# Hydraulic Elevator with Type 13A Hydraulic Machine

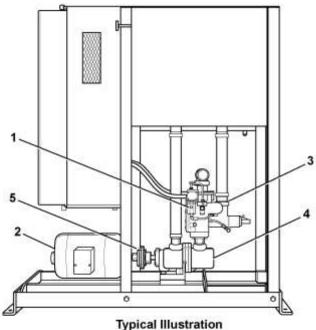
# Spare Parts Leaflet C-1029

May 18, 2022 / Page 1 of 14

# **OBSOLESCENCE NOTICE**

The product covered in this SPL has been designated as obsolete and is no longer supported. See TIP 32.2-1, Obsolete Components, for potential upgrade. Replacement lower level parts listed within and unique to this design are not being restocked when depleted. Some of these parts, depending on availability and other factors, may be quoted through Customer Service, but most will have extended lead times and increased cost due to low volume production.

#### **New York Design**



Typical Illustration

1. Pilot Valve Page 4
2. Motor Page 6
3. Manifold Valve Pages 7, 8, 9, 10
4. Pump Page 11
5. Coupling Page 13

NOTE: For lubrication and hydraulic oil, see Lubrication Chart, Form #2422H.

Order Forms O-351A, O-352C, O-352E & O-352F



This document does not contain any technical data subject to EAR or ITAR

SERVICE ENGINEERING
Otis Elevator Company
Bloomfield, Connecticut USA

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#### **History**

#### **Leaflet Description**

This leaflet provides information for replacement parts for the New York Design hydraulic elevator, also known as plunger electric elevator, with type 13A machine, direct driven pump and manifold valve.

#### **Leaflet Revisions**

| Date Revised       | Subject Matter Expert                                | Reason for Revision                             |
|--------------------|--|---|
| February 1, 1963   | Works Service Dept., Yonkers, NY                     | New SPL   |
| April 1, 1997      | Technical Publications Dept., Otis<br>Service Center | Update parts numbers                            |
| July 31, 2003      | Troy Chicoine  | Change pump part number, p. 11                  |
| September 14, 2007 | Troy Chicoine  | Corrected typos from 6962 to 6926.              |
| May 18, 2022       | Brian Regan  | Updated document template and obsolescence info |

**Related Drawings** 

| Drawing No. | Title | Drawing No. | Title       |
|-------------|-------|-------------|-------------|
| 6926D1      |       | 6926E       | Check Valve |

#### **Related Documents**

| Document ID       | Title | Document ID             | Title |
|-------------------|-------|-------------------------|-------|
| Order Form O-351A |       | M.L. 2084E4             |       |
| Order Form O-352E |       | M.L. 2223A22 through 25 |       |
| Order Form O-352F |       |                         |       |

#### **Subject Matter Expert**

| Name        | Department              |
|-------------|-------------------------|
| Brian Regan | OSC Service Engineering |

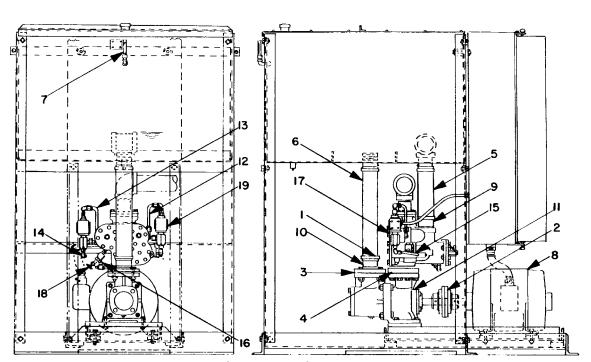
#### **About Spare Parts Leaflets...**

This document lists the lowest replaceable units (LRUs) for the standard version of the product. The LRUs are chosen by a team of Otis associates representing engineering and manufacturing.

While goal of this document is to make parts identification as easy as possible, the document cannot be all-inclusive. Elevator and escalator contracts classified as "special" or "custom" are not addressed here. For such contracts, please refer to specified information, the contract folder, TIPs, Field Education Articles, Construction Letters, etc. for further information.

If you have any suggestions about this document, please contact the subject matter expert listed on this page.

# **Type 13A Hydraulic Machine**



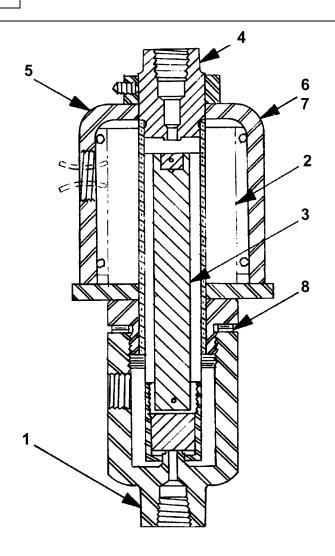
Order Form O-352F ML 2084E4, 6926D1, 2, and 2223A22, 23, 24, 25

|          | W/O VINTAGE                 |   |
|----------|-----------------------------|---|
| REF. No. | PART No.                    | DESCRIPTION   |
| *        | <del>254D1</del><br>B254D1  | Bonnet, Oil Filter (for Oil Tank)   |
| 1        | 336DY1                      | Clamp, Hose   |
| 2        |                             | Coupling (for details, see Page 13)   |
| 3        | 376H7                       | Gasket, 2-7/8 in. id, 7 in. od, 1/16 in. Thick, Vellumoid (pump to tank)      |
| 4        | 376AA4                      | Gasket, 2-7/8 in. id, 5 in. square, 1/16 in. Thick, Vellumoid (pump to valve) |
| 5        | 134A5                       | Hose, 3-1/2 in. id, 12-1/2 in. L (valve to tank)                              |
| 6        | 134A11                      | Hose, 2-3/4 in. id, 23-1/4 in. L (pump to tank)                               |
| 7        | <del>269AJ1</del><br>269AW1 | Indicator, Oil  |
| 8        |                             | Motor, Single Speed (for details, see Page 6)                                 |
| 9        | 441AH10                     | Pipe, Half Nipple, 3 in. Std., 6 in. L (hose to valve)                        |
| 10       | 441AH11                     | Pipe, Half Nipple, 2-1/2 in. Std., 6 in. L (hose to pump)                     |
| 11       |                             | Pump (for details, see Page 11)   |
| 12       | 136AB2                      | Tubing, with Fittings   |
| 13       | 136AB4                      | Tubing, with Fittings   |
| 14       | 136AD2                      | Tubing, with Fittings   |
| 15       | 136AE2                      | Tubing, with Fittings   |
| 16       | 136AF2                      | Tubing, with Fittings   |
| 17       |                             | Valve, 2-1/2 in. Manifold (for details, see Pages 7 through 10)               |
| 18       |                             | Valve, Manual Lowering, Angle Screwed, 400# bronze                            |
| 19       | 6941A1                      | Valve, Pilot (for details, see Page 4)  |

<sup>\*</sup> Part not shown.

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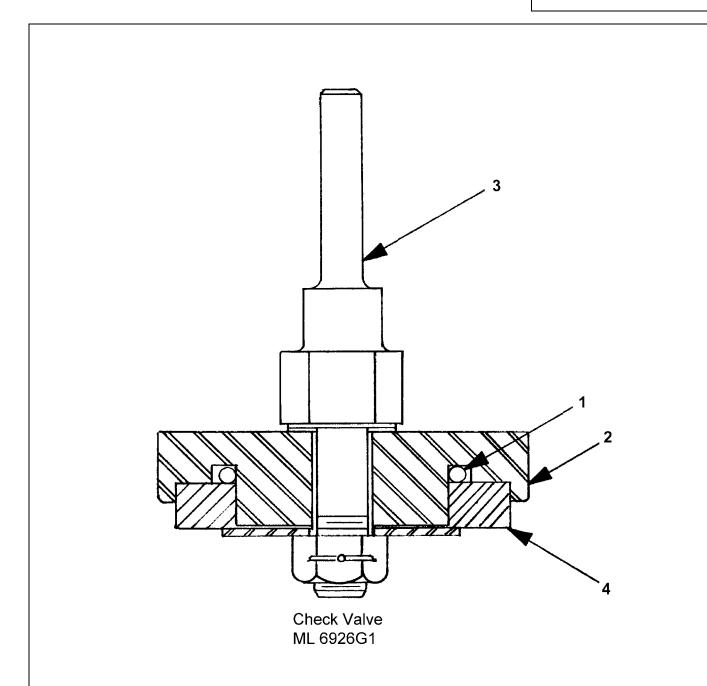
#### **6941A Pilot Valve**



#### **Pilot Valve**

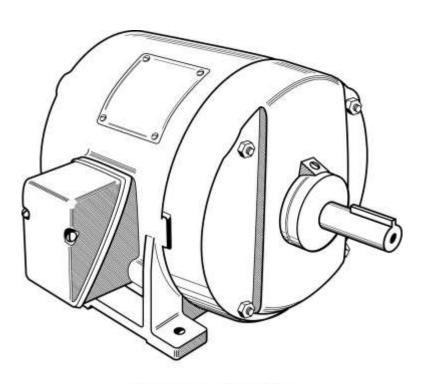
for Leveling and Lowering Valves M.L. 6941A1

|          | W/O VINTAGE |   |
|----------|-------------|---|
| REF. No. | PART No.    | DESCRIPTION   |
| 1        | 330BF1      | Case, Pilot Valve                                       |
| 2        | 222CV6      | Coil, Magnet, 7300 Turns, No. 31 Wire                   |
| 3        | 400BJ2      | Core, Moveable  |
| 4        | 400BK1      | Core, Stationary  |
| 5        | 374JG1      | Frame, Magnet   |
| 6        | 386JR10     | Plate, 2-3/8 in. Wide x 2-5/8 in. Long x 1/16 in. Thick |
| 7        | 96H138      | Rod, 1/8 in. Diameter, 3-1/4 in. Long (for Plates)      |
| 8        | 255CJ1      | Shim, Laminum, (3) 0.003 in. Laminations, Brass         |



|          | W/O VINTAGE |                    |
|----------|-------------|--------------------|
| REF. No. | PART No.    | DESCRIPTION        |
| 1        | 182H3       | Packing, "O" Ring  |
| 2        | 445AT1      | Plunger            |
| 3        | 95BP1       | Rod, Shouldered    |
| 4        | 129BL3      | Washer, Valve Disc |

### **Single Speed Motors**

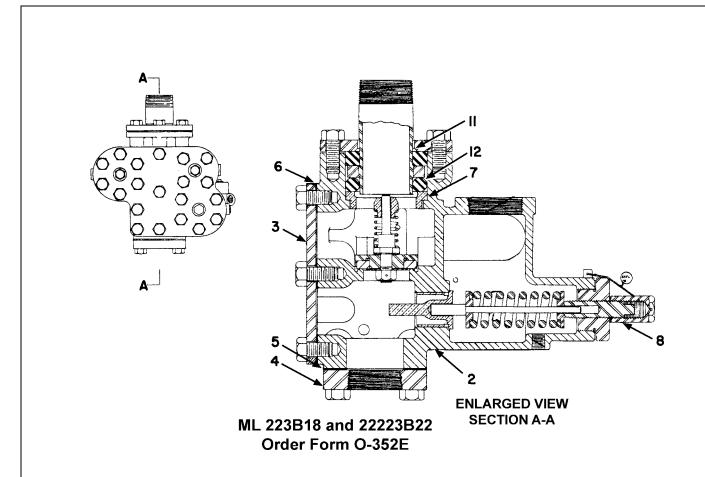


**Single Speed Motors** 

3 Phase, 60 Cycles, A.C., 3600 RPM

| W/O VINTAGE |   |
|-------------|---|
|             |   |
| W/U VINIALE | • |

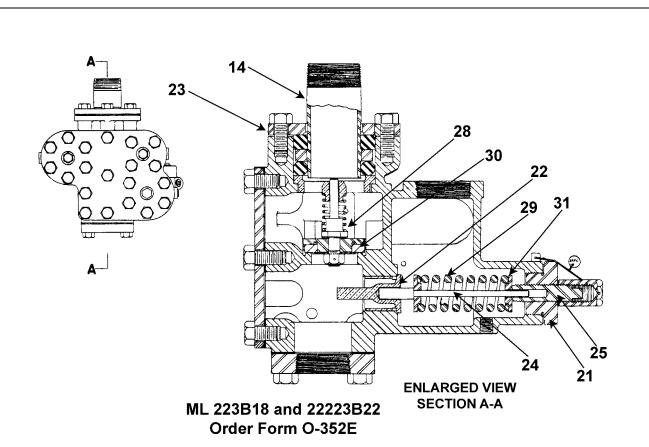
| W/O VIII AOL      |          |                 |           |
|-------------------|----------|-----------------|-----------|
| PART No.          | VOLTS    | NAME PLATE H.P. | FRAME No. |
| A6333Y1           | 208      | 20              | 284U      |
| A6333Y2           | 220/440* | 20              | 284U      |
| A6333Y3           | 550      | 20              | 284U      |
| A6333AA1          | 208      | 25              | 286U      |
| A6333AA2          | 220/440* | 25              | 286U      |
| A6333AA3          | 550      | 25              | 286U      |
| A6333AB1          | 208      | 30              | 324U      |
| A6333AB2          | 220/440* | 30              | 324U      |
| A6333AB3          | 550      | 30              | 324U      |
| * Specify voltage |          | •               | •         |



|          | W/O VINTAGE |   |
|----------|-------------|---|
| REF. No. | PART No.    | DESCRIPTION   |
| 2        |             | Case, Valve (If necessary to order, give elevator sales no. and size of manifold valve) |
| 3        | 346WM1      | Cover, Valve  |
| 4        | 346WL1      | Cover   |
| 5        | 376CH1      | Gasket, Vellumoid (for Cover Ref. # 4)  |
| 6        | 376CM1      | Gasket, Vellumoid (for Cover Ref. # 3)  |
| 7        | 441AD1      | Guide, Check Valve  |
| 8        | 72BY1       | Nut, Cap, 1in. hex, 3/4 in. tap (for screw Ref. # 26)                                   |
| 11       | 182G1       | Packing, Ring, 2-13/16 in. I.D., 4-5/16 in. O.D., 3/4 in. thick neoprene                |
| 12       | 182F1       | Packing, Ring, 3/4 in. dia., 11 in. long (form at assembly)                             |

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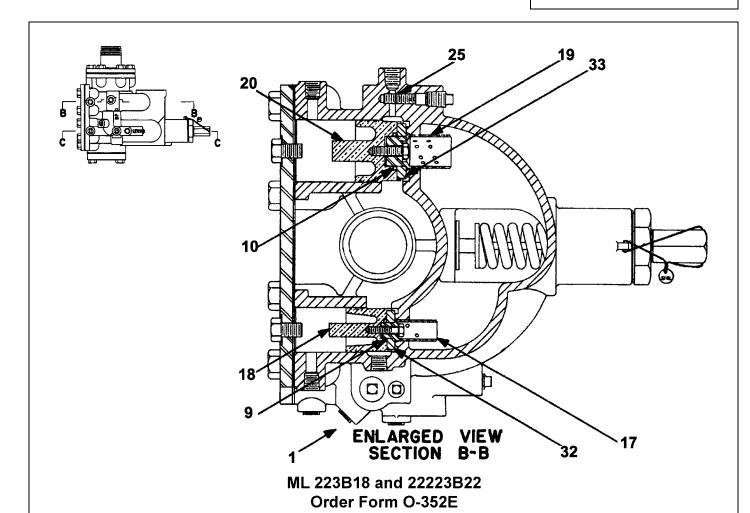
#### 2223B 2-1/2 Inch Manifold Valve



|          | W/O VINTAGE |   |
|----------|-------------|---|
| REF. No. | PART No.    | DESCRIPTION   |
| 14       | 377BE1      | Pipe, 2-1/2 in. std., 6 in. long  |
| 21       | 445AS1      | Plunger, Relief Valve (for Rod Ref. # 23)                               |
| 22       | 172GS1      | Ring, Clamp (for Case)  |
| 23       | 96BE1       | Rod, Relief Valve Piston, 3/8 in. dia., 8-9/32 in. long                 |
| 24       | 96H137      | Rod, 3/4 in. dia., 2-7/8 in. long                                       |
| 26       | 124BK1      | Screw, 3/4 in. thread, 2-3/4 in. long (for Cover Ref. # 4)              |
| 28       | 90VB7       | Spring, Check Valve, 27/32 in. I.D., 2-3/8 in. long, 5-3/4 active turns |
| 29       | 90HD9       | Spring, Relief Valve, 3-1/8 in. O.D., 6-1/8 in. long, 6 active turns    |
| 30       | 6926G1      | Valve, Check (for details, see Page 5)                                  |
| 31       | 133G5       | Washer, Spring Retaining  |

(Continued on next page)

| Page 8 | May 18, 2022 |
|--------|--------------|
| - 5.90 |              |



|          | W/O VINTAGE |  |  |  |  |
|----------|-------------|--|--|--|--|
| REF. No. | PART No.    | DESCRIPTION  |  |  |  |
| 1*       | 295B3       | Ball, 5/8 in. Steel  |  |  |  |
| 9        | 182H1       | Packing, "O" Ring, 1 in. I.D., Rubber (for Piston Ref. 18)                       |  |  |  |
| 10       | 182H2       | Packing, "O" Ring, 1-7/16 in. I.D., Rubber (for Piston Ref. 16 & 20)             |  |  |  |
| 17       | $\Diamond$  | Piston (Metering Shell), Leveling Valve (for Piston Ref. 18)                     |  |  |  |
| 18       | 442P2       | Piston, Leveling Valve   |  |  |  |
| 19       | <b>♦</b>    | Piston (Metering Shell), Lowering Valve (for Piston Ref. 20)                     |  |  |  |
| 20       | 442W1       | Piston, Lowering Valve   |  |  |  |
| 25       | 124BL1      | Screw, Headless, 3/8 in. thread, 3/4 in. Long                                    |  |  |  |
| 32       | 129BL1      | Washer, Valve Disc1-1/16 in. I.D., 2 in. O.D., 11/32 in. Thick, composition      |  |  |  |
| 33       | 129BL2      | Washer, Valve Disc, 1-1/2 in. I.D., 2-39/64 in. O.D., 3/8 in. Thick, composition |  |  |  |

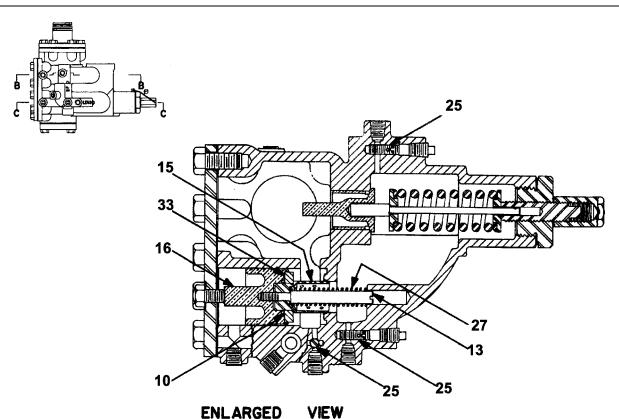
<sup>\*</sup> Arrow indicates location. The part itself is not showing in the illustration.

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When ordering pistons (metering shells), give the elevator sales number and state for which valve the piston is required.

#### C-1029

#### 2223B 2-1/2 Inch Manifold Valve

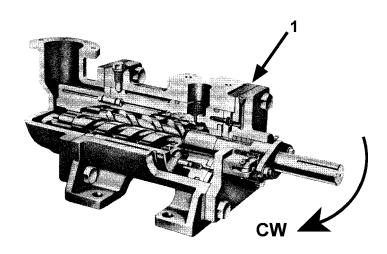


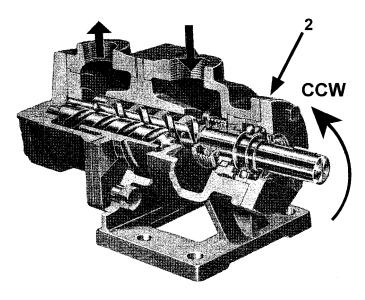
SECTION C-C ML 223B18 and 22223B22 Order Form O-352E

|          | W/O VINTAGE |   |  |
|----------|-------------|---|--|
| REF. No. | PART No.    | DESCRIPTION   |  |
| 10       | 182H2       | Packing, "O" Ring, 1-7/16 in. I.D., Rubber (for Piston Ref. 16 & 20)                    |  |
| 13       | 77NF3       | Pin, By-pass Valve, 1/2 in. Diameter x 5-3/4 in. Long                                   |  |
| 15       | <b>♦</b>    | Piston (Metering Shell), By-Pass Valve (for Piston # Ref. 16)                           |  |
| 16       | 442W1       | Piston, By-Pass Valve   |  |
| 25       | 124BL1      | Screw, Headless, 3/8 in. Thread, 3/4 in. Long   |  |
| 27       | 90XB6       | Spring, Compression, 9/16 in. I.D., 4-3/4 in. Long, 15 Active Turns (for By-pass Valve) |  |
| 33       | 129BL2      | Washer, Valve Disc, 1-1/2 in. I.D., 2-39/64 in. O.D., 3/8 in. Thick, composition        |  |

When ordering Pistons (Metering Shells), give the elevator sales number and state for which valve the piston is required.

Pump C-1029





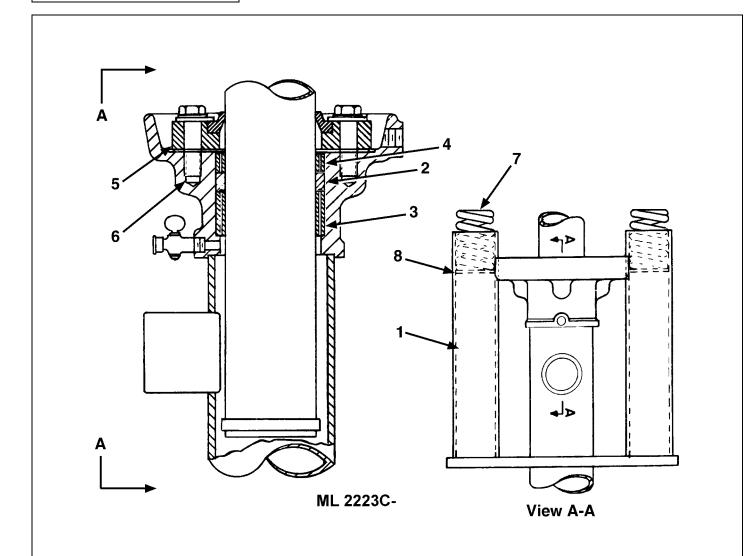
|          | W/O VINTAGE |  |
|----------|-------------|--|
| REF. No. | PART No.    | DESCRIPTION  |
| 1        | A6926AW1    | Pump, DeLaval IMO, "D" Design (3DB-218), 130 G.P.M., 3600 R.P.M. |
| *        | AAA27076AX7 | Kit, Minor Repair for IMO Pump, 3DB-218 (Ref. 1)                 |
| *        | AAA27076AX8 | Kit, Minor Repair for IMO Pump, A3DB-218 (Ref. 1)                |
| *        | AAA27076AX9 | Kit, Minor Repair for IMO Pump, G3DB-218 (Ref. 1)                |
| 2        | **          | Assembly, DeLaval IMO Pump, Series A313B                         |

**NOTE:** \* Part not shown.

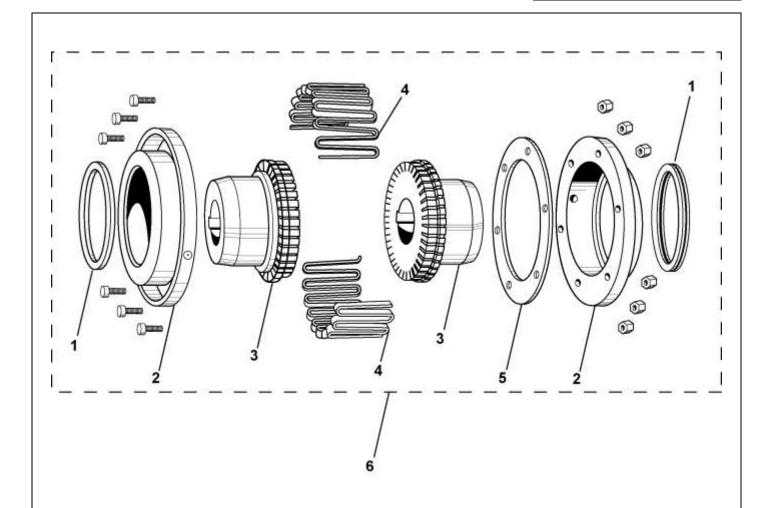
\*\* When ordering, give elevator sales number.

#### C-1029

# **Cylinder Head Packing & Buffer**



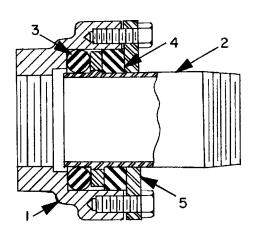
|          | W/O VINTAGE |                  |  |  |  |
|----------|-------------|------------------|--|--|--|
| REF. No. | PART No.    | DESCRIPTION      |  |  |  |
| 1        | 310C10      | Block            |  |  |  |
| 2        | 182R_       | Disogrin Packing |  |  |  |
| 3        | 172GK_      | Bottom Ring      |  |  |  |
| 4        | 172GK_      | Top Ring         | For Cylinder Head Packing Replacement Parts, See SPL 03-6942Y. |  |  |
| 5        | 172GJ_      | Clamp Ring       | 000 01 2 00-00421.   |  |  |
| 6        | 96H_        | Rod              |  |  |  |
| 7        | 90GD6       | Spring           |  |  |  |
| 8        | 127XA17     | Washer           |  |  |  |



|          |             | _   |
|----------|-------------|---|
|          | W/O VINTAGE |   |
| REF. No. | PART No.    | DESCRIPTION   |
| 1        |             | Neoprene seals  |
| 2        |             | Cover Halves  |
| 3        |             | Hubs  |
| 4        |             | Gridmember  |
| 5        |             | Gasket  |
| 6        | 215Y2       | Type 7F, 5-5/8 in. Dia., 1-1/2 in. Bore-Pump Side, 1-5/8 in. Bore-Motor Side (for 20 or 25 HP motors) |
|          | 215Y8       | Type 8F, 7-1/8 in. Dia., 1-1/2 in. Bore-Pump Side, 1-7/8 in. Bore-Motor Side (for 30 HP motor)        |

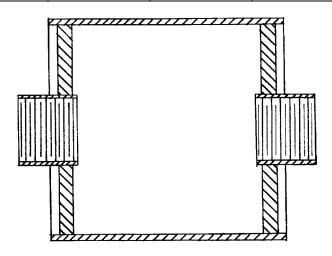
**Note:** When ordering renewal parts, be sure to give the coupling size stamped on Cover and Coupling Hub. Also give the sales number, machine type, and motor HP.

## **Isoline Unit & Hydraulic Muffler**



**Isoline Unit** 

| Part No. | Pipe Line<br>Size (in.) | Ref. 1<br>Case | Ref. 2<br>Pipe | Ref. 3<br>Ring Pkg. | Ref. 4<br>Ring Pkg. | Ref. 5<br>Clamp Ring |
|----------|-------------------------|----------------|----------------|---------------------|---------------------|----------------------|
| 6944A1   | 2                       | 330CC1         | 377BE2         | 182F2               | 182G2               | 172GY1               |
| 6944A2   | 3                       | 330CD1         | 377BE3         | 182F3               | 182G3               | 172GY2               |



#### **Hydraulic Muffler**

12" O.D., 13" long, w/ Couplings Complete P/N 441AJ1