a speed control orifice, proceed as follows

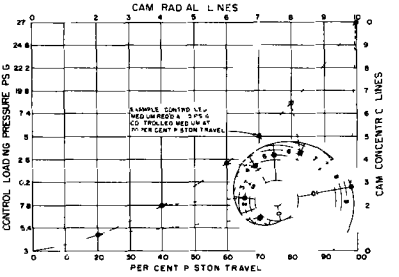

FIGURE 11 Locating Points for Shaping Positioner Cam

1. Remove pilot valve stem by springing open pilot stem retaining spring (Figure 4) and allowing stem to drop out (Do not scratch stem lands during this process)

2 Remove pilot valve by removing attach ing screws (Figure 12)

3 Remove O ring gaskets from both upper and lower holes in pilot valve block

4 Insert speed control orifice in each of the upper and lower holes

5. Replace O ring gaskets

6 Reassemble pilot valve to valve block

7 Reassemble pilot valve stem in pilot valve and replace pilot stem retaining spring

MAINTENANCE

General

1 Keep air connections tight to prevent leakage which may indicate improper function- ing of the unit Check all connections for leak age, while under pressure, with a soapsuds solution

2 Maintain a clean air supply (free of dirt, oil, or moisture) for satisfactory operation of Positioner and power operator

Routine Maintenance

1 Whenever power operator is out of serv ice (or when required), remove pilot valve stem and inner liners and clean with a common sol- vent Never use files, reamers, or abrasives on valve stem lands or valve liners If liners stick in valve body upon removal, push them free with a wooden stick or pencil, never use a metal rod for this purpose

2 Once each year or whenever Positioner supply or bypass valves begin to show signs of sticking, remove valve and lubricate with Bailey Petcock Lubricant (specify Part No 19987 1 when ordering) To remove valve, leave handle in present position and turn valve nut (Figure 12) out of pilot valve body

NOTE· Valves are not interchangeable with each other or with valves in other Positioners Valve and valve bodies are marked "1" and "2" for identification in reassembly

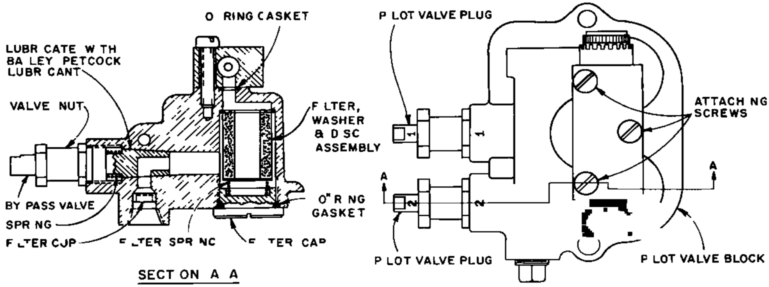

FIGURE 12 Positioner Pilot Valve and Pilot Valve Block

3 Once each year check filters in pilot valve body (Figure 12) and replace if dirty (note that filters are included as added protec tion and are not a substitute for the required clean air supply)

4 Once every two or three years change grease in Positio ıer gear case Fill gear case about half full with aluminum stearate base grease with a 1 2 consistency (such as Vulcan Lube, Grade No 1, from C H Clark Oil Co , Cleveland, Ohio) Rotate gears to work grease into teeth

5 Once each year check adjustment and calibration of Positioner and power operator

ITEM	PART NO	NAME
	CODE LABEL	IVE NO J LABEL W F REFERRING PTS
2	53 8J3	SPR SUPP RT
3	53 2 8	SLEEVE
4	80	SCREW
[illegible]	J 37x3 8	RD HD SCR J REQ
[illegible]	8 22	SCR & WASH ASSY
	J 32x5 8	RD HD S REW
8	53 86	POSIT ONER ER ARM
[illegible]	53 8 6	SPEED CONTROL WASH
[illegible]	53 74	P LOT VALVE GASKET
	3 J04	SEAL NG STR P
[illegible]	53 40	ER ASSY NCL DES
2A	53 408	COVER
2B	53 40	ER S R REQ
2C	9H J 8	RET RD J 2 REQ
3	8 32 3 8	RD HD S R REQ
4	NO 8	WASHER REQ
5	53 J 6J	V HA DLE REQ
	53 4 8	P L T BEAM ASSY
7	1 456	P L S EN SPR G
[illegible]	4 2	RD HD SCR REQ
	4	P L T STEM AD S R
2	3 3 6	SEALING TUBE
[illegible]	53 433	GEAR & HAFT ASSY
[illegible]	SEE TABLE	P LOT STEM
[illegible]	3 4 3	SP PEAM ASSY LUDES
3A	53 4	C MP BR REQ
B	3 4 5	AM R LLER

ITEM	PART NO	NAME
3	9 64	RET RD J REQ
3C	53 446	CAM ROLLER P N
4	J 45	P L T BEAM STOP
	N O	SHF LK WASH REQ
[illegible]	44	ADJ ST T
2	3	F E B LT
8	44	ADJUST N P V T
	SEE TABLE	SPR NG
3	SEE TABLE	RACHT L F AM B
3	53 4	AM H B
[illegible]	53 4	AM SHAFT & P N O
3	3 4 5	SPR RETA NER
J4	53 4 4	P L T BEAM SPR
35	53 8	SPR G RETA ER
J6	3 8	HEX AM LT
	9 6	SET S REW
J8	7 64 3	RETA NG R NG
3	53 4	BELL W T BE ASSY
4	SEE TABLE	Q ARE CA
4	SEE TABLE	SQ ARE R T CAM A
4	5 4	REAR PR E ES
4 A	53 3	O L SEAL
4	4	EEDLE BEAR G
4	SEE TABLE	AMEPLATE
44	9	PARKER KAL STL ER SCR 4 REQ
45	9 98	SPECIAL LOCK UT
46	9	RD HD S REW
4	53 43	SP AN MT BRKT

ITEM	PART NO	NAME
48		HEX TL T
49	J J	T RS SPR NG
5	3 4	SPR G
		LAT H
2	4908	SHF LK WA H REQ
[illegible]	4	ELB W
54	6	P LOT V LE ASSY NCL DES
4A	40	VALVE N T REQ
54D	53 4	SPRING REQ
55	58 0 8	AP F R 8 P LOT VALVE
	3 33	AP FOR 3 8 P LOT VALVE
56	SEE TABLE	VALVE SEAT 2 REQ
5	SEE TABLE	SLEEVE REQ F R 8 P L T V ONLY
58	53 428	P LOT VALVE SPG
53	53 4	VALVE B D
[illegible]	536486	AP LO K NUT
8	SEE ABLE	ADJ CAP
	0 3 x 8	INT F L H SEMS 3 REQ
63	4	F LTER CAP 3 REQ
[illegible]		R A KET RE
[illegible]	4 8	R NG GASKET J REQ
66	3 48	F L WASH & D S AS Y J REQ
6	53 J	F LTER C P 3 REQ
68	53 4	F LTER P J REQ
[illegible]	NPT	SQ HD TD BRASS P PE PLUG
	9 8	BA LEY PET C K L BR CANT
	3 4	BACKPLATE ASSY

TABLE OF VARIABLE PARTS

POSIT ONER PART NO	P LOT S ZE	AM STROKE	RANGE	ITEM 2	ITEM 9	ITEM 3	ITEM 40	ITEM 4	ITEM 43	ITEM 5	ITEM 57	ITEM 6
532 03	9	F LL	3 5	53 03	5316 8	448	J3 34	53 449	3 60 3	887	532 C32	53848
3 1030	3 6	FULL	3 5	532 9	J3 87	53 448	3 341	3 449	96600 4	5	M T	532 033
532 030 3	8	F LL	J 27 5	53 03	53 444	J 448	J 34	53 44	9860 5	887 2	53 03	53 48
53 030 4	3 6	FULL	7 5 2	532 9	3 444	53 448	3 34	5 443	4680 6	3 6	M T	53 033
532 30 5	8	FULL	3	3 J3	53 6 6	53 448	53 34	3 449	96 5 8	588	53 032	536487
532 030 6	J 6	FULL	3 5	53 9	53 67	53 448	53 34	53 443	96 8	3 8	M T	32 033
53 030	1 8	FULL	3 2 5	532 03	53 444	53 448	53 34	3 449	96 8	588	53 32	536487
532 03 8	3	FULL	3 2 5 2	532 0	53 444	53 448	53 34	J3 44	96 5 8	3 6	M T	53 C33
5321030	8		3 5	3 03	53 6 7	OM T	OM T	M T	J8	J887	532 03	536487
53 030 0	3 6		3 5	532 0	53 6 67	OM T	M T	OM T	95600	53 6	M T	
532 030	8		3 7 5	53 03	J 444	OM T	OM T	OM T	96600 2	8877 2	J2 C3	5364
J3 030 2	3 16		3 27 5 25	532 C	53 444	M T	OM T	OMIT	19660 2	53 8	M T	532 33

SPARE PARTS K TS

K T NO 256 68		K T O 25 6 8 2	
POSITIONER PART NOS 532 30 3 9 1 8 PILOT S ZE		POSIT O ER PART OS 532 03 4 6 8 12 3 6 P LOT S ZE	
QTY	ITEM NO SEE NOTE	QTY	ITEM NO SEE NOTE
EA	70 34 23B 58 29 23D 39 7 50 49 22	EA	70 34 23B 58 * 3D 39 50 49 22
2 EA	23C 57 56	2 EA	23C 56
3 EA	68 64 65 66	3 EA	68 64 65 66

NOTES

SPEC FY P SIT ONER PART UMBER TO BE STAMPED N NAMEPLATE

SEE P LOT S ZE C L MN N TABLE FOR APPL ABLE P LOT VALVE S ZE

* K T NCLUDES RANGE SPR NG 53 444 FOR 5 25 OR 3 27 PSIG AND 316767 FOR 3 5 PS

Parts List For Parts Drawing P92 9

REPLACEMENT PARTS

Spare Parts Kit

The Spare Parts Kit shown in Figure 13 should be carried in stock Specify the Spare Parts Kit part number to order a complete kit

Ordering Individual Parts

A Parts Drawing for the Double Acting Positioner, Pt No 5321030-□ is shown in Figure 13 Normally this drawing will apply to the units furnished However, there may be individual differences in specific units because of

1 Design changes made since the printing of this Instruction Section

2 Special design of the Positioner to make it suitable for special applications

Therefore, when ordering parts, assure the receipt of correct replacements by specifying on the order

1. The complete nomenclature (stamped on instrument nameplate) of the Positioner for which parts are desired

2 The Parts Drawing on which each part is illustrated. (The Parts Drawing Number is given in the title for the Figure)

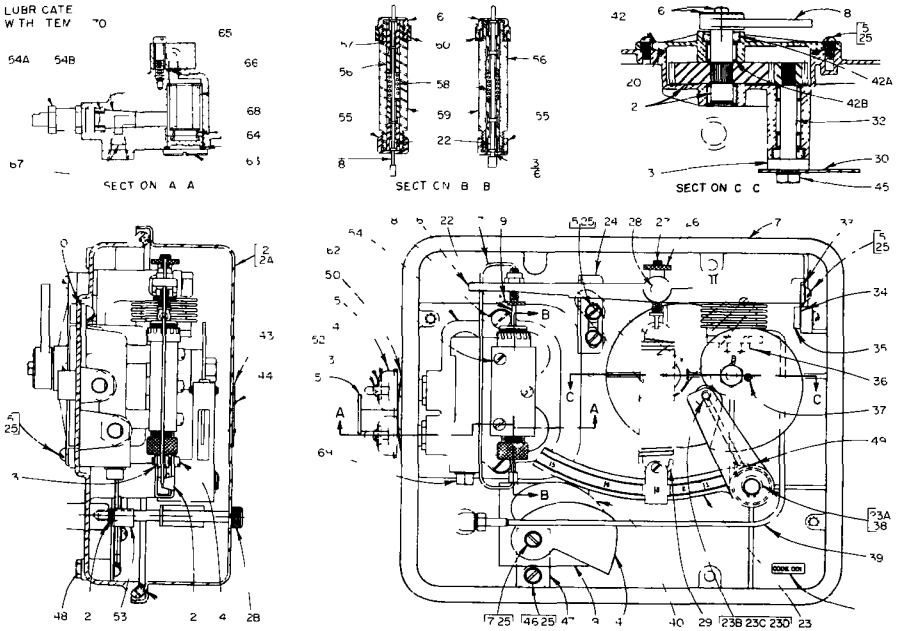

FIGURE 13 Parts Drawing P92-9, Assembly for Positioner Pt No 5321030-□

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