

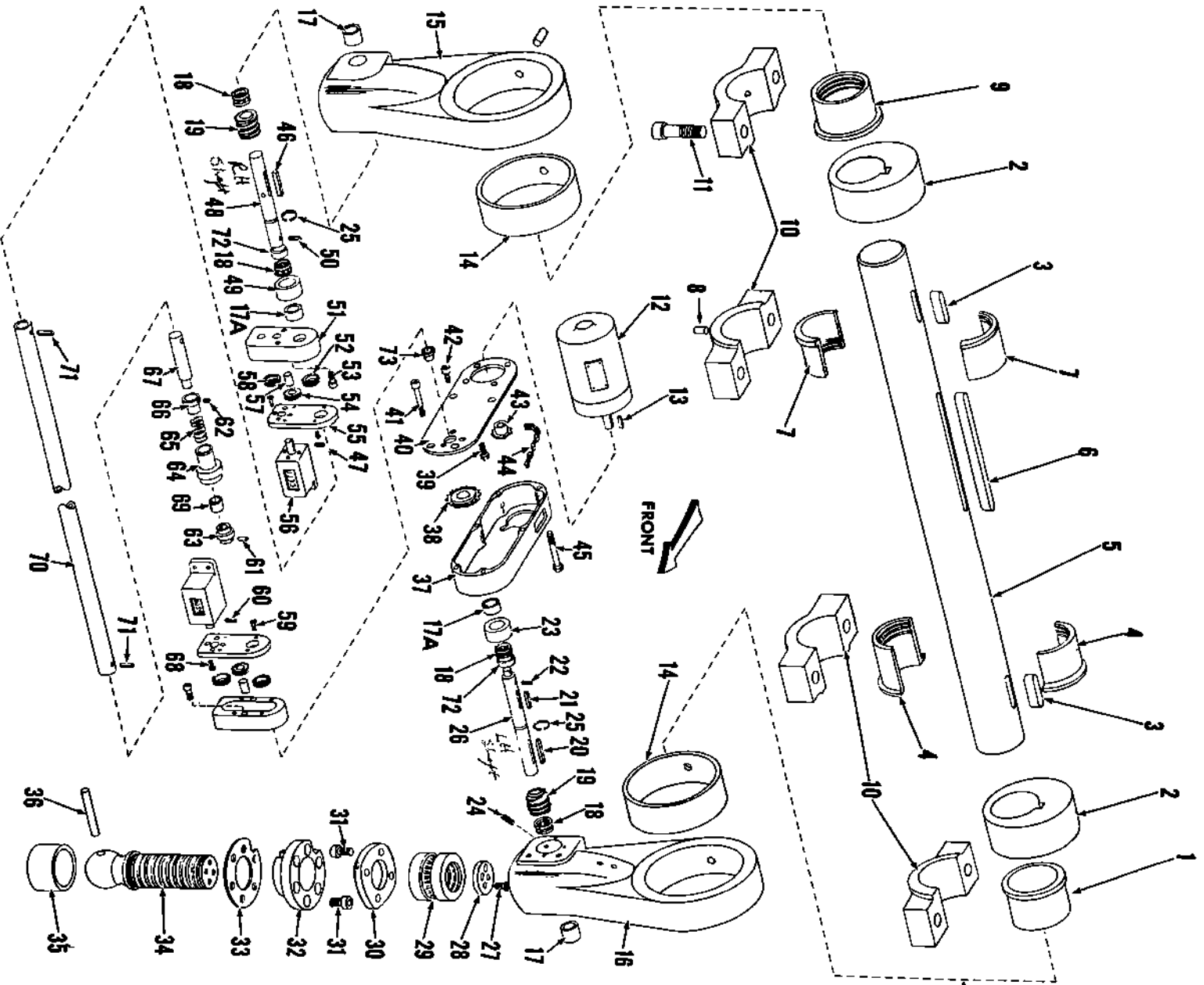
SEC. 4: PARTS LIST

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 AND RAM

1. Die Rail
2. Washer
3. Die Rail Screw
4. Die Adjustment Set Screw
5. Main Motor Control
6. Frame
7. Ram
10. Adjustment Switch Rear Cover
11. Adjustment Switch Front Cover
12. Socket Head Cap Screws
13. Punch Clamping Bar Screws
14. Punch Clamping Bar
15. Clamping Bar Locknut
16. Spring
17. Gib Screws
18. Left Gib
19. Rear Non-Metallic Liner
20. Front Non-Metallic Liner
21. Dowel
22. Lock Nut
23. Adjusting Screw
24. Cap Screw
25. Pivot Adjusting Block
26. Cap Screw
27. Pivot Block Cover
28. Pivot Block
29. Pivot Shoes
30. Right Gib
- * 31. Ram Adjustment Switch
36. Set Screw
37. Plug
38. Hand Rail
39. Mounting Screw
40. Rail Support

* Not Shown



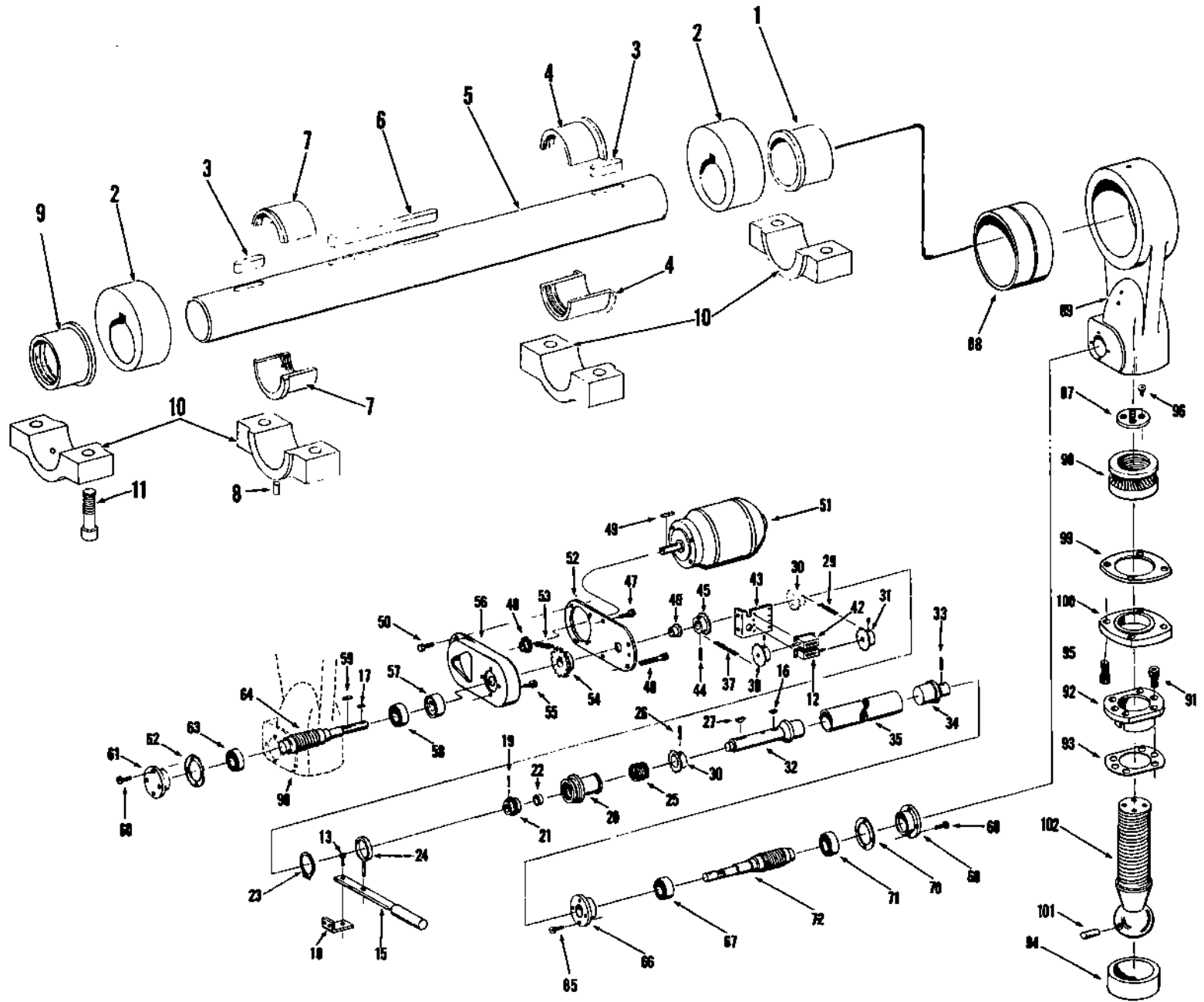
ECCENTRIC SHAFT AND RAM ADJUSTING MECHANISM

(IB - 60 shown — IB - 36: Please specify
right or left hand, facing front of
machine.)

1.	Bronze Bushing	37.	Sprocket Box
2.	Eccentric Cam	38.	Large Sprocket
3.	Eccentric Cam Keys	39.	Motor Screw
4.	Split Flanged Bronze Bushing	40.	Box Cover
5.	Eccentric Shaft	41.	Sprocket Box Mounting Screws
6.	Gear Reducer Key	42.	Cover Screws
7.	Split Bronze Bushing	43.	Small Sprocket
8.	Dowel	44.	Chain
9.	Flanged Bronze Bushing	45.	Motor Screw
10.	Bearing Caps	46.	Worm Key
11.	Socket Head Cap Screws	47.	Roll Pin
12.	Ram Adjusting Motor	48.	Left Adjusting Shaft <i>LH shaft</i>
13.	Motor Shaft Key	49.	Bearing Retainer
14.	Connection Bushing	50.	Roll Pin
15.	Left Connection	51.	Gear Box
16.	Right Connection	52.	Shaft Gear
17.	Bronze Bushing	53.	Gear Box Mounting Screw
17A	Bronze Bushing	54.	Idler Gear
18.	Thrust Bearings	55.	Gear Box Cover
19.	Worm	56.	Counter
20.	Worm Key	57.	Idler Shaft
21.	Sprocket Key	58.	Counter Gear
22.	Roll Pin	59.	Cover Screw
23.	Bearing Retainer	60.	Roll Pin
24.	Retainer Set Screw	61.	Roll Pin
25.	Snap Ring	62.	Set Screw
26.	Right Adjusting Shaft <i>LH shaft</i>	63.	Coupling Gear
27.	Stop Plate Screws	64.	Adjusting Sleeve
28.	Stop Plate	65.	Spring
29.	Adjusting Nut	66.	Sleeve Stop
30.	Connection Cover	67.	Inner Worm Shaft
31.	Socket Head Capscrews	68.	Counter Screws
32.	Ball Cover Right Hand	69.	Bushing
32A	Left Hand Ball Cover	70.	Adjusting Shaft Connection Tube
33.	Shims	71.	Roll Pins
34.	Ball Screw	72.	Spacer
35.	Ball Seat	73.	Bushing
36.	Ball Pin		

For Multi-Bender - See pages 24 & 25

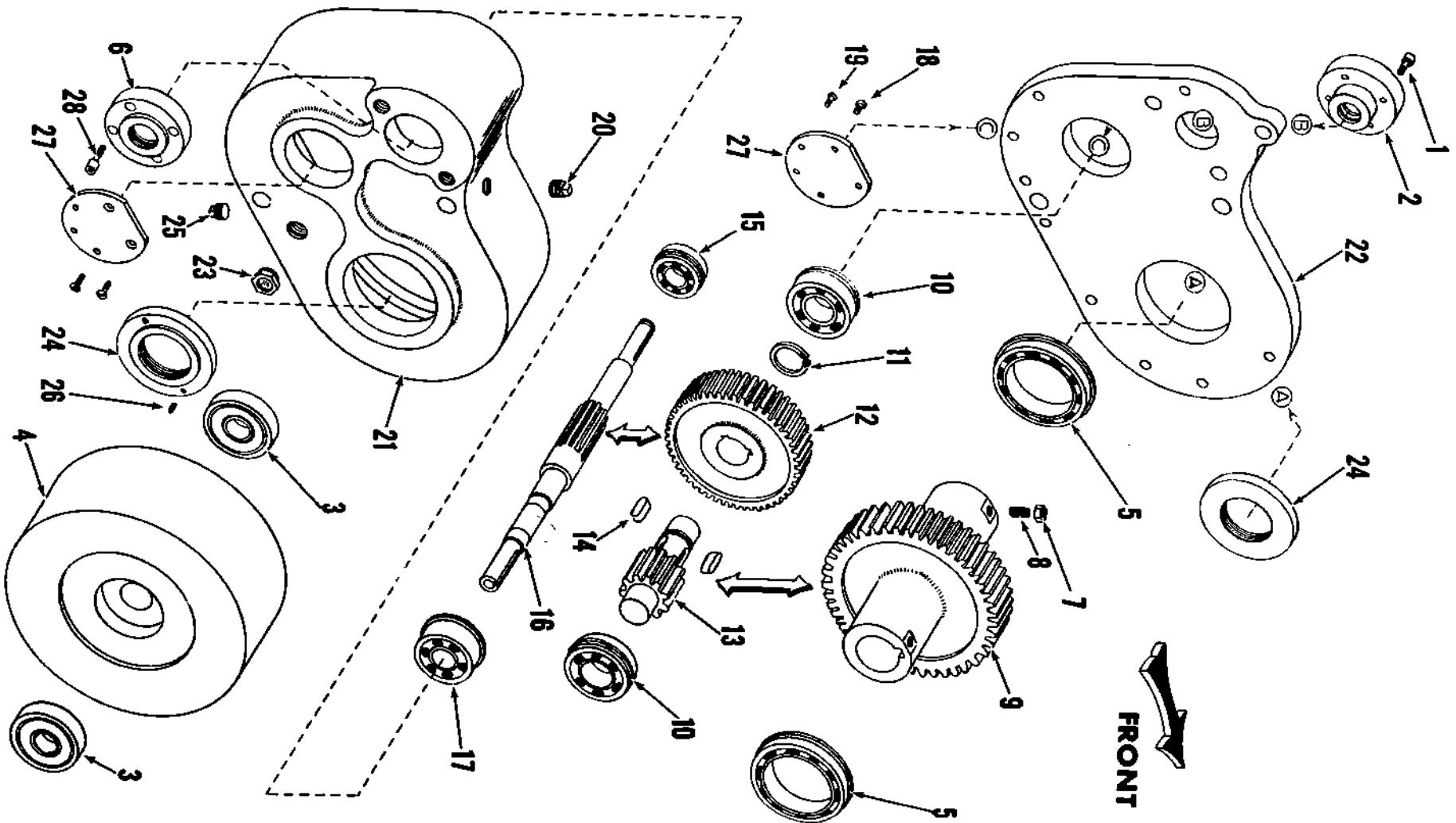
** 1/2" w/ shaft
removed by keyway*



- | | |
|-------------------------------------|------------------------------------|
| 1. Bronze Bushing | 49. Key |
| 2. Eccentric Cams | 50. Motor Screw |
| 3. Eccentric Cam Keys | 51. Motor |
| 4. Split Flanged Bronze Bushing | 52. Gear Box Cover |
| 5. Eccentric Shaft | 53. Chain |
| 6. Gear Reducer Key | 54. Drive Sprocket |
| 7. Split Bronze Bushing | 55. Screw |
| 8. Dowel | 56. Gear Box |
| 9. Flanged Bronze Bushing | 57. L.H. Inboard Bearing Retainer |
| 10. Bearing Caps | 58. L.H. Inboard Bearing |
| 11. Socket Head Cap Screws | 59. Key |
| 12. R. H. Counter | 60. Screw |
| 13. Screw | 61. L.H. Outboard Bearing Retainer |
| 15. Disengaging Handle | 62. Shim |
| 16. R. H. Driving Sprocket Key | 63. L.H. Outboard Bearing |
| 17. L. H. Driving Sprocket Key | 64. L.H. Worm |
| 18. Disengaging Handle Bracket | 65. Screw |
| 19. Roll Pin | 66. R.H. Inboard Bearing Retainer |
| 20. Coupling Sleeve | 67. R.H. Inboard Bearing |
| 21. Coupling Gear | 68. Screw |
| 22. Bushing | 69. R.H. Outboard Bearing Retainer |
| 23. Retainer Ring | 70. Shim |
| 24. Disengagement Ring | 71. R.H. Outboard Bearing |
| 25. Spring | 72. R.H. Worm |
| 26. Roll Pin | 88. Connection Bushing |
| 27. Key | 89. R.H. Connection { 2 PIECES ON |
| 29. R. H. Counter Chain | 90. L.H. Connection { SOME MODELS |
| 30. R. H. Driving Sprocket | 91. Ball Cover Screw |
| 31. R. H. Counter Sprocket | 92. Ball Cover |
| 32. L.H. Trunnion | 93. Shim |
| 33. Roll Pin | 94. Ball Seat |
| 34. R. H. Trunnion | 95. Connection Cover Screw |
| 35. Adjusting Shaft Connection Tube | 96. Stop Plate Screw |
| 37. L.H. Counter Chain | 97. Stop Plate |
| 39. L.H. Counter Sprocket | 98. Adjusting Nut |
| 40. Bushing | 99. Shim |
| 42. L.H. Counter | 100. Connection Cover |
| 43. Counter Mounting Plate | 101. Dowel |
| 44. Roll Pin | 102. Ball Screw |
| 45. L.H. Driving Sprocket | |
| 46. Screw | |
| 47. Screw | |
| 48. Drive Sprocket | |

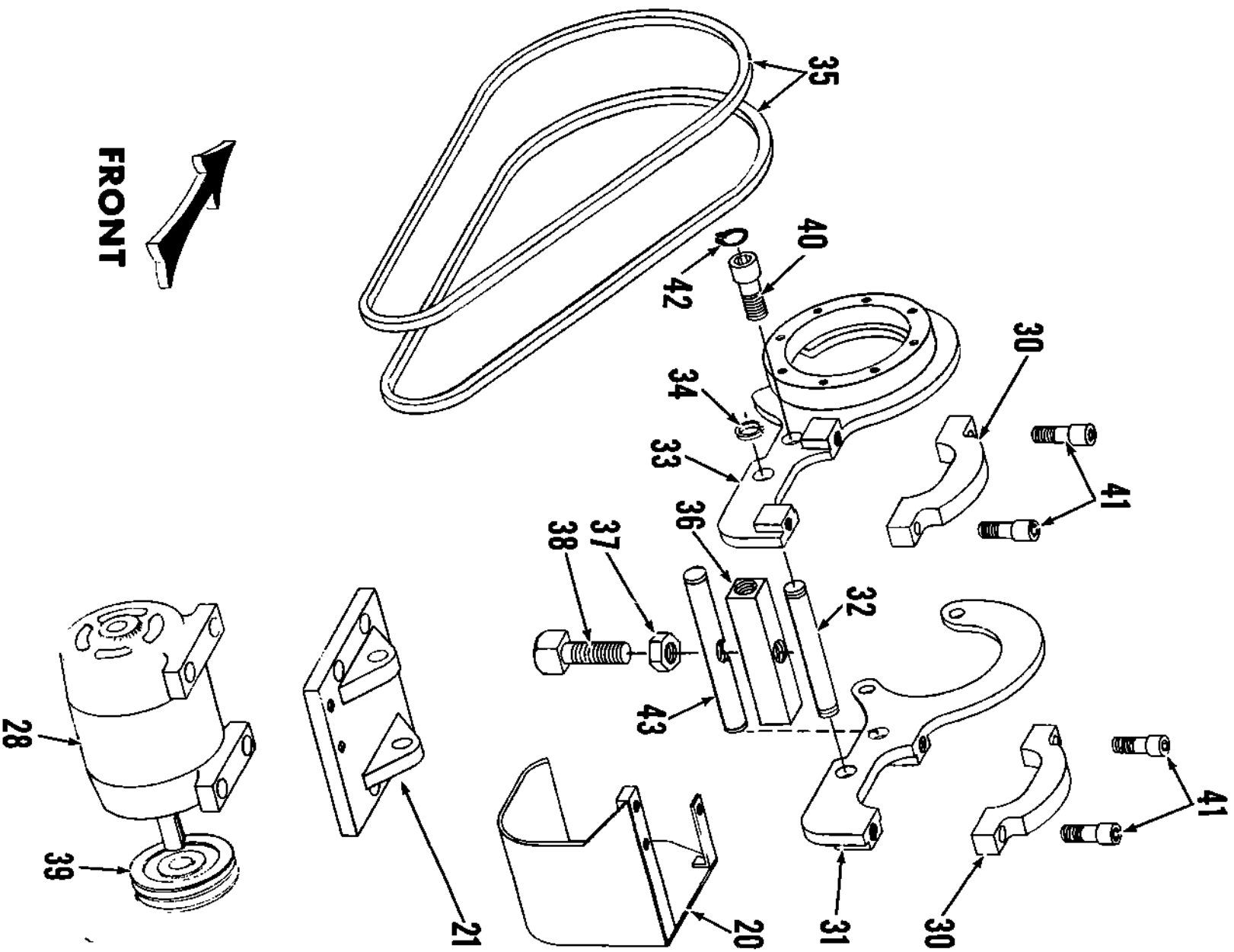
ECCENTRIC SHAFT AND RAM ADJUSTING MECHANISM

(IB - 90 - 120 - 150)



GEAR BOX

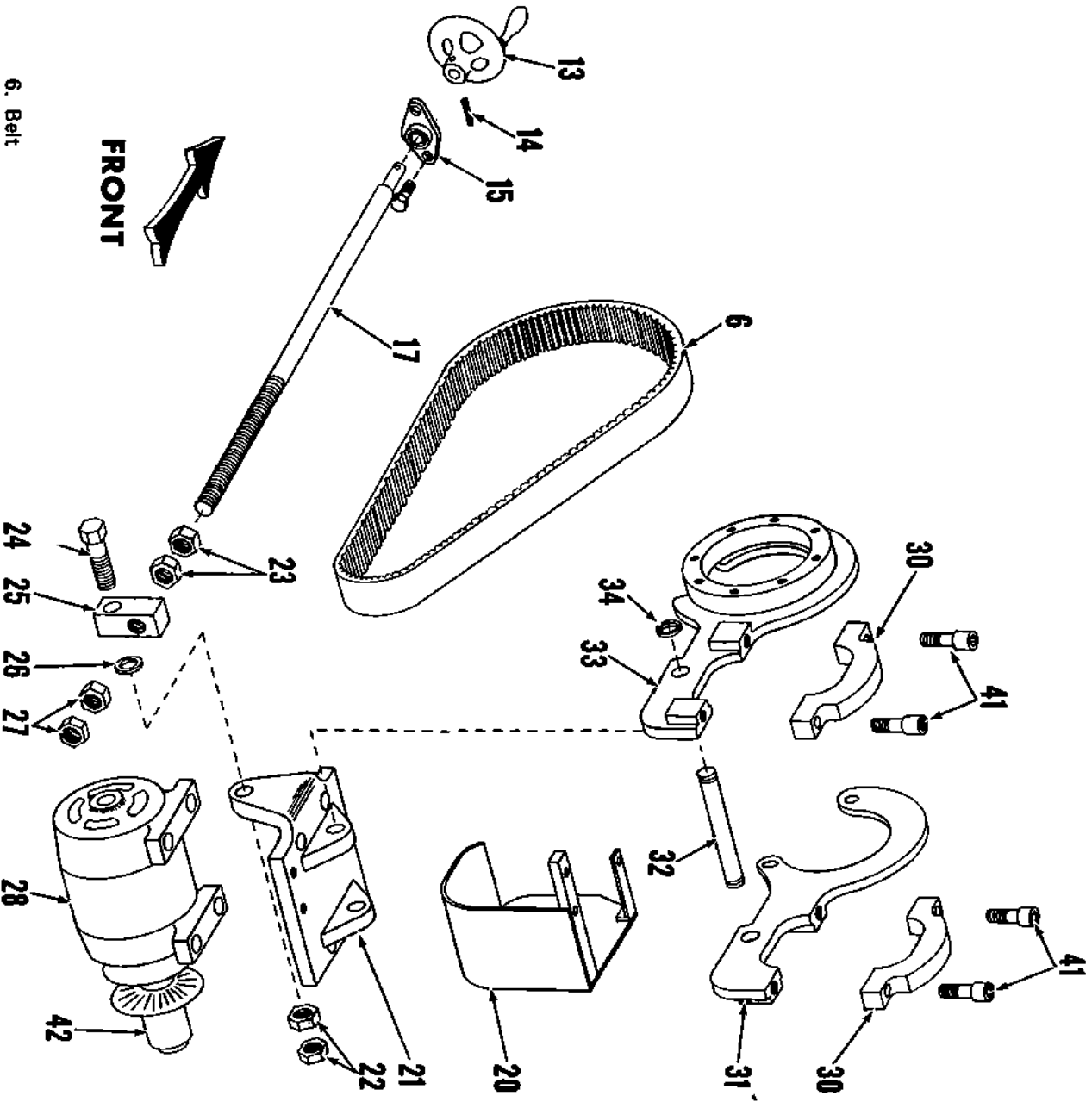
1. Socket Head Screw
2. Right Hand Bearing Cap
3. Flywheel Bearings
4. Flywheel
5. Main Gear Bearings
6. Left Hand Bearing Cap
7. Locknut
8. Set Screw
9. Main Gear and Output Hub
10. Intermediate Shaft Bearings
11. Snap Ring
12. Intermediate Gear
13. Intermediate Pinion and Shaft
14. Keys
15. Right Hand Drive Shaft Bearing
16. Driveshaft
17. Left Hand Drive Shaft Bearing
18. Countersunk Screws
19. Sockethead Screws
20. Oil Fill Plug
21. Gear Box Housing
22. Gear Box Cover
23. Oil Level Window
24. Main Bearing Cap
25. Oil Drain Plug
26. Removable Set Screw to pull No. 24
27. Bearing Cover
28. Socket Head Screw



**DRIVE MECHANISM, SINGLE SPEED
(1B - 120 & 150 PARTS INVERTED)**

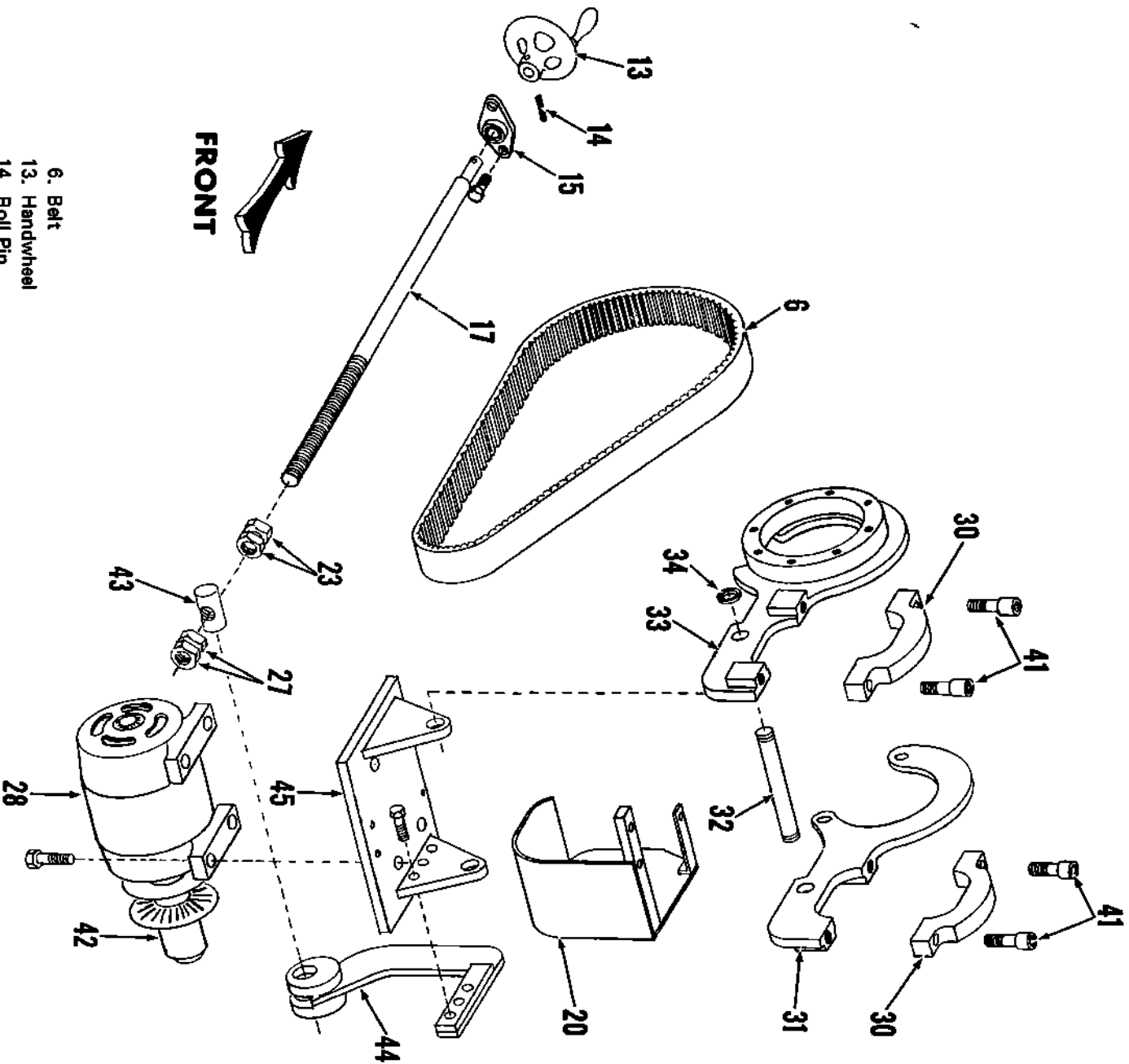
- 20. Belt Guard
- 21. Motor Plate
- 28. Motor
- 30. Support Plate Cap
- 31. Left Hand Support Plate
- 32. Pivot Pin
- 33. Right Hand Support Plate
- 34. Retainer Ring
- 35. Belts
- 36. Adjusting Block (1B - 36 & 60 only)
- 37. Locknut
- 38. Adjusting Screw
- 39. Sheave
- 40. Adjusting Block Screws (1B - 36 & 60 only)
- 41. Socket Head Screw
- 42. Retainer Ring (1B - 90 - 120 & 150 only)
- 43. Adjusting Bar (1B - 90 - 120 & 150 only)

DRIVE MECHANISM, ADJUSTABLE SPEED
(1B - 36)



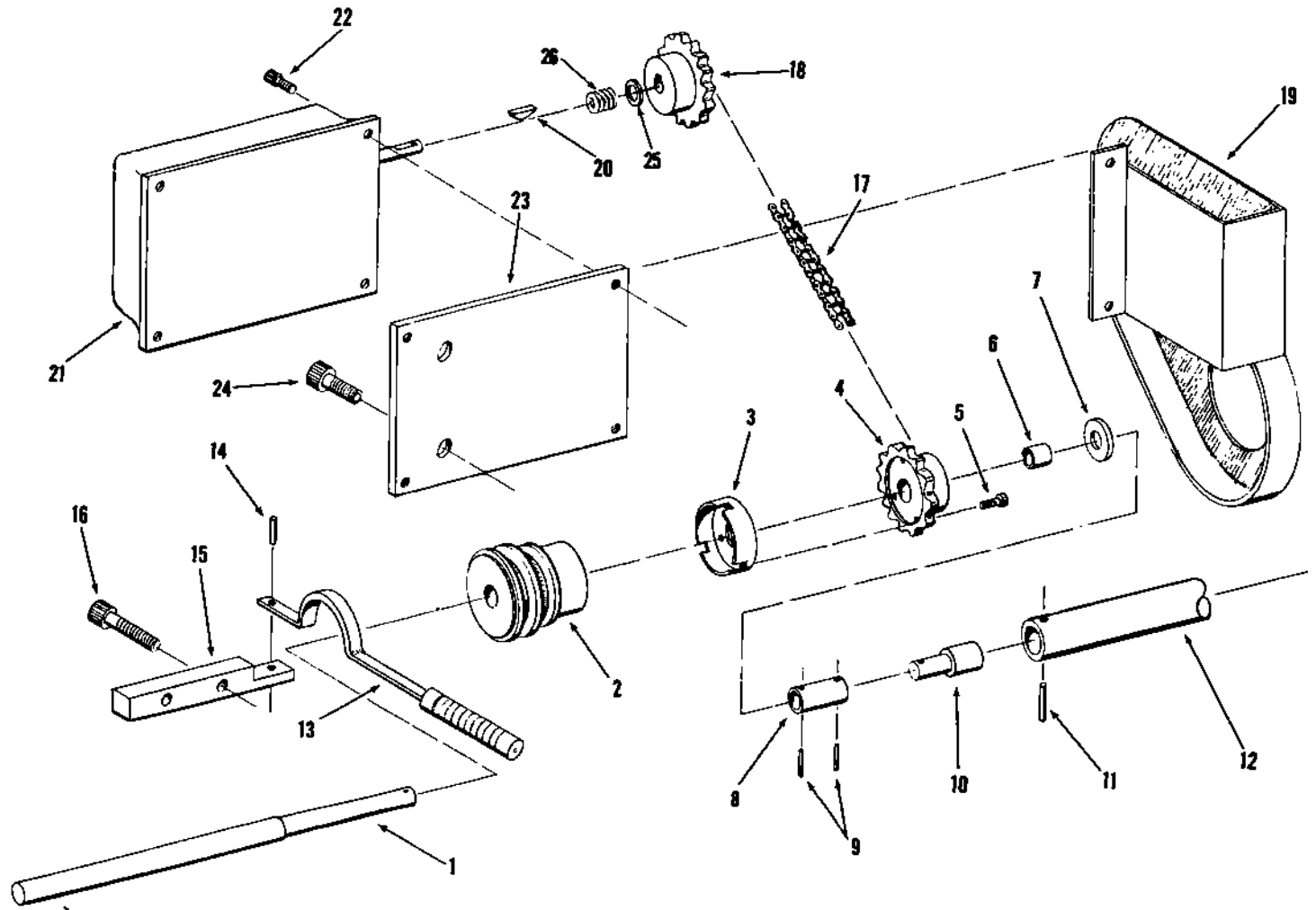
- 6. Belt
- 13. Handwheel
- 14. Roll Pin
- 15. Adjusting Shaft Bearing
- 17. Adjusting Shaft
- 20. Belt Guard
- 21. Motor Plate
- 22. Locknuts
- 23. & 27. Adjusting Screw Locknuts
- 24. Motor Plate Pivot Screw
- 25. Motor Plate Pivot
- 26. Washer
- 28. Motor and Adjustable Sheave
- 30. Support Plate Cap
- 31. Left Hand Support Plate
- 32. Pivot Pin
- 33. Right Hand Support Plate
- 34. Retainer Ring
- 41. Socket Head Screws
- 42. Pulley

DRIVE MECHANISM, ADJUSTABLE SPEED
(1B - 60 & 90)



FRONT

- 6. Belt
- 13. Handwheel
- 14. Roll Pin
- 15. Adjusting Shaft Bearing
- 17. Adjusting Shaft
- 20. Belt Guard
- 23. & 27. Adjusting Screw Locknuts
- 28. Motor and Adjustable Sheave
- 30. Support Plate Cap
- 31. Left Hand Support Plate
- 32. Pivot Pin
- 33. Right Hand Support Plate
- 34. Retainer Ring
- 41. Socket Head Screws
- 42. Pulley
- 43. Pivot Pin
- 44. Pivot Arm
- 45. Motor Base

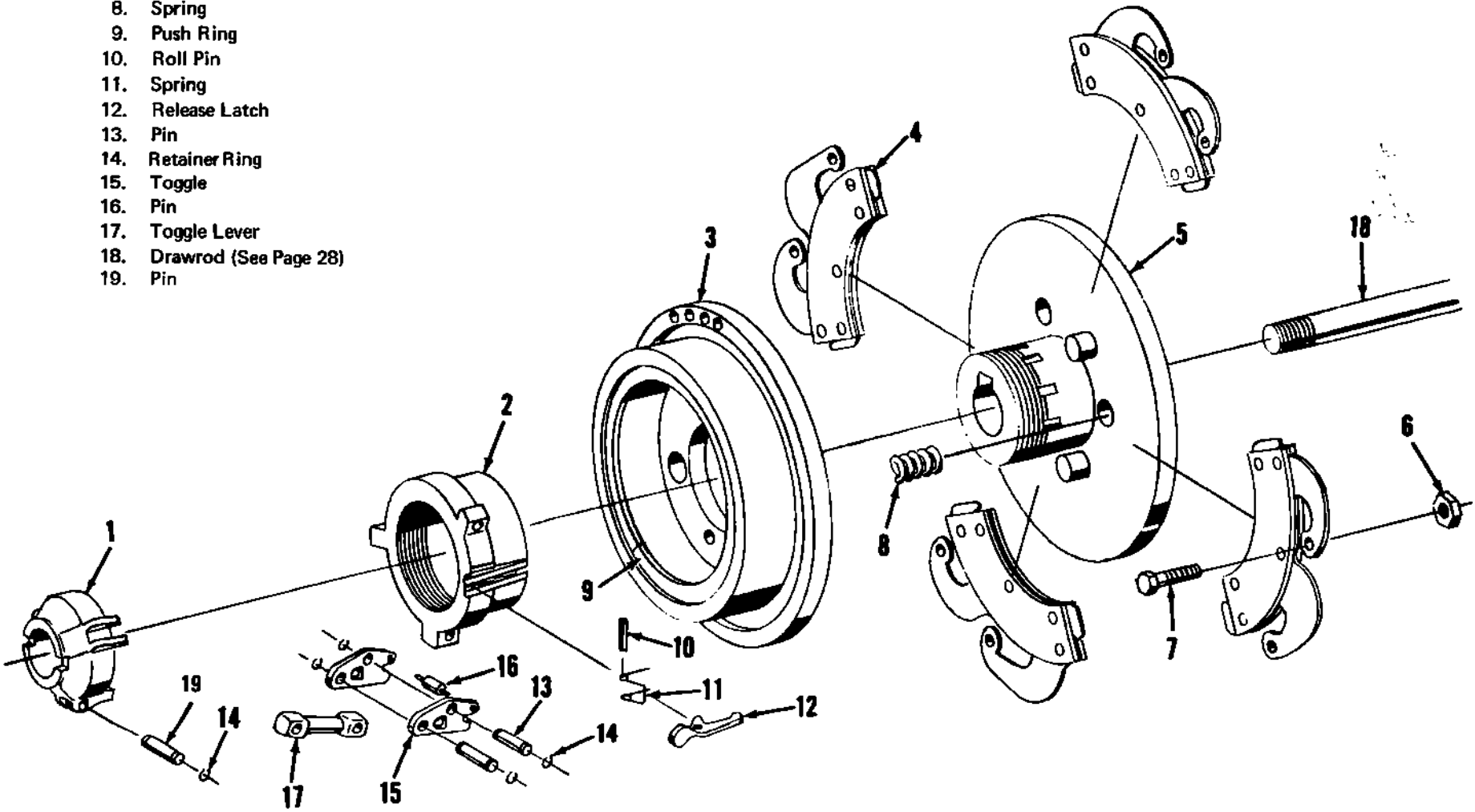


1. L.H. Adjusting Shaft
2. Clutch
3. Sprocket Driving Cup
4. Driven Sprocket
5. Screw
6. Bushing
7. Washer
8. Coupling
9. Roll Pins
10. Shaft Coupling Pin
11. Roll Pin
12. Adjusting Shaft Connection Tube
13. Disengaging Handle
14. Roll Pin
15. Handle Support (IB - 60 only)
16. Screw (IB - 60 only)
17. Link Chain
18. Driving Sprocket
19. Multi-Bender Guard (Certain Models Only)
20. Key
21. Rotary Limit Switch
22. Screw
23. Limit Switch Bracket
24. Screw
25. Brake Washer
26. Brake Spring

Arrangement Of Parts Is Reversed on Some Models.

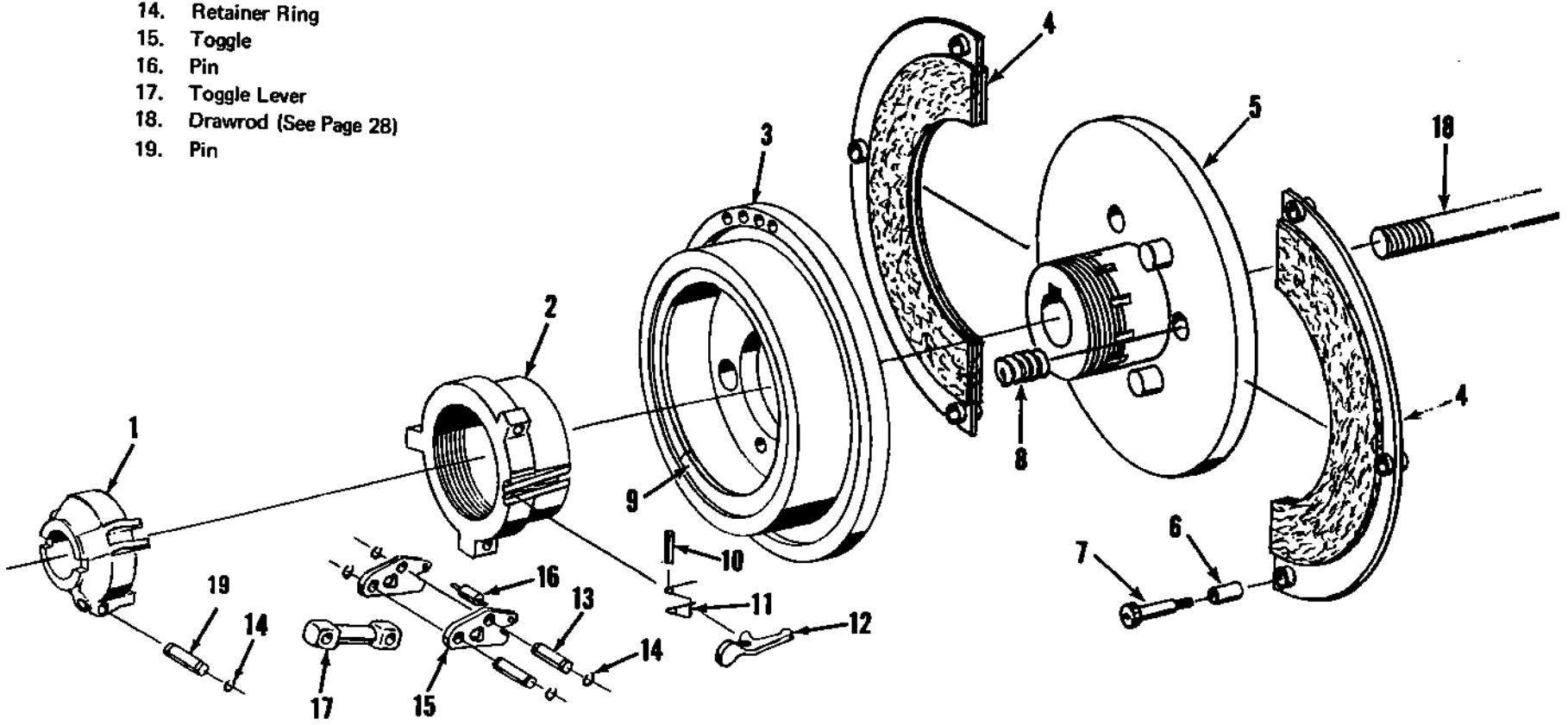
**MULTI-BENDER
(OPTIONAL)**

1. Shafter Collar
2. Adjusting Ring
3. Hub
4. 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
14. Retainer Ring
15. Toggle
16. Pin
17. Toggle Lever
18. Drawrod (See Page 28)
19. Pin

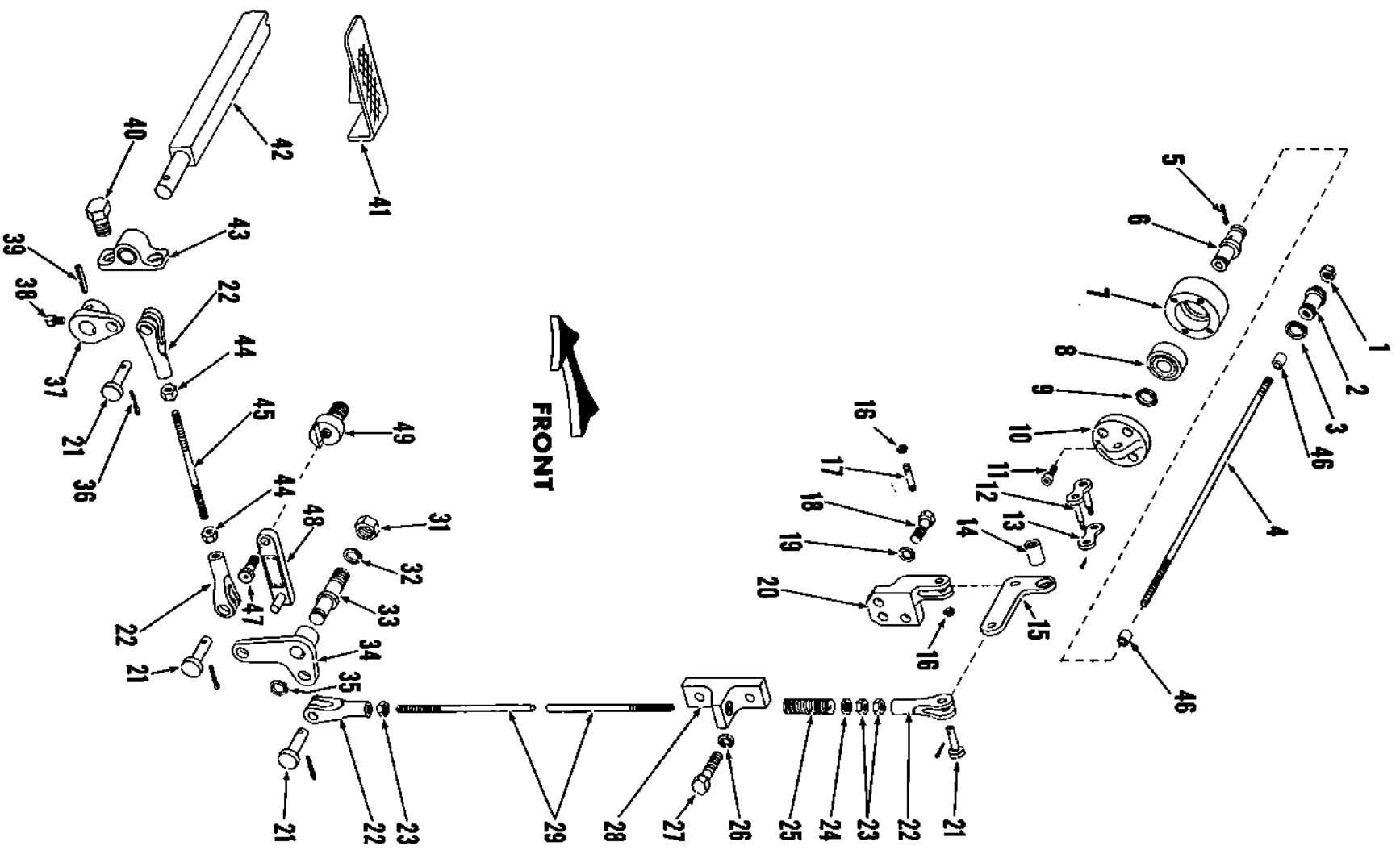


MECHANICAL FRICTION CLUTCH
(IB - 36)

1. Shafter Collar
2. Adjusting Ring
3. Hub
4. Disc Assembly
5. Driving Plate
6. Bushing
7. Shoulder Bolt
8. Spring
9. Push Ring
10. Roll Pin
11. Spring
12. Release Latch
13. Pin
14. Retainer Ring
15. Toggle
16. Pin
17. Toggle Lever
18. Drawrod (See Page 28)
19. Pin

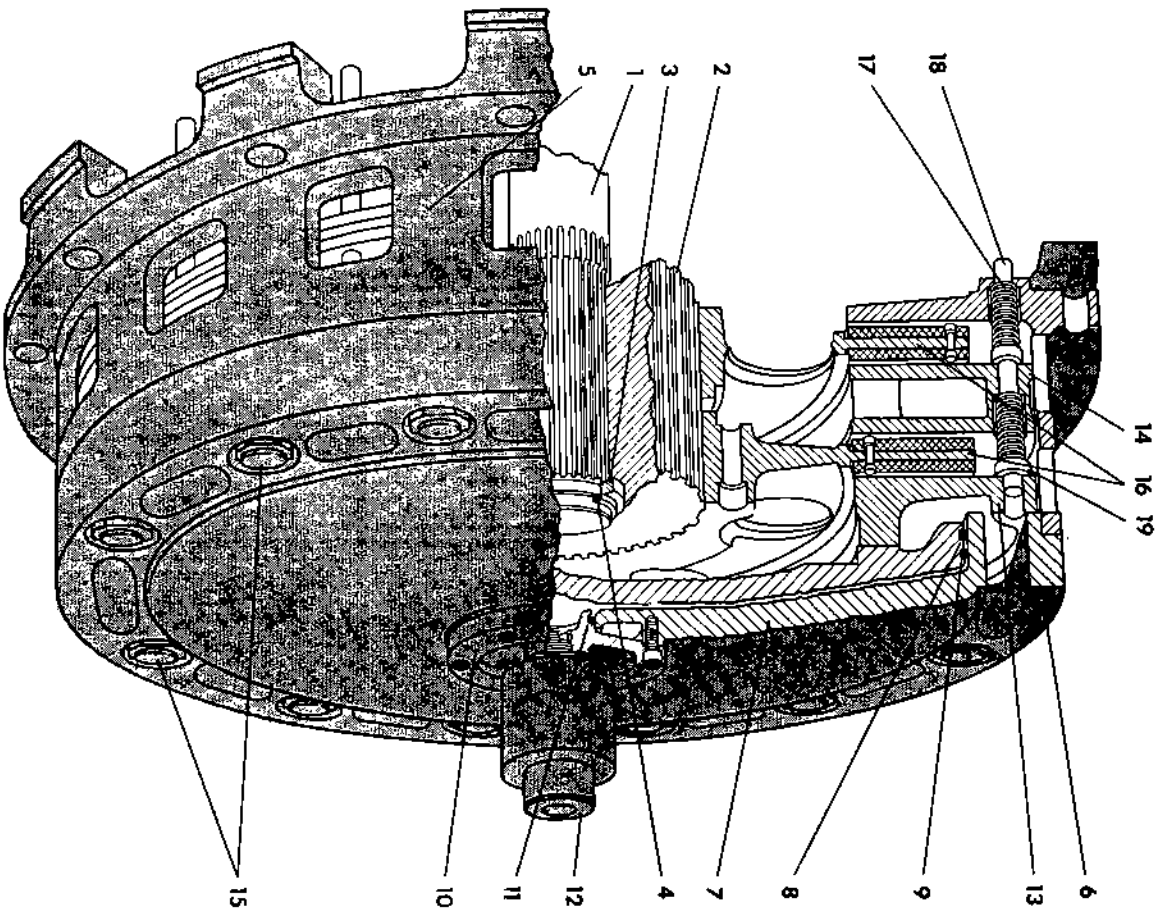


MECHANICAL FRICTION CLUTCH
(IB - 60 & UP)



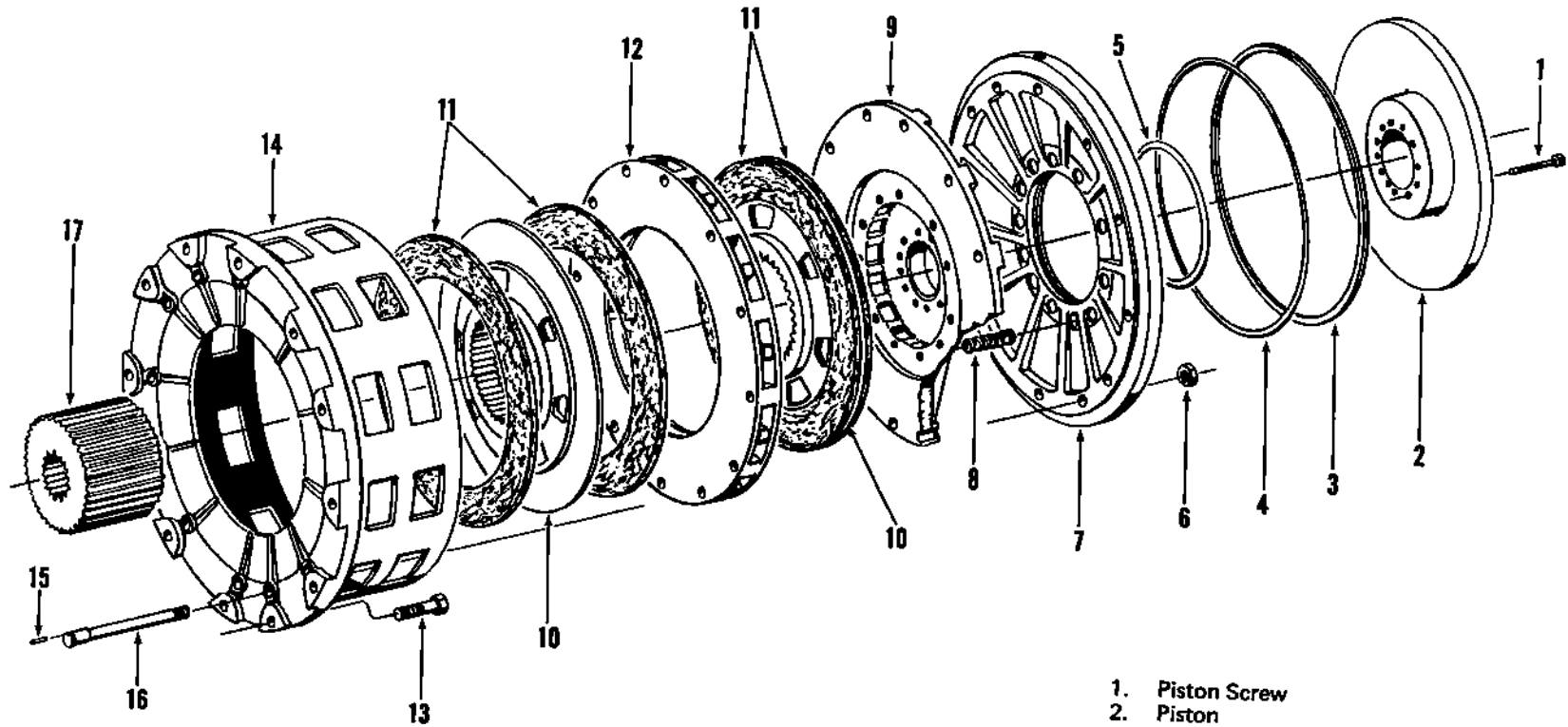
MECHANICAL TREADLE MECHANISM

1. Retainer Locknut
2. Drawrod Adjustable Retainer L.H.
3. Snap Ring
4. Drawrod - Treadle Pin
5. Roll Pin
6. Drawrod Retainer
7. Bearing Retainer
8. Sealed Bearing
9. Snap Ring
10. Bearing Retainer Cap
11. Socket Head Screws
12. Chain Link
13. Link Cap
14. Bushing
15. Upper Rocker Arm
16. Snap Ring
17. Pivot Pin
18. Cap Screw
19. Lockwasher
20. Rocker Arm Pivot Bracket
21. Pivot Pin
22. Yoke
23. Yoke Locknut
24. Washer
25. Return Spring
26. Lockwasher
27. Cap Screw
28. Spring Bracket
29. Vertical Treadle Rod
31. Locknut
32. Lockwasher
33. Rocker Arm Pin
34. Lower Rocker Arm
35. Snap Ring
36. Cotter Pin
37. Bell Crank
38. Setscrew
39. Roll Pin
40. Cap Screw (1B - 36 & 60)
41. Foot Pedal
42. Foot Treadle Shaft
43. Pillow Block (1B - 36 & 60)
44. Yoke Locknut
45. Lower Treadle Rod
46. Bronze Bushing
47. Shoulder Bolt
48. Treadle Lock Latch
49. Latch Pin



AIR FRICTION CLUTCH-TYPE LI-P

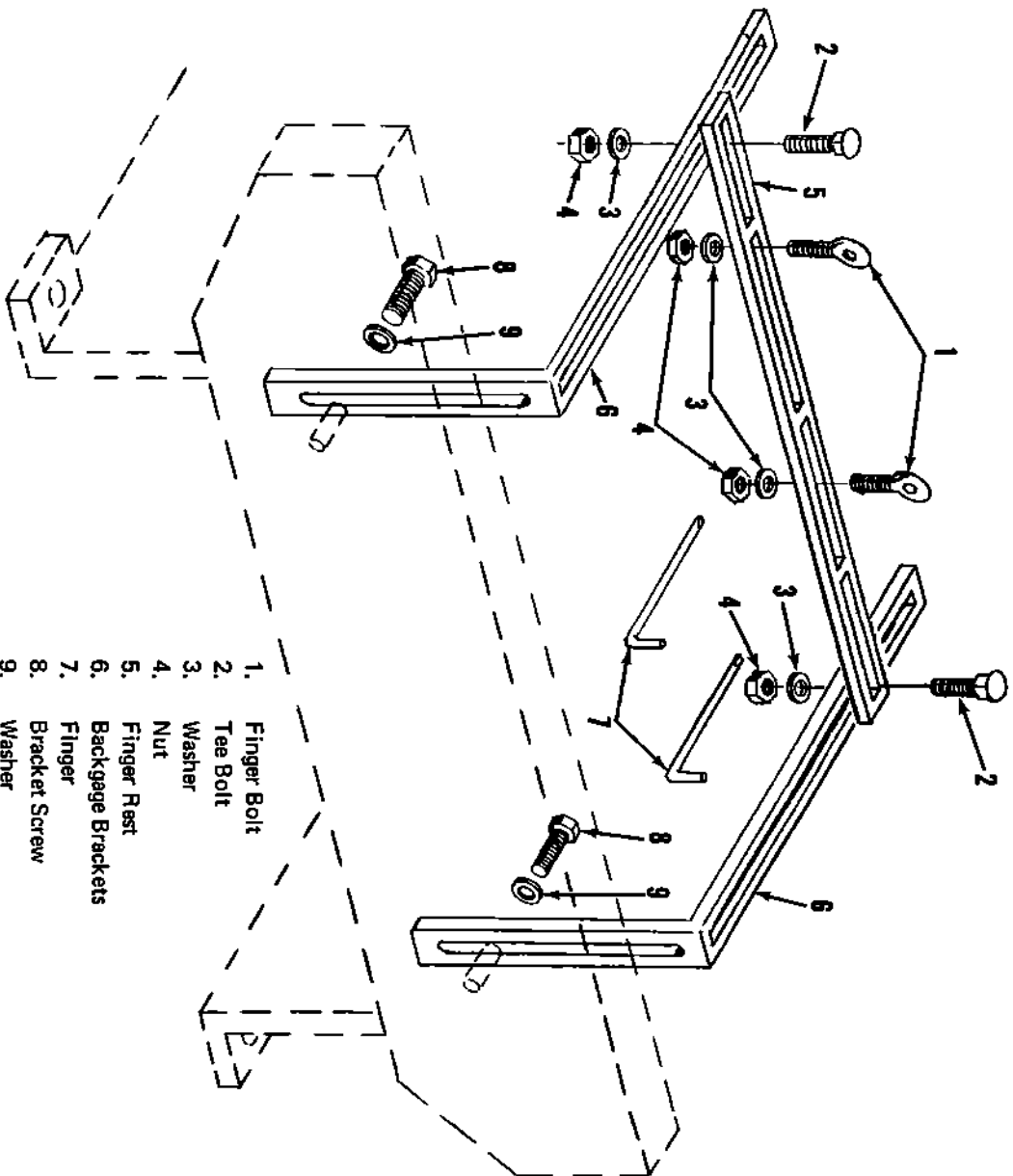
1. Drive Shaft
2. Driving Hub
3. Driving Hub Retaining Ring
4. Clutch Snap Ring
5. Clutch Housing
6. Clutch Cylinder
7. Clutch Piston
8. Piston Wiper
9. Piston "O" Ring
10. Rotary Air Seal Adapter
11. Adapter "O" Ring
12. Rotary Air Seal
13. Pressure Plate
14. Inner Pressure Plate
15. Pressure Plate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



- 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)

AIR RELEASING DISC BRAKE

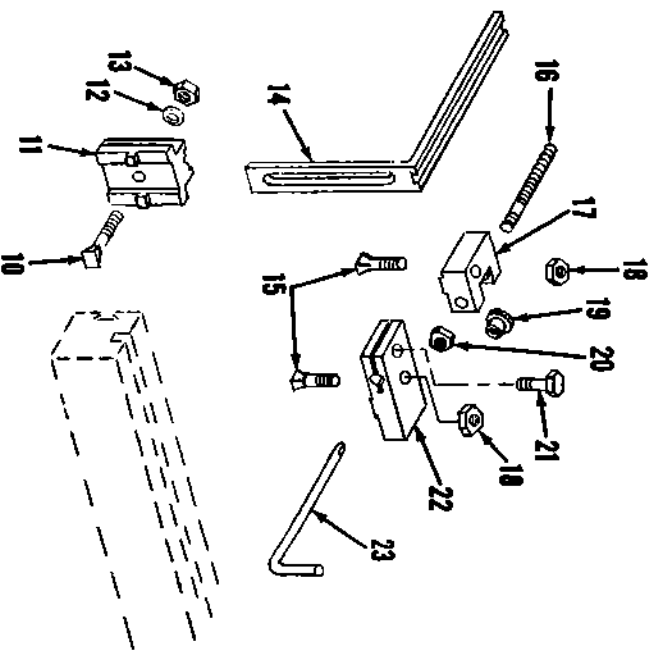
STANDARD BACKGAGE



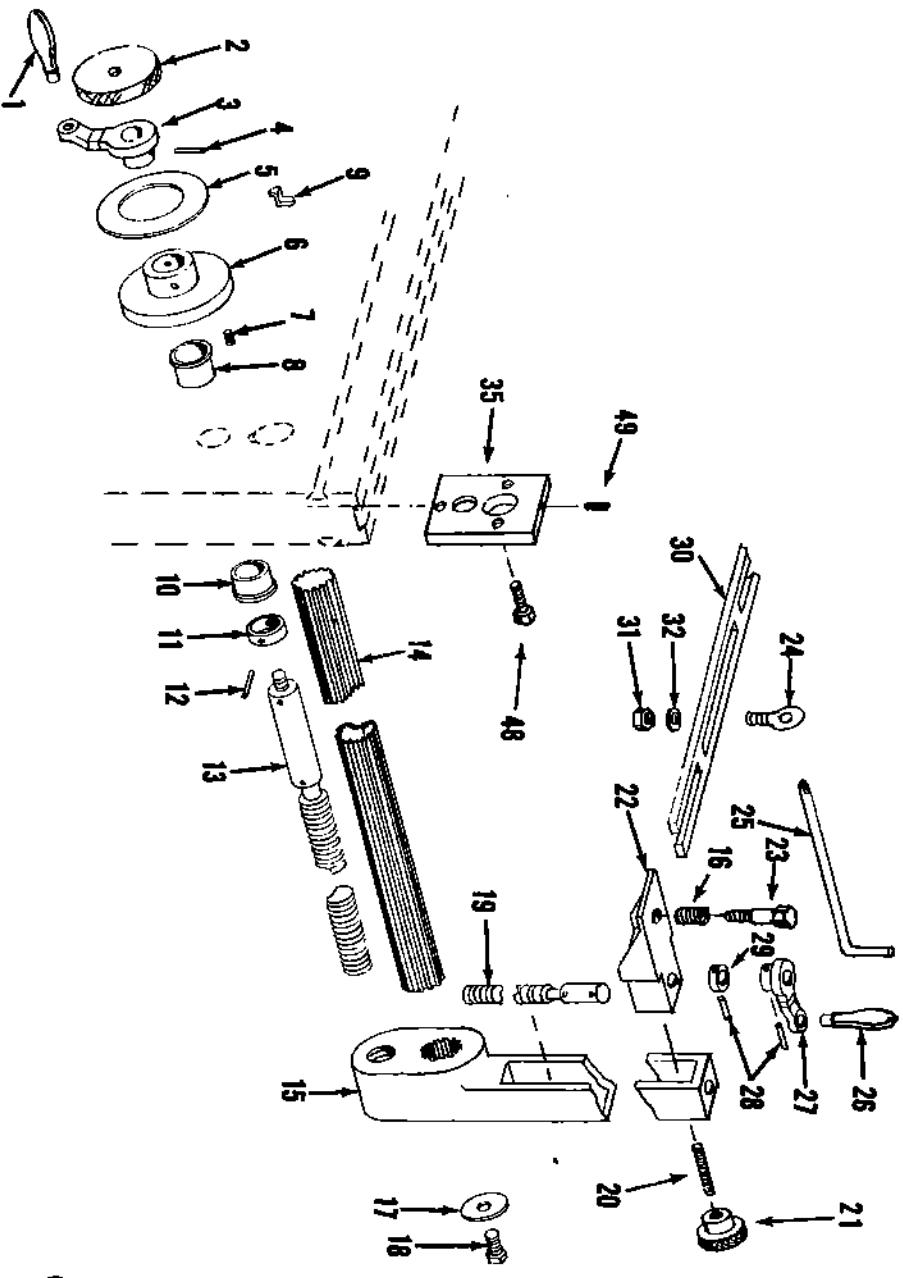
1. Finger Bolt
2. Tee Bolt
3. Washer
4. Nut
5. Finger Rest
6. Backgage Brackets
7. Finger
8. Bracket Screw
9. Washer

MICROMETER TYPE BACKGAGE

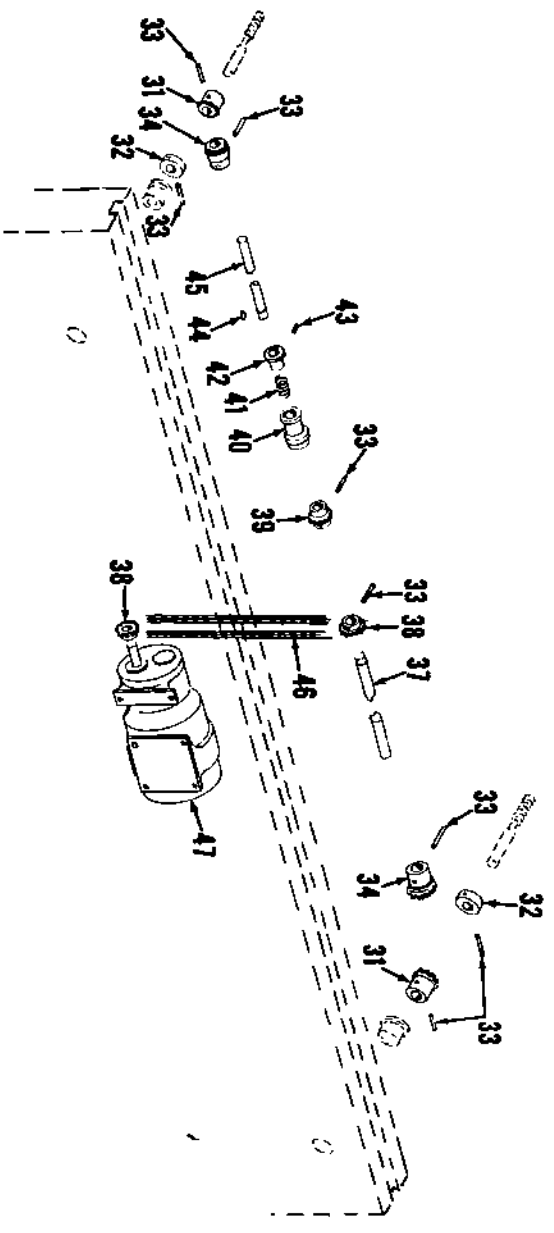
10. "V" Bolt
11. Backgage Base
12. Lockwasher
13. Locknut
14. Bracket
15. Tee Bolt
16. Micrometer Stud
17. Micrometer Support
18. Nut
19. Micrometer Nut
20. Jam Nut
21. Hex HD Cap Screw
22. Finger Support
23. Finger

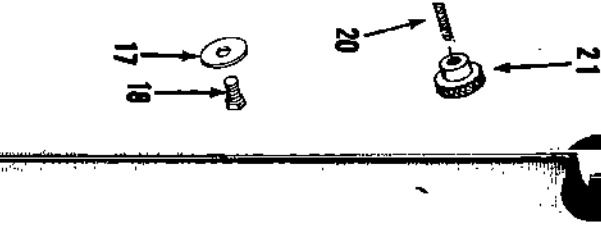


FRONT OPERATED MICROMETER BACKGAGE



FRONT OPERATED-POWER DRIVEN-MICROMETER BACKGAGE



- 
1. Handle
 2. Hand Knob
 3. Hand Crank
 4. Roll Pin
 5. Hand Wheel Dial Face
 6. Dial
 7. Set Screw
 8. Bushing
 9. Pointer
 10. Bushing
 11. End Collar
 12. Roll Pin
 13. Adjusting Screw
 14. Splined Shaft
 15. Upright
 16. Spring
 17. Washer
 18. Capscrew

FRONT OPERATED MICROMETER BACKGAGE

19. Upright Adjusting Screw
20. Stud
21. Knurled Knob
22. Support Arm
23. Shoulder Bolt
24. Finger Bolt
25. Finger
26. Handle
27. Hand Crank
28. Roll Pin
29. End Collar
30. Finger Rest
31. Nut
32. Washer
35. R.H. Support Bracket
36. L.H. Support Bracket (not shown)
48. Capscrew
49. Set Screw

31. Bevel Gear
32. End Collar
33. Roll Pin
34. Bevel Gear
37. Shaft
38. *Sprocket
39. Coupling Gear
40. Coupling Sleeve

41. Spring
42. Collar
43. Set Screw
44. Woodruff Key
45. Shaft
46. *Chain
47. *Motor

FRONT OPERATED-POWER DRIVEN-MICROMETER BACKGAGE

***SUPPLIED WHEN MOTOR OPERATED ONLY**