

Service Data

**Vickers®**

# Transmissions

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## Double Transmission Pump Package

TA1919V20\*-21/-22



Revised 11/01/89

M-2847-S

● Included in 923938 Shim Kit

▲ Included in 920171 Seal Kit

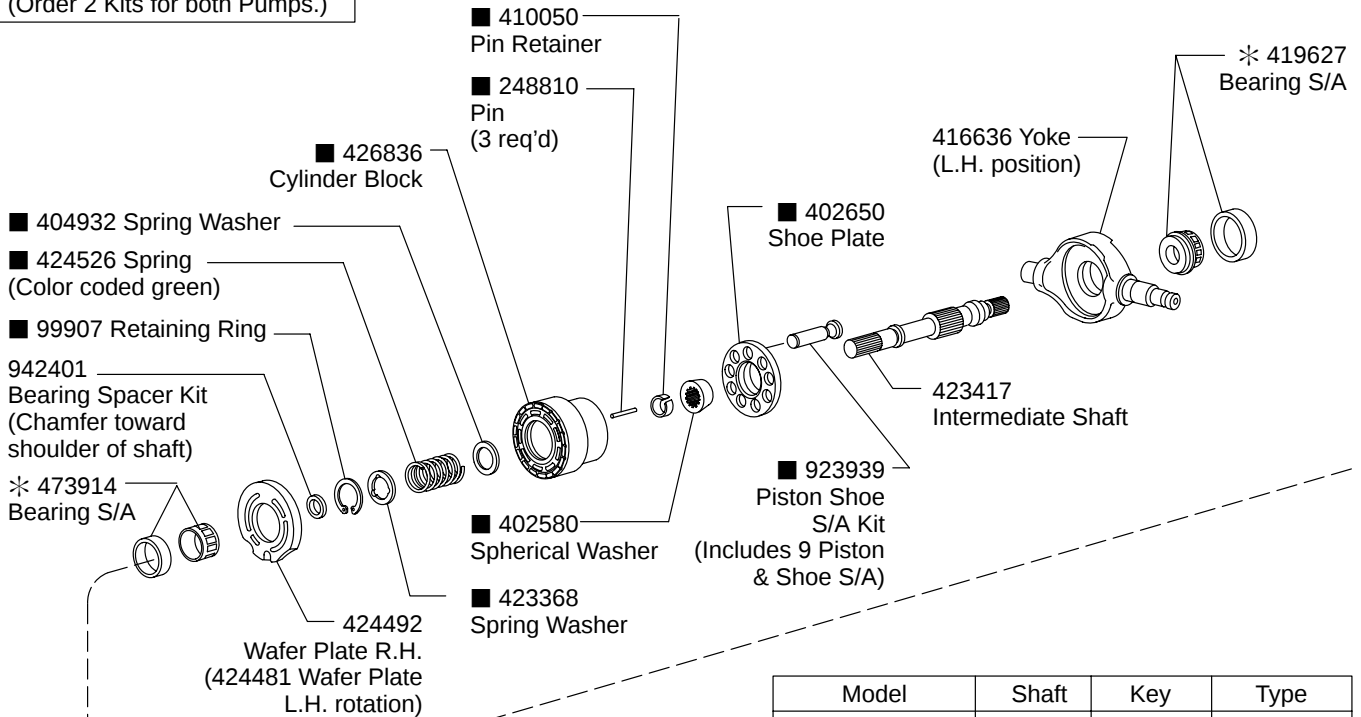
\* See Overhaul Manual for Bearing Preload Adjustment.

■ Included in 923936 Rotating Group Kit (For one Pump only)  
(Order 2 Kits for both Pumps.)

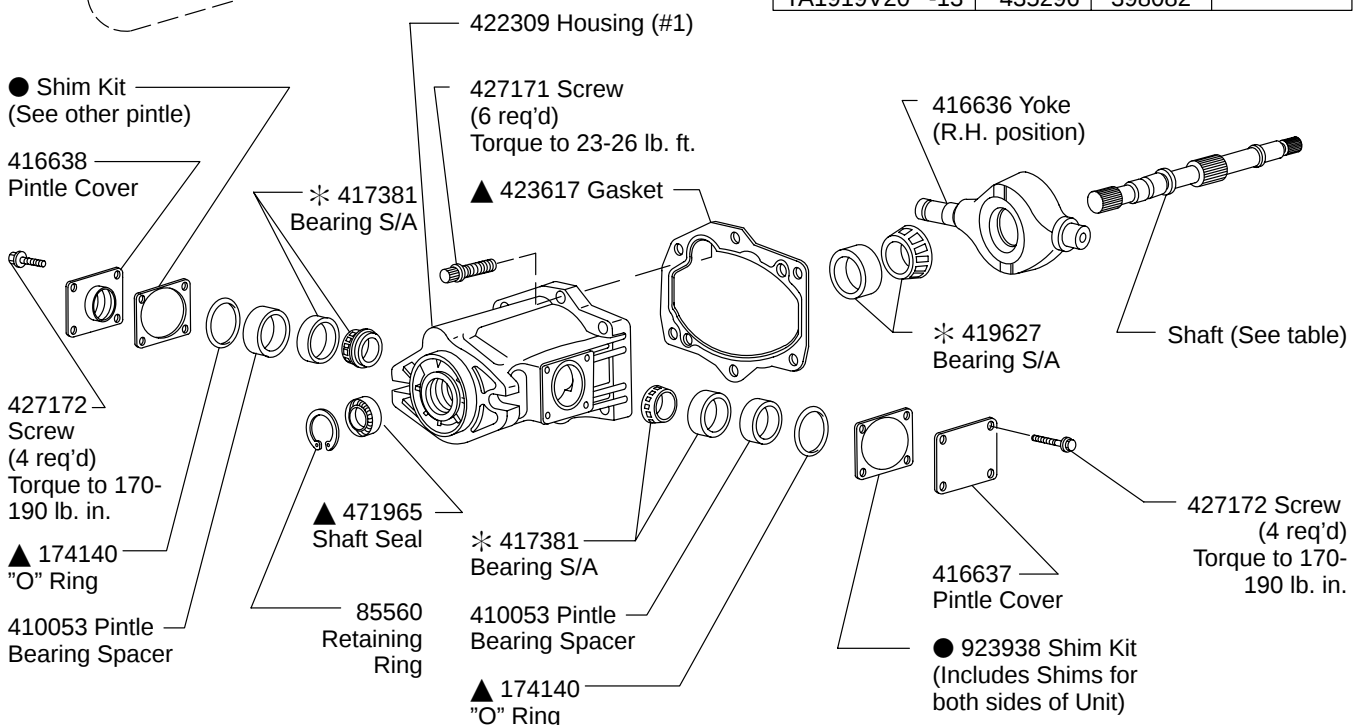


# **WARNING**

Use this drawing for parts information only.  
See Overhaul Manual M-2835-S for maintenance information.



| Model          | Shaft  | Key    | Type    |
|----------------|--------|--------|---------|
| TA1919V20**-2  | 423416 | —      | Splined |
| TA1919V20**-12 | 426443 | 235252 | Keyed   |
| TA1919V20**-13 | 435296 | 398082 |         |



427172 Screw (4 req'd)  
Torque to 170-190 lb. in.

▲ 174140 "O" Ring

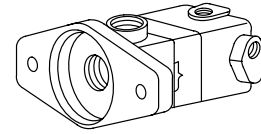
410053  
Pintle Bearing Spacer

\* 417381  
Bearing S/A

427171 Screw  
(6 req'd)  
Torque to 23-26 lb. in.

\* 417381  
Bearing S/A

See Double Transmission Vane Pump  
exploded view shown on back page.



416637  
Cover

● Shim Kit  
(See other  
pintle)

▲ 423617  
Gasket

422309  
Housing (#2)

199740 Screw (2 req'd)  
Torque to 54-60 lb. ft.

427700 Washer  
(2 req'd)

▲ 174140 "O" Ring

410053  
Pintle Bearing  
Spacer

● 923938  
Shim Kit  
(Includes  
Shims for both  
sides of unit)

Supercharge  
Inlet Port

7075 Plug (3 req'd)  
Torque to 15-17 lb. ft.

416638  
Pintle Cover

416599 Plug  
Torque to 128-148 lb. ft.

▲ 154131 "O" Ring  
424525 Spring  
(Color coded red)

416645  
Poppet

422303  
Valve Block

Outlet  
Ports  
A1  
& A2

■ 410050  
Pin Retainer

■ 402580  
Spherical  
Washer

■ 402650  
Shoe  
Plate

■ 923939  
Piston Shoe  
S/A Kit  
(Includes 9 Piston  
& Shoe S/A)

■ 248810  
Pin  
(3 req'd)

■ 426836  
Cylinder Block

■ 99907  
Retaining Ring

■ 423368  
Spring  
Washer

■ 424526  
Spring  
(Color coded green)

■ 404932  
Spring Washer

942401 Bearing Spacer Kit  
(Chamfer toward shoulder of shaft)

424481 Wafer Plate R.H.  
(424492 Wafer Plate L.H. rotation)

\* 473914  
Bearing S/A  
416650  
Coupling

Drain Port  
Replenishing Check Only  
(See table)

429325  
Pin  
(4 req'd)

248910 Pin  
(2 req'd)

Replenishing  
Check Only  
(See table)

416602  
Spring  
(4 req'd)

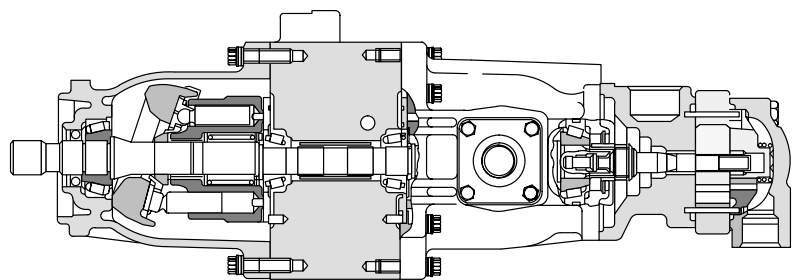
▲ 154131  
"O" Ring  
(2 req'd)

416960  
Spring  
(4 req'd)  
Color  
coded  
green

317697  
Plug  
Torque to 128-148 lb. ft.  
(Use with Check  
Valve only)

416599 Plug  
Torque to 128-148 lb. ft.  
(Use with Replenishing  
Check & Relief)

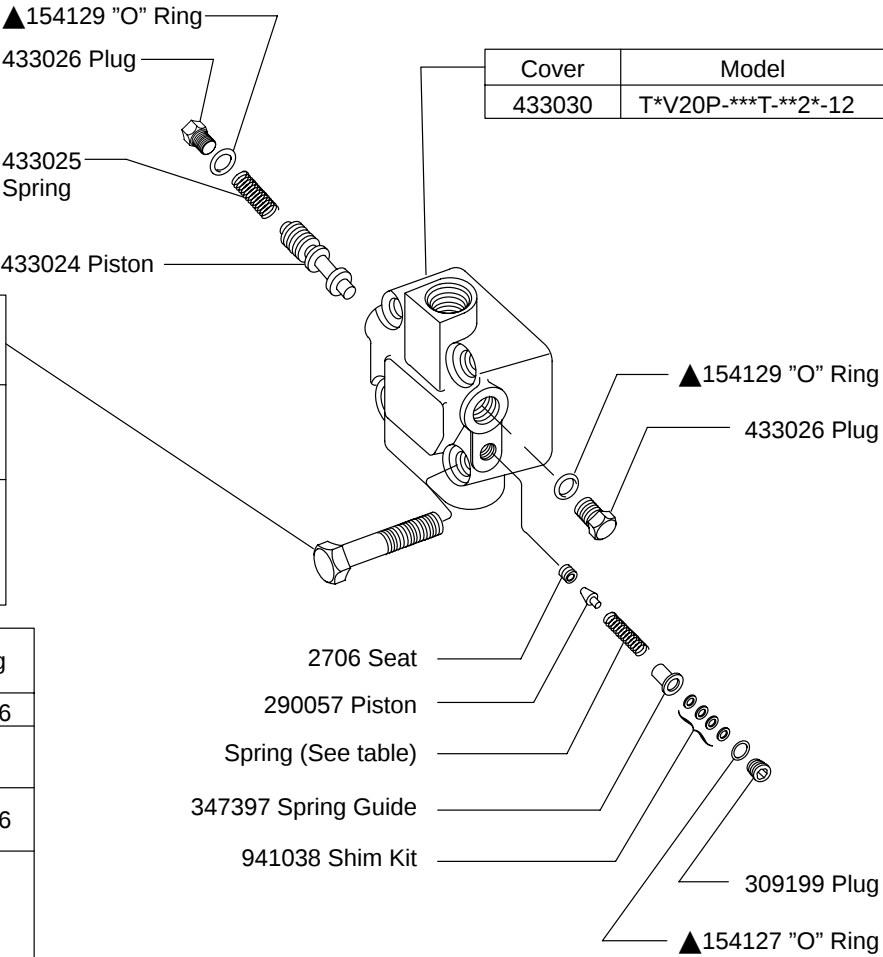
| Model                  | Replenishing<br>Check and Relief<br>Valve Kit (4 req'd) | Replenishing<br>Check<br>(4 req'd) |
|------------------------|---------------------------------------------------------|------------------------------------|
| TA1919V20**-**R        | 942429 - 5000 psi                                       | NONE                               |
| TA1919V20**-001 Suffix | 942430 - 3500 psi                                       | NONE                               |
| TA1919V20**-**0        | NONE                                                    | 416645                             |
| TA1919V20**-014 Suffix | 942428 - 3000 psi                                       | NONE                               |
| TA1919V20**-016 Suffix | 942427 - 4000 psi                                       | NONE                               |



Priority Valve  
Cover

| Model                 | Screw (4 req'd)<br>Torque to<br>80 ± 5 lb. ft. |
|-----------------------|------------------------------------------------|
| T*V20P-***7*-****-12  | 9431                                           |
| T*V20P-***8*-****-12  |                                                |
| T*V20P-***9*-****-12  |                                                |
| T*V20P-***10*-****-12 | 96168                                          |
| T*V20P-***11*-****-12 |                                                |
| T*V20P-***12*-****-12 |                                                |
| T*V20P-***13*-****-12 |                                                |

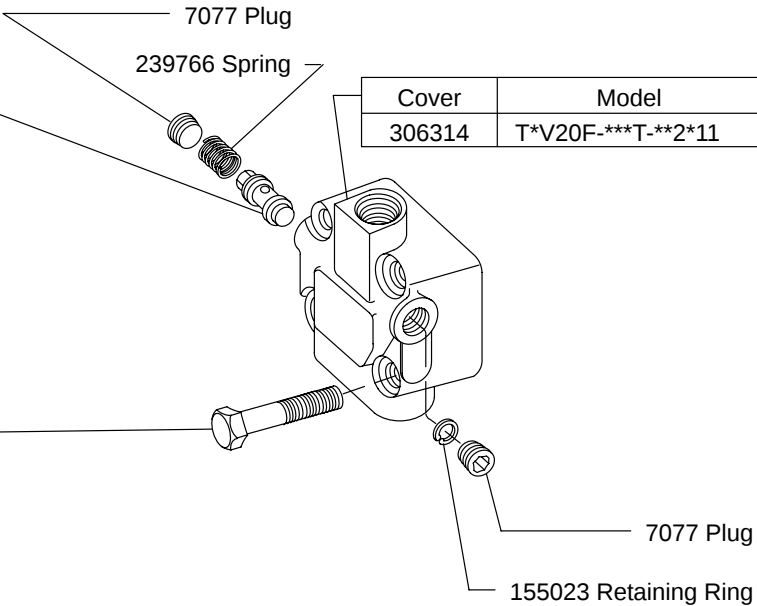
| Model               | Pressure<br>Setting | Spring |
|---------------------|---------------------|--------|
| T*V20P-****-***-A12 | 250                 | 252886 |
| T*V20P-****-***-B12 | 500                 | 2280   |
| T*V20P-****-***-C12 | 750                 |        |
| T*V20P-****-***-D12 | 1000                | 435626 |
| T*V20P-****-***-E12 | 1250                |        |
| T*V20P-****-***-F12 | 1500                | 2281   |
| T*V20P-****-***-G12 | 1750                |        |
| T*V20P-****-***-H12 | 2000                |        |
| T*V20P-****-***-J12 | 2250                |        |
| T*V20P-****-***-K12 | 2500                |        |



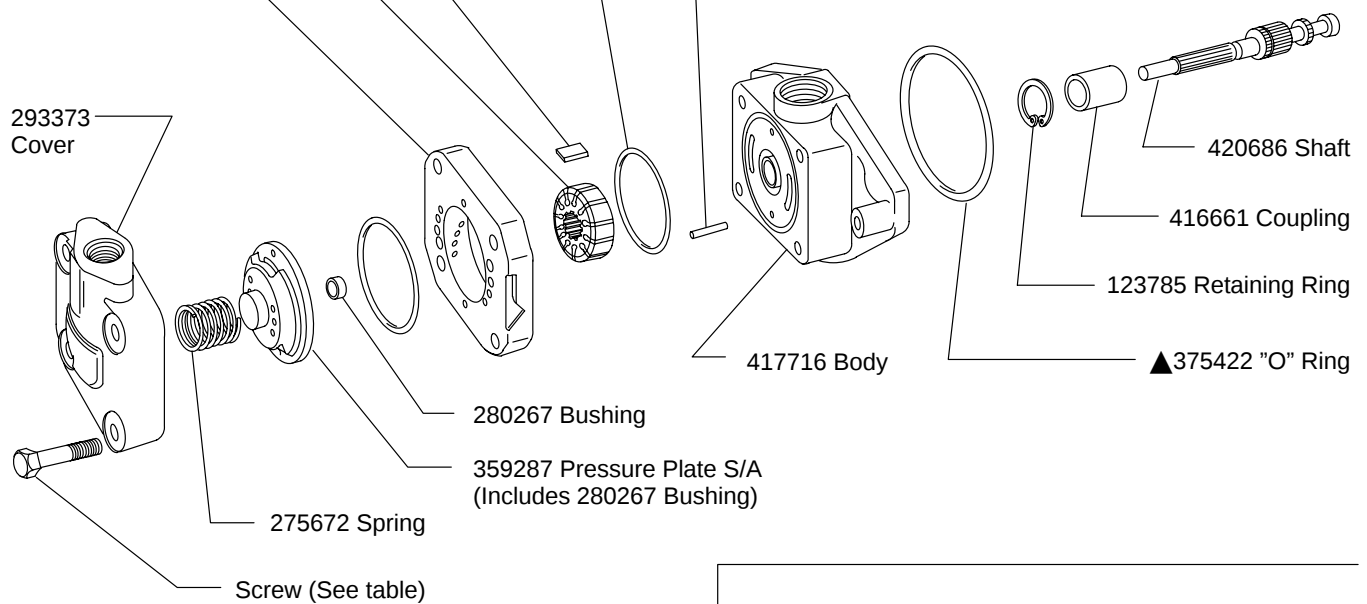
Flow Control  
Cover

| Model               | Pressure<br>Setting | Control<br>Valve S/A |
|---------------------|---------------------|----------------------|
| T*V20F-****-***-C11 | 750                 | 232794               |
| T*V20F-****-***-D11 | 1000                | 232795               |
| T*V20F-****-***-E11 | 1250                | 232796               |
| T*V20F-****-***-F11 | 1500                | 232797               |
| T*V20F-****-***-G11 | 1750                | 232798               |
| T*V20F-****-***-H11 | 2000                | 232799               |
| T*V20F-****-***-J11 | 2250                | 233019               |
| T*V20F-****-***-K11 | 2500                | 233020               |

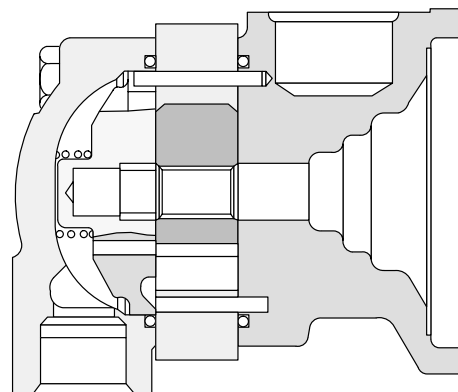
| Model                | Screw (4 req'd)<br>Torque to<br>80 ± 5 lb. ft. |
|----------------------|------------------------------------------------|
| T*V20F-***7*-****11  | 9431                                           |
| T*V20F-***8*-****11  |                                                |
| T*V20F-***9*-****11  |                                                |
| T*V20F-***10*-****11 | 96168                                          |
| T*V20F-***11*-****11 |                                                |
| T*V20F-***12*-****11 |                                                |
| T*V20F-***13*-****11 |                                                |



| Ring                      | Rotor  | Vane Kit<br>(12 Vanes) | ▲ "O" Ring<br>(2 req'd) | Cartridge<br>Kit | Pin<br>(2 req'd)   | Screw (4 req'd)<br>Torque to 80<br>± 5 lb. ft. | Model              |  |
|---------------------------|--------|------------------------|-------------------------|------------------|--------------------|------------------------------------------------|--------------------|--|
| Serviced in Cartridge Kit |        |                        |                         |                  |                    |                                                |                    |  |
| 328152                    | 358330 | 923493                 | 154090                  | 923481           | 2478               | 131486                                         | T*V20*_*7*_*11/12  |  |
| 331791                    |        |                        |                         | 923483           |                    |                                                | T*V20*_*8*_*11/12  |  |
| 331789                    |        |                        |                         | 923484           |                    |                                                | T*V20*_*9*_*11/12  |  |
| 374309                    | 358332 | 923478                 |                         | 923620           | T*V20*_*10*_*11/12 |                                                |                    |  |
| 328156                    |        |                        |                         | 923482           | T*V20*_*11*_*11/12 |                                                |                    |  |
| 331806                    | 358334 | 923479                 |                         | 923486           | 9603               | 1319                                           | T*V20*_*12*_*11/12 |  |
| 331807                    |        |                        |                         | 923487           |                    |                                                | T*V20*_*13*_*11/12 |  |

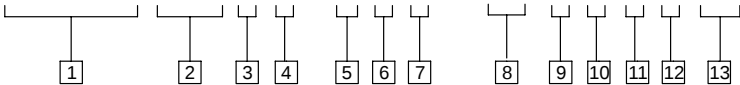


▲ Included in Seal Kit shown on  
Piston Pump section of drawing.



# Model Code

**TA1919 V20 \* \* - 2 \* \* - \*\* \* \* \* \* 2\***



## 1 Double Transmission Pump

Each rated @ 19 USgpm @1800 rpm

## 2 Auxiliary Vane Pump

## 3 Vane Pump Cover

**F** - Flow control  
**P** - Priority flow  
**Omitted** - STD cover

## 4 Rotation

(Viewed from shaft end)

**R** - Right hand (CW)  
**L** - Left hand (CCW)

## 5 Input Shaft

**2** - SAE B-B Spline  
**12** - Straight keyed  
**13** - Straight keyed

## 6 Control Pintle

(Location viewed from shaft end  
w/drain port up.)

| Code | Pump #1 | Pump #2 |
|------|---------|---------|
| A    | RH side | RH side |
| B    | LH side | RH side |
| C    | RH side | LH side |
| D    | LH side | LH side |

## 7 Main Relief Valve

**R** - Relief valve  
**O** - No relief valve

## 8 Vane Pump Ring Capacity (@ 1200 rpm)

**07** - 7 USgpm      **11** - 11 USgpm  
**08** - 8 USgpm      **12** - 11 USgpm  
**09** - 9 USgpm      **13** - 11 USgpm  
**10** - 10 USgpm

## 9 Vane Pump Outlet Pump

(Position viewed from cover end)

**A** - In line with case drain  
**C** - 180° Opposite case drain

## 10 Vane Pump Inlet Port

(Viewed from cover end)

**A** - Opposite inlet  
**B** - 90° CCW from from inlet  
**C** - In line with inlet  
**D** - 90° CW from from inlet

## 11 Flow Rate

**Orifice in "F" cover:**

2, 4, 6, 8, 10 USgpm

**Orifice in "P" cover:**

1, 2, 2.5, 3, 4, 5, 6, 7, 8 USgpm

## 12 Vane Pump Relief Valve Setting ("F" & "P" cover)

**A** - 250 psi      **G** - 1750 psi  
**B** - 500 psi      **H** - 2000 psi  
**C** - 750 psi      **J** - 2250 psi  
**D** - 1000 psi      **K** - 2500 psi  
**E** - 1250 psi      **O** - No relief valve  
**F** - 1500 psi

## Design

**13**  
-21/-22

For satisfactory service life of these components in industrial applications, use full flow filtration to provide fluid which meets ISO cleanliness code 18/16/13 or cleaner. Selections from Eaton OFP, OFR, and OFRS series are recommended.