

**Hydraulic Elevator  
w/ Type 7BA  
Hydraulic Machine**

**Spare Parts Leaflet**

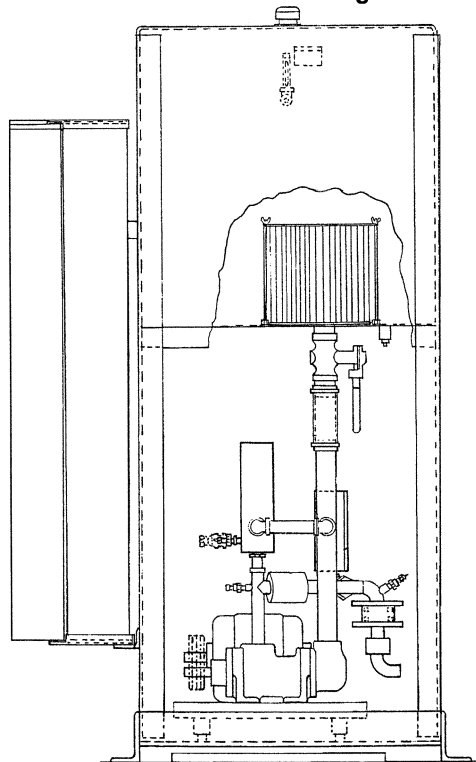
**C-1076**

**September 27, 2023 / 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

NOTE: For Lubrication and Hydraulic Oil, see Lubrication Chart #2422H.  
Order Form O-352H

**OTIS**

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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**Leaflet Description**

This leaflet provides information for replacement parts for the New York Design hydraulic elevator, also known as plunger electric elevator, with type 7BA machine, belt driven pump and EECO valves.

**Leaflet Revisions**

| <b>Date Revised</b> | <b>Subject Matter Expert</b> | <b>Reason for Revision</b>                    |
|---------------------|------------------------------|---|
| December 31, 1970   | ---                          | ---   |
| July 1, 1997        | ---                          | ---   |
| July 31, 2003       | Troy Chicoine                | Add minor repair kits (p/n AAA27076AX4-6).    |
| September 28, 2022  | Juan Murillo                 | Updated to include OBSOLESCENCE note on cover |
| September 27, 2023  | Juan Murillo                 | Updated OBSOLESCENCE note on cover            |

**Related Drawings**

| <b>Drawing No.</b> | <b>Title</b> | <b>Drawing No.</b> | <b>Title</b> |
|--------------------|--------------|--------------------|--------------|
| ---                | ---          | ---                | ---          |
| ---                | ---          | ---                | ---          |

**Related Documents**

| <b>Document ID</b> | <b>Title</b> |
|--------------------|--------------|
| ---                | ---          |
| ---                | ---          |

**Subject Matter Expert**

| <b>Name</b> | <b>Department</b>       |
|-------------|-------------------------|
| Brian Regan | OSC Service Engineering |

**About Spare Parts Leaflets...**

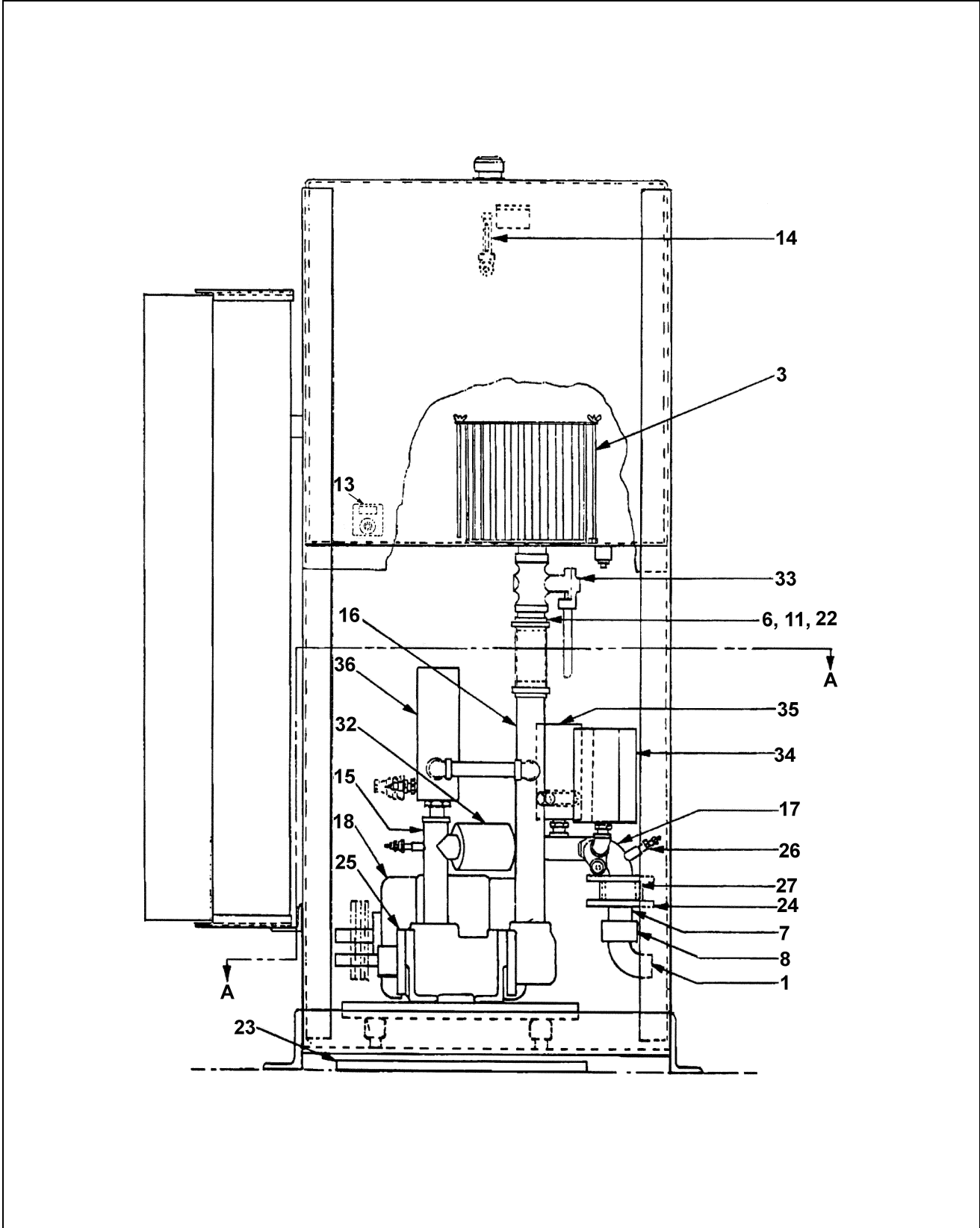
This document lists the lowest replaceable units (LRUs) for the standard version of the product. The LRUs are chosen by a team of Otis associates representing engineering and manufacturing.

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 7BA Hydraulic Machine

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**Type 7BA Hydraulic Machine**

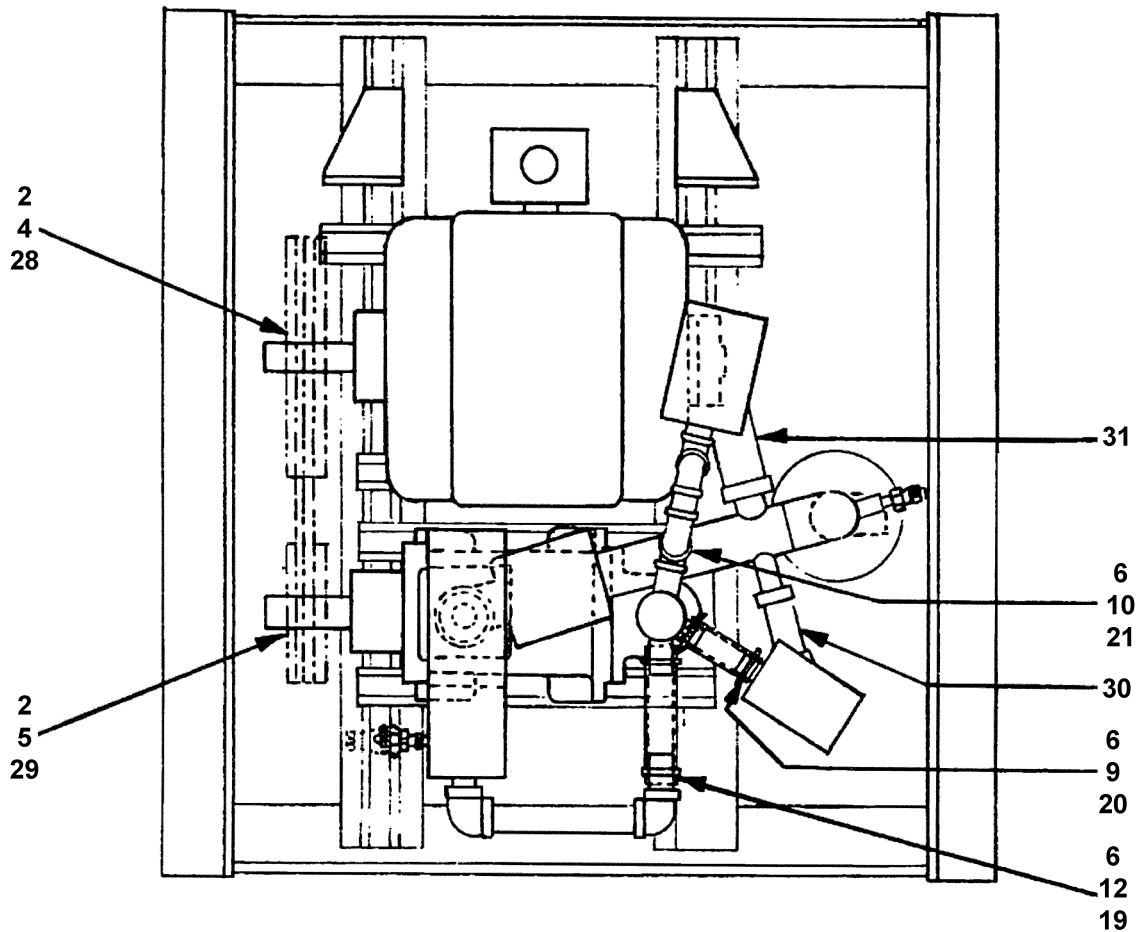
**Type 7BA Hydraulic Machine**  
**Order Form O-352H, R-352H, and R-352H1-2**  
**Material List 2223F27**  
**Drawings 7121A, A7121D**

| <b>REF. NO.</b> | <b>PART NO.</b> | <b>DESCRIPTION</b>  |
|-----------------|-----------------|---|
| 1               | 441AT2          | Adapter, Victaulic, 90°, Size 1.5" Elbow  |
| 3               | A254D1          | Bonnet, Oil Filter  |
| 6               | 336DY1          | Clamp, Hose   |
| 7               | 377BX2          | Fitting, Isoline, Size 1.5"   |
| 8               | 441AS2          | Fitting, Victaulic, Size 1.5" Coupling  |
| 11              | 134A38          | Hose, Oil, Thermoid, 2.25" ID, 6" Long (Tank Shut-Off Valve to Return Manifold) |
| 13              | 2223A63         | Heater, Immersion   |
| 14              | 269AW1          | Indicator, Oil Level  |
| 15              | 377BT2          | Manifold, Vertical Discharge Pipe, 1.5"   |
| 16              | A377BV3         | Manifold, Return Pipe, 2"   |
| 17              | A377CB3         | Manifold, Horizontal Discharge Pipe, 1.5"                                       |
| 18              | ---             | Motor, 1800 RPM, 3 HP, 60 Hz. See page 9.                                       |
| 22              | 441AH39         | Pipe, Half-Nipple, Std. Steel, 2" x 2" (Tank Shut-Off Valve)                    |
| 23              | 437AP1          | Pan, Drip   |
| 24              | 386AYR1         | Plate, Clamp  |
| 25              | 6962J3          | Pump, Hydraulic IMO-A3DB DeLaval Type 187. See page 10.                         |
| 26              | ---             | Plug, Shut-Off, Two-Way Hansen 0.25" (2-K16)                                    |
| 27              | 182W2           | Ring, Packing, Neoprene, 3.125" OD, 1.875" ID, 0.625" Thick                     |
| 32              | 271W2           | Valve, Check, EECO Series 3000, Size 1.5". See page 10.                         |
| 33              | 271AB2          | Valve, Butterfly, Tank Shut-Off, 2"   |
| 34              | ---*            | Valve, Down-Leveling, EECO DL-3. See page 11.                                   |
| 35              | ---*            | Valve, Down, EECO DL-3. See page 11.  |
| 36              | ---*            | Valve, Bypass, EECO BP-3 (without up-leveling). See page 7.                     |
| 36              | ---*            | Valve, Up-Leveling, EECO UV-2B. See page 8.                                     |
| 36              | ---*            | Valve, Up-Leveling, EECO UV-3A. See page 8.                                     |

\* Part to be used is determined by the car up speed, gross load or empty car weight and plunger. For replacement, give elevator sales number.

# Type 7BA Hydraulic Machine

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**Type 7BA Hydraulic Machine**

**Type 7BA Hydraulic Machine**  
**Order Form O-352H, R-352H and R-352H1-2**  
**Material List 2223F27**  
**Drawings 7121A, A7121D**

| <b>REF. NO.</b> | <b>PART NO.</b> | <b>DESCRIPTION</b>   |
|-----------------|-----------------|--|
| 2               | ---             | Belts, V Woods. See page 12.   |
| 4               | ---             | Bushing, Motor. See page 12.   |
| 5               | ---             | Bushing, Pump. See page 12.  |
| 6               | 336DY1          | Clamp, Hose  |
| 9               | 134A22          | Hose, Oil, Thermoid, 0.75" ID, 3.5" Long (Down-Leveling Valve to Return Manifold)  |
| 10*             | 134A25          | Hose, Oil, Thermoid, 1" ID, 3.25" Long (Down Valve to Return Manifold)             |
| 12              | 134A29          | Hose, Oil, Thermoid, 1.25" ID, 4" Long (Used with Bypass Valve to Return Manifold) |
| 12              | 134A43          | Hose, Oil, Thermoid, 1.25" ID, 6" Long (Used with Up Valve to Return Manifold)     |
| 19              | 441AH34         | Pipe, Half-Nipple, Std. Steel, 1" x 2" (Up Valve)                                  |
| 20              | 441AH29         | Pipe, Half-Nipple, Std. Steel, 0.5" x 1.5" (Down-Leveling Valve)                   |
| 21*             | 441AH33         | Pipe, Half-Nipple, Std. Steel, 0.75" x 3.5" (Down Valve)                           |
| 28              | ---             | Sheave, Motor. See page 12.  |
| 29              | ---             | Sheave, Pump. See page 12.   |
| 30              | A441AV1         | Strainer, Pipe Line, 0.5" Down-Leveling Valve                                      |
| 31              | A441AV3         | Strainer, Pipe Line, 1" Down Valve   |

\* Reference indicates location only; part not shown in illustration.

# BP3 Bypass Valve

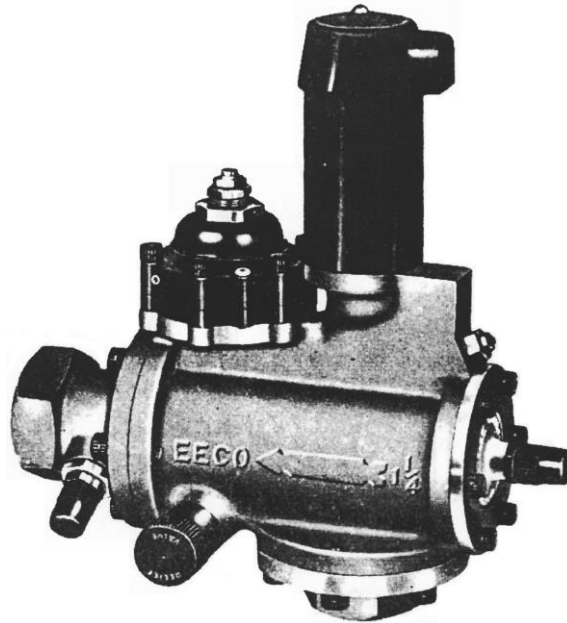
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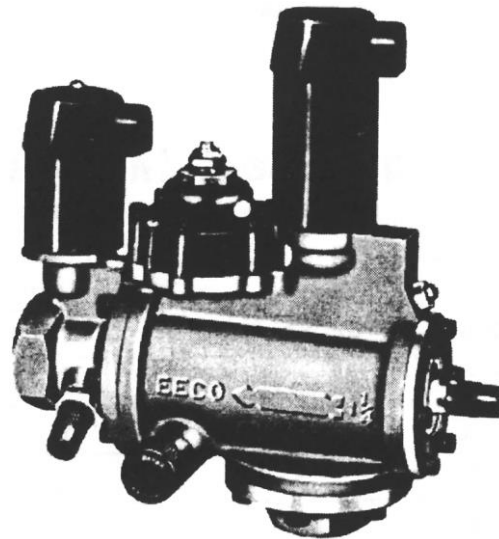
**By-Pass Valve**  
EECO Type BP-3

| <b>PART NO.</b> | <b>SIZE</b> | <b>DESCRIPTION</b>            |
|-----------------|-------------|-------------------------------|
| 271J1           | 1/2         | Valve, Bypass, EECO Type BP-3 |
| 271J2           | 3/4         | Valve, Bypass, EECO Type BP-3 |

**UV-2B & UV-3A Up-Leveling Valves**



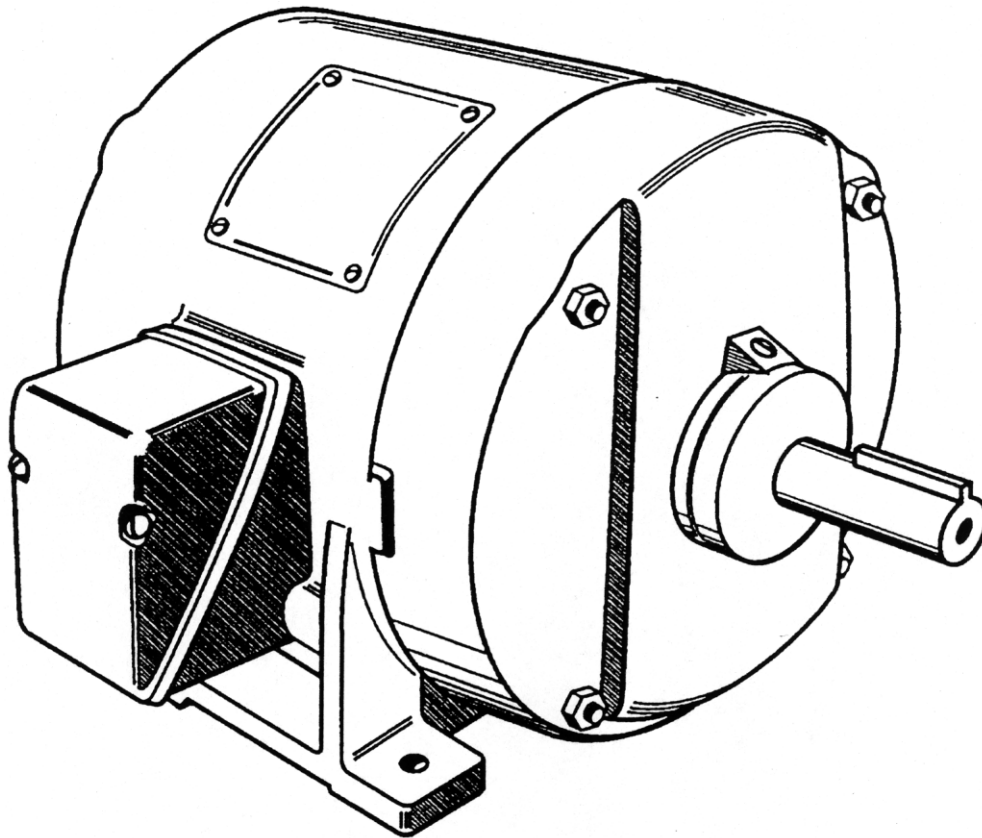
| <b>PART NO.</b> | <b>SIZE</b> | <b>INLET</b> | <b>OUTLET</b> | <b>DESCRIPTION</b>   |
|-----------------|-------------|--------------|---------------|--|
| A271P1          | 1/2         | 0.75"        | 1"            | Valve, Up-Leveling, EECO Type UV-2B  |
| A271P2          | 5/8         | 0.75"        | 1"            | Valve, Up-Leveling, EECO Type UV-2B. For replacement, refer to TIP 6.3.0-12. |
| A271P3          | 3/4         | 0.75"        | 1"            | Valve, Up-Leveling, EECO Type UV-2B  |



| <b>PART NO.</b> | <b>SIZE</b> | <b>INLET</b> | <b>OUTLET</b> | <b>DESCRIPTION</b>                  |
|-----------------|-------------|--------------|---------------|-------------------------------------|
| A271AA11        | 1/2         | 0.75"        | 1"            | Valve, Up-Leveling, EECO Type UV-3A |
| A271AA1         | 5/8         | 0.75"        | 1"            | Valve, Up-Leveling, EECO Type UV-3A |
| A271AA2         | 3/4         | 0.75"        | 1"            | Valve, Up-Leveling, EECO Type UV-3A |



**Single-Speed Motors**

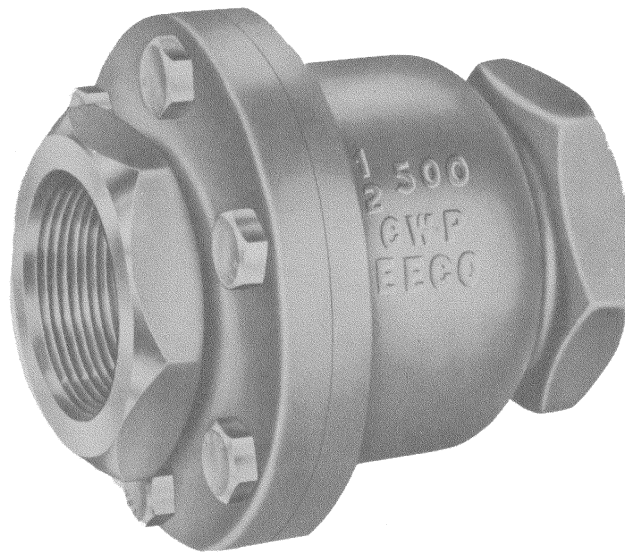


| <b>PART NO.</b> | <b>VOLTAGE</b> | <b>NAME PLATE HP</b> | <b>FRAME NO.</b> | <b>DESCRIPTION</b>                                    |
|-----------------|----------------|----------------------|------------------|---|
| 6333BC4         | 208            | 5                    | 182T             | Motor, Single-Speed, 3-Phase, 60 Cycles, AC, 1800 RPM |
| 6333BC5         | 230/460*       | 5                    | 182T             |   |
| 6333BC6         | 575            | 5                    | 182T             |   |
| 6333BC7         | 208            | 7.5                  | 184T             |   |
| 6333BC8         | 230/460*       | 7.5                  | 184T             |   |
| 6333BC9         | 575            | 7.5                  | 184T             |   |
| 6333BC10        | 208            | 10                   | 213T             |   |
| 6333BC11        | 230/460*       | 10                   | 213T             |   |
| 6333BC12        | 575            | 10                   | 213T             |   |
| 6333BC13        | 208            | 15                   | 215T             |   |
| 6333BC14        | 230/460*       | 15                   | 215T             |   |
| 6333BC15        | 575            | 15                   | 215T             |   |

\* Specify Voltage.

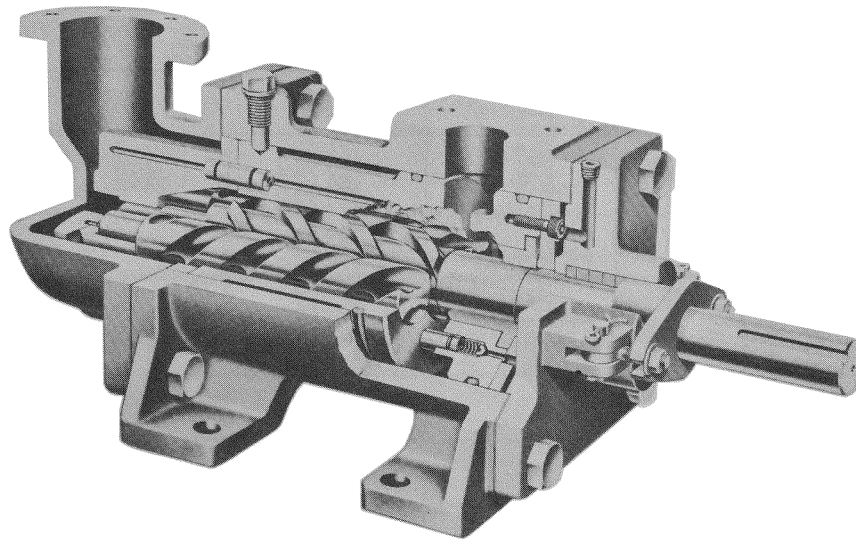
# Check Valve & Pump

**C-1076**

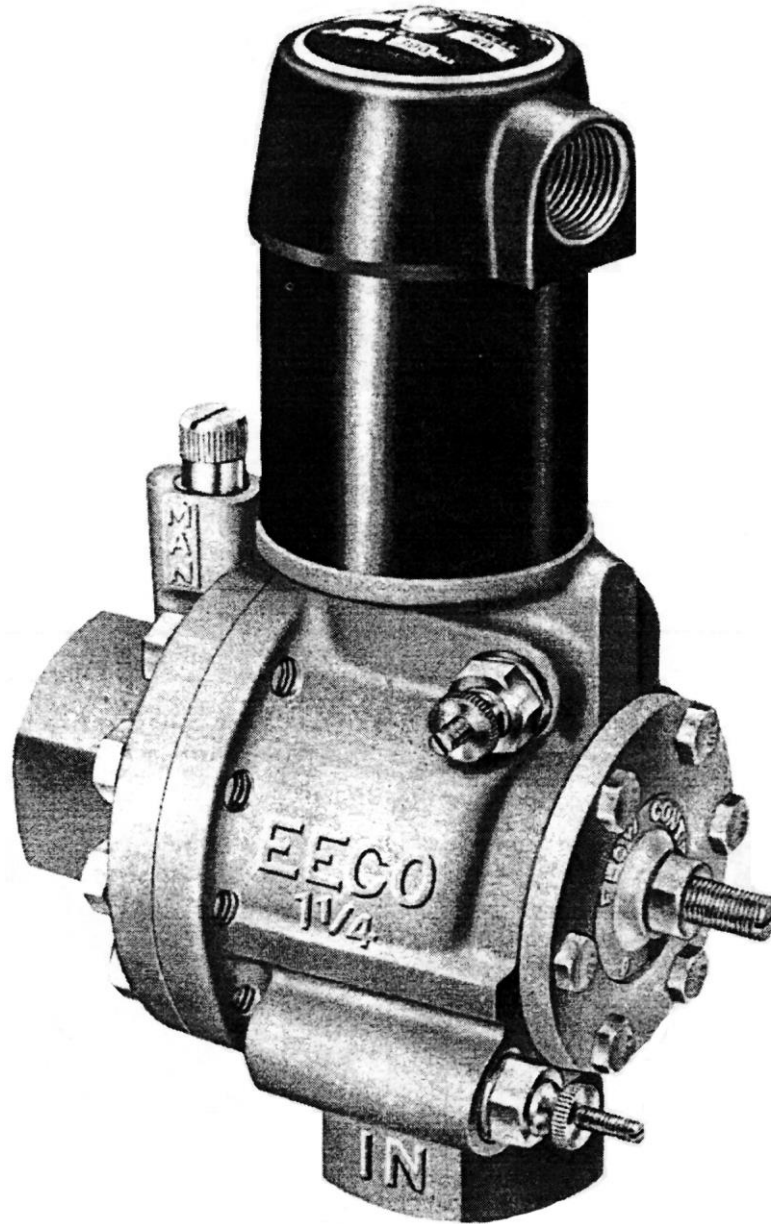


**Check Valve**  
EECO Series 3000

| PART NO. | DESCRIPTION                                |
|----------|--|
| 271W2    | Valve, Check, EECO Series 3000, Size 1-1/2 |



| PART NO.    | DESCRIPTION  |
|-------------|--|
| 6962J3      | Pump, DeLaval IMO-A3DB Type 187, 43 Gallons per Minute, at 2100 RPM  |
| 6962T1      | Pump, DeLaval IMO-A3DB Type 187, 46 Gallons per Minute, at 2220 RPM and 60 Gallons per Minute, at 2760 RPM |
| AAA27076AX4 | Minor Repair Kit, for IMO Pump Model 3DB-187   |
| AAA27076AX5 | Minor Repair Kit, for IMO Pump Model A3DB-187  |
| AAA27076AX6 | Minor Repair Kit, for IMO Pump Model G3DB-187  |



| <b>PART NO.</b> | <b>SIZE</b> | <b>DESCRIPTION</b>   |
|-----------------|-------------|--|
| 271BA3          | 1/2         | Valve, Down, EECO Type DL-3. For replacement, refer to TIP 6.3.0-12. |
| 271BA4          | 3/4         | Valve, Down, EECO Type DL-3. For replacement, refer to TIP 6.3.0-12. |

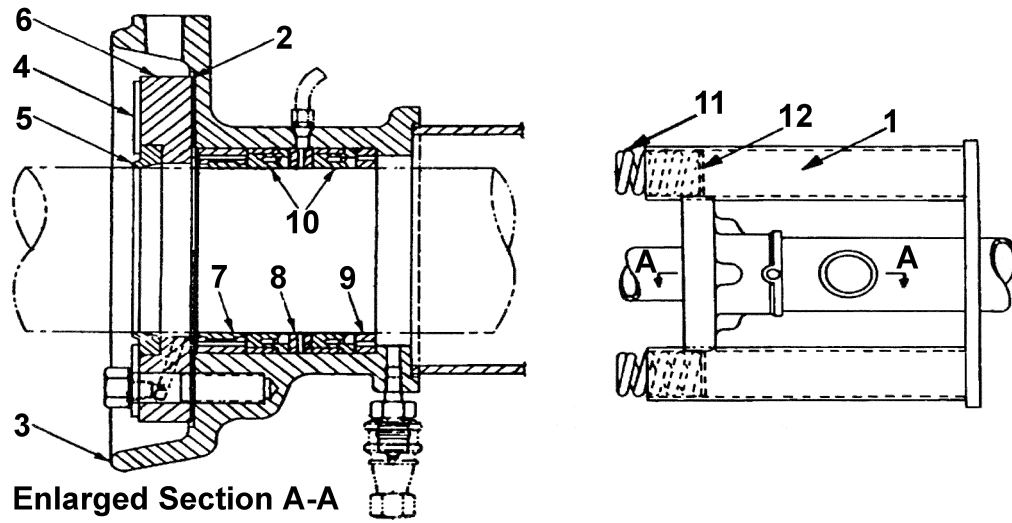
| <b>PART NO.</b> | <b>SIZE</b> | <b>DESCRIPTION</b>  |
|-----------------|-------------|---|
| 271BA1          | 1/4         | Valve, Down-Leveling, EECO Type DL-3  |
| 271BA2          | 3/8         | Valve, Down-Leveling, EECO Type DL-3  |
| 271BA3          | 1/2         | Valve, Down-Leveling, EECO Type DL-3. For replacement, refer to TIP 6.3.0-12. |

**Belts, Bushings, and Sheaves for 7BA Pumping Unit**  
 60 Hz Motor  
 Form O-352H and R352H

| <b>PUMP RPM</b> | <b>BELT V WOODS P/N</b>    | <b>MOTOR HP</b> | <b>MOTOR SHEAVE</b> | <b>MOTOR BUSHING</b> | <b>PUMP SHEAVE</b> | <b>PUMP BUSHING</b> |
|-----------------|----------------------------|-----------------|---------------------|----------------------|--------------------|---------------------|
| 2100            | <del>3V400</del><br>717A6  | 7.5             | 265BM17             | 321DE6               | 265BM11            | 321DE6              |
|                 |                            | 10              | 265BM17             | 321DE5               | 265BM11            | 321DE6              |
| 2220            | <del>3V375</del><br>717A17 | 5               | 265BM16             | 321DE4               | 265BM8             | 321DE4              |
| 2220            | <del>3V375</del><br>717A17 | 7.5             | 265BM17             | 321DE6               | 265BM9             | 321DE6              |
| 2220            | <del>3V375</del><br>717A17 | 10              | 265BM17             | 321DE5               | 265BM9             | 321DE6              |
| 2760            | <del>3V375</del><br>717A17 | 7.5             | 265BM20             | 321DE6               | 265BM5             | 321DE4              |
| 2760            | <del>3V375</del><br>717A17 | 10              | 265BM20             | 321DE5               | 265BM5             | 321DE4              |
| 2760            | <del>3V375</del><br>717A17 | 15              | 265BM21             | 321DE8               | 265BM6             | 321DE4              |

# Cylinder Head Packing & Buffer Data

**C-1076**



**Material List 2223G and 1-2223G**  
**Drawings A6942AA, 1-A6942Y, C6942Y**  
**Order From O-351C, R-351C**

|                       |                         | Ref. 1            | Ref. 2        | 8, 9, 10   | Ref. 3               | Ref. 4             | Ref. 5            | Ref. 6            | Ref. 7           | Ref. 8                        | Ref. 9            | Ref. 10               | Ref. 11          | Ref. 12        |
|-----------------------|-------------------------|-------------------|---------------|------------|----------------------|--------------------|-------------------|-------------------|------------------|-------------------------------|-------------------|-----------------------|------------------|----------------|
| Cylinder Size Pipe ID | Plunger Size Nominal OD | Block 2 Req.      | Gasket 1 Req. | Packing    | Cylinder Head 1 Req. | Clamp Wiper 1 Req. | Wiper Ring 1 Req. | Clamp Ring 1 Req. | Wear Ring 1 Req. | Jack Pack Lantern Ring 1 Req. | Space Ring 1 Req. | Seal Jack Pack 2 Req. | Spring ** Req.   | Washer ** Req. |
| 5"                    | 4"                      | 310C11<br>310C12* | 376NG1        | 1-A6942Y6  | A390AMI              | 172LK1             | 172LG1            | 172LL1            | A172KN1          | 1-172KP1                      | 2-172KP1          | 4-182R1               | * 90KD8<br>90ND5 | 127VD14        |
| 6"                    | 4.5"                    | 310C11<br>310C12* | 376NG2        | 1-A6942Y6  | A390ANI              | 172LK2             | 172LG12           | 172LL2            | A172KN2          | 1-172KP2                      | 2-172KP2          | 4-182R2               | * 90KD8<br>90ND5 | 127VD14        |
| 7"                    | 4.5"                    | 310C11<br>310C12* | 376NG2        | 1-A6942Y6  | A390ANI              | 172LK2             | 172LG2            | 172LL2            | A172KN2          | 1-172KP2                      | 2-172KP2          | 4-182R2               | * 90KD8<br>90ND5 | 127VD14        |
| 8"                    | 5.5"                    | 310C13            | 376NG3        | 1-A6942Y7  | A390API              | 172LK3             | 172LG3            | 172LL3            | A172KN3          | 1-172KP3                      | 2-172KP3          | 4-182R3               | * 90ND5<br>90TD4 | 127VD15        |
| 8"                    | 6.5"                    | 310C14            | 376NG4        | 1-A6942Y8  | A390ARI              | 172LK4             | 172LG4            | 172LL4            | A172KN4          | 1-172KP4                      | 2-172KP4          | 4-182R4               | * 90TD4<br>90AL2 | 127XA10        |
| 10"                   | 7.5"                    | 310C15            | 376NG5        | 1-A6942Y10 | A390ASI              | 172LK6             | 172LG6            | 172LL5            | A172KN6          | 1-172KP6                      | 2-172KP16         | 4-182R6               | * 90AL2<br>90ZD3 | 127VE8         |
| 10"                   | 8.5"                    | 310C15            | 376NG6        | 1-A6942Y17 | A390ATI              | 172LK6             | 172LG6            | 172LL6            | A172KN6          | 1-172KP6                      | 2-172KP17         | 4-182R6               | * 90AL2<br>90ZD3 | 127VE8         |
| 12"                   | 9.5"                    | 310C14            | 376NG7        | 1-A6942Y18 | A390AVI              | 172LK7             | 172LG7            | 172LL7            | A172KN7          | 1-172KP7                      | 2-172KP18         | 4-182R7               | * 90TD4<br>90AL2 | 127XA10        |
| 12"                   | 10.5"                   | 310C15            | 376NG8        | 1-A6942Y19 | A390AWI              | 182LK8             | 172LG8            | 182LL8            | A172KN8          | 1-172KP8                      | 2-172KP19         | 4-182R8               | * 90AL2<br>90ZD3 | 127VE8         |
| 16"<br>(OD)           | 12.5"                   | 310C15            | 376NG9        | 1-A6942Y20 | A390AXI              | 182LK9             | 172LG9            | 182LL9            | A172KN9          | 1-172KP9                      | 2-172KP20         | 4-182R9               | 90ZD3            | 127VE8         |

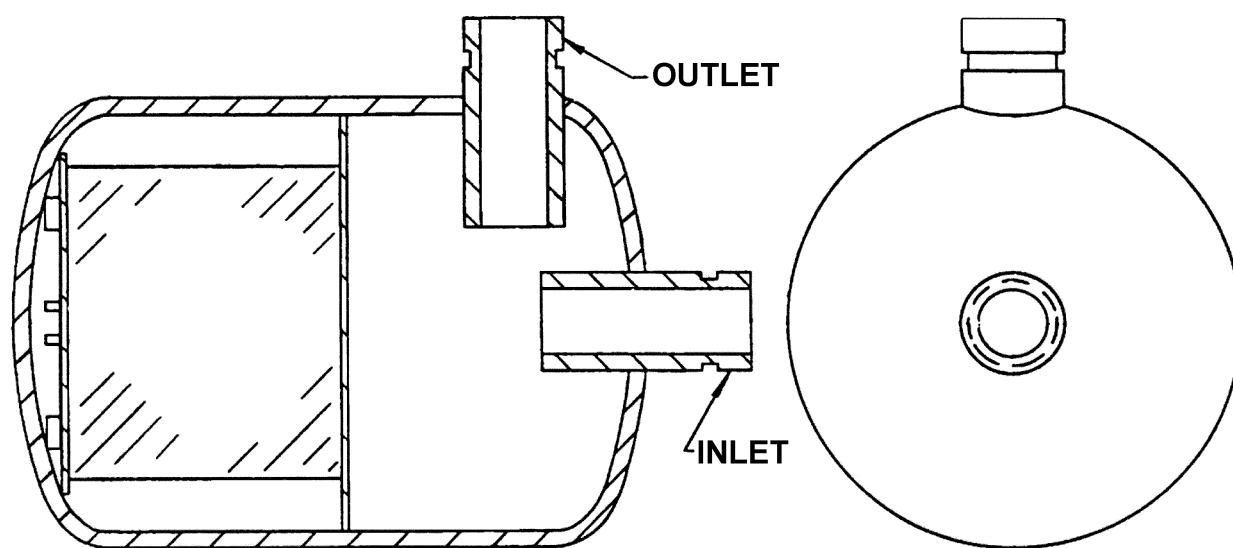
**NOTE:** For cylinder head packing replacement parts, see **SPL 03-6942Y**.

\* Part to be used is determined by the gross load; for replacement give elevator sales number.

\*\* Quantity variable.

**C-1076**

# Hydraulic Muffler



| <b>PART NO.</b> | <b>OD</b> | <b>LENGTH</b> | <b>PIPE SIZE</b> | <b>DESCRIPTION</b> |
|-----------------|-----------|---------------|------------------|--------------------|
| A441AM1         | 8.625"    | 14"           | 1.5"             | Muffler, Hydraulic |
| B441AM1         | 8.625"    | 14"           | 1.5"             | Muffler, Hydraulic |