

Service Data

Vickers®

Vane Pumps



Vane Type Double Pump

4525VQ Series -20 Design

VICKERS

Revised 11-01-95

I-3172-S

4 ● SAE rated capacity (4525VQ** shaft end pump cartridge)

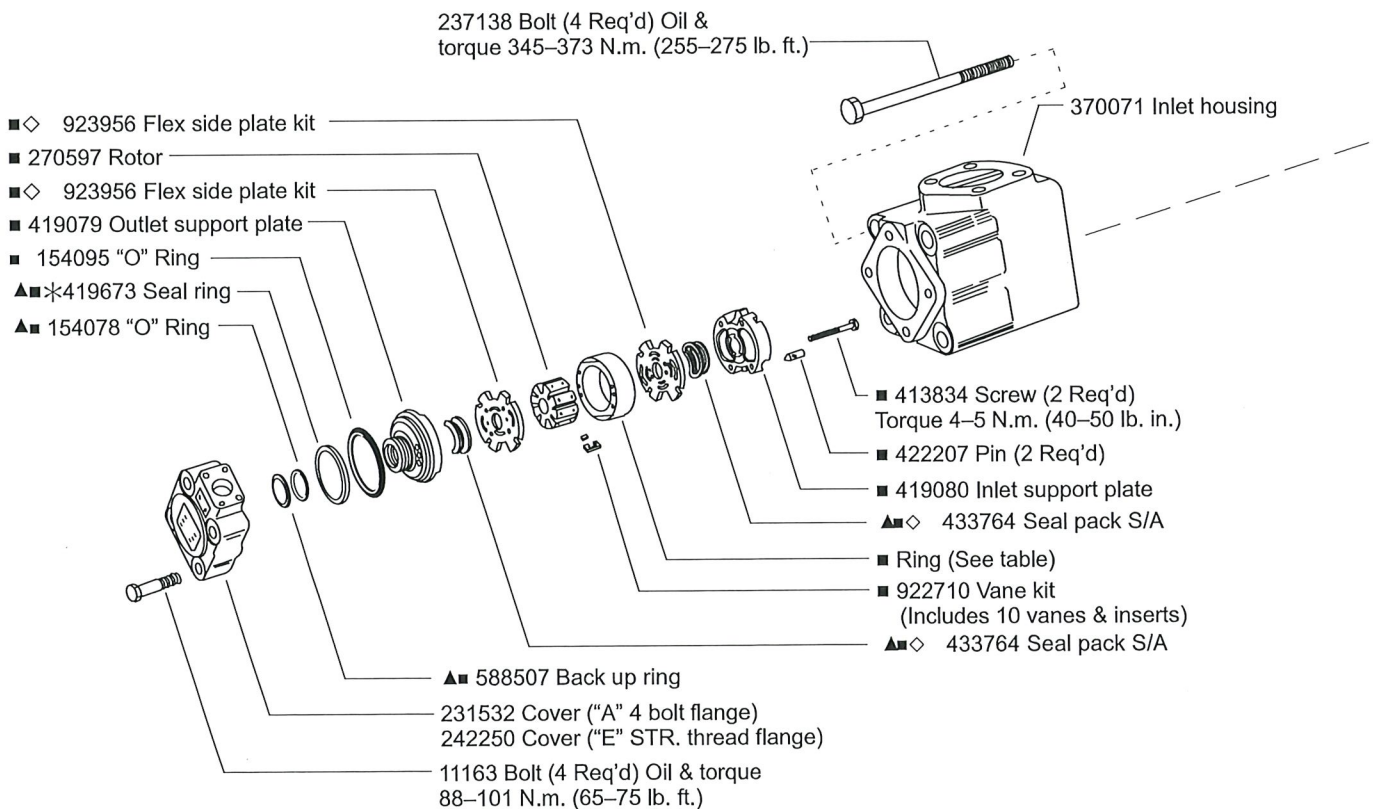
| USgpm | ● Ring | ● STD. cartridge kit | ● F3 cartridge kit |
|-------|--------|----------------------|--------------------|
| 42 | 297510 | 416435 | 419511 |
| 47 | 297718 | 421234 | 421954 |
| 50 | 297502 | 416436 | 419510 |
| 57 | 306772 | 421233 | 421955 |
| 60 | 297503 | 416437 | 419509 |

6 SAE rated capacity (4525VQ ***) cover end pump cartridge)

| ■ USgpm | ■ Ring | ■ STD. cartridge kit | ■ F3 cartridge Kit |
|---------|--------|----------------------|--------------------|
| 12 | 326984 | 421244 | 421576 |
| 14 | 326985 | 421235 | 421577 |
| 17 | 326986 | 421236 | 421578 |
| 19 | 326987 | 421237 | 421579 |
| 21 | 326988 | 421238 | 421580 |

NOTE:

- * Install 419673 sealing ring into body, then install cartridge kit.



- Included in 4525VQ shaft end cart. kit.
- Included in 4525VQ cover end cart. kit.
- ▲ Included in single shaft seal kit 920068 F3 equivalent shaft seal kit 920070
- * Included in double shaft seal kit 920069 F3 equivalent shaft seal kit 920071
- ◆ Included in mounting kit FB-C-10

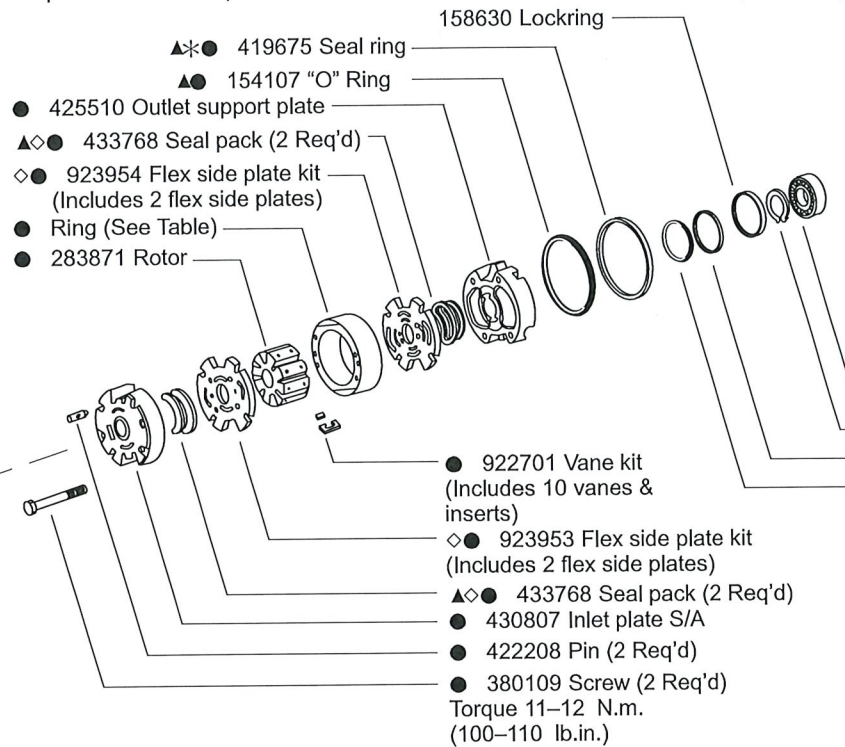
| 8 | Shaft part number | Key part number | Secondary shaft seal | Shaft number | Shaft type |
|---|-------------------|-----------------|----------------------|--------------|-----------------------|
| | 233524 | 217596 | — | 1 | STR. keyed standard |
| | 233527 | — | — | 11 | Spline |
| | 247102 | — | — | 19 | Spline |
| | 361762 | 239751 | — | 86 | STR. keyed heavy duty |
| | 413024 | — | 429282 | 114 | Spline |

NOTE:

- Assemble seal with spring loaded sealing member towards bearing. Seals to be completely wetted with oil prior to assembly.

NOTE:

- ◇ Included in flex side plate kit; bronze face of plate must be installed toward the rotor. Kit contains two flex side plates & four seal packs.



NOTE:

- Body S/A includes body, ball, & plug (Ball and plug not shown)

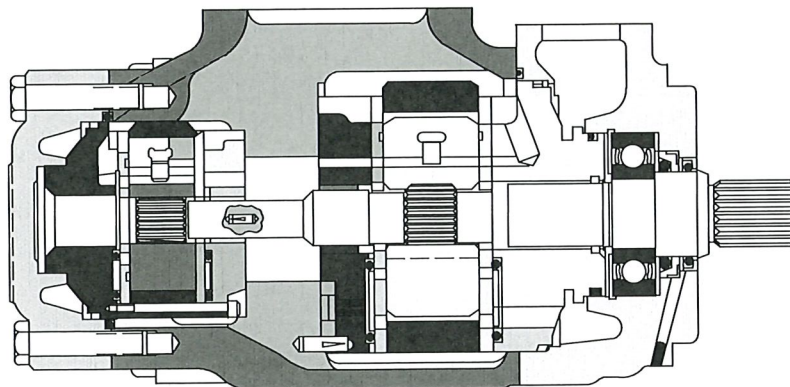
NOTE:

- Assemble seal flush with pilot face with spring loaded sealing member facing inward as shown. Seals to be completely wetted with oil prior to assembly.

NOTE:

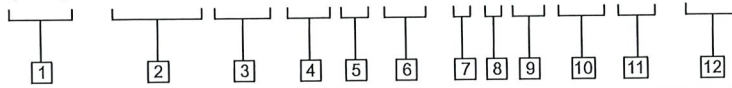
- * Install 419675 sealing ring into body, then install cartridge kit.

Typical cutaway view



Model Code

(F3) - 4525 VQ ** A ** - * 1 ** 20 (*) - 28*



1 Viton seals
(Omit if not required)

2 Series designation

3 Intra-vane pump

4 US GPM capacity
(Shaft end pump)

SAE rating 1200 rpm-100 psi (7 bar)

| | |
|---------------|---------------|
| 42 - 42 USgpm | 57 - 57 USgpm |
| 47 - 47 USgpm | 60 - 60 USgpm |
| 50 - 50 USgpm | |

5 SAE port connections

| Code | Inlet | Outlet #1 | Outlet #2 |
|------|------------------|------------------|------------------|
| A - | 4 bolt flange | 4 bolt flange | 4 bolt flange |
| E - | 4 bolt flange | 4 bolt flange | SAE ST. THD. |

6 US GPM capacity
(Cover end pump)

SAE rating 1200 rpm-100 psi (7 bar)

| | |
|---------------|---------------|
| 12 - 12 USgpm | 19 - 19 USgpm |
| 14 - 14 USgpm | 21 - 21 USgpm |
| 17 - 17 USgpm | |

7 Mounting

F - Foot (Single shaft seal)
S - Flange (Double shaft seal)
Omitted - Flange, single shaft seal
assembly

8 Shaft type

1- Straight with square key standard
11- Splined
19- Splined
86- Straight with square key heavy
duty
114- Splined

9 Outlet port positions
(Viewed from cover end of pump)

With # 1 outlet opposite inlet:
AA - # 2 outlet - 135° CCW from inlet
AB - # 2 outlet - 45° CCW from inlet
AC - # 2 outlet - 45° CW from inlet
AD - # 2 outlet - 135° CW from inlet
With # 1 outlet 90° CCW from inlet:
BA - # 2 outlet - 135° CCW from inlet
BB - # 2 outlet - 45° CCW from inlet
BC - # 2 outlet - 45° CW from inlet
BD - # 2 outlet - 135° CW from inlet

9 Outlet port positions continued
(Viewed from cover end of pump)

With # 1 outlet inline with inlet:
CA - # 2 outlet - 135° CCW from inlet
CB - # 2 outlet - 45° CCW from inlet
CC - # 2 outlet - 45° CW from inlet
CD - # 2 outlet - 135° CW from inlet

With # 1 outlet 90° CW from inlet:
DA - # 2 outlet - 135° CCW from inlet
DB - # 2 outlet - 45° CCW from inlet
DC - # 2 outlet - 45° CW from inlet
DD - # 2 outlet - 135° CW from inlet

10 Design

11 Rotation
(Viewed from shaft end of pump)

L - Left hand (CCW rotation)
Omitted - Right hand rotation

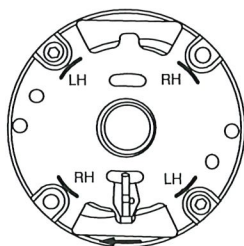
12 Mounting

282 - SAE 2-bolt mounting
283 - Foot mounting

NOTE:

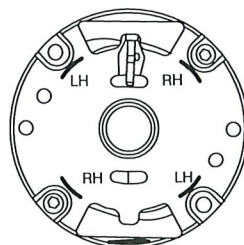
Standard right hand shaft rotation
cartridges shown. Reverse for left hand
rotation; refer to note.

Cover end cartridge R. H. Rotation



Sharp Edges of Vane Must Lead in
Direction of Rotation

Shaft end cartridge R. H. Rotation



Sharp Edges of Vane Must Lead in
Direction of Rotation

NOTE:

To reverse cartridge kit rotation,
remove the two screws and reverse
the location of the inlet support plate
and the outlet support plate. Reinstall
the two screws hand tight. Use pump
cover to align all sections of the
cartridge. Carefully remove the cover
and tighten the screws.