**PUMP FEATURES**

- Triplex plunger design provides a smooth liquid flow.
- Specially formulated Hi-Pressure Seals and concentric solid ceramic plungers assure true wear surface and extended seal life.
- Ultra-compact, hollow-shafted pump for direct mounting to gas engine.
- Integral Regulating Unloader with built-in by-pass standard on all units to assure system pressure control and pump protection.
- Fixed chemical injector standard on all units offers cleaning flexibility.
- Stacked valve design for ease in servicing.
- Swivel garden hose fitting with filter screen for easy inlet connection.

**COMMON PUMP SPECIFICATIONS**

| Dimensions | 7.99 x 7.75 x 6.29" (203 x 197 x 160 mm) |

**SPECIFICATIONS**

**3DX25GSI**

- **Model:** 3DX25GSI
- **Non-Production**

**3DX27GSI**

- **Model:** 3DX27GSI
- **Non-Production**

**3DX29GSI**

- **Model:** 3DX29GSI
- **See Current Data Sheet**

**3DX30GSI**

- **Model:** 3DX30GSI
- **See Current Data Sheet**

**Flooded to 60 PSI**

**ELECTRIC HORSEPOWER REQUIREMENTS**

- **Rated G.P.M.**
- **“Desired” G.P.M.**
- **Rated R.P.M.**
- **“Desired” R.P.M.**
- **GPM x PSI**
- **Electric Brake**
- **H. P. Required**
- **Determined**
- **Motor Pulley O.D.**
- **Pump Pulley O.D.**
- **Pump Pulley Size**
- **Motor R.P.M.**

**WARRANTY**

View the Limited Warranty on-line at www.catpumps.com/warranty.

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**Gas engine must be purchased separately.**

**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 or can be requested directly from CAT PUMPS.

**Warranty**

View the Limited Warranty on-line at www.catpumps.com/warranty.

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**“Customer confidence is our greatest asset”**
**Parts List**

<table>
<thead>
<tr>
<th>ITEM</th>
<th>PN</th>
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<th>DESCRIPTION</th>
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<td>19285</td>
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<td>O-Ring, Discharge Seat - 70D</td>
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</tbody>
</table>

**3DX Plunger Pump Model**

3DX25GSI, 3DX27GSI, 3DX29GSI, 3DX30GSI

**Item Notes:**
- Italics are optional items.
- Production parts different than repair parts.
- R Components comply with RoHS Directive.
- See Tech Bulletins 02, 024, 036, 043, 055, 074 and 083 for additional information.

**Material Codes:**
- AL=Aluminum
- BB=Brass
- BBCP=Brass/Chrome Plated
- CC=Ceramic
- CM-Chrome-moly
- LDPE=Low Density Polyethylene
- NBR=Medium Nitrile (Buna-N)
- NY=Nylon
- PVDF=Polyvinylidene Fluoride
- RTP=Reinforced Composite
- S=304SS
- SNG=Special Blend (Buna)
- STL=Steel
- STCP=Steel/Chrome Plated
- STZP=Steel/Zinc Plated
- TNM=Special High Strength

**Technical Notes:**
- Center raised pilot guide on the Adapter Plate assures proper alignment of pump and engine.
- Before mounting pump onto engine inspect engine for recessed seal and bearing guide to permit adapter to completely seat into recess and four bosses to be flush with engine face.

**NOTE:** Discard key which may come standard with most engines and use only the key included in this kit.
UNLOADER TYPE
An integral unloader with built-in by-pass is part of the discharge manifold to provide system pressure regulation and pump protection. This pump also includes a fixed chemical injector for chemical application.

OPERATION:
Pump should be purged of air before commencing with operation. Liquid must flow through the pump without discharge restriction to assure full system pressure is reached.

Install a pressure gauge close to the manifold head of the pump to assist in setting system pressure and to periodically monitor system pressure.

Setting and adjusting the unloader pressure must be done with the system turned on. Start the system with the unloader backed off to the lowest pressure setting (counterclockwise direction). Squeeze the trigger and read the pressure on the gauge at the pump. Do not read pressure at the gun or nozzle. If more pressure is desired, release the trigger, turn adjusting cap one quarter turn in a clockwise direction. Squeeze the trigger and read the pressure. Repeat this process until the desired system pressure is reached. Thread locking nut up to adjusting cap (model 3DX29GSI only).

NOTE: Pressure is not set at the factory.

SERVICE:
The unloader should be serviced on the same schedule as the seals in the pump. Refer to 3DX Service Manual for start-up, servicing of seals and valves, torque requirements and diagnosis and maintenance chart.

FIXED CHEMICAL INJECTOR

SPECIFICATIONS
Model 7232
GPM ............................................. 3.0 GPM (11.4 L/M)
Nozzle Orifice.................................. 2.1 mm (0.08"

Model 7242
GPM ............................................. 2.9 GPM (10.9 L/M)
Nozzle Orifice.................................. 2.0 mm (0.08"

Common Specifications
Hose Barb .................................... 1/4" (1/4"
Tapped Barb .................................. 8/32" UNF (8/32" UNF
Inlet Port....................................... M18x1.0 (M18x1.0
Discharge Port ................................ 3/8" NPTM (3/8" NPTM
Weight ........................................ 5.3 oz. (0.15 kg)
Dimensions .................................... 2 x 1 x 1.75" (52 x 25 x 45 mm

CHEMICAL INJECTOR PERFORMANCE CHART

<table>
<thead>
<tr>
<th>Orifice Size</th>
<th>Injector Model</th>
<th>Maximum Injecting Pressure</th>
<th>Maximum Chemical Draw</th>
<th>Pressure Drop Across Injector At System Pressure (500 PSI)</th>
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</thead>
<tbody>
<tr>
<td>2.1 mm</td>
<td>7232</td>
<td>250 PSI</td>
<td>37.2 oz/min</td>
<td>141 PSI</td>
</tr>
<tr>
<td>2.0 mm</td>
<td>7242</td>
<td>280 PSI</td>
<td>35.3 oz/min</td>
<td>148 PSI</td>
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</tbody>
</table>

Optimum performance of chemical injector occurs with a 35 ft. high pressure hose and a minimum 3/8" I.D. The type of hose, extended lengths, reduced I.D. and fittings may create back pressures in excess of the low pressure nozzle rating and prevent the injector from drawing chemical. See Hose Friction Loss Chart in Service Manual. Deduct hose friction loss from above low PSI Nozzle. Contact CAT PUMPS for assistance with other options.

CAUTION: Deduct the pressure drop shown in the performance chart from your desired system pressure to arrive at the maximum high pressure nozzle rating. This is essential to avoid over-pressurizing the pump.
Models 3DX25GSI, 3DX27GSI, 3DX29GSI, 3DX30GSI

1 Die cast flange-style aluminum crankcase means high strength, lightweight, and excellent tolerance control.
2 Heavy-duty dual crankshaft bearings provide extended drive-end life.
3 Chrome-moly crankshaft provides unmatched strength and surface hardness for long life.
4 High strength connecting rods assure durability and bearing quality.
5 Strong brass plunger rods with chrome-moly crosshead pins.
6 Special, concentric, high-density, polished solid ceramic plungers provide a true wear surface and extended seal life.
7 High tensile strength, forged brass manifold head with built-in integral unloader and eight mounting screws for exceptional strength.
8 100% wet seal design adds to service life by allowing pumped liquids to cool and lubricate on both sides.
9 Stacked valve assemblies include stainless steel valves, seats and springs to provide corrosion-resistance, ultimate seating and extended life.
10 Unique design and specially formulated Hi-Pressure Seals offer unmatched performance and seal life.
11 Crossheads are 360° supported for uncompromising alignment.

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*Original Instructions*

PN 983264 Rev D 5848_OB