

PRESS MANUAL

PD2-75 PRESS

Form A-37

WARNING
DO NOT OPERATE PRESS WITHOUT
SAFEGUARDING THE POINT-OF-OPERATION

This manual has been written to instruct personnel in the operation and maintenance of the NIAGARA PD2-75 PRESS. When written, it was completely up-to-date. Because of changing improvements in design, descriptions and instructions may vary from the press delivered to you.

NIAGARA PRESSES are precision-built. Careful attention to the adjustments and maintenance of the press should result in many years of trouble-free service. Although this press has been carefully inspected and tested in our plant, some of the adjustments may have been disturbed in transit. Therefore millwrights, maintenance men, die setters and operators should carefully read and understand these instructions and the Power Press Safety Manual, before the press is installed, operated or maintained. Additional copies of this manual and the Press Safety Manual will be furnished on request. We can assume no liability for unauthorized alterations or attachments to the press.

Because a press, regardless of type, is a multi-purpose piece of equipment used for a multitude of applications, it is impossible for press manufacturers to equip each press with a point-of-operation guard that will be effective with all the dies applicable to that press. There is no universal point-of-operation guard that can be put on a press by the manufacturer of the press that will accommodate the unlimited variety of uses and tooling to which that press can be adapted. Press employers must assume the responsibility for selecting and installing effective point-of-operation guards.

PRICE \$5.00 EACH

WARNING

TO PREVENT SERIOUS BODILY INJURY
NEVER PLACE ANY PART OF YOUR BODY UNDER THE SLIDE (RAM) OR WITHIN THE DIE AREA UNLESS POWER IS OFF, FLYWHEEL IS STOPPED AND THE SLIDE (RAM) IS BLOCKED UP.

NEVER OPERATE, INSTALL DIES, OR MAINTAIN THIS PRESS WITHOUT PROPER INSTRUCTION AND WITHOUT FIRST READING AND UNDERSTANDING THE OPERATORS OR PRESS MANUAL.

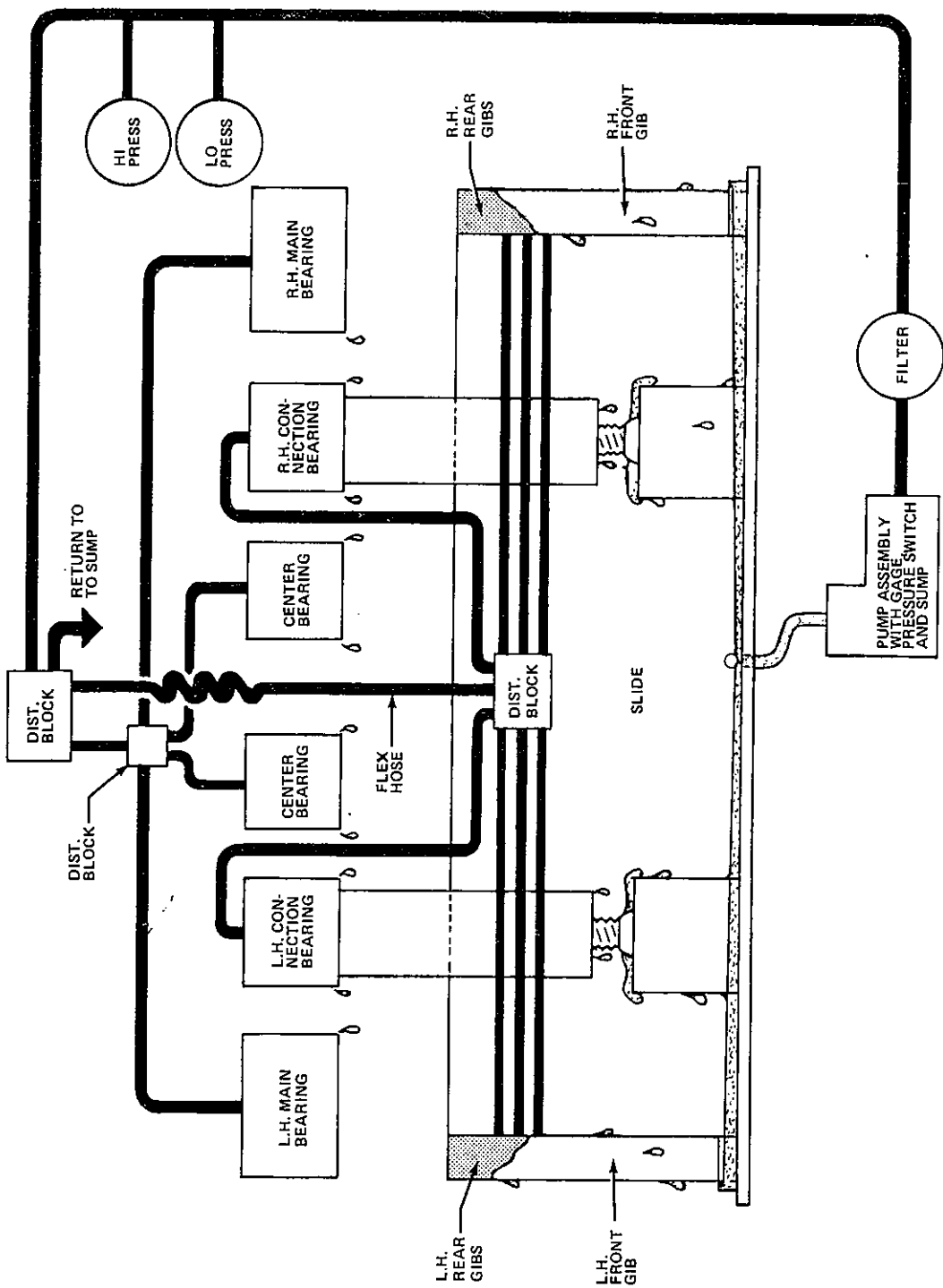
IT IS THE EMPLOYER'S RESPONSIBILITY TO IMPLEMENT THE ABOVE & ALSO TO PROVIDE PROPER DIES, GUARDS, DEVICES OR MEANS THAT MAY BE NECESSARY OR REQUIRED FOR ANY PARTICULAR USE, OPERATION, SET-UP OR SERVICE.

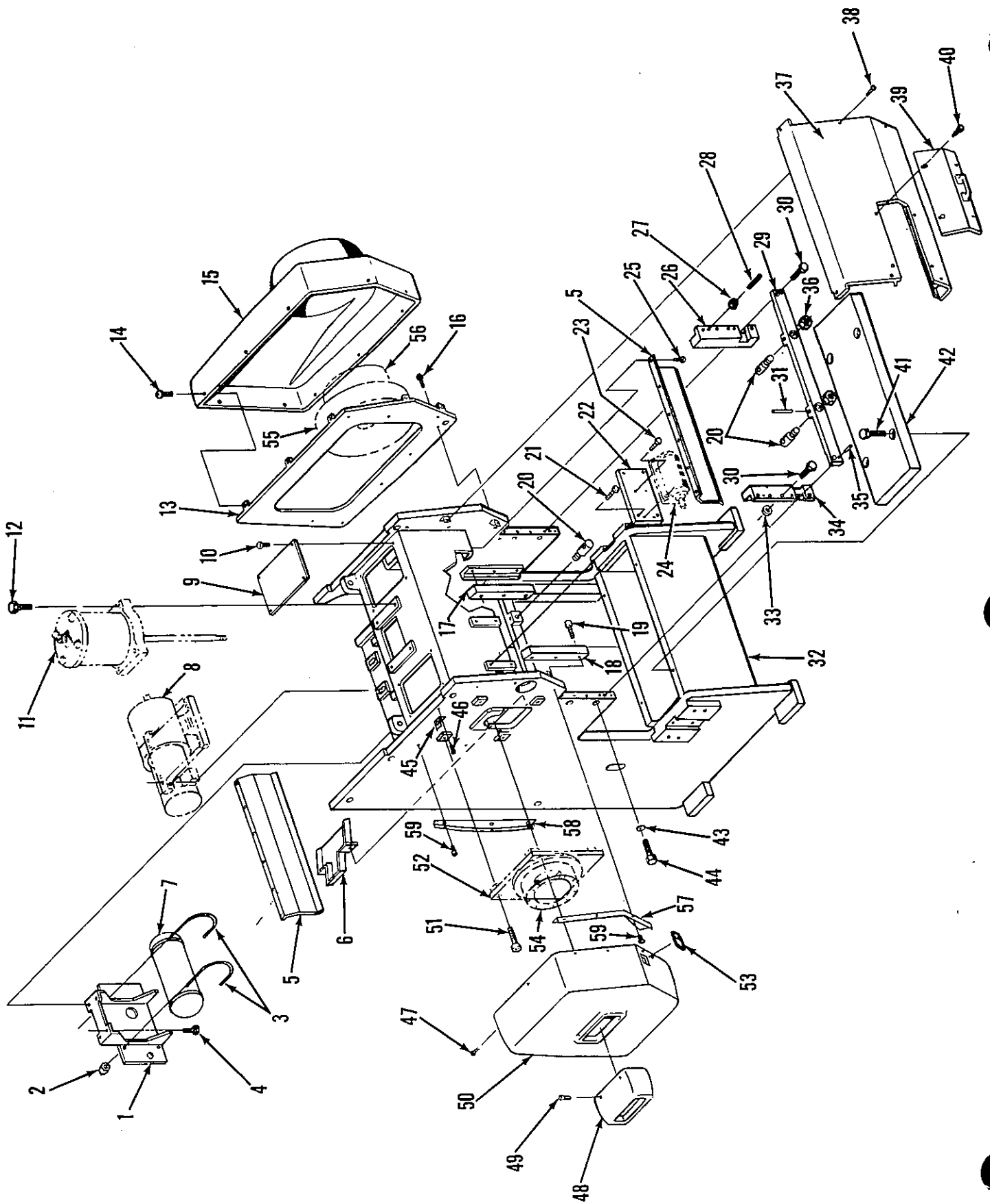
DO NOT REMOVE THIS SIGN FROM THIS PRESS

Niagara Machine & Tool Works

General Offices, P.O. Box 475, Buffalo, New York 14240, U.S.A.

LUBRICATION DIAGRAM



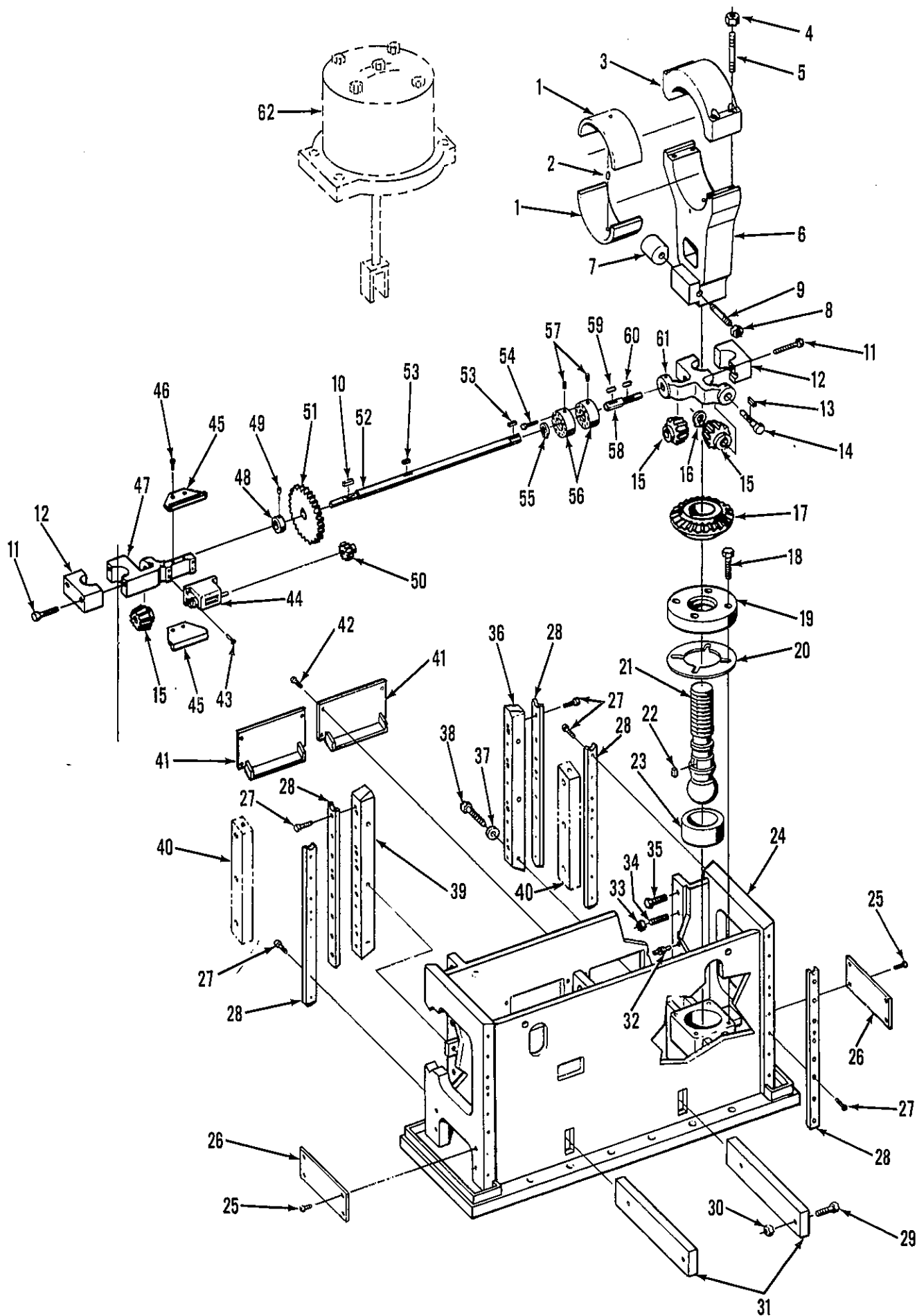


PARTS LIST

SINCE THE REFERENCE OR CALL OUT NUMBERS ON THE FOLLOWING PARTS LIST ARE DUPLICATED ON OTHER PARTS LISTS, SPECIFY PART REQUIRED BY GIVING REFERENCE NUMBER AND FULL NAME FOLLOWED BY FORM AND PAGE NUMBER.

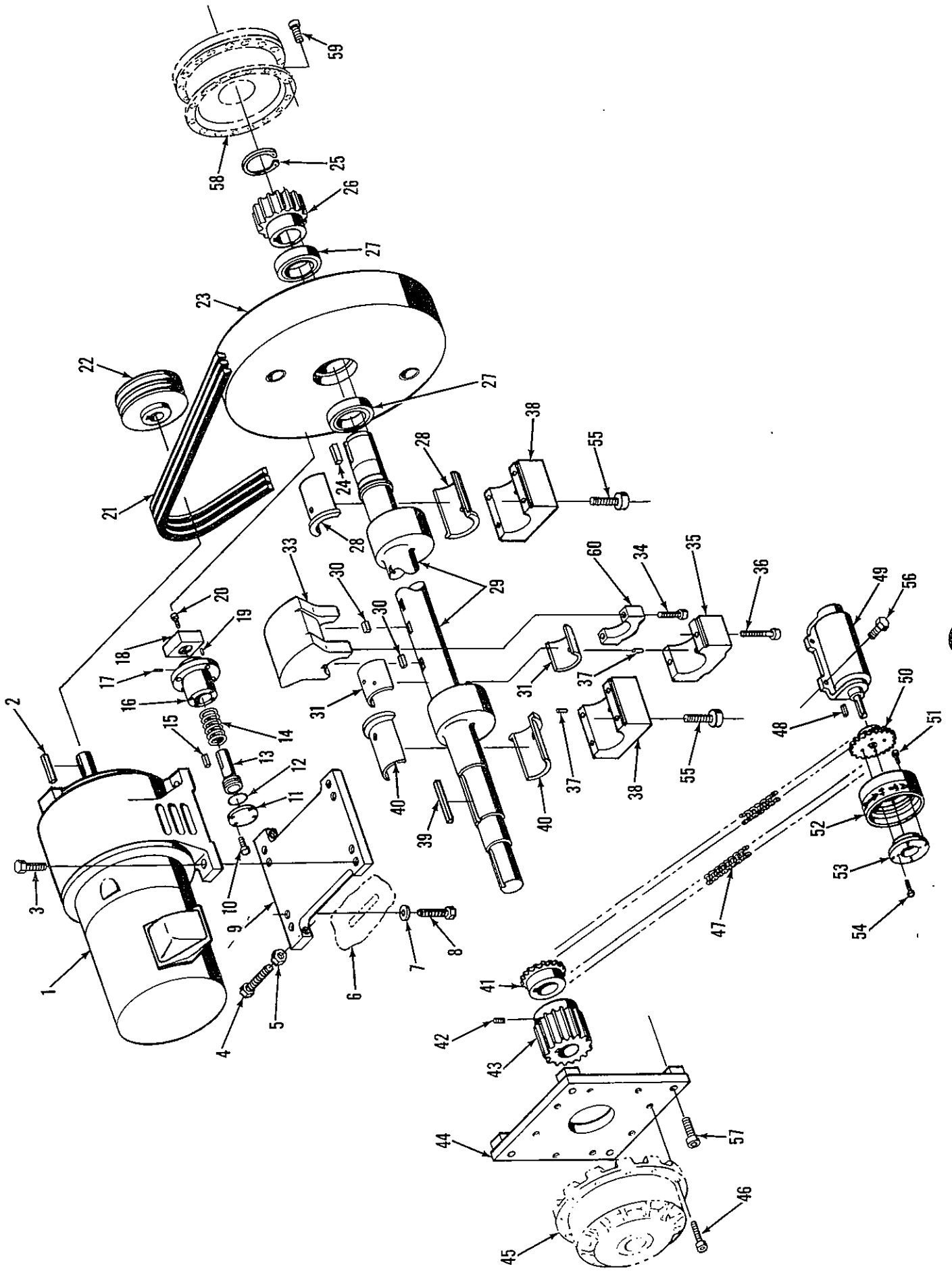
FRAME

- | | | | |
|-----|---|-----|------------------------------------|
| 1. | Tank Bracket | 29. | Tie Bar |
| 2. | Nut | 30. | Mounting Bolts |
| 3. | Tank Rods | 31. | Knock Out Pin - (Optional) |
| 4. | Bolt | 32. | Frame |
| 5. | Oil Shields | 33. | Spacer Washer |
| 6. | Oil Catcher | 34. | L.H. Front Gib |
| 7. | Tank | 35. | Dowel Pin |
| 8. | Drive Motor Assembly | 36. | Nuts (Optional) |
| 9. | Crown Cover | 37. | Front Panel |
| 10. | Bolt-Crown Cover | 38. | Button Head Socket Screws |
| 11. | Counterbalance
(See Separate Parts List) | 39. | Front Panel Cover |
| 12. | Counterbalance Mounting Bolt | 40. | Shoulder Bolt |
| 13. | Belt Guard Back Plate | 41. | Bolster Plate Mounting Bolt |
| 14. | Mounting Screw | 42. | Bolster Plate |
| 15. | Belt Guard | 43. | Washer |
| 16. | Back Plate Mounting Bolt | 44. | Gib Mounting Bolt |
| 17. | R.H. Rear Gib | 45. | Guard Clip |
| 18. | L.H. Rear Gib | 46. | Clip Mounting Bolt |
| 19. | Gib Mounting Bolt | 47. | Button Head Socket Screw |
| 20. | Knock Out Clamps (Optional) | 48. | Shaft Guard |
| 21. | Plate Mounting Bolt | 49. | Screw |
| 22. | Limit Switch Plate | 50. | Brake Guard |
| 23. | Limit Switch Mounting Bolt | 51. | Socket Head Capscrew |
| 24. | Limit Switch
(See Separate Parts List) | 52. | Brake Bracket |
| 25. | Button Head Socket Screw | | (See Separate Parts List) |
| 26. | R.H. Front Gib | 53. | Stroke Position Window |
| 27. | Jam Nut | 54. | Brake (See Separate Parts List) |
| 28. | Flat Point Socket Set Screw | 55. | Flywheel (See Separate Parts List) |
| | | 56. | Clutch (See Separate Parts List) |
| | | 57. | Brake Guard Support |
| | | 58. | Brake Guard Support |
| | | 59. | Brake Guard Support Screws |



SLIDE – CONNECTIONS

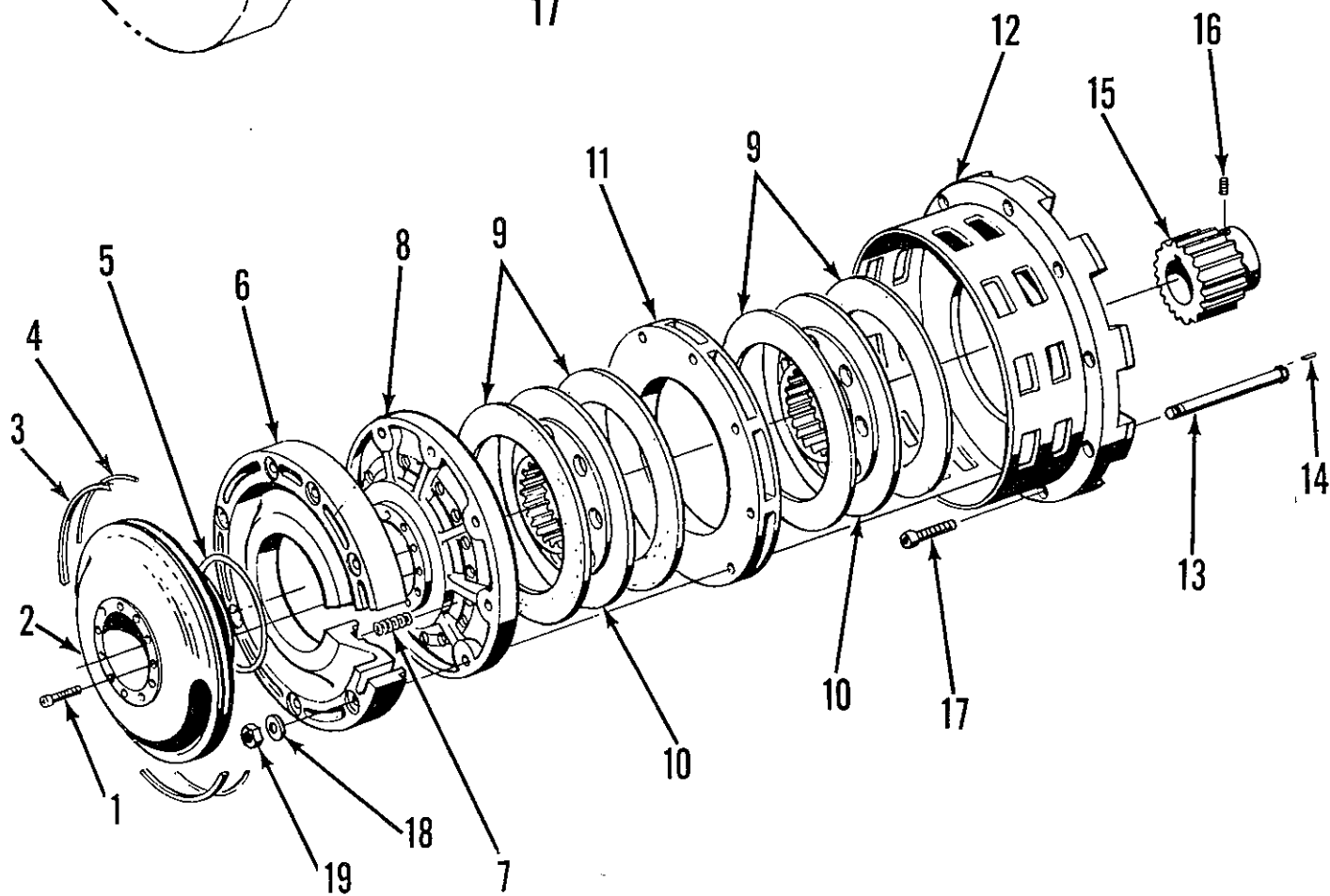
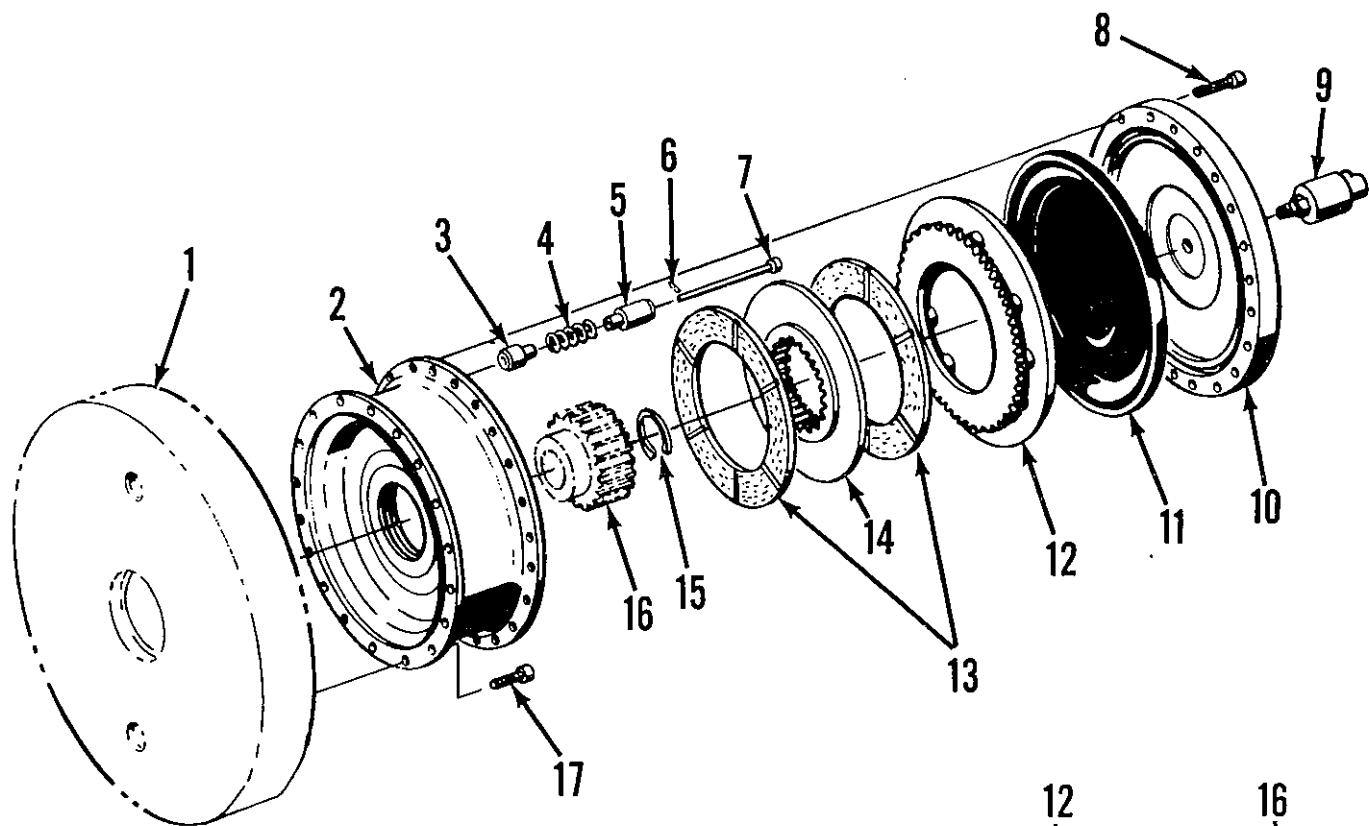
Sold As Unit	{	1. Connection Bushings	32. Lubrication Fitting
		2. Dowel	33. Jam Nut
		3. Connection Cap	34. Set Screw
		4. Connection Mounting Nut	35. Bolt
		5. Connection Mounting Stud	36. R.H. Gib Block
		6. R.H. Connection (Specify R.H. or L.H.)	37. Washer
		7. Clamp Plug	38. Gib Block Mounting Bolt
		8. Clamp Stud Nut	39. L.H. Gib Block
		9. Clamp Stud	40. Rear Gibs (Reference)
		10. Key	41. Rear Slide Oil Covers
		11. Bracket Cap Bolts	42. Button Head Screw
		12. Bracket Caps	43. Button Head Socket Screw
		13. Key	44. Counter
		14. Adjusting Stud	45. Counter Support Plates
		15. Adjusting Pinions	46. Button Head Socket Screw
		17. Adjusting Gear	47. L.H. Adjusting Bracket
		18. Cap Mounting Bolt	48. Collar
		19. Connection Ball Cap	49. Collar Set Screw
		20. Ball Cap Shim	50. Driven Gear with Bronze Bearing
		21. R.H. Ball Screw (Specify R.H. or L.H.)	51. Driving Gear
		22. Key	52. L.H. Adjusting Shaft
		23. Ball Seat	53. Keys
		24. Slide	54. Bolt
		25. Button Head Socket Screws	55. Retaining Ring
		26. Slide End Covers	56. Coupling (Two Halves)
		27. Pan Head Screws	57. Set Screws
		28. Slide Liners	58. R.H. Adjusting Shaft
		29. Bolt (Optional)	59. Key
		30. Nut (Optional)	60. Key
		31. Knock Out Bars (Optional)	61. R.H. Adjusting Bracket
			62. Air Counter Balance (See Separate Parts List)



DRIVE ASSEMBLY

1. Driving Motor
 2. Key
 3. Motor Mounting Bolt
 4. Plate Adjusting Set Screw
 5. Plate Adjusting Nut
 6. Frame
 7. Plate Mounting Washer
 8. Plate Mounting Bolt
 9. Motor Mounting Plate
 10. Hex Head Bolt
 11. Cylinder Cover
 12. "O" Ring - Piston
 13. Piston
 14. Spring
 15. Key
 16. Cylinder
 17. Roll Pin
 18. Brake Shoe
 19. Dowel Pin
 20. Hex Head Bolt
 21. Driving Belts
 22. Sheave
 23. Flywheel
 24. Key
 25. Retaining Ring
 26. Clutch Hub
 27. Flywheel Bearing
 28. R.H. Main Bearing Bushings
 29. Eccentric Shaft
 30. Counterweight Keys
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31. L.H. Center Main Bearing Bushings
32. R.H. Center Main Bearing Bushing (Not Shown)
33. Shaft Counterweight
34. Counterweight Mounting Screw
35. Center Main Bearing Cap
36. Bearing Cap Mounting Screw
37. Dowel Pin
38. Main Bearing Caps
39. Key - Brake Hub
40. L.H. Main Bearing Bushings
41. Limit Switch Driving Sprocket
42. Set Screw - Hub
43. Brake Hub
44. Brake Mounting Bracket
45. Brake Assembly (See Separate Parts List)
46. Brake Mounting Screw
47. Chain - Limit Switch
48. Key
49. Limit Switch
50. Limit Switch Driven Sprocket
51. Button Head Socket Screw
52. Stroke Indicator Dial and Scale
53. Sprocket Adapter
54. Adapter Mounting Bolt
55. Main Bearing Cap Mounting Screws
56. Limit Switch Mounting Screw
57. Mounting Screw
58. Clutch (See Separate Parts List)
59. Capscrew
60. Counterweight Cap



CLUTCH

1. Flywheel (Reference)
2. Clutch Housing
3. Spring Seat
4. Spring
5. Spring Plunger
6. Tie Rod Pin
7. Spring Tie Rod
8. Clutch Cylinder Mounting Screw
9. Union Adapter
10. Clutch Cylinder
11. Diaphragm
12. Push Plate
13. Clutch Linings
14. Inner Clutch Plate
15. Retaining Ring
16. Clutch Hub
17. Clutch Housing Mounting Screw

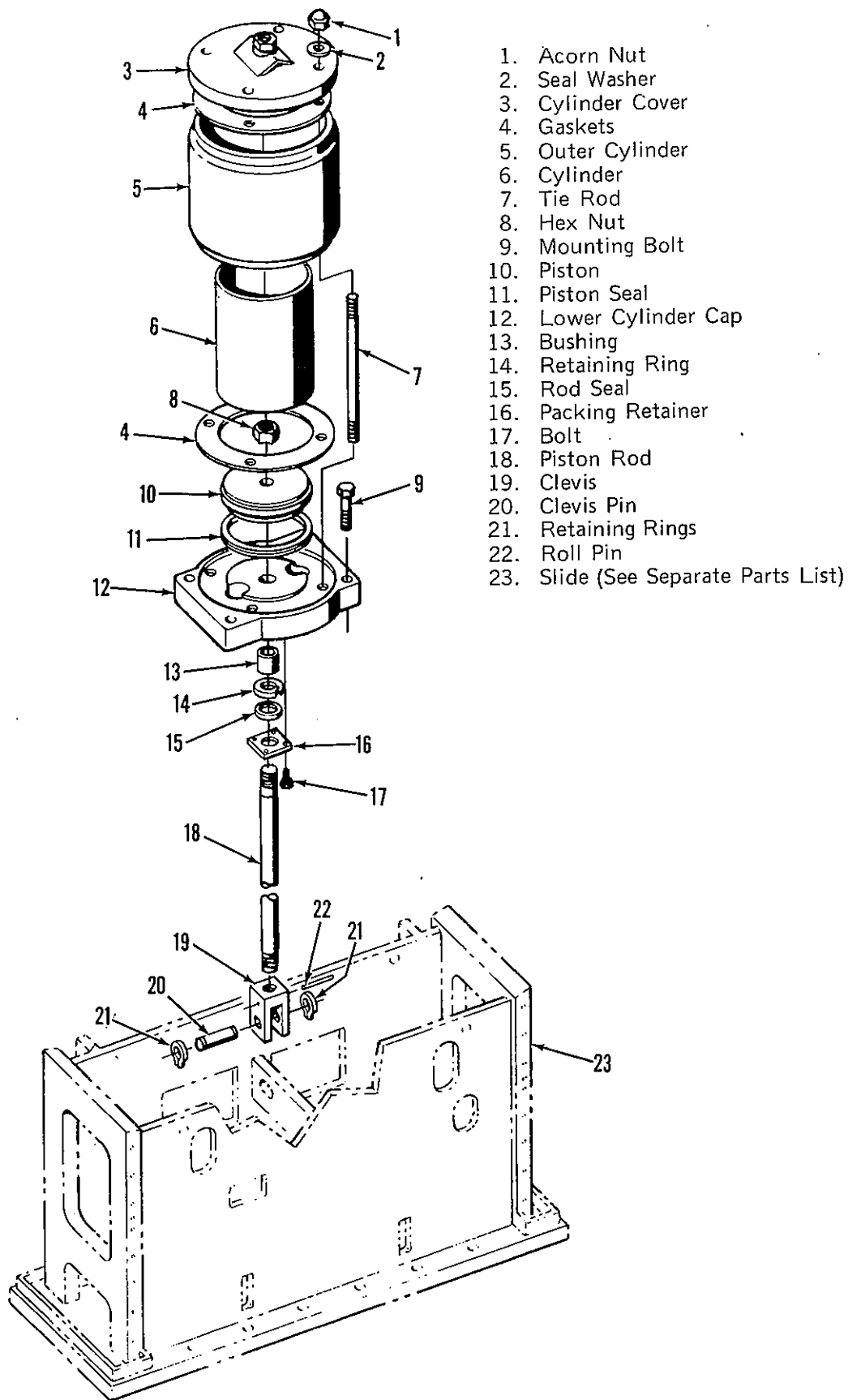
BRAKE

- * 1. Piston Screw
2. Piston
3. Piston Dust Seal
4. Piston "O" Ring (Outer)
5. Piston "O" Ring (Inner)
6. Cylinder
7. Spring
8. Pressure Plate
9. Brake Linings (One Set)
Includes Rivets (Quantity May Vary)
10. Brake Discs (Quantity May Vary)
11. Center Plate (Nut Used with Single Disc)
12. Drive Ring
13. Drive Stud
14. Pin
15. Brake Hub
16. Set Screw
17. Ring Mounting Screw
- **18. Washer
- **19. Nut

*Remove to replace seal and rings.

**Remove to replace lining.

AIR COUNTERBALANCE ASSEMBLY



1. Acorn Nut
2. Seal Washer
3. Cylinder Cover
4. Gaskets
5. Outer Cylinder
6. Cylinder
7. Tie Rod
8. Hex Nut
9. Mounting Bolt
10. Piston
11. Piston Seal
12. Lower Cylinder Cap
13. Bushing
14. Retaining Ring
15. Rod Seal
16. Packing Retainer
17. Bolt
18. Piston Rod
19. Clevis
20. Clevis Pin
21. Retaining Rings
22. Roll Pin
23. Slide (See Separate Parts List)