

Piston Pumps



Low Noise Industrial Piston Pump

PVQ 10-A2/MA * *** - ** * * - 10 C** *** *** * - 11/12/20
PVQ 13-A2/MA * *** - ** * * - 10 C** *** *** * - 11/12/20





CAUTION
 Model PVQ13C compensator pressure adjustment shall not exceed 2000 psi.

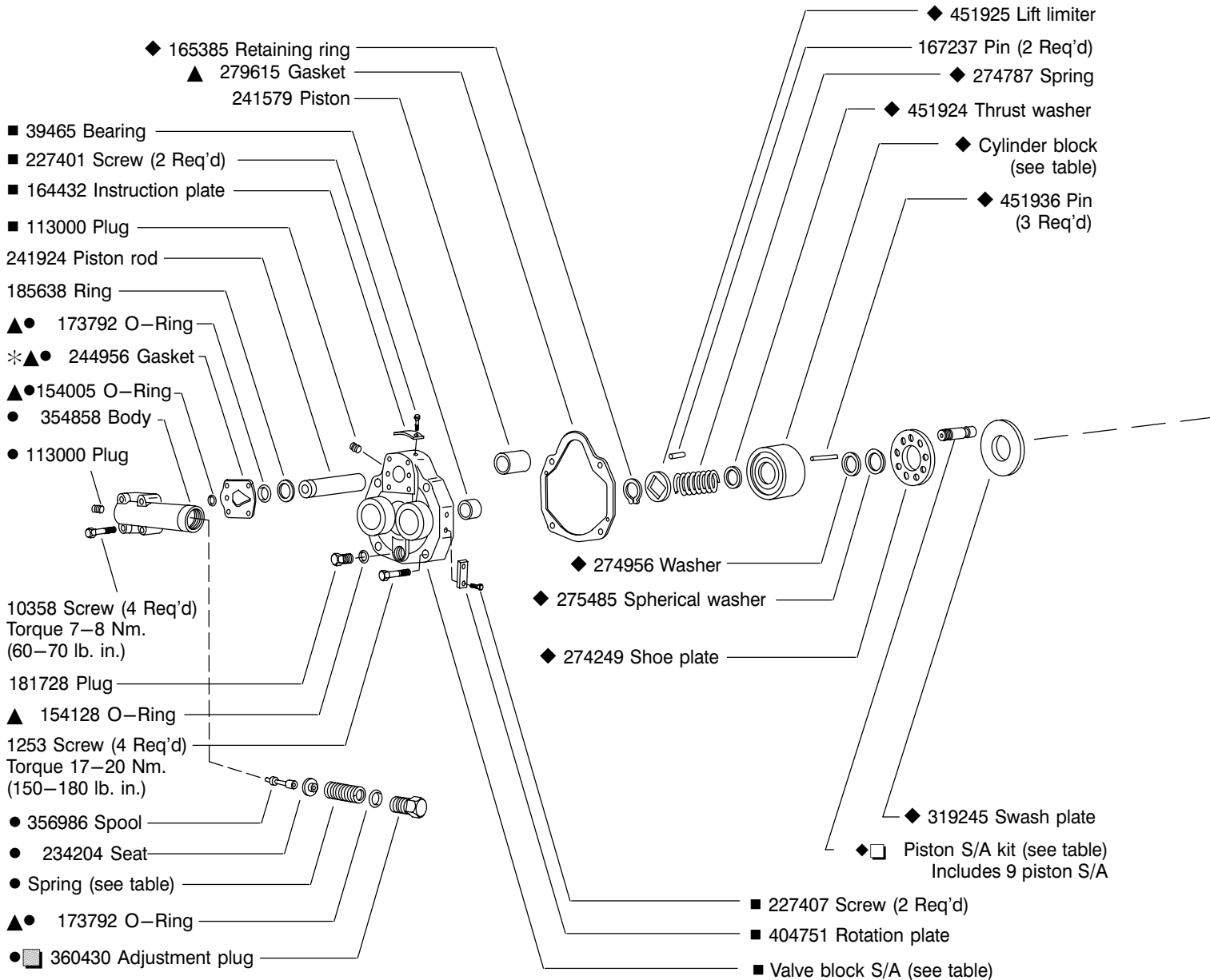
Model	●Comp. kit	●Comp. Spring	●Load Sense Spring
PVQ**C	942158	239371	————
PVQ**CM	942159	265693	————
PVQ**CG	942480	239371	————
PVQ**CMG	941353	265693	————
PVQ**C**V(C)11B	02—142729	239371	581073
PVQ**C**V(C)11P	02—142728	239371	581073
PVQ**C**V(C)24B	02—142730	239371	581072
PVQ**C**V(C)24P	02—142727	239371	581072
PVQ**CD****	(Refer to service parts information I—3255—S)		

NOTE

C, CM Compensator shown for right hand rotation. Rotate 180° for left hand shaft rotation and connect to left hand valve block S/A.

9 NOTE

See model code for pressure range settings of individual compensator kits.

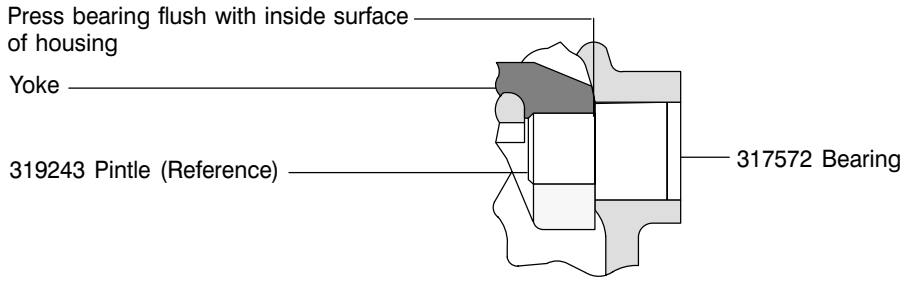


CAUTION



* Position gasket with small end of teardrop hole pointing in direction of compensator adjusting plug

	Right hand	Left hand
■ Valve block S/A		
Rear ports	02-142930	02-142931
Side ports	02-142932	02-142933



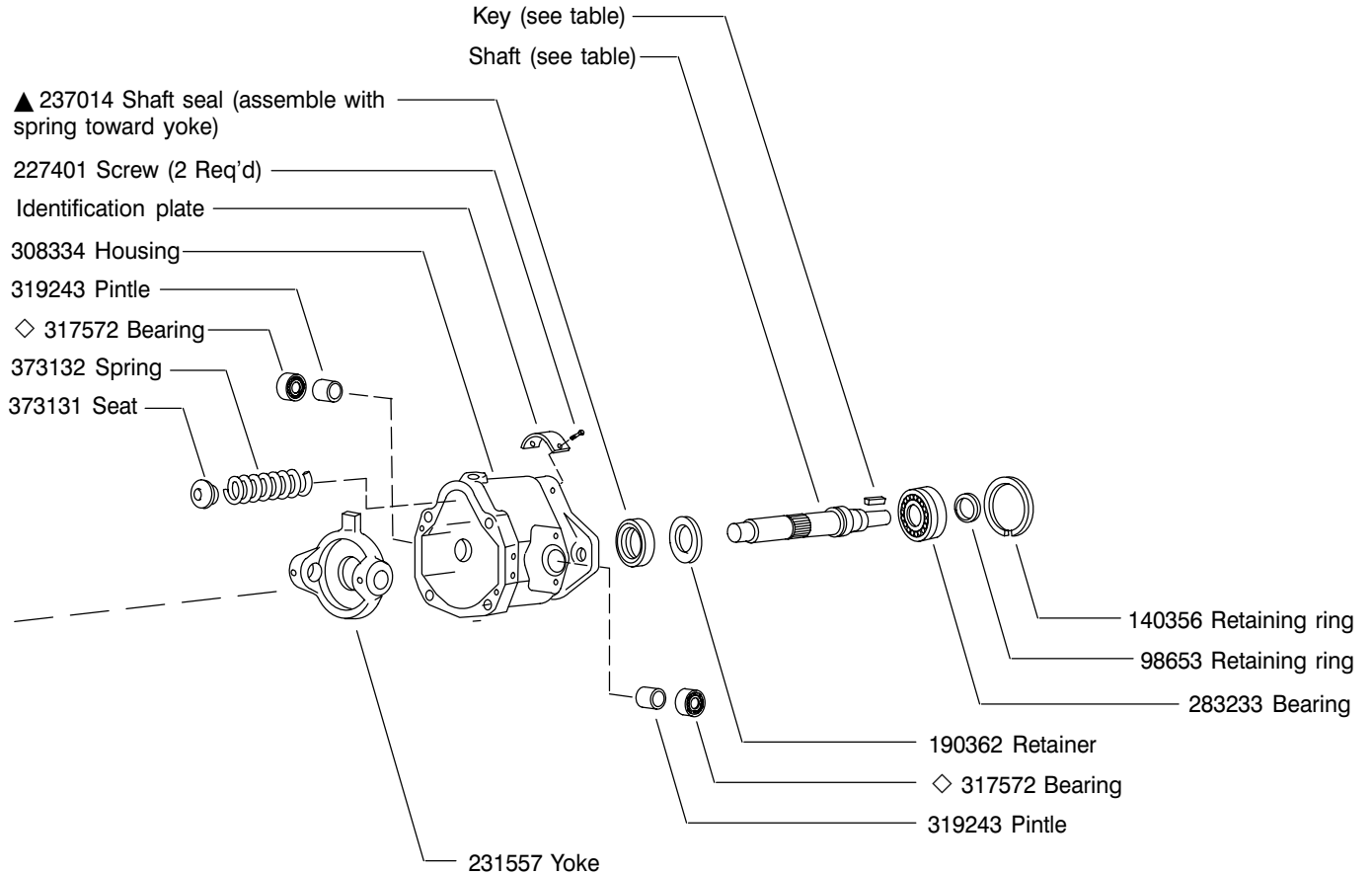
◇ **PINTLE BEARING ASSEMBLY NOTE**

The bearing O.D. surface and mating surface in the housing must be clean. Apply sealing compound (Loctite A (10-1) or equivalent) to the bearing O.D. and press in place.



CAUTION

Do not allow sealing compound to contact the bearing needles.



Model	Cylinder block	□ Piston S/A kit	◆ Rotating group kit
PVQ10	677061	942229	875775
PVQ13	677060	942230	875773

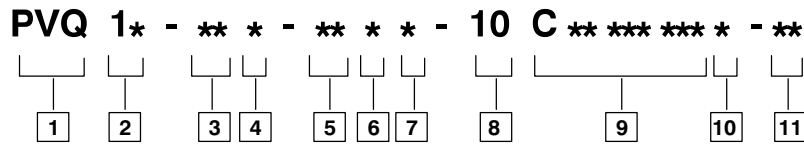
Shaft	Type	Key
266162	1	142843
286848	3	—
883030	N	472255

NOTE

For satisfactory service life of these components in industrial applications, use full flow filtration to provide fluid which meets ISO cleanliness code 16/13 or cleaner. OFP, OFR, and OFRS series filters are recommended.

- ▲ Standard seal kit 919191
F3 equivalent seal kit 919308
- Compensator kit (see table)
- Valve block S/A (see table)
- ◆ Rotating group kit (see table)
- Piston S/A kit (see table)

Model Code



1 PVQ Series

P – Inline piston pump
V – Variable volume
Q – Quiet series

2 Displacement

(CC/Rev & Pressure ratings)

10 – 10 CC/Rev (.64 CIR)
 210 bar (3000 psi)
13 – 13 CC/Rev (.84 CIR)
 140 bar (2000 psi)

3 Mounting flange

A2 – SAE “A” 2–bolt
MA – ISO 3019/2 “A” 2–bolt (available with “N” driveshaft only)

4 Rotation

(viewed from shaft end)

R – Right hand (CW), (standard)
L – Left hand (CCW), (optional)

5 Ports

(type and location)

SE – O-ring boss rear port,
 1.0625 inch (Inlet & Outlet) (standard)
SS – O-ring boss side port, 1.3125
 inch (Inlet & Outlet) (optional)

6 Shafts

(input)

1 – Straight keyed SAE “A” modified
 .75 inch Dia. x 1.75 inch long
3 – Splined SAE “A” modified 9T, 16/32
 DP major Dia. fit
N – ISO 3019/2 short straight keyed
 (available with “MA” mounting only)

7 Seals

S – Buna N (standard)
F – Fluorocarbon, (optional)

8 Pump design number

10 – First design

9 Control type

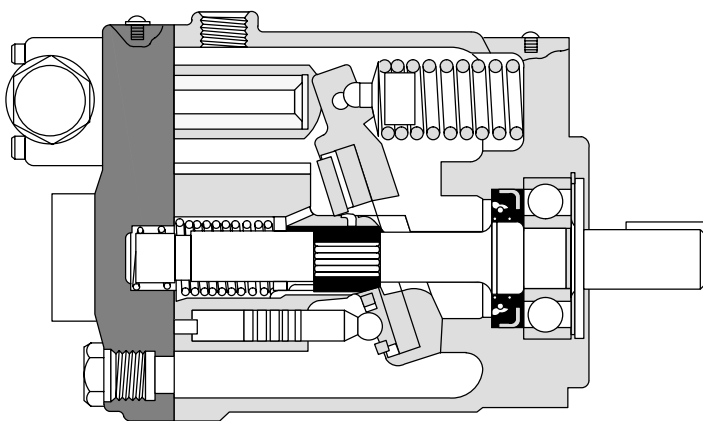
C** – Pressure compensator, PVQ10: Std.
 model is C21, indicating factory setting of
 210 bar (3000 psi). Range is 02–21 in tens
 of bar (350–3000 psi)
 PVQ13: Std. model is C14, indicating facto-
 ry setting of 140 bar (2000 psi). Range is
 02–14 in tens of bar (350–2000 psi)
CM** – Low pressure compensator, Std.
 model is CM7, indicating factory setting of
 70 bar (1000 psi). Range is 02–10 in tens of
 bar (350–1500 psi)
CV**B** – Pressure compensator C**, as
 above, with load sensing. Std. load sensing
 setting is 11 bar (160 psi). Range 10–17
 bar (150–250 psi), with bleed down orifice.
 Example: C21V11B indicates PVQ10 compen-
 sator with 210 bar pressure setting and
 11 bar load sense differential.
CV**P** – Pressure compensator with
 load sensing as C**V**B above, but with
 bleed down orifice plugged.
CVC**B** – Pressure compensator with
 load sensing. Compensator same as C**
 above. Std. load sensing setting is 24 bar
 (350 psi). Range 17–31 bar (250–450 psi),
 with bleed down orifice
CVC**P** – Pressure compensator with
 load sensing. Same as C**VC**B above,
 but with bleed down orifice plugged.
CG – Pressure compensator modified
 for hydraulic remote control.
CD** – Electric dual range compensator.
 PVQ10: Std. model is CD2110, indicating
 dual pressure settings of 210 and 100 bar,
 adjustment ranges are 20–210 bar (high)
 and 20–100 bar (low). PVQ13: Std. model
 is CD1407, indicating settings of 140 and 70
 bar, adjustment ranges are 20–140 bar
 (high) and 20–100 bar (low).

10 Control option

Blank – Without adjustable Max. displace-
 ment stop (standard)
D – Max. adjustable displacement stop
 (optional)

11 Control design

11 – For C** & CM**
11 – For C**D & CM**D
12 – For C**V(C)**B & C**V(C)**P
20 – CD*** & CG



Typical Sectional View



Vickers

Low Noise Industrial Piston Pump

PVQ 20-B2/MB * ** - * ** * - 10 C** * ** * ** * - 11/12/20
PVQ 32-B2/MB * ** - * ** * - 10 C** * ** * ** * - 11/12/20

CAUTION

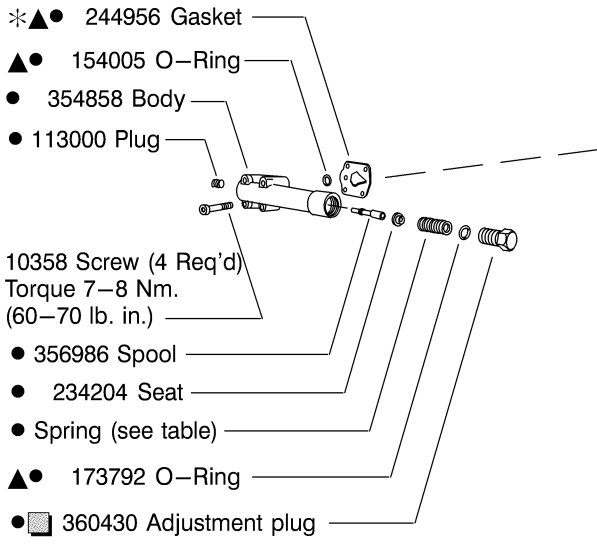


* Position gasket with small end of teardrop hole pointing in direction of compensator adjusting plug.

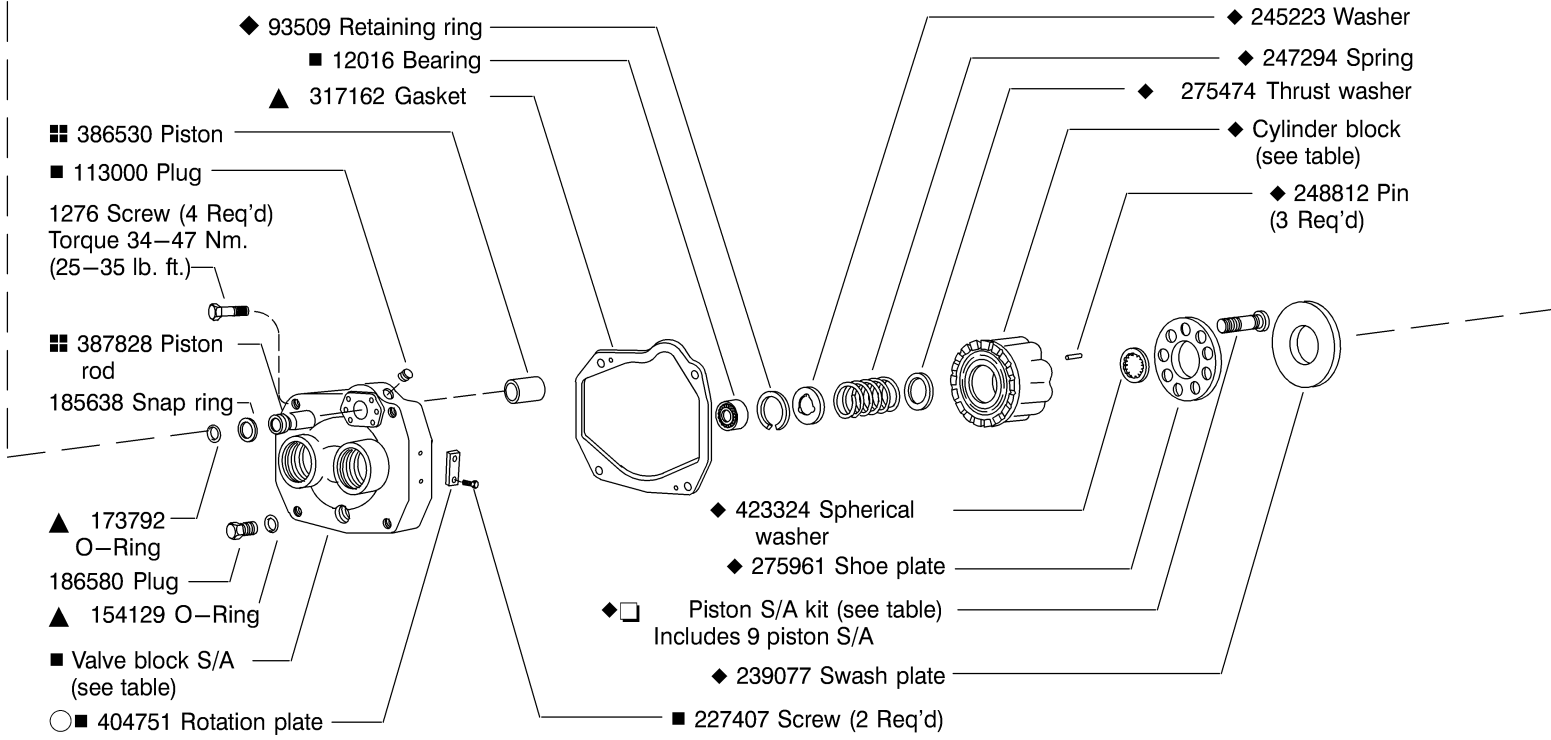
NOTE

Compensator shown for left hand shaft rotation. Rotate 180° for right hand shaft rotation.

COMPENSATOR



Model	Valve block S/A	Right hand	Left hand
PVQ20	Rear ports	02-142934	02-142935
	Side ports	02-142936	02-142937
PVQ32	Rear ports	02-142938	02-142939
	Side ports	02-142940	02-142941
PVQ20	Thru-drive	02-143198	02-143199
PVQ32	Thru-drive	02-143200	02-143201



Model	Cylinder block	Piston S/A kit	Rotating group kit
PVQ20	321703	942047	938276
PVQ32	260860	941887	938273



CAUTION

Model PVQ32C compensator pressure adjustment shall not exceed 2000 psi.

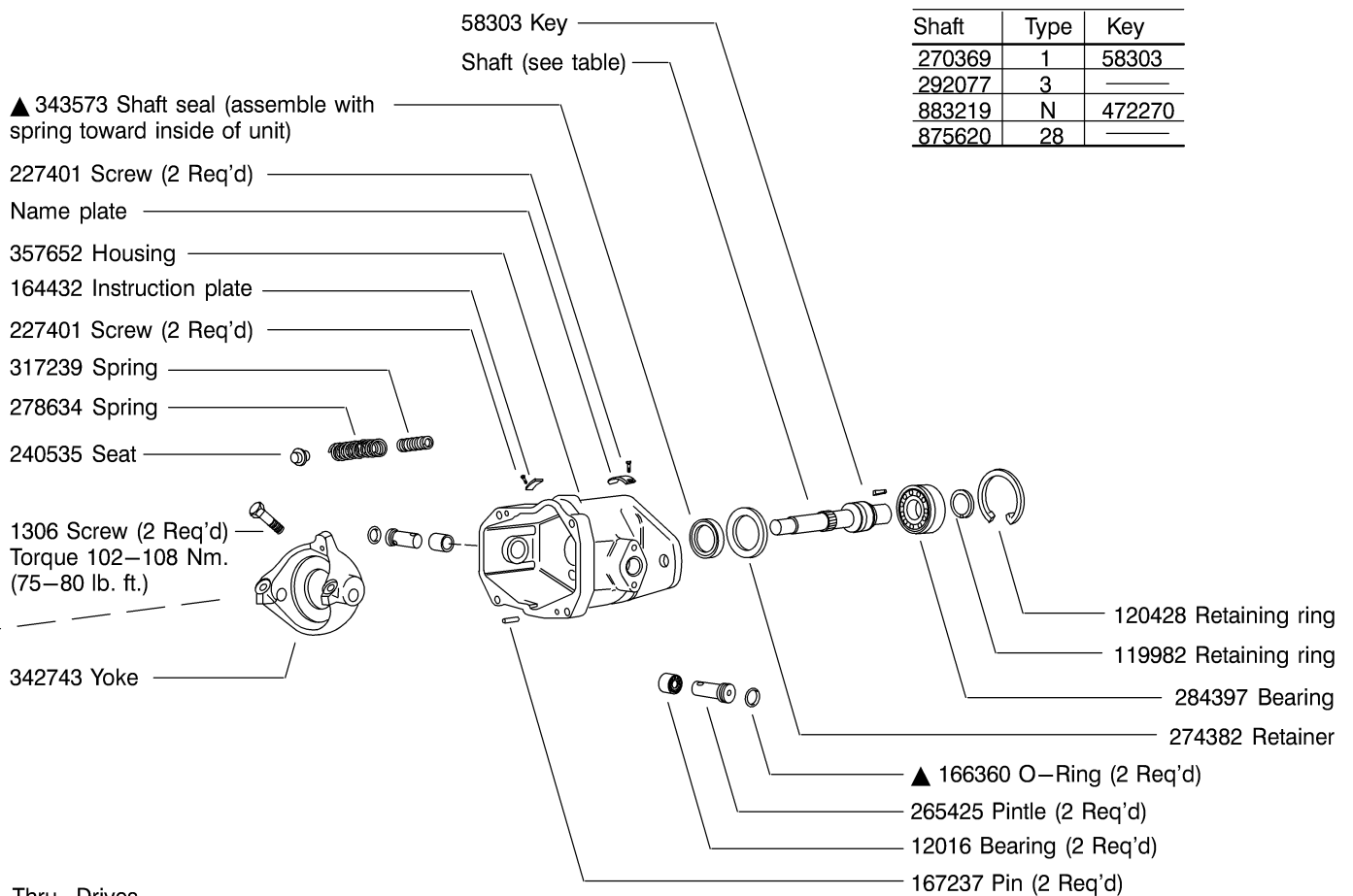
10 NOTE

See model code for pressure range settings of individual compensator kits.

Model	●Comp. kit	●Comp. Spring	●Load Sense Spring
PVQ**C	942158	239371	_____
PVQ**CM	942159	265693	_____
PVQ**CG	942480	239371	_____
PVQ**CMG	941353	265693	_____
PVQ**C**V(C)11B	02-142729	239371	581073
PVQ**C**V(C)11P	02-142728	239371	581073
PVQ**C**V(C)24B	02-142730	239371	581072
PVQ**C**V(C)24P	02-142727	239371	581072
PVQ**CD****	(Refer to service parts information I-3255-S)		

Non Thru-Drive Shaft

Shaft	Type	Key
270369	1	58303
292077	3	_____
883219	N	472270
875620	28	_____



Thru-Drives

5 Model	Shaft	Coupling	Snap Ring	O-Ring	7 Input Type
PVQ**A9	883302	426770	223172	351776	1 Str. Keyed SAE B
PVQ**A11	860501	577937	92757		

Couplings, coupling retaining rings, O-rings, capscrews and washers must be ordered separately to mount rear pump.

NOTE

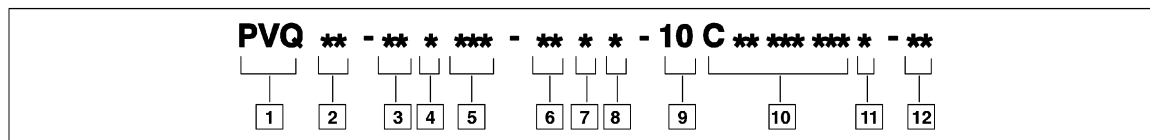
For satisfactory service life of these components in industrial applications, use full flow filtration to provide fluid which meets ISO cleanliness code 16/13 or cleaner. OFP, OFR, and OFRS series filters are recommended.

NOTE

Rotation plate shown for right hand shaft rotation. Assemble on opposite side of valve plate for left hand rotation.

- ▲ Standard seal kit 919682
F3 equivalent seal kit 919686
- Compensator kit (see table)
- Valve block S/A (see table)
- ◆ Rotating group kit (see table)
- Piston S/A kit (see table)
- ▣ Piston/Rod S/A kit 942327

Model Code



1 PVQ Series

P – Inline piston pump
V – Variable volume
Q – Quiet series

2 Displacement

(CC/Rev & Pressure ratings)

20 – 20 CC/Rev (1.28 CIR)
 210 bar (3000 psi)
32 – 32 CC/Rev (2.01 CIR)
 140 bar (2000 psi)

3 Mounting flange

B2 – SAE “B” 2-bolt
MB – ISO 3019/2 “B” 2-bolt (available with “N” drive shaft only)

4 Rotation

(viewed from shaft end)

R – Right hand (CW) (standard)
L – Left hand (CCW) (optional)

5 Thru drive

(without coupling) Available with side ports only.

Blank – No thru drive

A9 – SAE “A” 2-bolt with 9T shaft

A11 – SAE “A” 2-bolt with 11T shaft

6 Ports

(type and location)

SE – SAE O-Ring rear port, 1.625 inch (Inlet & Outlet) (standard)

SS – SAE O-Ring side port, 1.625 inch (Inlet & Outlet) (optional)

7 Shafts

(input)

1 – Straight keyed SAE “B” modified 2.31 inch long

3 – Splined SAE “B” modified 13T, 16/32 DP major dia. fit

N – ISO 3019/2 short straight keyed (available with “MB” mounting only) Not available on thru-drives

28 – 26 Tooth splined shaft (Vickers) Used to mount PVQ20/32 on PVQ40/45 “B26” thru drive

8 Seals

S – Buna N (standard)

F – Fluorocarbon (optional)

9 Pump design number

10 – First design

10 Control type

C** – Pressure compensator, PVQ20: Std. model is C21, indicating factory setting of 210 bar (3000 psi). Range is 02–21 in tens of bar (350–3000 psi)

PVQ32: Std. model is C14, indicating factory setting of 140 bar (2000 psi). Range is 02–14 in tens of bar (350–2000 psi)

CM** – Low pressure compensator, Std. model is CM7, indicating factory setting of 70 bar (1000 psi). Range is 02–10 in tens of bar (350–1500 psi)

CV**B** – Pressure compensator C**, as above, with load sensing. Std. load sensing setting is 11 bar (160 psi). Range 10–17 bar (150–250 psi), with bleed down orifice. Example: C21V11B indicates compensator with 210 bar pressure setting and 11 bar load sense differential.

CV**P** – Pressure compensator with load sensing as C**V**B above, but with bleed down orifice plugged.

CVC**B** – Pressure compensator with load sensing. Compensator same as C** above. Std. load sensing setting is 24 bar (350 psi). Range 17–31 bar (250–450 psi), with bleed down orifice

CVC**P** – Pressure compensator with load sensing. Same as C**VC**B above, but with bleed down orifice plugged.

CG – Pressure compensator modified for hydraulic remote control.

CD** – Electric dual range compensator. PVQ20: Std. model is CD2110, indicating dual pressure settings of 210 and 100 bar, adjustment ranges are 20–210 bar (high) and 20–100 bar (low). PVQ32: Std. model is CD1407, indicating settings of 140 and 70 bar, adjustment ranges are 20–140 bar (high) and 20–100 bar (low).

11 Control option

Blank – Without adjustable Max. displacement stop (standard)

D – Max. adjustable displacement stop (optional)

12 Control design

11 – For C** & CM**

11 – For C**D & CM**D

12 – For C**V(C)**B & C**V(C)**P

20 – CD** & CG

Eaton
 14615 Lone Oak Road
 Eden Prairie, MN 55344
 USA
 Tel: 952 937-9800
 Fax: 952 974-7722
 www.hydraulics.eaton.com

Eaton
 20 Rosamond Road
 Footscray
 Victoria 3011
 Australia
 Tel: (61) 3 9319 8222
 Fax: (61) 3 9318 5714

Eaton
 46 New Lane, Havant
 Hampshire PO9 2NB
 England
 Tel: (44) 23 92 486 451
 Fax: (44) 23 92 487 110

EATON

Vickers

Piston Pumps



PVQ 25 Variable Displacement Piston Pump

PVQ 25-**R-SE * S-20-C*****D-**-S**

CD Elect. Dual Range Compensator -- see Service Drawing I-3255-S**

C* Compensator

□▼ Compensator S/A kit

NOTE: Compensator S/A shown is for right hand rotation, rotate 180° for left hand rotation.

Spool (see table)

▶◊ 10358 Screw (4 req'd.) Torque 6,8-8 Nm (61-70 lb in)

Body (see table) (876296 Body - metric CG)

□▼ 113000 Plug

▲□▼ 262331 O-ring

▲□ 244956 Gasket*

* NOTE: Position gasket with small end of teardrop hole pointing in direction of compensator adjusting plug.

□▼ 234204 Seat
Spring (see table)

Plug (see table)

▼ CG only see table

▲▼ 197573 Back-up ring (CG only)

▲□▼ 262335 O-ring

△ 682910 Piston

For compensator, remote control and electrical dual range models.

Model	Comp. Kit	Spring	Body	Spool	Plug
□C	02-142732	239371	241568	241371	360430
□CM	02-142731	265693	241568	241371	360430
▼CG	942480	239371	412890	296234	412940*
▼CMG	941353	265693	412890	296234	412940*
CD	See Service Drawing I-3255-S				
UV	02-318838 (02-160245 UV control seal kit)				

* Plug requires 17077 lock wire and 239157 seal.

409998 Seat

409999 Seat

686753 Spring

162160 Roll pin

682369 Yoke

689402 Shaft (type 1)

not shown

58303 Key (shaft type

1) not shown

682935 Shaft (type 2)

shown

▲ 682936 Gasket

■ 683415 Retaining ring

■ 683416 Retaining ring

■ 49758 Bearing

■ 85560 Retaining ring

See opposite side for part numbers.

▲ 682702 Shaft seal

860889 Housing

417381 (2) Bearing S/A

682918 (2) Spacer

▲ 174140 (2) O-ring

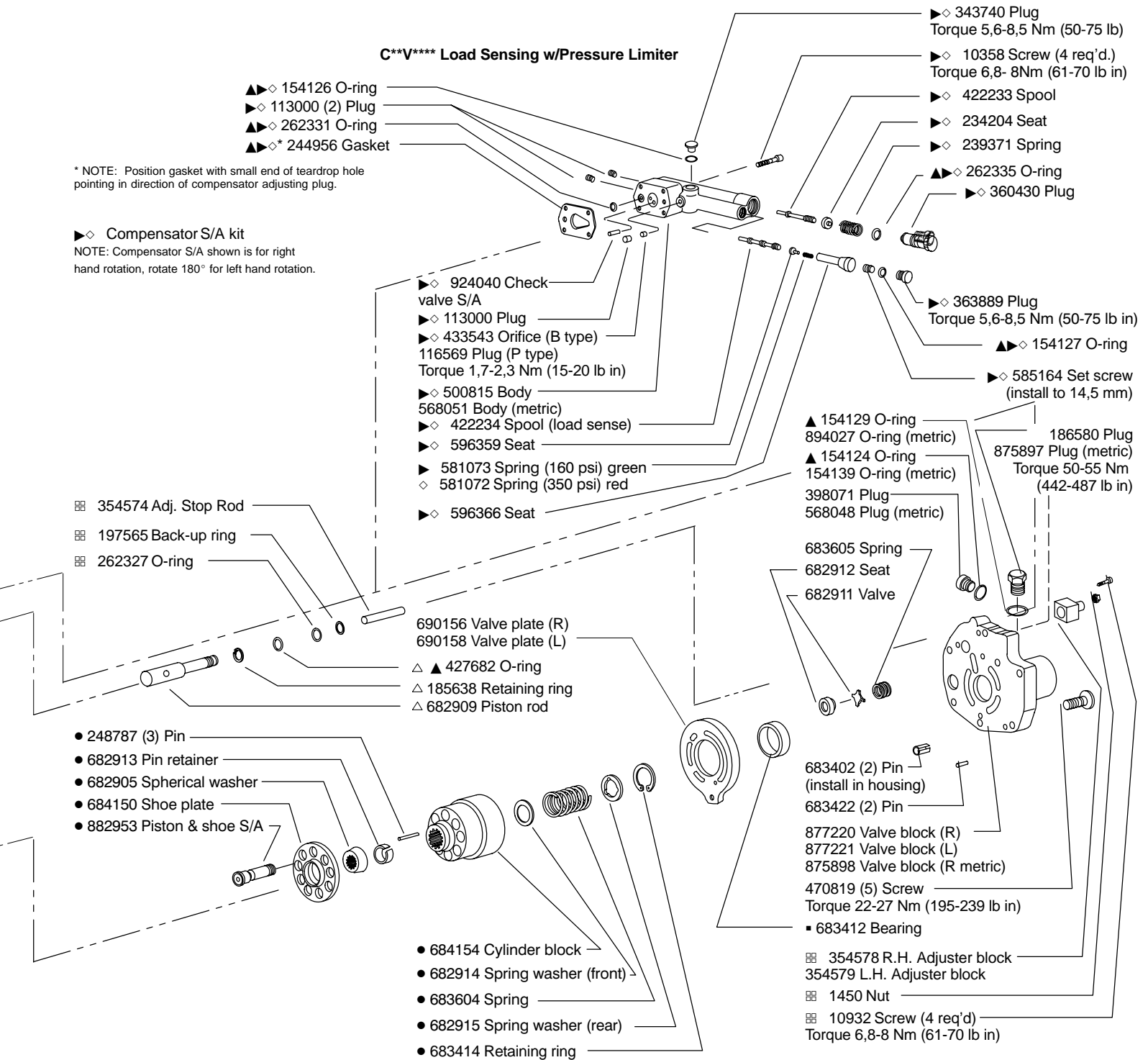
○ 923938 Shim kit

416637 (2) Cover

427172 (8) Screw

Torque 19-21 Nm (168-186 lb in)

NOTE: Using shim, preload to 0,175/0,225 mm (.007/.009 in). Swing yoke under preload to align bearing rollers at pintle ends. For proper O-ring compression do not install more than 0,50 mm (0.20 in) total shims under either cover.



For load sensing models.

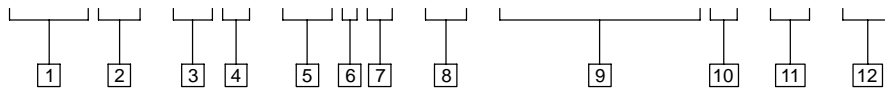
Model	Load Sense		
	Comp. Kit	Spring	Spring
▶C**V11B	02-142729	239371	581073
▶C**V11P	02-142728	239371	581073
▶C**VC24B	02-142730	239371	581072
▶C**VC24P	02-142727	239371	581072

- ▲ Seal Kit 882955
- Rotating Group Kit 882954
- Shaft Bearing Kit 882956
- △ Piston & Rod Kit 882957
- ⊞ Adjustable max. stop control (see I-3255-S)

Note: Body, plug and spool is the same on all load sense models. Adjustable max. stop feature see Service Drawing I-3255-S

For satisfactory service of these components, use full flow filtration to provide fluid which meets ISO cleanliness code 18/16/15 <70 bar (1000 psi), 17/15/13 70-207 bar (1000-3000 psi), 16/14/12 207+ bar (3000+ psi) or cleaner. Selections from pressure return, and in-line filter series are recommended.

PVQ 25 - ** R - SE * S - 20 - C * * * * * D - * * - S *



1 Series PVQ

- P – In-line piston pump
- V – Variable volume
- Q – Quiet series

2 Displacement in cc/rev and pressure ratings

- 25 – 25,2 cc/rev (1.54 cir), 207 bar (3000 psi)

3 Mounting flange specifications

- B2 – Flange SAE J744 101-2 (SAE B)
- MB – Flange ISO 3019/2-100A2HW (available with “N” drive shaft only)

4 Rotation viewed from shaft end

- R – Right hand (cw), standard
- L – Left hand (ccw), optional

5 Ports, type and location

- SE – SAE O-ring rear port, 1.0625” inlet & outlet (standard)

6 Shafts, input

- 1 – Straight keyed SAE “B” modified, 2.31” long
- 3 – Splined SAE “B” modified, 13T 16/32 DP major dia. fit
- N – Shaft end ISO 3019/2 E25N (available with “MB” mount only)

7 Seals

- S – Buna N, standard

8 Pump design number

- 20 – Design number subject to change. Installation dimensions remain unchanged for designs 20–29.

9 Control type

- C** – Pressure compensator. Standard setting 21 in tens of bar (max. setting 201 bar). Range 02–21 in tens of bar.
- CM** – Pressure compensator. Standard setting, 10 in tens of bar (max. setting 103 bar). Range 02–10 in tens of bar (350–1500 psi).
- C**V**B – Pressure compensator C**, as above with load sensing. Standard load sensing setting is 11 bar (160 psi); range 10–17 bar (150–250 psi); with bleed-down orifice. Example: C21V11B indicates PVQ25 compensator with 207 bar pressure setting and 11 bar load-sense differential.
- C**V**P – Pressure compensator with load sensing as C**V**B above, but with bleed-down orifice plugged.
- C**VC**B – Pressure compensator with load sensing. Compensator same as C** above. Standard load sensing setting is 24 bar (350 psi), range 17–31 bar (250–450 psi). With bleed-down orifice.

- C**VC**P – Pressure compensator with load sensing. Same as C**VC**B above, but with bleed-down orifice plugged.

- CG – Pressure compensator modified for hydraulic remote control.

- CD** – Electric dual range compensator. PVQ25: CD21 is standard 207 bar setting of high range (24–207 bar). Unit requires low range to be set by customer (20–100 bar).

- UV – Unloading Valve for accumulator circuits.

10 Control option

- Blank – Without adjustable maximum displacement stop (standard)
- D – Adjustable maximum displacement stop (optional)

11 Control design

- 10 – C** and CM**
- 11 – C**D and CM**D
- 12 – C**V(C)**B and C**V(C)**P
- 20 – CD**, CG, and UV

12 Special suffixes

- S2 – Shaft up mounting
- S3 – British Standard Parallel Threads Counterbore Ports (ISO R288 threads). Contact Vickers for available configurations.
- S9 – Special CG compensator for use with electronically modulated relief valves

Eaton Hydraulics

15151 Highway 5
Eden Prairie, MN 55344
Telephone: 612 937-7254
Fax: 612 937-7130
www.eatonhydraulics.com

46 New Lane, Havant
Hampshire PO9 2NB
England
Telephone: (44) 170-548-6451
Fax: (44) 170-548-7110



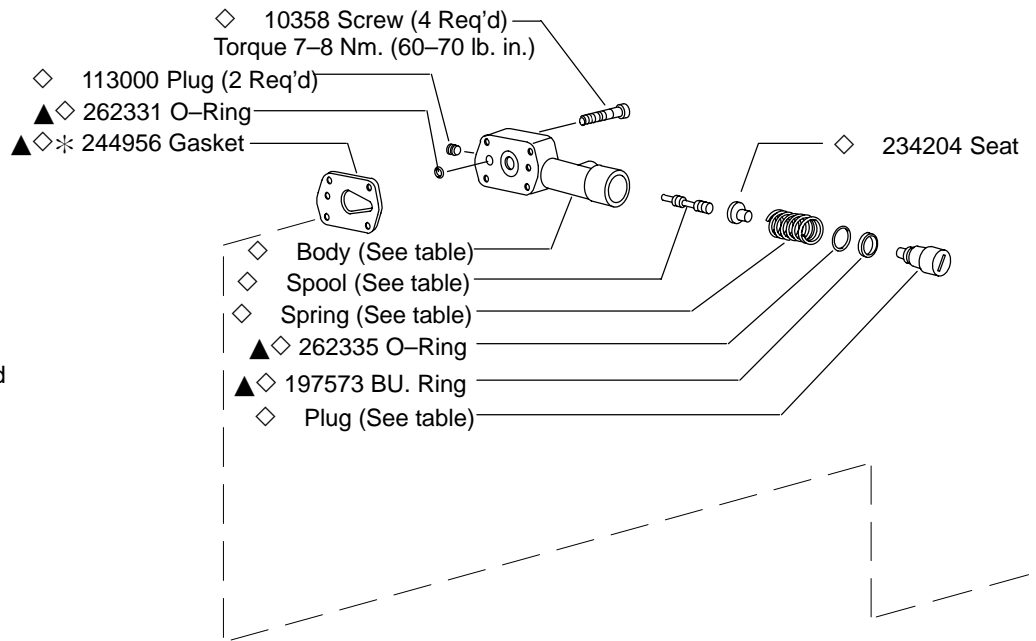
Piston Pumps



Low Noise Industrial Piston Pump

PVQ 40-B2/M2 * *** - ** * * - 10 C** *** *** * - 10/11/12/20
PVQ 45-B2/M2 * *** - ** * * - 10 C** *** *** * - 10/11/12/20

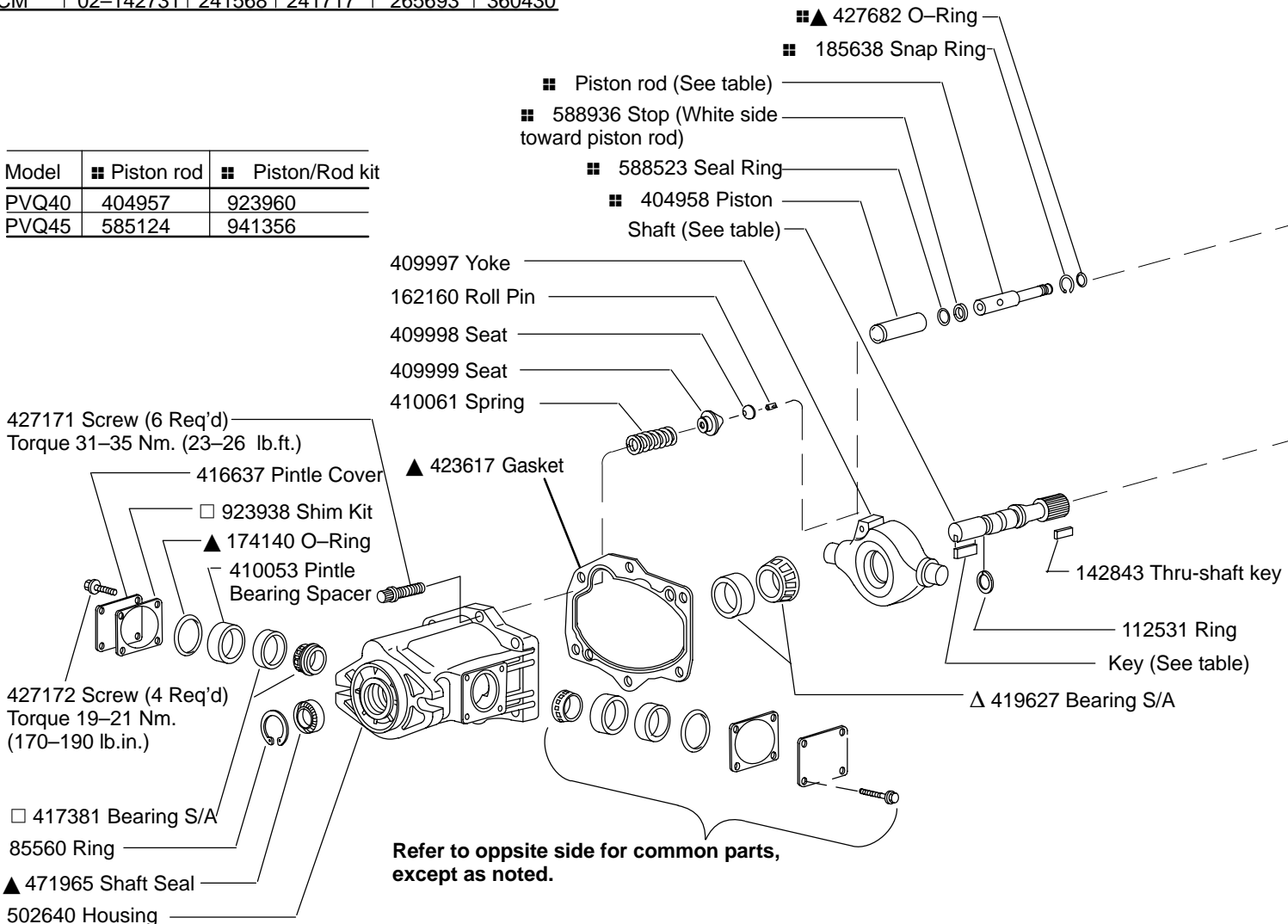
C, CM Compensator shown for R. H. rotation. Rotate 180° for L. H. shaft rotation.



* **CAUTION**
 Position gasket with small end of teardrop hole pointing in direction of compensator adjusting plug.

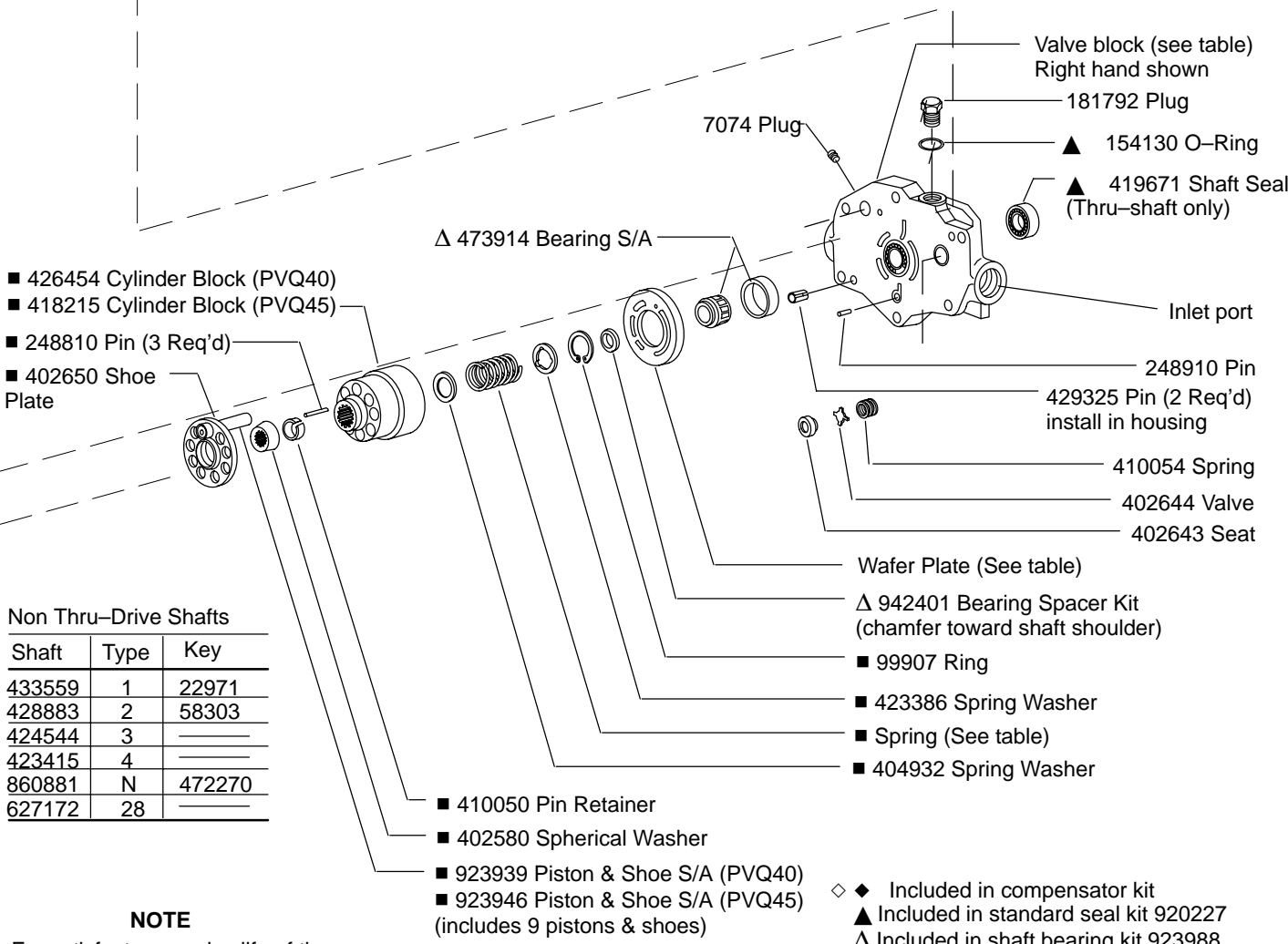
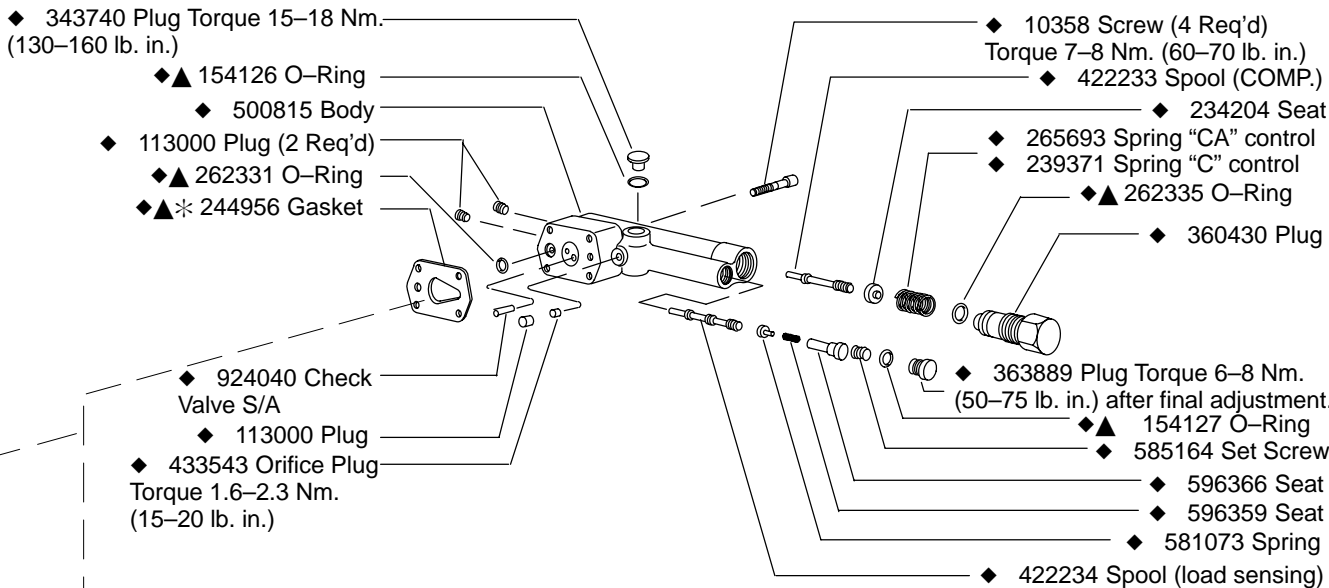
◇ Type	◇ Comp. kit	◇ Body	◇ Spool	◇ Spring	◇ Plug
C	02-142732	241568	241717	239371	360430
CG	942480	412890	296234	239371	412940
CM	02-142731	241568	241717	265693	360430

Model	■ Piston rod	■ Piston/Rod kit
PVQ40	404957	923960
PVQ45	585124	941356



Refer to opposite side for common parts, except as noted.

CVP Compensator shown for R. H. rotation. Rotate 180° for L. H. shaft rotation.
See table for compensator kit part number.



Non Thru-Drive Shafts

Shaft	Type	Key
433559	1	22971
428883	2	58303
424544	3	
423415	4	
860881	N	472270
627172	28	

NOTE

For satisfactory service life of these components in industrial applications, use full flow filtration to provide fluid which meets ISO cleanliness code 16/13 or cleaner. OFP, OFR, and OFRS series filters are recommended.

Model	Spring	Color
PVQ40	632570	Yellow
PVQ45	402579	Red

- ◆ Included in compensator kit
- ▲ Included in standard seal kit 920227
- △ Included in shaft bearing kit 923988
- Included in yoke bearing kit 923987
- Rotating group kit 923948 (PVQ40)
- Rotating group kit 923947 (PVQ45)



CAUTION

Model PVQ45C compensator pressure adjustment shall not exceed 2750 psi.

10 NOTE

See model code for pressure range settings of individual compensator kits.

Model	◆ Comp. kit	◆ Comp. Spring	◆ Load Sense Spring
PVQ**C	942158	239371	————
PVQ**CM	942159	265693	————
PVQ**CG	942480	239371	————
PVQ**C**V(C)11B	02-142729	239371	581073
PVQ**C**V(C)11P	02-142728	239371	581073
PVQ**C**V(C)24B	02-142730	239371	581072
PVQ**C**V(C)24P	02-142727	239371	581072
PVQ**CD****	(Refer to service parts information I-3255-S)		

Model	Shaft end rotation	Wafer plate	Valve block	Thru-Drive valve block	O-Ring
PVQ45*R*SS	Right hand (CW)	629539	429729	————	————
PVQ40*R*SS			677096	————	
PVQ45*R*SE			————	————	
PVQ40*R*SE	Left hand (CCW)	631476	435281	————	————
PVQ45*L*SS			677097	————	
PVQ40*L*SS			————	————	
PVQ45*L*SE	Right hand (CW)	629539	————	857668	351776
PVQ40*L*SE			————	627149	375422
PVQ4**RAFS			————	568082	351776
PVQ4**RBSS	Left hand (CCW)	631476	————	627541	375422
PVQ4**LAFS			————	————	————
PVQ4**LBSS	————	————	————	————	————

Thru-Drive Shafts

5 Model	Shaft	7 Input Type
PVQ**A9	883098	2 Str. Keyed SAE B-B
	586131	4 Splined SAE B-B
PVQ**B26	677131	2 Str. Keyed SAE B-B
	423416	4 Splined SAE B-B

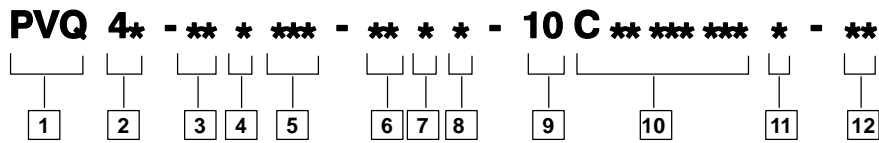
Thru-Drive Couplings

Thru-Drive Model Code	Coupling	O-Ring	Model Code Rear Pump	Rear Pump Shaft Type
PVQ**A9	864224	351776	PVQ10	3
			V10	11
			V20	62
PVQ**B26	627168	375422	PVE12	28
			PVQ40/45	28
			PVQ20/32	28
	475134		2520V	166

Thru-Drive Couplings	Type	Description
864224	A	"A" 9 tooth spline
627168	B	26 tooth
475134	B	Step coupling 26 to 15 tooth "B-B" spline

Rear pump, couplings, O-rings, capscrews and washers must be ordered separately to mount rear pump.

Model Code



1 PVQ Series

P – Inline piston pump
V – Variable volume
Q – Quiet series

2 Displacement

(CC/Rev & Pressure ratings)

40 – 40 CC/Rev (2.50 CIR)
 210 bar (3000 psi)
45 – 45 CC/Rev (2.75 CIR)
 190 bar (2700 psi)

3 Mounting flange

B2 – SAE “B” 2-bolt
MB – ISO 3019/2 “B” 2-bolt (available with “N” drive shaft only)

4 Rotation

(viewed from shaft end)

R – Right hand (CW) (standard)
L – Left hand (CCW) (optional)

5 Thru drive

(without coupling) Available with side ports only.

Blank – No thru drive
A9 – SAE “A” 2-bolt with 9T shaft
A11 – SAE “A” 2-bolt with 11T shaft
B13 – SAE “B” 2-bolt with 13T shaft
B26 – SAE “B” 2-bolt with 26T shaft
 (Available only with #4 main input shaft)

6 Ports

(type and location)

SE – Inch O-Ring boss rear port (standard)
SS – Inch O-Ring boss side port (optional)
FS – Flange side port (SAE “A” thru-drive only)

7 Shafts

(input)

1 – Straight keyed SAE “B”(not on thru drives)
2 – Straight keyed SAE “B-B”
3 – Splined SAE “B” modified 13T, 16/32 DP flat root side fit (not on thru drives)
4 – Splined SAE “B-B” modified 15T, 16/32 DP flat root side fit
N – ISO 3019/2 short straight keyed (available with “MB” mounting only) Not available on thru-drives.
28 – 26 tooth splined shaft (Vickers) Used to mount PVQ40/45 on PVQ40/45 thru-drive pump

8 Seals

S – Buna N (standard)
F – Fluorocarbon (optional)

9 Pump design number

10 – First design

10 Control type

C** – Pressure compensator, PVQ40: Std. model is C21, indicating factory setting of 210 bar (3000 psi). Range is 02–21 in tens of bar (350–3000 psi)
 PVQ45: Std. model is C19, indicating factory setting of 190 bar (2750 psi). Range is 02–19 in tens of bar (350–2750 psi)
CM** – Low pressure compensator, Std. model is CM7, indicating factory setting of 70 bar(1000 psi). Range is 02–10 in tens of bar (350–1500 psi)
CV**B** – Pressure compensator C**, as above, with load sensing. Std. load sensing setting is 11 bar (160 psi). Range 10–17 bar (150–250 psi), with bleed down orifice. Example: C21V11B indicates PVQ40 compensator with 210 bar pressure setting and 11 bar load sense differential.
CV**P** – Pressure compensator with load sensing as C**V**B above, but with bleed down orifice plugged.
CVC**B** – Pressure compensator with load sensing. Compensator same as C** above. Std. load sensing setting is 24 bar (350 psi). Range 17–31 bar (250–450 psi), with bleed down orifice
CVC**P** – Pressure compensator with load sensing. Same as C**VC**B above, but with bleed down orifice plugged.
CG – Pressure compensator modified for hydraulic remote control.
CD**** – Electric dual range compensator. PVQ40: Std. model is CD2110, indicating dual pressure settings of 210 and 100 bar, adjustment ranges are 20–210 bar (high) and 20–100 bar (low). PVQ45: Std. model is CD1910, indicating settings of 190 and 100 bar, adjustment ranges are 20–190 bar (high) and 20–100 bar (low).

11 Control option

Blank – Without adjustable Max. displacement stop (standard)
D – Max. adjustable displacement stop (optional)

12 Control design

10 – For C** & CM**
11 – For C**D & CM**D
12 – For C**V(C)**B & C**V(C)**P
20 – CD**** & CG

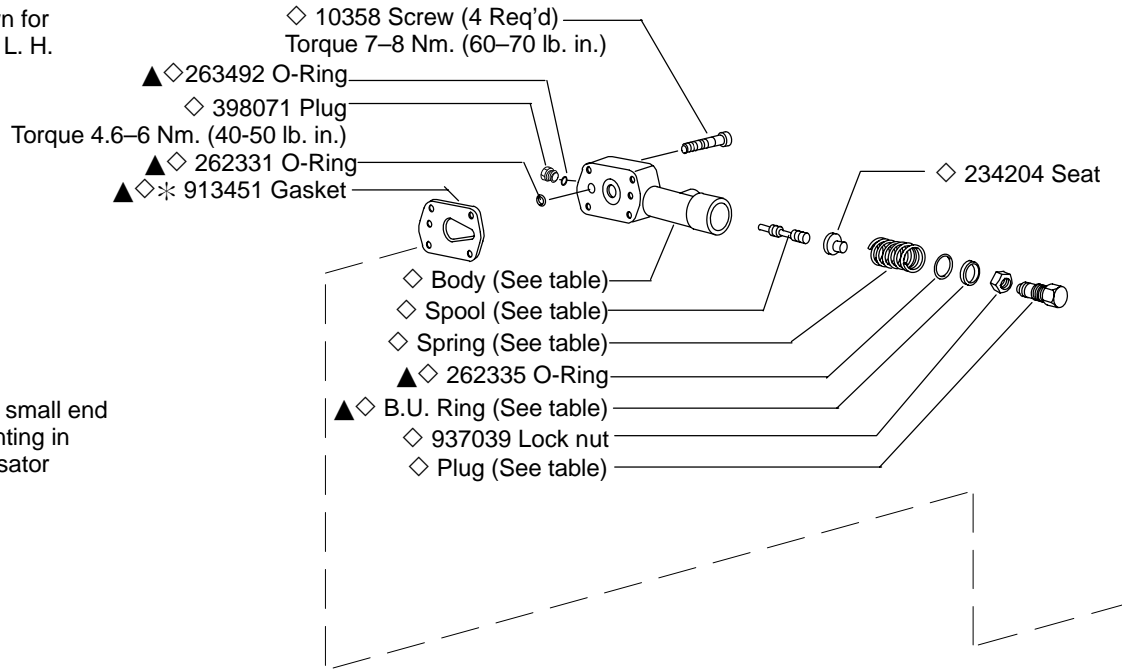


Low Noise Industrial Piston Pump

PVQ 40-B2 * *** - ** * * - 20 C** *** *** * - 12/13/21/30

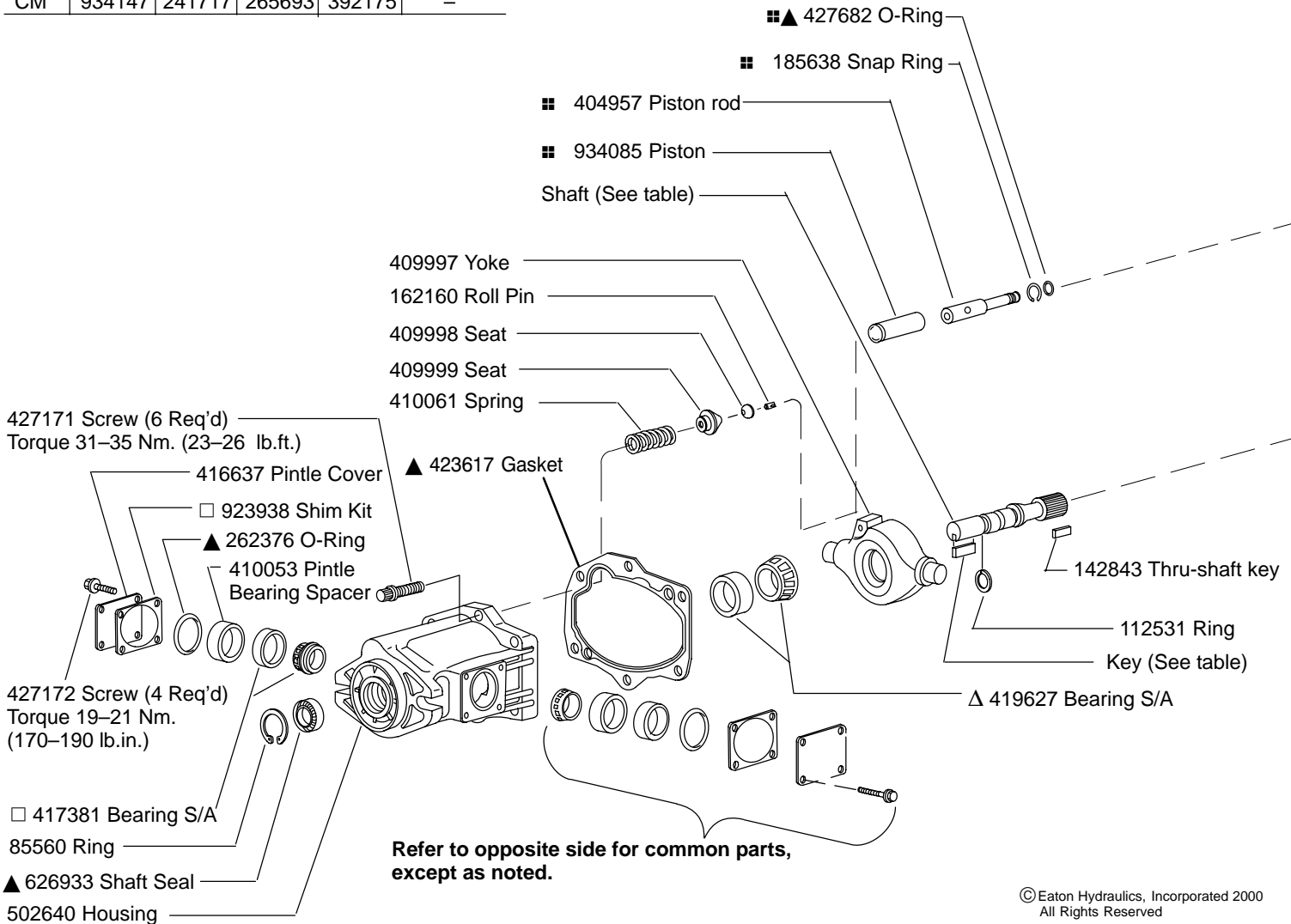
PVQ 45-B2 * *** - ** * * - 20 C** *** *** * - 12/13/21/30

C, CM** Compensator** shown for R. H. rotation. Rotate 180° for L. H. shaft rotation.

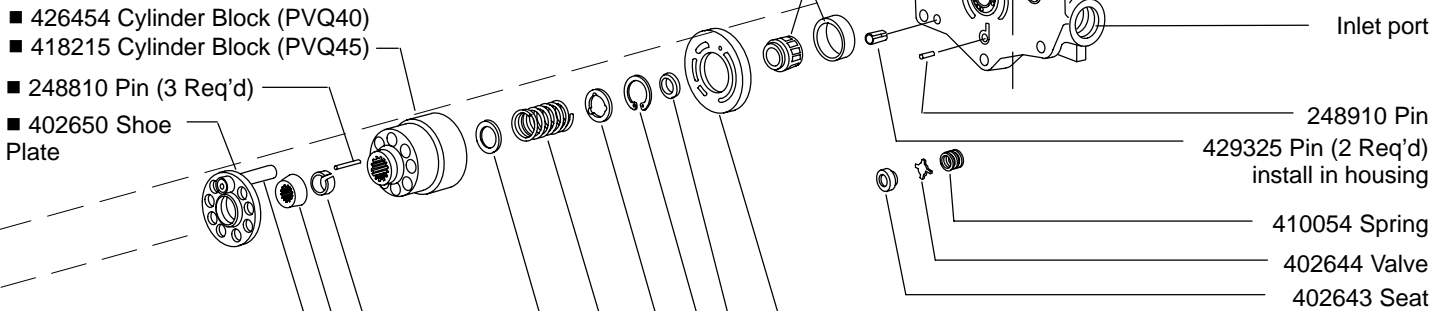
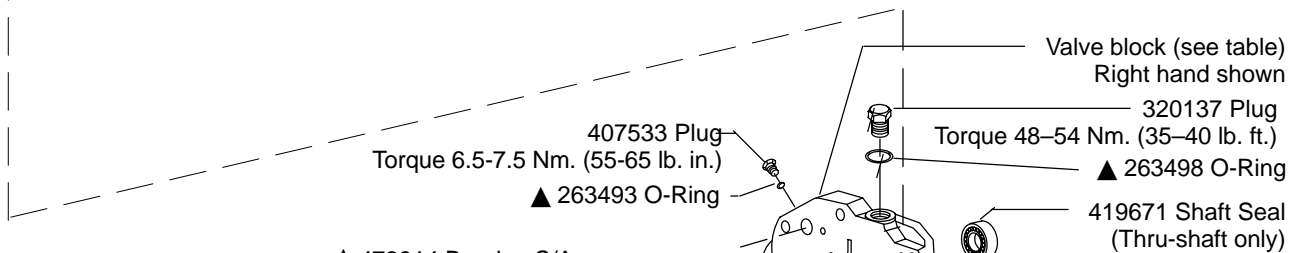
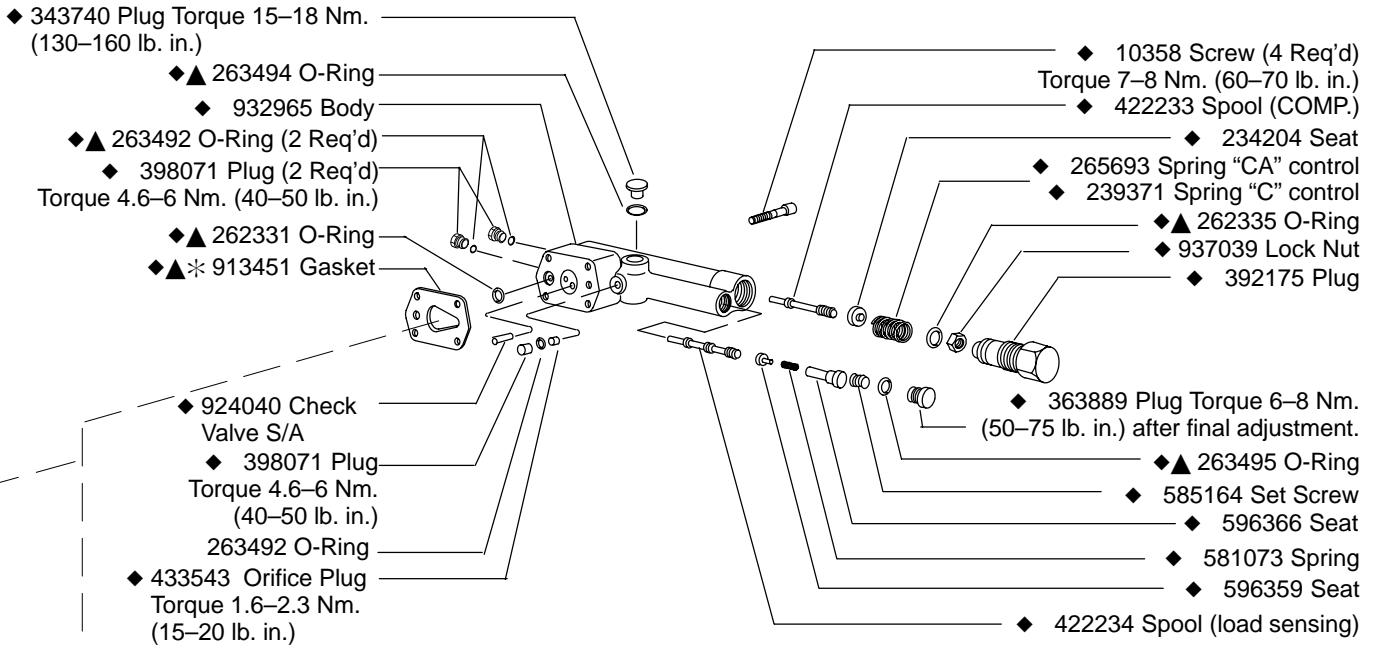


*** CAUTION**
 Position gasket with small end of teardrop hole pointing in direction of compensator adjusting plug.

Type	Body	Spool	Spring	Plug	B.U. Ring
C	934147	241717	239371	392175	–
CG	932966	296234	239371	944255	997049
CM	934147	241717	265693	392175	–

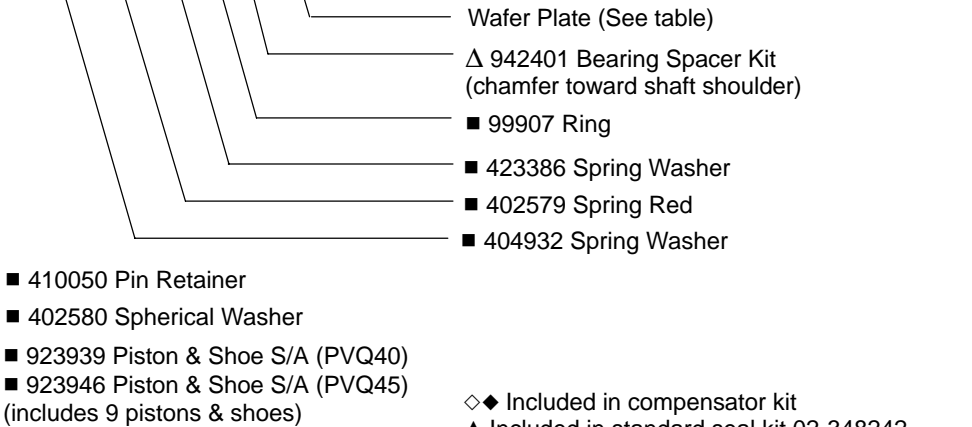


CV(C)**B Compensator** shown for R. H. rotation. Rotate 180° for L. H. shaft rotation.
See table for compensator kit part number.



Non Thru-Drive Shafts

Shaft	Type	Key
433559	1	22971
428883	2	58303
424544	3	
423415	4	
860881	N	472270
627172	28	



NOTE

For satisfactory service life of these components in industrial applications, use full flow filtration to provide fluid which meets ISO cleanliness code 16/13 or cleaner. OFP, OFR, and OFRS series filters are recommended.

- ◆◆ Included in compensator kit
- ▲ Included in standard seal kit 02-348242
- △ Included in shaft bearing kit 923988
- Included in yoke bearing kit 923987
- Rotating group kit 923948 (PVQ40)
- Rotating group kit 923947 (PVQ45)
- Included in piston rod kit 02-328397



CAUTION

Model PVQ45C compensator pressure adjustment shall not exceed 2750 psi.

NOTE

See model code **10** for pressure range settings of individual compensator kits.

Model	Comp. Kit	Comp. Spring	Load Sense Spring	
PVQ40-C21-12	02-348260	239371	-	
PVQ45-C19-12	02-348261			
PVQ**CM7-12	02-348259	265693		
PVQ**CG-30	02-348262	239371		
PVQ40-C21V11B-13	02-348193			581073
PVQ40-C21VC24B-13	02-348250			581072
PVQ40-C21V11P-13	02-348247			581073
PVQ40-C21VC24P-13	02-348248			581072
PVQ45-C19V11B-13	02-348251			581073
PVQ45-C19VC24B-13	02-348249			581072
PVQ45-C19V11P-13	02-348252		581073	
PVQ45-C19VC24P-13	02-348253		581072	
PVQ**CD****	(Refer to service parts information I-3255-S)			

Model	Shaft end rotation	Wafer plate	Valve block	Thru-drive valve block	O-Ring		
PVQ45*R*SS	Right hand (CW)	629539	933002	-	-		
PVQ40*R*SS			933017				
PVQ45*R*SE							
PVQ40*R*SE	Left hand (CCW)	631476	933016				
PVQ45*L*SS			933007				
PVQ40*L*SS							
PVQ45*L*SE							
PVQ40*L*SE	Right hand (CW)	629539	-			937476	351776
PVQ4**RAFS						627149	375422
PVQ4**RBSS	Left hand (CCW)	631476				933000	351776
PVQ4**LAFS				933021	375422		
PVQ4**LBSS							

Thru-Drive Shafts

5 Model	Shaft	7 Input Type
PVQ**A9	883098	2 Str. Keyed SAE B-B
	586131	4 Splined SAE B-B
PVQ**B26	677131	2 Str. Keyed SAE B-B
	423416	4 Splined SAE B-B

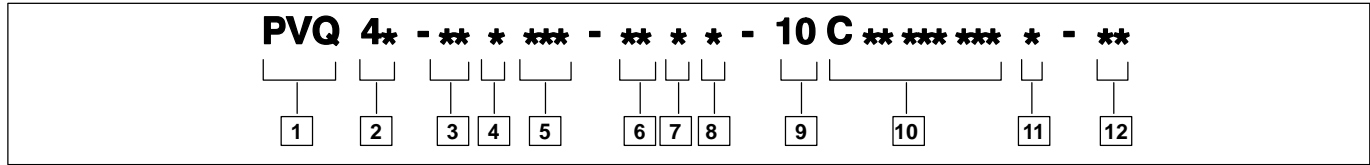
Thru-Drive Couplings

Thru-Drive Model Code	Coupling	O-Ring	Model Code Rear Pump	Rear Pump Shaft Type
PVQ**A9	864224	351776	PVQ10	3
			V10	11
			V20	62
PVQ**B26	627168	375422	PVE12	28
			PVQ40/45	28
			PVQ20/32	28
			2520V	166
	475134			

Thru-Drive Couplings	Type	Description
864224	A	"A" 9 tooth spline
627168	B	26 tooth
475134	B	Step coupling 26 to 15 tooth "B-B" spline

Rear pump, couplings, O-rings, capscrews and washers must be ordered separately to mount rear pump.

Model Code



1 PVQ Series

P – Inline piston pump
V – Variable volume
Q – Quiet series

2 Displacement

(CC/Rev & Pressure ratings)

40 – 40 CC/Rev (2.50 CIR)
 210 bar (3000 psi)
45 – 45 CC/Rev (2.75 CIR)
 190 bar (2700 psi)

3 Mounting flange

B2 – SAE “B” 2-bolt
MB – ISO 3019/2 “B” 2-bolt (available with “N” drive shaft only)

4 Rotation

(viewed from shaft end)

R – Right hand (CW) (standard)
L – Left hand (CCW) (optional)

5 Thru drive

(without coupling) Available with side ports only.

Blank – No thru drive
A9 – SAE “A” 2-bolt with 9T shaft
A11 – SAE “A” 2-bolt with 11T shaft
B13 – SAE “B” 2-bolt with 13T shaft
B26 – SAE “B” 2-bolt with 26T shaft
 (Available only with #4 main input shaft)

6 Ports

(type and location)

SE – Inch O-Ring boss rear port (standard)
SS – Inch O-Ring boss side port (optional)
FS – Flange side port (SAE “A” thru-drive only)

7 Shafts

(input)

1 – Straight keyed SAE “B” (not on thru drives)
2 – Straight keyed SAE “B–B”
3 – Splined SAE “B” modified 13T, 16/32 DP flat root side fit (not on thru drives)
4 – Splined SAE “B–B” modified 15T, 16/32 DP flat root side fit
N – ISO 3019/2 short straight keyed (available with “MB” mounting only) Not available on thru-drives.
28 – 26 tooth splined shaft (Vickers) Used to mount PVQ40/45 on PVQ40/45 thru-drive pump

8 Seals

S – Buna N (standard)
F – Fluorocarbon (optional)

9 Pump design number

10 – First design

10 Control type

C** – Pressure compensator, PVQ40: Std. model is C21, indicating factory setting of 210 bar (3000 psi). Range is 02–21 in tens of bar (350–3000 psi)
 PVQ45: Std. model is C19, indicating factory setting of 190 bar (2750 psi). Range is 02–19 in tens of bar (350–2750 psi)

CM** – Low pressure compensator, Std. model is CM7, indicating factory setting of 70 bar (1000 psi). Range is 02–10 in tens of bar (350–1500 psi)

CV**B** – Pressure compensator C**, as above, with load sensing. Std. load sensing setting is 11 bar (160 psi). Range 10–17 bar (150–250 psi), with bleed down orifice. Example: C21V11B indicates PVQ40 compensator with 210 bar pressure setting and 11 bar load sense differential.

CV**P** – Pressure compensator with load sensing as C**V**B above, but with bleed down orifice plugged.

CVC**B** – Pressure compensator with load sensing. Compensator same as C** above. Std. load sensing setting is 24 bar (350 psi). Range 17–31 bar (250–450 psi), with bleed down orifice

CVC**P** – Pressure compensator with load sensing. Same as C**VC**B above, but with bleed down orifice plugged.

CG – Pressure compensator modified for hydraulic remote control.

CD**** – Electric dual range compensator. PVQ40: Std. model is CD2110, indicating dual pressure settings of 210 and 100 bar, adjustment ranges are 20–210 bar (high) and 20–100 bar (low). PVQ45: Std. model is CD1910, indicating settings of 190 and 100 bar, adjustment ranges are 20–190 bar (high) and 20–100 bar (low).

11 Control option

Blank – Without adjustable Max. displacement stop (standard)

D – Max. adjustable displacement stop (optional)

12 Control design

12 – C**, C**D, CM** & CM**D

13 – C**V(C)**B & C**V(C)**P

21 – CD**** & UV

30 – CG