Service Data

Vickers®

# Vane Pumps

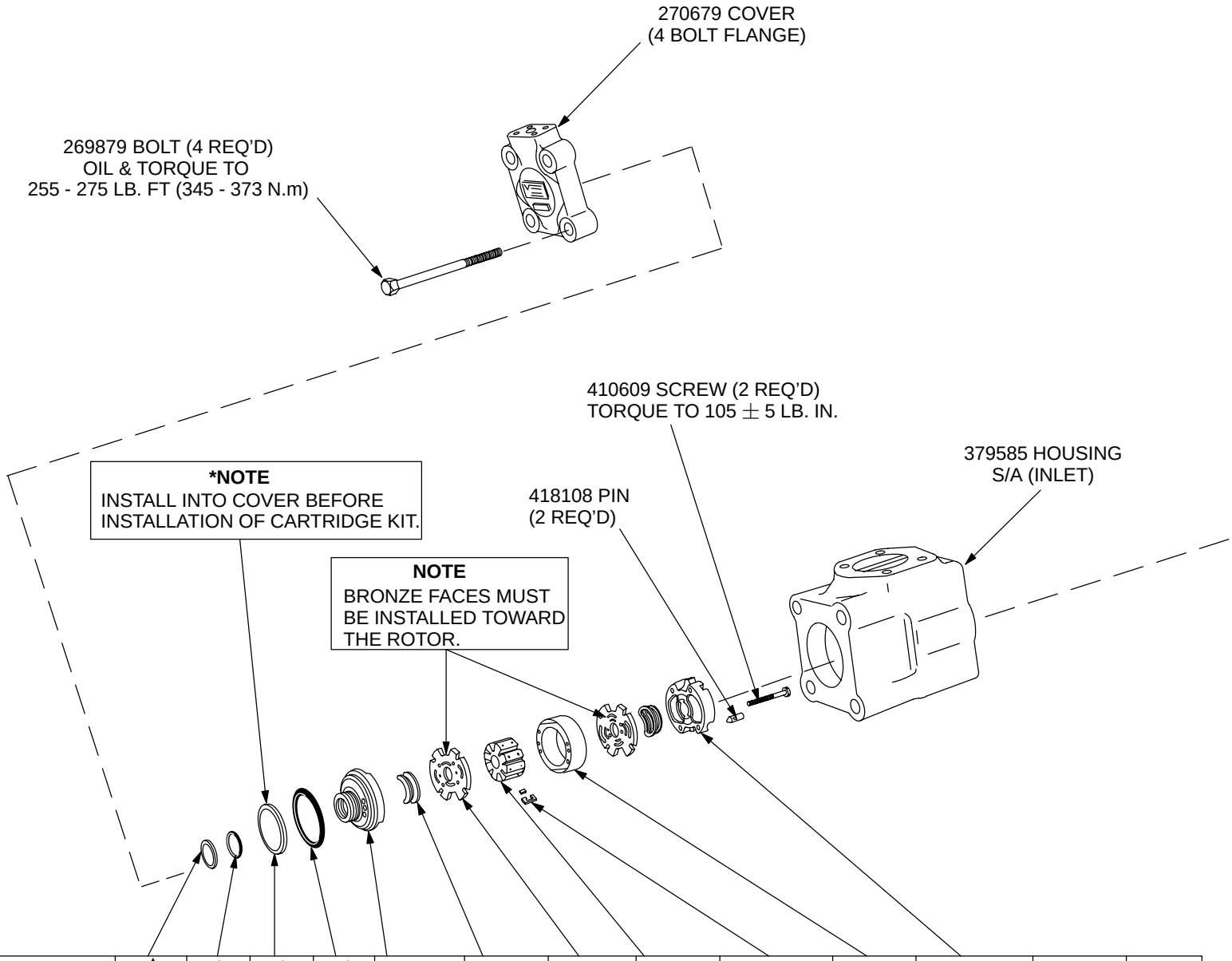
# Vane Type Double Pump

## 4535VQ Series - 20 Design

▲INCLUDED IN DOUBLE SHAFT SEAL KIT 920072.
F3 EQUIVALENT SEAL KIT 920074.

▲△INCLUDED IN DOUBLE SHAFT SEAL KIT 920073.
F3 EQUIVALENT SEAL KIT 920075.

☐ WIPE O.D. OF SEAL WITH OIL BEFORE PRESSING INTO BODY. APPLY GREASE TO SEAL I.D. BEFORE INSTALLATION OF SHAFT.




| MODEL | ▲ BACK -UP RING | ▲ "O" RING | ▲ SEAL RING | ▲ "O" RING | OUTLET SUPPORT PLATE | ▲SEAL PACK (4 REQ'D) | ■FLEX-SIDE PLATE KIT | ROTOR | VANE KIT (10 VANES & 10 INSERTS) | RING | INLET SUPPORT PLATE | CART. KIT | F3 CART. KIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| THESE PARTS ARE INCLUDED IN CARTRIDGE KIT | | | | | | | | | | | | | |
| 4535*** 21** | 588506 | 154084 | 419674 | 154101 | 412003 | 433766 S/A | 923953 | 262154 | 922700 | 394961 | 412005 | 421239 | 421563 |
| 4535***25** | | | | | | | | | | 319396 | | 421240 | 421564 |
| 4535***30** | | | | | | | | | | 319397 | | 421241 | 421565 |
| 4535***35* | | | | | | | | | | 319398 | | 421242 | 421566 |
| 4535***38* | | | | | | | | | | 319399 | | 421243 | 4215672 |

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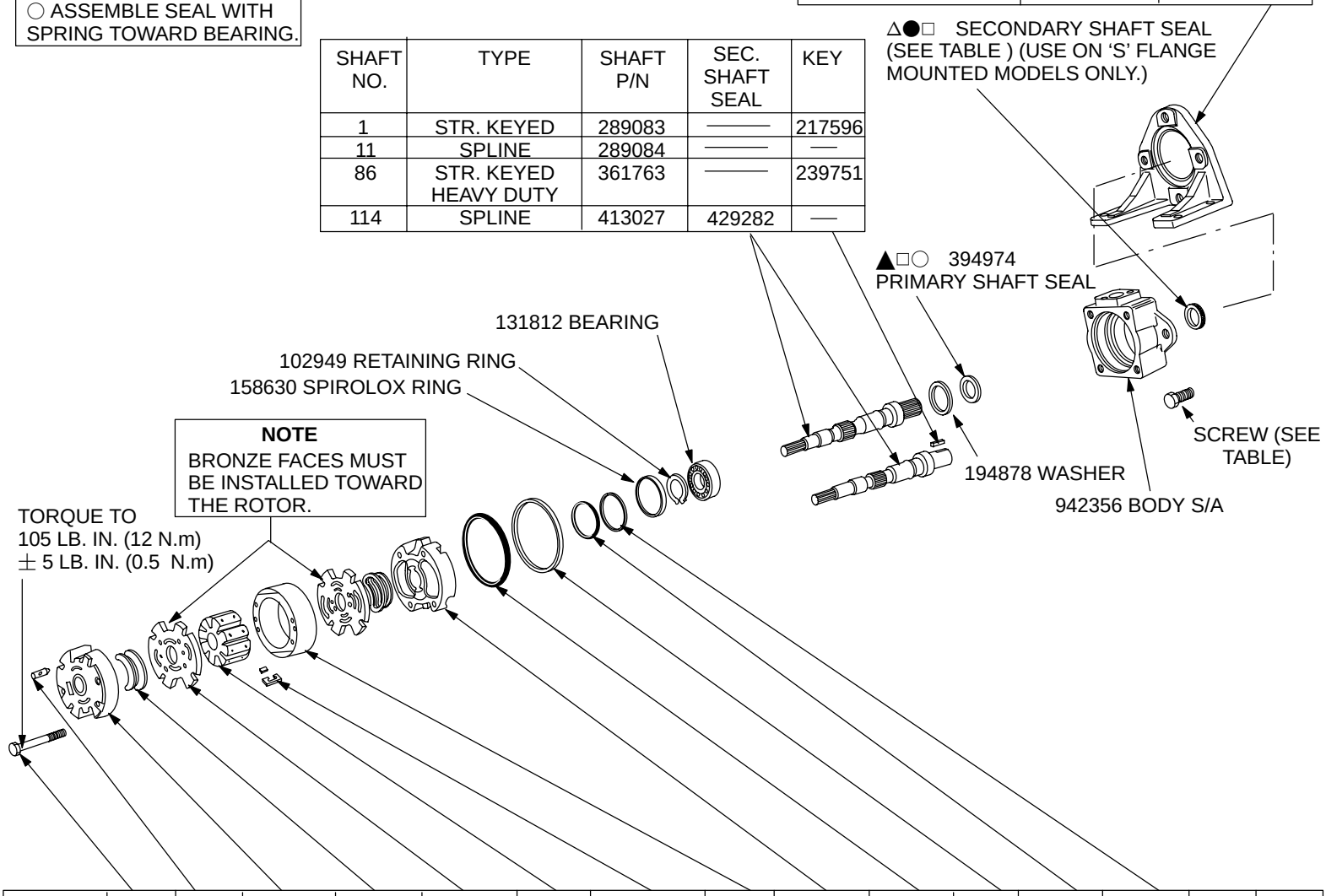
● ASSEMBLE SEAL FLUSH TO PILOT FACE WITH SPRING FACING INWARD AS SHOWN.

○ ASSEMBLE SEAL WITH SPRING TOWARD BEARING.

| MOUNTING ASSEMBLY 4535VQ**A**F-***-20(*) | | |
|---|---|---|
| INCLUDED IN FOOT BRACKET KIT NO. | SCREW (2 REQ'D) | MOUNTING BRACKET |
| FB-C-10 | 205533 | 205077 |

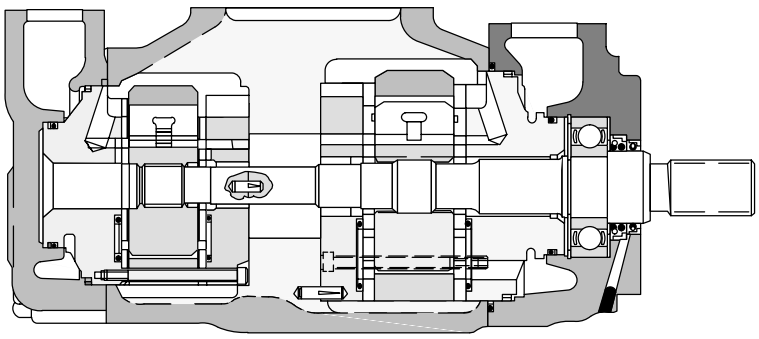
| SHAFT NO. | TYPE | SHAFT P/N | SEC. SHAFT SEAL | KEY |
|---|---|---|---|---|
| 1 | STR. KEYED | 289083 | ——— | 217596 |
| 11 | SPLINE | 289084 | ——— | — |
| 86 | STR. KEYED HEAVY DUTY | 361763 | ——— | 239751 |
| 114 | SPLINE | 413027 | 429282 | — |




| MODEL | SCREW (2 REQ'D) | PIN (2 REQ'D) | INLET SUPPORT PLATE | ▲SEAL PACK (4 REQ'D) | ◆FLEX-SIDE–PLATE KIT | ROTOR | VANE KIT (10 VANES & 10 INSERTS) | RING | OUTLET SUPPORT PLATE | ■▲ "O" RING | ✻■▲ SEAL RING | ▲ "O" RING | ■▲ BACK-UP RING | CART. KIT | F3 CART. KIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| THESE PARTS ARE INCLUDED IN CARTRIDGE KIT | | | | | | | | | | | | | | | |
| 4535VQ42A | 380109 | 422208 | 430807 S/A | 433768 S/A | 923954 | 283871 | 922701 | 295710 | 425510 | 154107 | 419675 | 154087 | 588509 | 416435 | 419511 |
| 4535VQ47A | | | | | | | | 297718 | | | | | | 421234 | 421954 |
| 4535VQ50A | | | | | | | | 297502 | | | | | | 416436 | 419510 |
| 4535VQ57A | | | | | | | | 306772 | | | | | | 421233 | 421955 |
| 4535VQ60A | | | | | | | | 297503 | | | | | | 416437 | 419509 |

✻INSTALL SEAL RING IN BODY OR COVER, THEN INSTALL CARTRIDGE KIT.

■ **NOTE**: FLEX SIDEPLATE KITS INCLUDE (4) F3 SEAL PACKS.



# Model Code

**(F3) - 4535 VQ ** A ** - * 1 ** 20 (*) - 28 ***

1 2 3 4 5 6 7 8 9 10 11 12

**1 Viton seals**
(Omit if not required.)

**2 Series designation**

**3 Intra–vane pump**

**4 USgpm capacity**
(Shaft end pump)

SAE rating 1200 rpm–100 psi (7 bar)

**42** – 42 USgpm
**47** – 47 USgpm
**50** – 50 USgpm
**57** – 57 USgpm
**60** – 60 USgpm

**5 SAE port connections**
Models Without Flow Control

| Code | Inlet | Outlet #1 | Outlet #2 |
|---|---|---|---|
| **A** – | 4 bolt flange | 4 bolt flange | 4 bolt flange |

**6 USgpm capacity**
(Cover end pump)

SAE rating 1200 rpm–100 psi (7 bar)

**21** – 21 USgpm
**25** – 25 USgpm
**30** – 30 USgpm
**35** – 35 USgpm
**38** – 38 USgpm

**7 Mounting**

**F** – Foot (Single shaft seal)
**S** – Flange (Double shaft seal)
Omitted for flange, single shaft seal assembly.

**8 Shaft type**

**1**- Straight with square key standard
**11**- 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 – Opposite inlet
**AB** – # 2 outlet – 90° CCW from inlet
**AC** – # 2 outlet – Inline with inlet
**AD** – # 2 outlet – 90° CW from inlet

With # 1 outlet 90° CCW from inlet:
**BA** – # 2 outlet – Opposite inlet
**BB** – # 2 outlet – 90° CCW from inlet
**BC** – # 2 outlet – Inline with inlet
**BD** – # 2 outlet – 90° CW from inlet

With # 1 outlet inline with inlet:
**CA** – # 2 outlet – Opposite inlet
**CB** – # 2 outlet – 90° CCW from inlet
**CC** – # 2 outlet – Inline with inlet
**CD** – # 2 outlet – 90° CW from inlet

With # 1 outlet 90° CW from inlet:
**DA** – # 2 outlet – Opposite inlet
**DB** – # 2 outlet – 90° CCW from inlet
**DC** – # 2 outlet – Inline with inlet
**DD** – # 2 outlet – 90° CW from inlet

**10 Design**

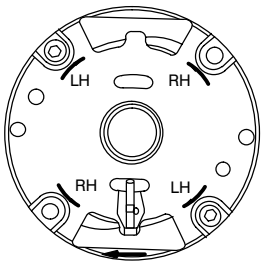
**11 Rotation**
(Viewed from shaft end of pump)

**L** – Left hand (CCW rotation)
Omitted for right hand rotation

**12 Mounting**

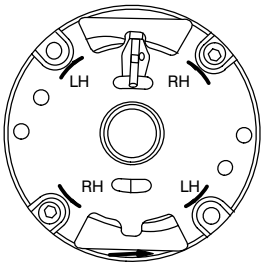
**282** – SAE 2–bolt mounting
**283** – Foot mounting

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**

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

**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.

For satisfactory service life of these components, use full flow filtration to provide fluid which meets ISO cleanliness code 16/13 or cleaner. Selections from pressure, return, and in-line filter series are recommended.

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