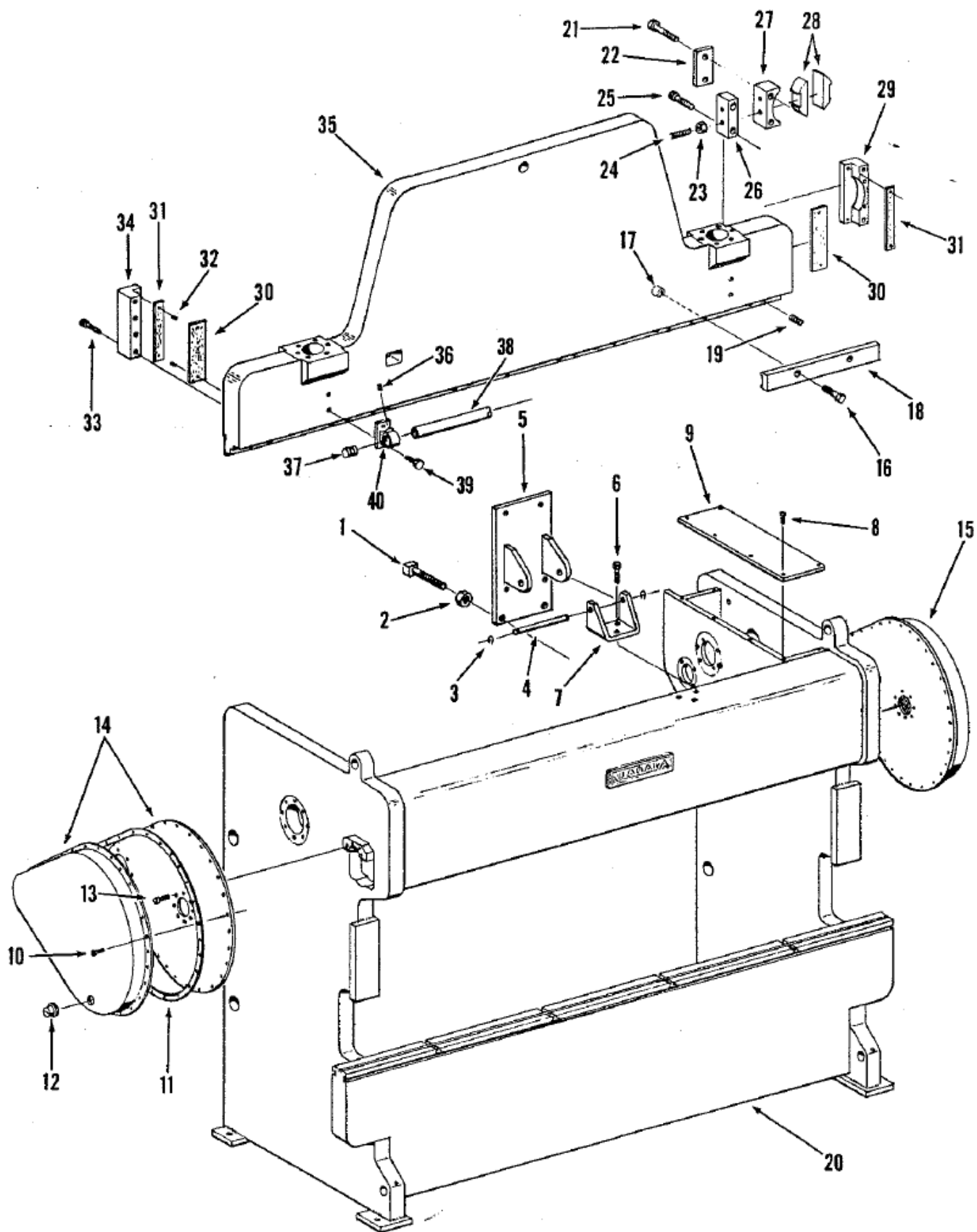
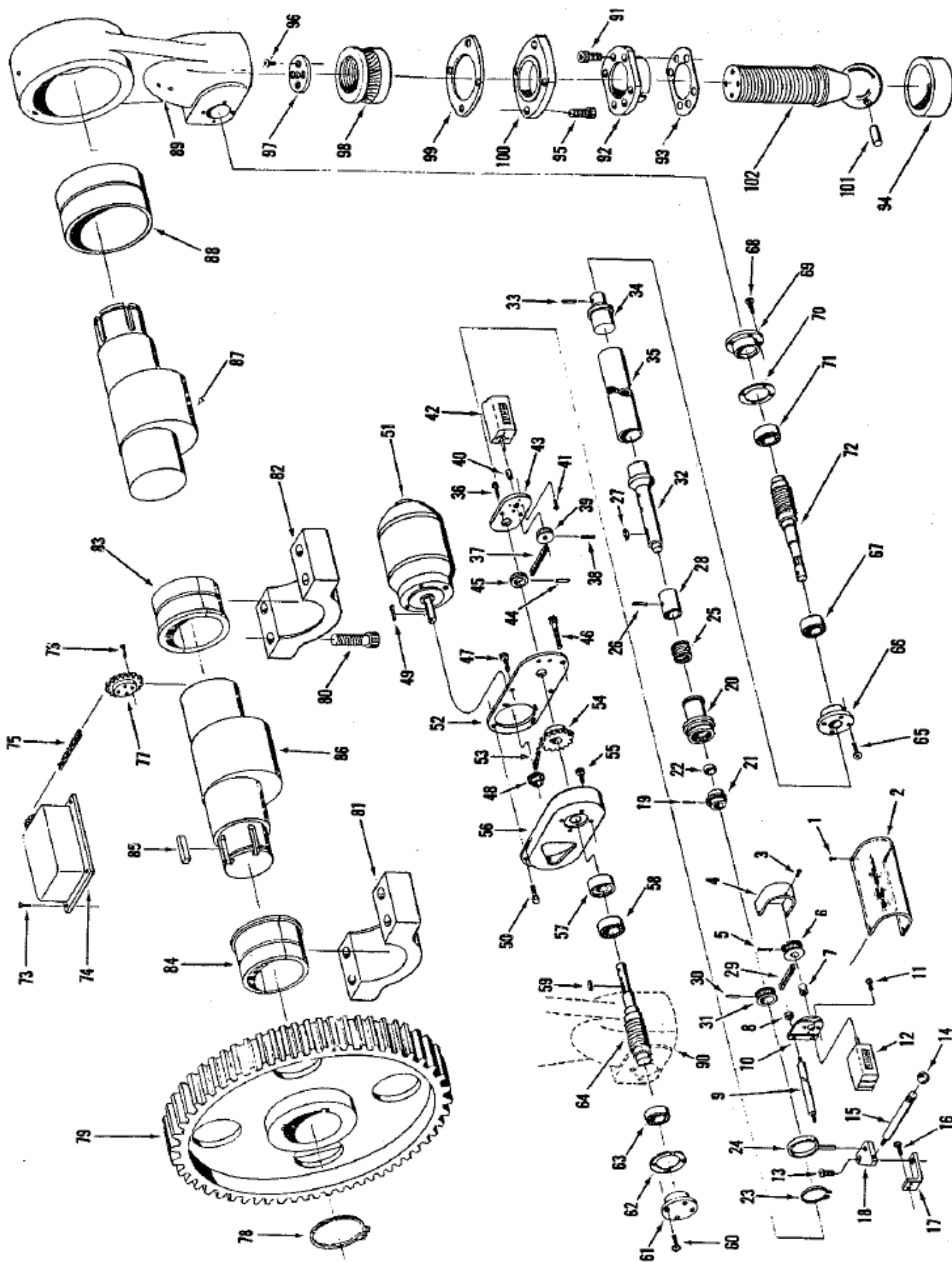




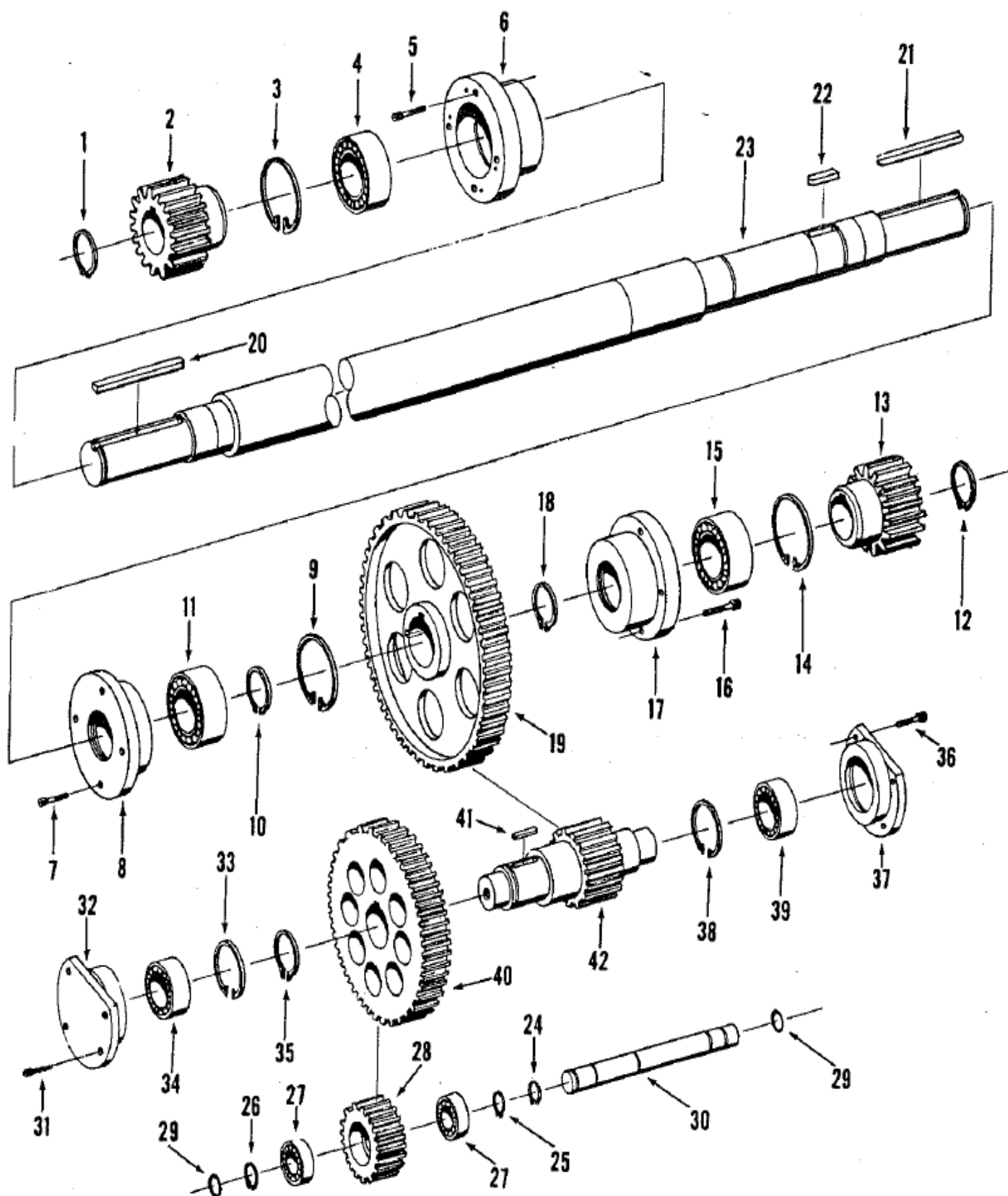
FRAME - RAM

1. Set Screw
2. Locknut
3. Retainer Rings
4. Retainer Ring Pin
5. Motor Mounting Bracket
6. Screws
7. Motor Support Bracket
8. Screws
9. Gear Box Cover
10. Screw
11. Gasket
12. Oil Level Sight
13. Screw
14. L.H. Gear Guard
15. R.H. Gear Guard
16. Screw
17. Round Nut
18. Clamp Bar
19. Spring
20. Frame
21. Screw
22. Pivot Block Retainer
23. Jam Nut
24. Set Screw
25. Screw
26. Adjusting Block
27. Pivot Block
28. Pivot Shoes
29. R.H. Outer Gib
30. Ram Liner
31. Gib Liner
32. Dowels
33. Gib Screws
34. L.H. Outer Gib
35. Ram
36. Set Screw
37. Plug
38. Hand Rail
39. Mounting Screw
40. Rail support



ECCENTRIC SHAFTS - RAM ADJUSTING SHAFT

- | | |
|--|---|
| <ol style="list-style-type: none"> 1. Screw 2. Plastic Guard 3. Screw 4. Pulley Enclosure 5. Roll Pin 6. R.H. Driven Pulley 7. Bushing 8. Support Rod Nut 9. Support Rod 10. R.H. Mounting Plate 11. Counter Screw 12. R.H. Counter 13. Screw 14. Knob 15. Disengaging Handle Rod 16. Screw 17. Disengaging Handle Bracket 18. Disengaging Handle Plate 19. Roll Pin 20. Coupling Sleeve 21. Coupling Gear 22. Bushing 23. Retainer Ring 24. Disengagement Ring 25. Spring 26. Roll Pin 27. Key 28. Spring Support 29. Timing Belt 30. Roll Pin 31. L.H. Driver Pulley 32. L.H. Trunnion 33. Roll Pin 34. R.H. Trunnion 35. Adjusting Shaft Connection Tube 36. Screw 37. Timing Belt 38. Roll Pin 39. L.H. Driven Pulley 40. Bushing 41. Counter Screw 42. L.H. Counter 43. L.H. Mounting Plate 44. Roll Pin 45. L.H. Drive Pulley 46. Screw 47. Screw 48. Driver Sprocket 49. Key 50. Motor Screw 51. Motor | <ol style="list-style-type: none"> 52. Gear Box Cover 53. Chain 54. Driven Sprocket 55. Screw 56. Gear Box 57. L.H. Inboard Bearing Retainer 58. L.H. Inboard Bearing 59. Key 60. Screw 61. L.H. Outboard Bearing Retainer 62. Shim 63. L.H. Outboard Bearing 64. L.H. Worm 65. Screw 66. R.H. Inboard Bearing Retainer 67. R.H. Inboard Bearing 68. Screw 69. R.H. Outboard Bearing Retainer 70. Shim 71. R.H. Outboard Bearing 72. R.H. Worm 73. Screw 74. Limit Switch 75. Chain 76. Screw 77. Driver Sprocket 78. Retainer Ring 79. Bull Gear 80. Bearing Cap Screw 81. Outboard Bearing Cap 82. Inboard Bearing Cap 83. Inboard Bushing 84. Outboard Bushing 85. Key 86. L.H. Eccentric Shaft 87. R.H. Eccentric Shaft 88. Connection Bushing 89. R.H. Connection 90. L.H. Connection 91. Ball Cover Screw 92. Ball Cover 93. Shim 94. Ball Seat 95. Connection Cover Screw 96. Stop Plate Screw 97. Stop Plate 98. Adjusting Nut 99. Shim 100. Connection Cover 101. Dowel 102. Ball Screw |
|--|---|

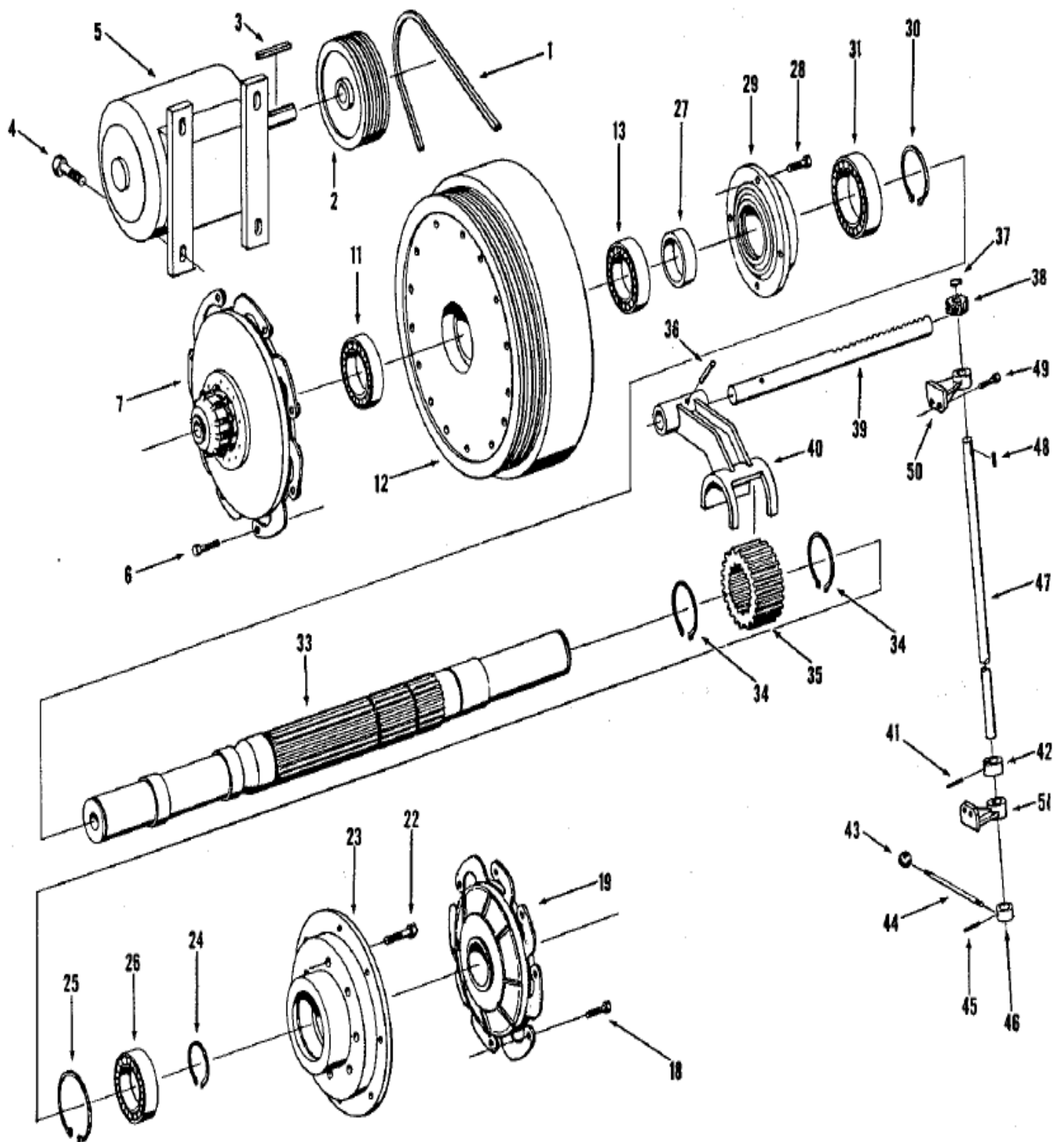


INTERMEDIATE - LOW SPEED - IDLER SHAFTS

1. Retainer Ring
2. L.H. Drive Pinion
3. L.H. Bearing Retainer Ring
4. L.H. Bearing, Int. Shaft
5. Screw
6. L.H. Bearing Cartridge, Int. Shaft
7. Screw
8. Inner R.H. Bearing Cartridge, Int. Shaft
9. Retainer Ring
10. Retainer Ring
11. Inner R.H. Bearing, Int. Shaft
12. Retainer Ring
13. R.H. Drive Pinion
14. R.H. Bearing Retainer Ring
15. R.H. Bearing, Int. Shaft
16. Screw
17. R.H. Bearing Cartridge, Int. Shaft
18. Retainer Ring
19. Intermediate Gear
20. L.H. Drive Pinion Key
21. R.H. Drive Pinion Key
22. Intermediate Gear Key
23. Intermediate Shaft

TWO SPEED MACHINES ONLY

24. Retainer Ring, Idler Shaft
25. Retainer Ring, Bearing
26. Retainer Ring, Bearing
27. Bearings, Idler Gear
28. Idler Gear
29. "O" Rings
30. Idler Shaft
31. Screw
32. L.H. Bearing Cartridge, Low Speed Shaft
33. L.H. Bearing Retainer Ring
34. L.H. Bearing, Low Speed Shaft
35. Retainer Ring
36. Screw
37. R.H. Bearing Cartridge, Low Speed Shaft
38. R.H. Bearing Retainer Ring
39. R.H. Bearing, Low Speed Shaft
40. Reducer Gear
41. Reducer Gear Key
42. Low Speed Gear Shaft

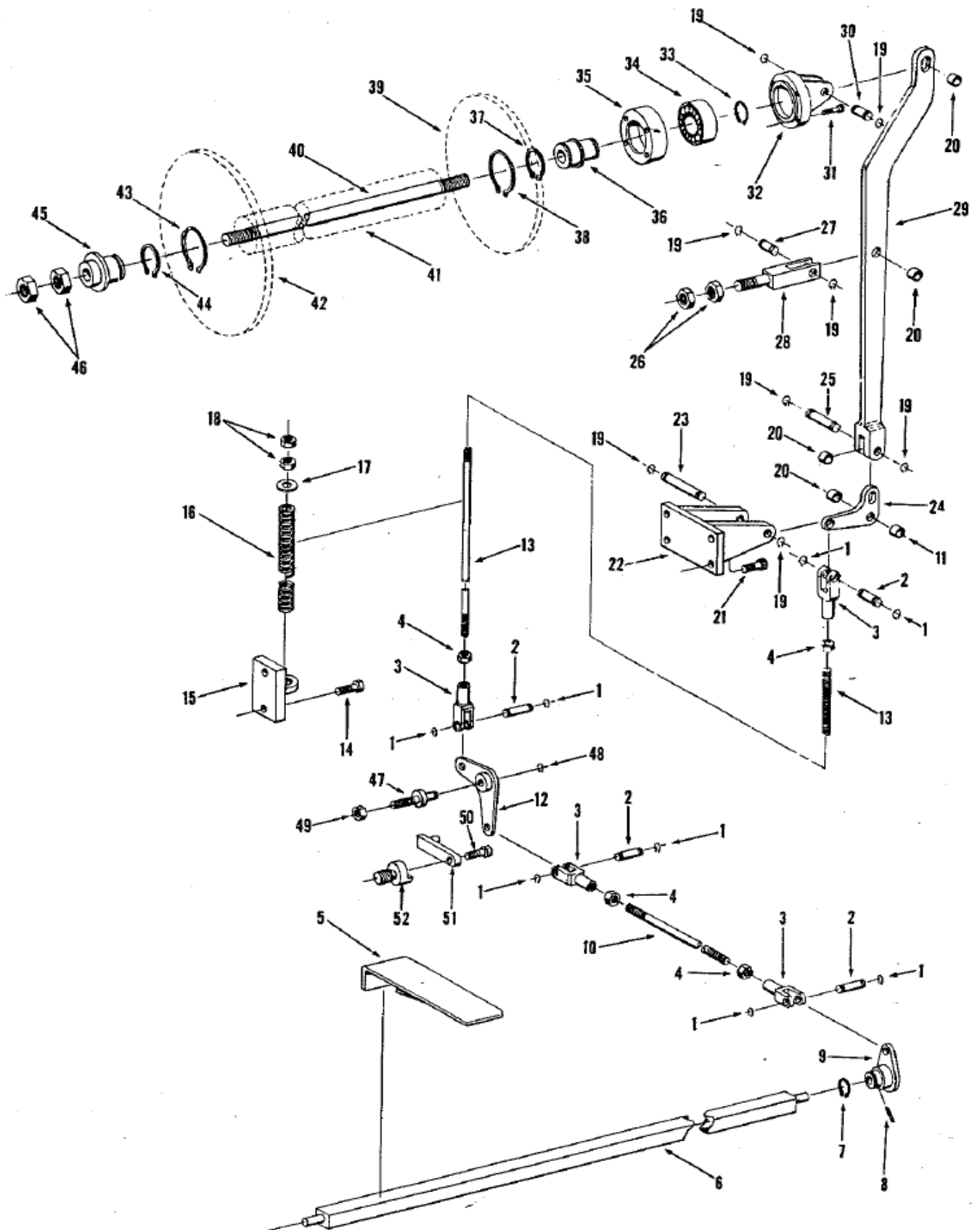


DRIVE - MECHANICAL CLUTCH & BRAKE

1. Drive Belt
2. Drive Sheave
3. Key
4. Screw
5. Drive Motor
6. Screw
7. Mechanical Clutch (See parts list on page 22)
11. L.H. Flywheel Bearing
12. Flywheel
13. R.H. Flywheel Bearing
18. Screw
19. Mechanical Brake (See parts list on page 22)
22. Screw
23. Brake Mounting Ring
24. Retainer Ring
25. Retainer Ring
26. R.H. Bearing, Driveshaft
27. Collar, Driveshaft
28. Screw
29. L.H. Bearing Cartridge, Driveshaft
30. Retainer Ring
31. L.H. Bearing Driveshaft
33. Driveshaft
34. Retainer Rings (Single Speed Machines only)
35. High Speed Pinion

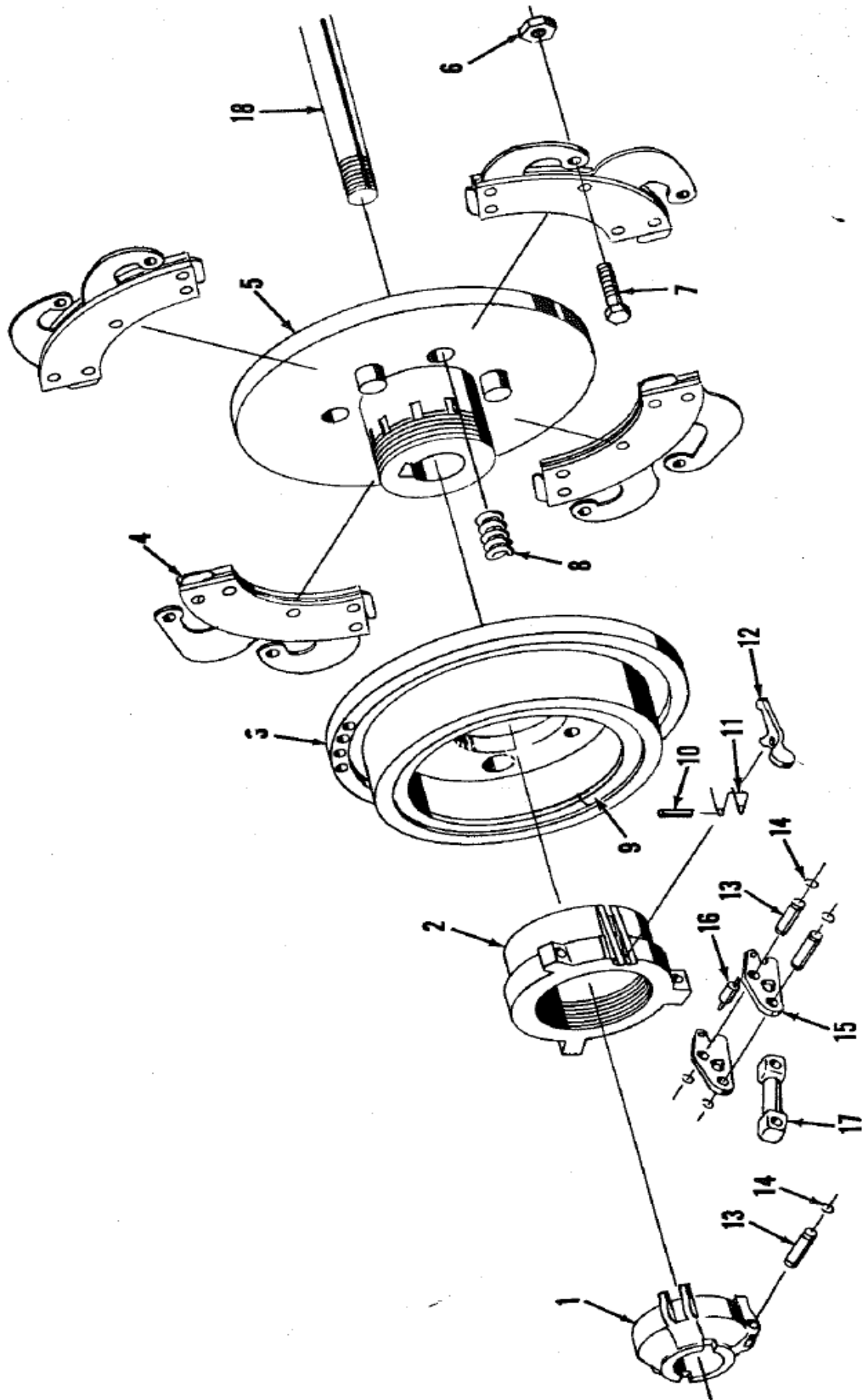
TWO SPEED MACHINES ONLY

36. Roll Pin
37. Retainer Ring
38. Shifting Fork Pinion
39. Shifting Fork Shaft
40. Shifting Fork
41. Roll Pin
42. Shifting Fork Rod Lock
43. Shifting Rod Handle Grip
44. Shifting Rod Handle
45. Roll Pin
46. Lower Shifting Rod Collar
47. Shifting Rod
48. Pinion Key
49. Screw
50. Upper Handwheel Shaft Bracket
51. Lower Handwheel Shaft Bracket



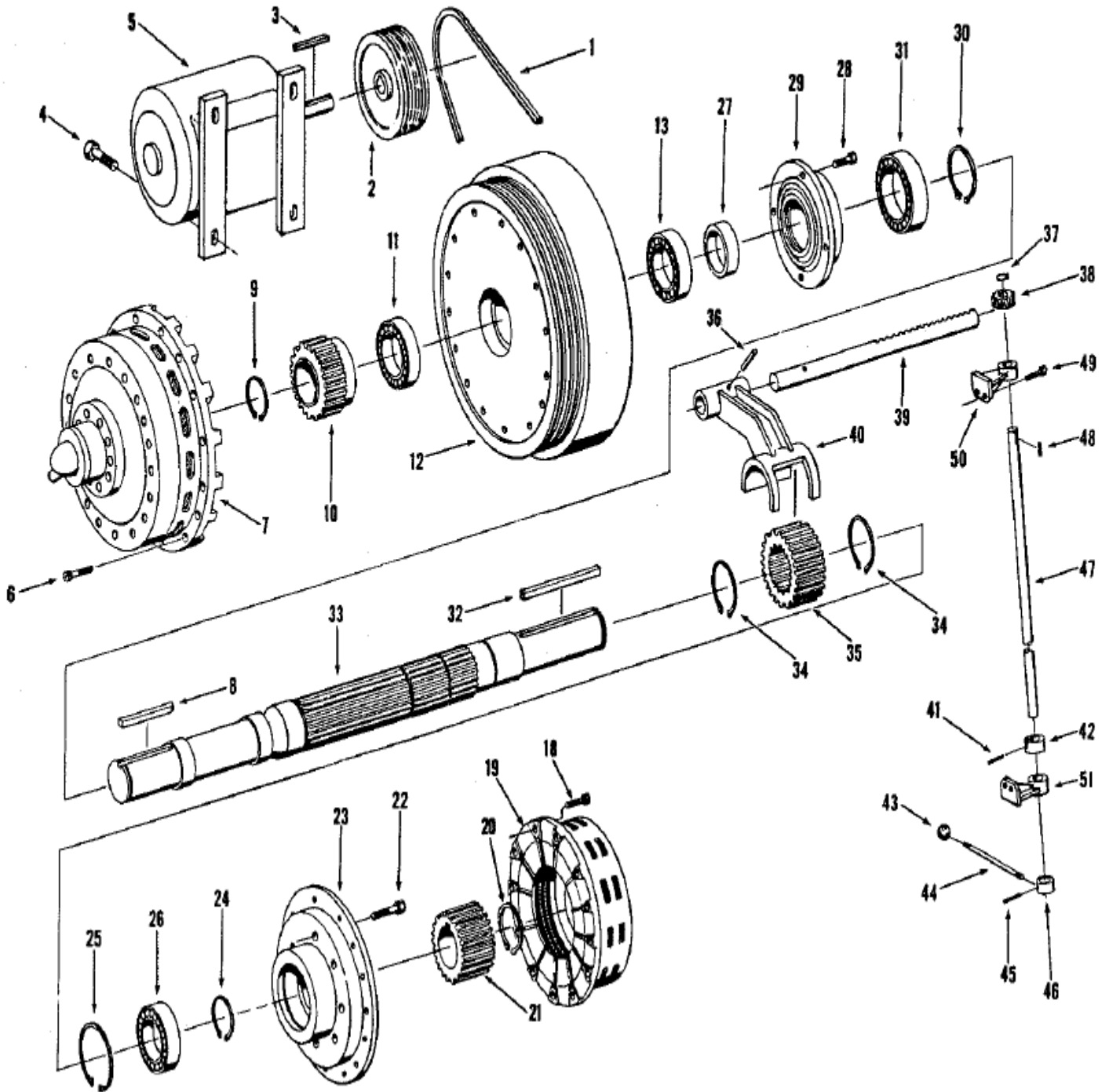
MECHANICAL TREADLE MECHANISM

1. Retainer Rings
2. Clevis Pins
3. Clevis
4. Jam Nuts
5. Foot Pedal
6. Treadle Shaft
7. Retainer Ring
8. Roll Pin
9. Bell Crank
10. Lower Treadle Rod
11. Spacers
12. Lower Rocker Arm
13. Upper Treadle Rod
14. Screw
15. Spring Bracket
16. Spring
17. Washer
18. Jam Nuts
19. Retainer Rings
20. Bushings
21. Screw
22. Bell Crank Bracket
23. Pin
24. Upper Bell Crank
25. Pin
26. Jam Nuts
27. Pin
28. Pivot Arm Bracket
29. Pivot Arm
30. Pin
31. Screw
32. Bearing Retainer Cap
33. Retainer Ring
34. Bearing
35. Bearing Retainer, throwout Rod
36. Drawrod Retainer
37. Retainer Ring
38. Retainer Ring
39. Mechanical Brake (See parts list on page 22)
40. Drawrod
41. Driveshaft (See parts list on page 18)
42. Mechanical Clutch (See parts list on page 22)
43. Retainer Ring
44. Retainer Ring
45. Adjustable Retainer, Drawrod
46. Retainer Locknuts
47. Pin, Lower Rocker Arm
48. Retainer Ring
49. Nut
50. Shoulder Bolt
51. Treadle Lock Latch
52. Latch Pin



MECHANICAL FRICTION CLUTCH (& BRAKE)

1. Shifter Collar
2. Adjusting Ring
3. Hub
4. Drive Disc Assembly
5. Driving Plate
6. Adjusting Nut
7. Hex Head Capscrew
8. Spring
9. Push Ring
10. Roll Pin
11. Spring
12. Release Latch
13. Pin (9 Req.)
14. Snap Ring (18 Req.)
15. Toggle (6 Req.)
16. Pin (3 Req.)
17. Toggle Lever (3 Req.)
18. Drawrod (See Page 20)

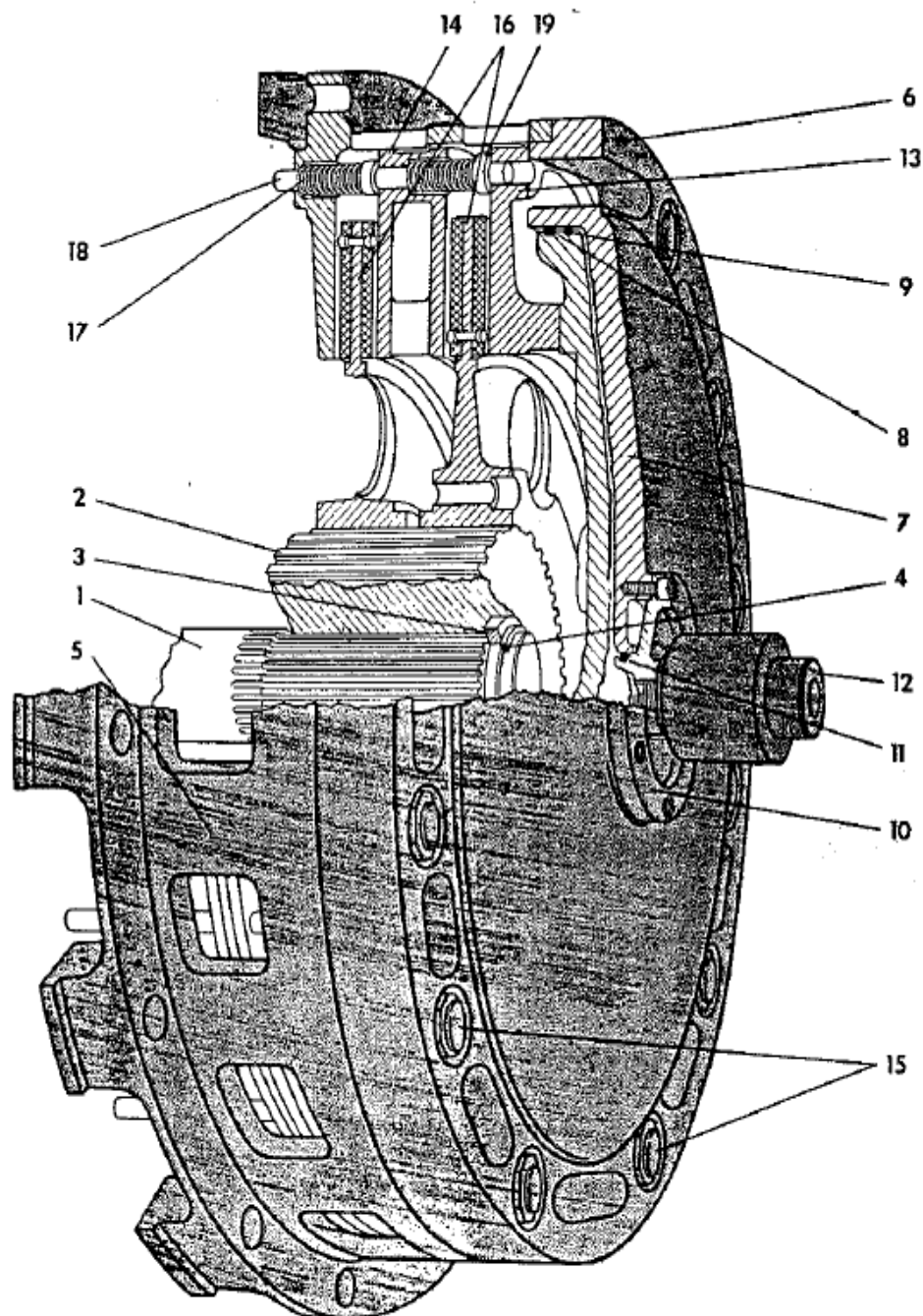


DRIVE - AIR FRICTION CLUTCH & BRAKE

1. Drive Belt
2. Drive Sheave
3. Key
4. Screw
5. Drive Motor
6. Screw
7. Air Friction Clutch (See Parts List on Page 26)
8. Clutch Key
9. Retainer Ring
10. Driving Hub
11. L.H. Flywheel Bearing
12. Flywheel
13. R.H. Flywheel Bearing
14. Brake Mounting Screw
15. Air Releasing Disc Brake (See Parts List on Page 28)
16. Retainer Ring
17. Brake Collar
18. Screw
19. Brake Mounting Ring
20. Retainer Ring
21. Retainer Ring
22. R.H. Bearing, Driveshaft
23. Collar, Driveshaft
24. Screw
25. L.H. Bearing Cartridge, Driveshaft
26. Retainer Ring
27. L.H. Bearing Driveshaft
28. Brake Key
29. Driveshaft
30. Retainer Rings (Single Speed Machines Only)
31. High Speed Pinion

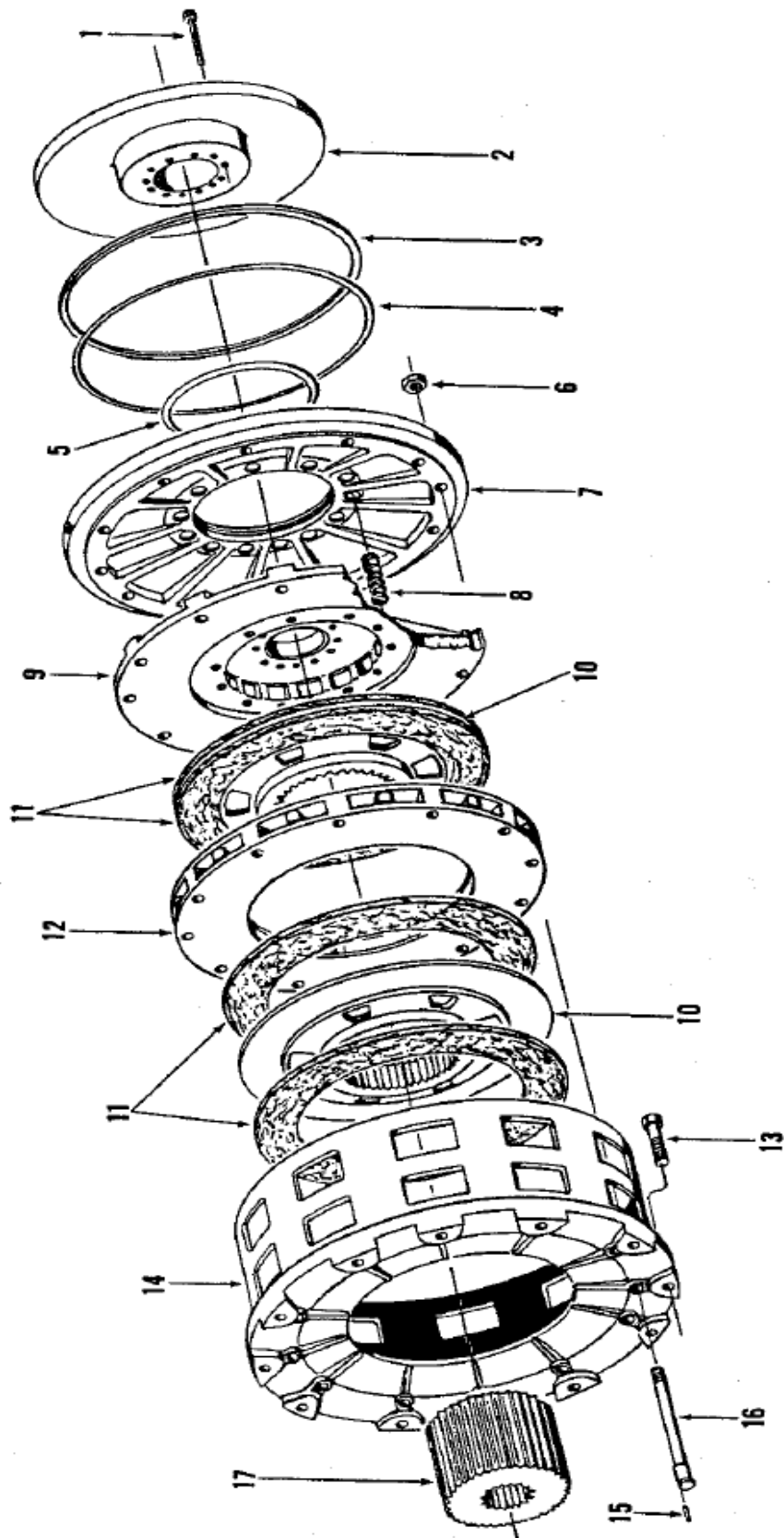
TWO SPEED MACHINES ONLY

32. Roll Pin
33. Retainer Ring
34. Shifting Fork Pinion
35. Shifting Fork Shaft
36. Shifting Fork
37. Roll Pin
38. Shifting Fork Rod Lock
39. Shifting Rod Handle Grip
40. Shifting Rod Handle
41. Roll Pin
42. Lower Shifting Rod Collar
43. Shifting Rod
44. Pinion Key
45. Screw
46. Upper Handwheel Shaft Bracket
47. Lower Handwheel Shaft Bracket



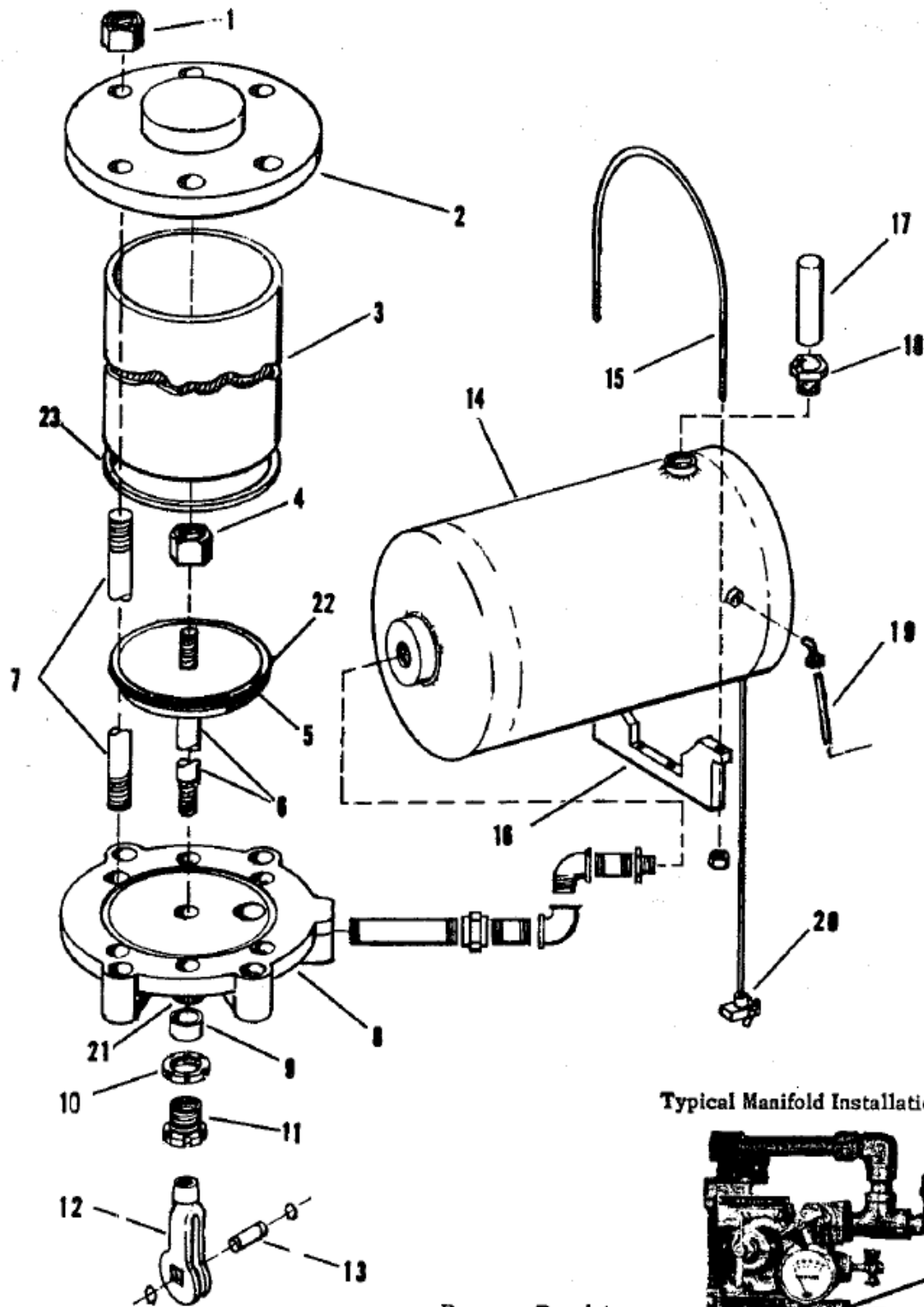
AIR FRICTION CLUTCH-TYPE LI-P

1. Drive Shaft
2. Driving Hub
3. Driving Hub Retaining Ring
4. Clutch Snap Ring
5. Clutch Housing
6. Clutch Cylinder
7. Clutch Piston
8. Piston Wiper
9. Piston 'O' Ring
10. Rotary Air Seal Adapter
11. Adapter 'O' Ring
12. Rotary Air Seal
13. Pressure Plate
14. Inner Pressure Plate
15. Pressure Plate Guides and Nut
16. Friction Disc
17. Spreader Spring
18. Spring Guide
19. Guide Collar

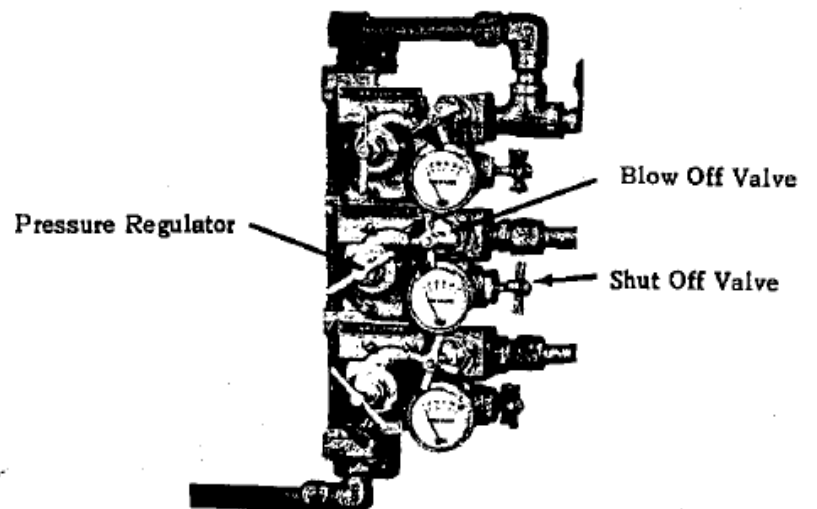


AIR RELEASING DISC BRAKE

1. Piston Screw
2. Piston
3. Piston Dust Seal
4. Piston Ring (outer)
5. Piston Ring (inner)
6. Cylinder Stud Nut
7. Cylinder
8. Spring
9. Pressure Plate
10. Brake Disc
11. Brake Lining
12. Center Plate
13. Brake Ring Mounting Screw
14. Brake Ring
15. Brake Stud Pin
16. Brake Stud
17. Brake Hub
18. Lining Rivet (not shown)

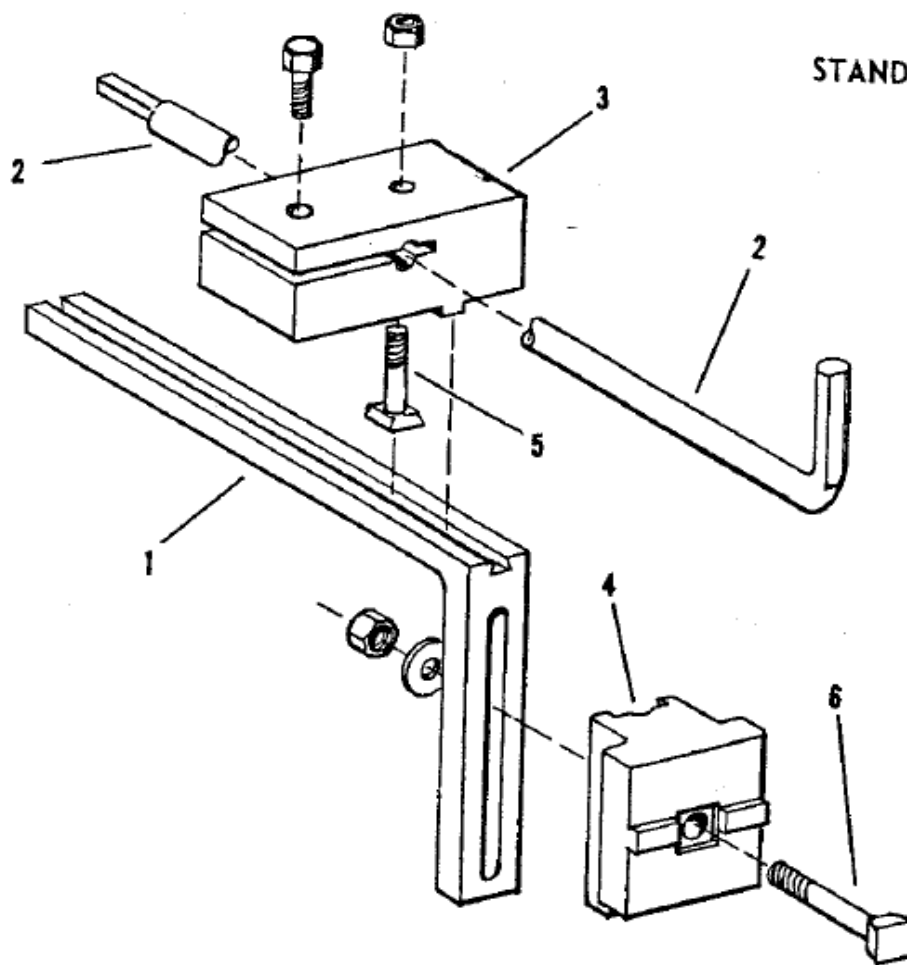


Typical Manifold Installation



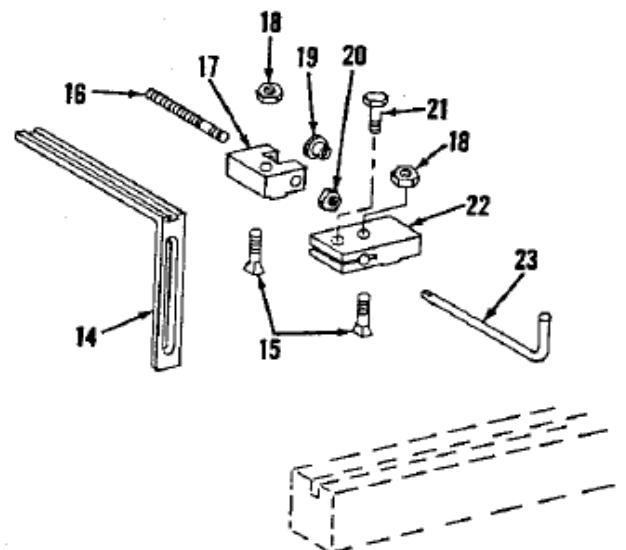
AIR COUNTERBALANCE AND TANK (OPTIONAL)

1. Tie Rod Nut
2. Upper Cylinder Cap
3. Counterbalance Cylinder
4. Piston Rod Nut
5. Piston
6. Piston Rod
7. Tie Rod
8. Lower Cylinder Cap
9. Sleeve
10. Lock Nut
11. Compression Nut
12. Clevis
13. Retainer Ring Pin
14. Air Tank
15. Tank Rod
16. Tank Bracket
17. Safety Valve
18. Bushing
19. Air Supply Line
20. Petcock
21. Stuffing Box Packing
22. Piston Packing
23. Velumoid Gasket



STANDARD BACKGAGE

MICROMETER TYPE BACKGAGE



STANDARD BACKGAGE

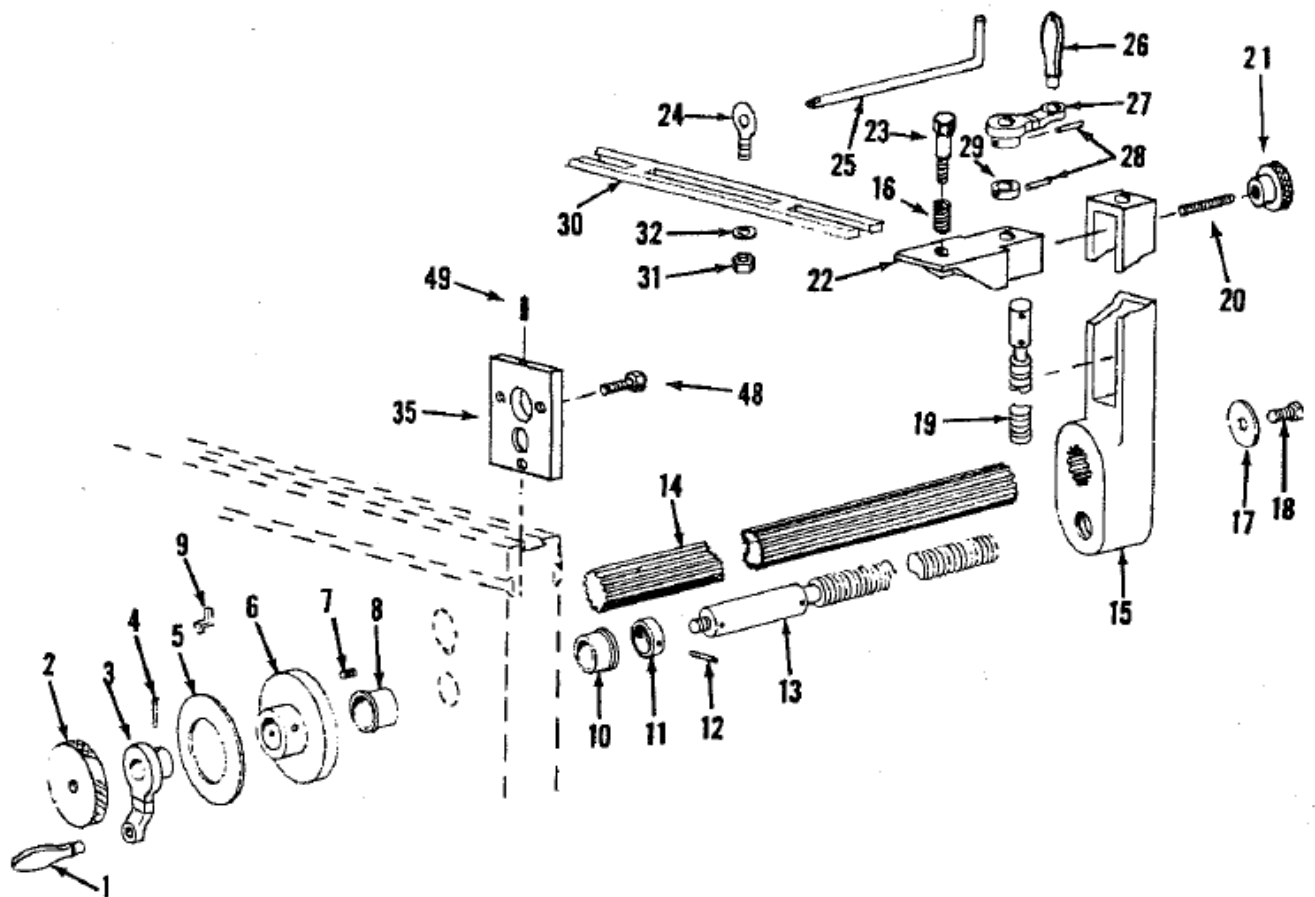
1. Backgage Bracket
2. Backgage Finger
3. Finger Support
4. Backgage Base
5. "V" Head Bolt
6. Tee Bolt

MICROMETER TYPE BACKGAGE

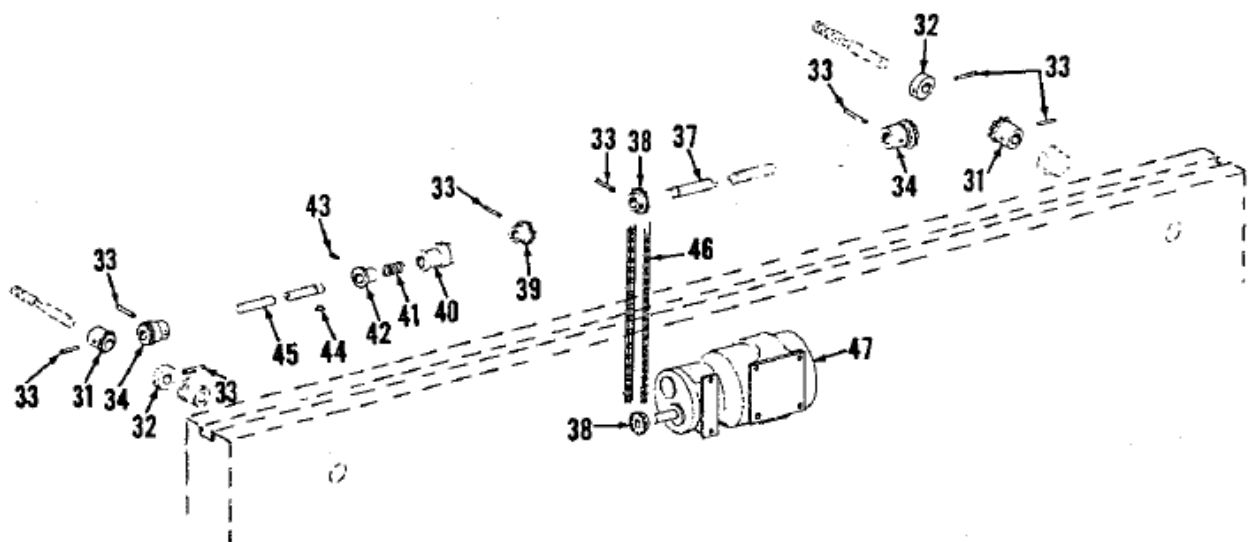
(OPTIONAL)

14. Bracket
15. Tee Bolt
16. Micrometer Stud
17. Micrometer Support
18. Nut
19. Micrometer Nut
20. Jam Nut
21. Hex HD Cap Screw
22. Finger Support
23. Finger

FRONT OPERATED MICROMETER BACKAGE



FRONT OPERATED-POWER DRIVEN-MICROMETER BACKAGE



**FRONT OPERATED MICROMETER BACKGAGE
(OPTIONAL)**

- | | |
|------------------------|--------------------------------------|
| 1. Handle | 19. Upright Adjusting Screw |
| 2. Hand Knob | 20. Stud |
| 3. Hand Crank | 21. Knurled Knob |
| 4. Roll Pin | 22. Support Arm |
| 5. Handwheel Dial Face | 23. Shoulder Bolt |
| 6. Dial | 24. Finger Bolt |
| 7. Set Screw | 25. Finger |
| 8. Bushing | 26. Handle |
| 9. Pointer | 27. Hand Crank |
| 10. Bushing | 28. Roll Pin |
| 11. End Collar | 29. End Collar |
| 12. Roll Pin | 30. Finger Rest |
| 13. Adjusting Screw | 31. Nut |
| 14. Splined Shaft | 32. Washer |
| 15. Upright | 35. R.H. Support Bracket |
| 16. Spring | 36. L.H. Support Bracket (Not Shown) |
| 17. Washer | 48. Capscrew |
| 18. Capscrew | 49. Set Screw |

**FRONT OPERATED-POWER DRIVEN-MICROMETER BACKGAGE
(OPTIONAL)**

- | | |
|---------------------|------------------|
| 31. Bevel Gear | 41. Spring |
| 32. End Collar | 42. Collar |
| 33. Roll Pin | 43. Set Screw |
| 34. Bevel Gear | 44. Woodruff Key |
| 37. Shaft | 45. Shaft |
| 38. *Sprocket | 46. *Chain |
| 39. Coupling Gear | 47. *Motor |
| 40. Coupling Sleeve | |

*SUPPLIED WHEN MOTOR OPERATED ONLY