Vane Type
Double Pump

(F3)—3520V(M)—**A(M)***(F)——**22—*
<table>
<thead>
<tr>
<th>MODEL</th>
<th>ROTOR</th>
<th>VANE KIT</th>
<th>RING</th>
<th>INLET PLATE</th>
<th>Cover End CART. KIT</th>
<th>Cover End F3 CART. KIT</th>
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</thead>
<tbody>
<tr>
<td>3520V***2</td>
<td>402690</td>
<td>02—136720</td>
<td>388683</td>
<td>584383</td>
<td>02—102506</td>
<td>02—102512</td>
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<td>3520V***5</td>
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<td>02—102513</td>
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<td>02—102514</td>
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<td>3520V***11</td>
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<td>02—102509</td>
<td>02—102515</td>
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<td>3520V***12</td>
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<td>02—136721</td>
<td>353901</td>
<td>584384</td>
<td>02—102510</td>
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<td>02—102511</td>
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</table>

- **575479 Outlet Plate**
- **Ring (See Table)**
- **575478 Rotor**
- **576265 Inlet Plate**
- **280031 Pin (2 Req’d)**
- **158465 Pin (2 Req’d)**
- **Inlet Plate (See Table)**
- **Ring (See Table)**
- **Vane Kit See Table** (Includes 10 Vanes & Inserts)
- **Rotor (See Table)**

- **289475 Screw (2 Req’d)**
- **289473 Screw (2 Req’d)**
- **42023 Bolt (4 Req’d)**
  Torque 190 — 217 N.m.
  (140 — 160 lb. ft.)

- **584382 Outlet Plate**
- **154026 “O” Ring**
- **588506 Ring**
- **154090 “O” Ring**
- **Cover (See Table)**
- **1296 Bolt (4 Req’d)**
  Torque 55.2 — 67.8 N.m.
  (40 — 50 lb. ft.)

- Included in shaft end cartridge kit
- Included in cover end cartridge kit
- Included in seal kit 922859
  F3 equivalent seal kit 919304
- Included in foot bracket kit FB—C—10
- Assemble seal with spring loaded sealing member towards bearing. Seals to be completely wetted with oil prior to assembly.
- Install 419674 sealing ring into body, then install cartridge kit.
### Table 1

<table>
<thead>
<tr>
<th>MODEL</th>
<th>COVER</th>
<th>HOUSING</th>
<th>BODY S/A</th>
<th>SHAFT END</th>
<th>SHAFT END</th>
<th>SHAFT END</th>
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<tr>
<td>3520V25</td>
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<td>3520V35</td>
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<td>3520V38</td>
<td>575476</td>
<td>02-102555</td>
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</tr>
</tbody>
</table>

### Diagram

- **Key (See Table)**
- **Shaft (See Table)**
- **38441 Bearing**
- **119982 Retaining Ring**
- **193144 Retaining Ring**
- **△● 588508 Ring**
- **△● 154084 "O" Ring**
- **※ △● 419674 Seal Ring**
- **△● 154101 "O" Ring**

- **Body S/A (See Table)**
- **□ 205077 Foot Bracket**
- **△ 205533 Screw (2 Req’d)**
- **△ 394973 Shaft Seal**
- **193220 Retainer**

### Table 2

<table>
<thead>
<tr>
<th>MODEL</th>
<th>COVER</th>
<th>HOUSING</th>
<th>BODY S/A</th>
<th>SHAFT</th>
<th>TYPE</th>
<th>KEY</th>
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</thead>
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<tr>
<td>3520V25</td>
<td>250824</td>
<td>250818</td>
<td>942355</td>
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<td>88678</td>
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<td>3520V30</td>
<td>252504</td>
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<td>942355</td>
<td>258250</td>
<td>(11) splined</td>
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<td>3520VM35</td>
<td>478510</td>
<td>478506</td>
<td>02-136921</td>
<td>394517</td>
<td>(86) keyed</td>
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<tr>
<td>3520VM38</td>
<td>478510</td>
<td>478506</td>
<td>02-136922</td>
<td>860097</td>
<td>(192N) keyed</td>
<td>472287</td>
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</tbody>
</table>

### 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 Code

(F3) - 3520V (M) - ** A (M) ** (F) - * * - 22 - *

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

1 Special seals
2 Series designation
Displacements cm³/r (in³/r)

Model         Shaft end    Cover end
3520V  81 – 121  18 – 45
        (4.94 – 7.37)  (1.1 – 2.22)

3 Pilot designation
M – Metric per ISO 3019/2 100A2HW
Omit – Standard pilot

4 Geometric displacement
Shaft end pump
(Rated capacity (USgpm) at 1200 rpm, 6.9 bar (100 psi))

Frame size  Code  cm³/r  in³/r
3520V  25  81  4.94
60  97  5.91
50  112  6.83
60  121  7.37

5 Port connections
A – SAE 4 bolt flange

6 Port connection modifier
M – Metric port connection
   (4 bolt flange)
Omit – Inch thread port connection
   (4 bolt flange)

7 Geometric displacement
Cover end pump
(Rated capacity (USgpm) at 1200 rpm, 6.9 bar (100 psi))

Frame size  Code  cm³/r  in³/r
3520V  2  6.5  0.40
5  18  1.10
8  27  1.67
11  36  2.22
12  40  2.47
14  45  2.78

8 Mounting
F – Foot mounting
Omit – Flange mounting

9 Shaft
1 – Straight keyed
11 – Splined
86 – Heavy duty straight keyed
192N – Staight keyed (M pilot only)

10 Port orientation
(Viewed from cover end of pump)
With no. 1 outlet opposite inlet
AA – No. 2 outlet 135° CCW from inlet
AB – No. 2 outlet 45° CCW from inlet
AC – No. 2 outlet 45° CW from inlet
AD – No. 2 outlet 135° CW from inlet

With no. 1 outlet 90° CCW from inlet
BA – No. 2 outlet 135° CCW from inlet
BB – No. 2 outlet 45° CCW from inlet
BC – No. 2 outlet 45° CW from inlet
BD – No. 2 outlet 135° CW from inlet

With no. 1 outlet inline with inlet
CA – No. 2 outlet 135° CCW from inlet
CB – No. 2 outlet 45° CCW from inlet
CC – No. 2 outlet 45° CW from inlet
CD – No. 2 outlet 135° CW from inlet

With no. 1 outlet 90° CW from inlet
DA – No. 2 outlet 135° CCW from inlet
DB – No. 2 outlet 45° CCW from inlet
DC – No. 2 outlet 45° CW from inlet
DD – No. 2 outlet 135° CW from inlet

11 Design

12 Rotation
(Viewed from shaft end of pump)
L – Left hand for counterclockwise
R – Right hand for clockwise

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.

When ordering spare cartridge parts, it is recommended they be obtained in cartridge kits. Kits are assembled and tested for either right or left hand rotation. If left hand rotation is required, it should be specified on parts order by adding suffix “L” to cartridge kit number.

Sharp Edges of Vane Must Lead in Direction of Rotation

Cover End Cartridge  R. H. Rotation
Shaft End Cartridge  R. H. Rotation

NOTE
Standard right hand shaft rotation cartridges shown. Reverse for left hand rotation.