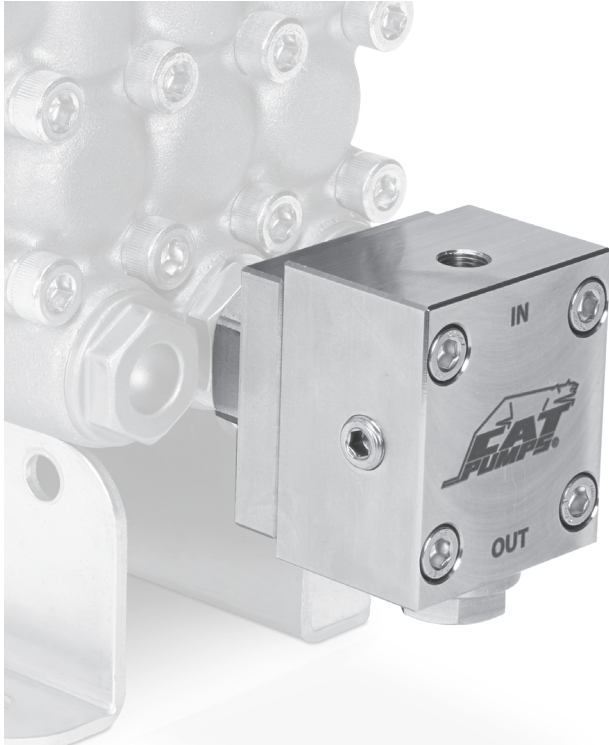


# DATA SHEET

## HIGH PRESSURE PULSE PUMP



**Stainless Steel**      **6340**  
**Model:**



| SPECIFICATIONS         | U.S. Measure      | Metric Measure        |
|------------------------|-------------------|-----------------------|
| Pressure Range         | 100 – 2000 psi    | 6.9 to 138 bar        |
| Flow Range             | 5.5 – 10.5 gph    | 20.8 – 39.7 lph       |
| RPM Range              | 1000 to 1800 rpm  | 1000 to 1800 rpm      |
| Maximum Inlet Pressure | 5 psi             | 0.35 bar              |
| Maximum Liquid Temp.   | 130°F             | 54°C                  |
| Inlet Port (1)         | 1/8" NPT(F)       | 1/8" NPT(F)           |
| Discharge Port (1)     | 1/8" NPT(F)       | 1/8" NPT(F)           |
| Adapter Port (1)       | 1/4" NPT(F)       | 1/4" NPT(F)           |
| Weight                 | 2.1 lbs.          | 0.95 kg               |
| Dimensions             | 2.4 x 2.0 x 2.68" | 60.9 x 50.8 x 68.1 mm |

### MAXIMUM INJECTION RATE

| Pump rpm | Injection Rate |
|----------|----------------|
| 1000     | 5.5 gph        |
| 1100     | 7 gph          |
| 1200     | 8 gph          |
| 1300     | 9 gph          |
| 1400     | 9.5 gph        |
| 1500     | 10.0 gph       |
| 1600     | 10.5 gph       |
| 1700     | 10.5 gph       |
| 1800     | 10.5 gph       |

### FEATURES

- Permits chemical application up to 2000 psi.
- Eliminates pumping harsh chemicals through the main pump.
- Conveniently mounts with an adapter into any inlet valve chamber on the main pump.
- Top cap can be rotated to (4) different positions.

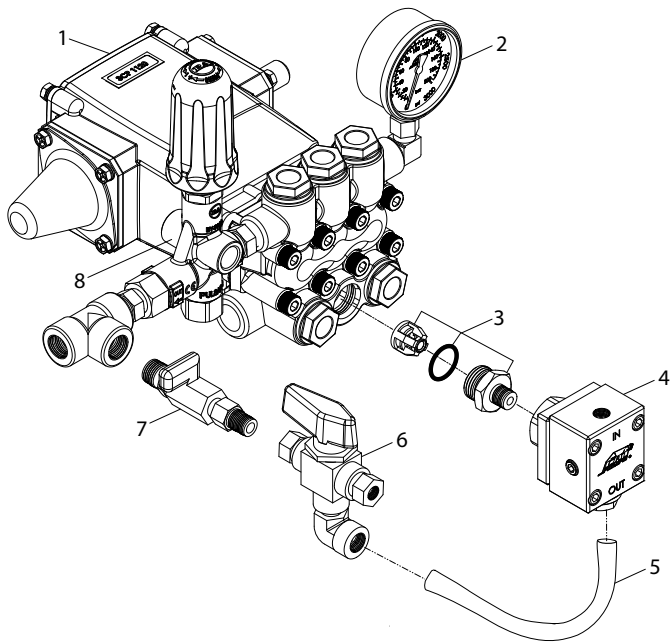
## SELECTION

Select proper adapter kit to match the appropriate pump model.

### 6340 ADAPTER KIT

| Pump Models  | Adapter Kit |
|--|-------------|
| 335, 435   | 991616      |
| 3CP1120, 3CP1130, 3CP1140  | 31227       |
| 310, 340, 350, 5CP2120W, 2140WCS, 2150W                                    | 31227       |
| 45, 5CP3105CSS, 5CP3110CSS, 5CP3160CSS, 5CP5120, 5CP5120CSS, 5CP5140CSS    | 31233       |
| 56, 60   | 31228       |
| 530, 550, 650, 660, 1050, 5CP6120, 5CP6180CSS, 5CP6190, 7CP6110CS, 7CP6170 | 31232       |

## INSTALLATION



|   |   |
|---|---|
| 1 | Plunger Pump  |
| 2 | Gauge   |
| 3 | Adapter Kit   |
| 4 | Pulse Pump  |
| 5 | High Pressure Discharge hose                              |
| 6 | 3-Way ball valve, closed center (PN 992043 or equivalent) |
| 7 | Metering valve (PN 992040 or equivalent)                  |
| 8 | Unloader  |

## Plunger Pump Conversion

1. Remove center inlet valve plug from discharge manifold.
  2. Remove complete valve assembly from valve chamber.
  3. Separate spring retainer from valve seat.
  4. Install modified spring retainer from adapter kit onto valve seat.
  5. Install modified valve kit into center inlet valve chamber.
  6. On adapter kits 31227 and 31232 lubricate and install new valve plug o-ring around large end of adapter body. On adapter kits 31228 and 31233 lubricate and install new backup-ring and then new o-ring around large end of adapter body.
  7. Thread adapter kit into valve chamber and torque to 870 in/lbs 72.5 ft/lbs or 98Nm.
  8. Use PTFE thread tape or pipe thread sealant on exposed threads of adapter kit. Thread pulse pump onto adapter kit and position pulse pump so that the word "IN" is at a 12:00 clock position.
- Note:** Pulse pump can be used in any position.
9. Attach any standard high-pressure hose from 1/8" NPT(F) "OUT" port on pulse pump to a metering valve after the unloader.

## Piston Pump Conversion

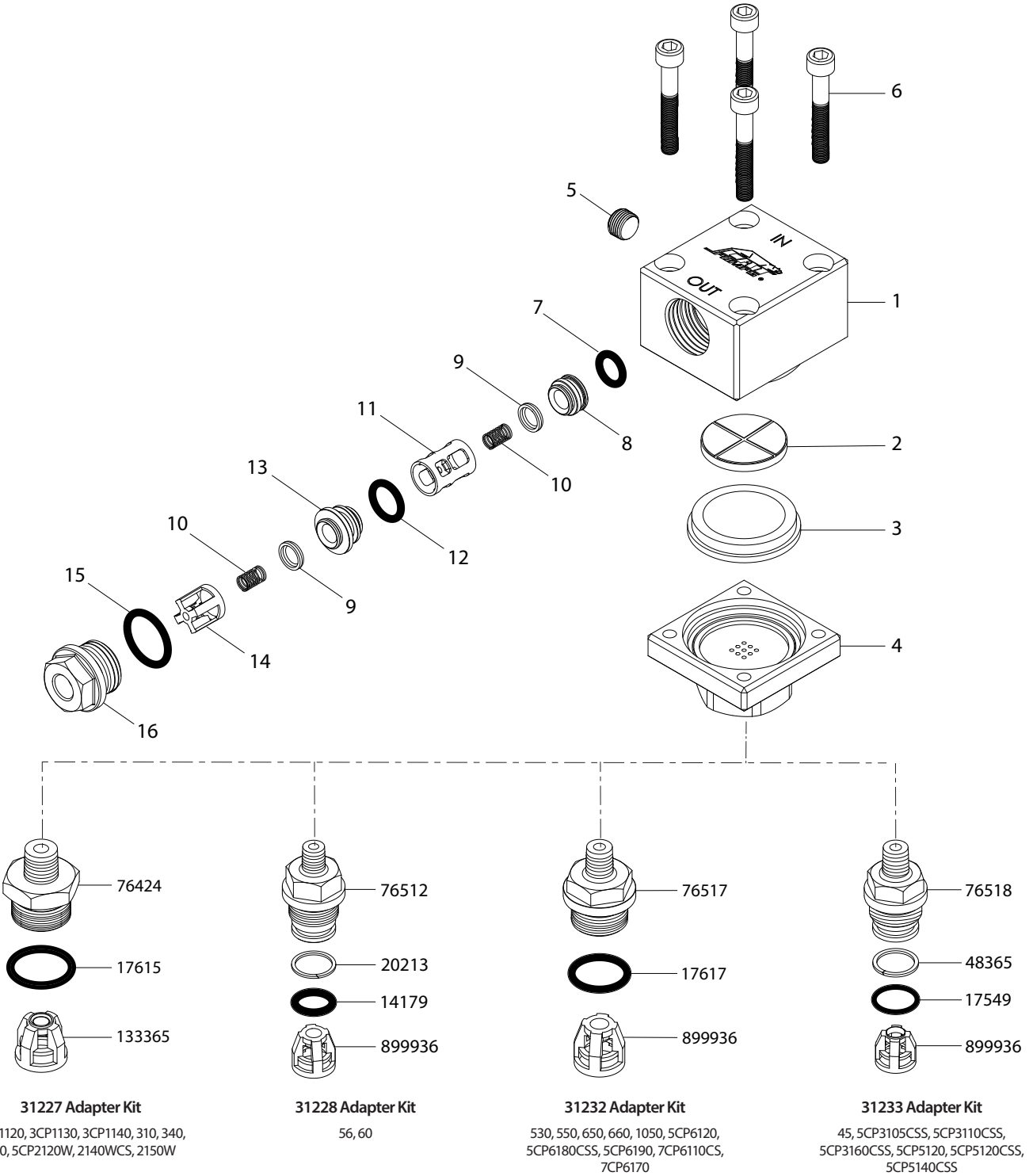
1. Remove discharge manifold from the piston pump.
  2. Replace with new pulse pump manifold and associated parts, and a new flat valve kit.
  3. Place pulse pump manifold with three cylinder holes facing upwards.
  4. In the cylinder hole with the deeper counterbore, install one white PTFE seal washer and one spring retainer (without nylon insert).
  5. Install heavy duty spring, standard flat valve spring, flat valve, flat seat and spacer into this same deep cylinder hole.
  6. In the remaining two cylinder holes, first install one white PTFE seal washer and then a complete flat valve assembly.
  7. Remove existing shims from each cylinder bolt. Since the number of shims may change with the manifold, refer to Tech Bulletin 017 for proper shimming procedure and mount pulse pump manifold to pump.
  8. Thread 1/2" NPT(M) x 1/4" NPT(M) hex nipple into special 1/2" NPT(F) port on the top of the pulse pump manifold.
  9. Apply Loctite® 242 to exposed threads of hex nipple. Thread pulse pump into hex nipple and position pulse pump so that the word "IN" is at a 12:00 clock position.
- Note:** Pulse pump can be used in any position.
11. Attach any standard high-pressure hose from 1/8" NPT(F) "OUT" port on pulse pump to a metering valve after the unloader.

## OPERATION

**Note:** A metering valve and closed center 3-way ball valve are required to properly operate the pulse pump.

1. Ensure pump is connected to a water supply but is NOT running.
  2. Turn water supply on, open trigger gun and start up pump.
  3. Bring pump up to operating pressure and set regulating devices.
- Note:** Main pump inlet pressure must not exceed 5 psi.
4. Open 3-way ball valve (PN 992043 or equivalent) to by-pass port.
  5. Ensure chemical flows through the pulse pump and comes out the by-pass port of 3-way ball valve.
  6. Allow chemical to flow out of by-pass port of 3-way ball valve, then switch 3-way ball valve to discharge port.
  7. Adjust metering valve (PN 992040 or equivalent) to the desired amount of chemical/water mixture.

## EXPLODED VIEW



### PARTS LIST

| ITEM | PN    | MATL | DESCRIPTION         | QTY |
|------|-------|------|---------------------|-----|
| 1    |       | S    | Body, Pump (w/logo) | 1   |
| 2    | 31202 | D    | Spacer              | 1   |
| 3    | 31201 | EPDM | Diaphragm           | 1   |
| 4    |       | S    | Body, Diaphragm     | 1   |
| 5    | 31203 | S    | Plug, 1/8"NPT(M)    | 1   |
| 6    | 31197 | S    | Screw (M6 x 40)     | 4   |
| 7    |       | FPM  | O-Ring, Inlet Valve | 1   |
| 8    |       | S    | Seat, Inlet Valve   | 1   |
| 9    |       | S    | Valve               | 2   |

| ITEM | PN    | MATL | DESCRIPTION                | QTY |
|------|-------|------|----------------------------|-----|
| 10   |       | S    | Spring                     | 2   |
| 11   |       | PVDF | Retainer, Inlet Valve      | 1   |
| 12   |       | FPM  | O-Ring, Discharge Valve    | 1   |
| 13   |       | S    | Seat, Discharge Valve      | 1   |
| 14   |       | PVDF | Retainer, Discharge Valve  | 1   |
| 15   |       | FPM  | O-Ring, Valve Plug         | 1   |
| 16   |       | S    | Plug, Valve                | 1   |
| 17   | 77044 | FPM  | Kit, Valve (Incls: 7 - 15) | 1   |

*Italics are optional items. MATERIAL CODES (Not Part of Part Number):*

D= Acetal EPDM= Ethylene Propylene Diene Monomer FPM= Fluorocarbon PVDF= Polyvinylidene Fluoride S= 304SS

## MAINTENANCE

### ⚠ WARNING

Before commencing with service, shut off drive (electric motor, gas or diesel engine) and turn off water supply to pump. Relieve all discharge line pressure by triggering gun or opening valve in discharge line.

#### Diaphragm - Disassembly/Reassembly

1. Remove four (4) hex socket head cap screws (HSH) with a 5mm allen wrench.
2. Separate main body from diaphragm body.
3. Remove diaphragm and spacer.
4. Inspect diaphragm and spacer for wear or damage, and replace as needed.
5. Insert spacer with cross hatched surface towards main body.
6. Insert diaphragm with open end facing main body.
7. Align four (4) holes in main body with holes of diaphragm body.
8. Thread in four (4) HSH screws by hand.
9. Use a 5mm allen wrench to torque to 144 in/lbs, 12 ft/lbs or 16Nm.

**NOTE:** Discharge port can be orientated in 90° increments by removing the four hex socket head cap screws with a 5mm allen wrench and rotating body to desired location. Re-torque to 12 ft/lbs.

#### Valve Assembly - Disassembly/Reassembly

1. Remove hex head valve plug with a 19mm open wrench.
2. Inspect valve plug for damage and replace as needed.
3. Inspect valve plug o-ring for cuts or wear (replacement o-ring can be found in valve kit).
4. Use a reverse pliers to remove stacked valve assembly from valve chamber or it can be pushed out from the "IN" port.
5. Separate discharge valve assembly (top) from inlet valve assembly (bottom).
6. Disassemble discharge valve assembly and inspect all parts per NOTE.
7. Disassemble inlet valve assembly and inspect all parts per NOTE.  
**Note:** Examine seats, valves and springs for grooves, pitting or wear and replace with a new kit valve as needed.  
**Note:** New stacked valve assembly (inlet/discharge) come already assembled.
8. Lubricate both discharge and inlet valve seat o-rings on assembly.
9. Place new stacked valve assembly (inlet/discharge) with inlet valve down into valve chamber.
10. Install new o-ring onto valve plug and lubricate.
11. Apply Loctite® 242® to threads of valve plug, hand thread valve plug into valve chamber.
12. Use a 19mm open wrench to torque to 516 in/lbs, 43 ft/lbs or 58Nm.

## TROUBLESHOOTING

| PROBLEM                                 | SOLUTION   |
|---|--|
| No chemical supply from pulse pump      | <ul style="list-style-type: none"><li>• Air in chemical supply.</li><li>• Foreign material in inlet or discharge valves of drive pump.</li><li>• Foreign material in inlet or discharge valves of pulse pump.</li><li>• Diaphragm worn - replace</li><li>• System not properly primed.</li></ul> |
| Limited chemical supply from pulse pump | <ul style="list-style-type: none"><li>• Worn inlet and discharge valves.</li><li>• Restriction in metering hose.</li><li>• Restriction between drive pump and pulse pump.</li></ul>  |

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### ⚠ CAUTIONS AND WARNINGS

All High Pressure Systems require a primary pressure regulating device (i.e. regulator, unloader) and a secondary pressure relief device (i.e. pop-off valve, relief valve). Failure to install such relief devices could result in personal injury or damage to pump or property. Cat Pumps does not assume any liability or responsibility for the operation of a customer's high pressure system.

Read all CAUTIONS and WARNINGS before commencing service or operation of any high pressure system. The CAUTIONS and WARNINGS are included in each service manual and with each Accessory Data sheet. CAUTIONS and WARNINGS can also be viewed online at [www.catpumps.com/cautions-warnings](http://www.catpumps.com/cautions-warnings) or can be requested directly from Cat Pumps.

### WARRANTY

View the Limited Warranty on-line at [www.catpumps.com/warranty](http://www.catpumps.com/warranty).