

# Piston Pumps

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## 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

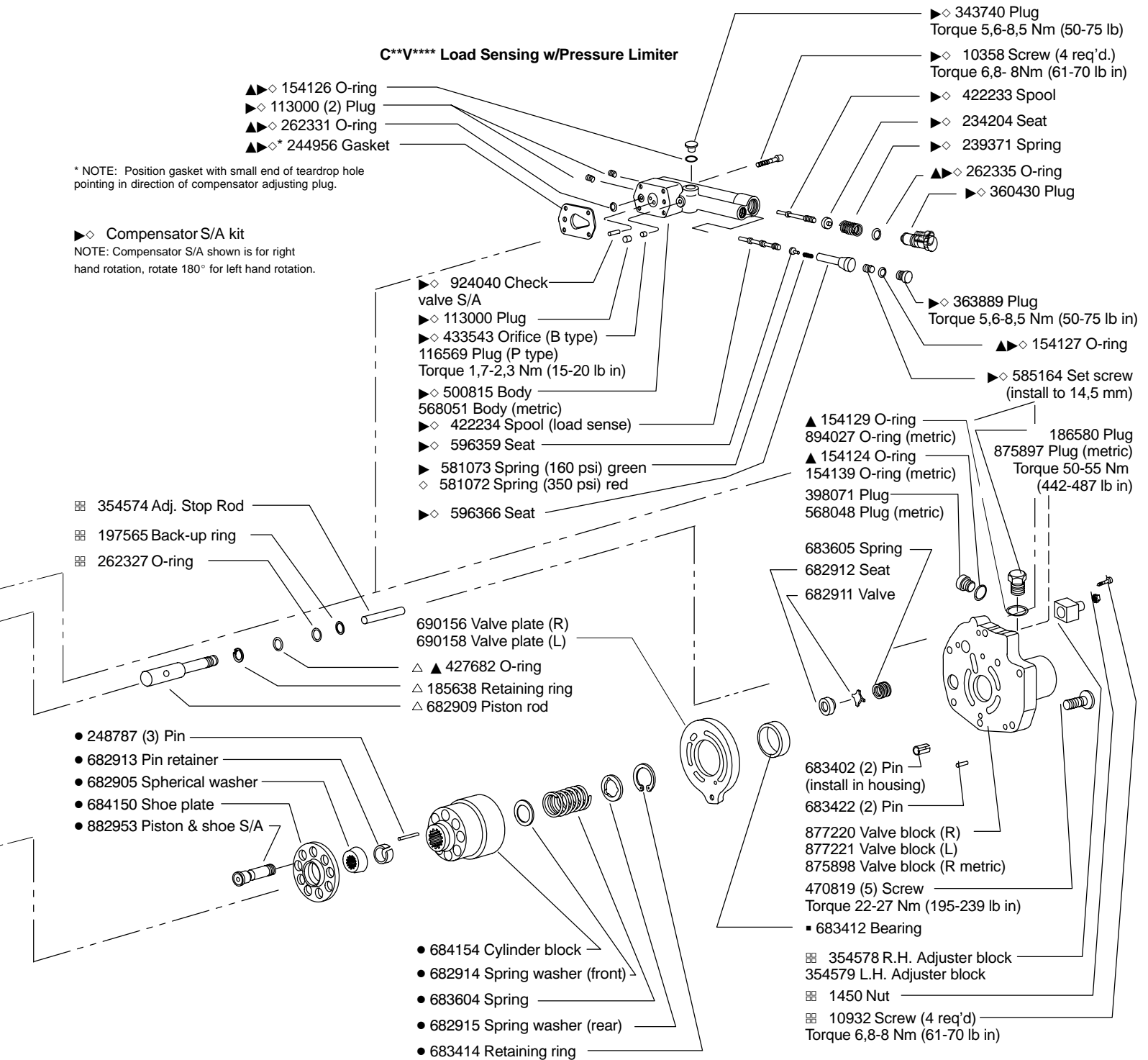
○ 923938 Shim kit

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.



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

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

**For load sensing models.**

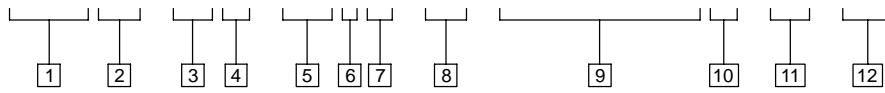
| Model     | Comp. Kit | Spring | Spring | Load Sense |
|-----------|-----------|--------|--------|------------|
| ▶C**V11B  | 02-142729 | 239371 | 581073 |            |
| ▶C**V11P  | 02-142728 | 239371 | 581073 |            |
| ▶C**VC24B | 02-142730 | 239371 | 581072 |            |
| ▶C**VC24P | 02-142727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

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