

Section D

ACCELERATOR

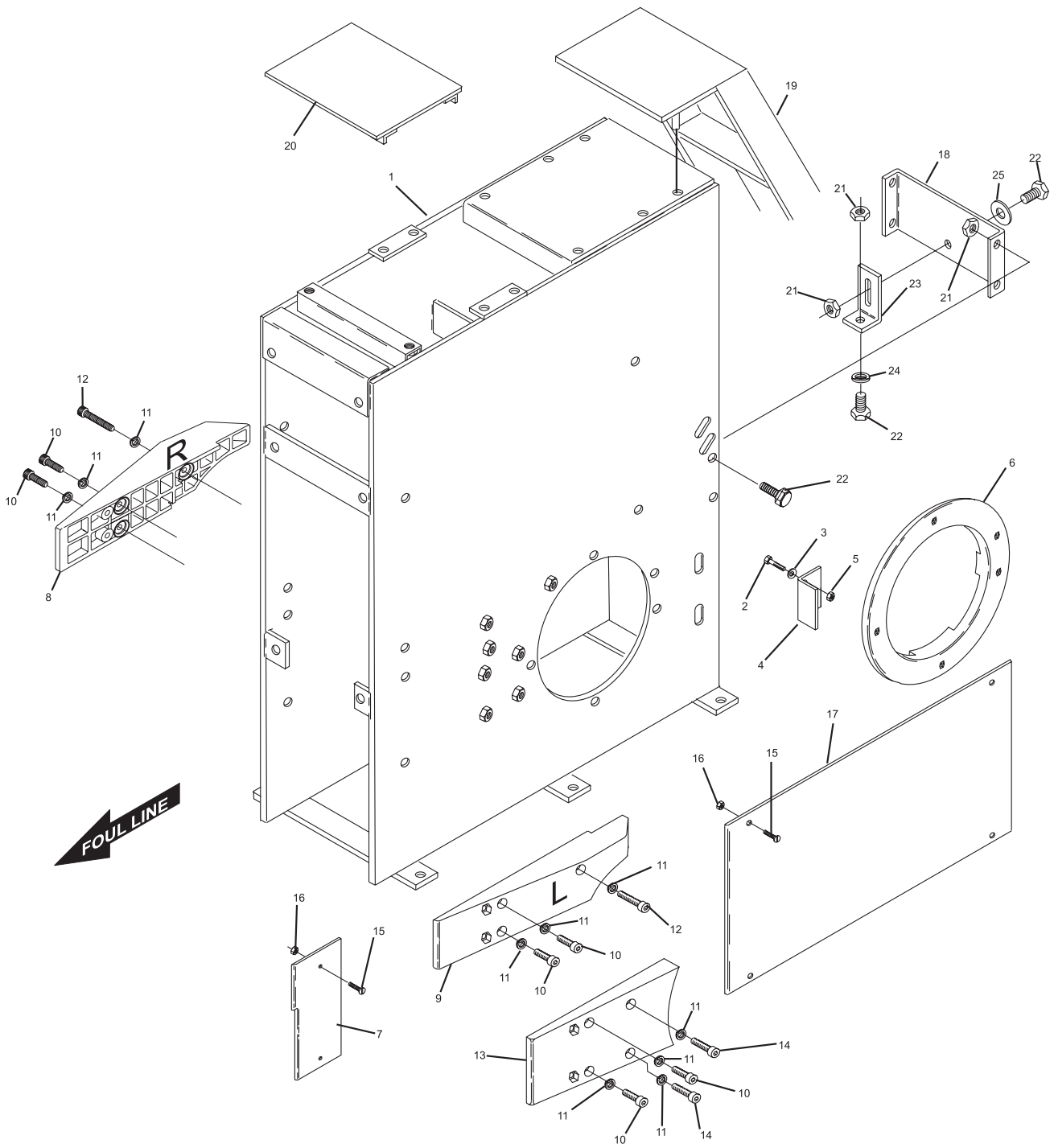
Index

| No. | Part No. | Description |
|------------|-----------------|--|
| 1. | 47-021476-001 | Ball Accelerator Box |
| 2. | 11-051019-001 | Hex Hd. Cap Screw (10 mm x 25 mm) |
| 3. | 11-052018-001 | Flat Washer (10.5 mm) |
| 4. | 47-021249-004 | Ball Cushion Stop |
| 5. | 11-051745-001 | Locknut (10 mm) |
| 6. | 47-021057-003 | Ball Door Protector Ring |
| 7. | 47-021481-003 | Fiber Plate (small) |
| 8. | 47-021619-002 | Protector Wedge - 10 pin side |
| 9. | 47-021620-002 | Protector Wedge - 7 pin side |
| 10. | 11-051543-001 | Socket Hd. Cap Screw (10 mm x 20 mm) |
| 11. | 11-051771-001 | Lockwasher (10 mm) |
| 12. | 11-051551-001 | Socket Hd. Cap Screw (10 mm x 45 mm) |
| 13. | 47-021618-002 | Protector Wedge (lower) |
| 14. | 11-051512-001 | Socket Hd. Cap Screw (10 mm x 35 mm) |
| 15. | 11-052454-001 | N.A. Flat Hd. Machine Screw (6 mm x 16 mm) |
| 16. | 11-051743-001 | Locknut (6 mm) |
| 17. | 47-021480-003 | N.A. Fiber Plate (large) |
| 18. | 47-021478-003 | Retaining Plate |
| 19. | 47-023950-002 | N.A. Ladder (short pit) |
| | 47-085967-009 | R.O. Ladder |
| 20. | 47-023593-003 | Guard Plate |
| 21. | 11-051744-001 | Locknut (8 mm) |
| 22. | 11-051010-001 | Hex Hd. Cap Screw (8 mm x 20 mm) |
| 23. | 47-031479-004 | Retaining Plate Bracket |
| 24. | 11-052031-001 | Flat Washer (9 mm) |
| 25. | 11-052017-001 | Washer (8.4 mm) |

N.A. = No Longer Available

R.O. = Replacement Option

Accelerator Box Assembly



Accelerator Box Assembly

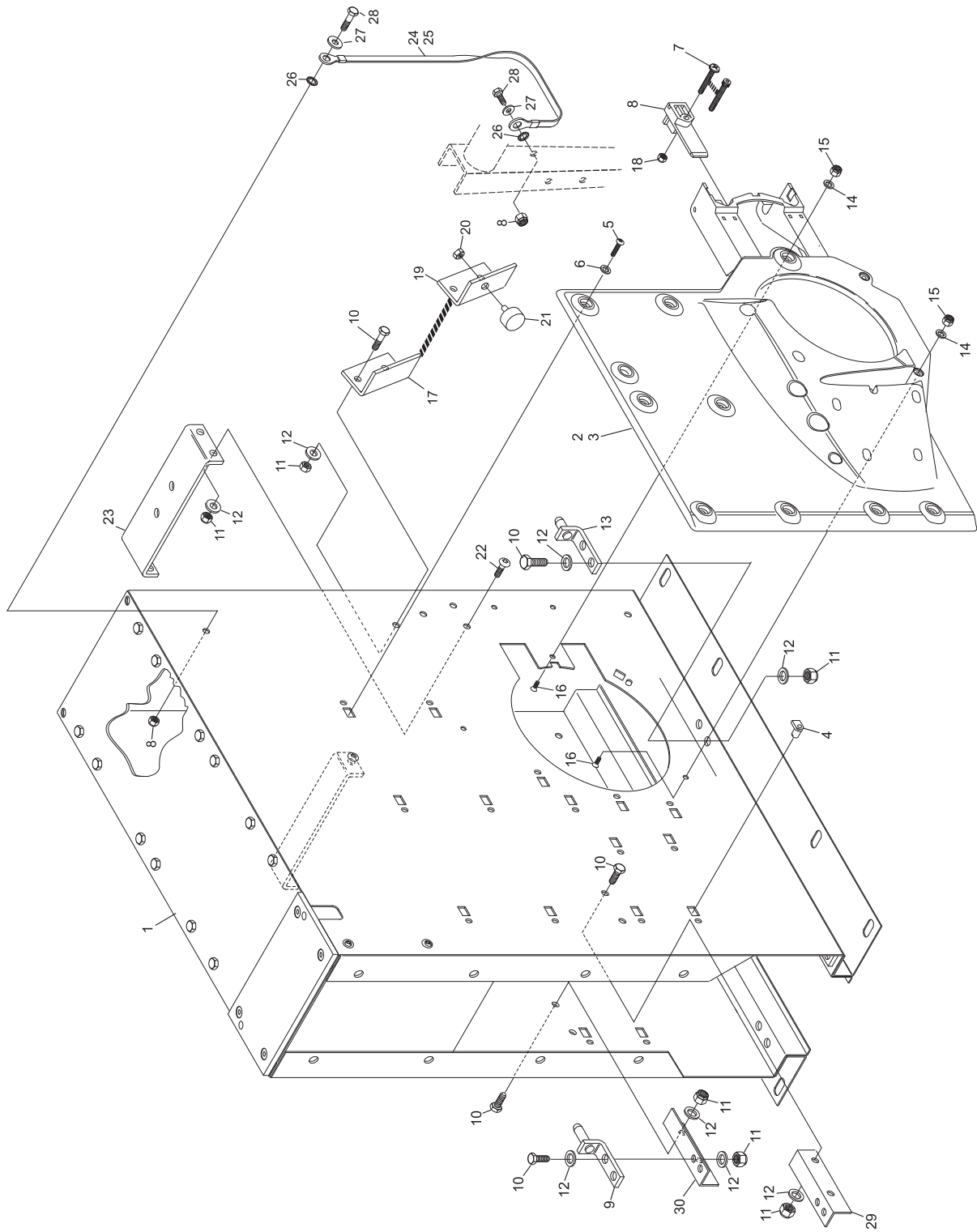
Index

| No. | Part No. | | Description |
|------------|-----------------|------|--|
| 1. | 47-035305-009 | S.O. | Ball Accelerator Box (complete) |
| 2. | 47-035240-001 | | L.H. Ball Door Protector Plate - 10 pin side |
| 3. | 47-035241-001 | | R.H. Ball Door Protector Plate - 7 pin side (shown) |
| 4. | 11-055800-000 | | EJOT Plastic Fastener (Nut Plate) |
| 5. | 11-054466-000 | | EJOT Plastic Fastener Screw (25 mm x 60 mm) |
| 6. | 11-052008-001 | | Flat Washer (6.4 mm) |
| 7. | 11-054460-000 | N.A. | EJOT Screw (60 mm x 50 mm) |
| | 11-054466-000 | R.O. | Torx Head Self Tap Screw (60 mm x 25 mm) |
| 8. | 47-035239-004 | | Axle Wedge |
| 9. | 47-035220-003 | | Front Accelerator Mount Bracket w/Pin |
| 10. | 11-051019-001 | | Hex Hd. Cap Screw (10 mm x 25 mm) |
| 11. | 11-051745-001 | | Locknut (10 mm) |
| 12. | 11-052018-001 | | Flat Washer (10.5 mm) |
| 13. | 47-035219-003 | | Rear Ball Rod Assembly Mount w/Pin |
| 14. | 11-052020-001 | | Flat Washer (5.3 mm) |
| 15. | 11-051742-001 | | Locknut (5 mm) |
| 16. | 11-052933-001 | | Countersunk Screw (5 mm x 12 mm) |
| 17. | 47-021249-004 | | Ball Cushion Stop |
| 18. | 11-051743-001 | | Locknut (6 mm) |
| 19. | 47-025751-004 | | Stop Bracket |
| 20. | 11-051744-001 | | Hex Nut (8 mm) |
| 21. | 99-020434-004 | | Rubber Bumper (30 x 20) |
| 22. | 11-054805-001 | | Button Hd. Socket Screw (10 mm x 25 mm) |
| 23. | 47-035228-003 | | Mount Bracket |
| 24. | 47-245788-003 | | Ground Strap - only |
| 25. | 47245788-009 | | Ground Strap Kit includes mounting hardware |
| 26. | 11-055015-001 | | Starlock Washer (8 mm) |
| 27. | 11-052003-001 | | Flat Washer (8 mm) |
| 28. | 11-051010-001 | | Hex Head Cap Screw (8 mm x 20 mm) |
| 29. | 47-035224-003 | N.A. | Front Support Left Hand |
| 30. | 47-035223-003 | N.A. | Front Support Right Hand |

N.A. = No Longer Available

S.O. = Special Order

GS-X/CPO Accelerator Box Assembly



GS-X/CPO Accelerator Box Assembly

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|-------|------------------|--|-------|-----------------|--|
| No. | Part No. | Description | No. | Part No. | Description |
| 1. | 47-031455-001 | N.A. Ball Accelerator Frame | 30. | 11-051028-001 | Hex Hd. Cap Screw (6 mm x 25 mm) |
| | 47-275705-009 | R.O. Ball Accelerator Frame (208/230V) | 31. | 11-051702-001 | Hex Nut (6 mm) |
| | *47-275706-009 | N.A. Ball Accelerator Pkg. (380V) | 32. | 47-031603-003 | Motor Mounting Bracket |
| 2. | 47-031248-004 | Tension Spring | 33. | 11-051769-001 | Lockwasher (6 mm) |
| 3. | 47-031440-003 | Tension Bar | 34. | 11-051704-001 | Hex Nut (8 mm) |
| 4. | 11-051703-001 | Hex Nut (10 mm) | 35. | 47-031604-004 | Shaft |
| 5. | 11-053501-000 | Key (5 mm x 5 mm x 25 mm) | 36. | 11-051805-001 | Split Pin (2.5 mm x 20 mm) |
| 6. | 47-031454-002 | Pivoting Lever | 37. | 47-031307-004 | Angle Bracket |
| 7. | 47-031456-004 | Axle | 38. | 11-051743-001 | Locknut (6 mm) |
| 8. | 11-052926-001 | Flat Hd. Cap Screw (10 mm x 20 mm) | 39. | 99-010123-004 | Bushing |
| 9. | 11-051045-001 | Hex HD. Cap Screw (10 mm x 30 mm) | 40. | 47-031453-004 | Spring Bracket |
| 10. | 11-051745-001 | Locknut (10 mm) | 41. | 99-020163-004 | Spring |
| 11. | 10-635127-000 | Flat Belt | 42. | **47-033867-004 | Motor Drive Pulley |
| 12. | ***47-035232-002 | Front Driving Drum Complete - Spacers not included | 43. | 11-053904-000 | V-Belt (10 mm x 6 mm x 950 mm, 50Cy, export only) |
| | *47-035234-004 | Spacer - needed when replacing Driving Drum (2 each) | | 11-053907-000 | V-Belt (10 mm x 6 mm x 925 mm) 60Cy - domestic only) |
| 13. | 47-035064-099 | Rear Driving Drum Complete - spacers not included | 44. | 11-052804-001 | Set Screw (16 mm x 8 mm) |
| | *47-035234-004 | Spacer - needed when replacing Driving Drum (2 each) | 45. | 11-051018-001 | Hex Hd. Cap Screw (6 mm x 20 mm) |
| 14. | 11-051015-001 | Hex Hd. Cap Screw (8 mm x 25 mm) | 46. | 11-052048-001 | Flat Washer (6.4 mm) |
| 15. | 11-052028-001 | Flat Washer (10.5 mm) | 47. | 99-040113-002 | N.A. Ball Accelerator Motor (1/2 H.P., 230VAC/380VAC) |
| 16. | 11-052017-001 | Flat Washer (8.4 mm) | | 99-076363-000 | R.O. Distributor Motor (1/2 H.P., 240/400VAC) w/Integral Brake |
| 17. | 11-051744-001 | Locknut (8 mm) | | 99-040295-004 | N.A. Accelerator Motor (1/2 H.P., 208VAC) |
| 18. | 11-052017-001 | Flat Washer (8.4 mm) | | 99-076362-000 | R.O. Distributor Motor (208VAC, 0.37kW) |
| 19. | 47-862787-000 | Protective Cover (Pkg. of 4) | 48. | 47-032500-004 | Ball Stop (for welded configuration) |
| 20. | 11-052609-001 | N.A. Carriage Bolt (8 mm x 100 mm) | 49. | 47-032125-003 | Guard Bracket |
| | 47-861021-001 | R.O. Carriage Bolt (8 mm x 100 mm) Pkg. of 5 | 50. | 47-032126-003 | Ball Stop |
| 21. | 11-680925-000 | N.A. Strain Relief | 51. | 47-033504-004 | Flat Belt Guard Complete |
| | 11-055080-000 | R.O. Strain Relief | 52. | 11-052610-001 | N.A. Carriage Belt (6 mm x 20 mm) |
| 22. | 68-100192-000 | N.A. Cable Assembly | 53. | 11-051770-001 | Lockwasher (8 mm) |
| | *47-142614-000 | Cable Assembly (GS Consolidated Electronics) | 54. | 47-022519-000 | N.A. Ball Wipe w/Sleeve |
| 23. | 47-031309-001 | Ball Rod | | 47-022519-002 | N.A. Sleeve only |
| 24. | 53-520634-001 | Transition Track (GS Accelerators to Return Track) | 55. | 47-030924-003 | Drive Disc |
| 25. | 11-051045-001 | Hex Hd. Cap Screw (10 mm x 30 mm) | | | |
| 26. | 11-051771-001 | Lockwasher (10 mm) | | | |
| 27. | 11-052018-001 | Flat Washer (10.5 mm) | | | |
| 28. | 47-031261-004 | Spacer | | | |
| 29. | 11-053577-000 | Rubber Bumper (6 mm Thread) | | | |

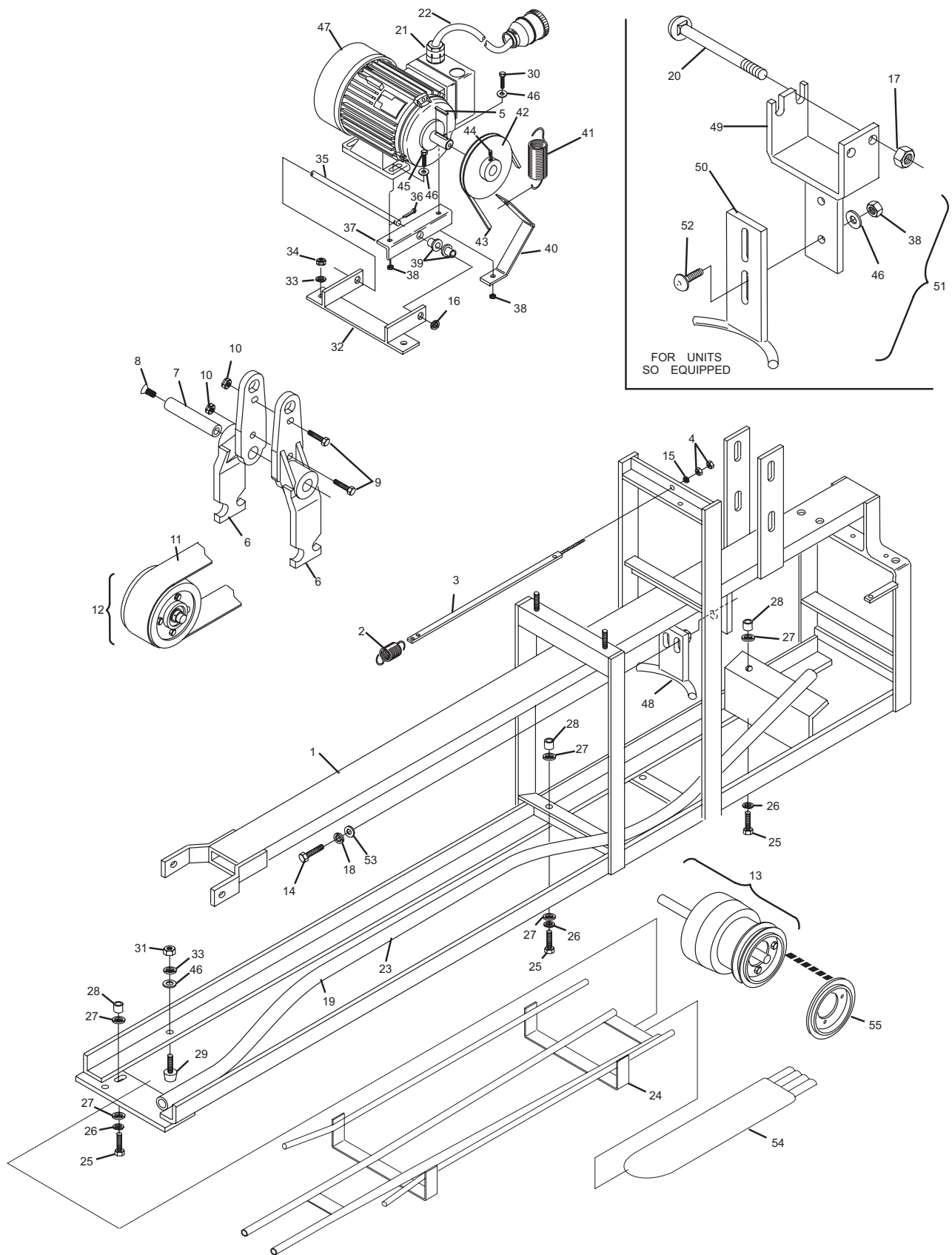
N.A. = No Longer Available

* Not Illustrated

** Replaces 47-031306-004 Motor Drive Pulley

*** Replaces 47-035063-009 Front Drive Drum

Ball Accelerator



Ball Accelerator

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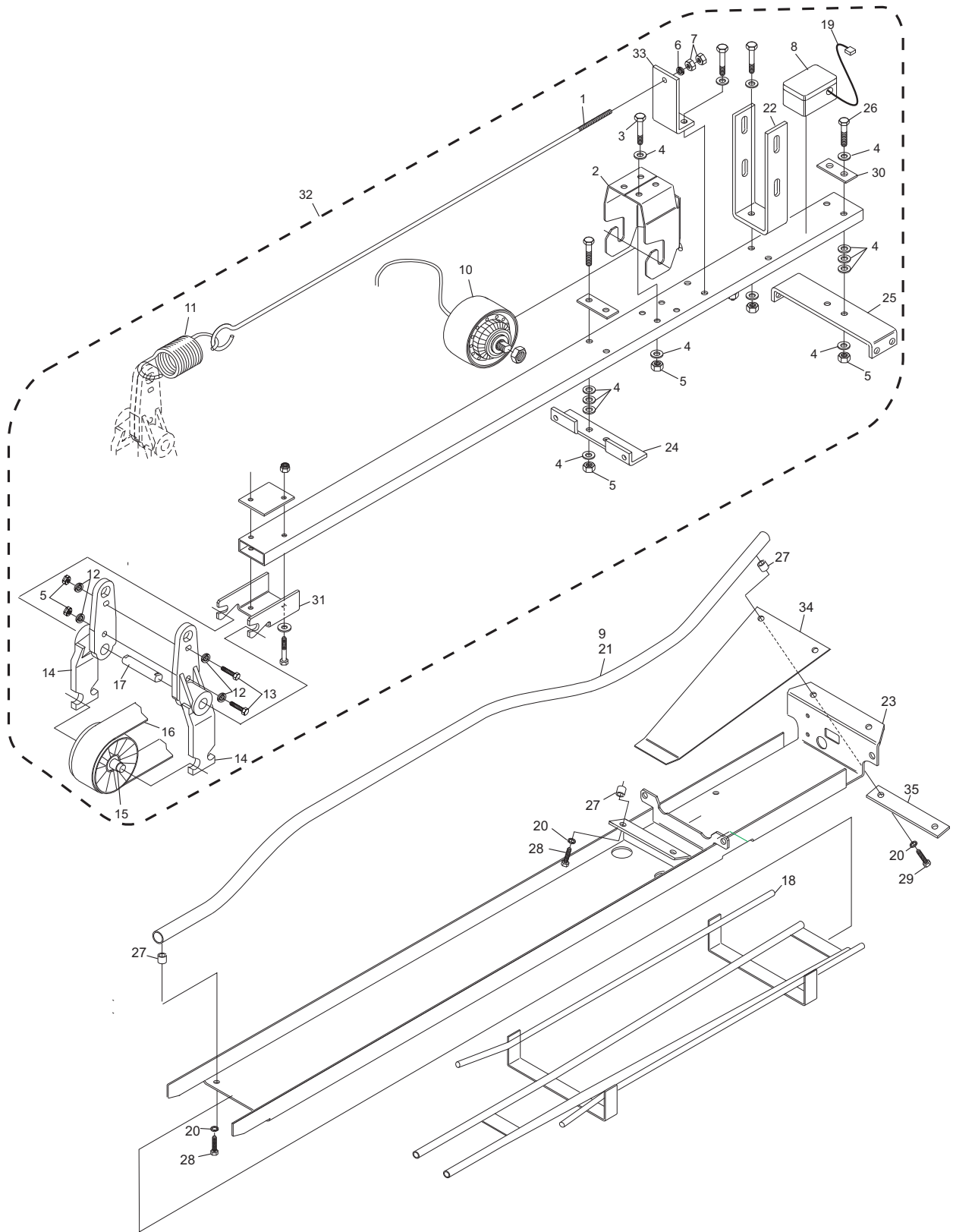
| No. | Part No. | Description |
|------------|-----------------|--|
| 1. | 47-035236-003 | Tension Rod |
| 2. | 47-035226-002 | Motor Support Bracket |
| 3. | 11-051071-000 | Hex Head Cap Screw (10 mm x 60 mm) |
| 4. | 11-052050-001 | Flat Washer (10.5) |
| 5. | 11-051745-001 | Locknut (10 mm) |
| 6. | 11-052019-001 | Flat Washer (8.4) |
| 7. | 11-051704-001 | Nut (8 mm) |
| 8. | 47-035600-004 | Terminal Box w/Cable |
| 9. | 47-862787-000 | Protective Cover - Pkg. of 4 |
| 10. | 99-030363-004 | Accelerator Motor/Rear Drive Drum Assembly w/Cable (208/230/380 VAC) |
| 11. | 47-031248-004 | Tension Spring |
| 12. | 11-052018-001 | Flat Washer (10.5 mm) |
| 13. | 11-051020-001 | N.A. Hex Head Screw (M8 x 150 mm) |
| 14. | 47-031454-002 | Pivot Lever |
| 15. | 47-035232-002 | Front Driving Drum Complete - spacers not included |
| | *47-035234-004 | Spacer - needed when replacing Driving Drum Complete (2 each) |
| 16. | 10-635127-000 | Flat Belt |
| 17. | 47-035230-004 | Axle |
| 18. | 53-520634-001 | Metric Transition Track (GS Accelerators to Return Track) |
| 19. | 47-035600-004 | Terminal Box |
| 20. | 11-051771-001 | Lockwasher (10 mm) |
| 21. | 47-035303-009 | S.O. Ball Rod w/Cover |
| 22. | 47-035225-003 | Bracket (locking mechanism) |
| 23. | 47-035211-001 | Bottom Accelerator Plate |
| 24. | 47-035229-002 | Front Bracket |
| 25. | 47-035228-003 | Rear Bracket |
| 26. | 11-051093-001 | Mounting Screw (10 mm x 75 mm) |
| 27. | 47-035214-004 | N.A. Spacer |
| | 47-860014-000 | R.O. Spacer (Qty. of 5) |
| 28. | 11-051045-001 | Hex Hd. Cap Screw (10 mm x 30 mm) |
| 29. | 11-051078-001 | N.A. Hex Hd. Cap Screw (10 mm x 40 mm) |
| 30. | 47-035344-004 | Shim Plate |
| 31. | 47-035231-002 | N.A. Holder for Roll Lever |
| 32. | 47-035601-001 | S.O. Drive Frame - Complete |
| 33. | 47-035235-003 | N.A. Bracket |
| 34. | 47-035351-003 | Accelerator Plate |
| 35. | 47-035311-004 | Stiffening Plate |

N.A. = No Longer Available

S.O. = Special Order

** = Not Illustrated*

GS-X/CPO Ball Accelerator



GS-X/CPO Ball Accelerator

| Index | | | Index | | |
|-------|-----------------|--|-------|------------------|---|
| No. | Part No. | Description | No. | Part No. | Description |
| 1. | *47-031054-002 | Ball Door | 36. | 47-031801-004 | Connecting Link |
| 2. | 11-051018-001 | Hex Hd. Cap Screw (6 mm x 20 mm) | 37. | 11-051791-001 | Split Pin (1.6 mm x 10 mm) |
| 3. | 11-051743-001 | Locknut (6 mm) | 38. | 47-031799-004 | Tension Spring |
| 4. | 11-051793-001 | Cotter Pin (2 mm x 16 mm) | 39. | 47-031798-004 | Connecting Stud |
| 5. | 11-051067-001 | Hex Hd. Cap Screw (8 mm x 35 mm) | 40. | 47-031802-004 | Lever |
| 6. | 11-430046-000 | Bearing | 41. | 47-033558-009 | R.H. Locking Mechanism Complete |
| 7. | 11-051060-001 | Hex Hd. Cap Screw (6 mm x 70 mm) | 42. | ***47-033557-009 | L.H. Locking Mechanism |
| 8. | 11-051061-001 | Hex Hd. Cap Screw (8 mm x 75 mm) | 43. | **47-243030-004 | N.A. Solenoid Assembly Complete (silver box, consolidated box, and nexgen electronics) |
| 9. | 47-031090-004 | Support Brace | | 99-070356-004 | R.O. Solenoid Assembly |
| 10. | *47-031058-001 | Arm - all GS pinsetters - see note | 44. | 47-033556-009 | R.H. Ball Door with Arm Complete 7 Pin Side, R.H. Even Lane (shown) |
| 11. | 11-051008-001 | Hex Hd. Cap Screw (6 mm x 10 mm) | 45. | 47-033555-009 | L.H. Ball Door with Arm Complete 10 Pin Side L.H. Odd Lane (not shown) |
| 12. | 11-051744-001 | Locknut (8 mm) | 46. | 47-030276-004 | Ball Door Arm Tension Spring |
| 13. | 47-031822-004 | Lever | 47. | 11-054301-001 | N.A. Hitch Pin (3 mm x 62 mm) |
| 14. | 47-031056-003 | L.H. Ball Door Key | | 47-861032-001 | R.O. Hitch Pin (3 mm x 62 mm) Pkg. of 10 |
| 15. | 47-031055-003 | R.H. Ball Door Key | 48. | 11-680302-000 | N.A. Terminal - Male |
| 16. | 47-034767-004 | Tension Spring | | 57-860032-000 | R.O. Terminal - Male (Pkg. of 10) |
| 17. | 47-031091-004 | Shaft | 49. | 11-680301-000 | N.A. Terminal - Female |
| 18. | 11-053478-001 | N.A. Speed Nut (8 mm) | | 57-860031-000 | R.O. Terminal - Female (Pkg. of 20) |
| | 47-861050-000 | R.O. Speed Nut (8 mm) Pkg. of 10 | 50. | 11-680216-000 | Connector - Female |
| 19. | 47-031302-004 | Ball Door Shaft (Pre GS-X Pinsetters) | 51. | 11-055253-001 | Special Lockwasher (6 mm) |
| | 47-034843-004 | Shaft - Threaded End | 52. | 11-053157-001 | Jam Nut (14 mm) |
| 20. | 11-053477-001 | Speed Nut (7 mm) | 53. | 47-035238-004 | Ball Door Shaft (GS-X Pinsetters) |
| 21. | 11-053616-001 | Stop Collar (15 mm) | 54. | 11-054463-000 | N.A. EJOT Self Tapping Screw (KB30 x 7 mm) |
| 22. | 11-052807-001 | Set Screw (6 mm x 12 mm) | 55. | 47-034842-004 | Bushings |
| 23. | 47-031797-002 | Locking Bolt | | | |
| 24. | 47-031800-004 | Pivot Link | | | |
| 25. | 11-053480-001 | Speed Nut (10 mm) | | | |
| 26. | 99-060133-004 | Plunger Only | | | |
| 27. | 11-051021-001 | Hex Hd. Cap Screw (10 mm x 35 mm) | | | |
| 28. | 11-052028-001 | Flat Washer (10.5 mm) | | | |
| 29. | 11-051745-001 | Locknut (10 mm) | | | |
| 30. | 47-031796-002 | Holder | | | |
| 31. | 11-051742-001 | Locknut (5 mm) | | | |
| 32. | 11-680116-000 | Connector - Male | | | |
| 33. | **99-060219-004 | Solenoid Assembly Complete (red box) | | | |
| 34. | 11-051068-001 | Hex Hd. Cap Screw (5 mm x 65 mm) | | | |
| 35. | 11-052039-001 | Flat Washer (5.3 mm) | | | |

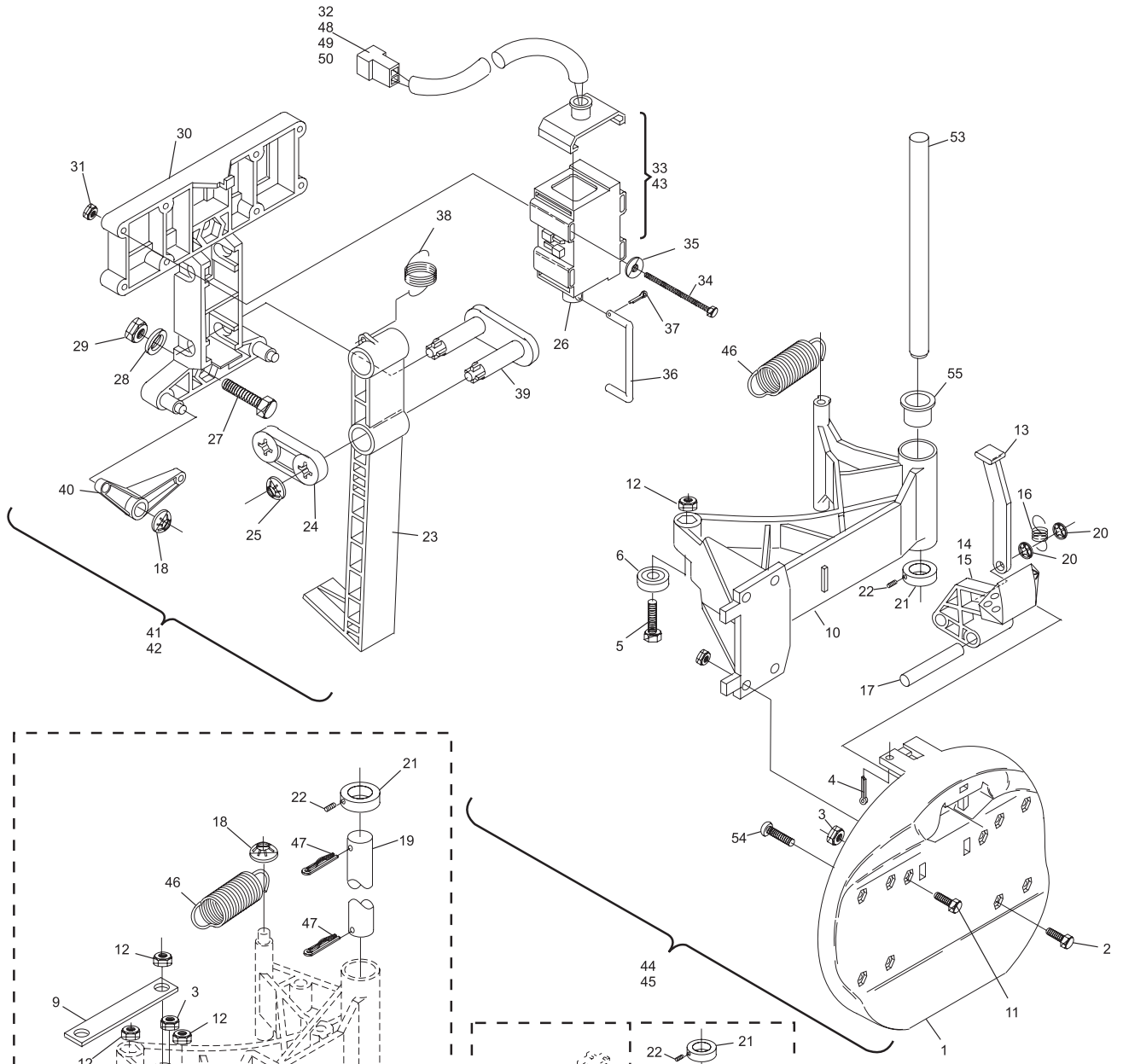
N.A. = No Longer Available
R.O. = Replacement Option

* Index Nos. 1 and 10 are inverted for use in both left-hand and right-hand machines.

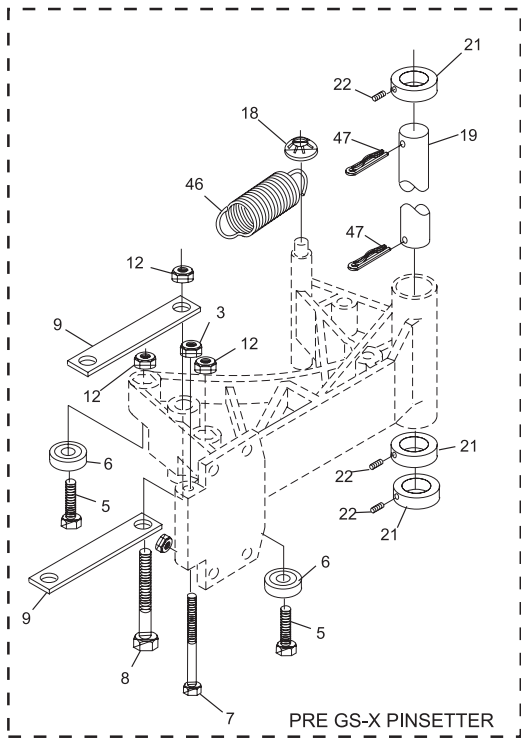
** Does not include Plunger, 99-060133-004

*** For older ball door arms with steel support braces (series 169, to series 419) change these arms on both ball doors of a pair.

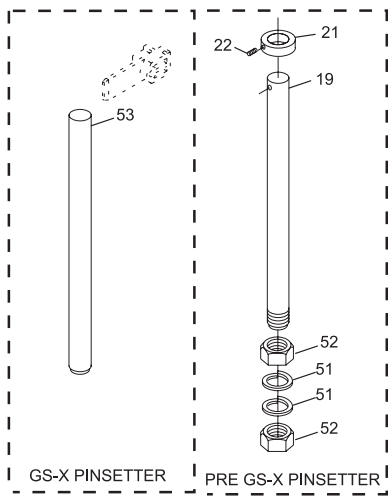
Ball Door/Lock Assembly



**View is of the 7 Pin side
of the RH/Even Lane
Ball Door 47-033556-009**



PRE GS-X PINSETTER



GS-X PINSETTER

PRE GS-X PINSETTER

Ball Door/Lock Assembly