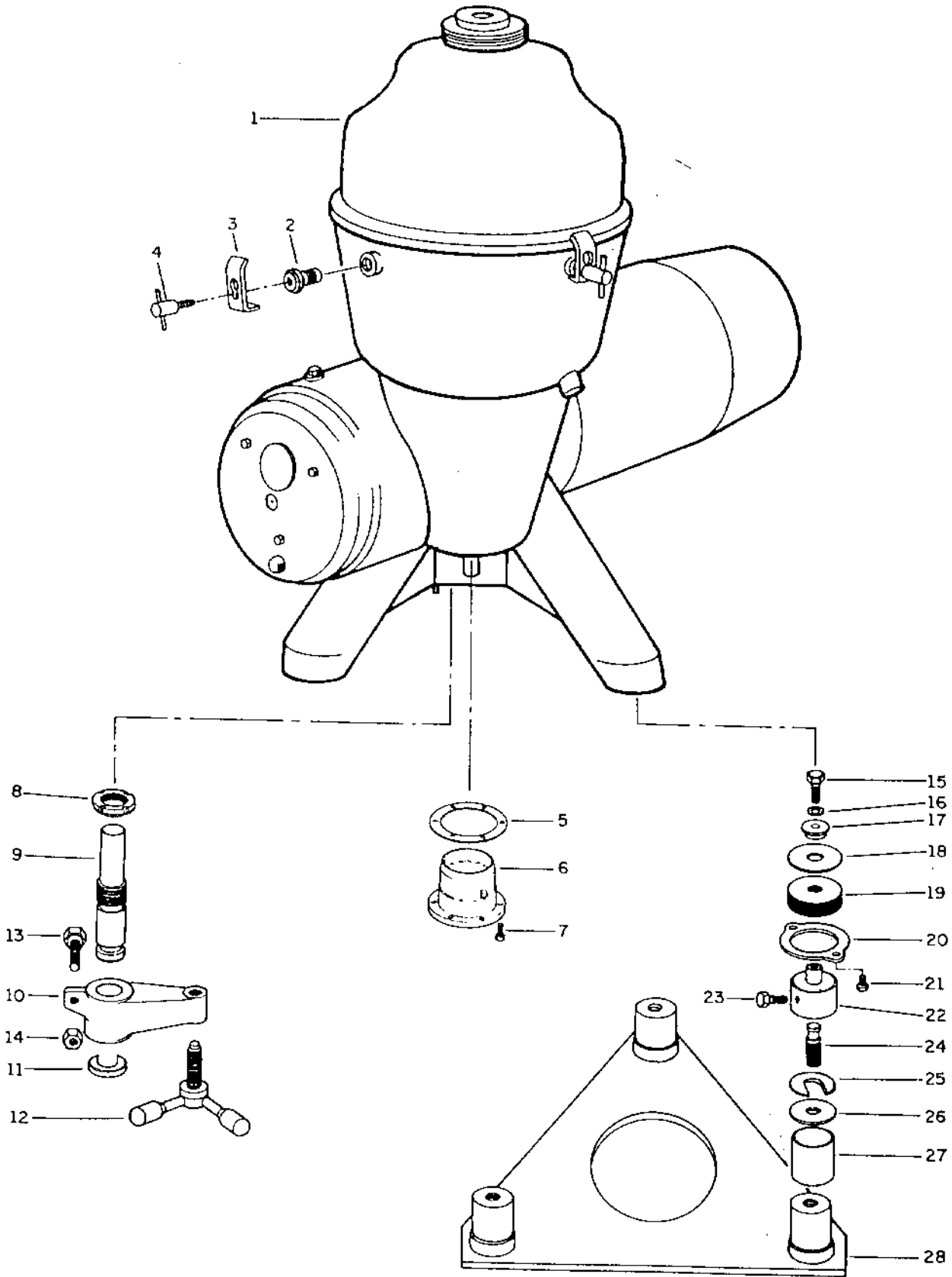


Hutchison-Hayes Separators, Inc.

Model 545 Clarifier Parts List With Diagrams

P.O. Box 2965 ♦ Houston, Texas 77252
3520 East Belt ♦ Houston, Texas 77015
(713) 455-9600 ♦ Fax (713) 455-7753

MAIN ASSEMBLY



MAIN ASSEMBLY

| REF. | QTY. | PART NO. | PART DESCRIPTION |
|------|------|--------------|-------------------------|
| 1 | 1 | 8200990-80 | Frame Cover |
| 2 | 4 | 8200441-01 | Bowl Lock Screw Adapter |
| 3 | 4 | 8200444-01 | Cover Clamp |
| 4 | 4 | 8200449-80 | Bowl Lock Screw |
| 5 | 1 | 8200450-01 * | Step Bearing Gasket |
| 6 | 1 | 8200383-01 | Step Bearing |
| 7 | 6 | 31738 | Step Bearing Screw |
| 8 | 1 | 43076Y | Lock Nut |
| 9 | 1 | 8200443-01 | Inlet Arm Shaft |
| 10 | 1 | 8200429-01 | Inlet Hinge Arm |
| 11 | 1 | 8200440-01 | Lock Washer |
| 12 | 1 | 8200470-80 | Hand Clamp Screw |
| 13 | 1 | 8200428-01 | Stop Screw |
| 14 | 1 | 39108 | Nut |
| 15 | 3 | 39104 | Frame Foot Screw |
| 16 | 3 | 9611 | Washer |
| 17 | 3 | 8200518-01 | Upper Frame Foot Washer |
| 18 | 3 | 8200522-01 | Upper Support Washer |
| 19 | 3 | 8200525-01 * | Rubber Base Cushion |
| 20 | 3 | 8200454-01 | Lower Support Washer |
| 21 | 6 | 8200526-01 | Screw |
| 22 | 3 | 8200521-01 | Frame Foot |
| 23 | 3 | 8200524-01 | Frame Foot Stop Screw |
| 24 | 3 | 8200519-01 | Stud Bolt |
| 25 | 9 | 8200520-01 | Adjusting Washer |
| 26 | 3 | 8200523-01 | Lower Frame Foot Washer |
| 27 | 3 | 8200516-01 | Foundation Foot Sleeve |
| 28 | 1 | 8200527-80 | Foundation Plate |

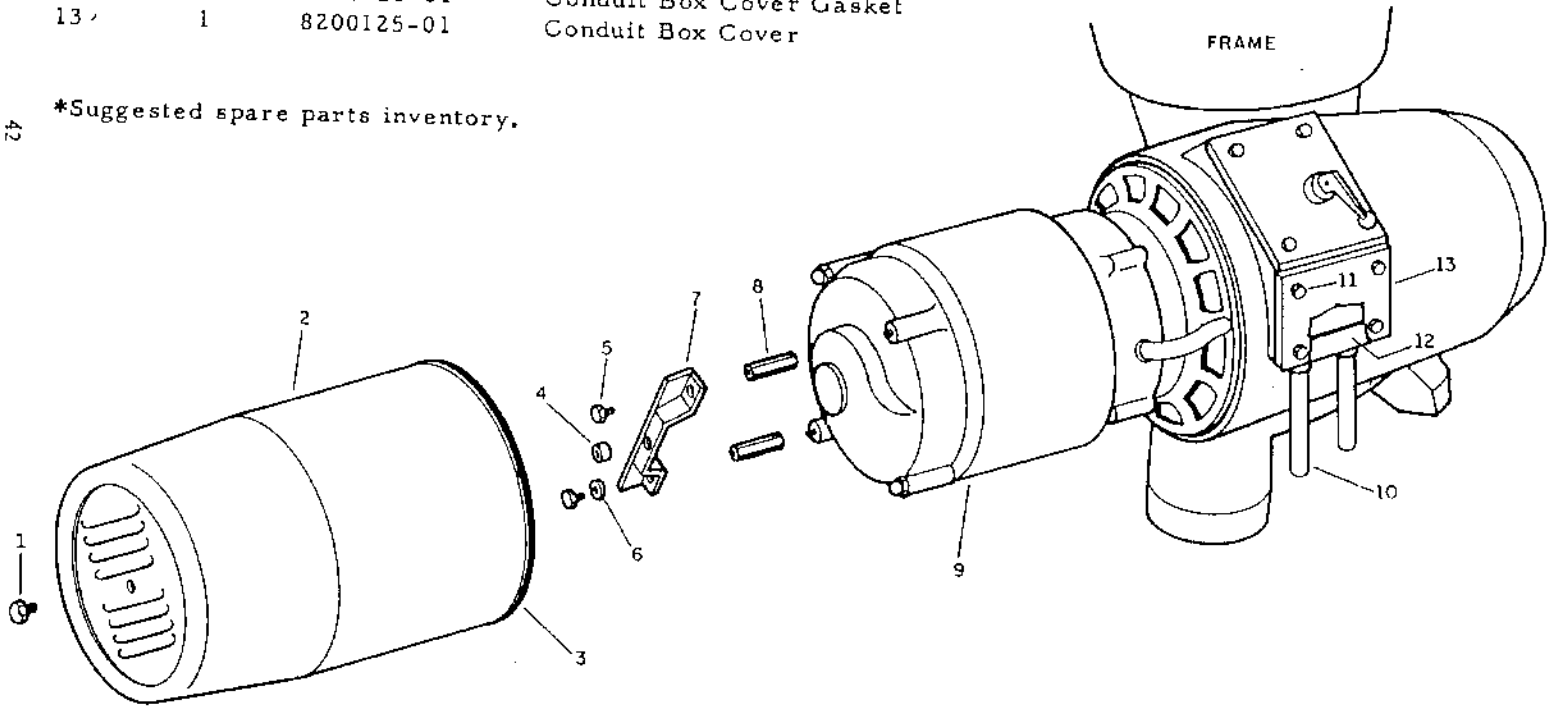
*Suggested spare parts inventory.

MOTOR COVER

| REF. | QTY. | PART NO. | PART DESCRIPTION |
|------|------|--------------|--------------------------|
| 1 | 1 | 34960 | Motor Cover Screw |
| 2 | 1 | 8200377-80 | Motor Cover |
| 3 | 1 | 8200142-02 * | Motor End Seal Strip |
| 4 | 1 | 37081 * | Motor Cover Spacer |
| 5 | 2 | 25193 | Motor Bracket Screw |
| 6 | 2 | 20550 | Motor End Seal Washer |
| 7 | 1 | 8200530-80 | Motor Cover Bracket |
| 8 | 2 | 8200529-01 | Motor Stud Spacer Nut |
| 9 | 1 | | Motor |
| 10 | 2 | 785018-80Y | Conduit Box Seal Sleeve |
| 11 | 4 | 39088 | Conduit Box Cover Screw |
| 12 | 1 | 8200126-01 * | Conduit Box Cover Gasket |
| 13 | 1 | 8200125-01 | Conduit Box Cover |

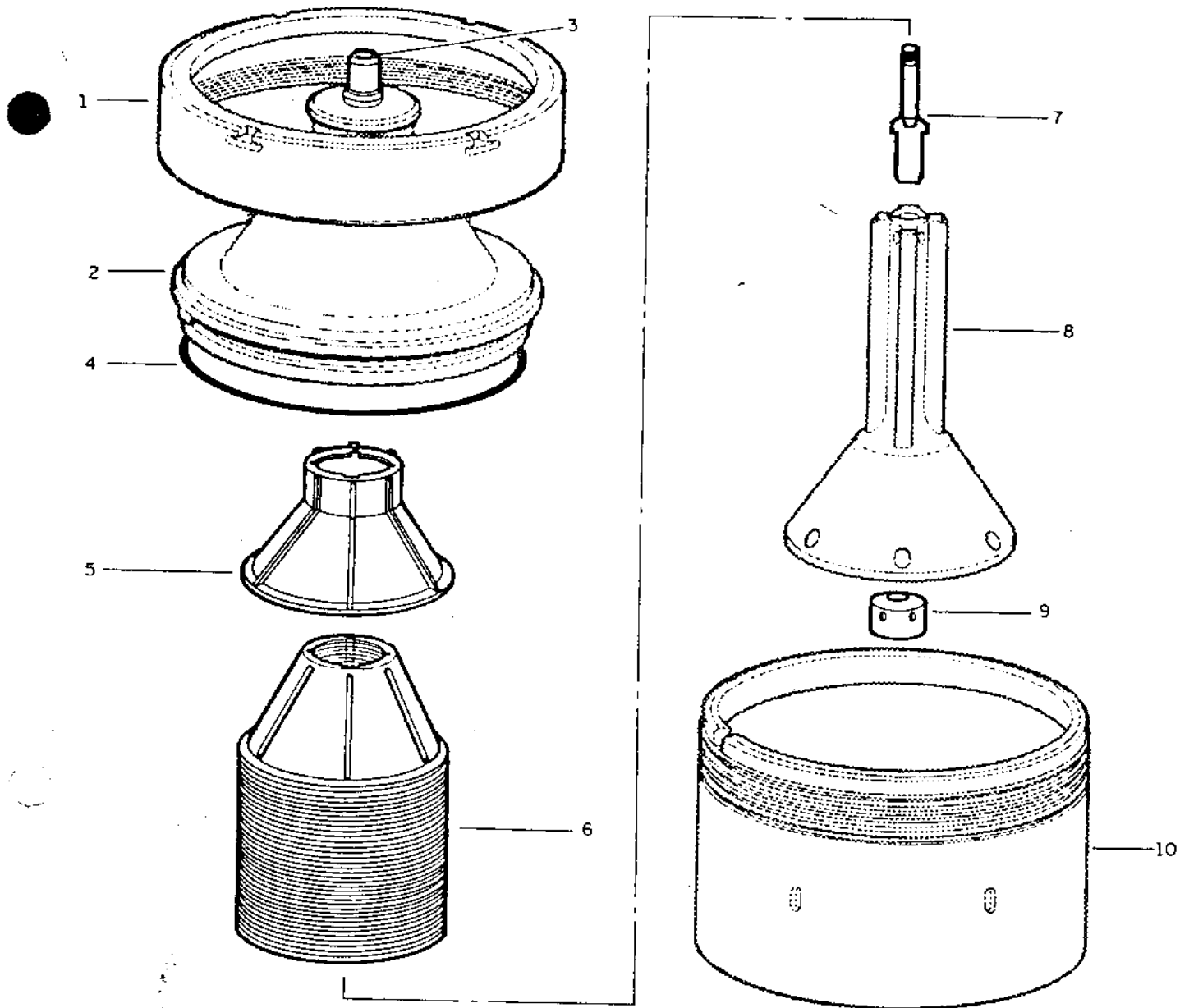
*Suggested spare parts inventory.

42



BOWL

BOWL
-540-

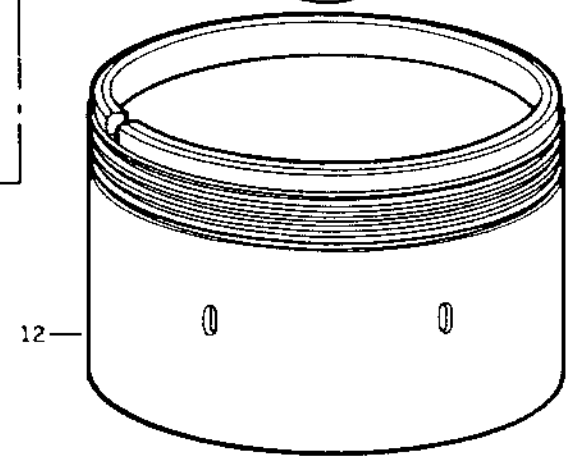
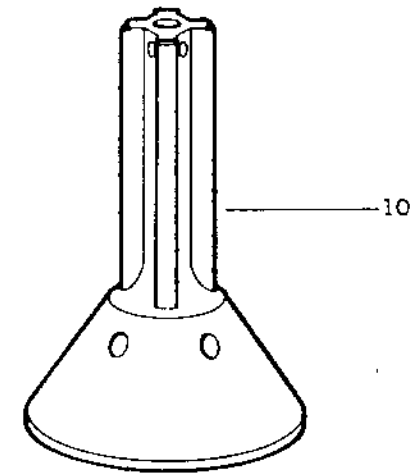
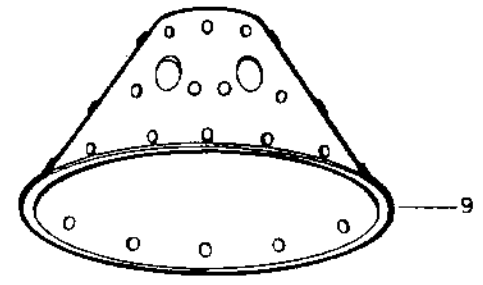
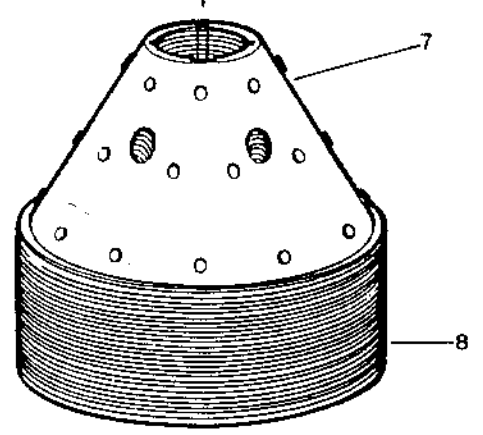
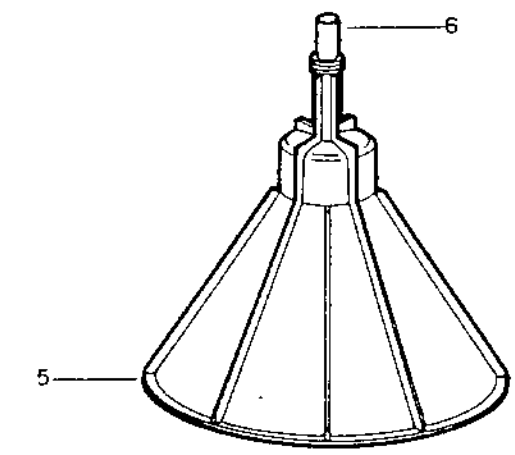
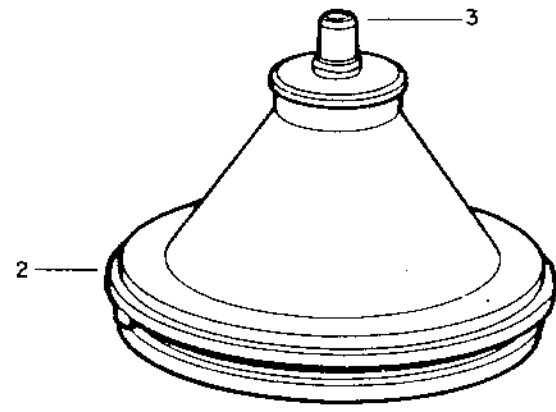
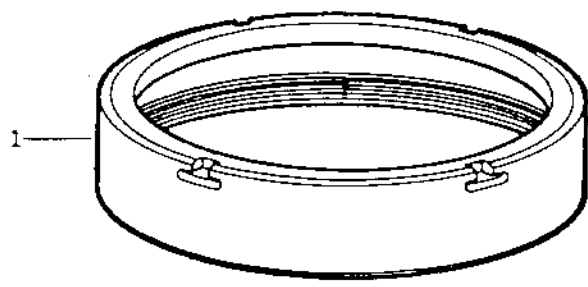


| REF. | QTY. | PART NO. | PART DESCRIPTION |
|------|------|--------------|---|
| 1 | 1 | | Coupling Ring |
| 2 | 1 | | Bowl Top |
| 3 | 1 | 8200337-01 * | Outlet Sleeve |
| 4 | 1 | 8200330-02 * | Bowl Top Rubber Ring |
| 5 | 1 | 8200427-80 | Top Disc |
| 6 | 93 | 8200472-80 | Intermediate Disc (Unsoldered Caulks) |
| | | 8200472-82 | Intermediate Fill-in Disc (unsoldered caulks) |
| | 93 | 8200472-81 | Intermediate Disc (Soldered Caulks) |
| | | 8200472-83 | Intermediate Fill-in Disc (soldered caulks) |
| 7 | 1 | 8200481-80 | Anchor Stud |
| 8 | 1 | | Disc Carrier |
| 9 | 1 | 8200368-01 | Spindle Cap Nut |
| 10 | 1 | | Bowl Shell |

*Suggested spare parts

BOWL

510-525-545-590



Bowl 510-525-545-590

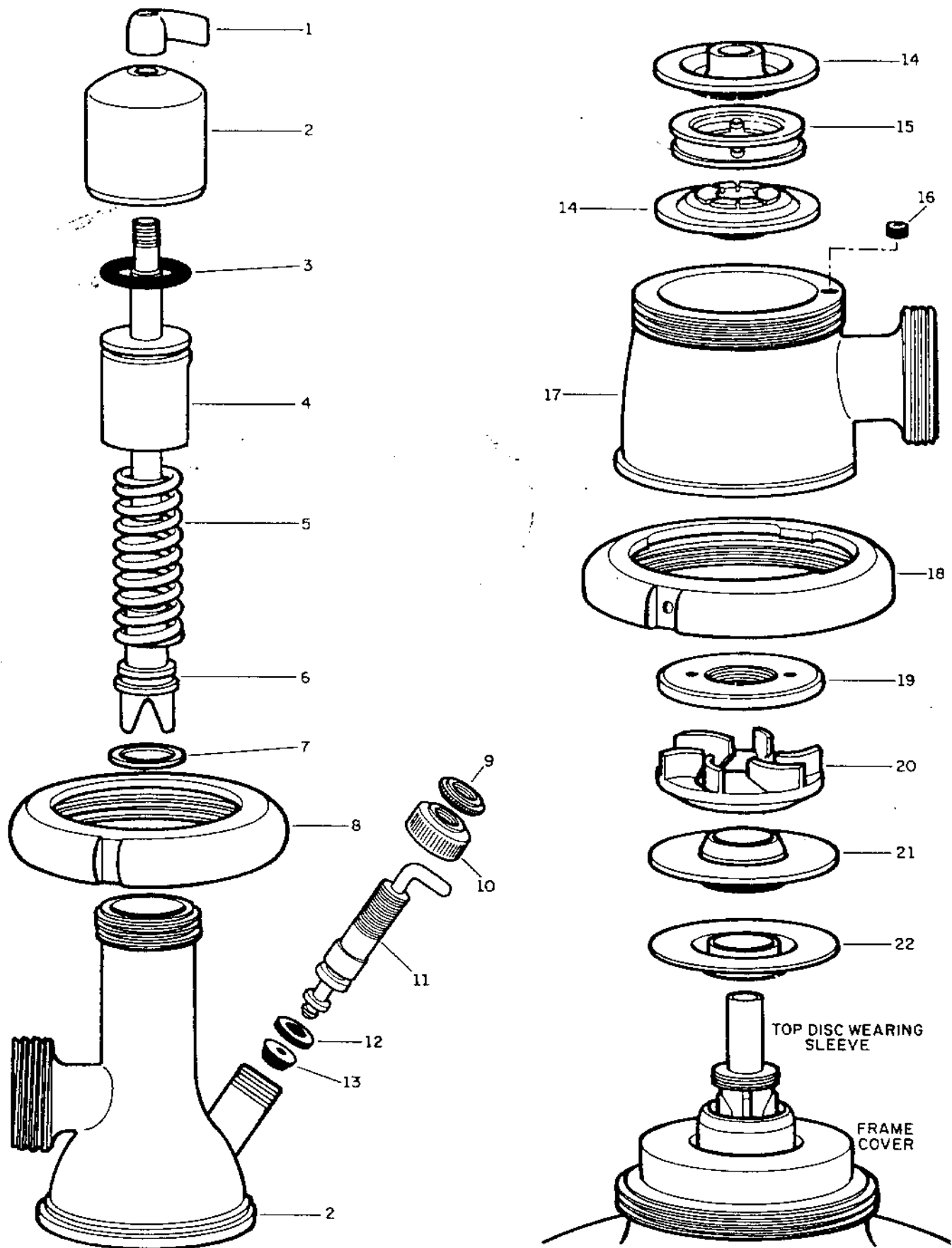
| REF. | QTY. | PART NO. | PART DESCRIPTION |
|------|------|-------------|---------------------------------|
| 1 | 1 | ----- | Coupling Ring |
| 2 | 1 | ----- | Bowl Top |
| 3 | 1 | 8200337-01* | Outlet Sleeve (510-525-590) |
| | 1 | 8200573-01* | Outlet Sleeve (545) |
| 4 | 1 | 8200330-02* | Bowl Top Rubber Ring |
| 5 | 1 | 8200426-80 | Top Disc (510-590) |
| | 1 | 8200342-80 | Top Disc (525) |
| | 1 | 8200579-80 | Top Disc (545) |
| 6 | 1 | 8200347-01* | Wearing Sleeve (510-525-590) |
| | 1 | 37010 * | Wearing Sleeve (545) |
| 7 | 1 | 8200473-81 | Intermediate Top Disc (510-590) |
| | 1 | 8200299-81 | Intermediate Top Disc (525) |
| | 2 | 8200574-80 | Intermediate Top Disc (545) |
| 8 | 94 | 8200473-80 | Intermediate Disc (510-590) |
| | 135 | 8200299-80 | Intermediate Disc (525) |
| | 91 | 8200575-80 | Intermediate Disc (545) |
| 9 | 1 | 8200474-80 | Bottom Disc (510-590) |
| | 1 | 8200310-80 | Bottom Disc (525) |
| | 1 | 8200578-80 | Bottom Disc (545) |
| 10 | 1 | ----- | Disc Carrier |
| 11 | 1 | 8200368-01 | Spindle Cap Nut |
| 12 | 1 | ----- | Bowl Shell |

NOTE: Parts followed by machine numbers are used on these machines only.

*Suggested spare parts inventory.

OUTLET DEVICE

510-525-545-590



OUTLET DEVICE

510-525-545-590

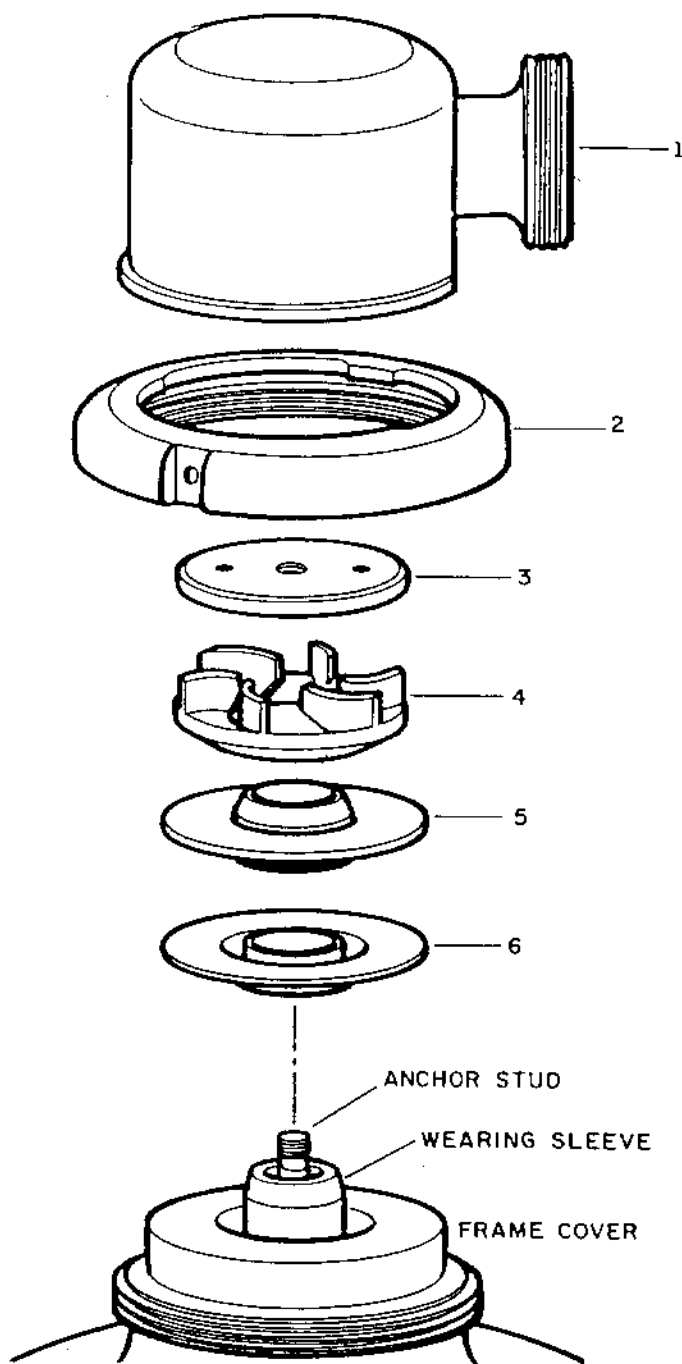
| REF. | QTY. | PART NO. | PART DESCRIPTION |
|------|------|-------------|--|
| | 1 | 38065 | Cream Control Valve (Comp.) (510-525) |
| | 1 | 38707 | Cream Control Valve (Comp.) (545-590) |
| 1 | 1 | 20783 | Lock Nut |
| 2 | 1 | 38064 | Body & Adjust. Nut (Comp.) (510-525) |
| | 1 | 38708 | Body & Adjust. Nut (Comp.) (545-590) |
| 3 | 1 | 05555* | Rubber Ring |
| 4 | 1 | 32856 | Upper Guide |
| 5 | 1 | 16829 | Spring (510-525-545-590) |
| | 1 | 16829 | Spring (545-590 spare part) |
| 6 | 1 | 32853 | Control Valve |
| 7 | 1 | 35339* | Valve Washer |
| 8 | 1 | 32861 | Coupling Ring |
| 9 | 1 | 36336 | Lock Nut (545-590) |
| 10 | 1 | 36335 | Cap Nut (545-590) |
| 11 | 1 | 36334 | Stem (545-590) |
| 12 | 1 | 31267* | Rubber Ring (545-590) |
| 13 | 1 | 8301124-01* | Rubber Valve (545-590) |
| 14 | 2 | 28706* | Cream Seal (510-525-590) |
| | 2 | 37399* | Cream Seal (545) |
| | 2 | 37400* | Reinforcing Cup (545) |
| 15 | 1 | 28707 | Seal Holder (510-525-590) |
| | 1 | 37401 | Seal Holder (545) |
| 16 | 1 | 38705* | Gasket (545-590) |
| 17 | 1 | 8200369-80 | Outlet Connection (510-525) |
| | 1 | 8200367-80 | Outlet Connection (545-590) |
| 18 | 1 | 28711 | Coupling Ring |
| 19 | 1 | 8200348-01 | Impeller Top (55 mm) 2-11/64" (510-525) |
| | 1 | 8200348-02 | Impeller Top (75 mm) 2-61/64" (545-590) |
| 20 | 1 | 8200349-01 | Impeller Bottom (55 mm) 2-11/64" (510-525) |
| | 1 | 8200349-02 | Impeller Bottom (75 mm) 2-61/64" (545-590) |
| 21 | 1 | 36837* | Outlet Seal (510-525-590) |
| | 1 | 36858* | Outlet Seal (545) |
| 22 | 1 | 36838* | Reinforcing Cup (510-525-590) |
| | 1 | 36859* | Reinforcing Cup (545) |

NOTE: Parts followed by machine numbers are used on these machines only.

*Suggested spare parts inventory.

OUTLET DEVICE

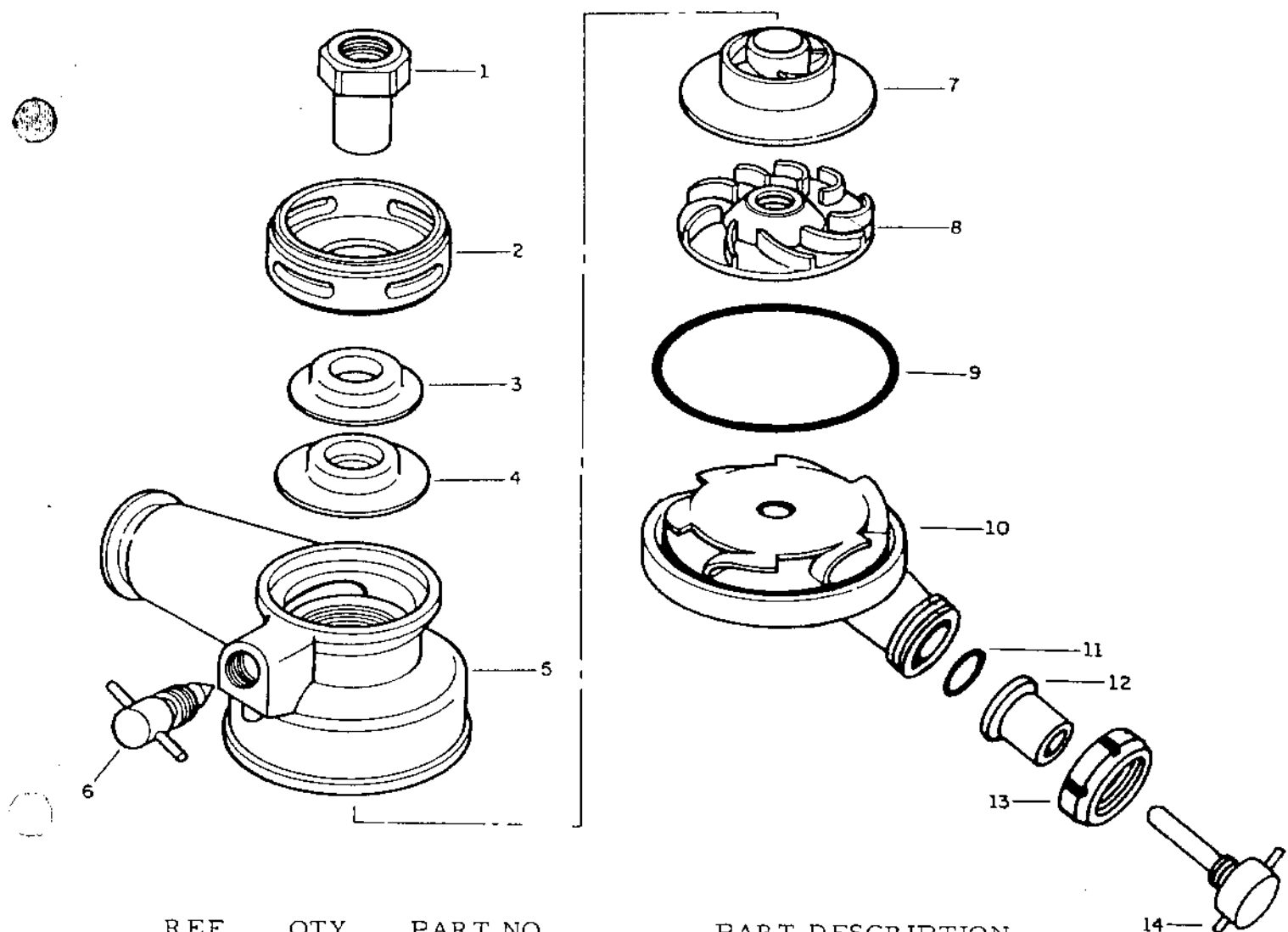
- 540 -



| REF. | QTY. | PART NO. | PART DESCRIPTION |
|------|------|------------|-------------------|
| 1 | 1 | 8200405-80 | Outlet Connection |
| 2 | 1 | 28711 | Coupling Ring |
| 3 | 1 | 8200411-01 | Impeller Top |
| 4 | 1 | 8200410-01 | Impeller Bottom |
| 5 | 1 | 36837 * | Outlet Seal |
| 6 | 1 | 36838 * | Reinforcing Cup |

*Suggested spare parts inventory.

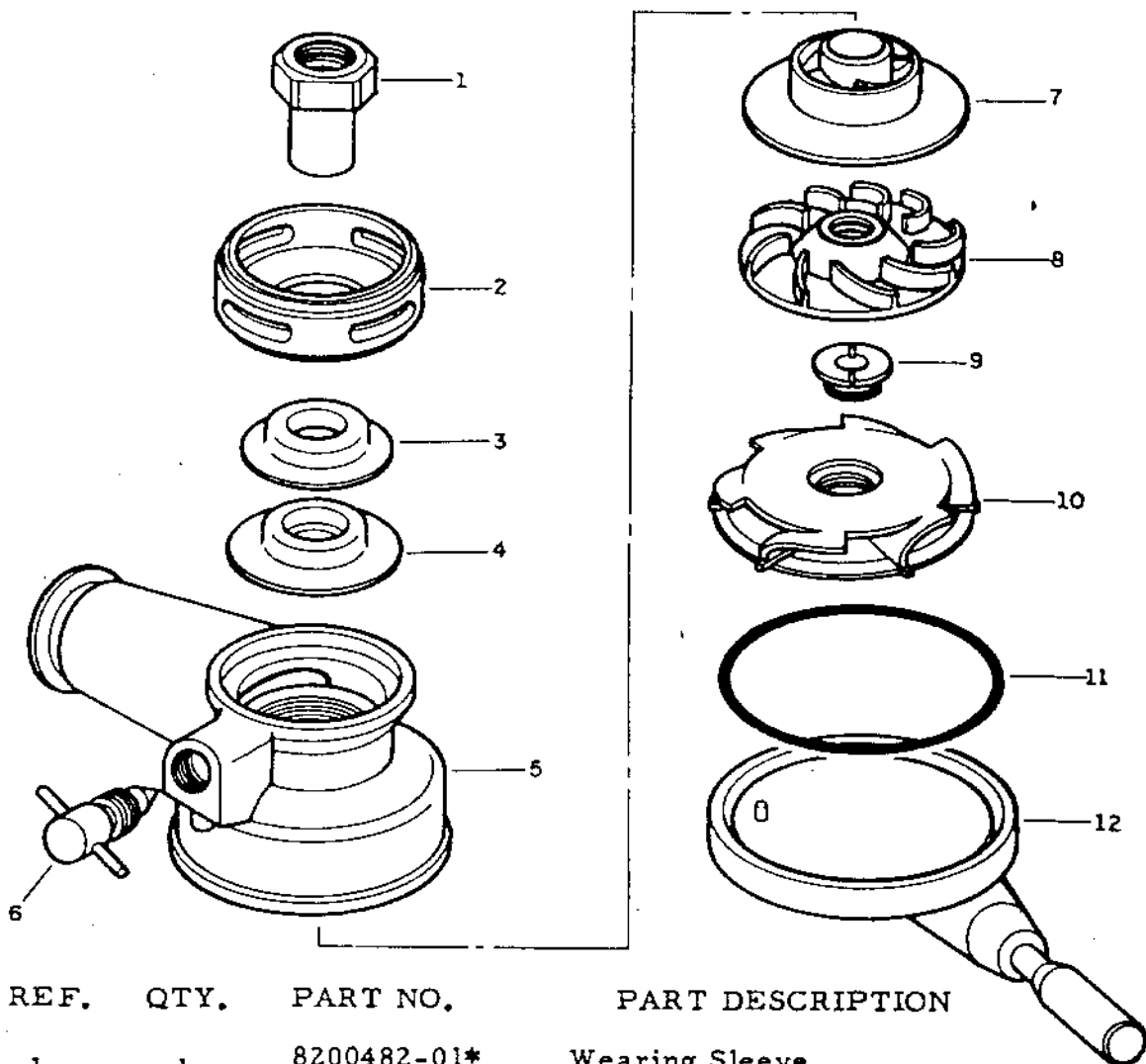
590 INLET DEVICE



| REF. | QTY. | PART NO. | PART DESCRIPTION |
|------|------|-------------|-----------------------------------|
| 1 | 1 | 8200482-01* | Wearing Sleeve |
| 2 | 1 | 8200460-01 | Seal Holder |
| 3 | 1 | 36838 * | Reinforcing Cup |
| 4 | 1 | 36837 * | Inlet Seal |
| 5 | 1 | 8200458-80 | Pump Housing |
| 6 | 1 | 785098-80Y* | Deaerating Screw |
| 7 | 1 | 8200404-02 | Impeller Top (120 mm) 4-47/64" |
| 8 | 1 | 8200402-01 | Impeller Bottom (120 mm) 4-47/64" |
| 9 | 1 | 8200330-04* | Rubber Ring |
| 10 | 1 | 43726Y | Pump Housing Cover |
| 11 | 1 | 43733Y * | Rubber Ring |
| 12 | 1 | 43732Y | Threaded Sleeve |
| 13 | 1 | 190614Y | Coupling Nut |
| 14 | 1 | 43730Y | Spindle Valve |

* Suggested Spare Parts Inventory

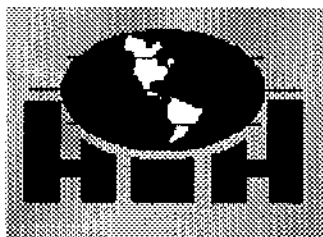
INLET DEVICE



| REF. | QTY. | PART NO. | PART DESCRIPTION |
|------|------|-------------|---|
| 1 | 1 | 8200482-01* | Wearing Sleeve |
| 2 | 1 | 8200460-01 | Inlet Seal Holder |
| 3 | 1 | 36838 * | Reinforcing Cup |
| 4 | 1 | 36837 * | Inlet Seal |
| 5 | 1 | 8200490-80 | Pump Housing |
| 6 | 1 | 8200487-80 | Deaerating Screw |
| 7 | 1 | 8200404-01 | Impeller Top (110 mm) 4-21/64" (510-525) |
| | 1 | 8200404-02 | Impeller Top (120 mm) 4-47/64" (545-540) |
| 8 | 1 | 8200403-01 | Impeller Bottom (110 mm) 4-21/64" (510-525) |
| | 1 | 8200402-01 | Impeller Bottom (120 mm) 4-47/64" (545-540) |
| 9 | 1 | 8200445-03 | Reducer (11 mm) 7/16" |
| | 1 | 8200445-07 | Reducer (12.3 mm) 31/64" |
| | 1 | 8200445-04 | Reducer (13.5 mm) 17/32" |
| | 1 | 8200445-08 | Reducer (15 mm) 19/32" |
| | 1 | 8200445-09 | Reducer (18 mm) 23/32" |
| | 1 | 8200445-06 | Reducer (30 mm) 1-3/16" |
| 10 | 1 | 8200468-80 | Diffuser |
| 11 | 1 | 8200330-04* | Rubber Ring |
| 12 | 1 | 8200466-80 | Pump Housing Cover |
| | | 8200404-03 | Impeller Top - 510-525-540 |
| | | 8200403-02 | Impeller Bottom - 510-525- |

*Suggested spare parts inventory.
 • Furnished when so ordered.

} furnished only when so ordered.

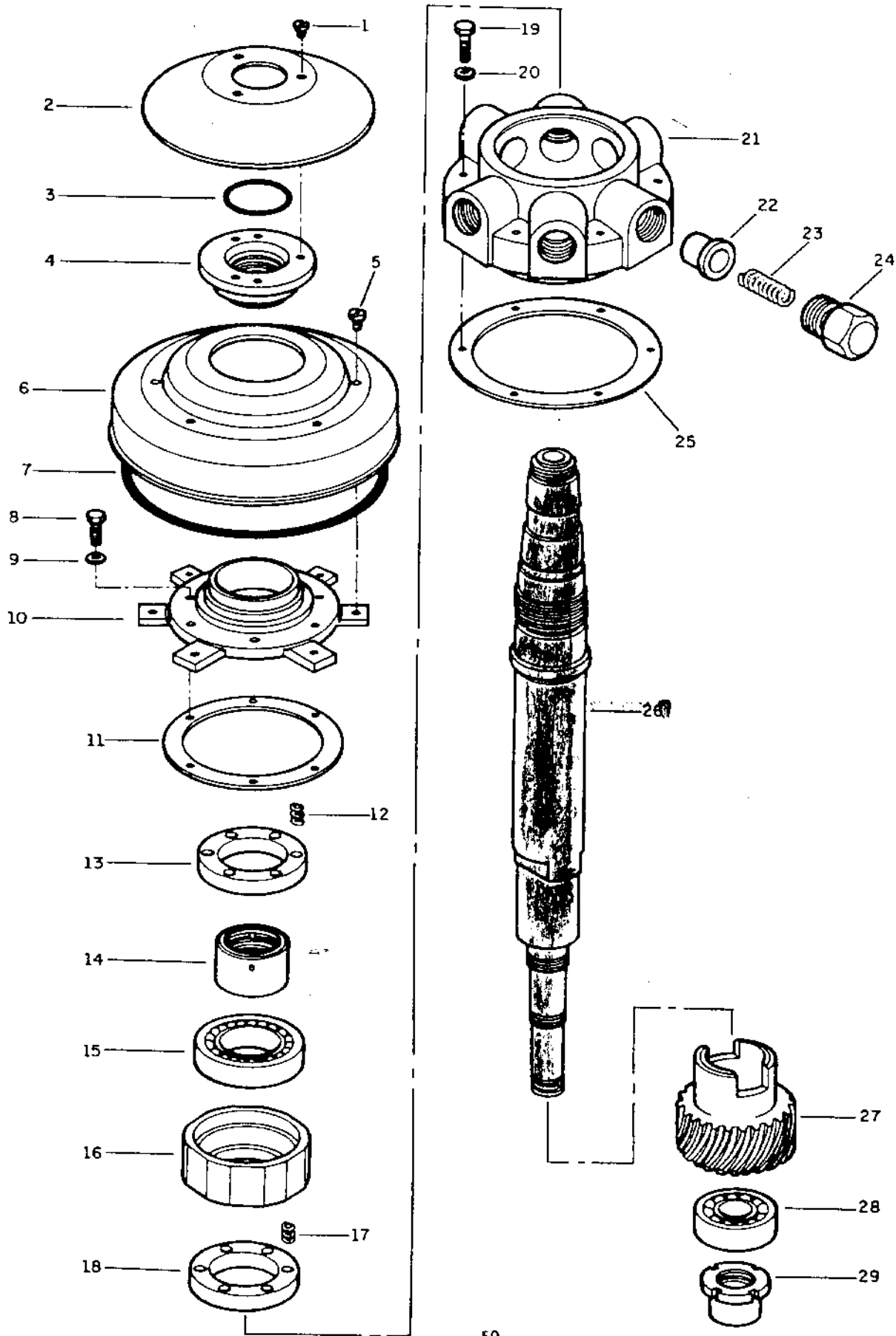


Hutchison-Hayes Separators, Inc.

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P.O. Box 2965 ♦ Houston, Texas 77252
3520 East Belt ♦ Houston, Texas 77015
(713) 455-9600 ♦ Fax (713) 455-7753

VERTICAL DRIVE

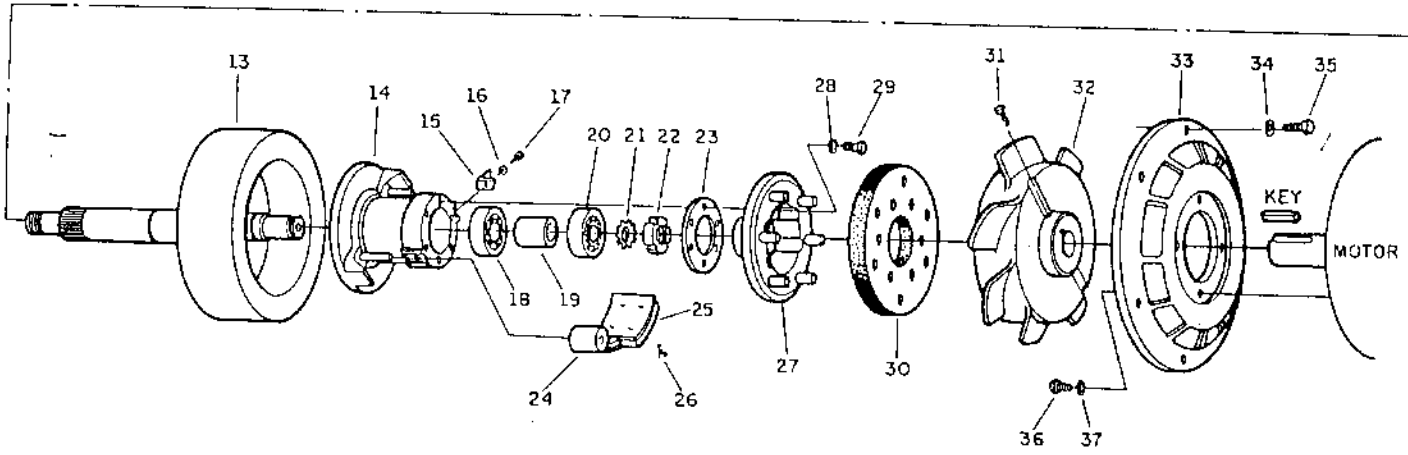
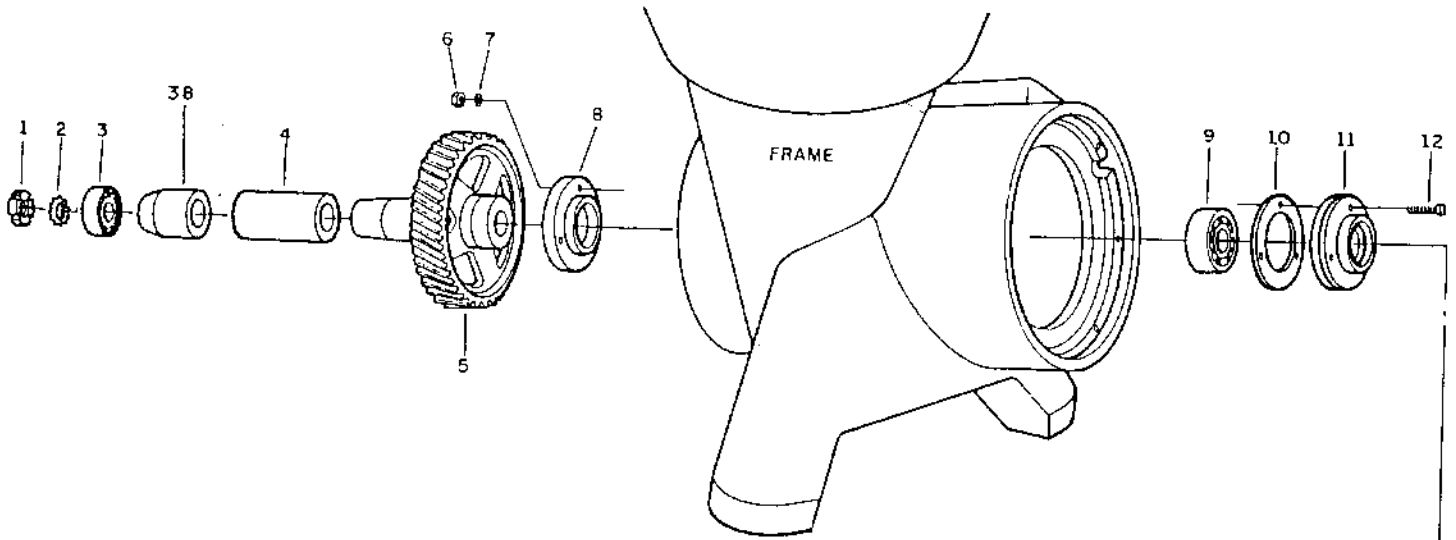


VERTICAL DRIVE

| REF. | QTY. | PART NO. | PART DESCRIPTION |
|----------|------|------------------|--------------------------|
| 1 | 3 | 65203Y | Screw |
| 2 | 1 | 8200387-01 | Throw-off Plate |
| 3 | 1 | 39270 * | Rubber Ring |
| 4 | 1 | 39288 | Protecting Cover |
| 5 | 6 | 43712Y | Screw |
| 6 | 1 | 8200463-80 | Protecting Cap |
| 7 | 1 | 8200330-05 * | Rubber Ring |
| 8 | 6 | 39092 | Cap Screw |
| 9 | 6 | 6478 | Washer |
| 10 | 1 | 8200395-01 | Top Bearing Plate Cover |
| 11 | 1 | 8200396-01 * | Gasket |
| 12 | 6 | 36446 | Spring 8Q01357-01 |
| 13 | 1 | 8200388-01 | Top Bearing Support Ring |
| 6287#-14 | 1 | 8200393-01 | Lock Nut |
| 15 | 1 | 8200356-01 * | Upper Ball Bearing |
| 16 | 1 | 8200392-01 | Top Bearing Sleeve |
| 17 | 6 | 36446 | Spring |
| 18 | 1 | 8200389-01 | Spring Guide Ring |
| 19 | 6 | 39098 | Screw |
| 20 | 6 | 9611 | Washer |
| 21 | 1 | 8200394-01 | Top Bearing Plate |
| 22 | 6 | 36452 | Top Bearing Buffer |
| 23 | 6 | 8200358-01 | Top Bearing Spring |
| 24 | 6 | 36454 | Spring Housing Screw |
| 25 | 1 | 36502 * | Gasket |
| 26 | 1 | 8200386-01 | Spindle # <u>6293</u> |
| 27 | 1 | 8200493-01 * | Worm Quill |
| 28 | 1 | 8200357-01 * | Lower Ball Bearing |
| 29 | 1 | 8200462-01 | Lock Nut |

*Suggested spare parts inventory.

HORIZONTAL DRIVE



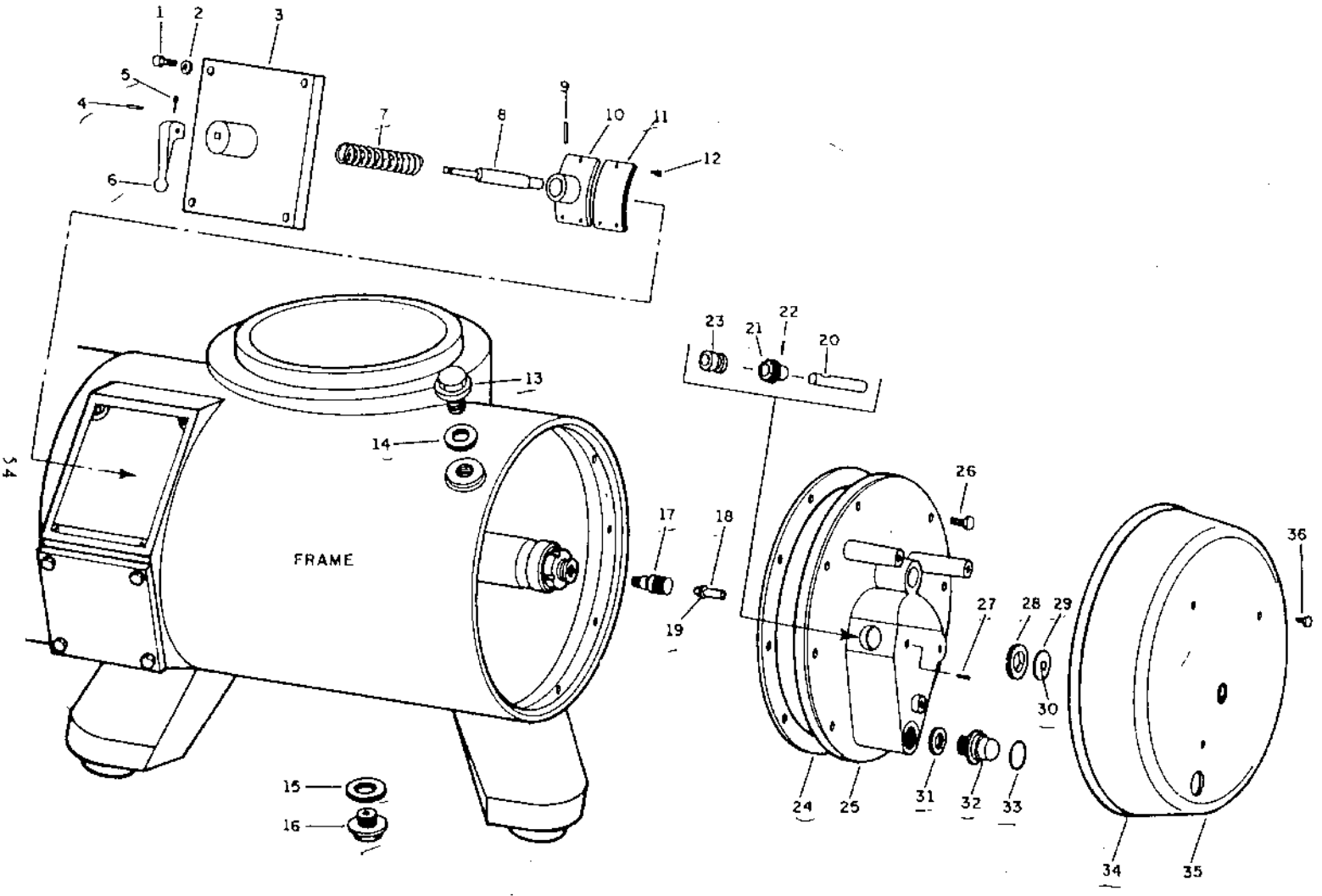
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HORIZONTAL DRIVE

| REF. | QTY. | PART NO. | PART DESCRIPTION |
|------|------|--------------|---|
| 1 | 1 | 39418 | Lock Nut |
| 2 | 1 | 14564 * | Lock Washer |
| 3 | 1 | 8200360-01 * | Outer Ball Bearing |
| 4 | 1 | 8200905-01 | Spacing Sleeve |
| 5 | 1 | 8200916-01 * | Worm Wheel |
| 6 | 3 | 32057 | Nut |
| 7 | 3 | 6478 | Lock Washer |
| 8 | 1 | 37287 | Inner Cap |
| 9 | 1 | 37424 * | Inner Ball Bearing |
| 10 | 1 | 39446 * | Gasket |
| 11 | 1 | 37283 | Outer Cap |
| 12 | 3 | 8200345-01 | Bolt |
| 13 | 1 | 8200400-80 | Worm Wheel Shaft and Friction Clutch Housing |
| 14 | 1 | 8200439-80 | Friction Clutch Hub |
| 15 | 3 | 37369 | Stop Angle |
| 16 | 3 | 6478 | Washer |
| 17 | 3 | 37206 | Screw |
| 18 | 1 | 30765 * | Inner Clutch Hub Ball Bearing |
| 19 | 1 | 37210 | Spacing Sleeve |
| 20 | 1 | 30293 * | Outer Clutch Hub Ball Bearing |
| 21 | 1 | 14564 | Lock Washer |
| 22 | 1 | 39418 | Lock Nut |
| 23 | 1 | 37207 * | Gasket |
| | 3 | 37396 | Friction Clutch Weight (Comp.) |
| 24 | 3 | 37382 | Friction Clutch Weight (Sep.) |
| | | 8200343-81 | Friction Clutch Weight Set |
| 25 | 3 | 37368 * | Friction Clutch Lining |
| 26 | 12 | 37231 * | Friction Clutch Screw |
| 27 | 1 | 8201036-80 | Clutch End Coupling |
| 28 | 6 | 6478 | Washer |
| 29 | 6 | 39092 | Screw |
| 30 | 1 | 37215 * | Rubber Cushion |
| 31 | 1 | 39375 | Set Screw |
| 32 | 1 | 8200456-80 | Motor End Coupling |
| 33 | 1 | 8200370-01 | Motor Adapter Plate |
| 34 | 6 | 6478 | Washer |
| 35 | 6 | 22250 | Screw |
| 36 | 4 | 25001 | Screw |
| 37 | 4 | 9611 | Washer |
| 38 | 1 | 8200906-01 | Spacing Sleeve |

*Suggested spare parts inventory.

FRAME PARTS

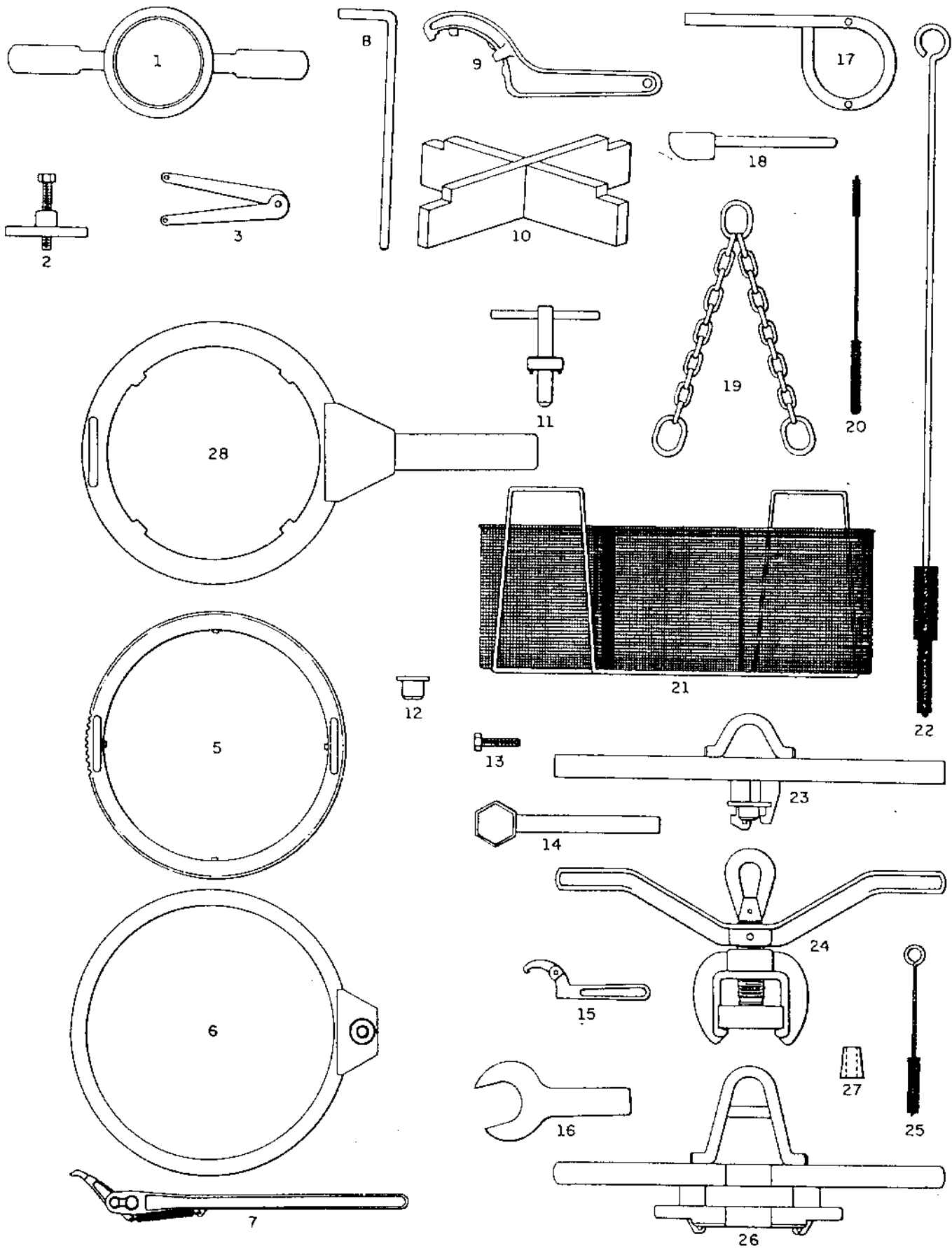


FRAME PARTS

| REF. | QTY. | PART NO. | PART DESCRIPTION |
|------|------|--------------|-----------------------------|
| 1 | 4 | 38920 | Screw |
| 2 | 4 | 8200248-01 | Washer |
| 3 | 1 | 8200106-80 | Brake Mounting Plate |
| | | 8200583-01 | Brake Mounting Plate Gasket |
| 4 | 1 | 39122 | Handle Pin |
| 5 | 1 | 8200252-01 | Cotter Pin |
| 6 | 1 | 8200282-01 | Handle |
| 7 | 1 | 37441 | Spring |
| | 1 | 8200253-80 | Brake Shoe Comp. |
| 8 | 1 | 8200254-01 | Stem |
| 9 | 1 | 39419 | Pin |
| 10 | 1 | 39357 | Shoe |
| 11 | 1 | 39358 * | Lining |
| 12 | 3 | 37231 * | Screw |
| 13 | 1 | 8200130-01 | Oil Filler Plug |
| 14 | 1 | 8200129-01 * | Gasket |
| 15 | 1 | 31468 * | Gasket |
| 16 | 1 | 8200128-01 | Oil Drain Plug |
| 17 | 1 | 11554Y * | Speed Indicator Pinion |
| 18 | 1 | 8200115-01 | Plunger |
| 19 | 1 | 43083Y | Snap Ring |
| 20 | 1 | 43080Y | Shaft |
| 21 | 1 | 11553Y * | Wheel Gear |
| 22 | 1 | 63796Y | Pin |
| 23 | 1 | 8200104-01 | Bushing |
| 24 | 1 | 8200127-01 * | Gasket |
| 25 | 1 | 8200176-80 | Worm Wheel Housing Cover |
| 26 | 8 | 31012 | Screw |
| 27 | 1 | 8200179-01 | Set Screw |
| 28 | 1 | 8200233-01 | Lock Ring |
| 29 | 1 | 8200139-01 * | Rubber Membrane |
| 30 | 1 | 8200138-01 | Push Button |
| 31 | 1 | 17122 * | Gasket |
| 32 | 1 | 43625Y | Oil Sight Glass |
| 33 | 1 | 36781 * | Rubber Ring |
| 34 | 1 | 8200142-01 * | Rubber Seal Strip |
| 35 | 1 | 8200232-80 | Worm Wheel Housing Hood |
| 36 | 3 | 39089 | Screw |

* Suggested spare parts inventory.

TOOLS



TOOLS

| REF. | PART NO. | PART DESCRIPTION |
|------|-------------|---|
| 1 | 37780 | Frame Cover Lifter |
| 2 | 39055 | Friction Clutch Hub Extractor |
| 3 | 20433 | Outlet Impeller - Adjust. Spanner Wrench |
| | 8200539-80* | Bowl Coupling Ring Ratchet Wrench (Comp.) |
| 5 | 8200536-80* | Ratchet Ring for Coupling Ring Wrench |
| 6 | 8200538-80* | Ratchet Wrench Support |
| 7 | 8200585-80* | Lever for Ratchet Wrench |
| 8 | 8200547-01 | Spindle Cap Nut Wrench |
| 9 | 19163 | Outlet Connection Spanner Wrench |
| 10 | 8200471-80 | Disc Carrier Stand |
| 11 | 8200459-80 | Inlet Impeller Wrench |
| 12 | 8200457-01 | Spindle Protecting Plug |
| 13 | 39533 | Worm Wheel Shaft Ball Bearing Jack Screw |
| 14 | 8200568-80 | Inlet Wearing Sleeve Wrench |
| 15 | 39483 | Ball Bearing Lock Nut Hook Spanner Wrench |
| 16 | 38548 | Spring Housing Screw Wrench |
| 17 | 38433 | Top Bearing Protecting Cover Pin Spanner Wrench |
| 18 | 15582 | Bowl Scraper |
| 19 | 31358 | Sling Chain |
| 20 | 02905 | Standardizing Valve Cavity Brush |
| 21 | 17686 | Wire Basket |
| 22 | 34655 | Spindle Brush |
| 23 | 8200513-80 | Disc Carrier Lifter |
| 24 | 8200498-80 | Bowl Shell Lifter |
| 25 | 16936 | Top Disc Brush |
| 26 | 8200506-80 | Bowl Top Lifter |
| 27 | 8200514-01 | Top Disc Protecting Sleeve |
| | 8200514-02 | Top Disc Protecting Sleeve (545 only) |
| 28 | 65372Y | Bowl Coupling Ring Wrench |

De Laval Special Oil (orange label)

| | |
|------------|--------------|
| 8701027-80 | 5 gallon |
| 8701028-80 | 30 gal. drum |

De Laval Stainless Steel Thread Lubricant

| | |
|-------|-----------------------|
| 36325 | 1 Container (115 oz.) |
| 36326 | 1 Squeeze Bottle |
| 36282 | 1 Cap - Sq. Bottle |

*When Specially Ordered.