



PARTS MANUAL

Tunnel Boring Machine

Wheel Machines

480 - 540

BH S/N: F23800F00 - F18300F00

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SERVICE • RELIABILITY • INNOVATION

Introduction

This parts manual contains assembly illustrations of the Akkerman 480 and 540 Tunnel Boring Machines (TBM). The illustrations in this manual are intended to show typical construction of various parts. In some instances, the details of parts illustrated may not exactly represent their actual appearance, but will help to identify parts performing the same functions. Additional copies of this manual may be purchased from the Akkerman Aftermarket Support Department, or downloaded from the Akkerman web site at www.akkerman.com.

The TBM consists of the boring head, cutter head attachment (dirt head, sand head, quad carbide head, or closed face), conveyor, and target laser stand. Tunnel Boring Machines are articulated and can be steered hydraulically in any direction. The TBMs have powerful hydraulic motors which rotate an inner drum. The cutter head or closed face attachment is connected to the drum. As it turns, the teeth excavate the face and the spoils fall into the drum. Scoops in the drum elevate the spoils onto a conveyor that transfers it to the haul unit for removal. Manual or hydraulically operated torque wings prevent rolling of the machine. With the proper use of a laser, the strictest line and grade requirements can be maintained throughout the pipeline installation.

LOCATING PARTS

This parts manual is organized into 13 sections to help you locate parts information quickly. The first page of each section lists the assemblies within the section.

An Alphabetical Index, Section 12, is provided to help you find the page number of a specific assembly. If a part number is known, the Numerical Index, Section 13, can also be utilized to find the page number of an assembly.

USE GENUINE AKKERMAN PARTS

The use of parts other than genuine Akkerman parts could affect the efficient performance of the Tunnel Boring Machine. ALWAYS use genuine Akkerman parts.

PARTS ORDERING

To order fast, accurate, and reliable parts service, call (800) 533-0386, (507) 567-2261, or fax (507) 567-2605, and provide the following information.

1. Model Number
2. Serial Number
3. Part Number, Description, and Quantity
4. Shipping Preference

MEASUREMENTS

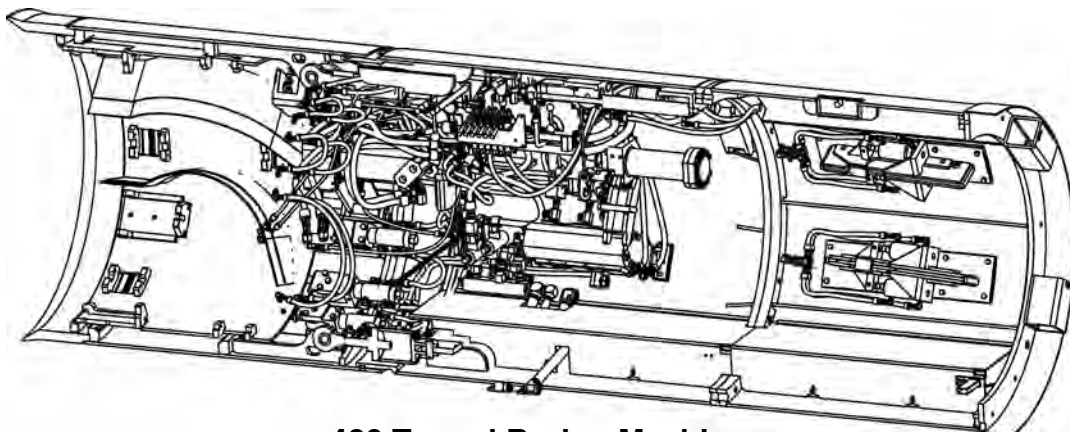
The unit of measure in this manual is in inches unless indicated otherwise.

HARDWARE SPECIFICATION

All Akkerman products are assembled with SAE Grade 8 bolts, nuts, and washers unless otherwise indicated. ALWAYS use matched fastener hardware when replacing or repairing the unit.

If you find any errors in this manual or have suggestions for improvement, please let us know. Email your comments via the Akkerman web site (Contact Us web page), or mail your suggestions to: Akkerman Inc., ATTN: Technical Publications, 58256 266th Street, Brownsdale, MN.

Akkerman Inc. reserves the right to improve its product without notice or obligation.



480 Tunnel Boring Machine

NOTES



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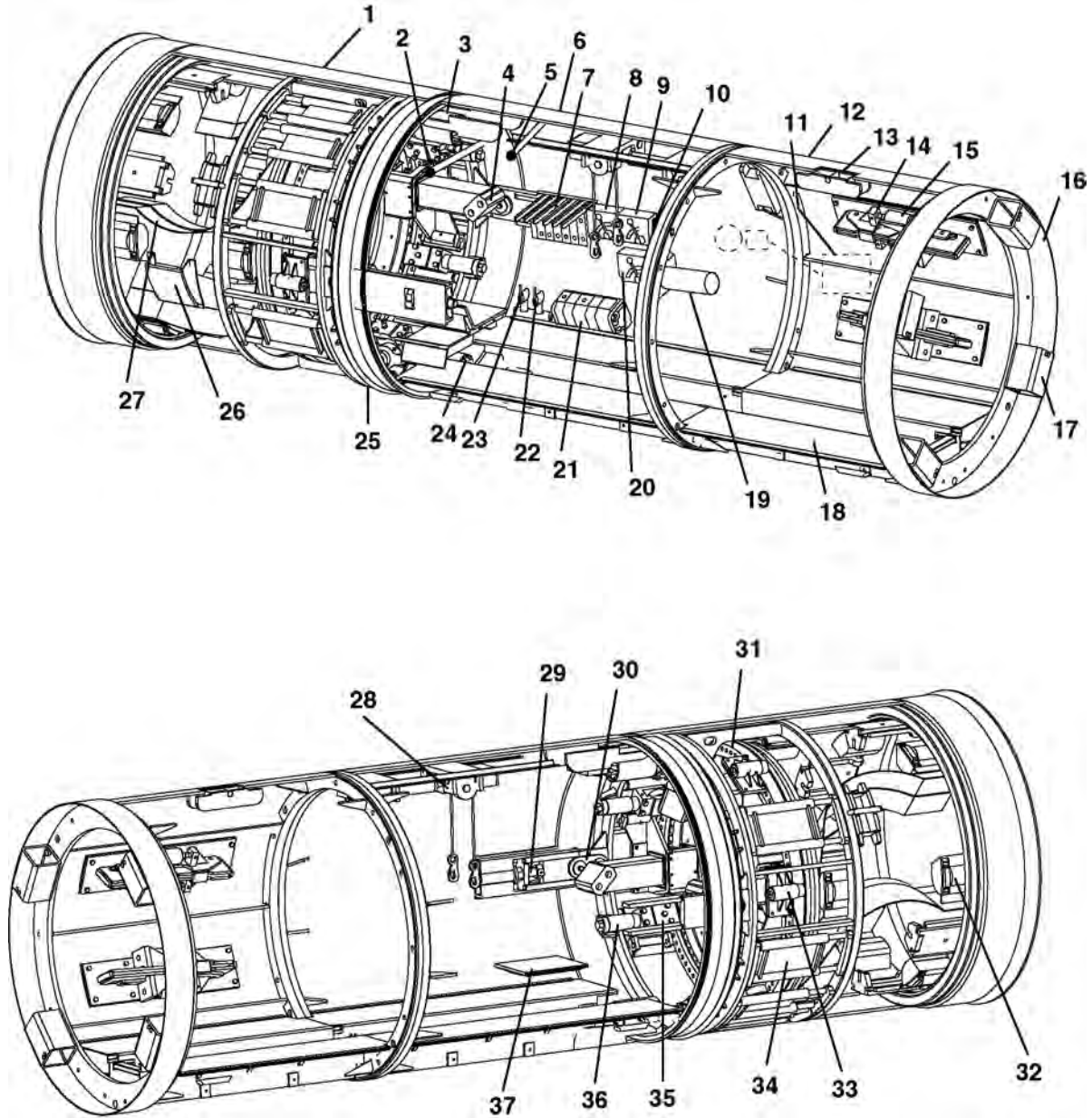
NOTES



General Information

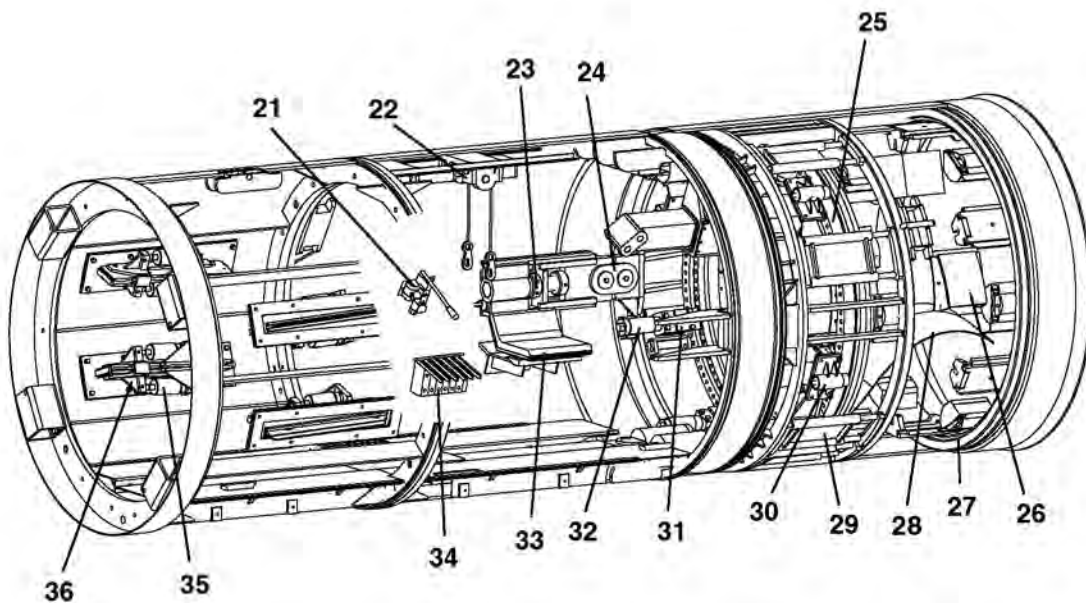
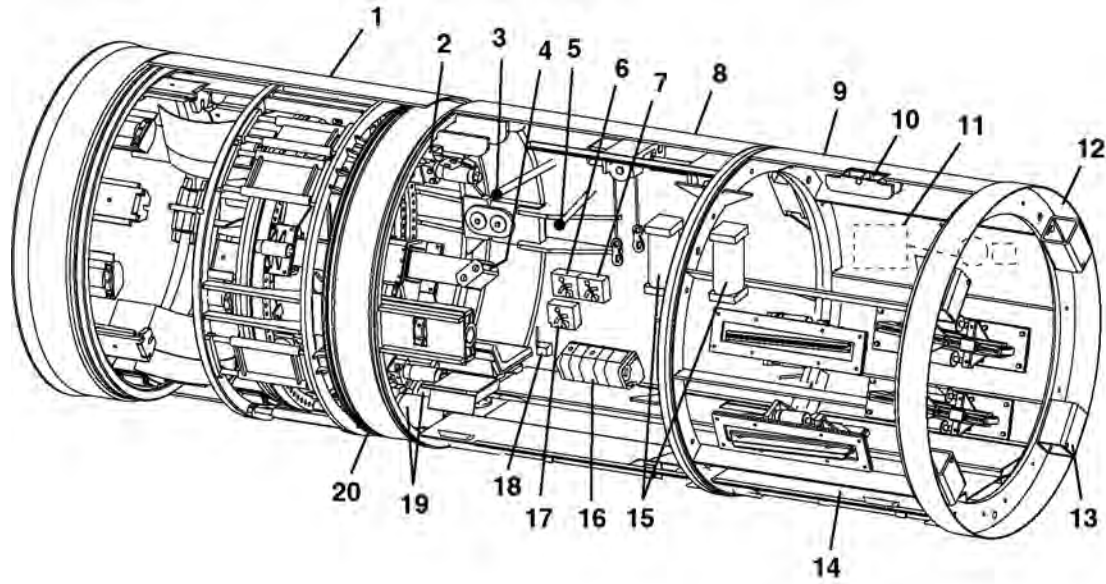
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| Laser Light Stand | 8 |

TUNNEL BORING MACHINE - 480, 540 (SN F18300F-01 THRU -03)



- | | | |
|--------------------------------|--------------------------------|--|
| 1. Front Drum & Drive Assembly | 14. Dirt Wing Assembly | 27. Dirt Paddle |
| 2. Inner Drum Control | 15. Dirt Wing Cylinder | 28. Conveyor Lift |
| 3. Steering Cylinder (Top) | 16. Bell End Ring | 29. Steering Adjustment (Side to Side) |
| 4. Drive Motor | 17. Push Block | 30. Steering Link |
| 5. Conveyor Drive Control | 18. Floor Assembly | 31. Gear Ring |
| 6. Mid Drum Assembly | 19. Pressure Filter | 32. Drum Roller |
| 7. TBM Control Valve | 20. Selector Speed Control | 33. Idler Roller |
| 8. Conveyor Speed Control | 21. Flow Divider | 34. Advance Slide Bracket |
| 9. Inner Drum Speed Control | 22. Single/Dual Feed Control | 35. Advance Assembly |
| 10. Grade/Alignment Control | 23. Conveyor Safety Valve | 36. Advance Cylinder |
| 11. Gas Detection System | 24. Steering Cylinder (Bottom) | 37. Operator Seat |
| 12. Dirt Wing Drum Assembly | 25. Steering Joint | |
| 13. Lift Pocket | 26. Dirt Scoop | |

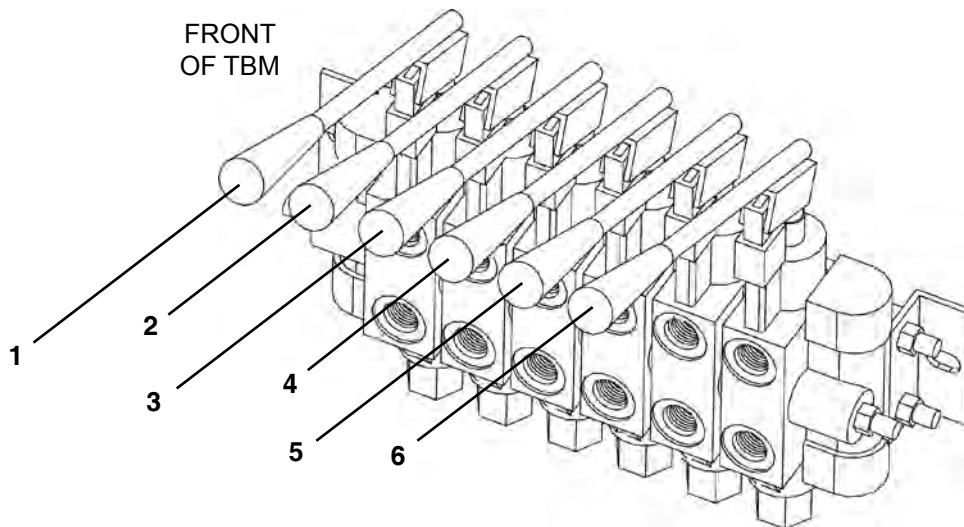
TUNNEL BORING MACHINE - 540 (SN F18300F-04 & AFTER)



- | | | |
|--------------------------------|--|---------------------------|
| 1. Front Drum & Drive Assembly | 13. Push Block | 25. Gear Ring |
| 2. Steering Cylinders (Top) | 14. Floor Assembly | 26. Dirt Scoop |
| 3. Inner Drum Control | 15. Pressure Filters | 27. Drum Roller |
| 4. Drive Motor | 16. Flow Divider | 28. Dirt Paddle |
| 5. Conveyor Drive Control | 17. Steering Speed Selector | 29. Advance Slide Bracket |
| 6. Conveyor Speed Control | 18. Conveyor Safety Valve | 30. Idler Roller |
| 7. Inner Drum Speed Control | 19. Steering Cylinders (Bottom) | 31. Advance Assembly |
| 8. Mid Drum Assembly | 20. Steering Joint | 32. Advance Cylinder |
| 9. Dirt Wing Drum Assembly | 21. Grade/Alignment Control | 33. Operator Seat |
| 10. Lift Pocket | 22. Conveyor Lift | 34. TBM Control Valve |
| 11. Gas Detection System | 23. Steering Adjustment (Side to Side) | 35. Dirt Wing Cylinder |
| 12. Bell End Ring | 24. Steering Link | 36. Dirt Wing Assembly |

TBM CONTROL VALVE

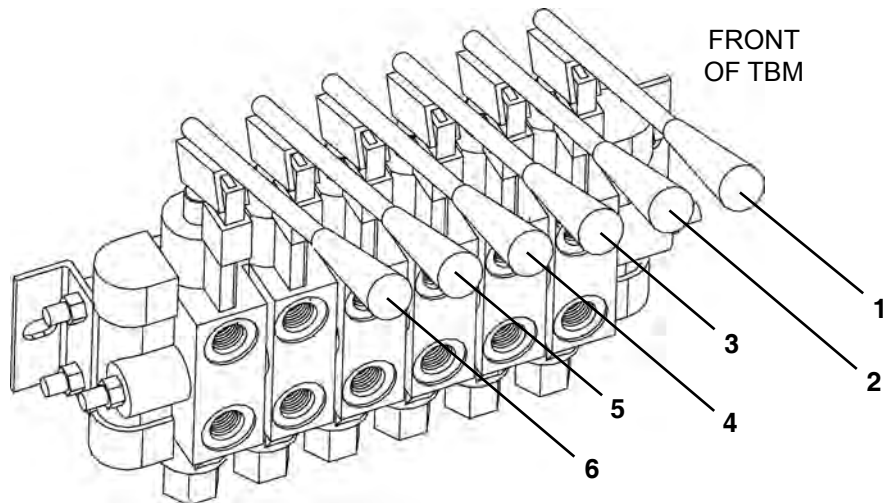
480 - 540 (sn BH18300-01 thru 03)



- 1. Inner Drum Advance
- 2. Conveyor Lift
- 3. Steering Cylinders

- 4. Auxiliary or Closed Face Attachment Doors
- 5. Dirt Wing Cylinders
- 6. Dirt Wing Cylinders

540 (sn BH18300-04 and after)

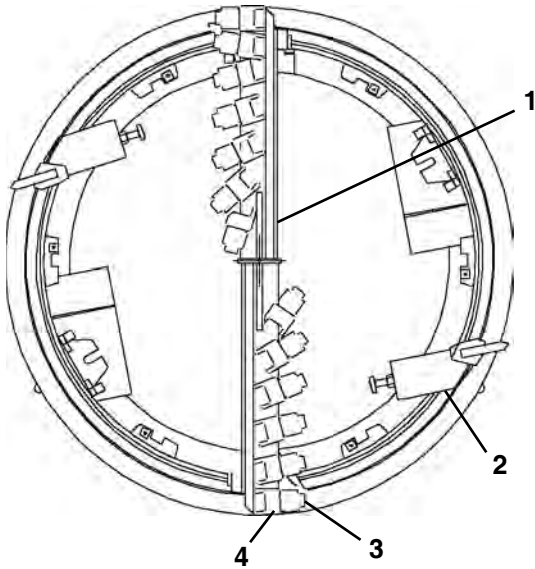


- 1. Inner Drum Advance
- 2. Conveyor Lift
- 3. Steering Cylinders

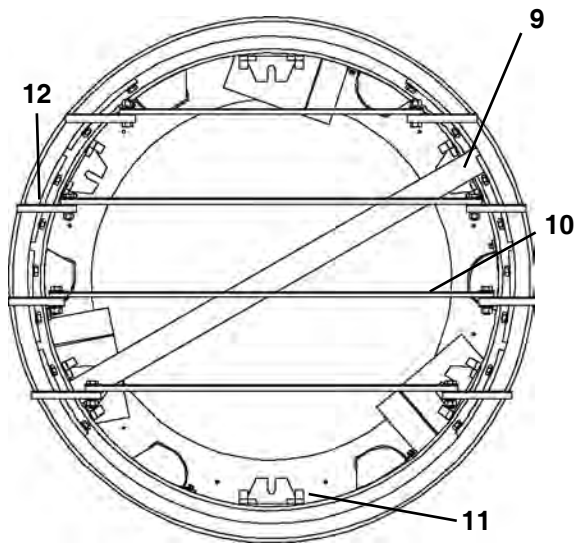
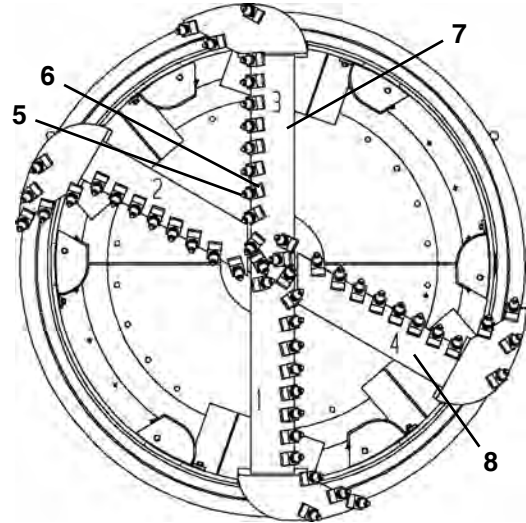
- 4. Auxiliary or Closed Face Attachment Doors
- 5. Dirt Wing Cylinders
- 6. Dirt Wing Cylinders

CUTTER HEAD ATTACHMENTS

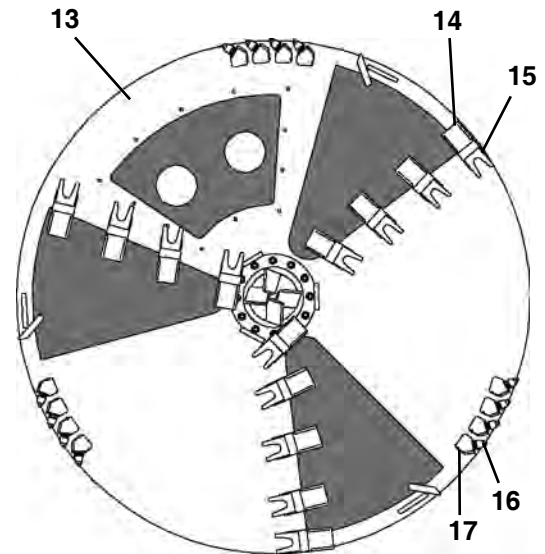
Dirt Head



Quad Carbide Bar Head



Sand Head



Closed Face

Dirt Cutter

1. Cutter Bar
2. Adjustable Cutter
3. Tooth Cutter
4. Tooth Pocket

Quad Carbide Bar Head

5. Carbide Tooth
6. Tooth Holder
7. Cutter Bar Weldment
8. Quad Bar Weldment

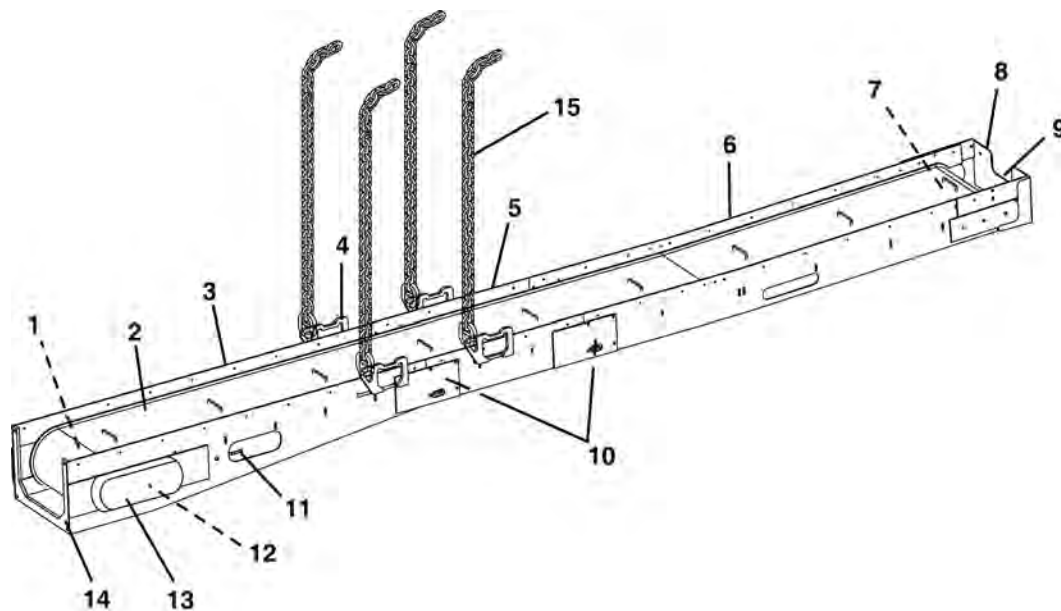
Sand Head

9. Cutter Bar
10. Sand Shelf
11. Cutter Bar Mount
12. Sand Shelf Bracket

Closed Face

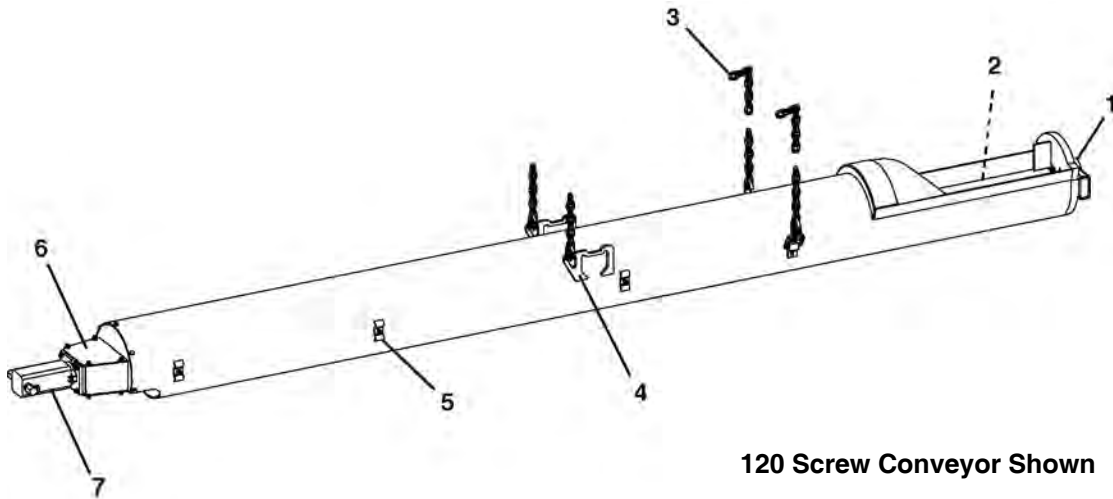
13. Closed Face
14. Cutter Tooth
15. Tooth Pocket
16. Cutter Bit
17. Bit Holder

CONVEYOR - BELT



- | | | |
|-------------------------------|--------------------------|-----------------------------------|
| 1. Drive Motor Frame Assembly | 6. Feed Frame Assembly | 11. Belt Tensioning Screw |
| 2. Belting | 7. Front Roller Assembly | 12. Drive Motor & Roller Assembly |
| 3. Drive Frame Assembly | 8. Dirt Guard | 13. Conveyor Chain Cover |
| 4. Lift Bracket | 9. Carrier Bearing | 14. Drive Frame Free End Support |
| 5. Extension Frame Assembly | 10. Idler Roller | 15. Safety Chain |

CONVEYOR - SCREW

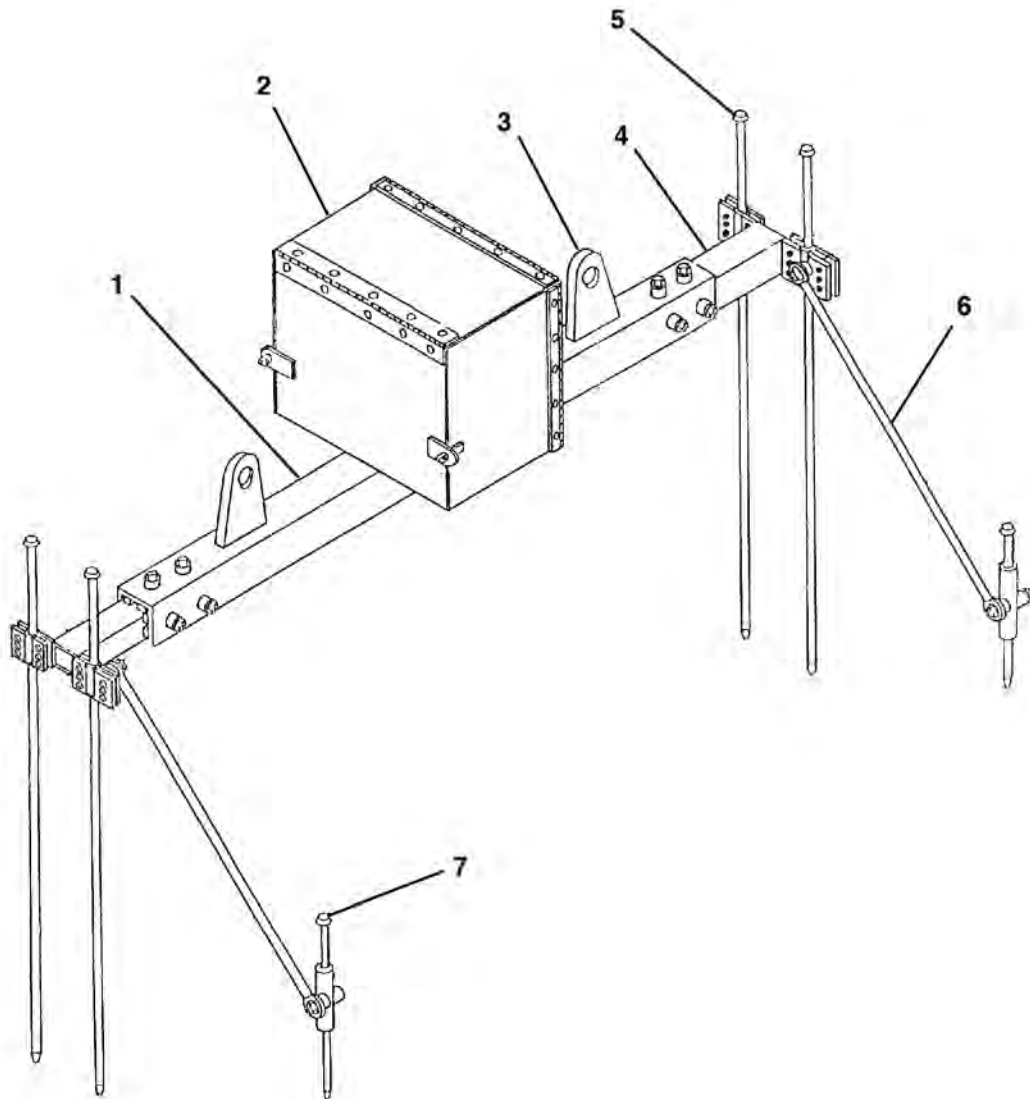


120 Screw Conveyor Shown

- 1. Carrier Bearing
- 2. Auger
- 3. Safety Chain
- 4. Lift Bracket

- 5. Hose Clamp
- 6. Motor Mount
- 7. Motor

LASER LIGHT STAND



- 1. Adjustable Frame
- 2. Laser Box Assembly
- 3. Lift Bracket
- 4. Sliding Tube

- 5. Long Stake
- 6. Support Tube
- 7. Short Stake

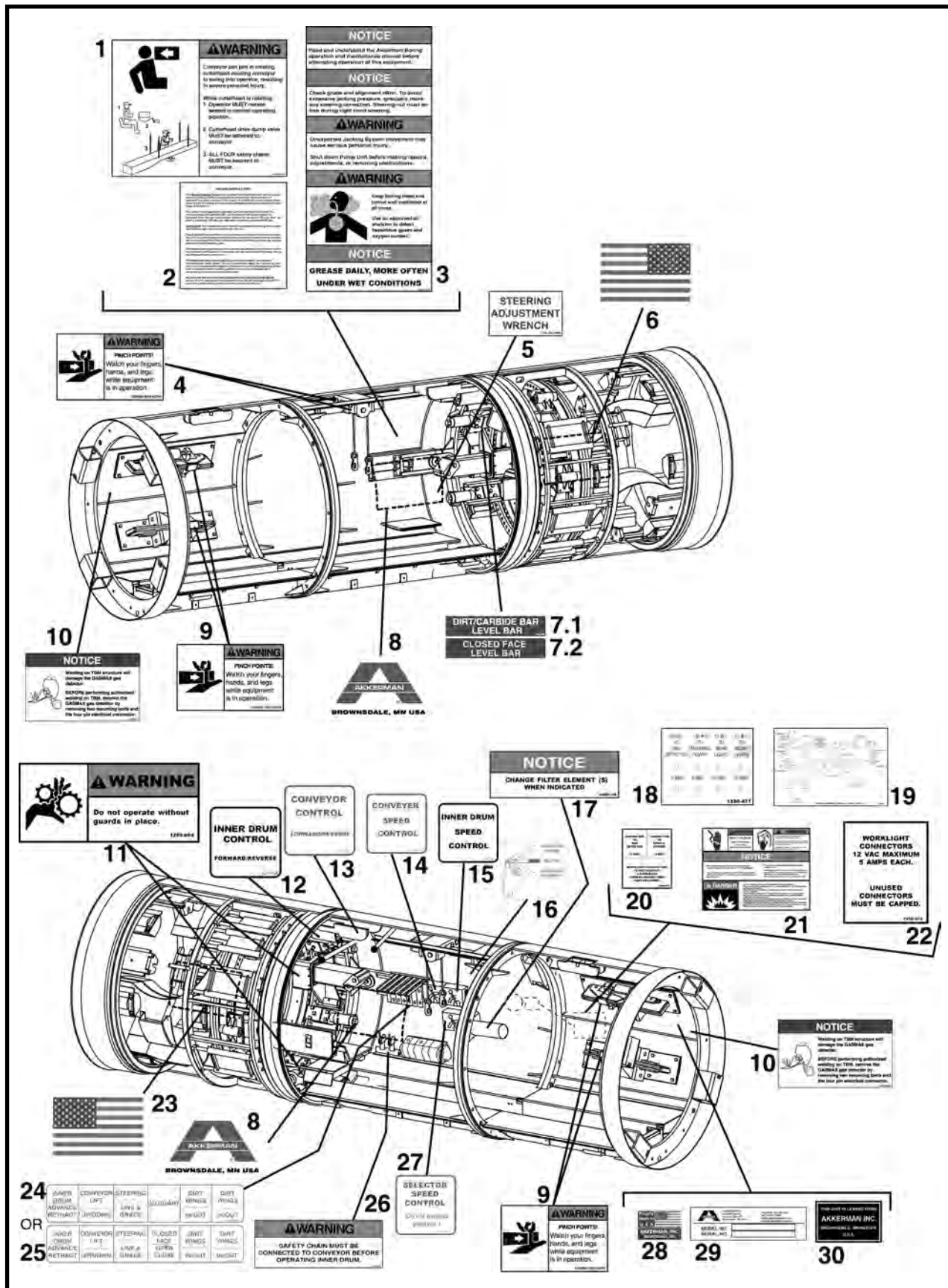


Decals

| | |
|--|----|
| Tunnel Boring Machine | |
| 480, 540 (SN F18300F-01 Thru F18300F-03) | 2 |
| 540 (SN F18300F-04 & After) | 4 |
| Conveyors | |
| Belt | 6 |
| Screw | 7 |
| Laser Light Laser Stand | 8 |
| Head Box | 9 |
| Closed Face (New Style) Lift Eye Decal | 10 |

TUNNEL BORING MACHINE DECALS

480, 540 (SN F18300F-01 Thru F18300F-03)



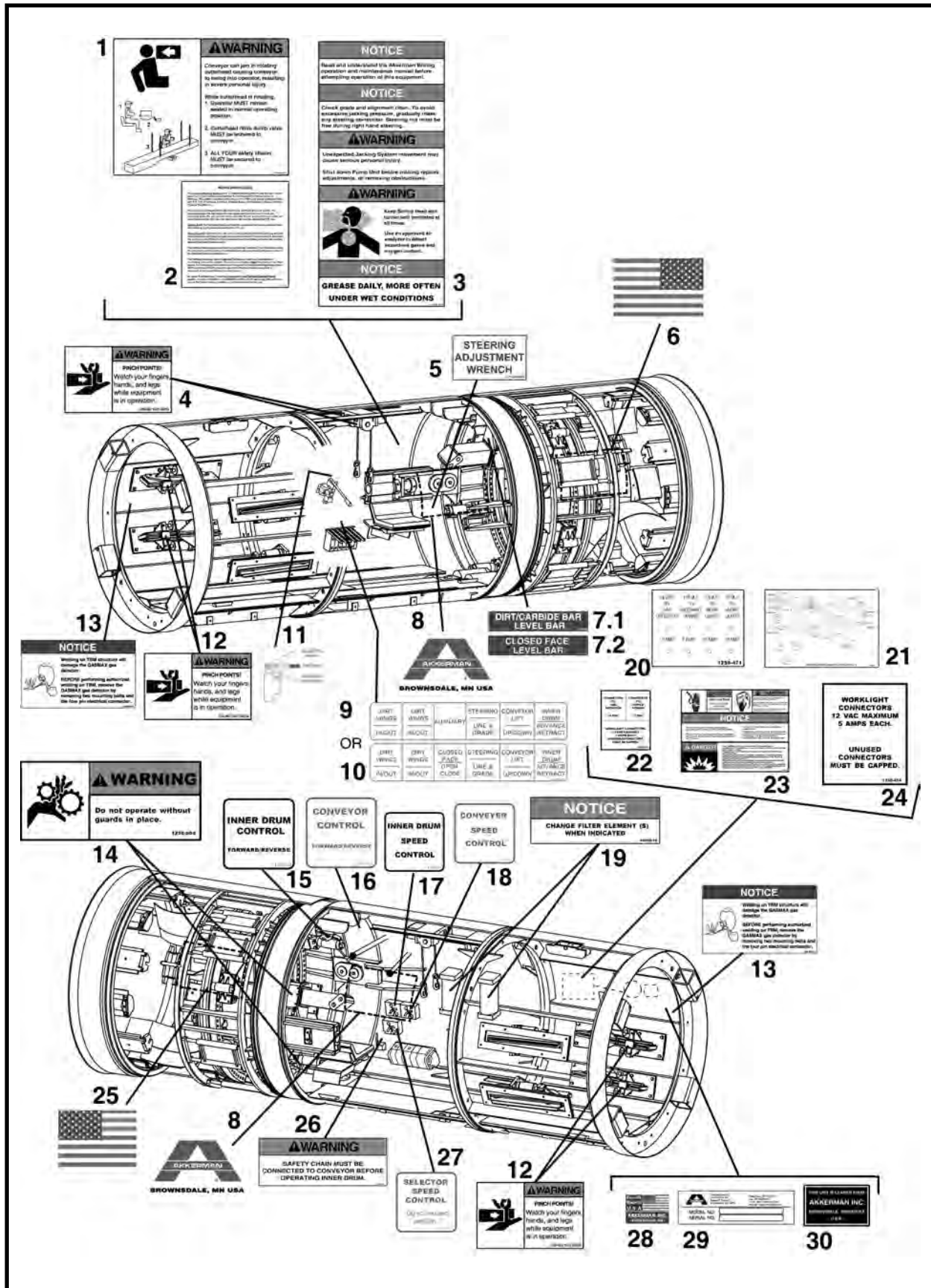
TUNNEL BORING MACHINE DECALS
480, 540 (SN F18300F-01 Thru F18300F-03)

| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----------------|-----------|--|
| 1 | 1 | 1250-532a | DECAL, Warning, Conveyor Swing |
| 2 | 1 | 1250-581 | DECAL, Methane Warning System |
| 3 | 1 | 1250-859 | DECAL, TBM Warning Notice |
| 4 | 2 | 1250-562 | DECAL, Warning, Pinch Points |
| 5 | 1 | 1251-295 | DECAL, Steering Adjustment Wrench |
| 6 | 1 | 1251-326 | DECAL, USA Flag, Large - Right |
| 7.1 | 1 | 1251-312 | DECAL, Dirt/Carbide Level Bar |
| 7.2 | 1 | 1251-200 | DECAL, Closed Face Level Bar |
| 8 | 2 | 1251-245 | DECAL, Akkerman, X Large |
| 9 | 1 per Dirt Wing | 1250-562 | DECAL, Warning, Pinch Points |
| 10 | 2 | 1251-320 | DECAL, Notice, Welding Gas Detector Damage |
| 11 | 1 per Motor | 1250-004 | DECAL, Warning, Guards Must Be In Place |
| 12 | 1 | 1250-028 | DECAL, Inner Drum Control |
| 13 | 1 | 1250-029 | DECAL, Conveyor Control |
| 14 | 1 | 1250-031 | DECAL, Conveyor Speed Control |
| 15 | 1 | 1250-030 | DECAL, Inner Drum Speed Control |
| 16 | 1 | 1250-007 | DECAL, Grade/Alignment Control |
| 17 | 1 | 40000-16 | DECAL, Notice, Change Filter |
| 18 | 1 | 1250-471 | DECAL, Fuse Locator |
| 19 | 1 | 1250-470 | DECAL, Schematic |
| 20 | 1 | 1250-475 | DECAL, Connector Designator |
| 21 | 1 | 1250-478 | DECAL, Danger, Warning, Notice, Gas Detector |
| 22 | 1 | 1250-474 | DECAL, Work Light Max. Amp. |
| 23 | 1 | 1250-560 | DECAL, USA Flag, Large |
| 24 | 1 | 1250-651 | DECAL, Control Valve |
| 25 | 1 | 1250-652 | DECAL, Control Valve (with Closed Face) |
| 26 | 1 | 1250-006 | DECAL, Warning, Safety Chain Connected To Conveyor |
| 27 | 1 | 1250-837 | DECAL, Selector Speed Control |
| 28 | 1 | 1250-544 | DECAL, Made in USA |
| 29 | 1 | REF | PLATE, Serial Number |
| 30* | 1 | 1250-098 | DECAL, Lease |

* Note: Decal used only on leased equipment.

TUNNEL BORING MACHINE DECALS

540 (SN F18300F-04 & After)



TUNNEL BORING MACHINE DECALS

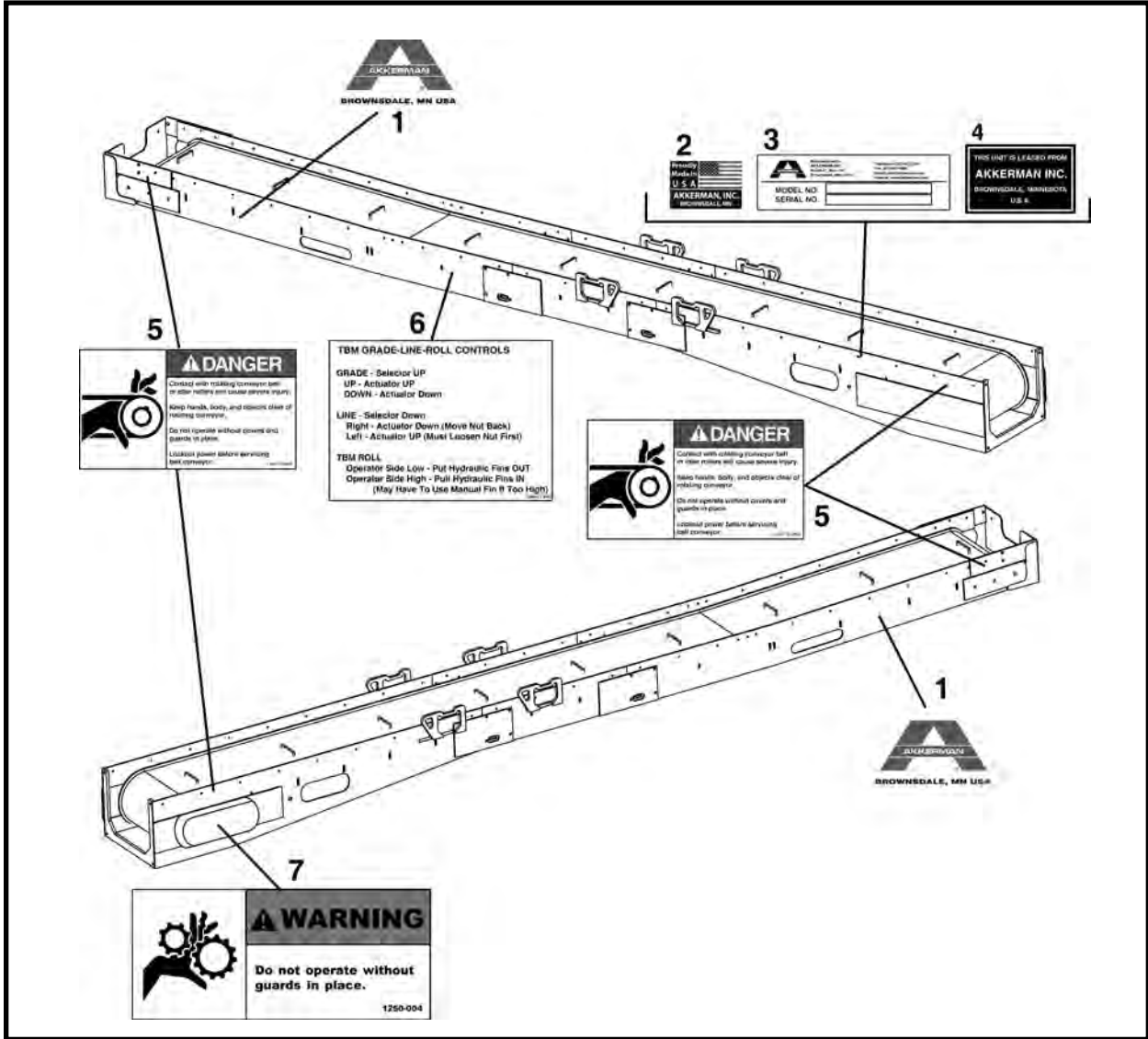
540 (SN F18300-04 & After)

| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----------------|-----------|--|
| 1 | 1 | 1250-532a | DECAL, Warning, Conveyor Swing |
| 2 | 1 | 1250-581 | DECAL, Methane Warning System |
| 3 | 1 | 1250-859 | DECAL, TBM Warning Notice |
| 4 | 2 | 1250-562 | DECAL, Warning, Pinch Points |
| 5 | 1 | 1251-295 | DECAL, Steering Adjustment Wrench |
| 6 | 1 | 1251-326 | DECAL, USA Flag, Large - Right |
| 7.1 | 1 | 1251-312 | DECAL, Dirt/Carbide Level Bar |
| 7.2 | 1 | 1251-200 | DECAL, Closed Face Level Bar |
| 8 | 2 | 1251-245 | DECAL, Akkerman, X Large |
| 9 | 1 | 1250-650 | DECAL, Control Valve |
| 10 | 1 | 1250-579 | DECAL, Control Valve (with Closed Face) |
| 11 | 1 | 1250-007 | DECAL, Grade/Alignment Control |
| 12 | 1 per Dirt Wing | 1250-562 | DECAL, Warning, Pinch Points |
| 13 | 2 | 1251-320 | DECAL, Notice, Welding Gas Detector Damage |
| 14 | 1 per Motor | 1250-004 | DECAL, Warning, Guards Must Be In Place |
| 15 | 1 | 1250-028 | DECAL, Inner Drum Control |
| 16 | 1 | 1250-029 | DECAL, Conveyor Control |
| 17 | 1 | 1250-030 | DECAL, Inner Drum Speed Control |
| 18 | 1 | 1250-031 | DECAL, Conveyor Speed Control |
| 19 | 2 | 40000-16 | DECAL, Notice, Change Filter |
| 20 | 1 | 1250-471 | DECAL, Fuse Locator |
| 21 | 1 | 1250-470 | DECAL, Schematic |
| 22 | 1 | 1250-475 | DECAL, Connector Designator |
| 23 | 1 | 1250-478 | DECAL, Danger, Warning, Notice, Gas Detector |
| 24 | 1 | 1250-474 | DECAL, Work Light Max. Amp. |
| 25 | 2 | 1250-560 | DECAL, USA Flag, Large |
| 26 | 1 | 1250-006 | DECAL, Warning, Safety Chain Connected To Conveyor |
| 27 | 1 | 1250-837 | DECAL, Selector Speed Control |
| 28 | 1 | 1250-544 | DECAL, Made in USA |
| 29 | 1 | REF | PLATE, Serial Number |
| 30* | 1 | 1250-098 | DECAL, Lease |

* Note: Decal used only on leased equipment.

BELT CONVEYOR DECALS

1615

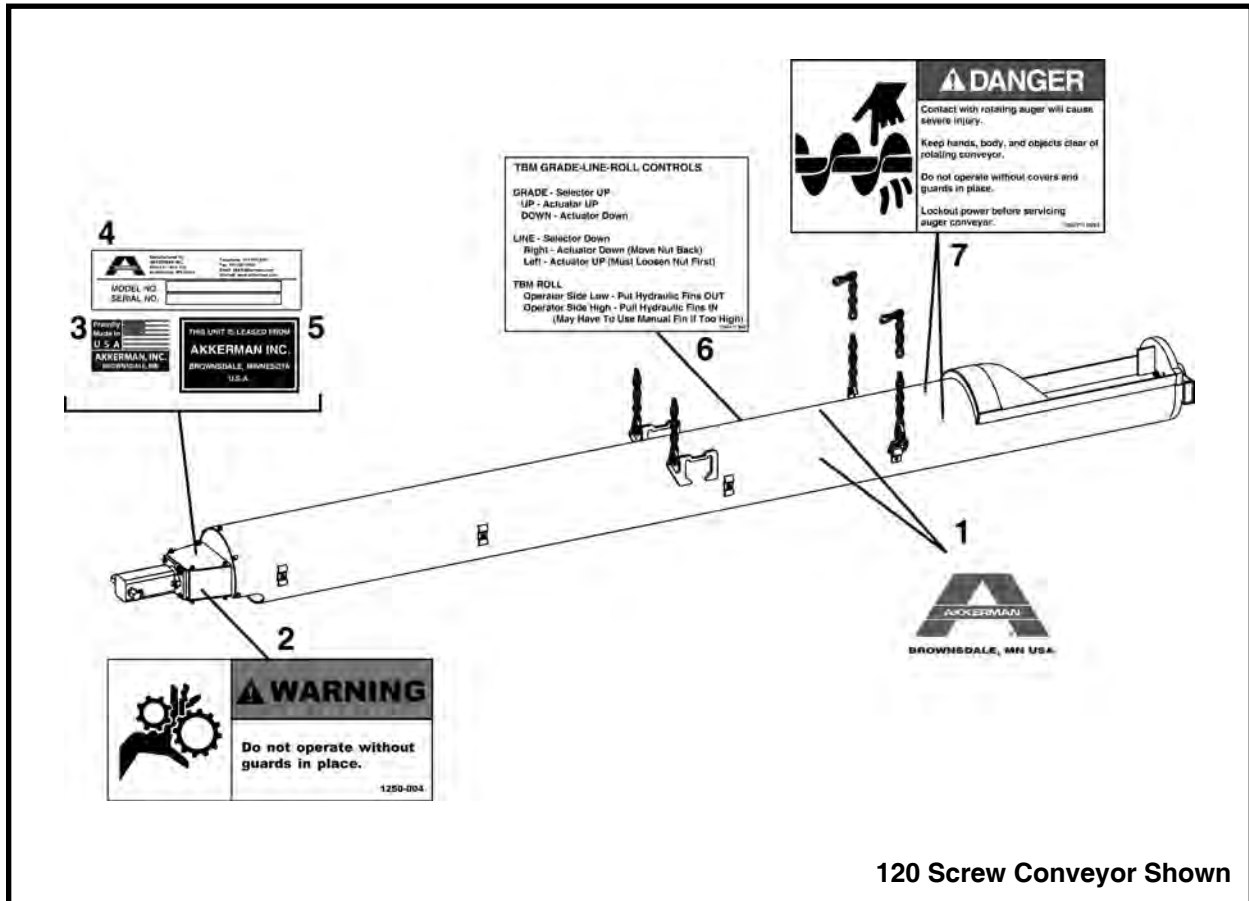


| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|----------|---|
| 1 | 2 | 1251-246 | DECAL, Akkerman, Large |
| 2 | 1 | 1250-544 | DECAL, Made In USA |
| 3 | 1 | REF | PLATE, Serial Number |
| 4* | 1 | 1250-098 | DECAL, Lease |
| 5 | 4 | 1250-750 | DECAL, Danger Rotating Belt Conveyor |
| 6 | 1 | 1250-577 | DECAL, TBM Steering Controls |
| 7 | 1 | 1250-004 | DECAL, Warning, Guards Must Be In Place |

* Note: Decal used only on leased equipment.

SCREW CONVEYOR DECALS

120-140

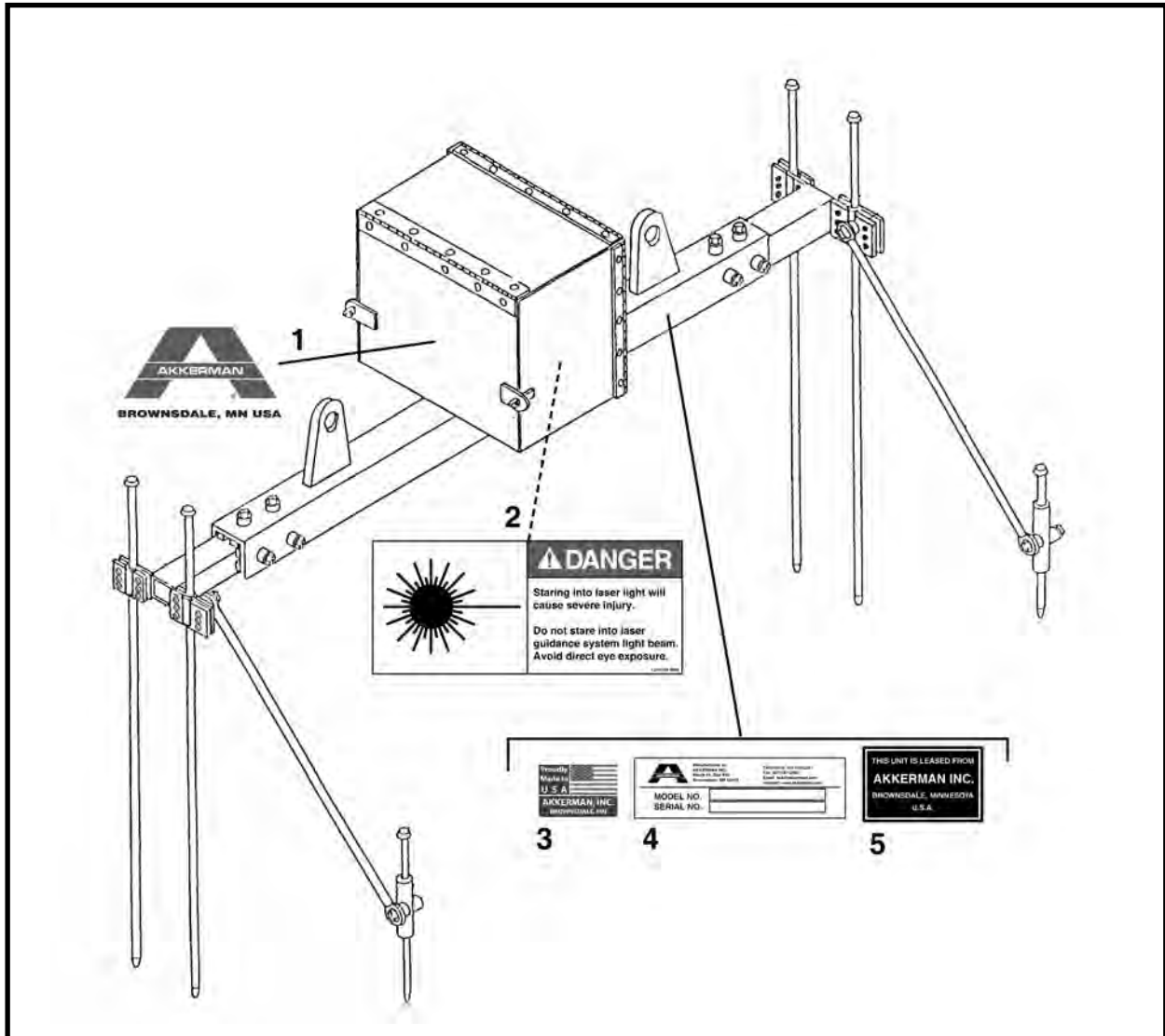


120 Screw Conveyor Shown

| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|----------|---|
| 1 | 2 | 1251-246 | DECAL, Akkerman, Large |
| 2 | 1 | 1250-004 | DECAL, Warning, Guards Must Be In Place |
| 3 | 1 | 1250-544 | DECAL, Made In USA |
| 4 | 1 | REF | PLATE, Serial Number |
| 5* | 1 | 1250-098 | DECAL, Lease |
| 6 | 1 | 1250-577 | DECAL, TBM Steering Controls |
| 7 | 2 | 1250-751 | DECAL, Danger Rotating Auger Conveyor |

* Note: Decal used only on leased equipment.

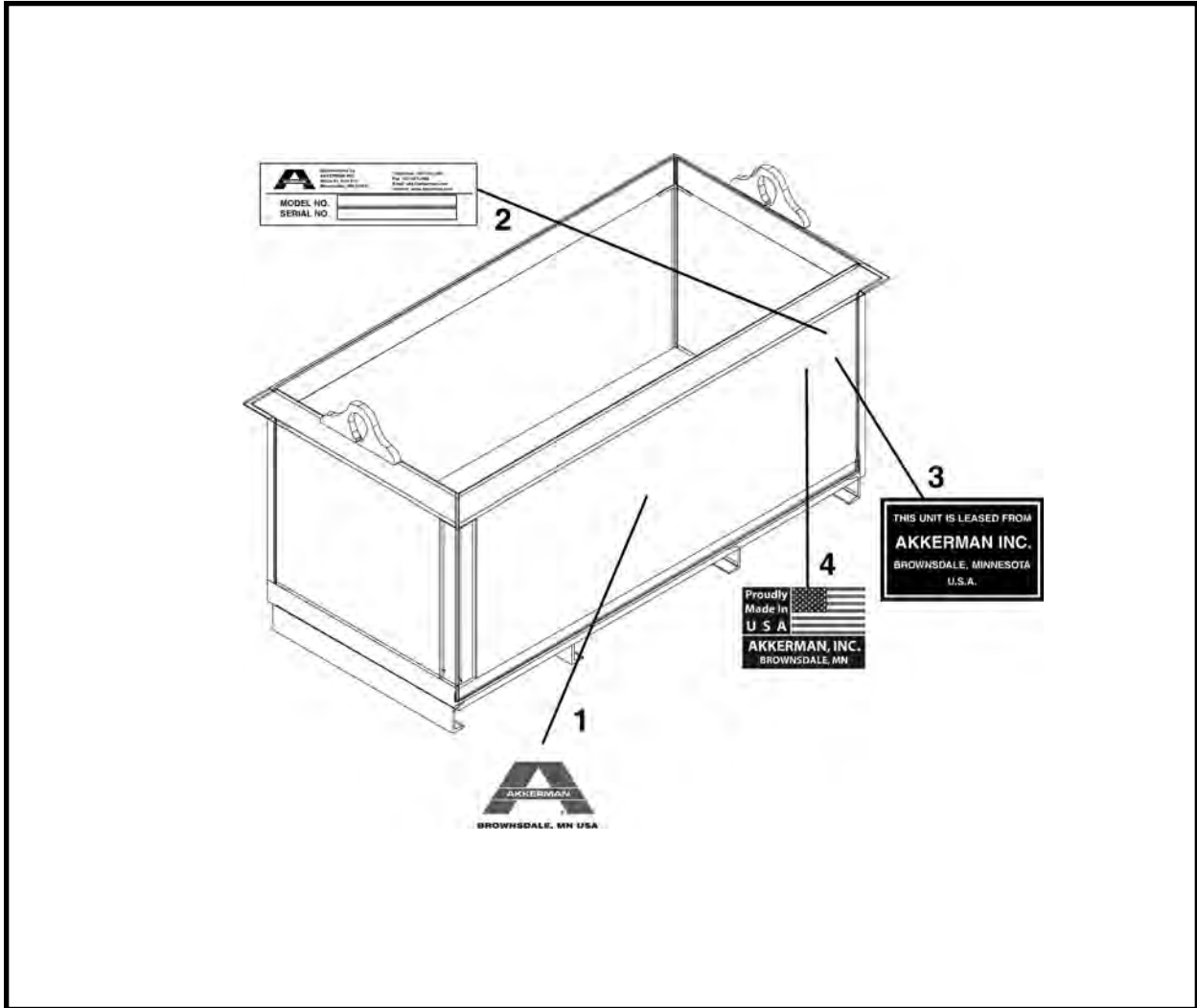
LASER LIGHT STAND DECALS



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|----------|----------------------------|
| 1 | 2 | 1251-245 | DECAL, Akkerman, X Large |
| 2 | 2 | 1250-749 | DECAL, Danger, Laser Light |
| 3 | 1 | 1250-544 | DECAL, Made In USA |
| 4 | 1 | REF | PLATE, Serial Number |
| 5* | 1 | 1250-098 | DECAL, Lease |

* Note: Decal used only on leased equipment.

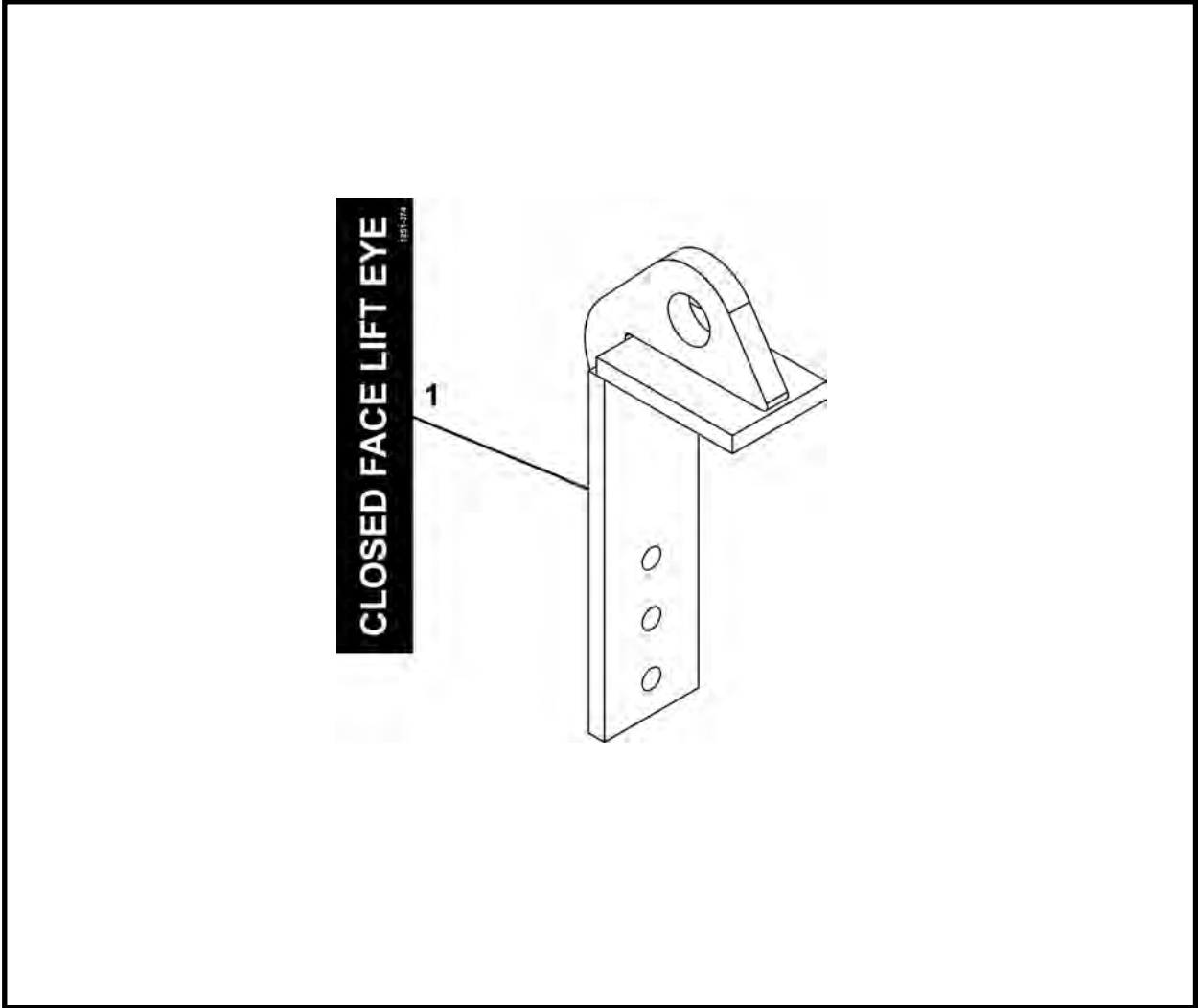
HEAD BOX DECALS



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|----------|--------------------------|
| 1 | 2 | 1251-245 | DECAL, Akkerman, X Large |
| 2 | 1 | REF | PLATE, Serial Number |
| 3 | 1 | 1250-544 | DECAL, Made In USA |
| 4* | 1 | 1250-098 | DECAL, Lease |

* Note: Decal used only on leased equipment.

**CLOSED FACE LIFT EYE DECAL
CLOSED FACE (NEW STYLE)**



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|----------|-----------------------------|
| 1 | 1 | 1251-374 | DECAL, Closed Face Lift Eye |



Structurals

TBM Frame

| | |
|---|----|
| Final Assembly | 3 |
| Front Drum & Drive Assembly | 4 |
| Inner Drum Assembly | 5 |
| Inner Drum Weldment | 6 |
| Bulkhead Seal & Door Assembly | 7 |
| Bulkhead Seal Assembly | 8 |
| Gear Ring Assembly | 9 |
| Drum Roller Assembly, 026435A | |
| 480: (SN F23800F-17 & Before); 540 (SN F18300F-10 & Before) ... | 10 |
| Drum Roller Assembly, 022132A | |
| 480: (SN F23800F-18 & After); 540 (SN F18300F-11 & After) | 11 |
| Drum Roller Assembly, 011845A00 | 12 |
| Dirt Scoop Assembly, 002289A00 | 13 |
| Dirt Paddle Assembly | 14 |
| Drum Advance Standard Assembly, 026140A | 16 |
| Thrust Roller Assembly, 001296A02 | 17 |
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| Motor Option | |
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| Mid Drum Assembly | 25 |
| Seat Assembly | |
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| Dirt Wing Drum Assembly | 29 |
| Hydraulic Dirt Wing (CW) Assembly..... | 30 |
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| Steering Cylinder & Link Assembly | |
| Steering Cylinder & Link Assembly, 023806A00 (480) | 32 |
| Steering Cylinder & Link Assembly, 018306A01 (540) | 34 |
| Floor Assembly | |
| Floor Assembly, 023819A00 (480) | 36 |
| Floor Assembly, 018320A00 (540) | 37 |
| Bell End Ring Assembly | 38 |

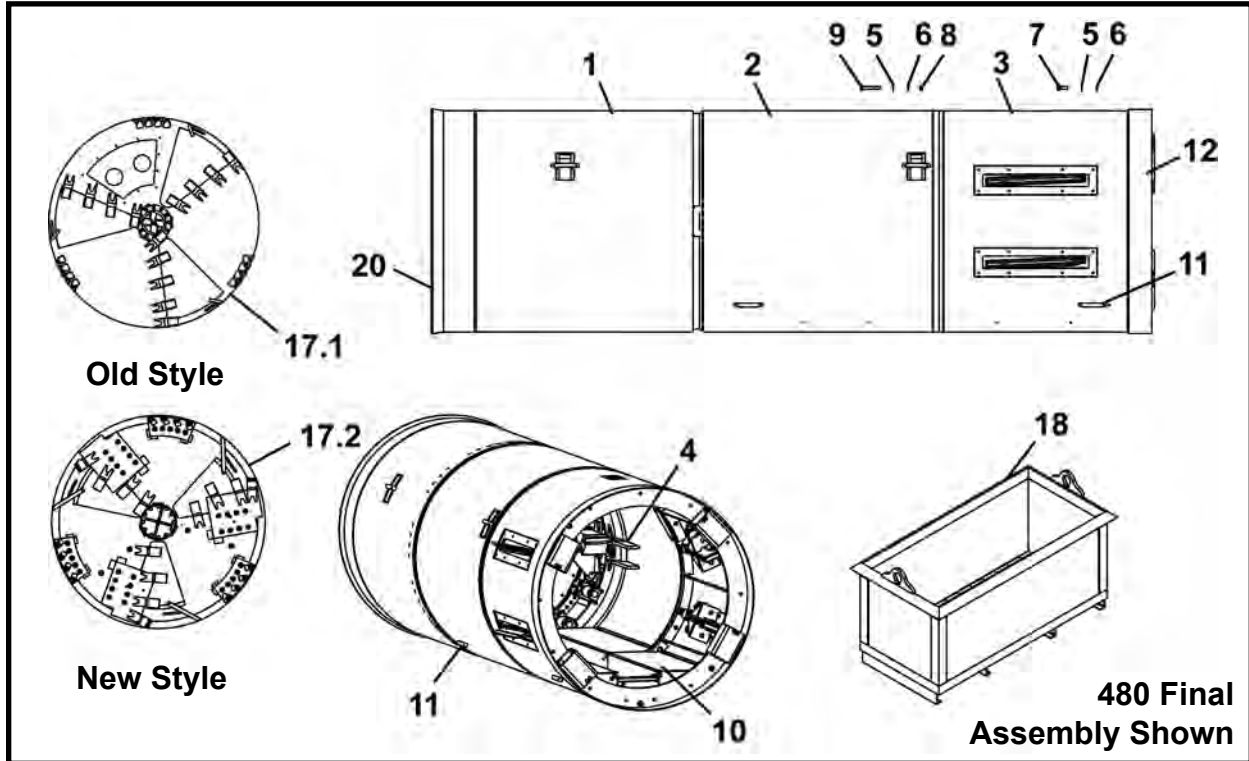
TBM Attachments, Laser Light Stand, and Conveyors continued on next page.

Structurals (continued)

TBM Attachments

| | |
|---|---|
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| Sand Head Assembly | 40 |
| Quad Carbide Cutter Bar Assembly | 41 |
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| New Style | |
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| Laser Light Stand, F05866F00 | 59 |
| Conveyors | See Section 11 Miscellaneous/Conveyors |

FINAL ASSEMBLY



| ITEM | QTY | 480 PART NO. | 540 PART NO. | DESCRIPTION |
|---------|-----|-----------------|-----------------|--|
| 0 | 1 | F23800F00 | F18300F00 | FINAL ASSEMBLY |
| 1* | 1 | 023802A00 | 018302A00 | ASSEMBLY, Front Drum & Drive |
| 2* | 1 | 023303A00 | 018303A00 | ASSEMBLY, Mid Drum |
| 3* | 1 | 023804A00 | 018304A00 | ASSEMBLY, Dirt Wing Drum |
| 4* | 1 | 023806A00 | 018306A01 | ASSEMBLY, Steering Cylinder & Link |
| 5 | 26 | P0040-012 | P0040-012 | WASHER, Flat 3/4 |
| 6 | 26 | P0045-012 | P0045-012 | WASHER, Lock 3/4 |
| 7 | 13 | P0001-12-009 | P0001-12-009 | BOLT, 3/4-10 x 2-1/4 |
| 8 | 13 | P0003-12-000 | P0003-12-000 | NUT, 3/4-10 |
| 9 | 13 | P0001-12-018 | P0001-12-018 | BOLT, 3/4-10 x 4-1/2 |
| 10* | 1 | 023819A00 | 018320A00 | ASSEMBLY, Floor |
| 11 | 4 | 002279P01 | 002279P01 | GUIDE, Skid |
| 12* | 1 | 023810A00 | 018310A00 | ASSEMBLY, Bell End Ring |
| 13** | 1 | 016400A | 016400A | ASSEMBLY, Electrical System |
| 14* | 1 | 030305A | 030316A | ASSEMBLY, Dirt Head |
| 15* | 1 | 004824A01 | 004888A00 | ASSEMBLY, Sand Head |
| 16* | 1 | 010861A00 | 009906A00 | ASSEMBLY, Quad Carbide Head |
| 17.1* | 0 | 023910F00 | 026170F00 | ASSEMBLY, Closed Face (Old) |
| 17.2* | 0 | F25650F | F26235F | ASSEMBLY, Closed Face (New) |
| 18 | 1 | F10350F00 | F10360F00 | BOX, Head |
| 19.1*** | 1 | 023817A01 | - | ASSEMBLY, Hydraulic System 480 SN 17 & before NPT |
| 19.1*** | 1 | 029950A | - | ASSEMBLY, Hydraulic System 480 SN 18 & after NPT/ORB |
| 19.2*** | 1 | - | 023817A01 | ASSEMBLY, Hydraulic System 540 SN 1 - 3 NPT |
| 19.2*** | 1 | - | 010199A00 | ASSEMBLY, Hydraulic System 540 SN 4 - 10 NPT |
| 19.2*** | 1 | - | 029951A | ASSEMBLY, Hydraulic System 540 SN 11 & after ORB |
| 20**** | 32 | P0033-10-024 | P0033-10-024 | SCREW, SH Set 5/8 UNC x 1.5 |

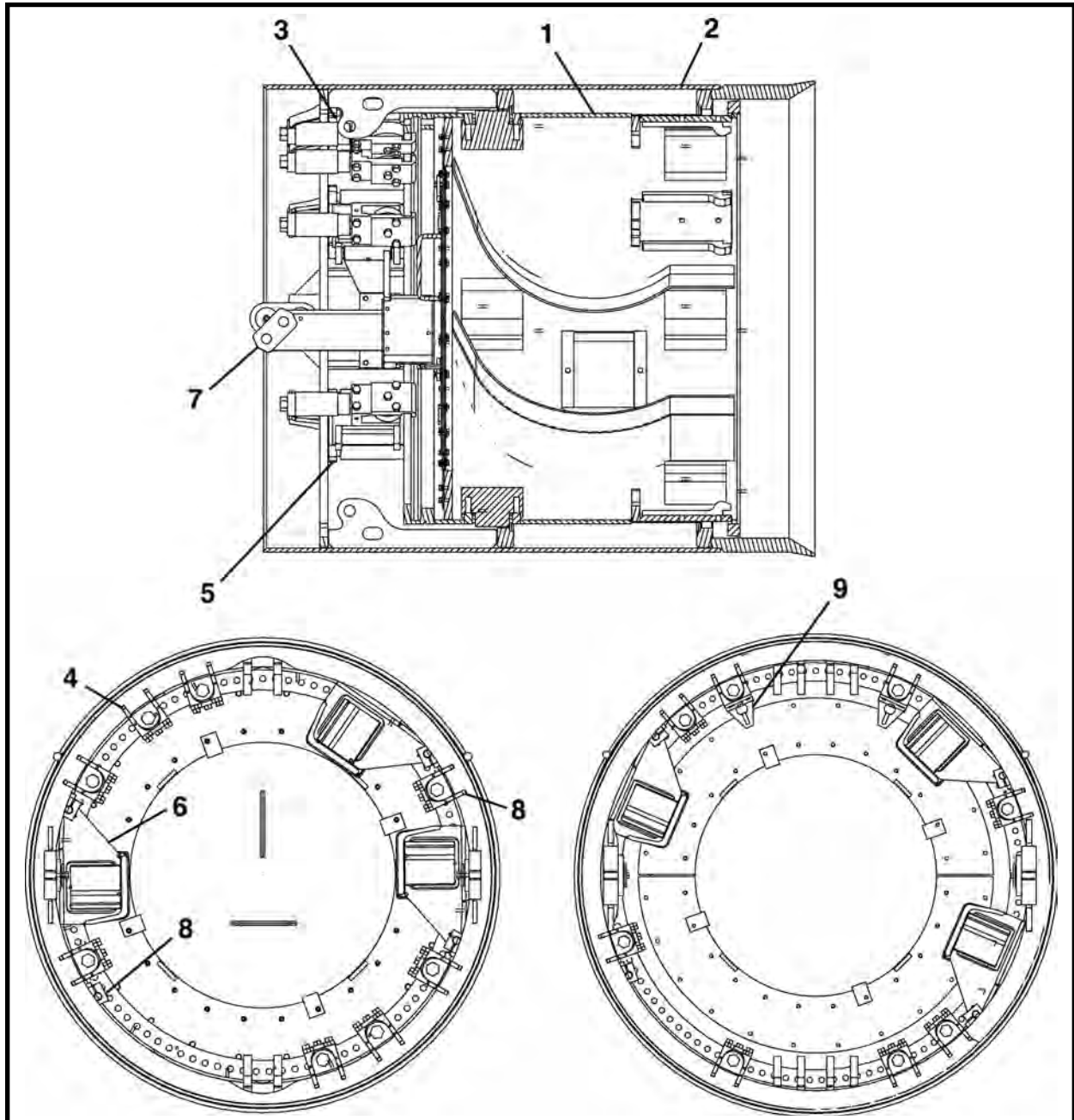
* Refer to this section for parts information.

** Refer to Section 5, Electrical for parts information

*** Refer to Section 6, Hydraulics for parts information.

**** Add to cutting ring with Loctite®, flush with ID to prevent dirt buildup in the sand head mounting holes.

FRONT DRUM & DRIVE ASSEMBLY

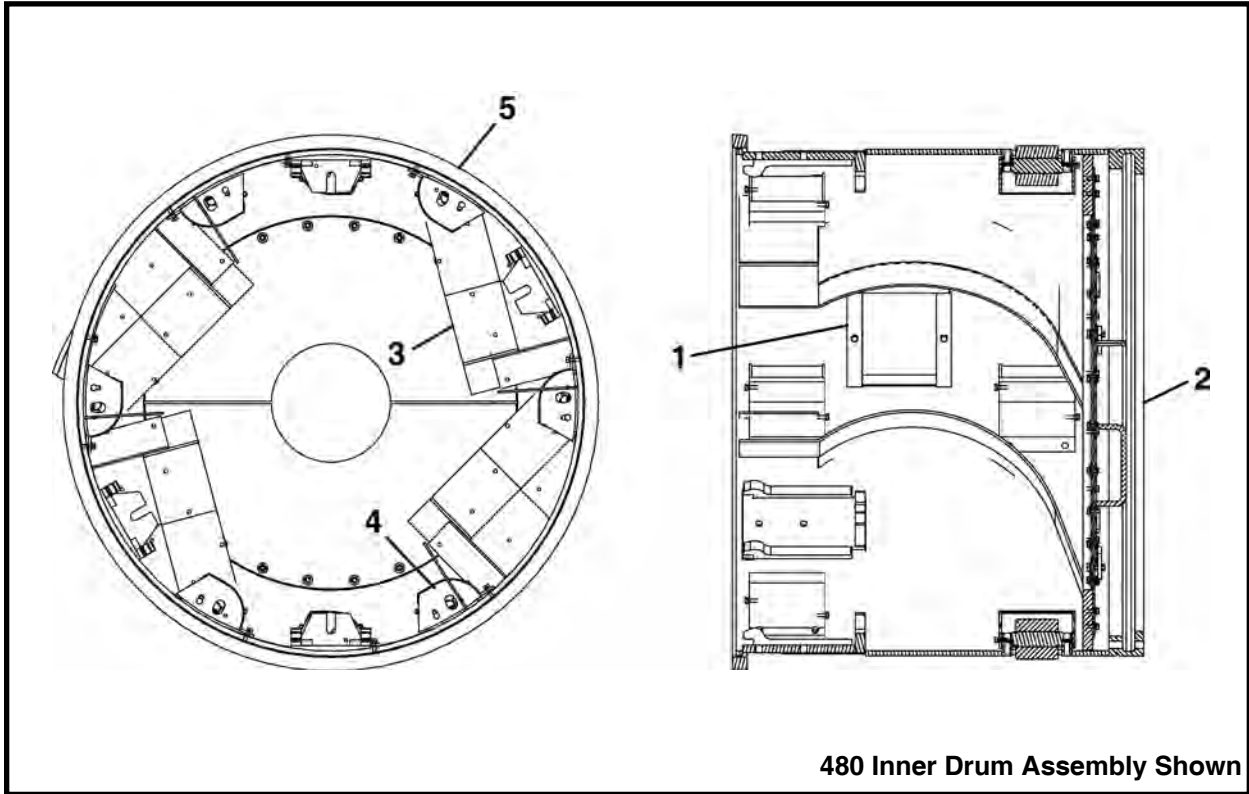


| ITEM | QTY | 480 PART NO. | 540 PART NO. | DESCRIPTION |
|------|-----|-----------------|-----------------|-----------------------------------|
| 0 | 1 | 023802A00 | 018302A00 | FRONT DRUM & DRIVE ASSEMBLY |
| 1* | 1 | 023805A00 | 018305A00 | ASSEMBLY, Inner Drum |
| 2 | 1 | 023811A00 | 018311A00 | WELDMENT, Front Drum |
| 3 | 8 | 013783P | 013785P | MOUNT, Drum Advance Assembly |
| 4* | 4 | 026140A | 026140A | ASSEMBLY, Drum Advance |
| 5 | 8 | 013784P | 013786P | MOUNT, Drum Advance w/Motor |
| 6 | 3 | 008288A00 | 009131A00 | BRACKET, Motor (Includes item 6a) |
| 6a | 1 | P0063-001 | P0063-001 | FITTING, Grease 1/4 (not shown) |
| 7* | 3 | 013814A00 | 013814A00 | ASSEMBLY, Motor |
| 7a* | 1 | 030160A | 030055A | MOTOR OPTION |
| 8* | 4 | 026145A | 026145A | DRUM ADVANCE, for Motor Assembly |
| 9 | 2 | - | 002225P | BRACKET, Conveyor Safety Retainer |

* Refer to this section for parts information.

NOTE: An optional motor is available for the 480 and 540 TBMs. Refer to item 7a.

INNER DRUM ASSEMBLY



| ITEM | QTY | 480 PART NO. | 540 PART NO. | DESCRIPTION |
|------|-------|-----------------|-----------------|-----------------------|
| 0 | 1 | 023805A00 | 018305A00 | ASSEMBLY, Inner Drum |
| 1* | 1 | 002289A00 | 002289A00 | ASSEMBLY, Dirt Scoop |
| 2* | 1 | 009388A01 | 009180A00 | ASSEMBLY, Gear Ring |
| 3* | 4/3 | 020833A | 020837A | ASSEMBLY, Dirt Paddle |
| 4.1* | 10/12 | 026435A | 026435A | ASSEMBLY, Drum Roller |
| 4.2* | 10/12 | 022132A | 022132A | ASSEMBLY, Drum Roller |
| 5* | 1 | 023815A00 | 018315A00 | WELDMENT, Inner Drum |

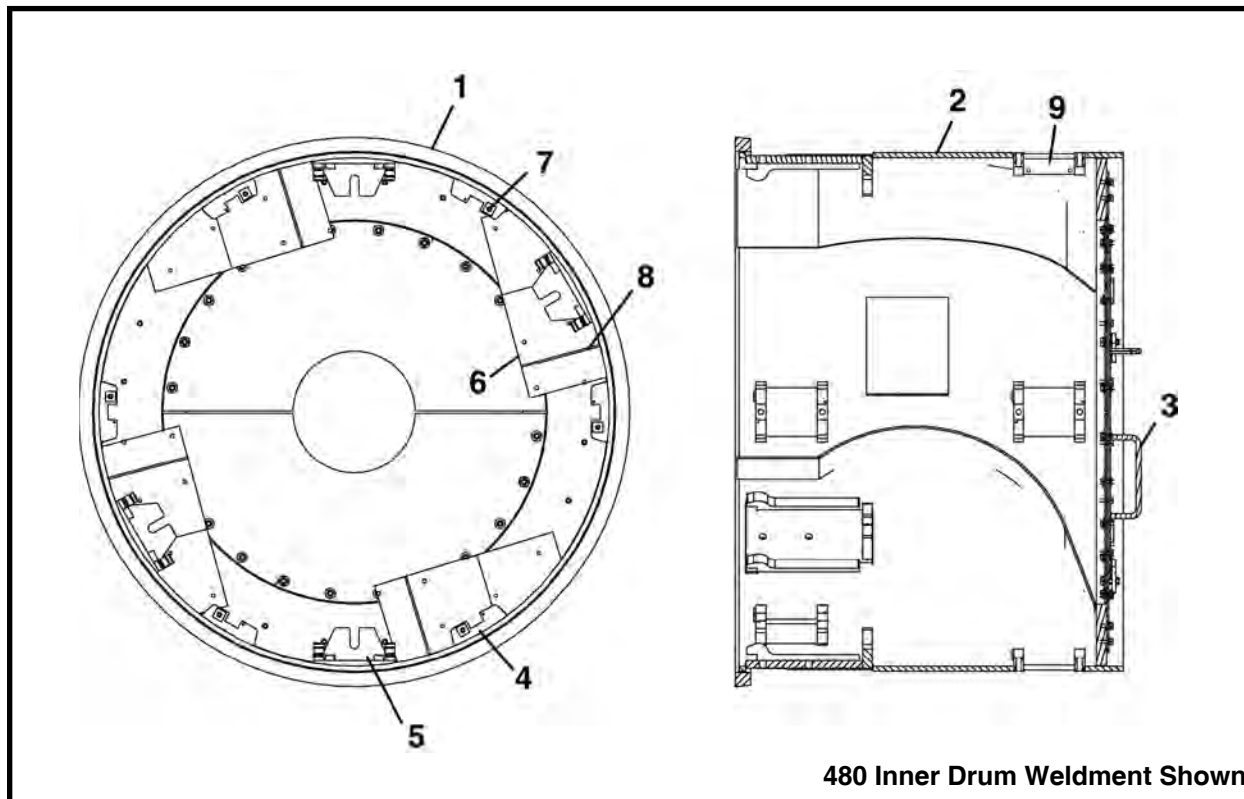
* Refer to this section for parts information.

NOTE:

4.1: Part number 026435A, Drum Roller Assembly is used on the following TBMs:
480: SN F23800F00-17 & Before; 540: SN F18300F00-10 & Before

4.2: Part number 022132A, Drum Roller Assembly is used on the following TBMs:
480: SN F23800F00-18 & After; 540: SN F18300F00-11 & After

INNER DRUM WELDMENT



| ITEM | QTY | 480 PART NO. | 540 PART NO. | DESCRIPTION |
|------|-------|-----------------|-----------------|---------------------------|
| 0 | 1 | 023815A00 | 018315A00 | WELDMENT, Inner Drum |
| 1 | 1 | 023847P00 | 018345P00 | RING, Inner Drum |
| 2.1 | 1 | 023846P00 | 018344P00 | SKIN, Inner Drum |
| 2.2 | 1 | 022199P | 022131P | SKIN, Inner Drum |
| 3* | 1 | 023818A00 | 018318A00 | ASSEMBLY, Bulkhead Door |
| 4.1 | 20/24 | 011807P00 | 011807P00 | MOUNT, Drum Rollers |
| 4.2 | 20/24 | 022186P | 022186P | MOUNT, Drum Rollers |
| 5.1 | 4/6 | 004666A00 | 004666A00 | WELDMENT, Cutter Mount |
| 5.2 | 4/6 | 022190A | 022190A | WELDMENT, Cutter Mount |
| 6 | 4/3 | 020835P | 020839P | PLATE, Dirt Paddle |
| 7 | 10/12 | 003924P00 | 003924P00 | SPACER MOUNT, Drum Roller |
| 8 | 4/3 | 020832P | 020832P | PLATE, Dirt Paddle, Flat |
| 9.1 | 0 | - | - | COVER, Mounting |
| 9.2 | 10/12 | 022185P | 022185P | COVER, Mounting |

* Refer to this section for parts information.

NOTE:

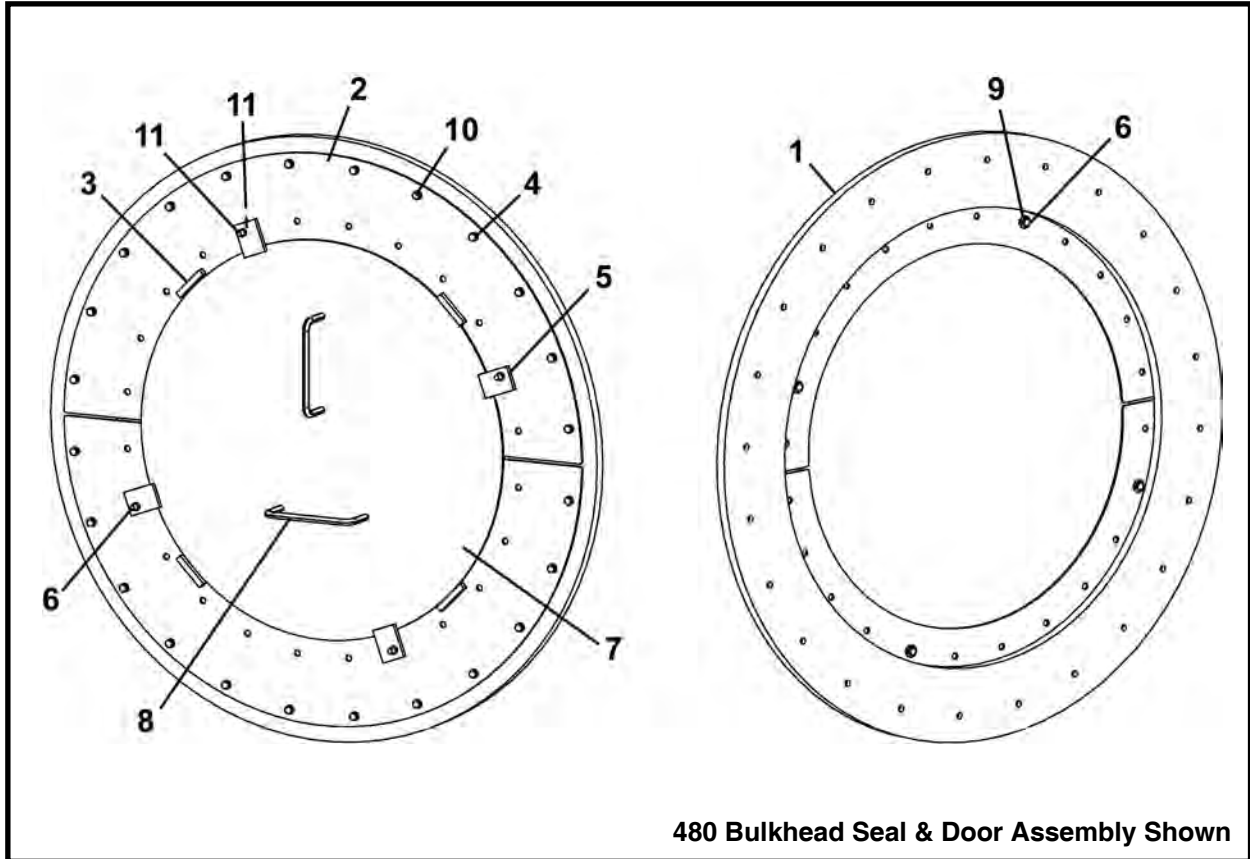
Items 2.1, 4.1, 5.1 and 9.1 apply to the following TBMs:

480: SN F23800F00-17 & Before; 540: SN F18300F00-10 & Before;

Items 2.2, 4.2, 5.2 and 9.2 apply to the following TBMs:

480: SN F23800F00-18 & After; 540: SN F18300F00-11 & After

BULKHEAD SEAL & DOOR ASSEMBLY



| ITEM | QTY | 480 PART NO. | 540 PART NO. | DESCRIPTION |
|------|-----|-----------------|-----------------|------------------------------------|
| 0 | 1 | 023818A00 | 018318A00 | ASSEMBLY, Bulkhead Seal & Door |
| 1 | 1 | 023837P00 | 006729P01 | RING, Inner Drum |
| 2 | 2 | 023838P00 | 015032P00 | PLATE, Bulkhead Adapter |
| 3 | 4 | 009987P00 | 009987P00 | BAR, Closed Inner Drum |
| 4 | 24 | P0045-006 | P0045-006 | WASHER, Lock 3/8 |
| 5 | 4 | 009986P00 | 009986P00 | BLOCK, Clamp |
| 6 | 4 | P0034-06-008 | P0034-06-008 | SCREW, Square Head Set 3/8 UNC x 2 |
| 7 | 1 | 023839P00 | 023839P00 | DOOR, Bulkhead |
| 8 | 2 | 012875P00 | 012875P00 | HANDLE |
| 9 | 4 | P0040-006 | P0040-006 | WASHER, Hardened Flat 3/8 |
| 10 | 24 | P0001-06-004 | P0001-06-004 | BOLT, 3/8 UNC x 1 |
| 11 | 8 | P0003-06-000 | P0003-06-000 | NUT, 3/8 |

NOTE:

1. There are four 3/8 nuts (item 11) that are placed between inner drum encloser bar (item 5) and bulkhead adaptor plate (item 2) to allow spacing for mounting bulkhead door.

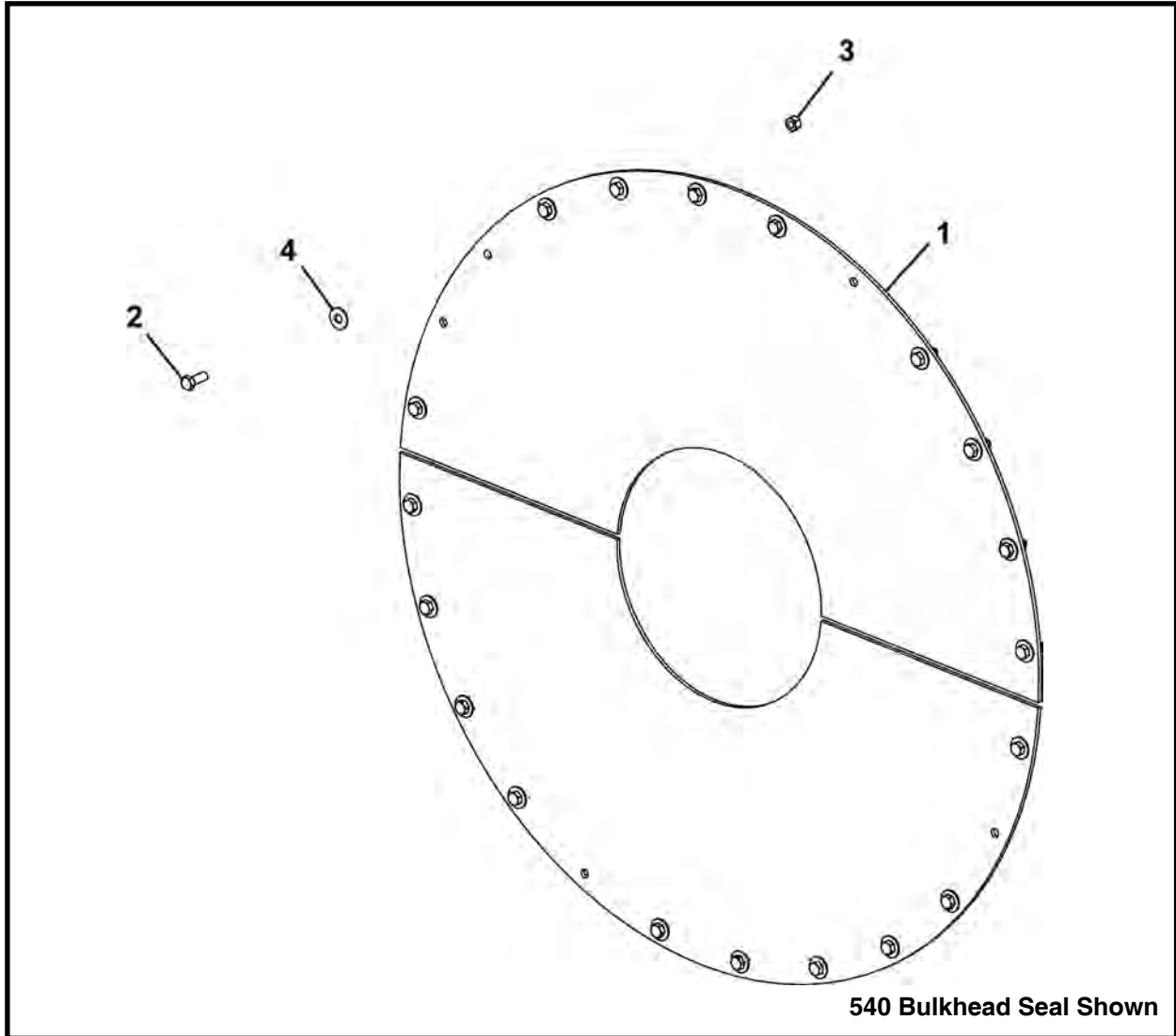
2. The Bulkhead Seal assembly part numbers (including mounting hardware) are as follows:

480 - 023870A

540 - 018359A

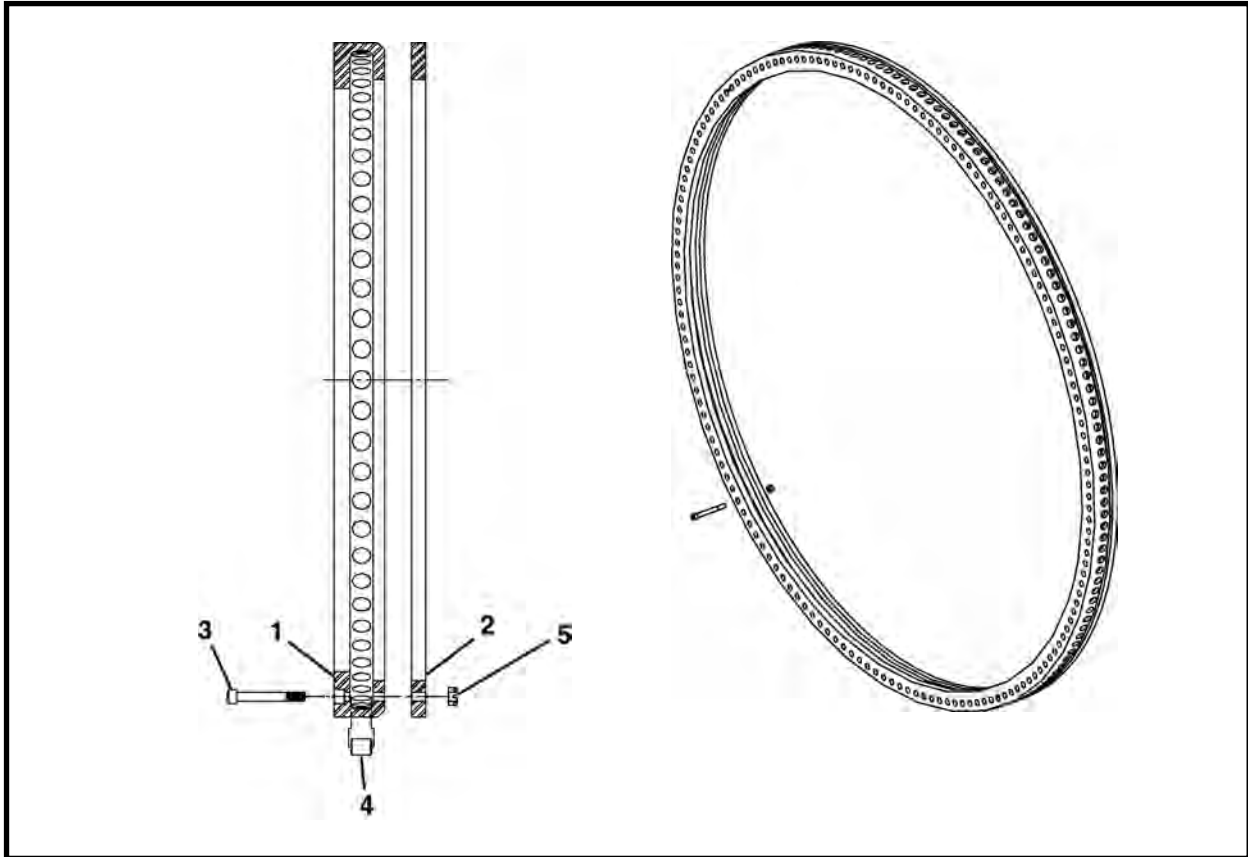
Refer to this section for bulkhead seal assembly parts information.

BULKHEAD SEAL ASSEMBLY



| ITEM | QTY | 480 PART NO. | 540 PART NO. | DESCRIPTION |
|------|-----|-----------------|-----------------|---------------------------|
| 0 | 1 | 023870A | 018359A | ASSEMBLY, Bulkhead Seal |
| 1 | 2 | 023848P00 | 018323P | SEAL, Bulkhead |
| 2 | 20 | P0001-06-004 | P0001-06-004 | BOLT, 3/8 UNC x 1 |
| 3 | 20 | P0003-06-000 | P0003-06-000 | NUT, 3/8 |
| 4 | 20 | P0040-006 | P0040-006 | WASHER, Hardened Flat 3/8 |

GEAR RING ASSEMBLY



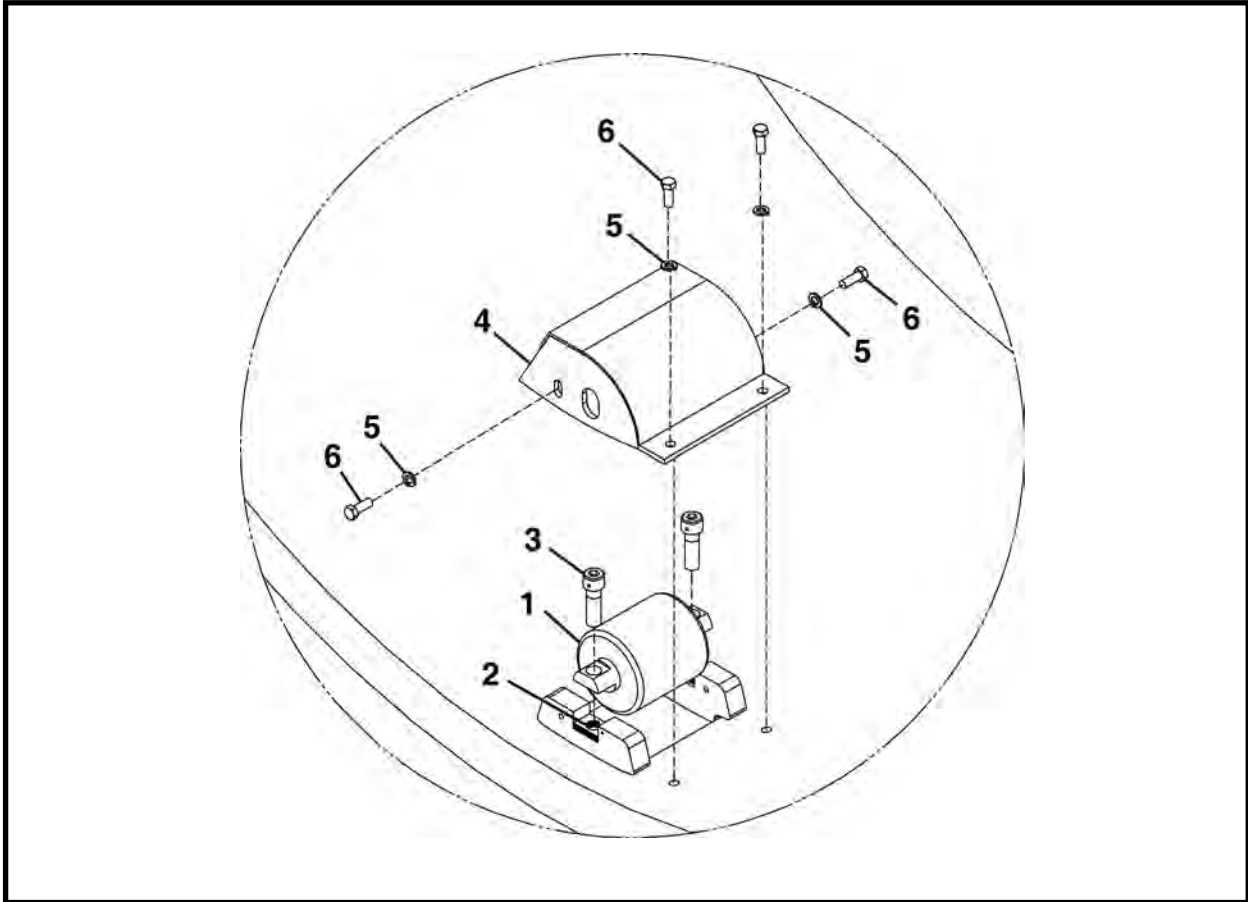
| ITEM | QTY | 480 PART NO. | 540 PART NO. | DESCRIPTION |
|------|--------|-----------------|-----------------|---------------------|
| 0 | 1 | 009388A01 | 009180A00 | ASSEMBLY, Gear Ring |
| 1 | 1 | 009389P00 | 009179P00 | GEAR RING |
| 2 | 1 | 009390P02 | 009204P02 | RING, Mounting |
| 3 | 95/107 | 009183P01 | 009183P01 | BOLT, Gear Ring |
| 4 | 95/107 | 001151P00 | 001151P00 | SPOOL, Gear Ring |
| 5 | 95/107 | P0013-08-000 | P0013-08-000 | NUT, Lock 1/2 |

NOTE: Tighten mounting bolts to 120 - 130 in/lbs. torque.

DRUM ROLLER ASSEMBLY, 026435A

480: SN F23800F00-17 & Before

540: SN F18300F00-10 & Before



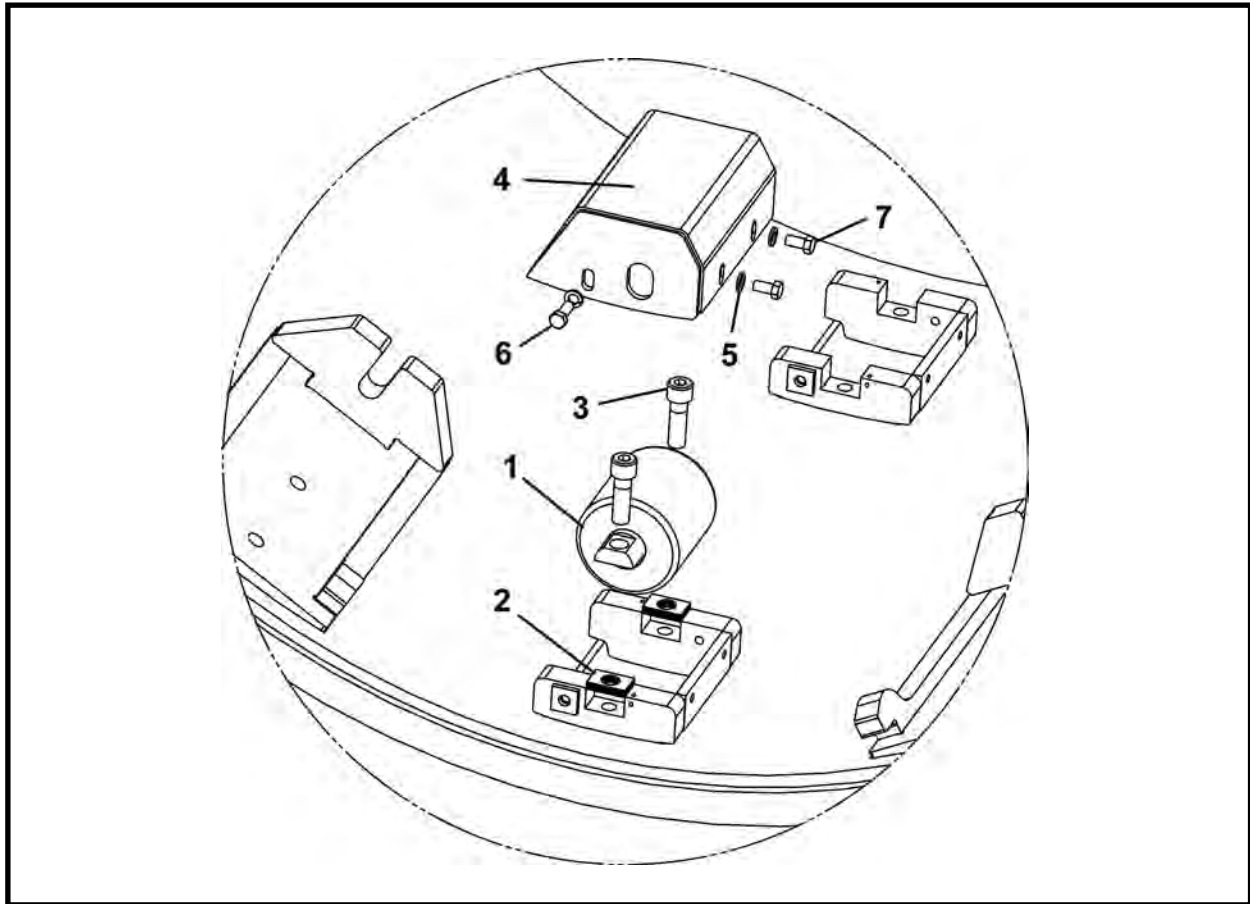
| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|---------------------------------|
| 0 | 1 | 026435A | ASSEMBLY, Common Drum Roller |
| 1* | 1 | 011845A00 | ASSEMBLY, Drum Roller |
| 2 | 12 | 011809P00 | SHIM |
| 3 | 2 | 011808P00 | SCREW, Socket Head Cap, 5/8 x 2 |
| 4 | 1 | 002082A01 | ASSEMBLY, Cover |
| 5 | 4 | P0045-006 | WASHER, Lock 3/8 |
| 6 | 4 | P0001-06-004 | BOLT, 3/8 UNC x 1 |

* Refer to this section for parts information.

DRUM ROLLER ASSEMBLY, 022132A

480: SN F23800F00-18 & After

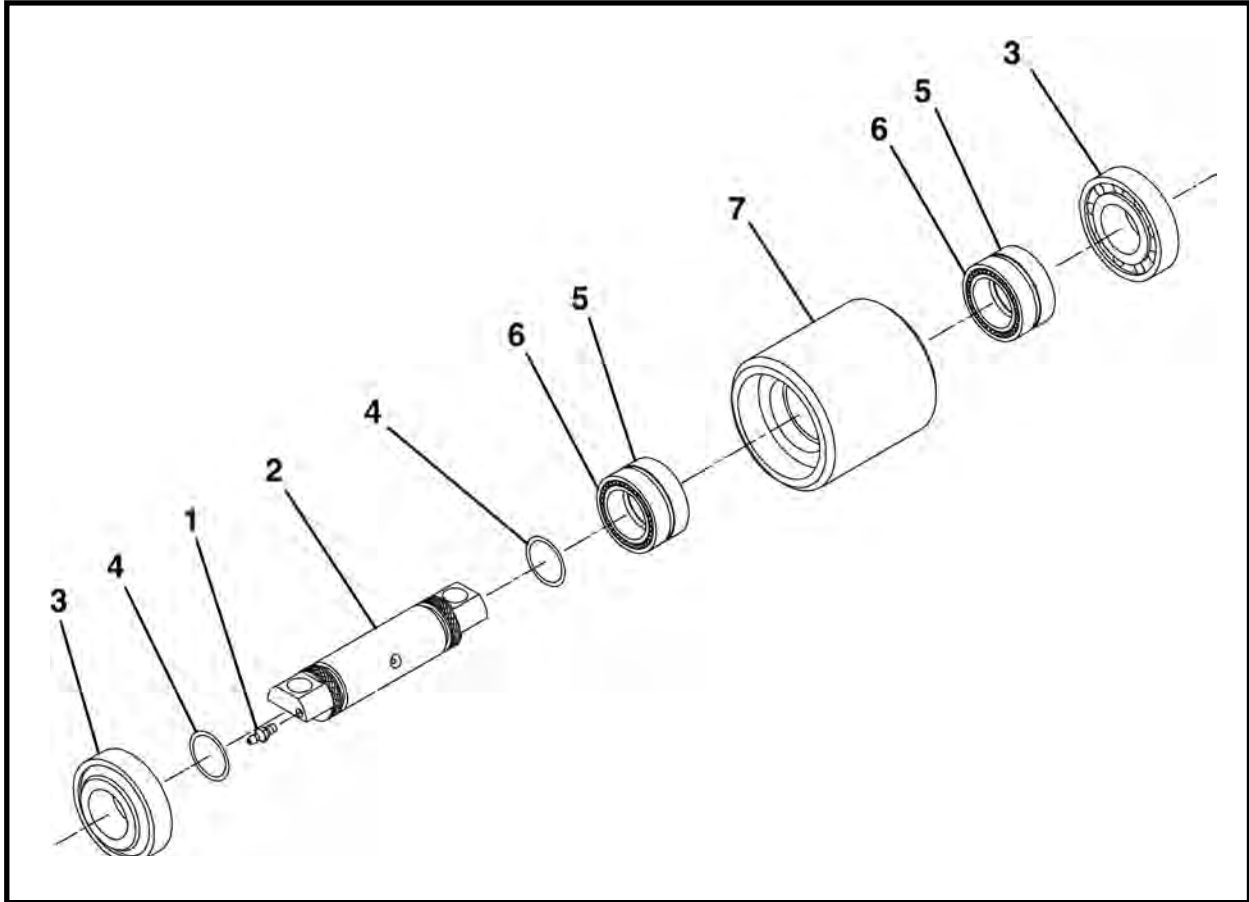
540: SN F18300F00-11 & After



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|---------------------------------|
| 0 | 1 | 022132A | ASSEMBLY, Drum Roller |
| 1* | 1 | 011845A00 | ASSEMBLY, Drum Roller |
| 2 | 12 | 011809P00 | SHIM |
| 3 | 2 | 011808P00 | SCREW, Socket Head Cap, 5/8 x 2 |
| 4 | 1 | 022180A | ASSEMBLY, Cover |
| 5 | 4 | P0045-006 | WASHER, Lock 3/8 |
| 6 | 2 | P0001-06-004 | BOLT, 3/8 UNC x 1 |
| 7 | 2 | P0001-06-003 | BOLT, 3/8 UNC x .75 |

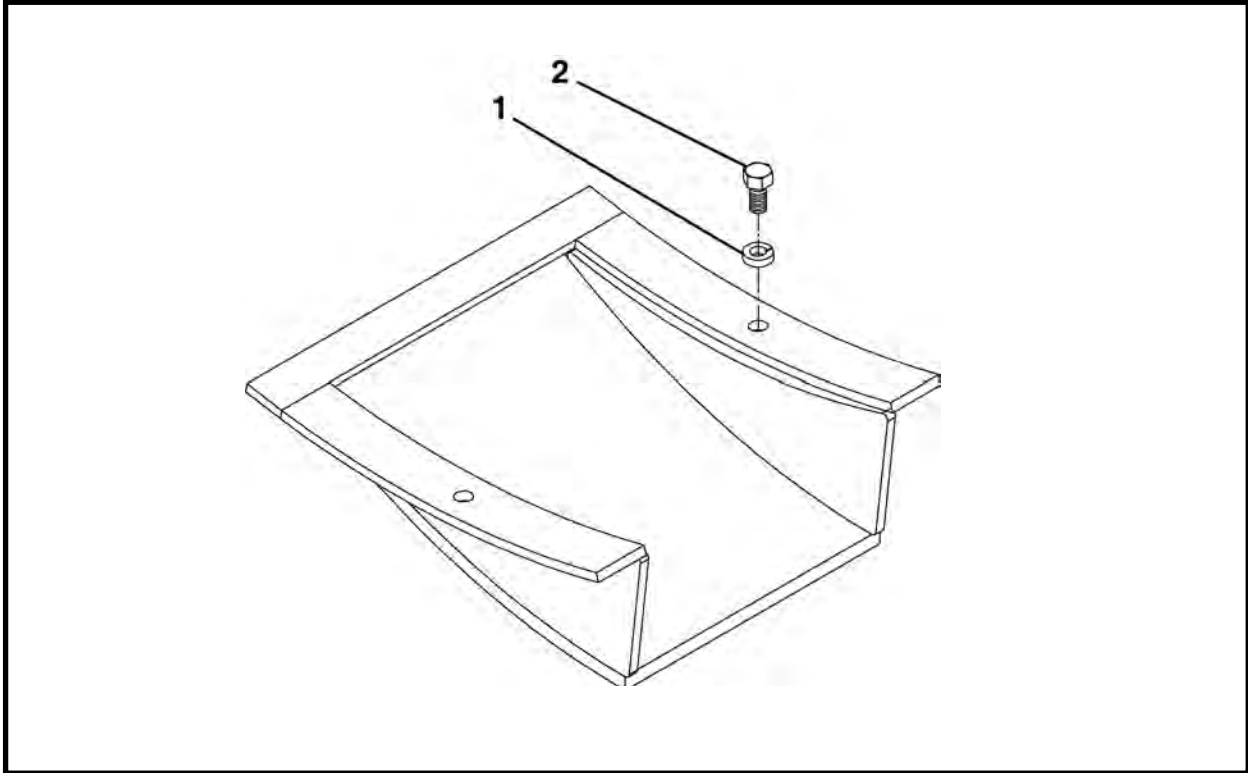
* Refer to this section for parts information.

DRUM ROLLER ASSEMBLY, 011845A00



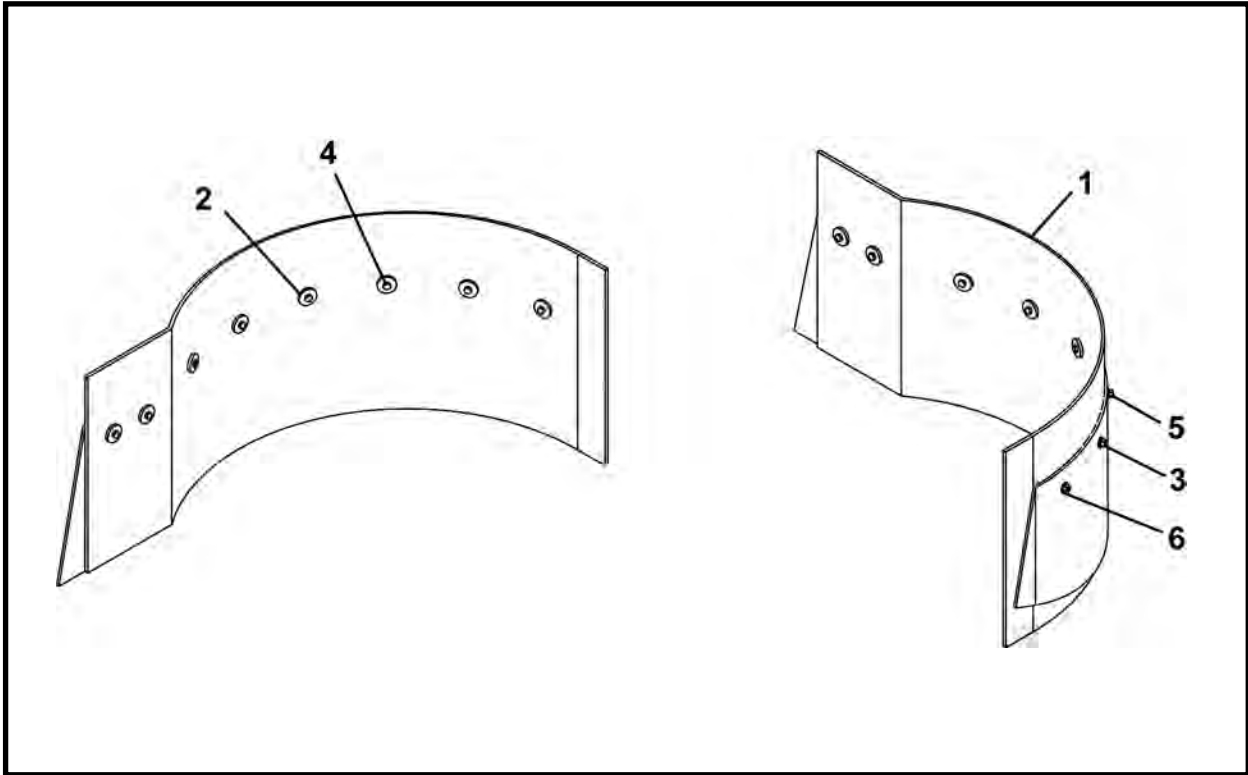
| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|-----------|----------------------------|
| 0 | 1 | 011845A00 | ASSEMBLY, Drum Roller |
| 1 | 1 | P0063-001 | FITTING, Grease 1/4-28 UNF |
| 2 | 1 | 011805P00 | ROD |
| 3 | 2 | P0065-004 | BEARING |
| 4 | 2 | P0085-218 | ORING |
| 5 | 2 | P0065-099 | BEARING, Roller |
| 6 | 2 | P0065-100 | RING, Inner |
| 7 | 1 | 011846P00 | ROD |

DIRT SCOOP ASSEMBLY, 002289A00



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|----------------------|
| 0 | 1 | 002289A00 | ASSEMBLY, Dirt Scoop |
| 1 | 2 | P0045-006 | WASHER, Lock 3/8 |
| 2 | 2 | P0001-06-003 | BOLT, 3/8 UNC x .75 |

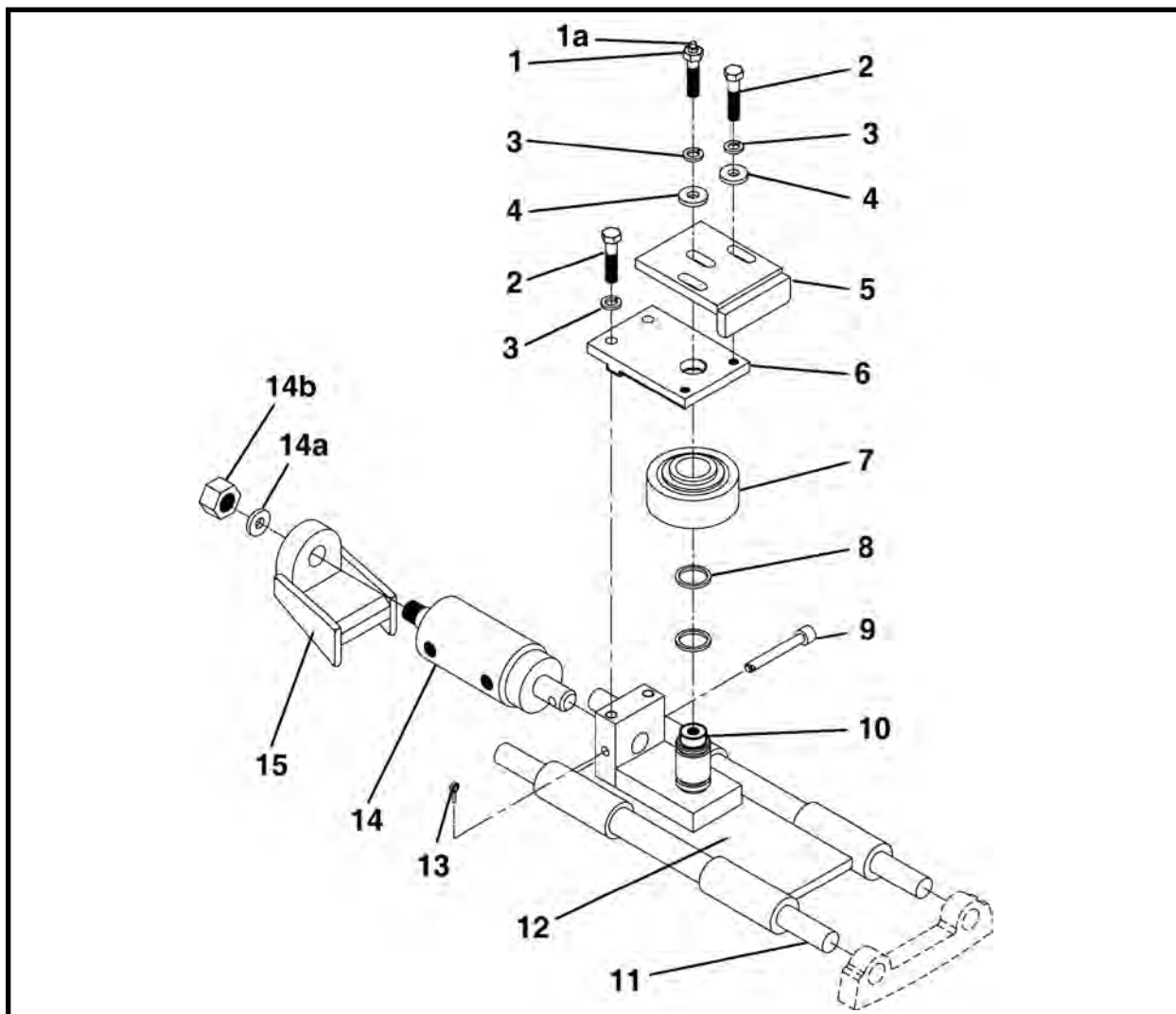
DIRT PADDLE ASSEMBLY



| ITEM | QTY | 480 | 540 | DESCRIPTION |
|------|-----|--------------|--------------|---------------------------|
| | | PART NO. | PART NO. | |
| 0 | 1 | 020833A | 020837A | ASSEMBLY, Dirt Paddle |
| 1 | 1 | 020834P | 020838P | RUBBER, Dirt Paddle |
| 2 | 8 | 002624P00 | 002624P00 | WASHER |
| 3 | 8 | P0045-004 | P0045-004 | WASHER, Lock 1/4 |
| 4 | 8 | P0001-04-004 | P0001-04-004 | BOLT, 1/4 UNC x 1 |
| 5 | 8 | P0003-04-000 | P0003-04-000 | NUT, 1/4 |
| 6 | 8 | P0040-004 | P0040-004 | WASHER, Hardened Flat 1/4 |

NOTES

DRUM ADVANCE STANDARD ASSEMBLY, 026140A



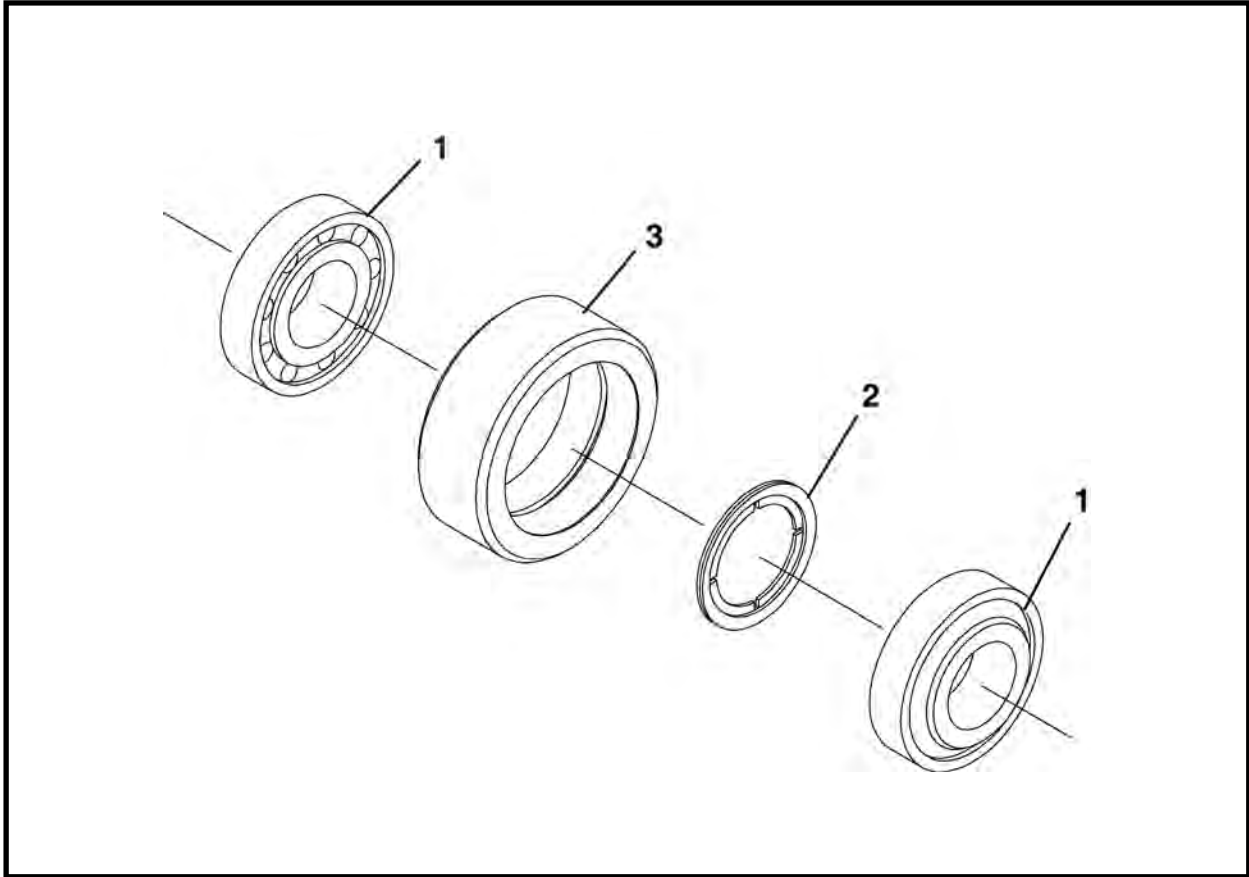
| ITEM | QTY | PART NO. | DESCRIPTION |
|--------|-----|--------------|--|
| 0 | 1 | 026140A | ASSEMBLY, Drum Advance Standard |
| 1 | 1 | 001906A00 | BOLT, Grease (Includes item 1a) |
| 1a | 1 | P0063-001 | FITTING, Grease 1/4 UNF |
| 2 | 4 | P0001-08-005 | BOLT, 1/2 UNC x 1.25 |
| 3 | 5 | P0045-008 | WASHER, Lock 1/2 |
| 4 | 3 | 001887P00 | WASHER |
| 5 | 1 | 001328A00 | GUIDE, Thrust Roller |
| 6 | 1 | 025356P00 | PLATE |
| 7.1* | 1 | 001296A02 | THRUST ROLLER (For Standard Duty) |
| 7.2** | 1 | P0065-134 | THRUST ROLLER (For Heavy Duty) |
| 8.1 | 2 | P0085-218 | ORING (For Standard Duty) |
| 8.2** | 2 | P0085-214 | ORING (For Heavy Duty) |
| 9 | 1 | 002243P00 | PIN, Cylinder Mount |
| 10.1 | 1 | 025354P01 | SHAFT, Thrust Roller |
| 10.2** | 1 | 025355P00 | SHAFT, Thrust Roller (For Heavy Duty) |
| 11 | 2 | 006825P01 | ROD |
| 12 | 1 | 010737A02 | BRACKET, Thrust (Includes item 12a) |
| 12a | 2 | P0063-003 | FITTING, Grease 90 Degree (not shown) |
| 13 | 1 | P0048-024 | PIN, Cotter |
| 14*** | 1 | 010747A00 | CYLINDER, Advance (Includes items 14a and 14b) |
| 14a | 1 | P0040-014 | WASHER 7/8 |
| 14b | 1 | P0004-14-000 | NUT, 7/8 UNF |
| 15 | 1 | 002261A00 | HOLDER, Advance Cylinder |

* Refer to this section for parts information.

** For heavy duty application. Used in 013700A00 heavy duty drum advance assembly.

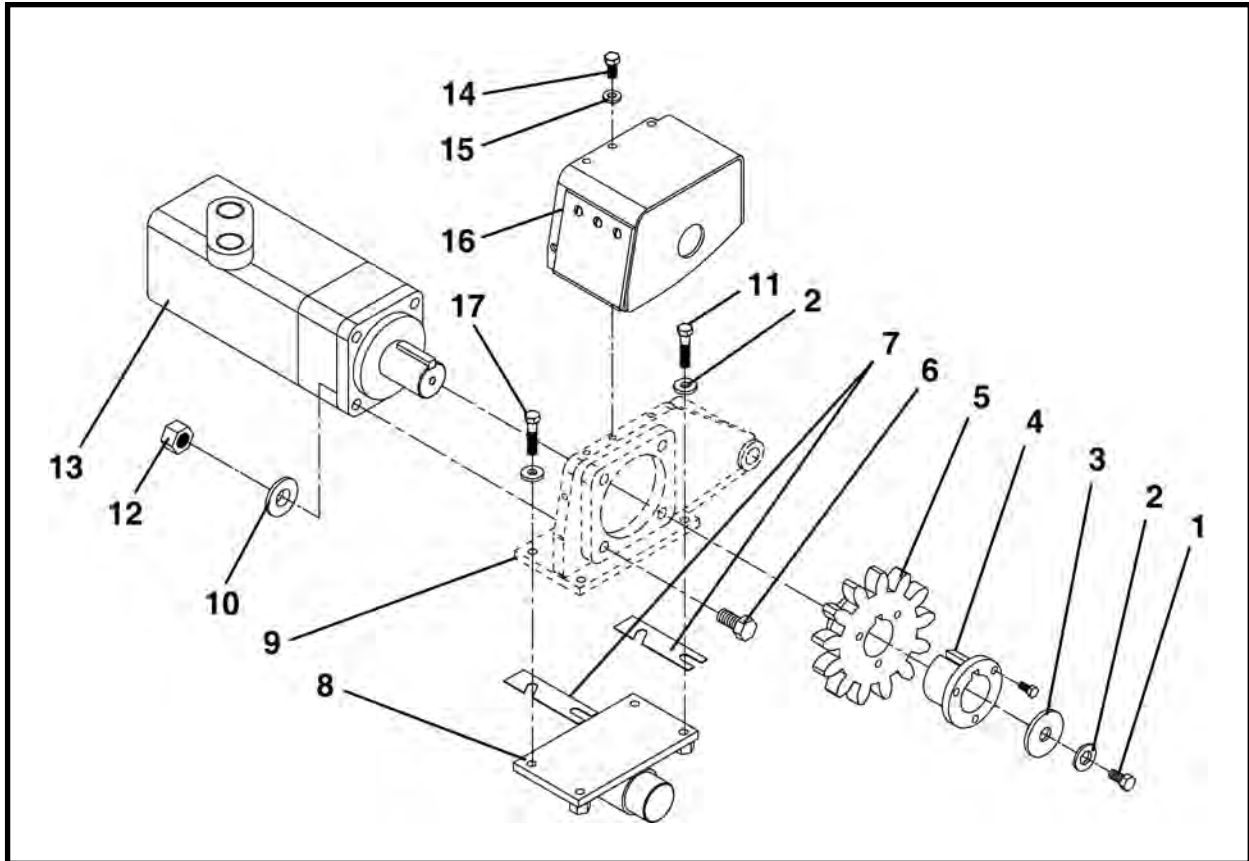
*** Refer to Section 10, Cylinders for parts information.

THRUST ROLLER ASSEMBLY, 001296A02



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|-----------|-------------------------|
| 0 | 1 | 001296A02 | ASSEMBLY, Thrust Roller |
| 1 | 2 | P0065-004 | BEARING |
| 2 | 1 | 010740P01 | SPACER, Bearing |
| 3 | 1 | 010741P00 | BODY, Roller |

MOTOR ASSEMBLY, 013814A00



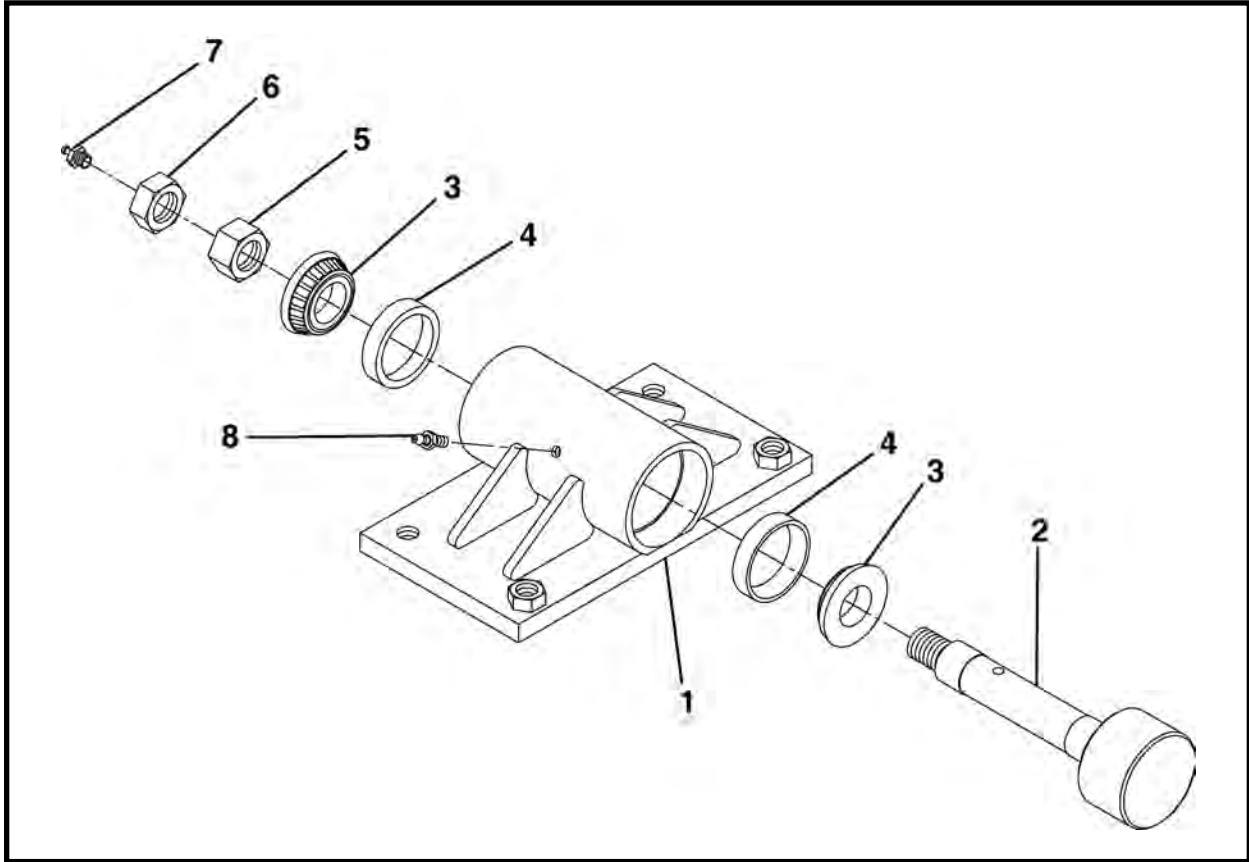
| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|---|
| 0 | 1 | 013814A00 | ASSEMBLY, Motor |
| 1 | 1 | P0002-08-004 | BOLT, 1/2 UNF x 1 |
| 2 | 5 | P0045-008 | WASHER, Lock 1/2 |
| 3 | 1 | 001320P00 | WASHER |
| 4 | 1 | P0066-036 | BUSHING |
| 5 | 1 | 002995P04 | SPROCKET |
| 6 | 4 | P0001-10-010 | BOLT, 5/8-11 UNC x 2.5 |
| 7 | 8 | 007332P00 | SHIM |
| 8* | 1 | 001231A01 | ASSEMBLY, Idler Roller |
| 9 | - | - | ASSEMBLY, Motor Bracket |
| 10 | 4 | P0040-010 | WASHER, Hardened Flat 5/8 |
| 11 | 2 | P0001-08-007 | BOLT, 1/2 UNC x 1.75 |
| 12 | 4 | P0003-10-000 | NUT, 5/8 |
| 13** | 1 | P0304-123 | MOTOR |
| 14 | 4 | P0001-06-003 | BOLT, 3/8 UNC x .75 |
| 15 | 4 | P0045-006 | WASHER, Lock 3/8 |
| 16 | 1 | 008289A00 | ASSEMBLY, Motor Guard (Includes item 16a) |
| 16a | 6 | P0020-14-203 | SCREW, Truss 1/4 UNC x .75 |
| 17 | 2 | P0001-08-006 | BOLT, 1/2 UNC x 1.5 |

* Refer to this section for parts information.

** Refer to Section 8, Motors for parts information.

NOTE: An Inner Drum Motor Assembly Option is available for the 480 and 540 TBMs (480 - 030160A, 540 - 030055A). Refer to this section for parts information.

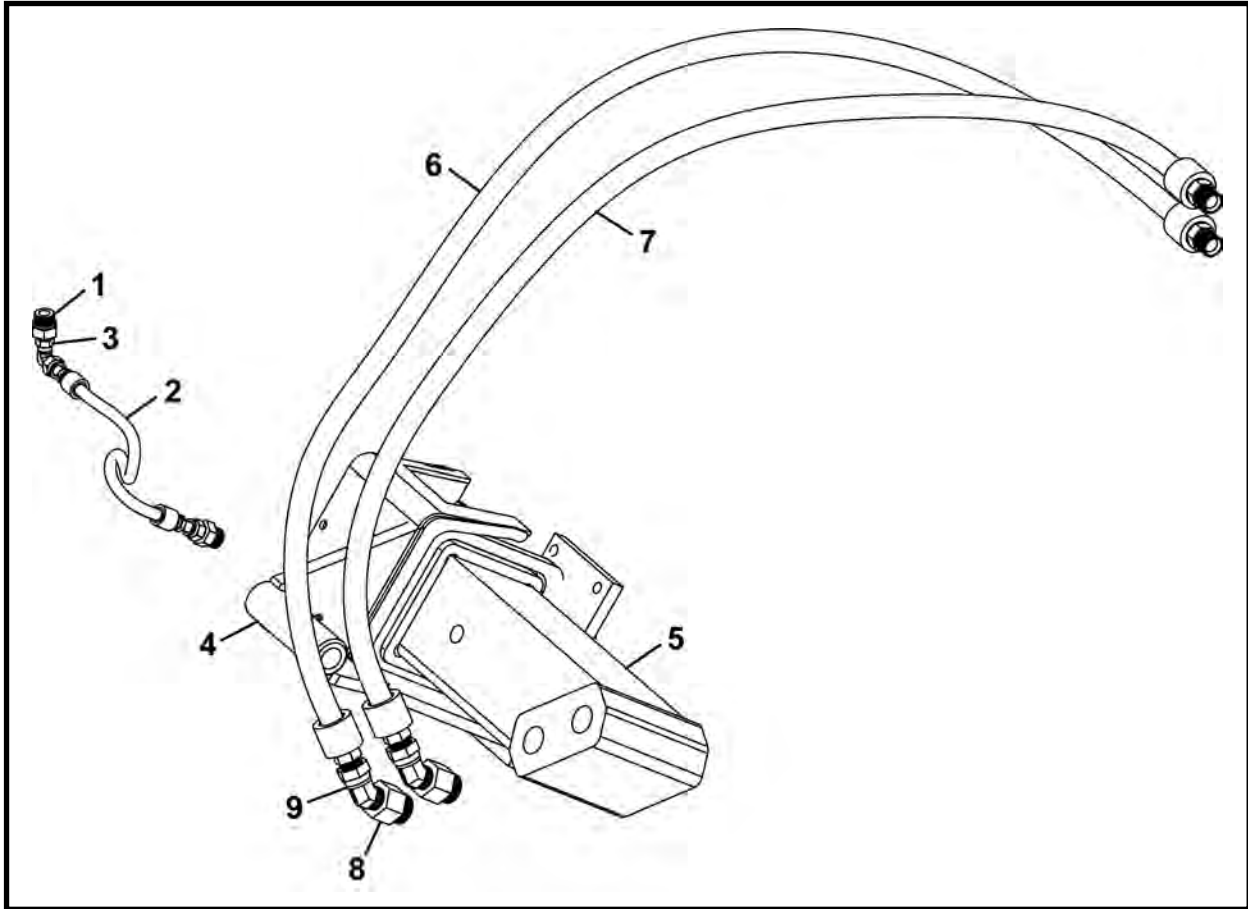
IDLER ROLLER ASSEMBLY, 001231A01



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|---|
| 0 | 1 | 001231A01 | ASSEMBLY, Idler Roller |
| 1 | 1 | 001229A01 | ASSEMBLY, Housing |
| 2.1 | 1 | 001922P01 | SHAFT, Idler Roller (Standard 2.375 Diameter Head) |
| 2.2 | 1 | 008109P00 | SHAFT, Idler Roller (Oversized 2.875 Diameter Head) |
| 3 | 2 | P0065-020 | BEARING CONE |
| 4 | 2 | P0065-021 | BEARING CUP |
| 5 | 1 | P0004-12-000 | NUT, 3/4 UNF |
| 6 | 1 | P0008-12-000 | NUT, Jam 3/4 UNF |
| 7 | 1 | P0063-001 | FITTING, Grease 1/4 UNF |
| 8 | 1 | P0063-012 | FITING, Grease 1/4 NPT |

NOTE: Contact your Akkerman Aftermarket Support Representative for proper assembly.

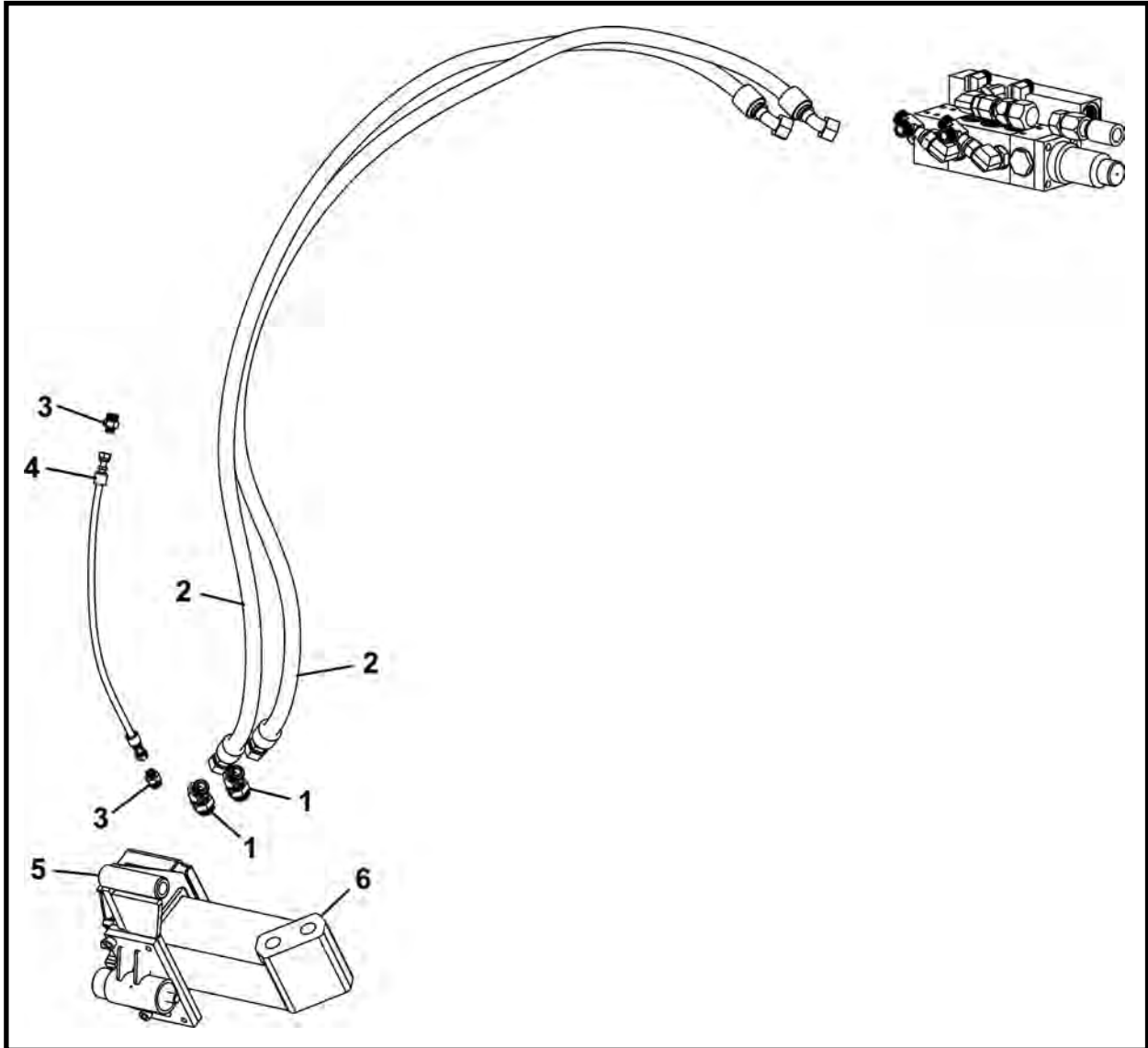
**INNER DRUM MOTOR ASSEMBLY OPTION 480, 030160A
FOR TBM 480**



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|-------------|---------------------------------------|
| 0 | 1 | 030160A | ASSEMBLY, Inner Drum Motor Option 480 |
| 1 | 2 | P0300-223 | FITTING, 06MJ-10MB |
| 2 | 1 | A10311A-022 | HOSE ASSEMBLY, 3/8 x 22 |
| 3 | 1 | P0300-149 | FITTING, 06MJ-06FJX90 |
| 4 | 1 | 008288A00 | BRACKET, Motor |
| 5* | 1 | 013814A00 | ASSEMBLY, Motor |
| 6 | 1 | A10330A-076 | HOSE ASSEMBLY, 3/4 x 76 |
| 7 | 1 | A10330A-068 | HOSE ASSEMBLY, 3/4 x 68 |
| 8 | 2 | P00300-068 | FITTING, 16MB-12FP |
| 9 | 2 | P0300-191 | FITTING, 12MP-12FPX45 |

* Refer to this section for parts information.

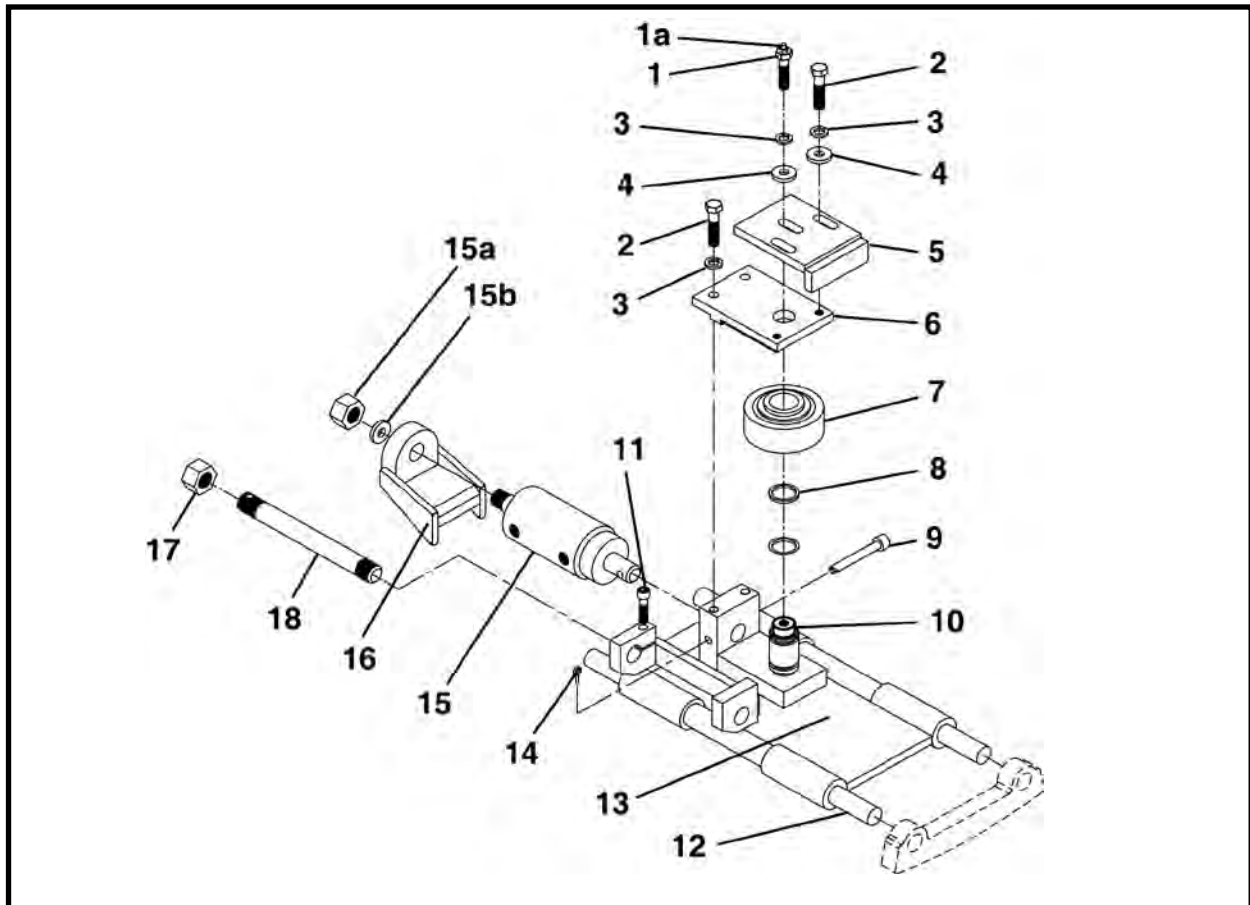
**INNER DRUM MOTOR ASSEMBLY OPTION 540, 030055A
FOR TBM 540**



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|-------------|---------------------------------------|
| 0 | 1 | 030055A | ASSEMBLY, Inner Drum Motor Option 540 |
| 1 | 2 | P0300-561 | FITTING, 12MFOR-16MB45 |
| 2 | 2 | A09953A-100 | HOSE ASSEMBLY, 3/4 x 100 |
| 3 | 2 | P0300-634 | FITTING, 06MFOR-10MB |
| 4 | 1 | A10313A-025 | HOSE ASSEMBLY, 3/8 x 25 |
| 5 | 1 | 008288A00 | BRACKET, Motor |
| 6* | 1 | 013814A00 | ASSEMBLY, Motor |

* Refer to this section for parts information.

DRUM ADVANCE FOR MOTOR ASSEMBLY, 026145A



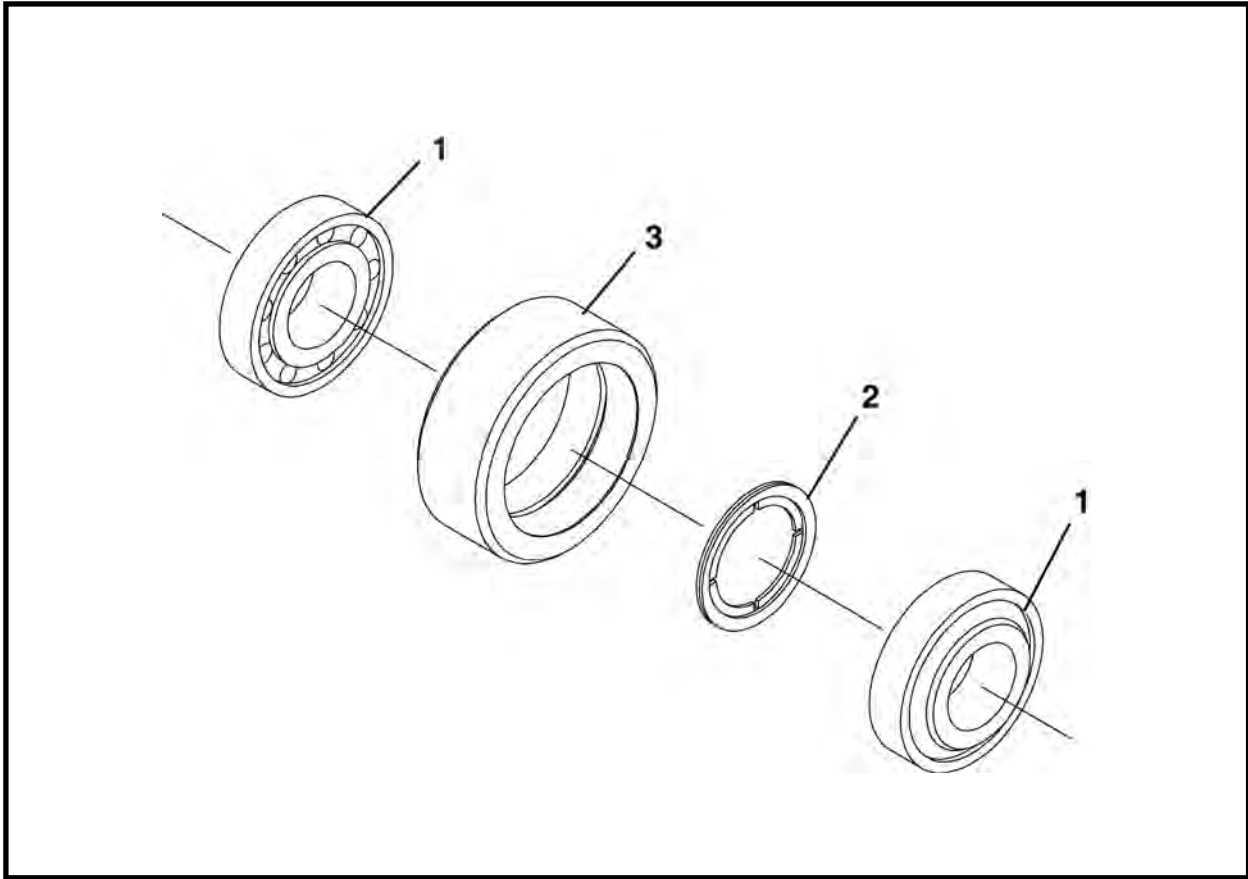
| ITEM | QTY | PART NO. | DESCRIPTION |
|--------|-----|--------------|--|
| 0 | 1 | 026145A | ASSEMBLY, Drum Advance For Motor |
| 1 | 1 | 001906A00 | BOLT, Grease (Includes item 1a) |
| 1a | 1 | P0063-001 | FITTING, Grease 1/4 UNF |
| 2 | 4 | P0001-08-005 | BOLT, 1/2 UNC x 1.25 |
| 3 | 5 | P0045-008 | WASHER, Lock 1/2 |
| 4 | 3 | 001887P00 | ADVANCE, Washer |
| 5 | 1 | 001328A00 | GUIDE, Thrust Roller |
| 6 | 1 | 025356P00 | PLATE, Thrust Roller |
| 7.1* | 1 | 001296A02 | THRUST ROLLER (For Standard Duty) |
| 7.2** | 1 | P0065-134 | THRUST ROLLER (For Heavy Duty) |
| 8.1 | 2 | P0085-218 | ORING (For Standard Duty) |
| 8.2** | 2 | P0085-214 | ORING (For Heavy Duty) |
| 9 | 1 | 002243P00 | PIN, Cylinder |
| 10.1 | 1 | 025354P01 | SHAFT, Thrust Roller (For Standard Duty) |
| 10.2** | 1 | 025355P00 | SHAFT, Thrust Roller (For Heavy Duty) |
| 11 | 1 | P0031-07-007 | SCREW, Socket Head Cap 7/16 UNC x 1.75 |
| 12 | 2 | 006825P01 | ROD |
| 13 | 1 | 010744A02 | BRACKET, Motor & Thrust Roller (Includes item 13a) |
| 13a | 2 | P0063-001 | FITTING, Grease 1/4 UNF (not shown) |
| 14 | 1 | P0048-024 | PIN, Cotter 1/8 x 3/4 |
| 15*** | 1 | 010747A00 | CYLINDER, Advance (Includes items 15a & 15b) |
| 15a | 1 | P0040-014 | WASHER, 7/8 |
| 15b | 1 | P0004-14-000 | NUT, 7/8 |
| 16 | 1 | 002261A01 | HOLDER, Cylinder Advance |
| 17 | 1 | P0007-16-000 | NUT, Jam 1-8 UNC |
| 18 | 1 | 010742P00 | SHAFT, Motor Mount |

* Refer to this section for parts information.

** For heavy duty applications. Used in 013713A00 heavy duty drum advance for motor assembly.

*** Refer to Section 10, Cylinders for parts information.

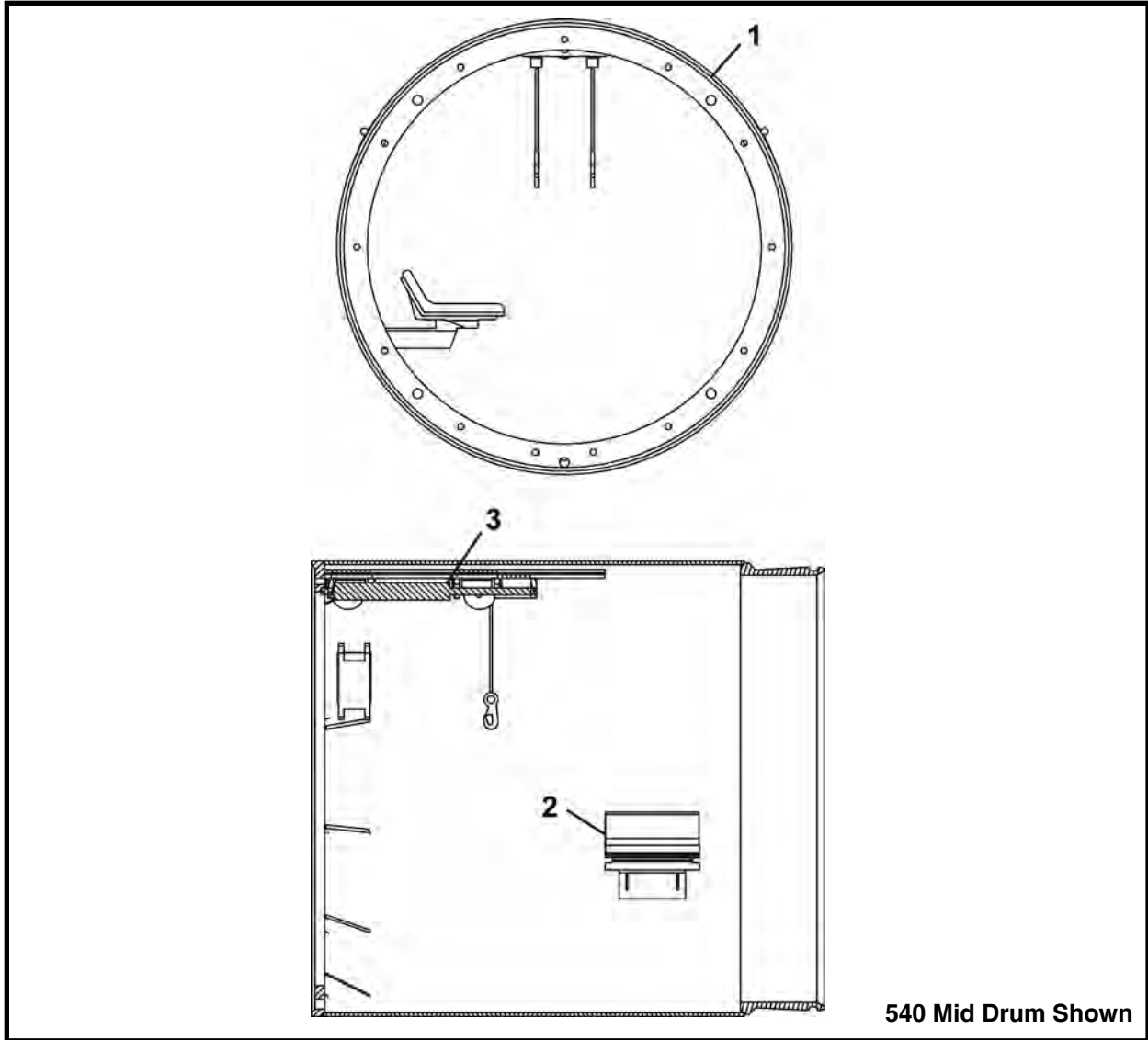
THRUST ROLLER ASSEMBLY, 001296A02



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|-----------|-------------------------|
| 0 | 1 | 001296A02 | ASSEMBLY, Thrust Roller |
| 1 | 2 | P0065-004 | BEARING |
| 2 | 1 | 010740P01 | SPACER, Bearing |
| 3 | 1 | 010741P00 | BODY, Roller |

NOTES

MID DRUM ASSEMBLY

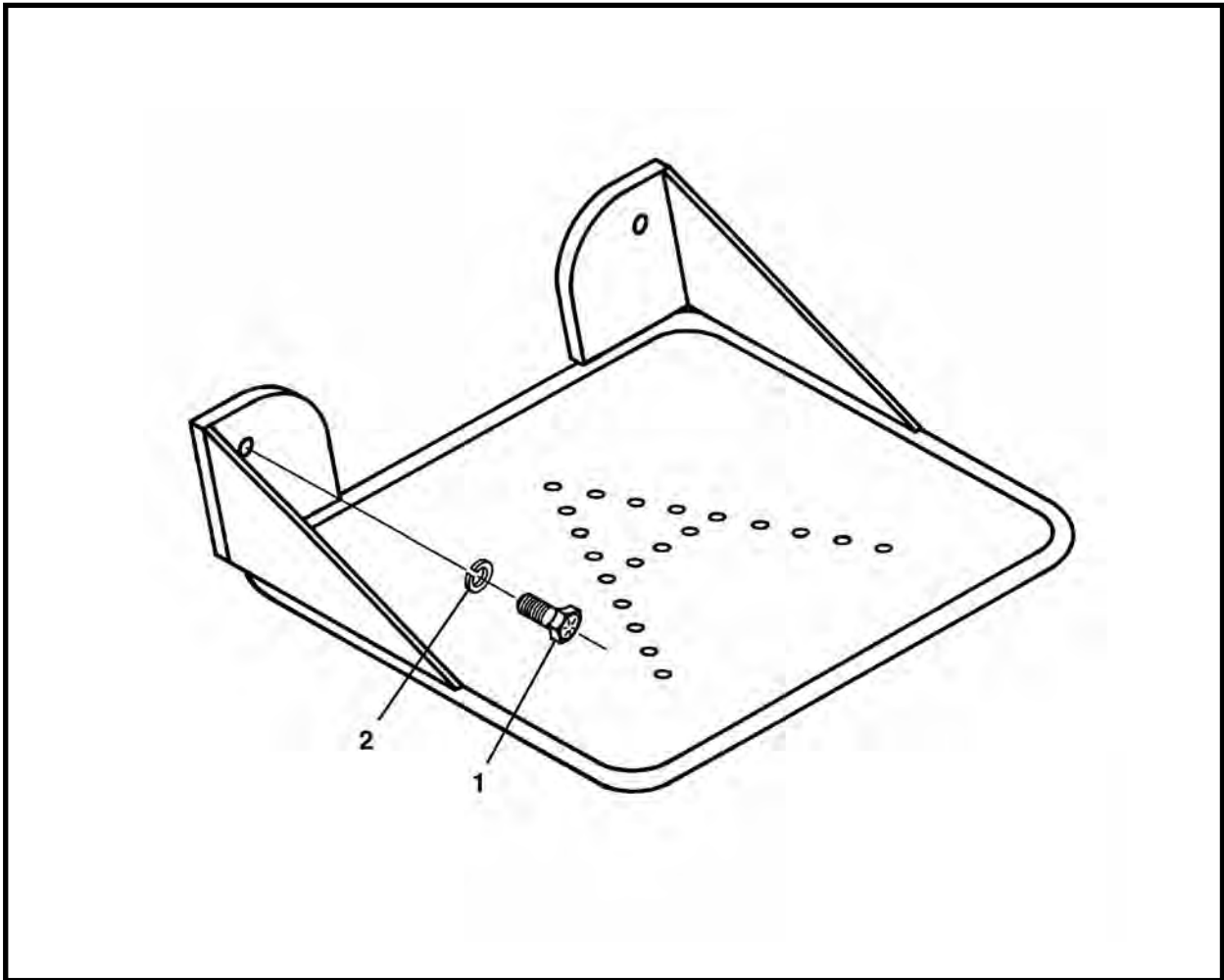


| ITEM | QTY | 480 PART NO. | 540 PART NO. | DESCRIPTION |
|------|-----|-----------------|-----------------|-------------------------|
| 0 | 1 | 023803A00 | 018303A00 | ASSEMBLY, Mid Drum |
| 1 | 1 | 023813A00 | 018313A00 | WELDMENT, Mid Drum |
| 2* | 1 | 003695A00 | 009992A01 | ASSEMBLY, Seat |
| 3* | 1 | 025315A00 | 018358A | ASSEMBLY, Conveyor Lift |

* Refer to this section for parts information.

SEAT ASSEMBLY, 003695A00

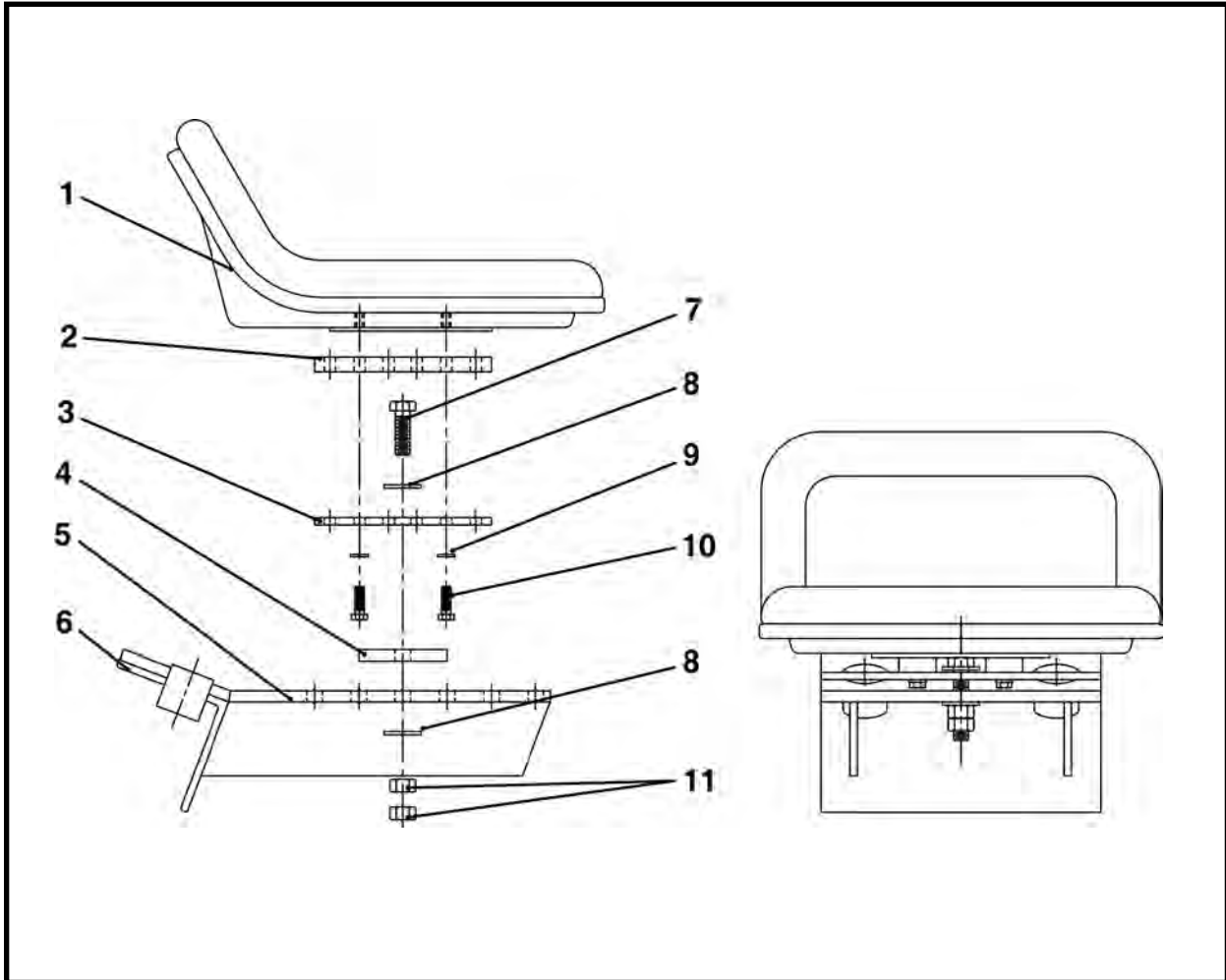
480



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|---------------------|
| 0 | 1 | 003695A00 | ASSEMBLY, Seat, 480 |
| 1 | 2 | P0001-08-004 | BOLT, 1/2 UNC x 1 |
| 2 | 2 | P0045-008 | WASHER, Lock 1/2 |

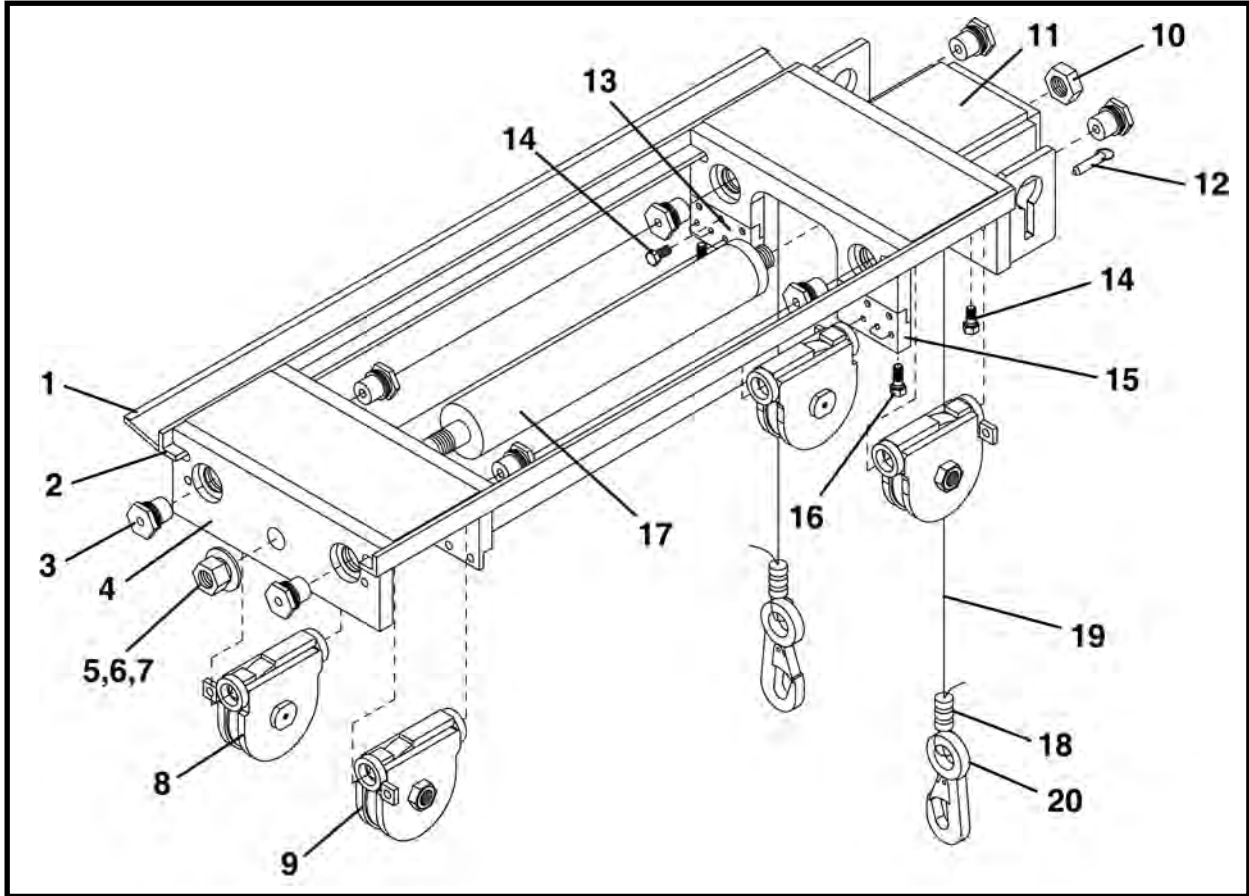
SEAT ASSEMBLY, 009992A01

540



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|---------------------------|
| 0 | 1 | 009992A01 | ASSEMBLY, Seat, 540 |
| 1 | 1 | P0113-001 | SEAT, Low Back - Standard |
| 2 | 2 | 009993P00 | BAR |
| 3 | 1 | 009994P00 | BAR |
| 4 | 1 | 009995P00 | BAR |
| 5 | 1 | 019378A00 | BRACKET, Seat |
| 6 | 1 | 019382P00 | ANGLE |
| 7 | 1 | P0001-08-009 | BOLT, 1/2-13 UNC x 2-1/4 |
| 8 | 2 | P0040-008 | WASHER, Flat 1/2 |
| 9 | 4 | P0045-005 | WASHER, Lock 5/16 |
| 10 | 4 | P0001-05-004 | BOLT, 5/16 UNC x 1 |
| 11 | 2 | P0003-08-000 | NUT, Hex 1/2 |

CONVEYOR LIFT ASSEMBLY, 025315A00

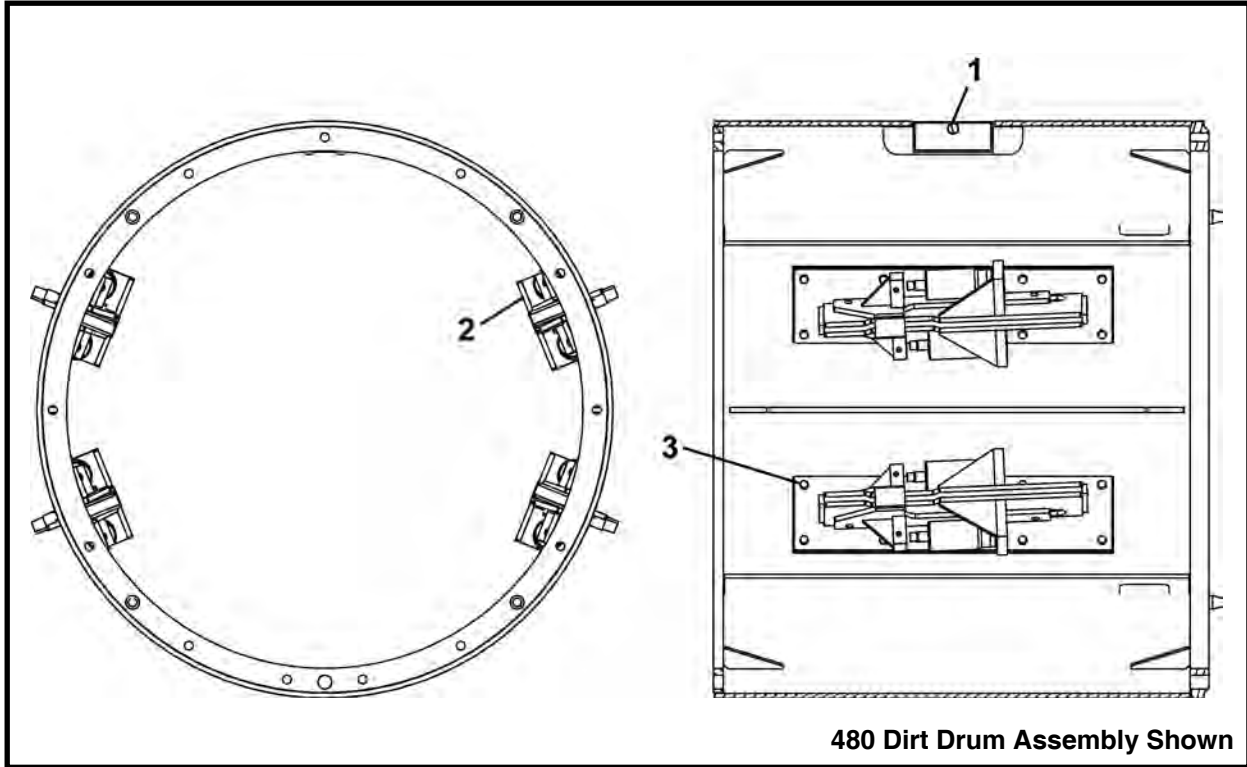


| ITEM | QTY | 480 PART NO. | 540 PART NO. | DESCRIPTION |
|--------|-----|-----------------|-----------------|--|
| 0 | 1 | 025315A00 | 018358A | ASSEMBLY, Conveyor Lift |
| 1 | 2 | 025389P00 | 025389P00 | BAR |
| 2 | 2 | 025391P00 | 025391P00 | ANGLE |
| 3 | 8 | 025398P00 | 025398P00 | ROD |
| 4 | 1 | 025317A00 | 025317A00 | BRACKET, Slide |
| 5* | 1 | P0004-14-000 | P0004-14-000 | NUT, 7/8 UNF |
| 6 | 1 | P0045-014 | P0045-014 | WASHER, Lock 7/8 |
| 7 | 2 | P0040-016 | P0040-016 | WASHER, Hardened Flat 1 |
| 8 | 2 | 025316A01 | 025316A01 | ASSEMBLY, L.H. Pulley (Includes items 8a & 8b) |
| 8a | 1 | P0063-001 | P0063-001 | FITTING, Grease |
| 8b | 1 | P0007-12-000 | P0007-12-000 | NUT, Jam 3/4 UNC |
| 9 | 2 | 025318A01 | 025318A01 | ASSEMBLY, R.H. Pulley (Includes items 9a & 9b) |
| 9a | 1 | P0063-001 | P0063-001 | FITTING, Grease |
| 9b | 1 | P0007-12-000 | P0007-12-000 | NUT, Jam 3/4-10 UNC |
| 10* | 1 | P0008-16-000 | P0008-16-000 | NUT, Jam 1 NF |
| 11 | 1 | 025319A00 | 025319A00 | BRACKET, Shaft End Slide |
| 12 | 2 | P0024-007 | P0024-007 | PIN, Locking 3/8 (Used with earlier models) |
| 13 | 1 | 025386P00 | 025386P00 | BAR |
| 14 | 12 | P0001-06-003 | P0001-06-003 | BOLT, 3/8 UNC x .75 |
| 15 | 1 | 025383P00 | 025383P00 | BAR |
| 16 | 2 | P0001-06-004 | P0001-06-004 | BOLT, 3/8 UNC x 1 |
| 17.1** | 1 | 002691A00 | 002691A00 | CYLINDER, Conveyor Lift (With NPT Fittings) |
| 17.2** | 1 | 020300A | 020300A | CYLINDER, Conveyor Lift (With ORB Fittings) |
| 18 | 2 | P0073-001 | P0073-001 | SLEEVE |
| 19 | 2 | P0075-002-060 | P0075-002-072 | CABLE, 1/4 x ___ in. |
| 20 | 2 | P0079-001 | P0079-001 | HOOK, Snap |

* Tack weld nuts to conveyor lift.

** Refer to Section 10, Cylinders for parts information.

DIRT WING DRUM ASSEMBLY



| ITEM | QTY | 480 PART NO. | 540 PART NO. | DESCRIPTION |
|------|-----|-----------------|-----------------|------------------------------------|
| 0 | 1 | 023804A00 | 018304A00 | ASSEMBLY, Dirt Wing Drum |
| 1 | 1 | 023814A01 | 018314A00 | WELDMENT, Dirt Wing Drum |
| 2* | 4 | 014628A00 | 014600A00 | ASSEMBLY, Hydraulic Dirt Wing - CW |
| 3 | 32 | P0001-08-004 | - | BOLT, Hex 1/2 UNC x 1 |
| 3 | 32 | - | P0001-08-005 | BOLT, Hex 1/2 UNC x 1.25 |
| 4** | - | 014629A00 | 014617A00 | DIRT WING, Hydraulic - CCW |

* Refer to this section for parts information.

** Optional, not shown. Refer to this section for parts information.

NOTE:

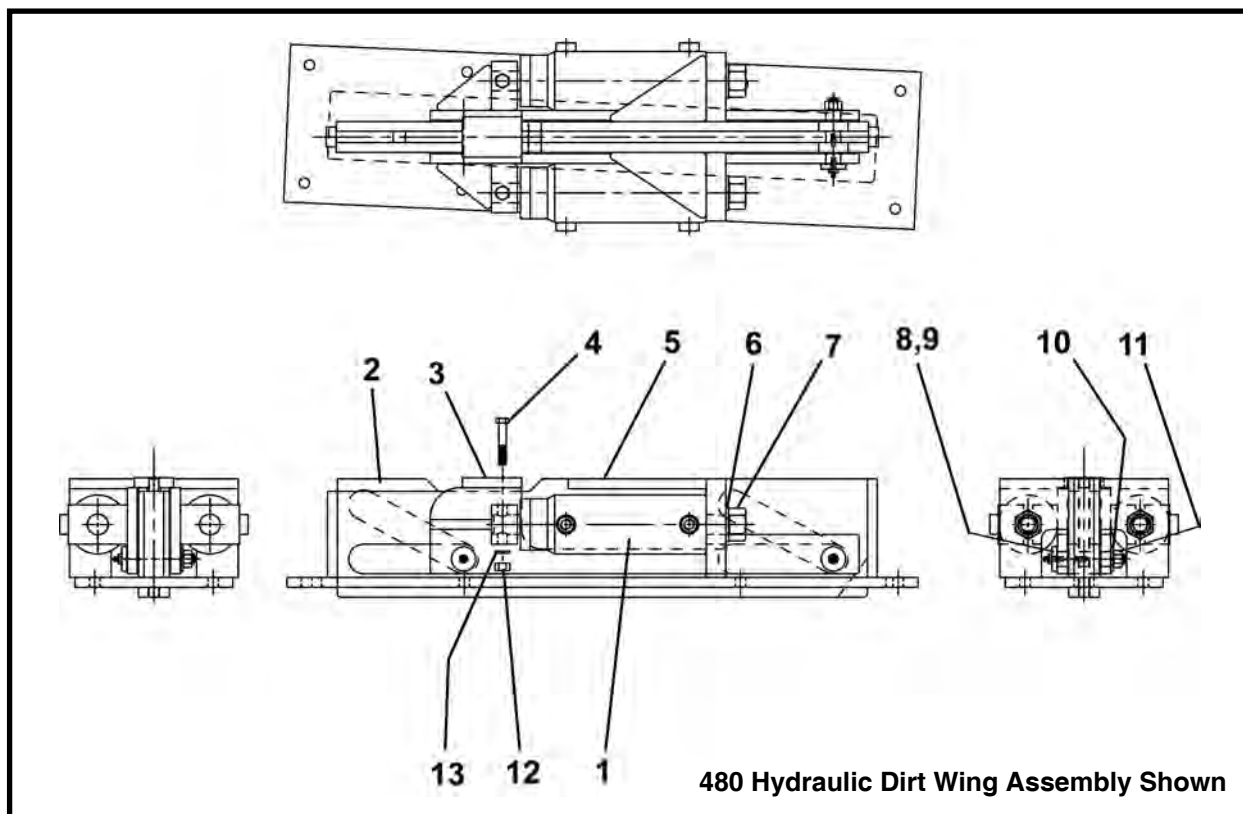
1. There are optional bolt on dirt wings for the 480 and 540 TBMs:

014654A00, Wing - CW

014655A00, Wing - CCW

2. If removing dirt wings from TBM, use Dirt Wing Cover, 014619P00.

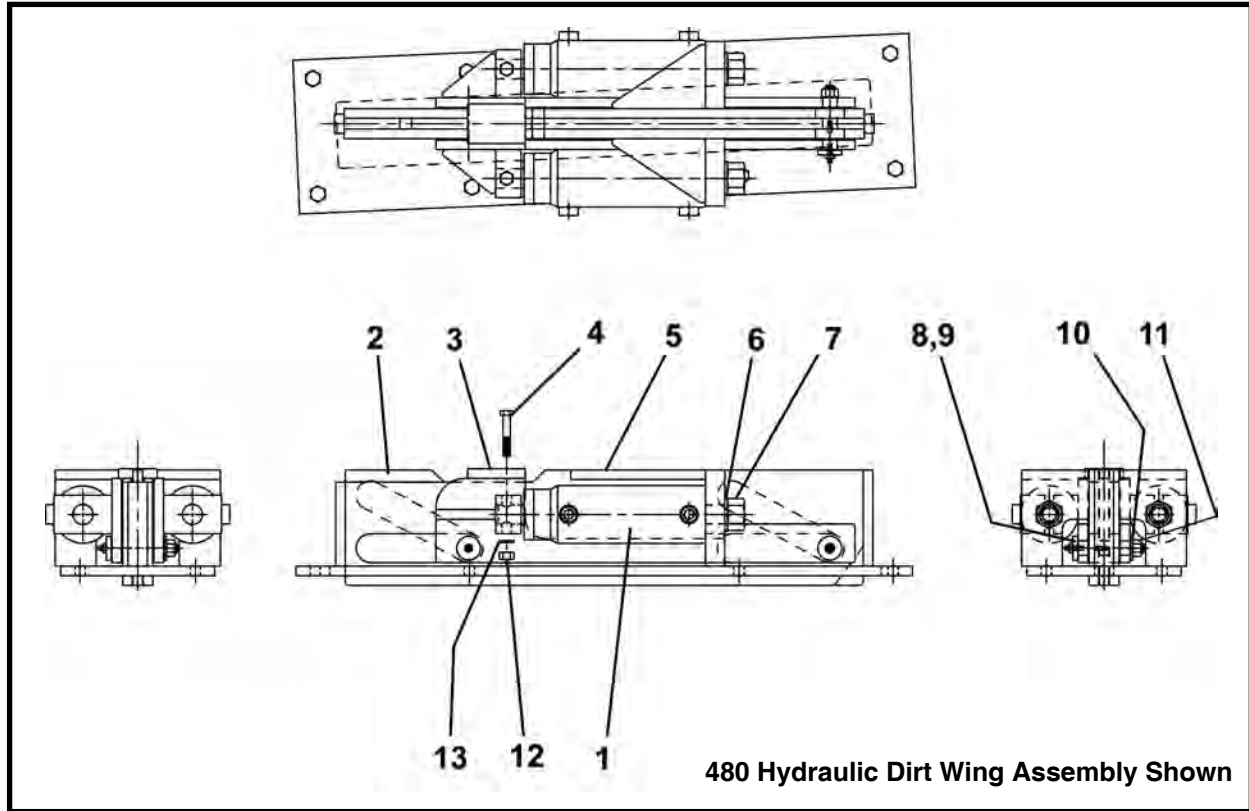
HYDRAULIC DIRT WING (CW) ASSEMBLY



| ITEM | QTY | 480 PART NO. | 540 PART NO. | DESCRIPTION |
|------|-----|-----------------|-----------------|---|
| 0 | 1 | 014628A00 | 014600A00 | ASSEMBLY, Hydraulic Dirt Wing (CW Rotation) |
| 1* | 2 | 014603A00 | 014603A00 | ASSEMBLY, Cylinder |
| 2 | 1 | 014644P00 | 014610P00 | BLADE, Wing |
| 3 | 1 | 014632A00 | 014606A01 | WELDMENT, Thruster Bar |
| 4 | 2 | P0001-07-010 | P0001-07-010 | BOLT, Hex 7/16 UNC x 2.5 |
| 5 | 1 | 014630A00 | 014602A00 | BRACKET (CW) |
| 6 | 2 | P0040-014 | P0040-014 | WASHER, Hardened Flat 7/8 |
| 7 | 2 | P0004-14-000 | P0004-14-000 | NUT, 7/8 UNF |
| 8 | 2 | 007239P00 | 007239P00 | PIN, Axle |
| 9 | 6 | 007240P00 | 07240P00 | ROLLER |
| 10 | 2 | P0040-008 | P0040-008 | WASHER, Hardened Flat 1/2 |
| 11 | 2 | P0013-08-000 | P0013-08-000 | NUT, Lock 1/2 |
| 12 | 2 | P0003-07-000 | P0003-07-000 | NUT, 7/16 |
| 13 | 2 | P0045-007 | P0045-007 | WASHER, Lock 7/16 |

* Refer to Section 10, Cylinders for parts information.

HYDRAULIC DIRT WING (CCW) ASSEMBLY

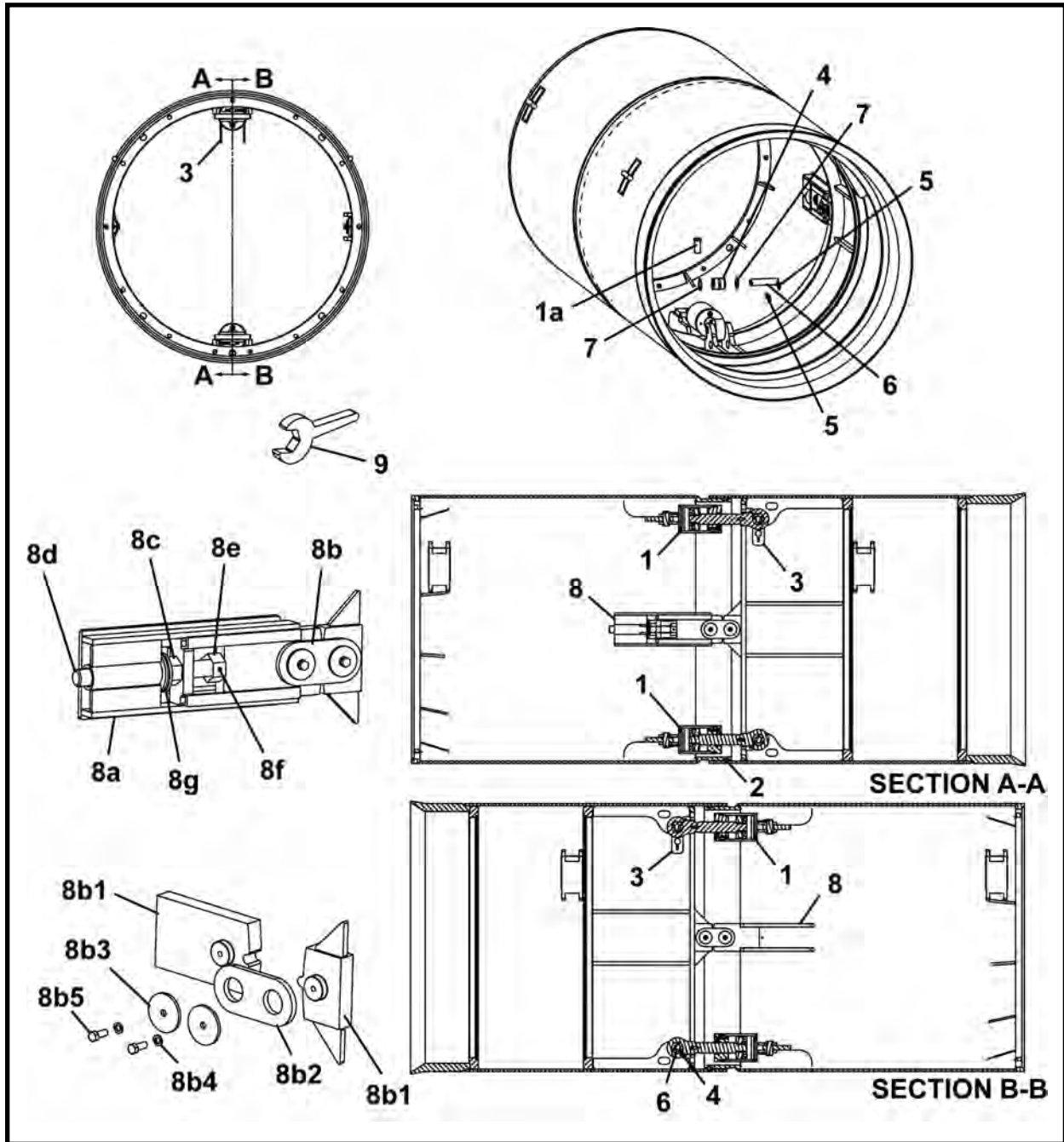


| ITEM | QTY | 480 PART NO. | 540 PART NO. | DESCRIPTION |
|------|-----|-----------------|-----------------|--|
| 0 | 1 | 014629A00 | 014617A00 | ASSEMBLY, Hydraulic Dirt Wing (CCW Rotation) |
| 1* | 2 | 014603A00 | 014603A00 | ASSEMBLY, Cylinder |
| 2 | 1 | 014644P00 | 014610P00 | BLADE, Wing |
| 3 | 1 | 014632A00 | 014606A01 | WELDMENT, Thruster Bar |
| 4 | 2 | P0001-07-010 | P0001-07-010 | BOLT, Hex 7/16 UNC x 2.5 |
| 5 | 1 | 014631A00 | 014618A00 | BRACKET (CCW) |
| 6 | 2 | P0040-014 | P0040-014 | WASHER, Hardened Flat 7/8 |
| 7 | 2 | P0004-14-000 | P0004-14-000 | NUT, 7/8 UNF |
| 8 | 2 | 007239P00 | 007239P00 | PIN, Axle |
| 9 | 6 | 007240P00 | 07240P00 | ROLLER |
| 10 | 2 | P0040-008 | P0040-008 | WASHER, Hardened Flat 1/2 |
| 11 | 2 | P0013-08-000 | P0013-08-000 | NUT, Lock 1/2 |
| 12 | 2 | P0003-07-000 | P0003-07-000 | NUT, 7/16 |
| 13 | 2 | P0045-007 | P0045-007 | WASHER, Lock 7/16 |

* Refer to Section 10, Cylinders for parts information.

STEERING CYLINDER & LINK ASSEMBLY, 023806A00

480



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|------------|-----------|---|
| 0 | 1 | 023806A00 | ASSEMBLY, Steering Cylinder & Link, 480 |
| 1.1* | 2 | 025292A | CYLINDER, Steering (With NPT Fittings) |
| 1.2* | 2 | 020301A | CYLINDER, Steering (With ORB Fittings) |
| 1a | 1 Per Cyl. | 002856P00 | PIN |
| 2 | 1 | P0088-029 | ORING, Seal |
| 3 | 2 | 007149P | BRACKET, Safety Chain |
| 4 | 2 | 025291P | BUSHING |
| 5 | 4 | P0090-005 | PIN, Hitch |
| 6 | 2 | 007158P00 | PIN, Steering Cylinder |
| 7 | 4 | P0085-328 | ORING |

STEERING CYLINDER & LINK ASSEMBLY, 023806A00

480

| ITEM | QTY | PART NO. | DESCRIPTION |
|------|------|--------------|--|
| 8 | 1 | 023809A | STEERING LINK |
| 8a | 1 | 001892A00 | BOX, Steering Link |
| 8b | 2 | 002990A00 | LINK ASSEMBLY (Includes items 8a - 8g) |
| 8b1 | 1 | 002852P00 | BLOCK, Steering Link |
| 8b2 | 1 | 001316P00 | LINK, Steering |
| 8b3 | 2 | 003640P00 | WASHER, Steering Link |
| 8b4 | 2 | P0045-008 | WASHER, Lock 1/2 UNC |
| 8b5 | 2 | P0001-08-005 | BOLT, 1/2 UNC x 1.25 |
| 8c | 1 | P0003-24-000 | NUT, 1-1/2 |
| 8d | 1 | 001322P00 | SCREW, Steering Link |
| 8e | 1 | 002303P00 | NUT, Steering Link |
| 8f | 1 | P0033-05-008 | SCREW, Sockt Hd Set 5/16 x .5 |
| 8g | 2 | P0040-024 | WASHER, Hardened Flat 1-1/2 |
| 9 | 1 | 001221P00 | WRENCH, Steering Link |
| 10** | 1 PT | P0088-012 | LUBE, Seal |

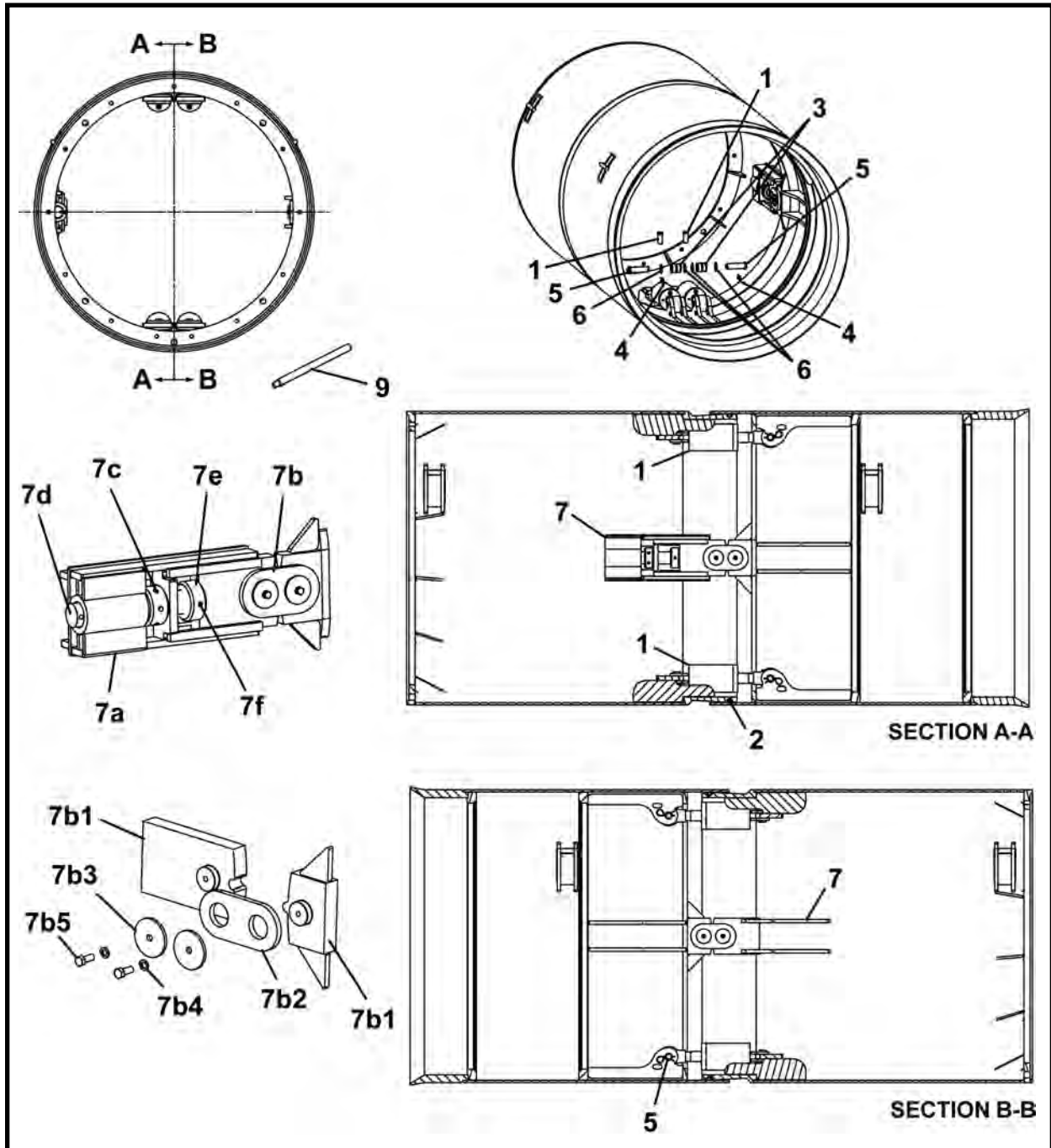
* Refer to Section 10, Cylinders for parts information.

** Not Shown

PT - Pint

STEERING CYLINDER & LINK ASSEMBLY, 018306A01

540



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|------------|-----------|---|
| 0 | 1 | 018306A01 | ASSEMBLY, Steering Cylinder & Link, 540 |
| 1.1* | 4 | 010385A01 | CYLINDER, Steering (With NPT Fittings) |
| 1.2* | 4 | 020302A | CYLINDER, Steering (With ORB Fittings) |
| 1a | 1 Per Cyl. | 002856P00 | PIN |
| 2 | 1 | P0088-027 | ORING, Seal |
| 3 | 4 | 007412P00 | BUSHING |
| 4 | 4 | P0090-005 | PIN, Hitch |
| 5 | 4 | 005868P00 | PIN, Steering Cylinder |
| 6 | 8 | P0085-328 | ORING |

STEERING CYLINDER & LINK ASSEMBLY, 018306A01

540

| ITEM | QTY | PART NO. | DESCRIPTION |
|------|------|--------------|--|
| 7 | 1 | 018324A | STEERING LINK |
| 7a | 1 | 006288A00 | BOX, Steering Link |
| 7b | 2 | 006303A00 | LINK ASSEMBLY (Includes items 7a - 7f) |
| 7b1 | 1 | 003605P00 | BLOCK, Steering Link |
| 7b2 | 1 | 005783P00 | LINK, Steering |
| 7b3 | 2 | 003640P00 | WASHER, Steering Link |
| 7b4 | 2 | P0045-008 | WASHER, Lock 1/2 UNC |
| 7b5 | 2 | P0001-08-005 | BOLT, 1/2 UNC x 1.25 |
| 7c | 1 | 005853P01 | NUT, Steering |
| 7d | 1 | 006301P00 | SCREW, Steering Link |
| 7e | 1 | 006302P01 | NUT, Steering Link |
| 7f | 1 | P0033-06-014 | SCREW, Sockt Hd Set 3/8 x .875 |
| 8** | 1 PT | P0088-012 | LUBE, Seal |
| 9 | 1 | 005912P00 | WRENCH, Steering Adjustment |

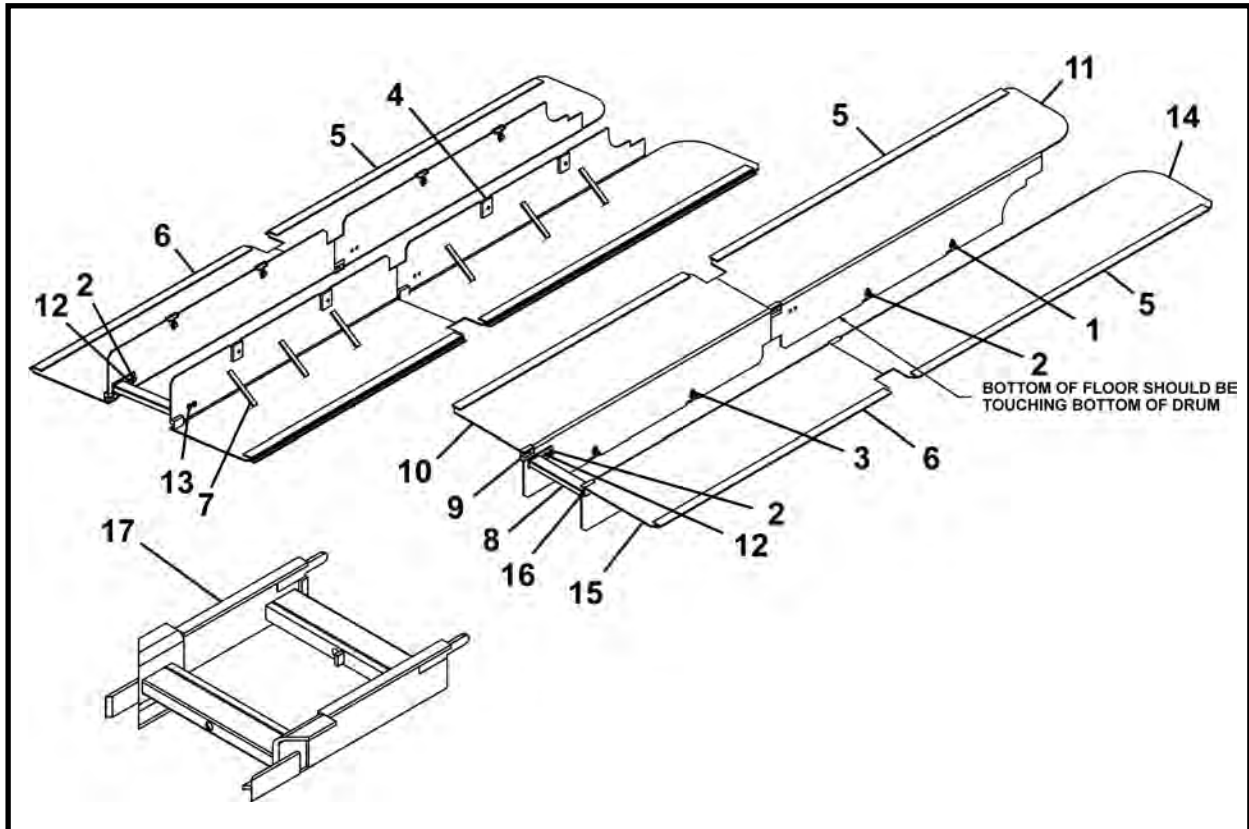
* Refer to Section 10, Cylinders for parts information.

** Not Shown

PT - Pint

FLOOR ASSEMBLY, 023819A00

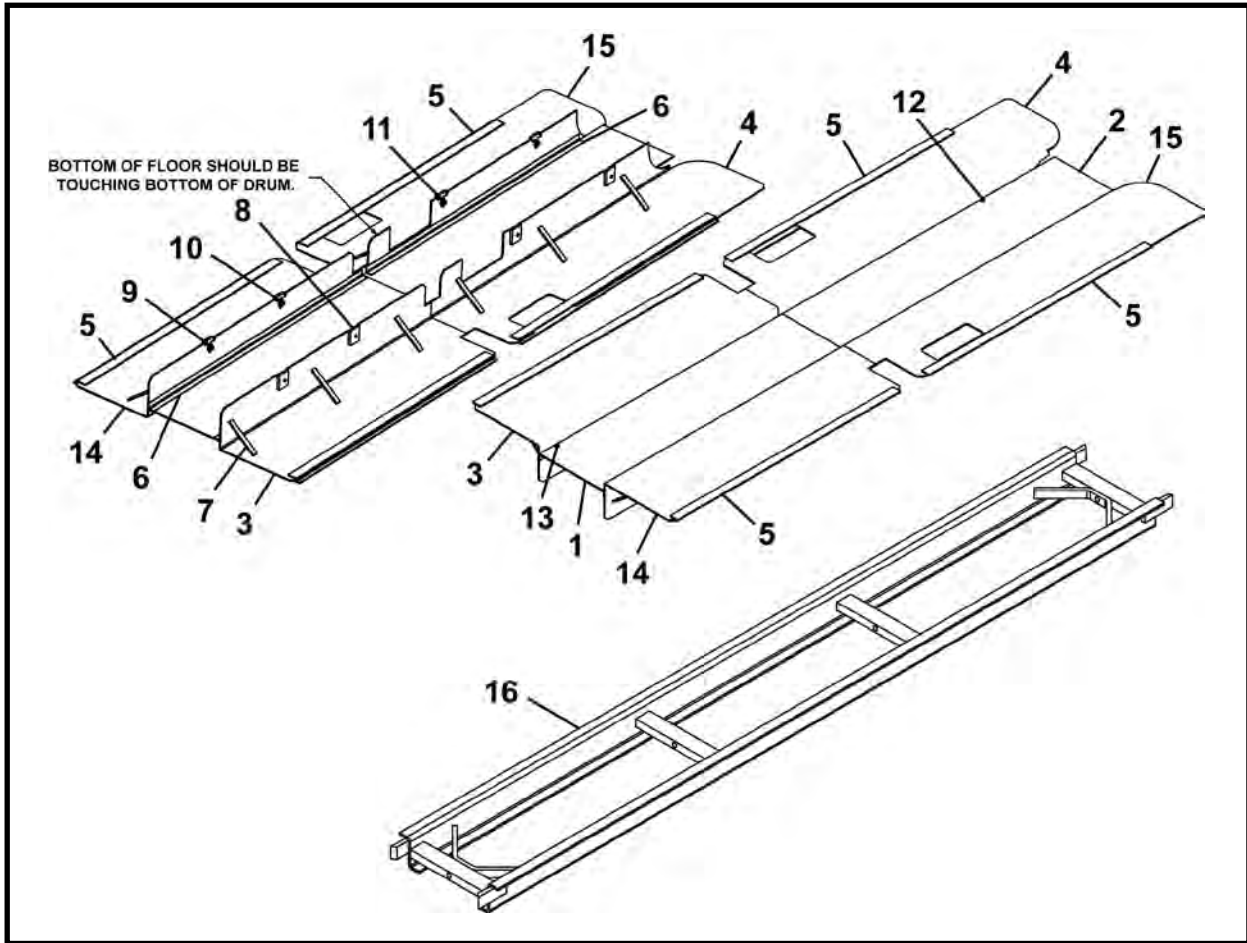
480



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|--------------------------|
| 0 | 1 | 023819A00 | ASSEMBLY, Floor, 480 |
| 1 | 8 | P0001-06-004 | BOLT, 3/8-16 UNC x 1 |
| 2 | 12 | P0045-006 | WASHER, Lock 3/8 |
| 3 | 8 | P0040-006 | WASHER, Flat 3/8 |
| 4 | 8 | 001810P02 | BAR, Mounting |
| 5 | 4 | 025043P | STRAP, Floor Support Mid |
| 6 | 4 | 025049P | STRAP, Floor Support |
| 7 | 12 | 001811P00 | GUSSET |
| 8 | 1 | 002203A00 | WELDMENT, Track Bar |
| 9 | 2 | 001979P01 | TAB, Track Starting |
| 10 | 1 | 023829P | FLOOR, Dirt Wing Drum LH |
| 11 | 1 | 023827P | FLOOR, Mid Drum LH |
| 12 | 4 | P0001-06-003 | BOLT, Hex 3/8 UNC x 3/4 |
| 13 | 4 | P0003-06-000 | NUT, 3/8 |
| 14 | 1 | 023828P | FLOOR-Mid Drum RH |
| 15 | 1 | 023849P | FLOOR, Dirt Wing Drum RH |
| 16 | 2 | 010161P00 | TAB, Track Starting |
| 17 | 1 | 030560A | TRACK ADAPTER, TBM |

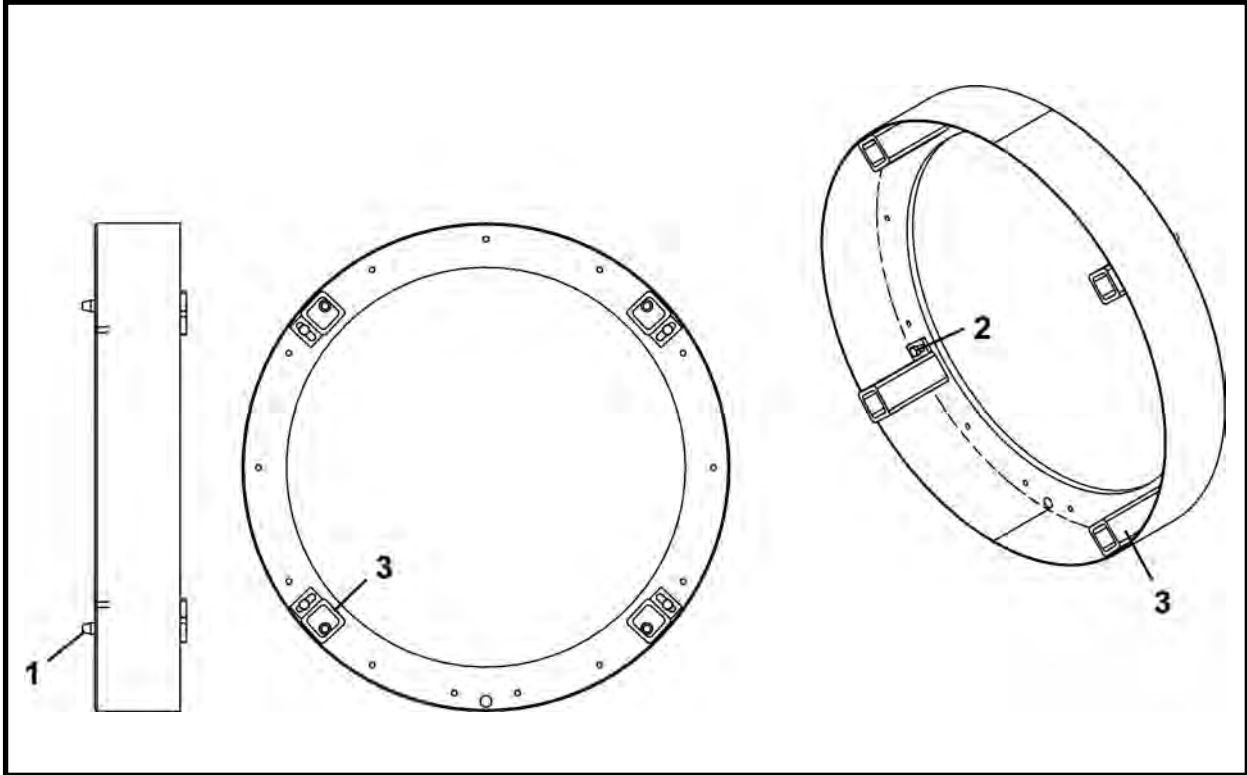
FLOOR ASSEMBLY, 018320A00

540



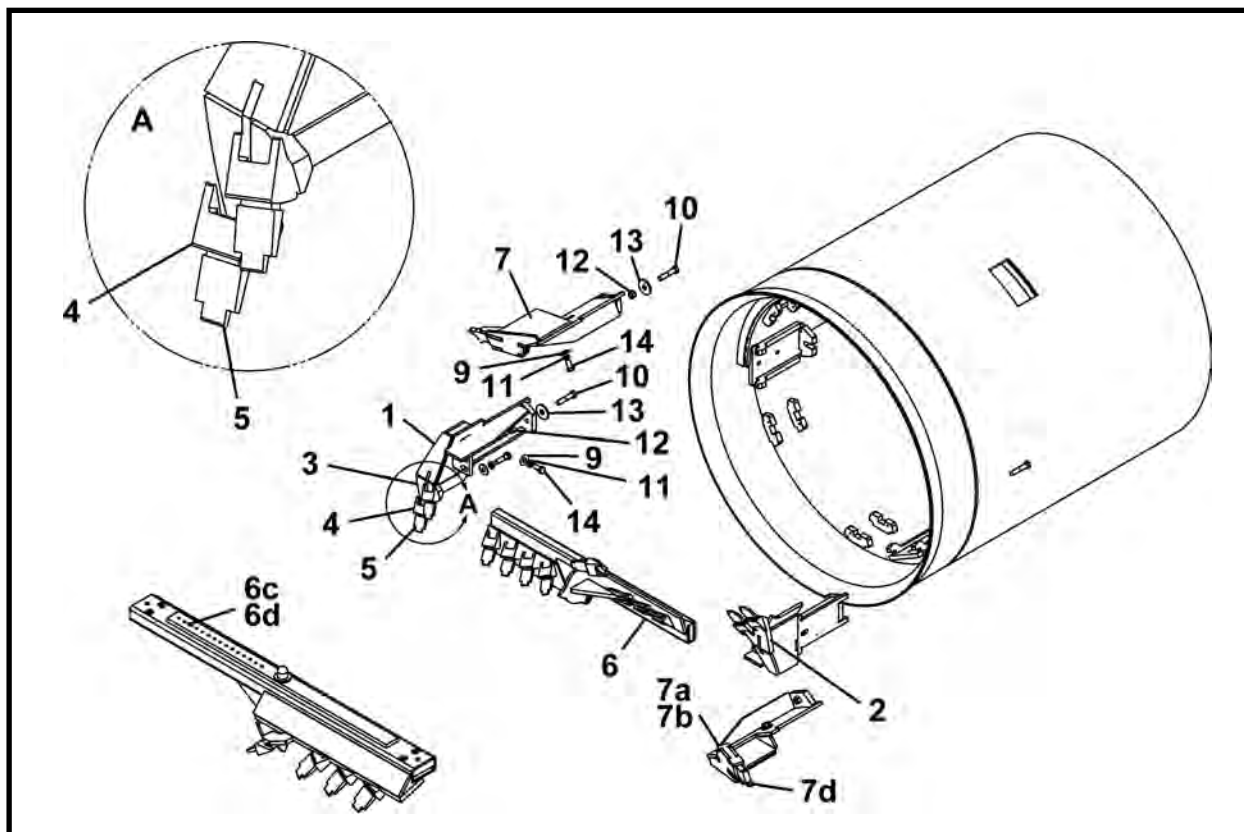
| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|--------------------------|
| 0 | 1 | 018320A00 | ASSEMBLY, Floor, 540 |
| 1 | 1 | 025047P | FLOOR, Center |
| 2 | 1 | 025048P | FLOOR, Center |
| 3 | 1 | 018328P | FLOOR, Dirt Wing Drum LH |
| 4 | 1 | 018326P | FLOOR-Mid Drum RH |
| 5 | 8 | 025049P | STRAP, Floor Support |
| 6 | 4 | 026427P | ANGLE, Floor Support |
| 7 | 12 | 001811P00 | GUSSET |
| 8 | 8 | 001810P02 | BAR, Mounting |
| 9 | 8 | P0045-006 | WASHER, Lock 3/8 |
| 10 | 8 | P0001-06-004 | BOLT, 3/8 UNC x 1 |
| 11 | 8 | P0040-006 | WASHER, Flat 3/8 |
| 12 | 2 | P0001-04-004 | BOLT, 1/4-20 UNC x 1 |
| 13 | 2 | P0045-004 | WASHER, Lock 1/4 |
| 14 | 1 | 018329P | FLOOR, Dirt Wing Drum RH |
| 15 | 1 | 018327P | FLOOR-Mid Drum RH |
| 16 | 1 | F14750F00 | TRACK, Z-Section 8 Ft |

BELL END RING ASSEMBLY



| ITEM | QTY | 480 PART NO. | 540 PART NO. | DESCRIPTION |
|------|-----|-----------------|-----------------|-------------------------|
| 0 | 1 | 023810A00 | 018310A00 | ASSEMBLY, Bell End Ring |
| 1 | 4 | 023792P00 | 023792P00 | PIN, Locating |
| 2 | 4 | P0001-12-006 | P0001-12-006 | BOLT, 3/4 UNC x 1.5 |
| 3 | 4 | 019370A | 019370A | BLOCK, Spacer |

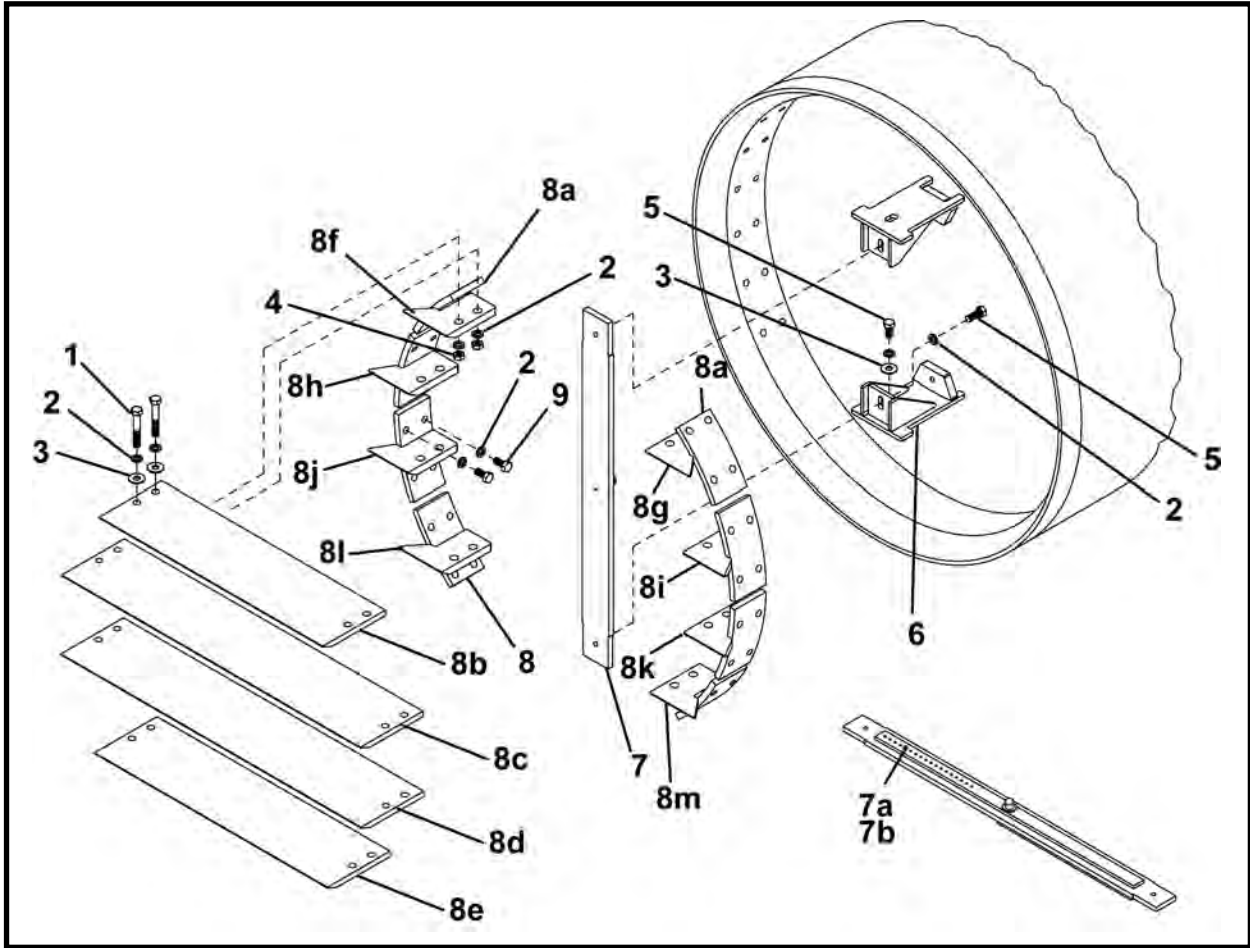
DIRT HEAD ASSEMBLY DIRT BAR



| ITEM | QTY | 480 PART NO. | 540 PART NO. | DESCRIPTION |
|------|------|-----------------|-----------------|---|
| 0 | 1 | 030305A | 030316A | ASSEMBLY, Dirt Head |
| 1 | 2 | 030315A | 030315A | CUTTER, Outside |
| 2 | 1 | 030313P | 030319P | MOUNT, Tooth - RH |
| 3 | 1 | 030314P | 030320P | MOUNT, Tooth - LH |
| 4 | 4/3 | P0051-001 | P0051-001 | POCKET, Tooth |
| 5 | 4/3 | P0050-001 | P0050-001 | TEETH, Cutter |
| 6 | 1 | 002205A00 | 003040A00 | BAR, Cutter (Includes items 6a - 6d) |
| 6a | 8/10 | P0050-001 | P0050-001 | TOOTH, Cutter |
| 6b | 8/10 | P0051-001 | P0051-001 | POCKET, Tooth |
| 6c | 1 | P0001-05-003 | P0001-05-003 | BOLT, Target 5/16 UNC x .75 |
| 6d | 1 | P0003-05-000 | P0003-05-000 | NUT, 5/16 |
| 7 | 2 | 004742A00 | 004742A00 | PLATE, Cutter Adjustment (Includes items 7a - 7d) |
| 7a | 1 | P0034-12-014 | P0034-12-014 | BOLT, Square Head 3/4 x 3.5 |
| 7b | 1 | P0007-12-000 | P0007-12-000 | NUT, Jam |
| 7c | 1 | P0001-08-004 | P0001-08-004 | BOLT, 1/2 UNC x 1 |
| 7d.1 | AR | 004750P01 | 004750P01 | TOOTH, Overcut (Standard) 8.25" |
| 7d.2 | AR | 004750P02 | 004750P02 | TOOTH, Overcut (Long) 9.25" |
| 7d.3 | AR | 004750P03 | 004750P03 | TOOTH, Overcut (Extra Long) 10.25" |
| 8 | 4 | P0001-12-010 | P0001-12-010 | BOLT, 3/4 UNC x 2.5 |
| 9 | 8 | P0040-012 | P0040-012 | WASHER, Hardened Flat 3/4 |
| 10 | 4 | P0001-12-014 | P0001-12-014 | BOLT, 3/4 UNC x 3.5 |
| 11 | 8 | P0045-012 | P0045-012 | WASHER, Lock 3/4 |
| 12 | 4 | P0003-12-000 | P0003-12-000 | NUT, 3/4 |
| 13 | 4 | 004124P01 | 004124P01 | WASHER |
| 14 | 4 | P0001-12-006 | P0001-12-006 | BOLT, 3/4 UNC x 1.5 |

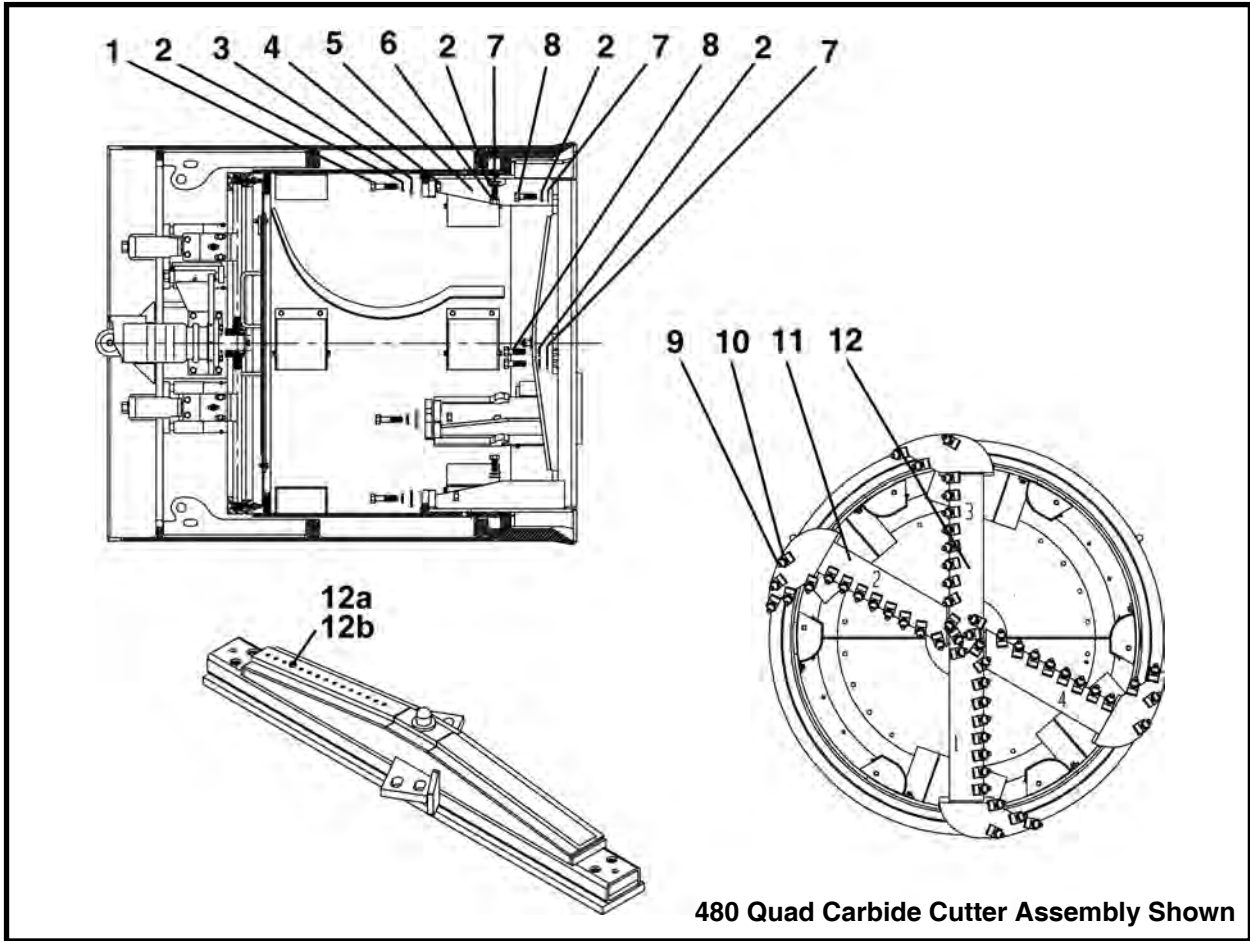
AR- As Required

SAND HEAD ASSEMBLY



| ITEM | QTY | 480 PART NO. | 540 PART NO. | DESCRIPTION |
|------|-----|-----------------|-----------------|---|
| 0 | 1 | 004824A01 | 004888A00 | ASSEMBLY, Sand Head |
| 1 | 16 | P001-12-012 | P0001-12-012 | BOLT, Hex 3/4 UNC x 3 |
| 2 | 68 | P0040-012 | P0040-012 | WASHER, Flat 3/4 |
| 3 | 18 | P0045-012 | P0045-012 | WASHER, Lock 3/4 |
| 4 | 16 | P0003-12-000 | P0003-12-000 | NUT, 3/4 |
| 5 | 4 | P0001-12-006 | P0001-12-006 | BOLT, 3/4 UNC x 1.5 |
| 6 | 2 | 004644A01 | 004644A01 | PLATE, Cutter |
| 7 | 1 | 004836A00 | 004890A00 | BAR, Sand (Includes items 7a-7b) |
| 7a | 1 | P0001-05-003 | P0001-05-003 | BOLT, Target 5/16 UNC x .75 |
| 7b | 1 | P0003-05-000 | P0003-05-000 | NUT, 5/16 |
| 8 | 1 | 004825A02 | 004889A02 | ASSEMBLY, Sand Shelf (Includes items 8a-8m) |
| 8a | 2 | 004823P01 | 005915P00 | BAR, Curved Mounting |
| 8b | 1 | 004826P00 | 005916P00 | SHELF, Sand |
| 8c | 1 | 004827P00 | 005917P00 | SHELF, Sand |
| 8d | 1 | 004828P00 | 005918P00 | SHELF, Sand |
| 8e | 1 | 004829P00 | 005919P00 | SHELF, Sand |
| 8f | 1 | 009411P00 | 005442P00 | SHELF, End |
| 8g | 1 | 009412P00 | 005439P00 | SHELF, End |
| 8h | 1 | 009413P00 | 004946P00 | SHELF, End |
| 8i | 1 | 009414P00 | 004945P00 | SHELF, End |
| 8j | 1 | 004830P00 | 004947P00 | SHELF, End |
| 8k | 1 | 004831P00 | 004948P00 | SHELF, End |
| 8l | 1 | 009415P00 | 005442P00 | SHELF, End |
| 8m | 1 | 009416P00 | 005439P00 | SHELF, End |
| 9 | 32 | P0001-12-008 | P0001-12-008 | BOLT, 3/4 UNC x 2 |

**QUAD CARBIDE CUTTER BAR ASSEMBLY
QUAD BAR**

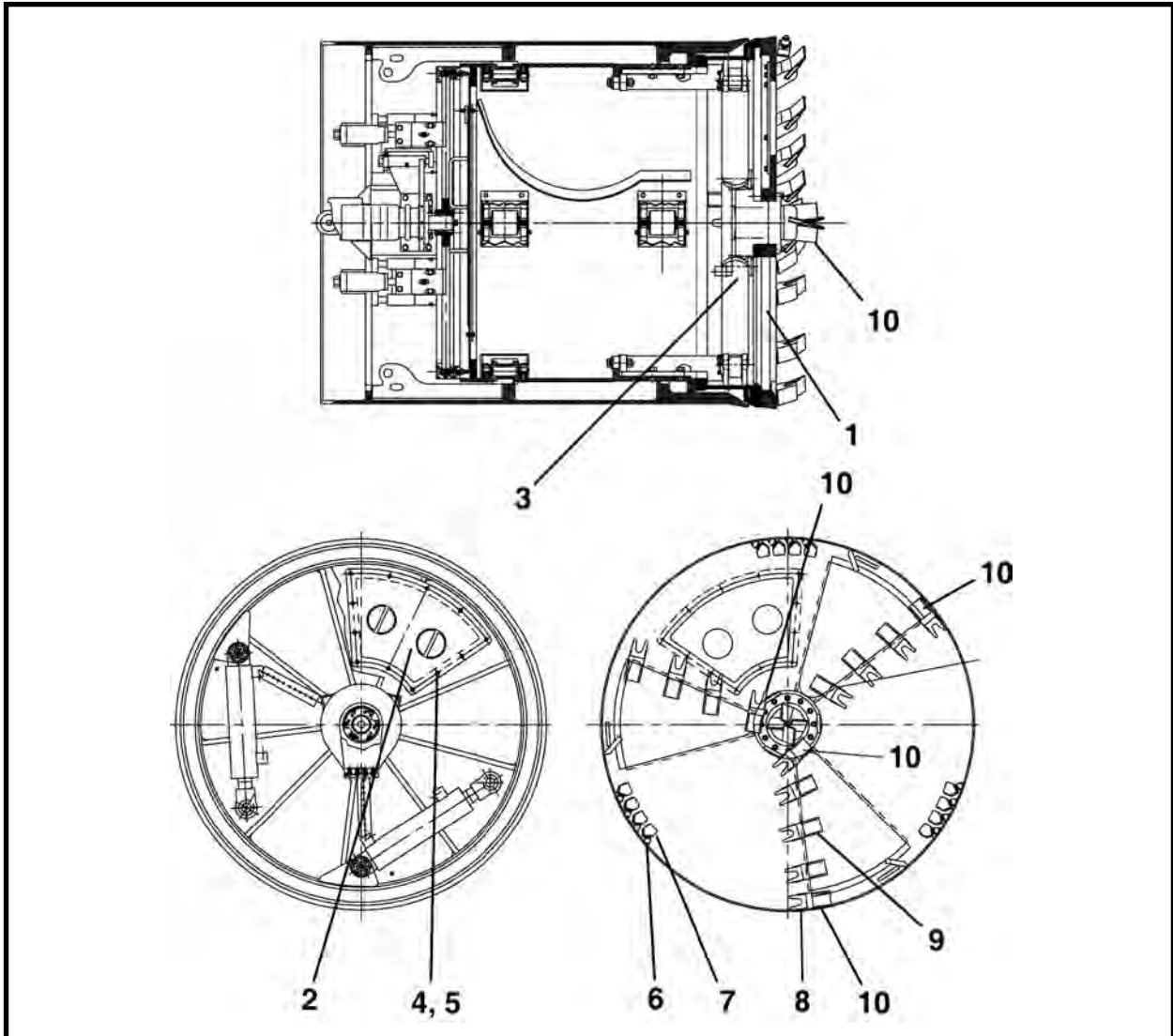


| ITEM | QTY | 480 PART NO. | 540 PART NO. | DESCRIPTION |
|------|-------|-----------------|-----------------|---|
| 0 | 1 | 010861A00 | 009906A00 | ASSEMBLY, Quad Carbide Cutter Bar |
| 1 | 4 | P0001-12-014 | P0001-12-014 | BOLT, 3/4 UNC x 3.5 |
| 2 | 12 | P0045-012 | P0045-012 | WASHER, Lock 3/4 |
| 3 | 4 | 004124P01 | 004124P01 | WASHER, Flat |
| 4 | 4 | P0003-12-000 | P0003-12-000 | NUT, 3/4 |
| 5 | 4 | 005539A01 | 005539A01 | ASSEMBLY, Carbide Cutter Plate |
| 6 | 4 | P0001-12-006 | P0001-12-006 | BOLT, 3/4 UNC x 1.5 |
| 7 | 16 | P0040-012 | P0040-012 | WASHER, Flat 3/4 |
| 8 | 12 | P0001-12-010 | P0001-12-010 | BOLT, 3/4 UNC x 2.5 |
| 9 | 48/60 | P0050-011 | P0050-011 | TOOTH, Carbide |
| 10 | 48/60 | P0051-004 | P0051-004 | HOLDER, Tooth |
| 11 | 2 | 010849A00 | 024116A00 | WELDMENT, Quad Bar |
| 12 | 1 | 010862A00 | 009905A00 | WELDMENT, Cutter Bar (Includes items 12a - 12b) |
| 12a | 1 | P0001-05-003 | P0001-05-003 | BOLT, Target 5/16 UNC x .75 |
| 12b | 1 | P0003-05-000 | P0003-05-000 | NUT, 5/16 |

* An optional spade style carbide tooth, P0050-010 is available.

NOTES

CLOSED FACE ASSEMBLY, 023910A00
480 CLOSED FACE (OLD STYLE)

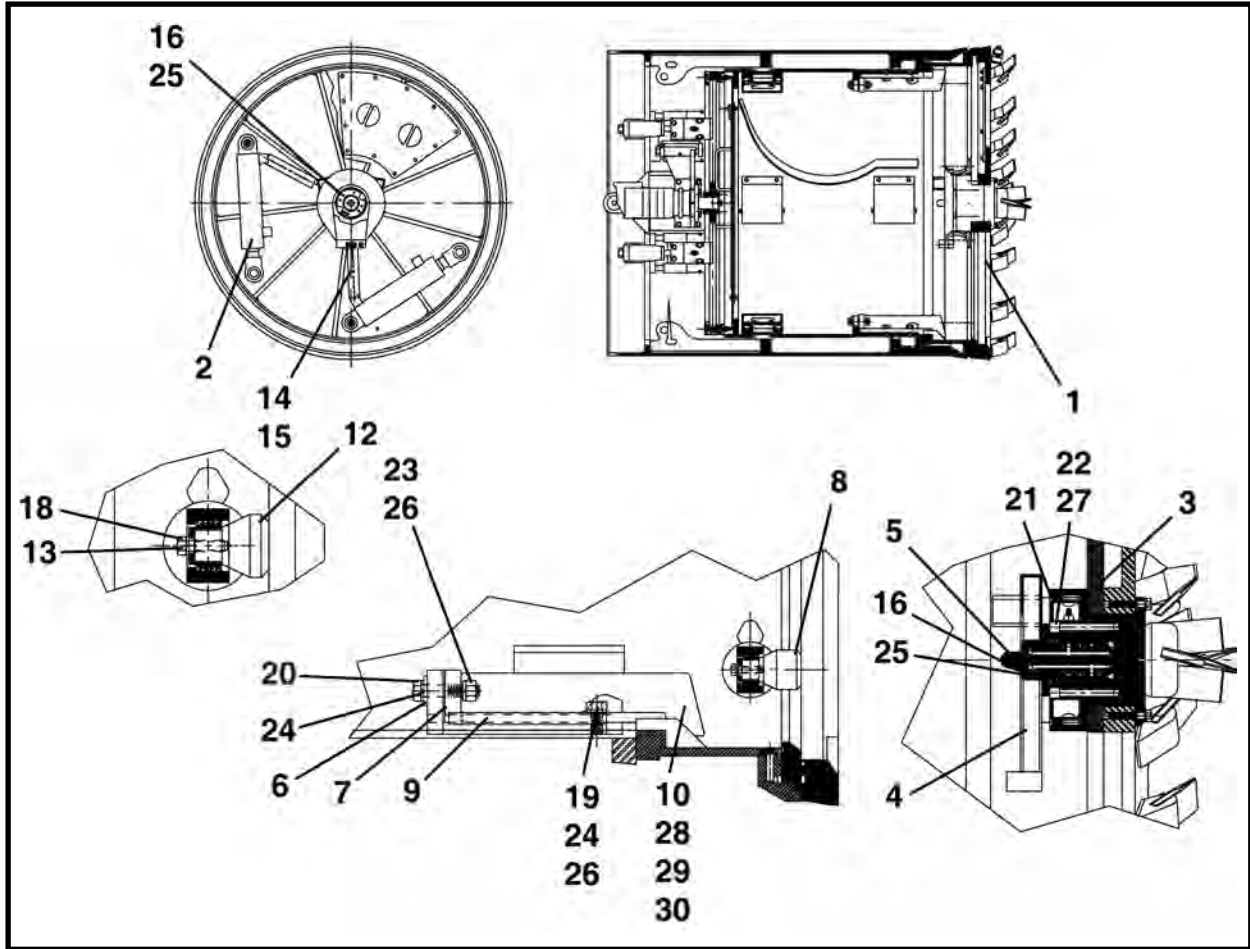


| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|---------------------------------------|
| 0 | 1 | 023910F00 | ASSEMBLY, Closed Face, 480 |
| 1* | 1 | 023911A00 | ASSEMBLY, Closed Face Mounting & Weld |
| 2 | 1 | 023916A00 | DOOR, Obstruction Removal |
| 3** | 1 | 019315A00 | CONTROL, Closed Face |
| 4 | 10 | P0001-06-006 | BOLT, 3/8 UNC x 1.5 |
| 5 | 10 | P0045-006 | WASHER, Lock 3/8 |
| 6 | 12 | P0050-000 | TOOTH, Carbide |
| 7 | 12 | P0051-004 | HOLDER, Carbide Tooth |
| 8 | 13 | P0051-011 | HOLDER, Dirt Tooth |
| 9 | 8 | P0050-026 | TOOTH, Dirt |
| 10 | 9 | P0050-030 | TOOTH, Carbide Cutter |

* Refer to this section for parts information.

** Refer to Section 6, Hydraulics, Closed Face Control Assembly, 019315A00 for parts information.

CLOSED FACE MOUNTING & WELD ASSEMBLY, 023911A00
480 CLOSED FACE (OLD STYLE)



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|--|
| 0 | 1 | 023911A00 | ASSEMBLY, Closed Face Mounting & Weld, 480 |
| 1 | 1 | 023912A00 | ASSEMBLY, Closed Face Weldment (Includes item 1a) |
| 1a | 2 | P0085-S14 | ORING |
| 2** | 2 | 015007A00 | ASSEMBLY, Cylinder |
| 3 | 1 | 018656A00 | GUARD, Rotary Hub (Includes item 3a) |
| 3a | 1 | P0063-001 | FITTING, Grease |
| 4 | 1 | 018670A00 | CONVEYOR & ROTARY HUB GUARD (Includes items 4a-4b) |
| 4a | 4 | P0001-05-004 | BOLT, 5/16 UNC x 1 |
| 4b | 4 | P0045-005 | WASHER, Lock 5/16 |
| 5* | 1 | 018700A00 | ASSEMBLY, Rotary Hub |
| 6 | 4 | 004124P01 | WASHER |
| 7 | 4 | 004671P00 | LUG |
| 8 | REF | 018736P00 | PIN |
| 9 | 4 | 015027P00 | PLATE, Mounting |
| 10 | 8 | 015028P00 | PLATE, Mounting |
| 11 | REF | 023514P00 | BAR, Level (Not Shown) |
| 12 | 2 | 018717P01 | PIN |
| 13 | 4 | 018718P00 | WASHER |
| 14 | 2 | 023763P00 | PLATE |
| 15 | 2 | P0001-05-003 | BOLT, 5/16 UNC x .75 |
| 16 | 4 | P0001-06-003 | BOLT, 3/8 UNC x .75 |
| 17 | 4 | 023515P00 | PADDLE, Dirt (Not Shown) |

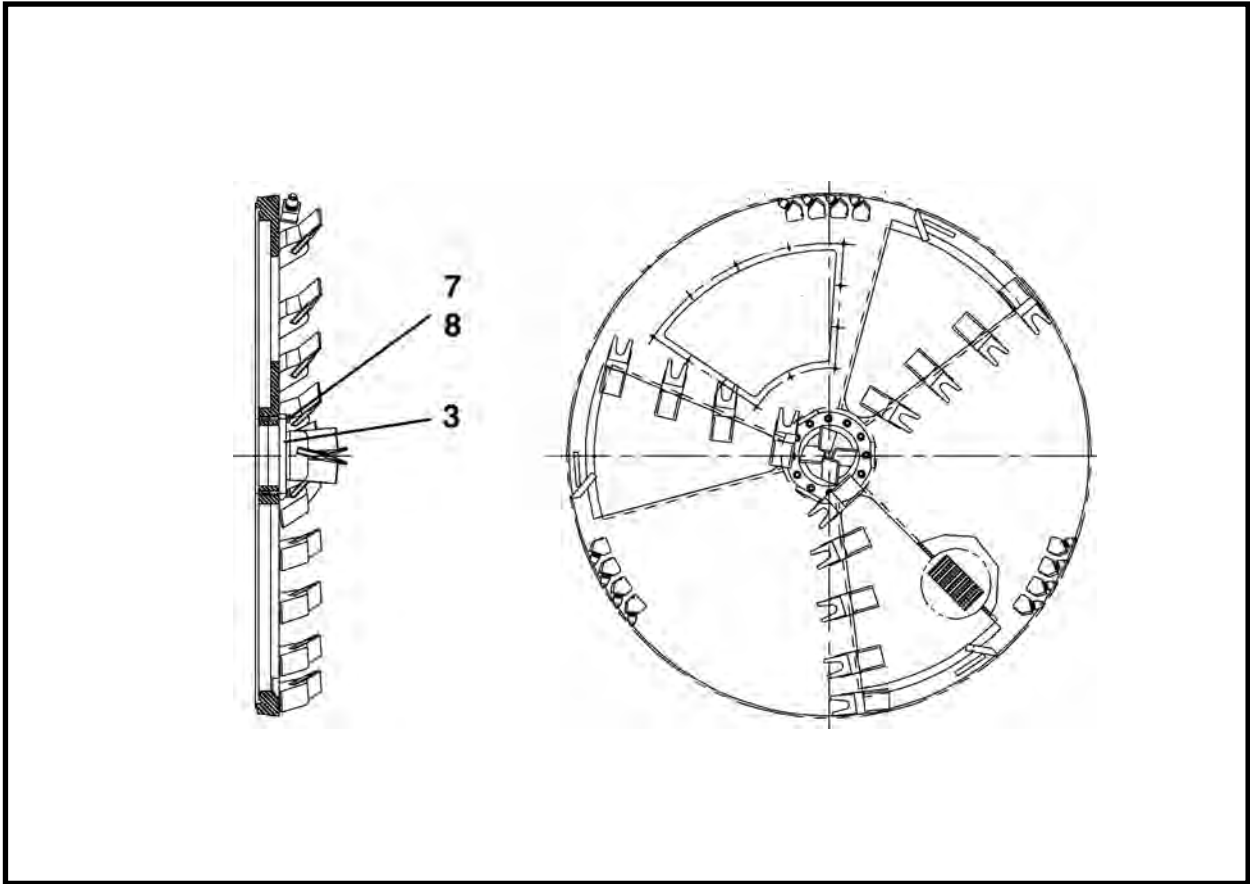
CLOSED FACE MOUNTING & WELD ASSEMBLY, 023911A00
480 CLOSED FACE (OLD STYLE)

| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|------------------------------------|
| 18 | 4 | P0001-08-006 | BOLT, 1/2 UNC x 1.5 |
| 19 | 8 | P0001-12-006 | BOLT, 3/4 UNC x 1.5 |
| 20 | 4 | P0001-12-014 | BOLT, 3/4 UNC x 3.5 |
| 21 | 6 | P0030-06-004 | SCREW, Flat Head Cap 3/8 UNC x 1 |
| 22 | 6 | P0031-08-024 | SCREW, Socket Head Cap 1/2 UNC x 6 |
| 23 | 4 | P0003-12-000 | NUT, 3/4 |
| 24 | 12 | P0040-012 | WASHER, Flat 3/4 |
| 25 | 18 | P0045-006 | WASHER, Lock 3/8 |
| 26 | 12 | P0045-012 | WASHER, Lock 3/4 |
| 27 | 6 | P0046-008 | WASHER, Lock 1/2 Hi Collar |
| 28 | 8 | 026909P | PLATE, Close Off |
| 29 | 8 | 026907P | PLATE, Close Off |
| 30 | 4 | 026137P | PLATE, Close Off |

* Refer to this section for parts information.

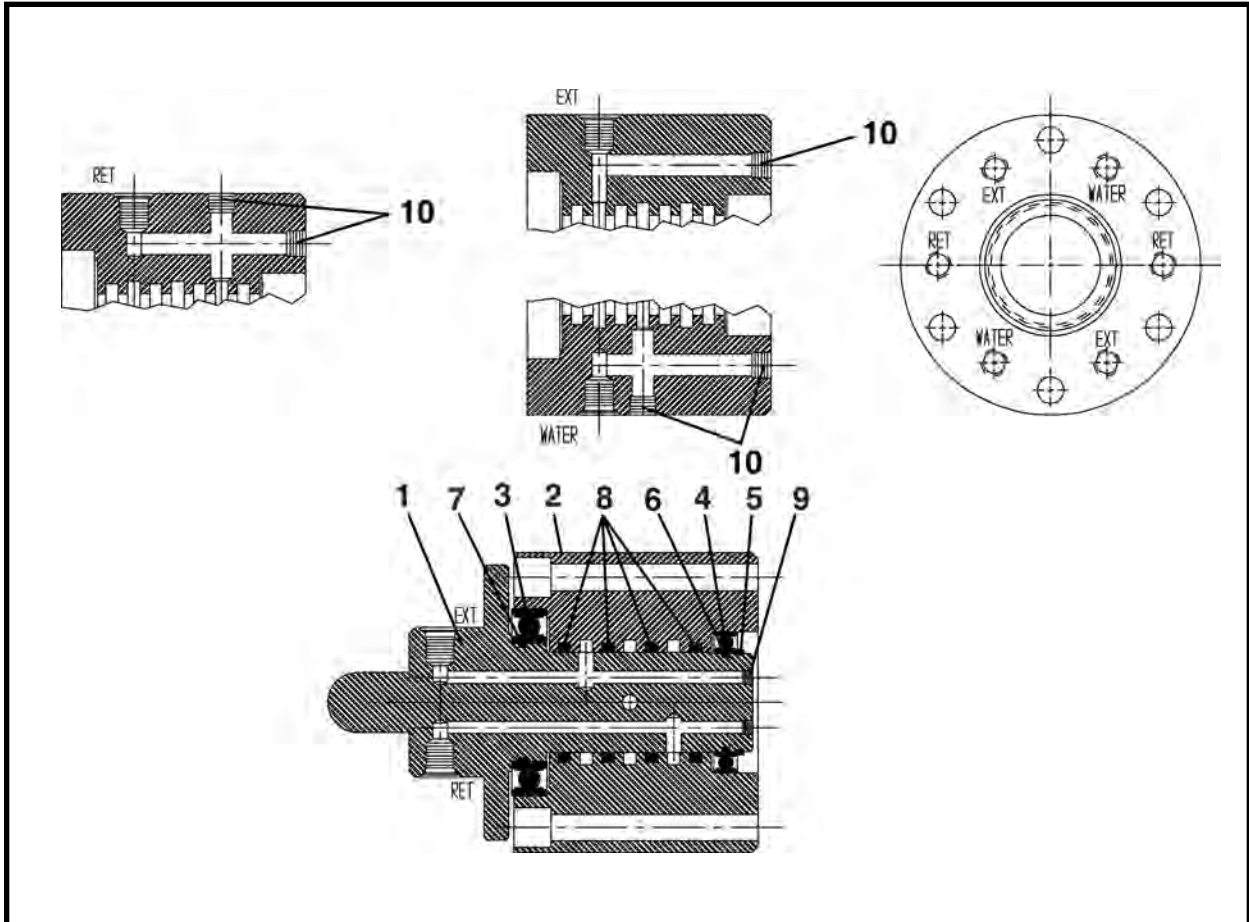
** Refer to Section 10, Cylinders for parts information.

FRONT FACE WELDMENT, 023913A00
480 CLOSED FACE (OLD STYLE)



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|-----------------------------------|
| 0 | 1 | 023913A00 | WELDMENT, Front Face, 480 |
| 1 | - | - | - |
| 2 | - | - | - |
| 3 | 1 | 018665A00 | MOUNTING BASE, Front Center Tooth |
| 4 | - | - | - |
| 5 | - | - | - |
| 6 | - | - | - |
| 7 | 12 | P0001-08-008 | BOLT, 1/2 UNC x 2 |
| 8 | 12 | P0045-008 | WASHER, Lock 1/2 |

ROTARY HUB ASSEMBLY, 018700A00
480 CLOSED FACE (OLD STYLE)



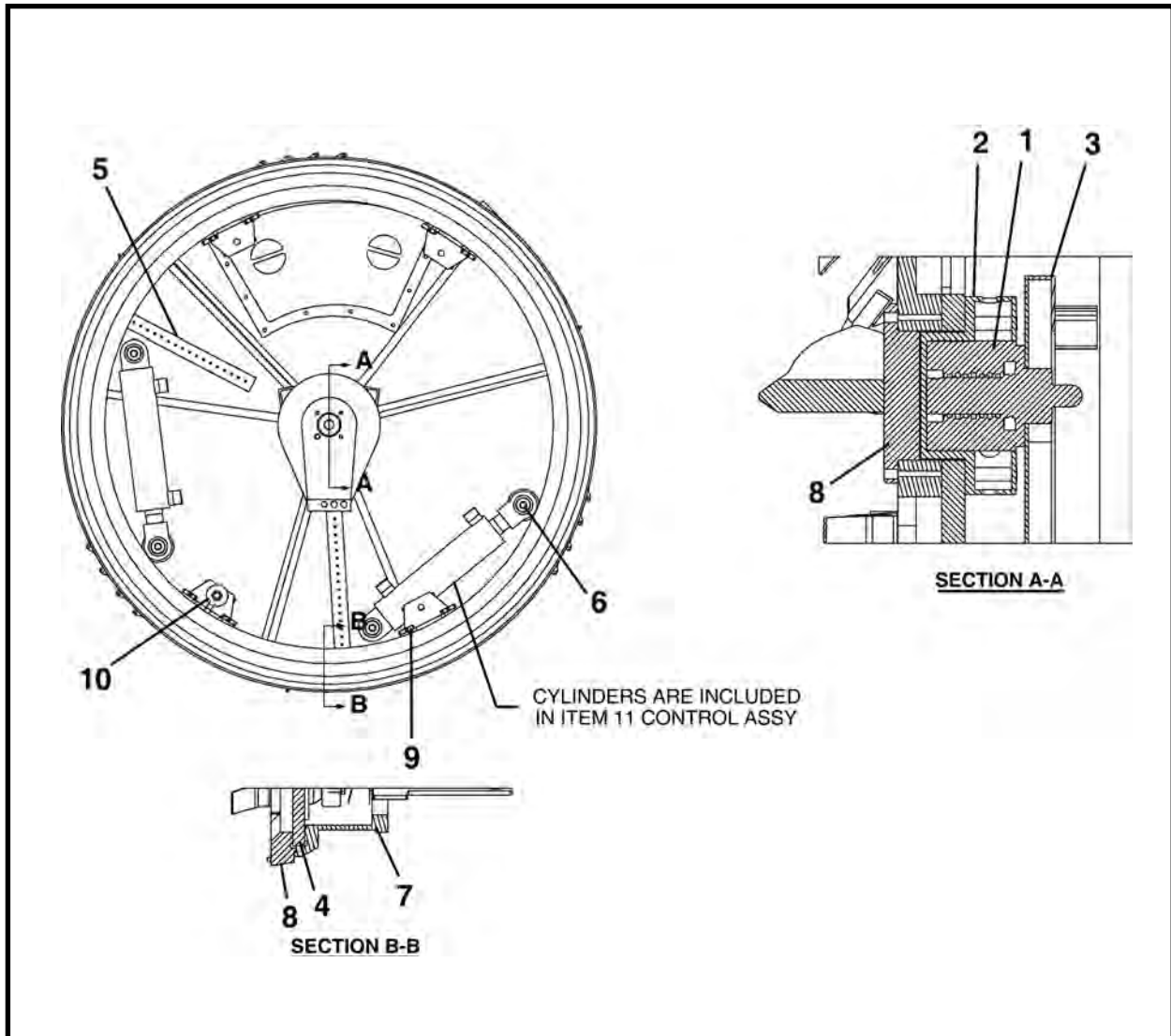
| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|-----------|---------------------------|
| 0* | 1 | 018700A00 | ASSEMBLY, Rotary Hub, 480 |
| 1 | - | - | - |
| 2 | - | - | - |
| 3 | 1 | P0065-106 | BEARING |
| 4 | 1 | P0065-013 | BEARING |
| 5 | 1 | P0077-029 | RING, Snap |
| 6 | 1 | P0085-132 | ORING |
| 7 | 1 | P0085-139 | ORING |
| 8 | 4 | P0080-019 | SEAL, Quad |
| 9 | 1 | P0300-144 | PLUG, 1/8 |
| 10 | 10 | P0300-026 | PLUG, 1/4 |

* The complete Rotary Hub Assembly, 018700A00 is no longer available. For complete replacement, use 027562A, Rotary Hub Assembly (refer to Rotary Hub Assembly, 027562A later in this section).

NOTE: When replacing parts:

1. Pack bearings with grease before pressing into item 2.
2. Lubricate seals and shaft before assembly in item 2.
3. After shaft is in place, slide item 6 on shaft.
4. Press item 4 into housing after shaft is in place.
5. Pressure test all ports of hub to 3,000 psi.

CLOSED FACE ASSEMBLY, 026170F00
540 CLOSED FACE (OLD STYLE)

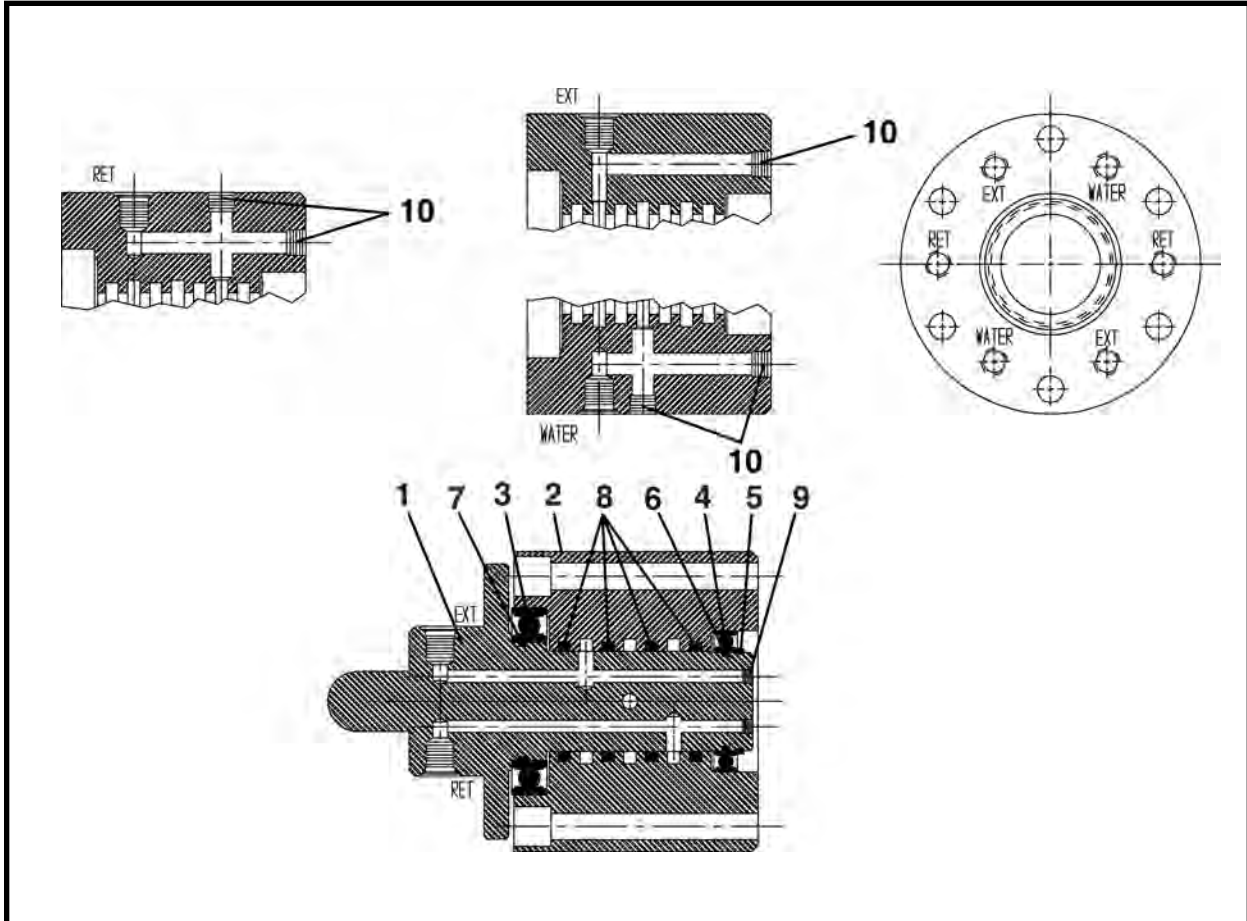


| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|--|
| 0 | 1 | 026170F00 | ASSEMBLY, Closed Face, 540 |
| 1* | 1 | 018700A00 | HUB, Rotary |
| 2 | 1 | 018656A00 | GUARD, Rotary Hub (Includes item 2a) |
| 2a | 2 | P0063-001 | FITTING, Grease |
| 3 | 1 | 018670A00 | ASSEMBLY, Conveyor & Rotary (Includes items 3a-3b) |
| 3a | 4 | P0001-05-004 | BOLT, 5/16 UNC x 1 |
| 3b | 4 | P0045-005 | WASHER, Lock 5/16 |
| 4 | 1 | 026131A | DOOR, Rotary |
| 5 | 2 | 014215P00 | BAR, Target |
| 6* | 1 | 026155A | KIT, Cylinder Mount |
| 7 | 1 | 015004A00 | WELDMENT, Back Mount |
| 8* | 1 | 026143A | ASSEMBLY, Front Face Weldment |
| 9 | 4 | 026149A | WELDMENT, Closed Face Mount |
| 10* | 1 | 026152A | KIT, Hardware |
| 11** | 1 | 015010A00 | ASSEMBLY, Closed Face Control |

* Refer to this section for parts information.

** Refer to Section 6, Hydraulics, Closed Face Control Assembly, 015010A00 for parts information.

ROTARY HUB ASSEMBLY, 018700A00
540 CLOSED FACE (OLD STYLE)



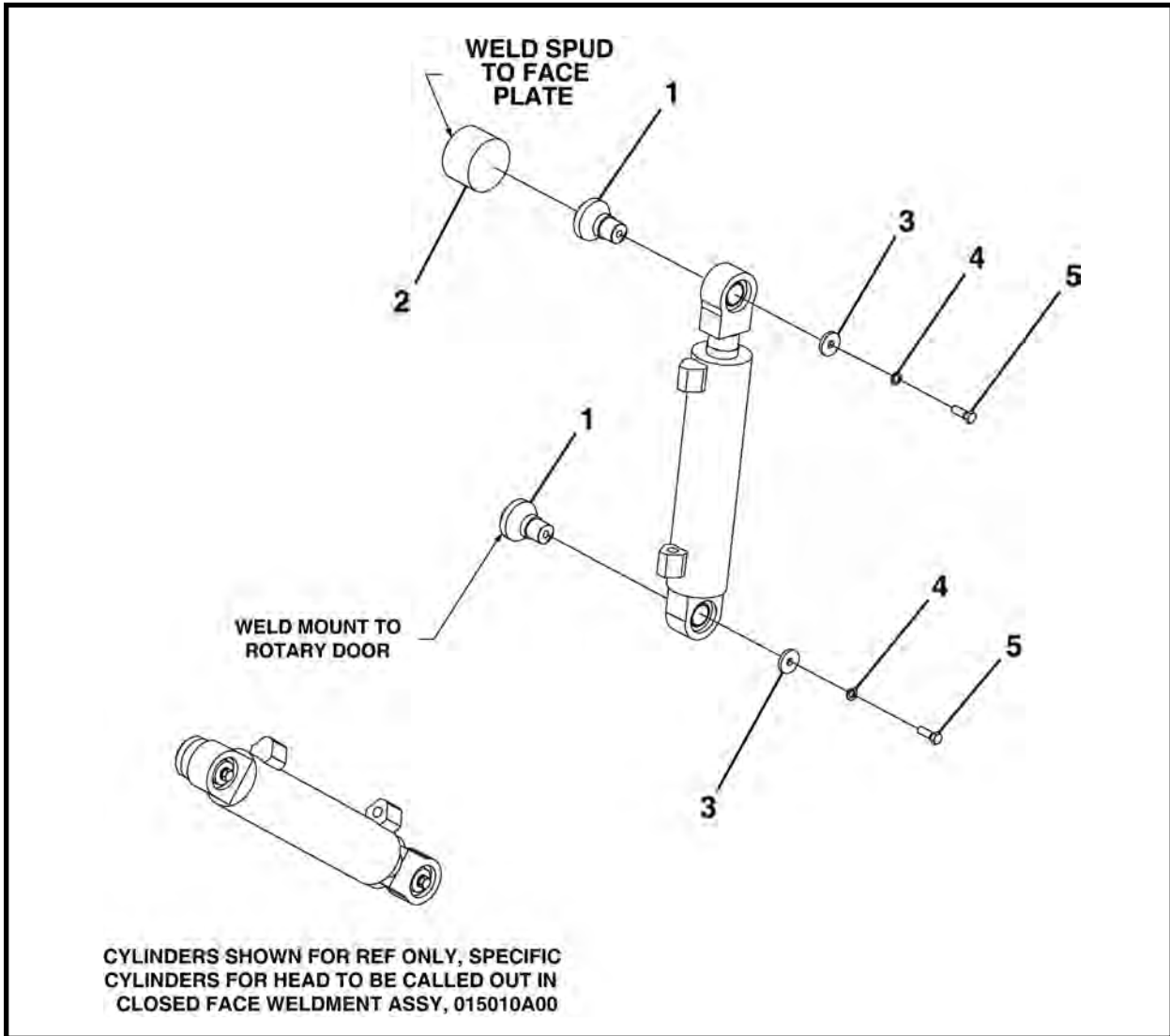
| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|-----------|---------------------------|
| 0 | 1 | 018700A00 | ASSEMBLY, Rotary Hub, 540 |
| 1 | - | - | - |
| 2 | - | - | - |
| 3 | 1 | P0065-106 | BEARING |
| 4 | 1 | P0065-013 | BEARING |
| 5 | 1 | P0077-029 | RING, Snap |
| 6 | 1 | P0085-132 | ORING |
| 7 | 1 | P0085-139 | ORING |
| 8 | 4 | P0080-019 | SEAL, Quad |
| 9 | 1 | P0300-144 | PLUG, 1/8 |
| 10 | 10 | P0300-026 | PLUG, 1/4 |

* The complete Rotary Hub Assembly, 018700A00 is no longer available. For complete replacement, use 027562A, Rotary Hub Assembly (refer to Rotary Hub Assembly, 027562A later in this section).

NOTE: When replacing parts:

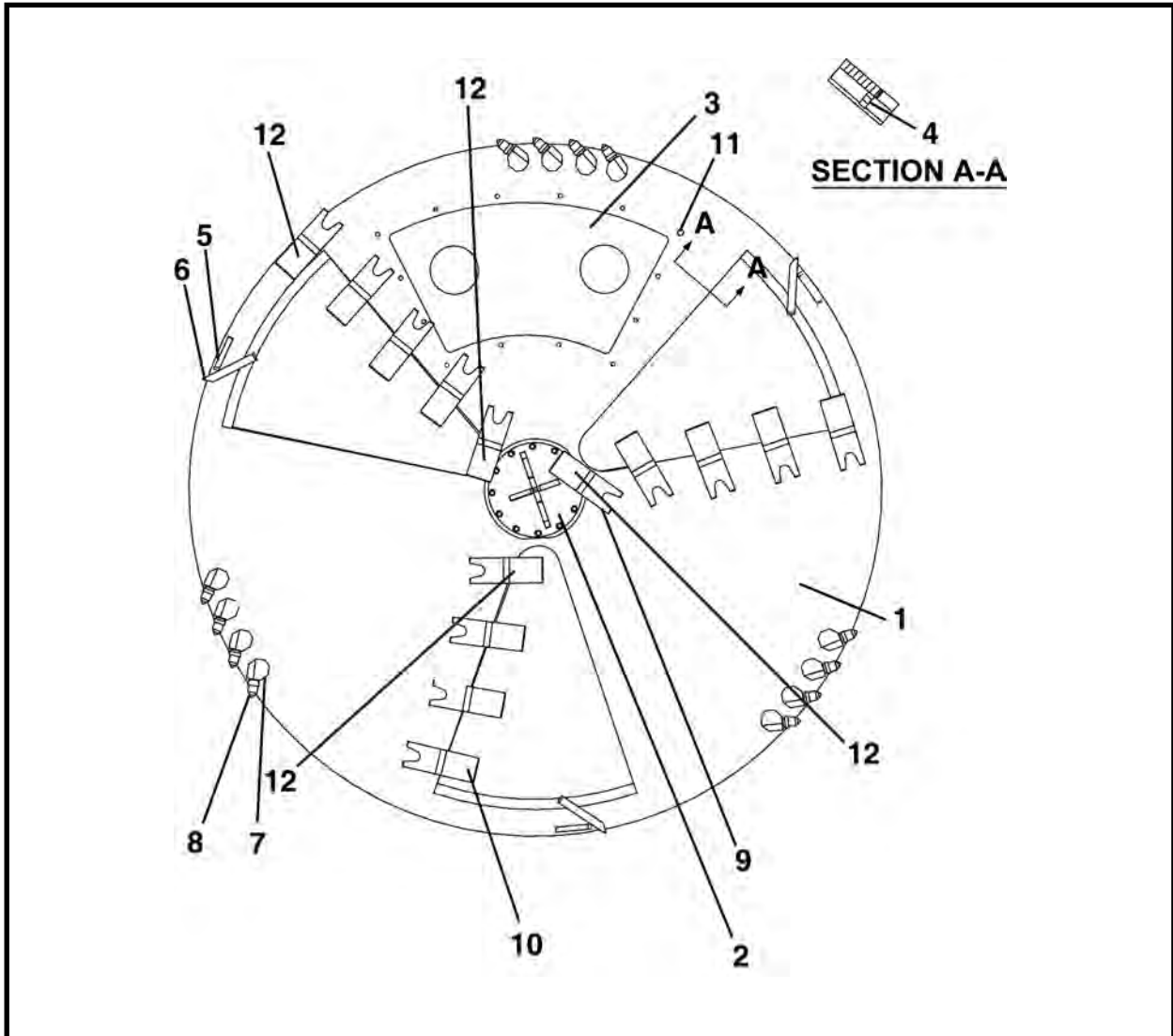
1. Pack bearings with grease before pressing into item 2.
2. Lubricate seals and shaft before assembly in item 2.
3. After shaft is in place, slide item 6 on shaft.
4. Press item 4 into housing after shaft is in place.
5. Pressure test all ports of hub to 3,000 psi.

CLOSED FACE CYLINDER MOUNT KIT, 026155A
540 CLOSED FACE (OLD STYLE)



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|--------------------------------------|
| 0 | 1 | 026155A | KIT, Closed Face Cylinder Mount, 540 |
| 1 | 4 | 018717P01 | PIN, Front Mount |
| 2 | 2 | 019464P00 | RISER, Spud |
| 3 | 4 | 018718P00 | WASHER |
| 4 | 4 | P0045-008 | WASHER, Lock 1/2 |
| 5 | 4 | P0001-08-006 | BOLT, 1/2 UNC x 1.5 |

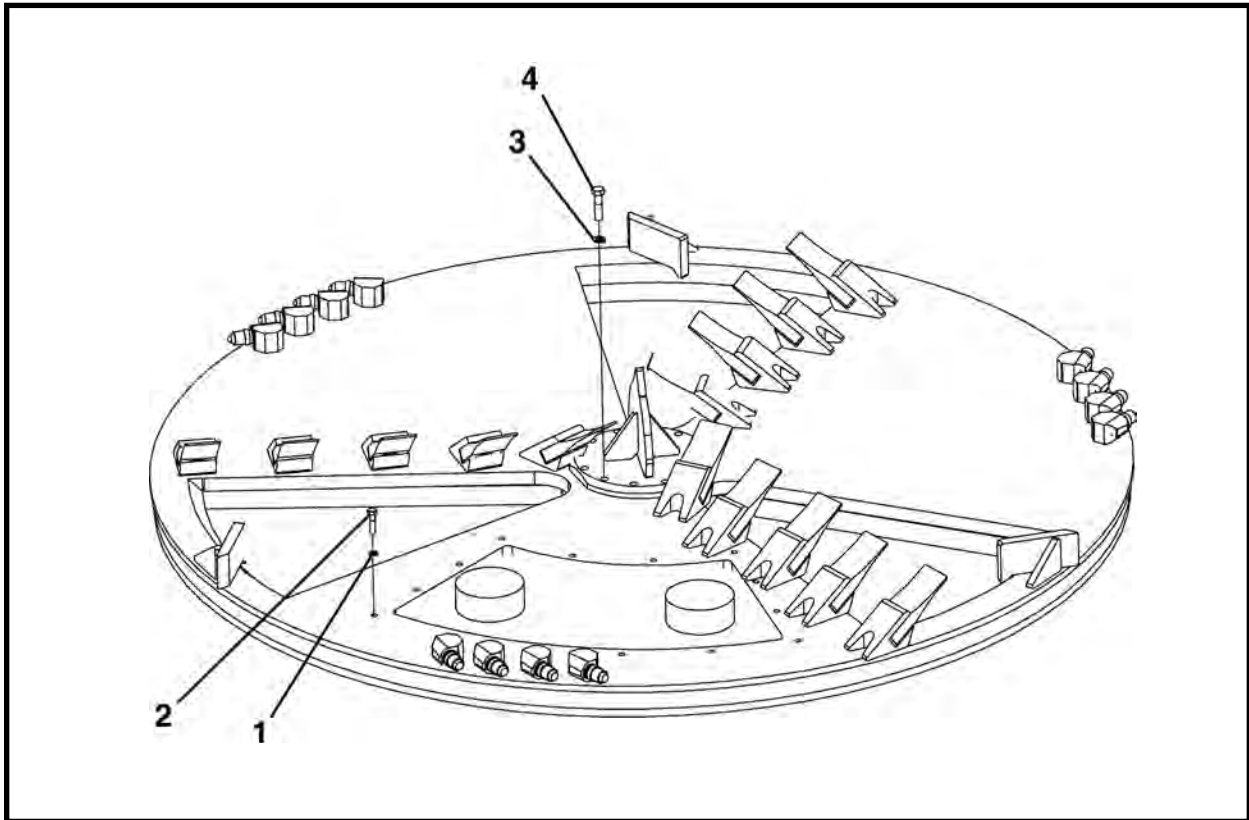
FRONT FACE WELDMENT ASSEMBLY, 026143A
540 CLOSED FACE (OLD STYLE)



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|-----------|------------------------------------|
| 0 | 1 | 026143A | ASSEMBLY, Front Face Weldment, 540 |
| 1 | 1 | - | PLATE, Front |
| 2 | 1 | 026139A | WELDMENT, Closed Face Pilot |
| 3 | 1 | 019313A00 | DOOR, Obstruction Removal |
| 4 | 6 | 015022P00 | BAR, Face Plate Wear |
| 5 | 3 | - | PLATE, Face Gusset |
| 6 | 3 | - | PLATE, Face Gusset |
| 7 | 12 | P0051-004 | HOLDER, Carbide Tooth |
| 8 | 12 | P0050-011 | TOOTH, Carbide Bullet |
| 9 | 14 | P0051-011 | HOLDER, Tooth |
| 10 | 14 | P0050-026 | TOOTH, Paddle |
| 11* | 1 | 026144A | KIT, Obstruction Door Hardware |
| 12 | 4 | P0050-030 | TOOTH, Carbide Cutter Bar |

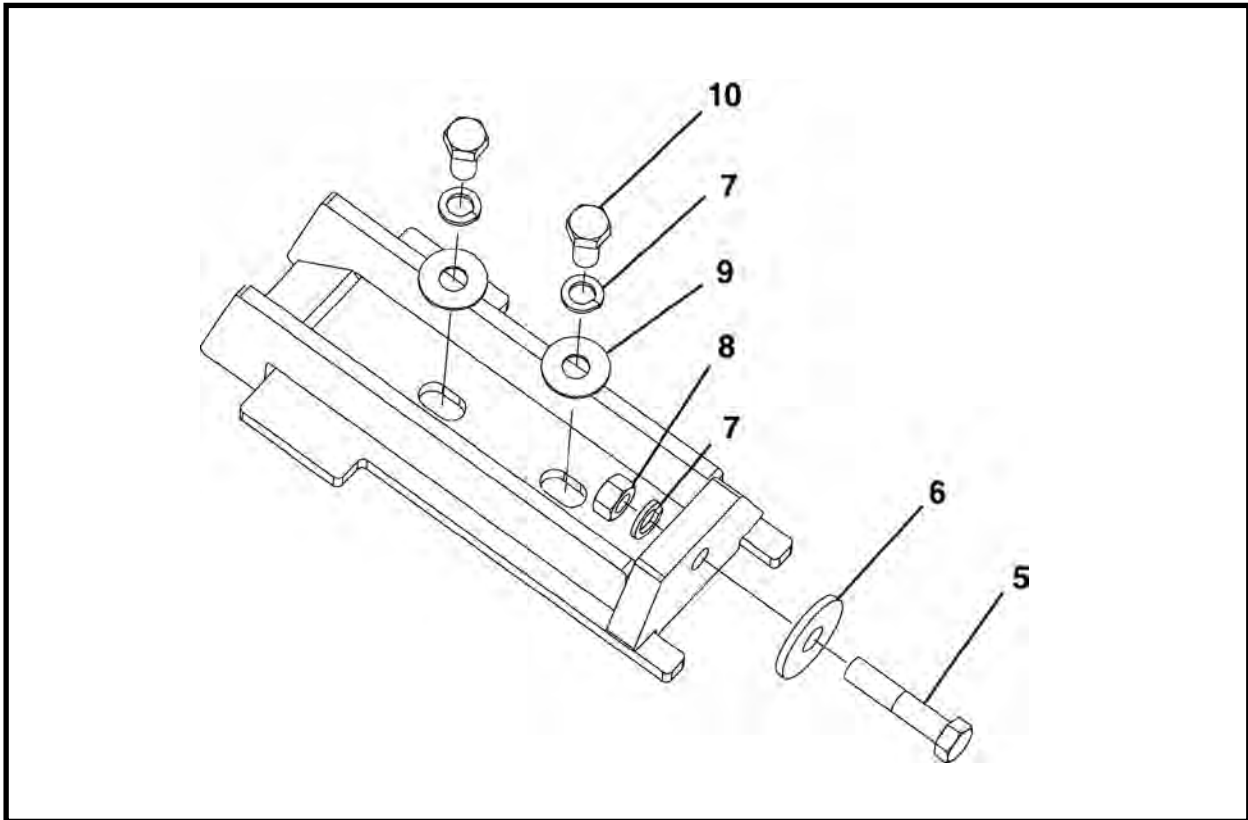
* Refer to this section for parts information.

OBSTRUCTION DOOR PILOT HARDWARE KIT, 026144A
540 CLOSED FACE (OLD STYLE)



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|---|
| 0 | 1 | 026144A | KIT, Obstruction Door Pilot Hardware, 540 |
| 1 | 14 | P0045-006 | WASHER, Lock 3/8 |
| 2 | 14 | P0001-06-006 | BOLT, 3/8 UNC x 1.5 |
| 3 | 12 | P0045-008 | WASHER, Lock 1/2 |
| 4 | 12 | P0001-08-008 | BOLT, 1/2 UNC x 2 |

CLOSED FACE MOUNT HARDWARE KIT, 026152A
540 CLOSED FACE (OLD STYLE)

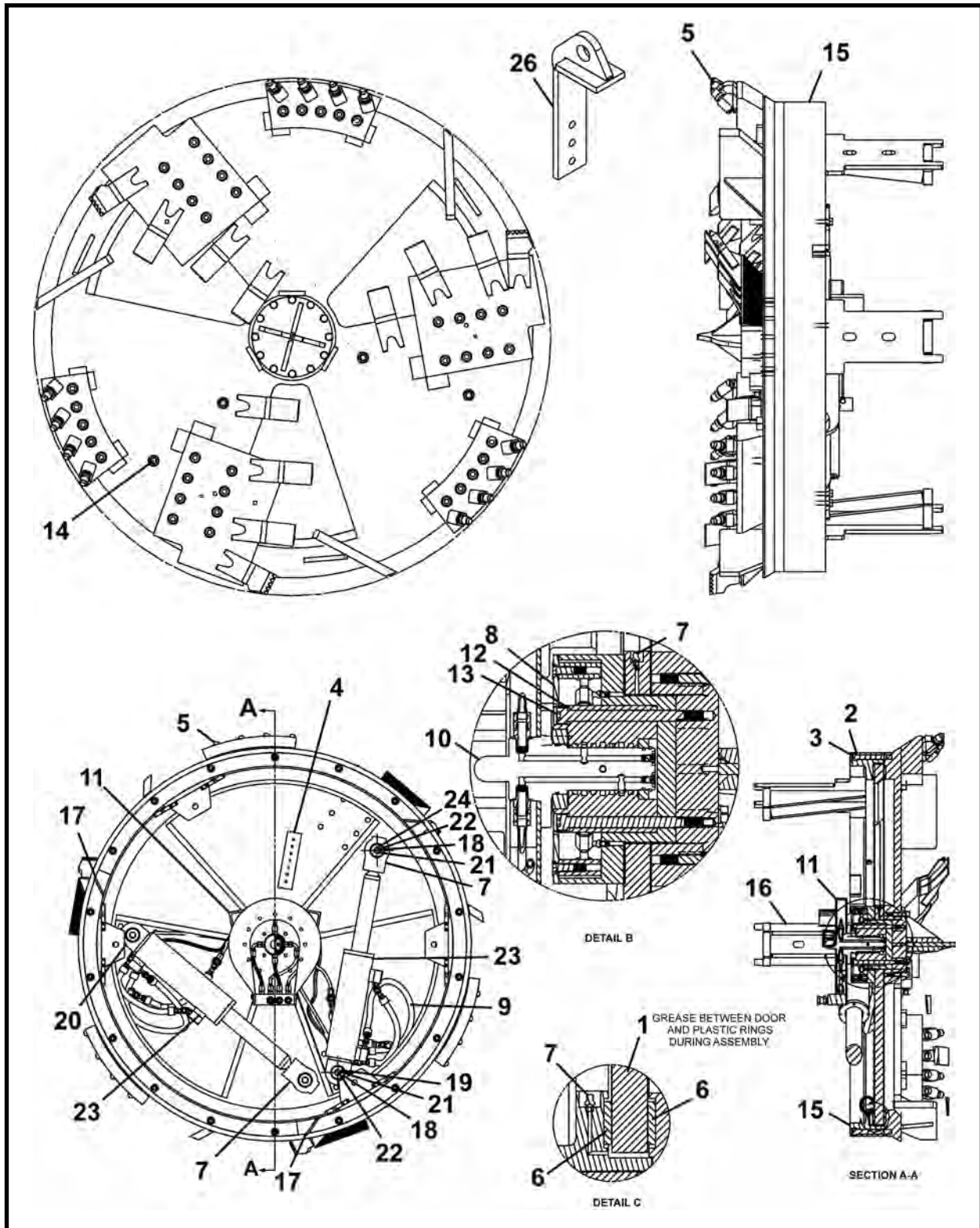


| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|--------------------------------------|
| 0 | 1 | 026152A | KIT, Closed Face Mount Hardware, 540 |
| 1* | 4 | P0001-06-003 | BOLT, 3/8 UNC x .75 |
| 2* | 4 | P0045-006 | WASHER, Lock 3/8 |
| 3** | 6 | P0031-08-024 | SCREW, Socket Head Cap 1/2 UNC x 6 |
| 4** | 6 | P0046-008 | WASHER, Lock High Collar |
| 5 | 4 | P0001-12-014 | BOLT, 3/4 UNC x 3.5 |
| 6 | 1 | 004124P01 | WASHER |
| 7 | 12 | P0045-012 | WASHER, Lock |
| 8 | 4 | P0003-12-000 | NUT, Hex |
| 9 | 8 | P0040-012 | WASHER, Flat |
| 10 | 8 | P0001-12-006 | BOLT, 3/4 UNC x 1.5 |

* Not Shown - Fastens conveyor guard to hub.

** Not Shown - Fastens hub to front face.

CLOSED FACE ASSEMBLY
480 - 540 CLOSED FACE (NEW STYLE)



| ITEM | QTY | 480 PART NO. | 540 PART NO. | DESCRIPTION |
|------|-------|-----------------|-----------------|----------------------------------|
| 0 | 1 | F25650F | F26235F | CLOSED FACE ASSEMBLY |
| 1 | 1 | 025653P | 026238P | DOOR, Rotary |
| 2 | 18/24 | P0046-010 | P0046-010 | WASHER, Hi-Collar Lock 5/8 |
| 3 | 18/24 | P0031-10-020 | P0031-10-020 | SCREW, Socket Hd Cap 5/8 UNC x 5 |

CLOSED FACE ASSEMBLY
480 - 540 CLOSED FACE (NEW STYLE)

| ITEM | QTY | PART NO. | | DESCRIPTION |
|--------|-----|--------------|--------------|--|
| | | 480 | 540 | |
| 4 | 1 | 023763P00 | 014215P00 | TARGET BAR |
| 5* | 1 | 025651A | 026236A | FRONT FACE ASSEMBLY |
| 6 | 16 | 025647P | 026241P | RING, Plastic Wear |
| 7 | 8 | P0063-001 | P0063-001 | FITTING, Grease Straight |
| 8 | 1 | 018656A00 | 018656A00 | ROTARY HUB ASSEMBLY (Includes items 8a & 8b) |
| 8a | 6 | P0030-06-004 | P0030-06-004 | SCREW, Flat Head Cap 3/8 UNC x 1 |
| 8b | 2 | P0063-001 | P0063-001 | FITTING, Grease |
| 9*** | 1 | 023986A | 027561A | HYDRAULIC ROTARY HUB ASSEMBLY |
| 10* | 1 | 027562A | 027562A | ROTARY HUB ASSEMBLY |
| 11 | 1 | 018670A00 | 018671A00 | GUARD, Rotary Hub (Includes items 11a & 11b) |
| 11a | 6 | P0001-05-004 | P0001-05-004 | BOLT, 5/16 UNC x 1 |
| 11b | 2 | P0045-004 | P0045-004 | WASHER, Lock 1/4 |
| 12 | 6 | P0046-008 | P0046-008 | WASHER, Hi-Collar Lock 1/2 |
| 13 | 6 | P0031-08-022 | P0031-08-022 | SCREW, Socket Hd Cap 1/2 UNC x 5.5 |
| 14 | 4 | P0416-003 | P0416-003 | PLUG, Square Head 1/2 |
| 15 | 1 | 025648P | 026239P | RING, Rear |
| 16 | 4/3 | 027552A | 027552A | MOUNT |
| 17 | 3 | 027558P | 027558P | SCRAPER, Outside |
| 18 | 4 | 018718P00 | 018718P00 | WASHER |
| 19 | 2 | 015057P | 015057P | PIN, Cylinder Mounting |
| 20 | 2 | P0063-003 | P0063-003 | FITTING, Grease, 90 Degree |
| 21 | 4 | P0001-08-006 | P0001-08-006 | BOLT, 1/2 UNC x 1.5 |
| 22 | 4 | P0045-008 | P0045-008 | WASHER, Lock 1/2 |
| 23**** | 2 | 015065A | 015060A | CYLINDER ASSEMBLY |
| 24 | 2 | 018717P01 | 018717P01 | PIN, Front Mount |
| 25** | 3 | 016735A | 016735A | RUBBER PADDLE ASSEMBLY |
| 26^ | 1 | 027509A | 027509A | LIFTING WELDMENT |

* Refer to this section for parts information.

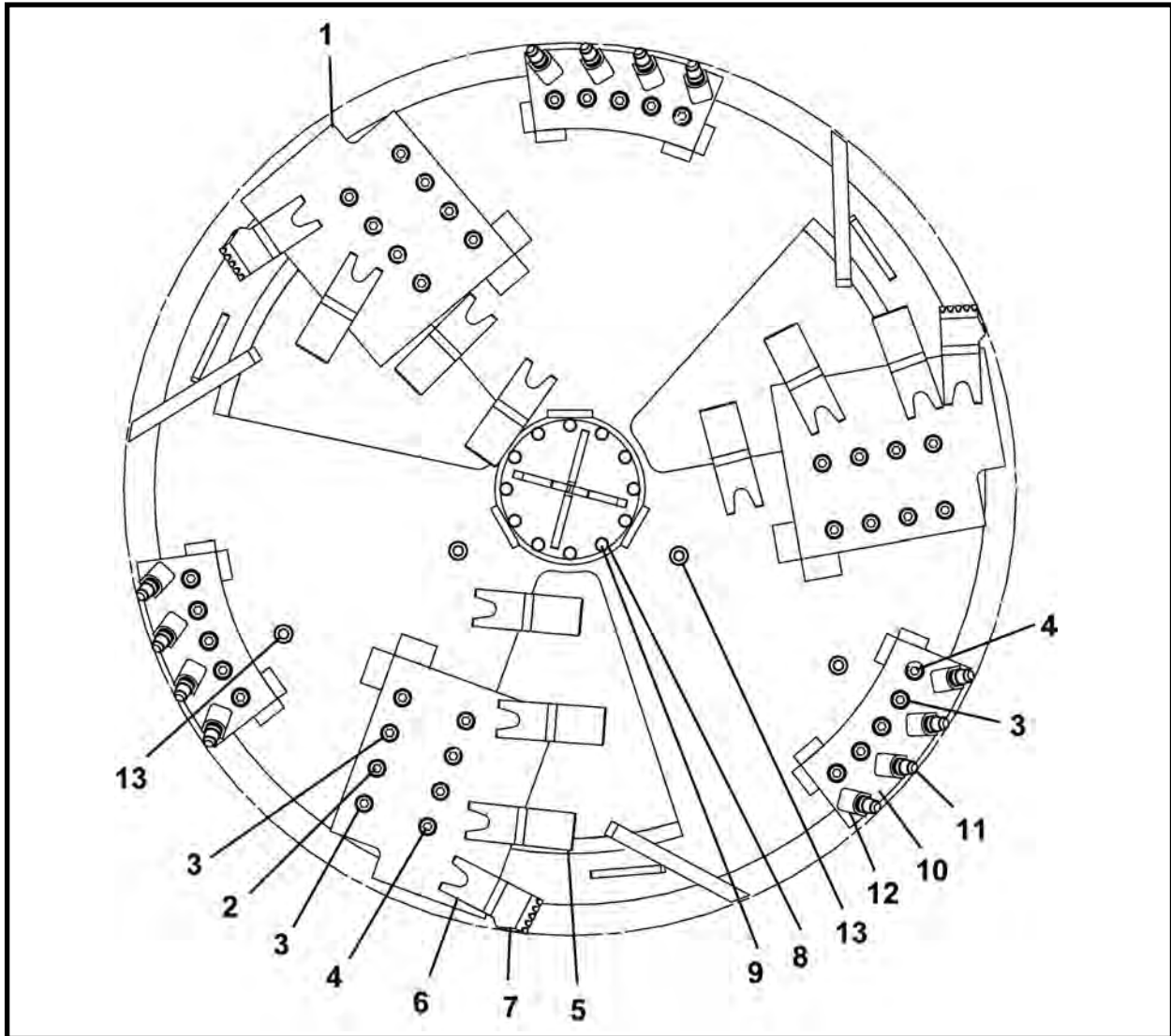
** Not Shown. Refer to this section for parts information.

*** Refer to Section 6, Hydraulics for parts information.

**** Refer to Section 10, Cylinders for parts information.

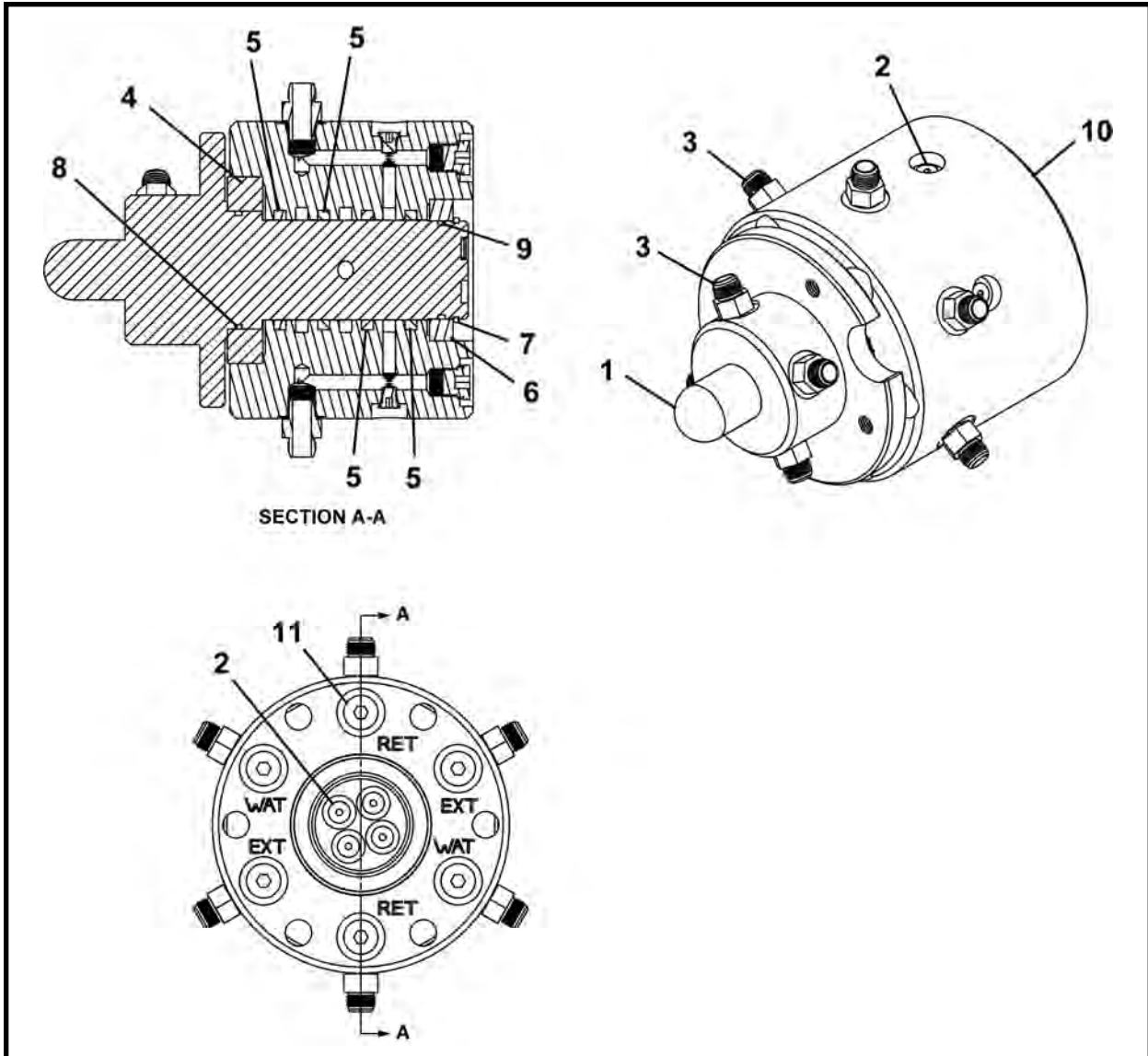
^ When changing closed face assembly, use Lifting Weldment, 027509A (ITEM 26) to move closed face assembly to/from TBM. To install Lifting Weldment 027509A to closed face assembly, remove three 3/4 UNC x 3 socket head cap screws (PN P0031-12-020) (retain for later use) from standard tooth weldment (PN 026315A) and replace with three 3/4 UNC x 5 socket head cap screws (PN P0031-12-012). Once closed face assembly is reinstalled, remove 3/4 UNC x 5 hardware and lifting weldment and replace the 3/4 UNC x 3 hardware (previously removed) into the standard tooth weldment. If hardware is damaged, replace with new.

FRONT FACE ASSEMBLY
480 - 540 CLOSED FACE (NEW STYLE)



| ITEM | QTY | 480 PART NO. | 540 PART NO. | DESCRIPTION |
|------|-------|-----------------|-----------------|------------------------------------|
| 0 | 1 | 025651A | 026236A | FRONT FACE ASSEMBLY |
| 1 | 3 | 026315A | 026315A | WELDMENT, Standard Tooth |
| 2 | 18 | P0031-12-010 | P0031-12-010 | SCREW, Socket Hd Cap 3/4 UNC x 2.5 |
| 3 | 39 | P0046-012 | P0046-012 | WASHER, Hi-Collar Lock 3/4 |
| 4 | 21 | P0031-12-012 | P0031-12-012 | SCREW, Socket Head Cap 3/4 UNC x 3 |
| 5 | 9/11 | P0050-026 | P0050-026 | TEETH, Cutter |
| 6 | 12/14 | P0051-011 | P0051-011 | POCKET, Tooth |
| 7 | 3 | P0050-030 | P0050-030 | TEETH, Carbide Cutter Bar |
| 8 | 12 | P0045-008 | P0045-008 | WASHER, Lock 1/2 |
| 9 | 12 | P0001-08-008 | P0001-08-008 | BOLT, 1/2 UNC x 2 |
| 10 | 3 | 023985P | 027559P | PLATE, Tooth Mounting |
| 11 | 12 | P0050-011 | P0050-011 | CUTTER BIT |
| 12 | 12 | P0051-004 | P0051-004 | HOLDER, Cutter Bit |
| 13 | 4 | P0400-003 | P0400-003 | COUPLING |

ROTARY HUB ASSEMBLY, 027562A
480 - 540 CLOSED FACE (NEW STYLE)

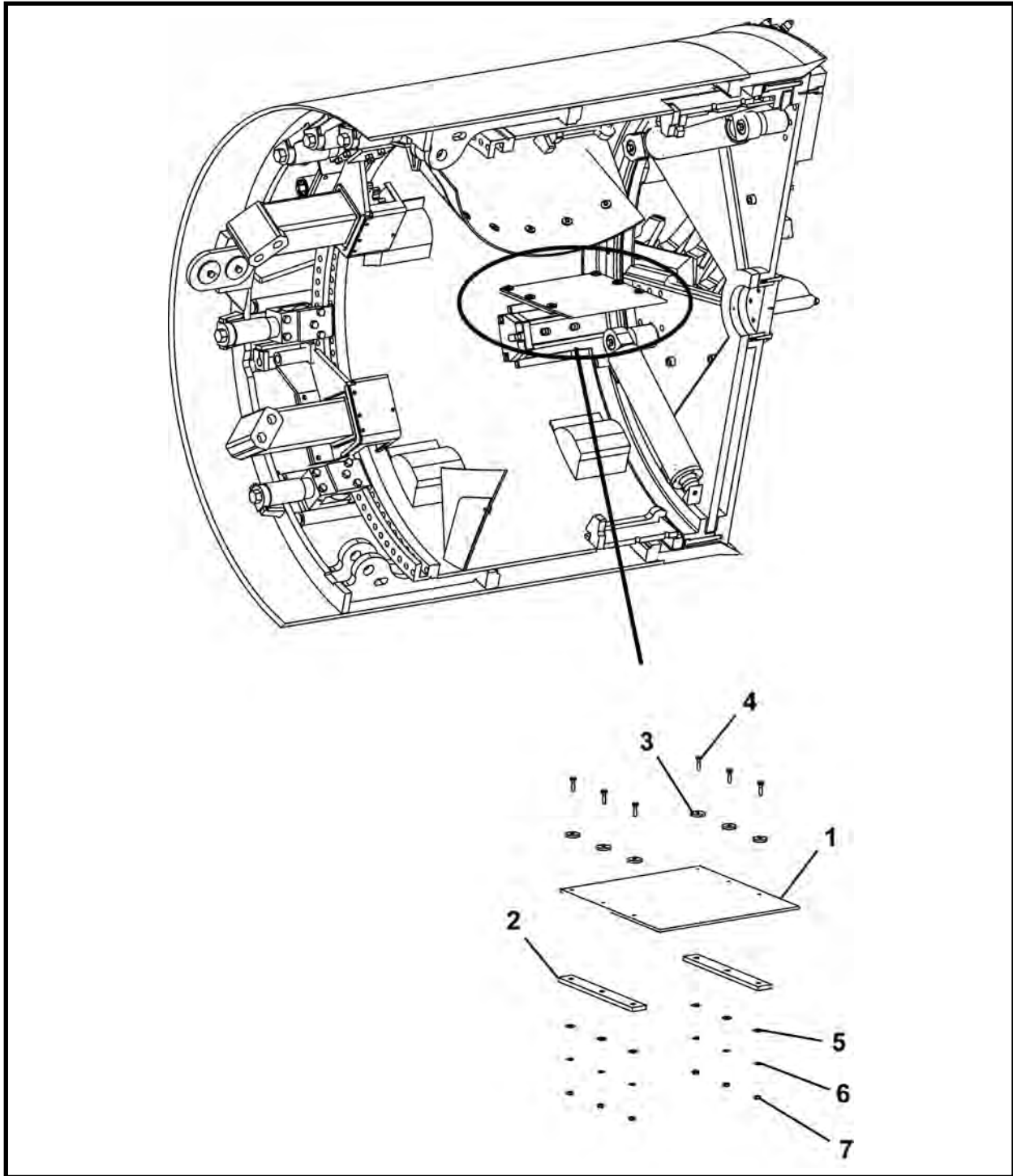


| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|-----------|---------------------|
| 0 | 1 | 027562A | ROTARY HUB ASSEMBLY |
| 1 | 1 | 027564P | SHAFT |
| 2 | 8 | P0300-224 | PLUG, 02MB-HHP |
| 3 | 10 | P0300-041 | FITTING, 06MJ-06MB |
| 4 | 1 | P0065-106 | BEARING |
| 5 | 4 | P0080-019 | SEAL, Quad |
| 6 | 1 | P0065-013 | BEARING |
| 7 | 1 | P0077-029 | RING, External Snap |
| 8 | 1 | P0085-139 | ORING |
| 9 | 1 | P0085-132 | ORING |
| 10 | 1 | 027563P | HUB |
| 11 | 6 | P0300-176 | PLUG, 06MB-HHP |

NOTE: When replacing parts:

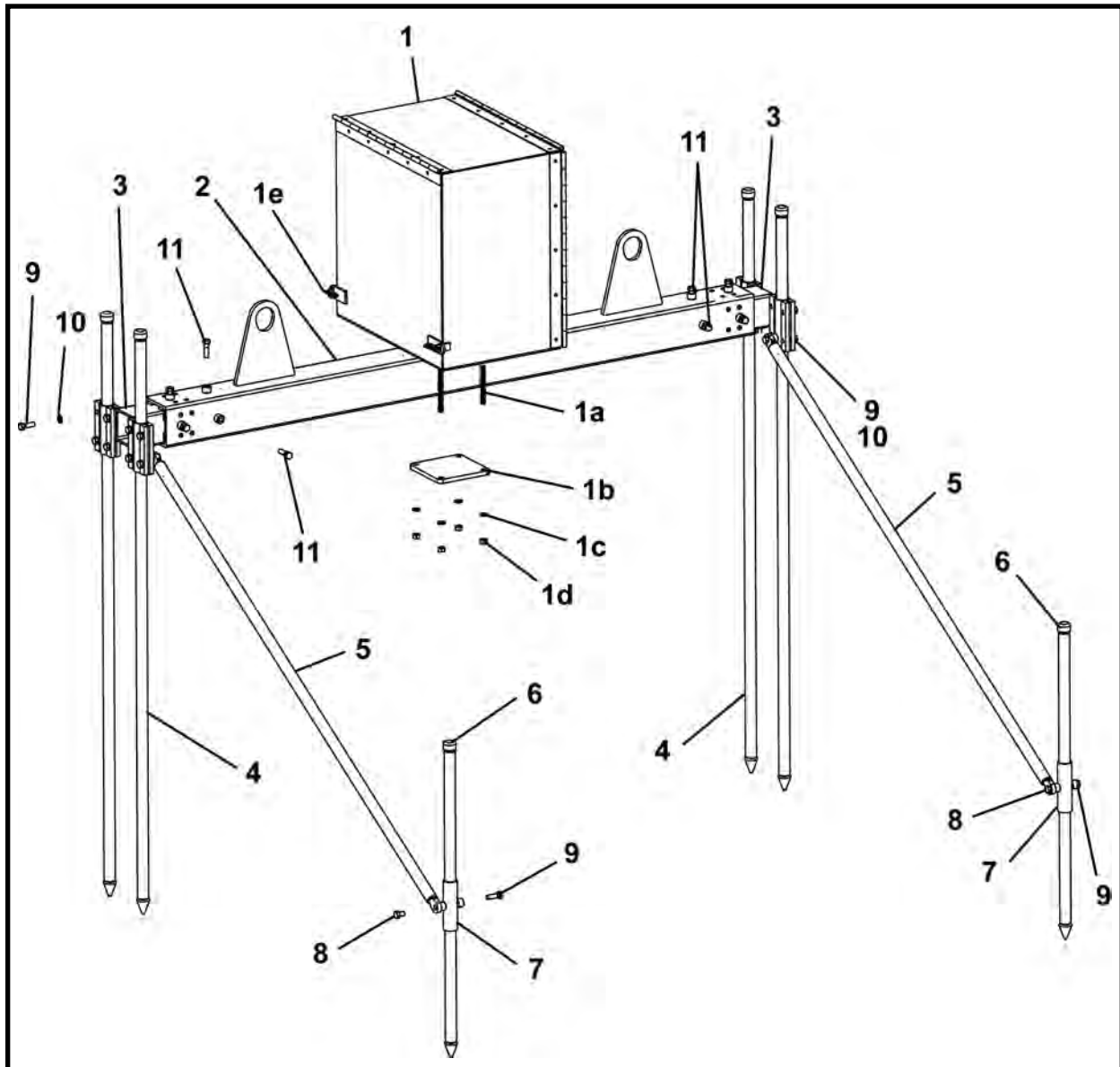
1. Pack bearings with grease before pressing into item 10.
2. Lubricate seals and shaft before assembly in item 10.
3. After shaft is in place, slide item 9 on shaft.
4. Press item 6 into housing after shaft is in place.
5. Pressure test all ports of hub to 3,000 psi.

RUBBER PADDLE ASSEMBLY, 016735A
480 - 540 CLOSED FACE (NEW STYLE)



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|---------------------------|
| 0 | 1 | 016735A | PADDLE ASSEMBLY, Rubber |
| 1 | 1 | 016736P | BELTING, Paddle |
| 2 | 2 | 016737P | BAR, Paddle Mounting |
| 3 | 6 | 002624P00 | WASHER |
| 4 | 6 | P0001-04-004 | BOLT, 1/4 UNC x 1 |
| 5 | 6 | P0040-004 | WASHER, Hardened Flat 1/4 |
| 6 | 6 | P0045-004 | WASHER, Lock 1/4 |
| 7 | 6 | P0003-04-000 | NUT, 1/4 |

LASER LIGHT STAND, F05866F00



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|----------------|--|
| 0 | 1 | F05866F00 | LASER LIGHT STAND |
| 1 | 1 | 006068A01 | LASER BOX ASSEMBLY (Includes items 1a - 1e) |
| 1a | 4 | P0023-500A-008 | ROD, Threaded |
| 1b | 1 | 006051P00 | PLATE, Laser Box |
| 1c | 8 | P0045-008 | WASHER, Lock 1/2 |
| 1d | 8 | P0003-08-000 | NUT, 1/2 |
| 1e | 2 | P0090-004 | PIN, Hitch |
| 2 | 1 | 006047A00 | TUBE |
| 3 | 2 | 006034A00 | TUBE, Sliding |
| 4 | 4 | 006039A00 | STAKE, Long |
| 5 | 2 | 006044A00 | TUBE, Support |
| 6 | 2 | 006040A00 | STAKE, Short |
| 7 | 2 | 006025A00 | TUBE, Swivel |
| 8 | 4 | P0001-08-003 | BOLT, 1/2 UNC x .75 |
| 9 | 26 | P0001-08-005 | BOLT, 1/2 UNC x 1.25 |
| 10 | 24 | P0045-008 | WASHER, Lock 1/2 |
| 11 | 8 | P0001-08-007 | BOLT, 1/2 UNC x 1.75 |

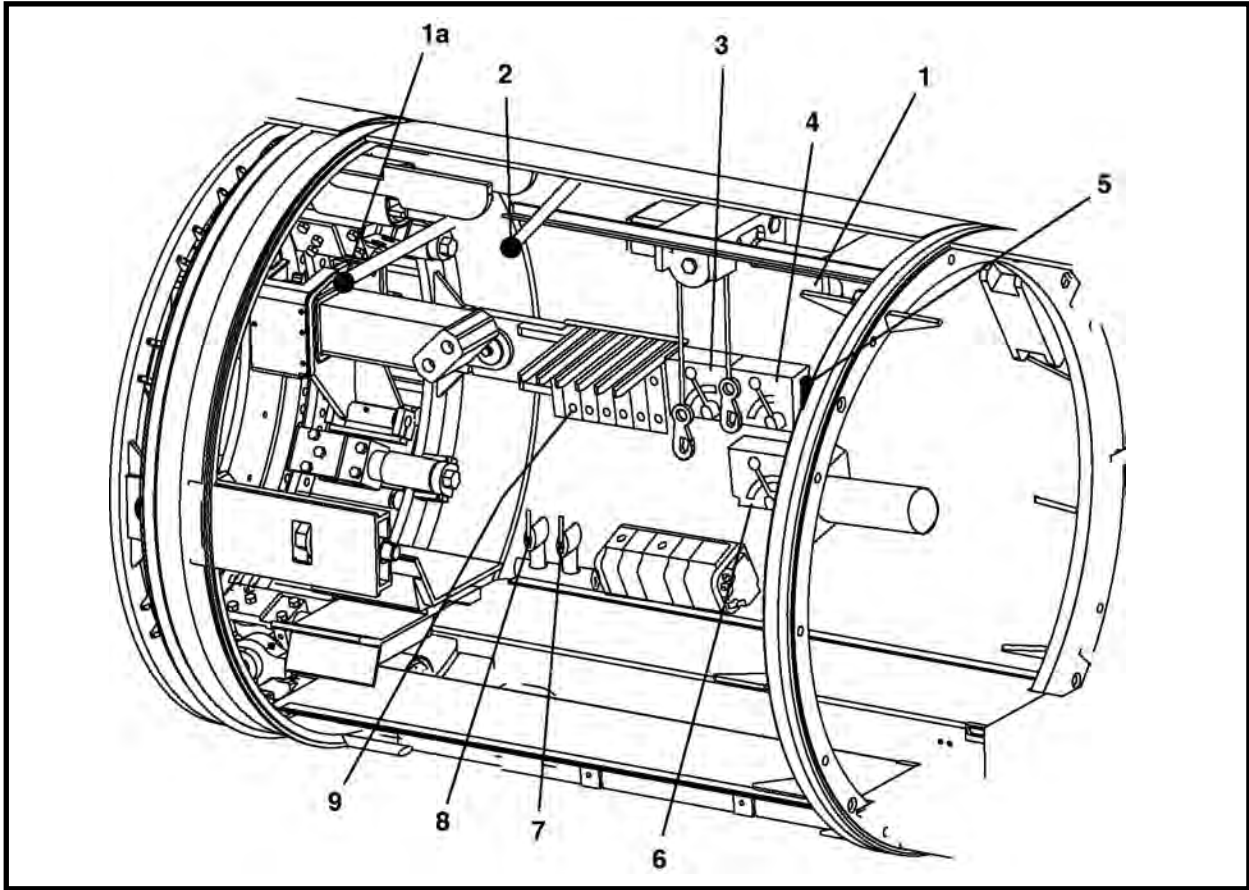
NOTES



Operator Controls

| | |
|--|---|
| 480, 540 (SN F18300F-01 Thru F18300F-03) | 2 |
| 540 (SN F18300F-04 Thru 10) | 3 |
| 540 (SN F18300F-11 & After) | 4 |

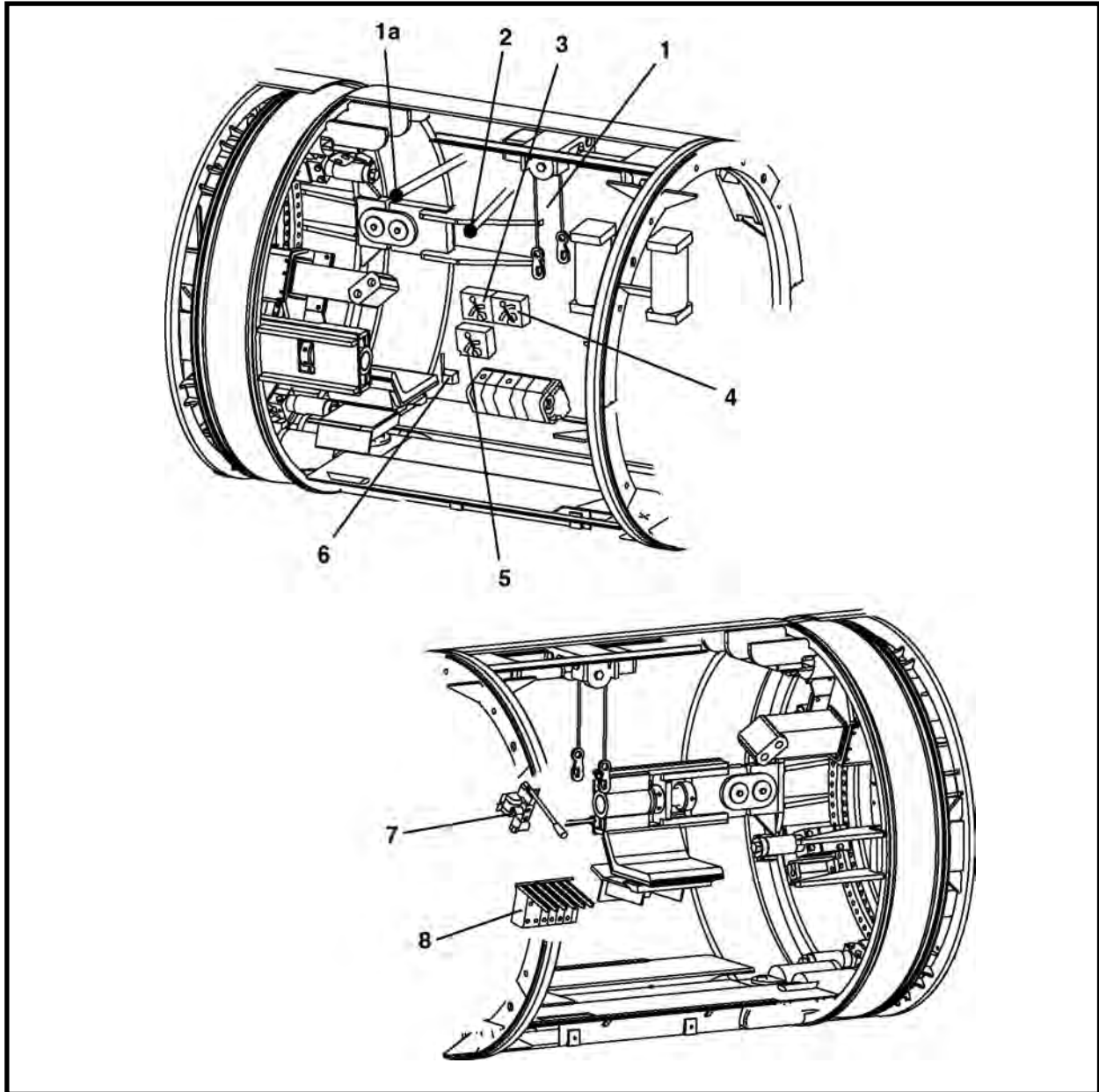
OPERATOR CONTROLS
480, 540 (SN F18300F-01 thru F18300F-03)



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|-----------|---|
| 1* | 1 | 003708A00 | VALVE, Inner Drum Motor Control |
| 1a | - | - | Inner Drum Control Lever |
| 2.1* | 1 | 005280A00 | VALVE, Conveyor Drive Control (480 SN F23800F-17 & Before, 540 SN F18300-01 thru 03) |
| 2.2* | 1 | 005343A | VALVE, Conveyor Drive Control (480 SN F23800F-18 & After) |
| 3* | 1 | P0302-112 | VALVE, Conveyor Speed Flow Control |
| 4* | 1 | P0302-112 | VALVE, Inner Drum Speed Flow Control |
| 5* | 1 | P0302-118 | VALVE, Steering (Grade/Alignment) |
| 6* | 1 | P0302-112 | VALVE, Steering Selector Flow Control |
| 7* | 1 | P0302-113 | VALVE, Single/Dual Feed Control |
| 8* | 1 | P0302-113 | VALVE, Conveyor Control |
| 9* | 1 | P0302-260 | VALVE, TBM Control |

* Refer to Section 7, Valves for parts breakdown.

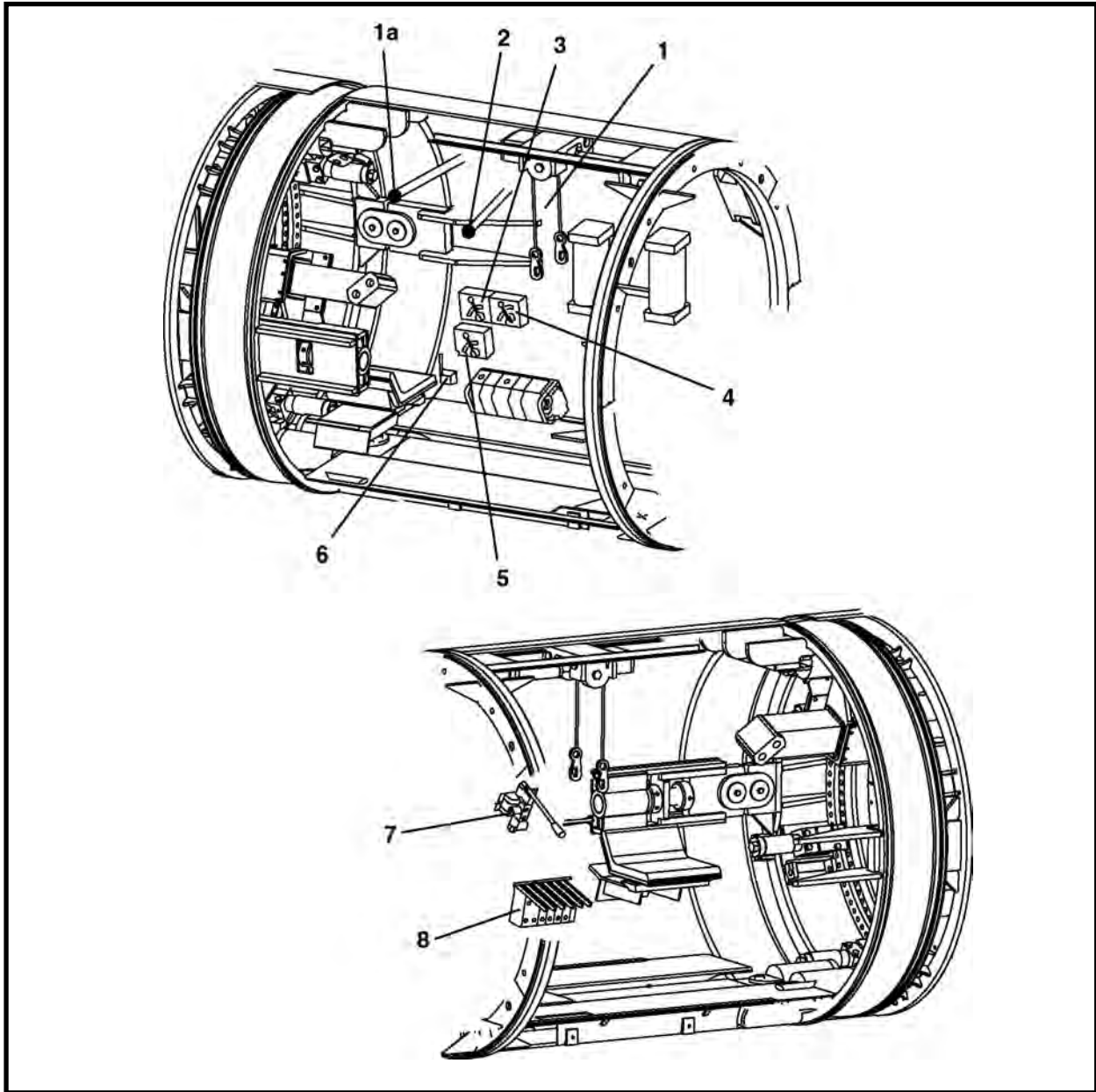
OPERATOR CONTROLS
540 (SN F18300F-04 Thru 10)



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|-----------|---------------------------------------|
| 1* | 1 | 007579A00 | VALVE, Inner Drum Motor Control |
| 1a | - | - | Inner Drum Control Lever |
| 2* | 1 | 005344A | VALVE, Conveyor Drive Control |
| 3* | 1 | P0302-112 | VALVE, Inner Drum Speed Flow Control |
| 4* | 1 | P0302-112 | VALVE, Conveyor Speed Flow Control |
| 5* | 1 | P0302-112 | VALVE, Steering Selector Flow Control |
| 6* | 1 | P0302-183 | VALVE, Conveyor Control |
| 7* | 1 | P0302-118 | VALVE, Steering (Grade/Alignment) |
| 8* | 1 | P0302-260 | VALVE, TBM Control |

* Refer to Section 7, Valves for parts breakdown.

OPERATOR CONTROLS 540 (SN F18300F-11 & After)



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|-----------|---------------------------------------|
| 1* | 1 | 007579A00 | VALVE, Inner Drum Motor Control |
| 1a | - | - | Inner Drum Control Lever |
| 2* | 1 | 005344A | VALVE, Conveyor Drive Control |
| 3* | 1 | P0302-533 | VALVE, Inner Drum Speed Flow Control |
| 4* | 1 | P0302-533 | VALVE, Conveyor Speed Flow Control |
| 5* | 1 | P0302-533 | VALVE, Steering Selector Flow Control |
| 6* | 1 | 029920A | VALVE, Conveyor Control |
| 7* | 1 | P0302-118 | VALVE, Steering (Grade/Alignment) |
| 8* | 1 | P0302-260 | VALVE, TBM Control |

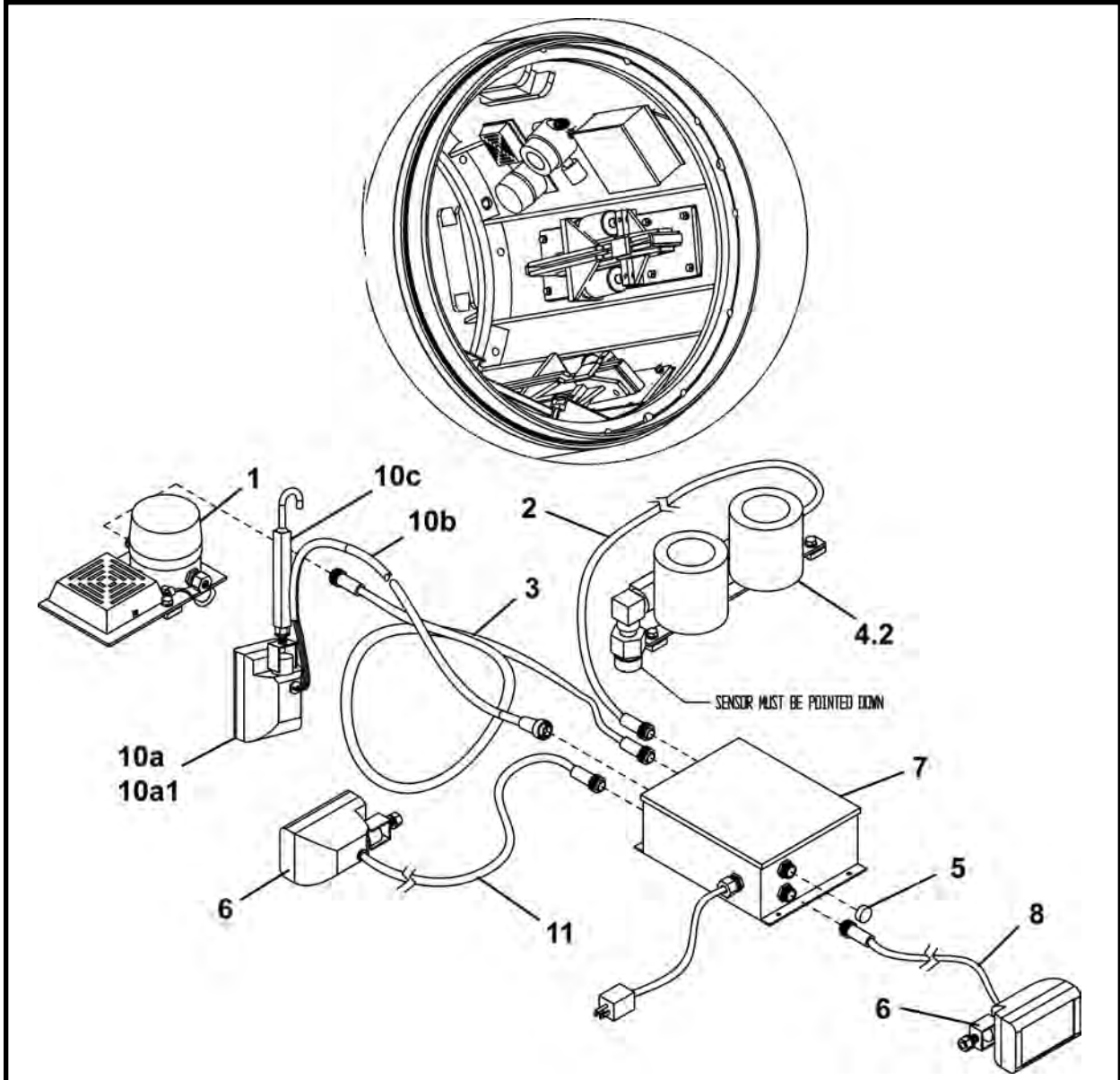
* Refer to Section 7, Valves for parts breakdown.



Electrical

| | |
|--|----|
| Electrical System Assembly, 016400A | 2 |
| Strobe - Horn Assembly, 016404A | 3 |
| Gas Detector Assembly | |
| Gas Detector Assembly - GasMax II, 016420A | 4 |
| Gas Detector Assembly - Zellweger Analytics, 016401A | 5 |
| Gas Challenge Kit, P0310-266 | 6 |
| Gas Detector Schematic | |
| GasMax II | 8 |
| Zellweger Analytics | 9 |
| Electrical Box Assembly, 016402A | 10 |
| Electrical Box Schematic | 11 |
| Extension Light Assembly, 016415A | 12 |

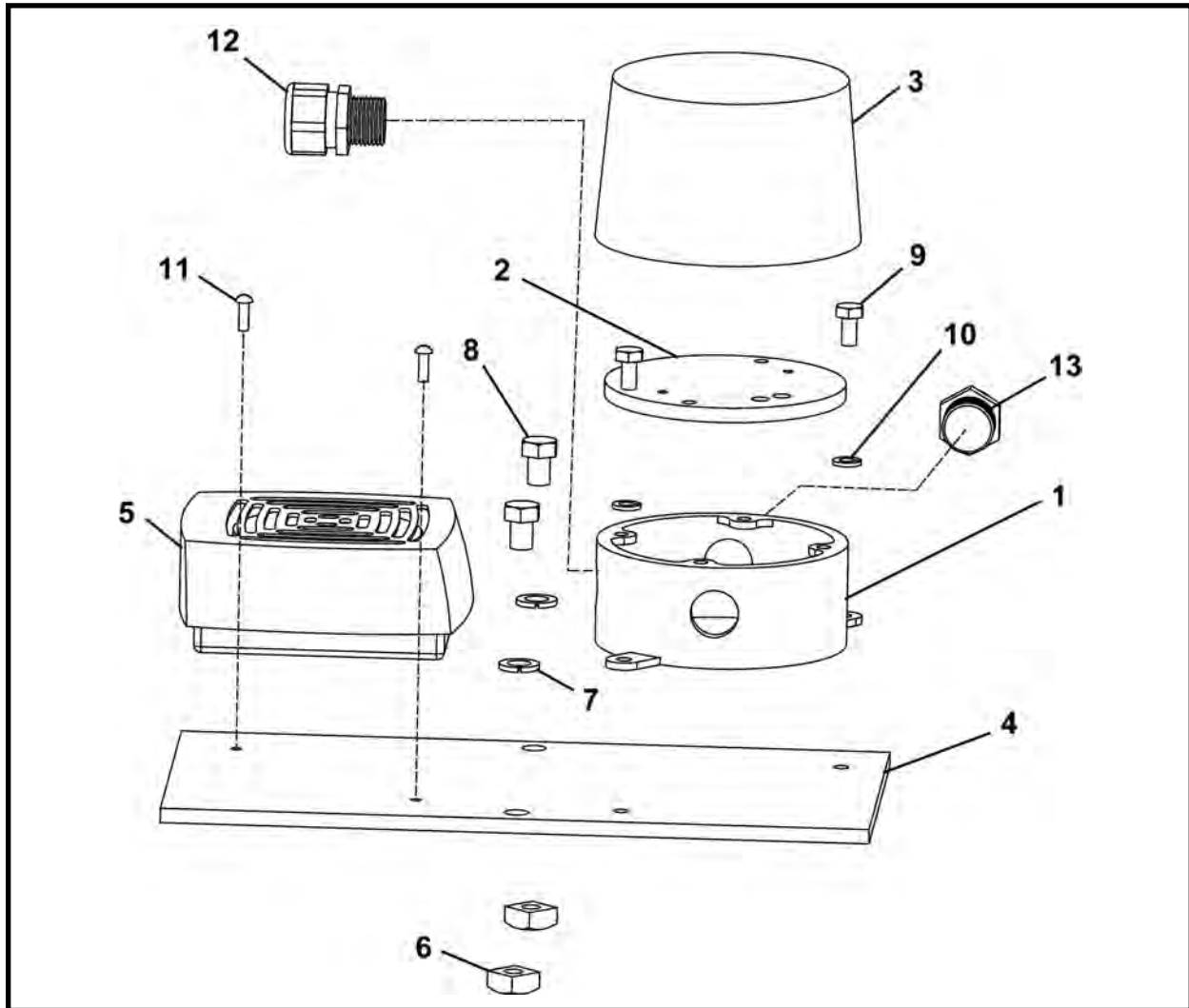
ELECTRICAL SYSTEM ASSEMBLY, 016400A



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|------------|---|
| 0 | 1 | 016400A | ELECTRICAL SYSTEM ASSEMBLY |
| 1* | 1 | 016404A | STROBE-HORN ASSEMBLY |
| 2 | 1 | P0054-287 | CABLE |
| 3 | 1 | P0054-087 | CABLE |
| 4.1* | 1 | 016420A | GAS DETECTOR ASSEMBLY - GasMax II |
| 4.2* | 1 | 016401A | GAS DETECTOR ASSEMBLY - Zellweger Analytics |
| 5 | 1 | P0054-090 | CAP |
| 6 | 2 | 016409A | LIGHT ASSEMBLY (Includes items 6a and 6b) |
| 6a | 1 | P0053-026 | LIGHT (Includes item 6b) |
| 6b | 1 | P0053-026A | BULB, Light |
| 7* | 1 | 016402A | ELECTRICAL BOX ASSEMBLY |
| 8 | 1 | 016410A | CABLE ASSEMBLY |
| 9 | - | - | - |
| 10* | 1 | 016415A | EXTENSION LIGHT ASSEMBLY (Includes items 10a - 10b) |
| 10a | 1 | P0053-026 | LIGHT (Includes item 10a1) |
| 10a1 | 1 | P0053-026A | BULB, Light |
| 10b | 1 | P0054-167A | CABLE ASSEMBLY |
| 10c | 1 | 016416A | LIGHT HANDLE |
| 11 | 1 | 016419A | CABLE ASSEMBLY, 25 ft |

* Refer to this section for parts information.

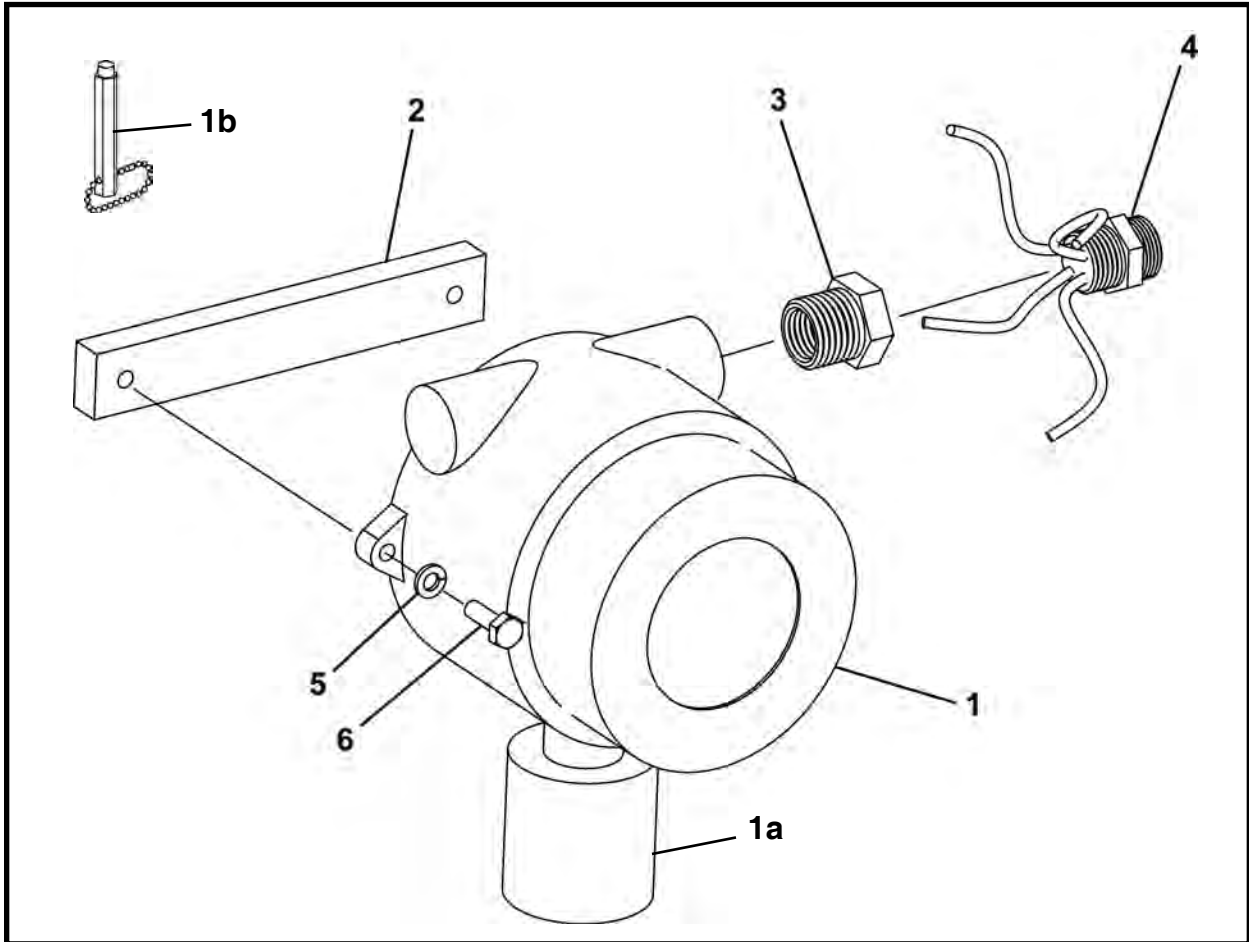
STROBE - HORN ASSEMBLY, 016404A



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|--|
| 0 | 1 | 016404A | STROBE - HORN ASSEMBLY |
| 1 | 1 | P0310-251 | HOLDER BOX |
| 2 | 1 | 023534P00 | COVER, Back |
| 3 | 1 | P0310-286B | STROBE LIGHT, Red 24VDC (Includes item 3a) |
| 3a | 1 | P0310-286A | LENS |
| 4 | 1 | 016405P | PLATE, Mounting |
| 5 | 1 | P0310-287D | HORN, Warning 24VDC |
| 6 | 2 | P0011-006A | NUT, Strut Square |
| 7 | 2 | P0045-006 | WASHER, Lock 3/8 |
| 8 | 2 | P0001-06-002 | BOLT, 3/8-16 UNC x 1/2 |
| 9 | 2 | P0001-04-002 | BOLT, 1/4-20 UNC x 1/2 |
| 10 | 2 | P0045-004 | WASHER, Lock 1/4 |
| 11 | 2 | P0017-08-323 | SCREW, Round Head Machine 8-32 x 1/2 |
| 12 | 1 | P0311-121 | CONNECTOR, Strain Relief |
| 13 | 1 | P0054-069 | RECEPTACLE, Mini |

* Not Shown

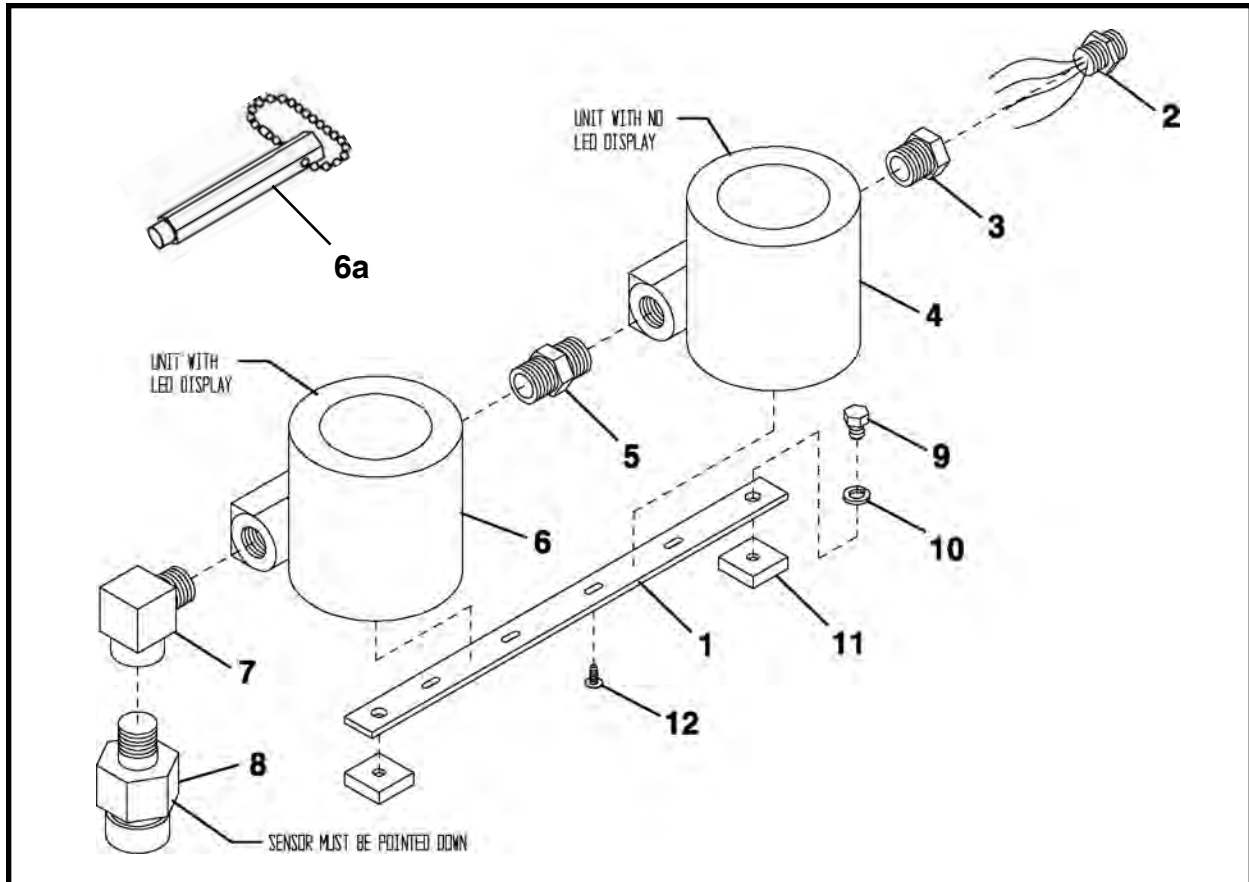
GAS DETECTOR ASSEMBLY, 016420A
GDS GasMax II



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|--|
| 0 | 1 | 016420A | GAS DETECTOR ASSEMBLY - GasMax II |
| 1 | 1 | P0251-197 | DETECTOR, GDS (Includes items 1a and 1b) |
| 1a* | 1 | P0251-197A | ELEMENT, Sensor |
| 1b | 1 | P0310-283B | MAGNETIC WAND |
| 2 | 1 | 016407P | BRACKET, Mounting |
| 3 | 1 | P0300-012 | FITTING, 12MP-08FPS |
| 4 | 1 | P0054-286 | RECEPTACLE, 4 Pin Male |
| 5 | 2 | P0045-004 | WASHER, Lock 1/4 |
| 6 | 2 | P0001-04-003 | BOLT, 1/4 UNC x 3/4 |

* Not Shown

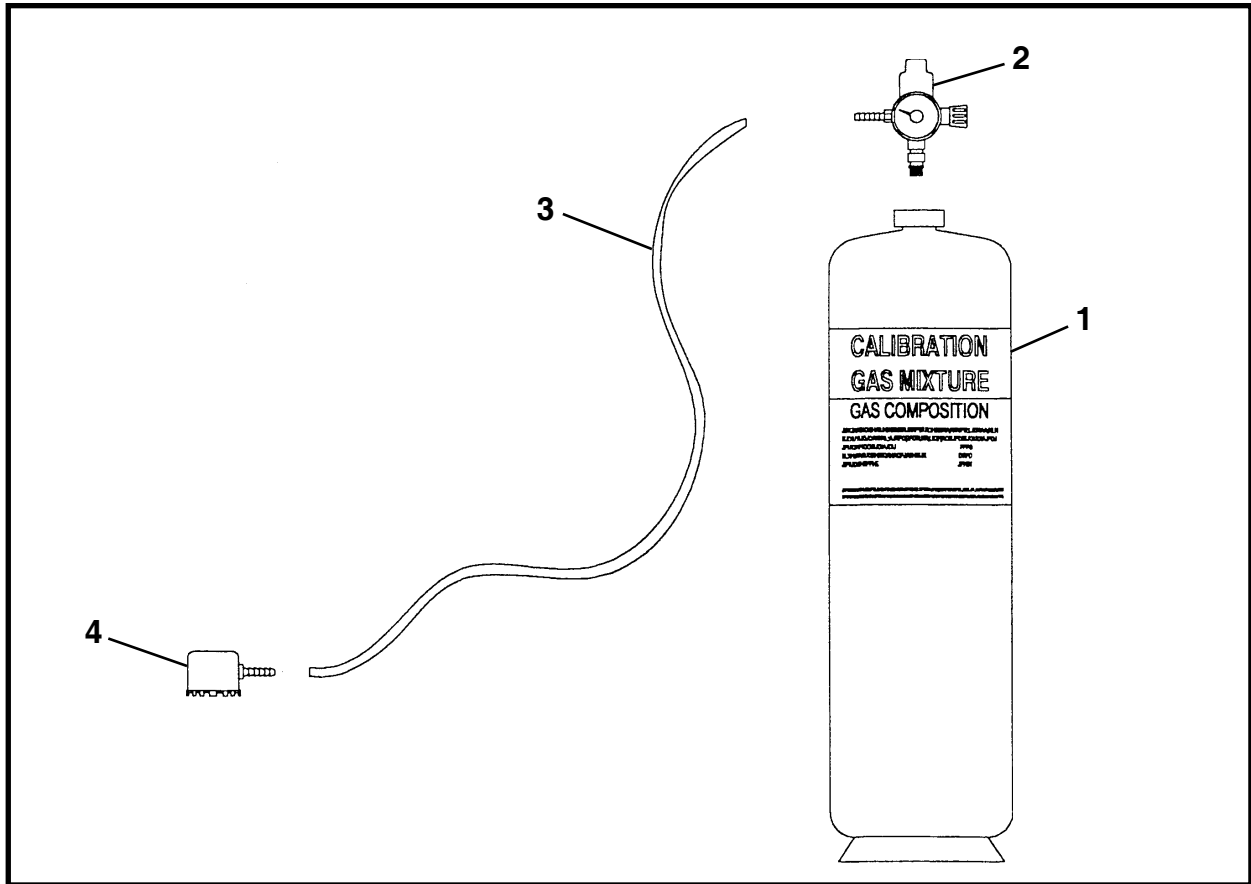
GAS DETECTOR ASSEMBLY, 016401A
ZELLWEGER ANALYTICS



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|--|
| 0* | 1 | 016401A | GAS DETECTOR ASSEMBLY |
| 1 | 1 | 016403P | BRACKET, Mounting |
| 2 | 1 | P0054-286 | RECEPTACLE |
| 3 | 1 | P0300-012 | BUSHING, Reducer |
| 4 | 1 | P0310-284E | RELAY MODULE, Gas Detector |
| 5 | 1 | P0300-107 | NIPPLE |
| 6 | 1 | P0310-283A | TRANSMITTER, Gas Detector (includes item 6a) |
| 6a | 1 | P0310-283B | MAGNETIC WAND |
| 7 | 1 | P0300-009 | ELBOW, Street 3/4 - 90 Degree |
| 8 | 1 | P0310-284D | SENSOR, Gas Detector |
| 9 | 2 | P0001-06-002 | BOLT, 3/8-16 UNC x 1/2 |
| 10 | 2 | P0045-006 | WASHER, Lock 3/8 |
| 11 | 2 | P0011-006A | NUT, Strut Square |
| 12 | 4 | P0017-10-324 | SCREW, Round Head Machine 10-32 |

* Do not use pipe dope or tape on threads, must have good ground.
 All fittings must be plated noncorrosive configuration.

GAS CHALLENGE KIT, P0310-266



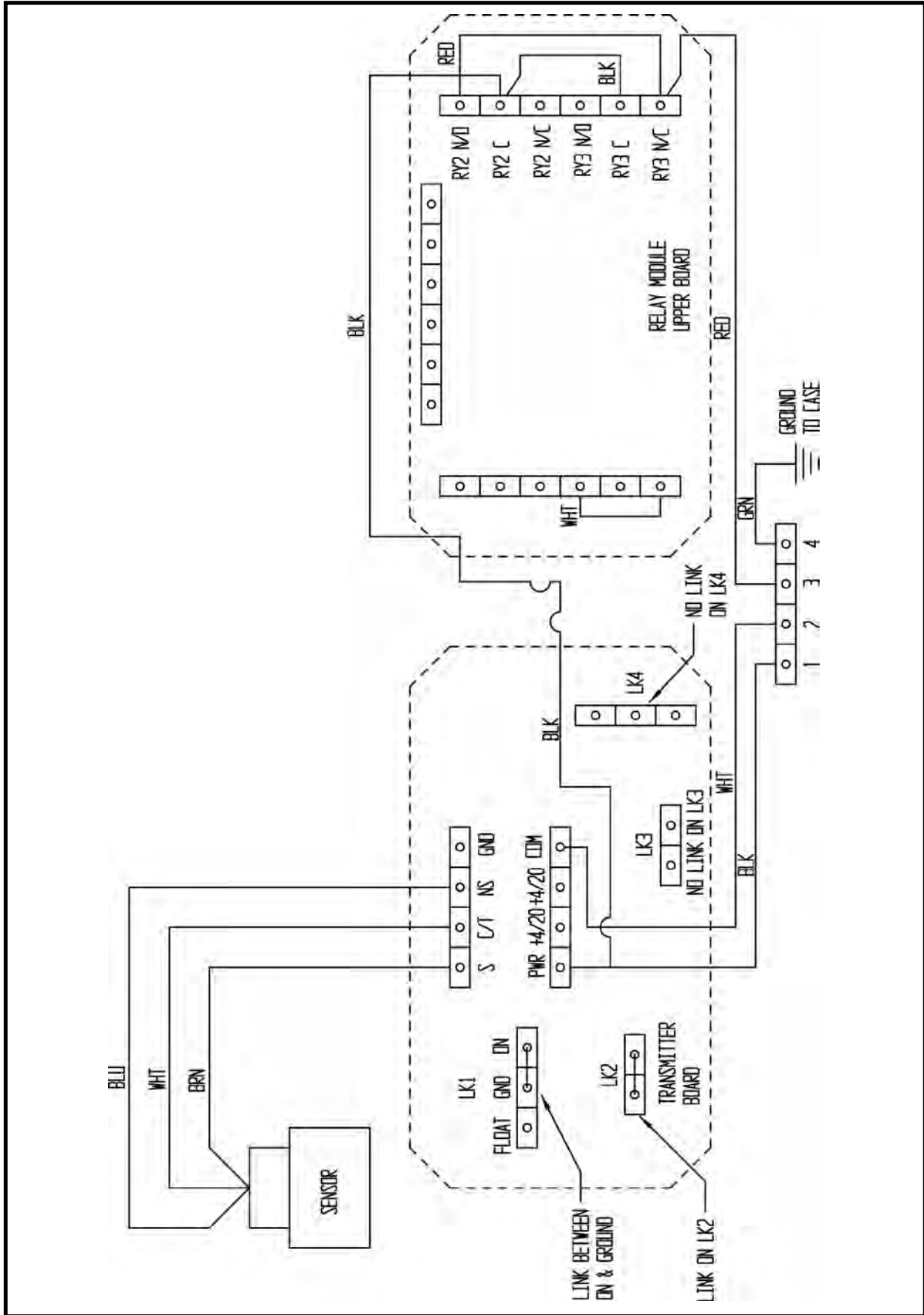
| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|------------|---|
| 0 | 1 | P0310-266 | GAS CHALLENGE KIT |
| 1 | 2 | P0310-266A | CYLINDER, 50% LEL Methane Gas Concentration |
| 2 | 1 | P0310-266C | REGULATOR VALVE & GAUGE |
| 3 | 1 | P0310-266D | TUBE, Plastic |
| 4a | 1 | P0310-266B | CALIBRATION CUP, Sensor (Zellweger) |
| 4b | 1 | 016422A | CALIBRATION CUP, Sensor (GasMaxII) |
| 5* | 1 | - | PROTECTIVE CASE |

* Not Shown

NOTES

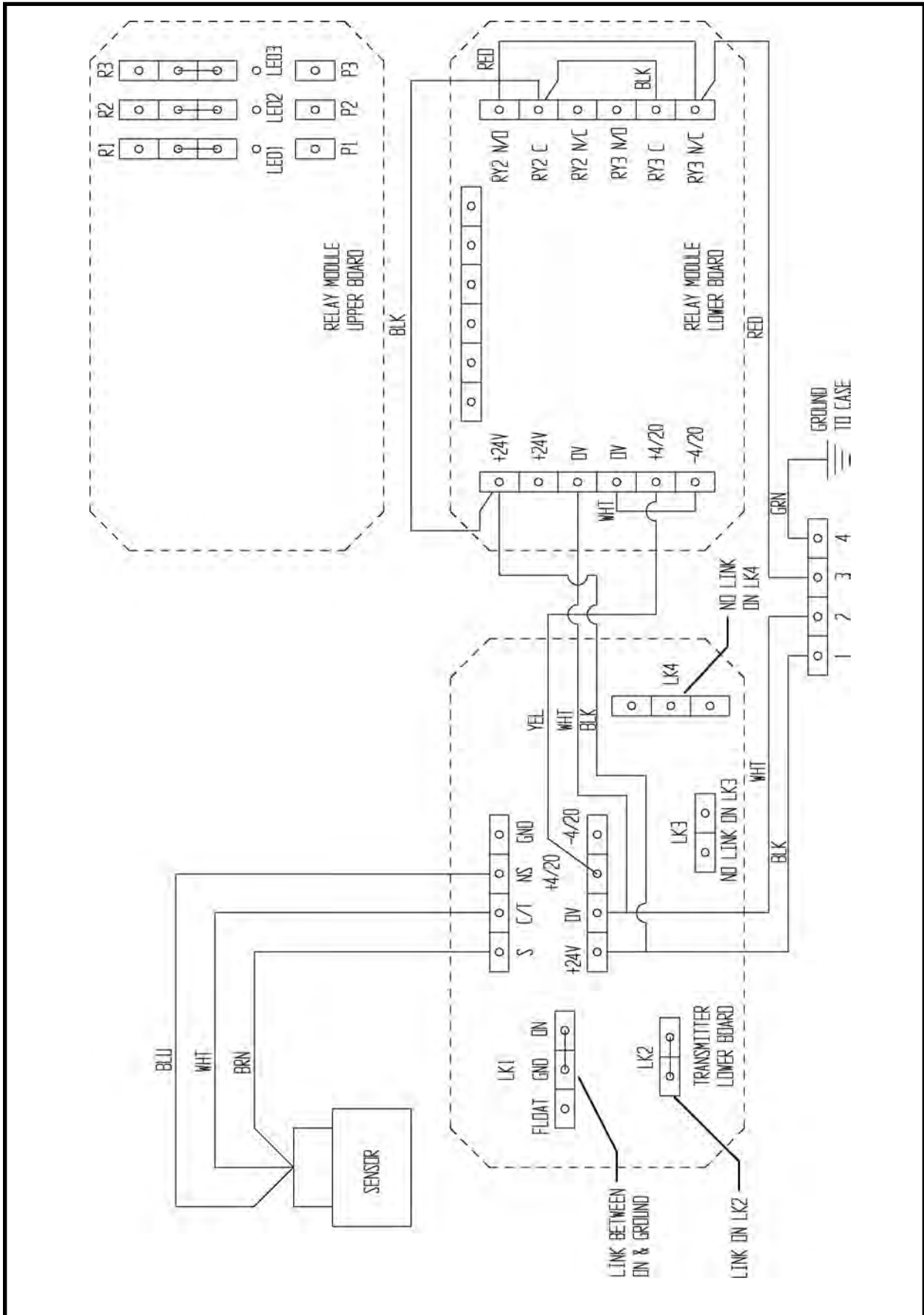
GAS DETECTOR ASSEMBLY SCHEMATIC

GDS GasMax II

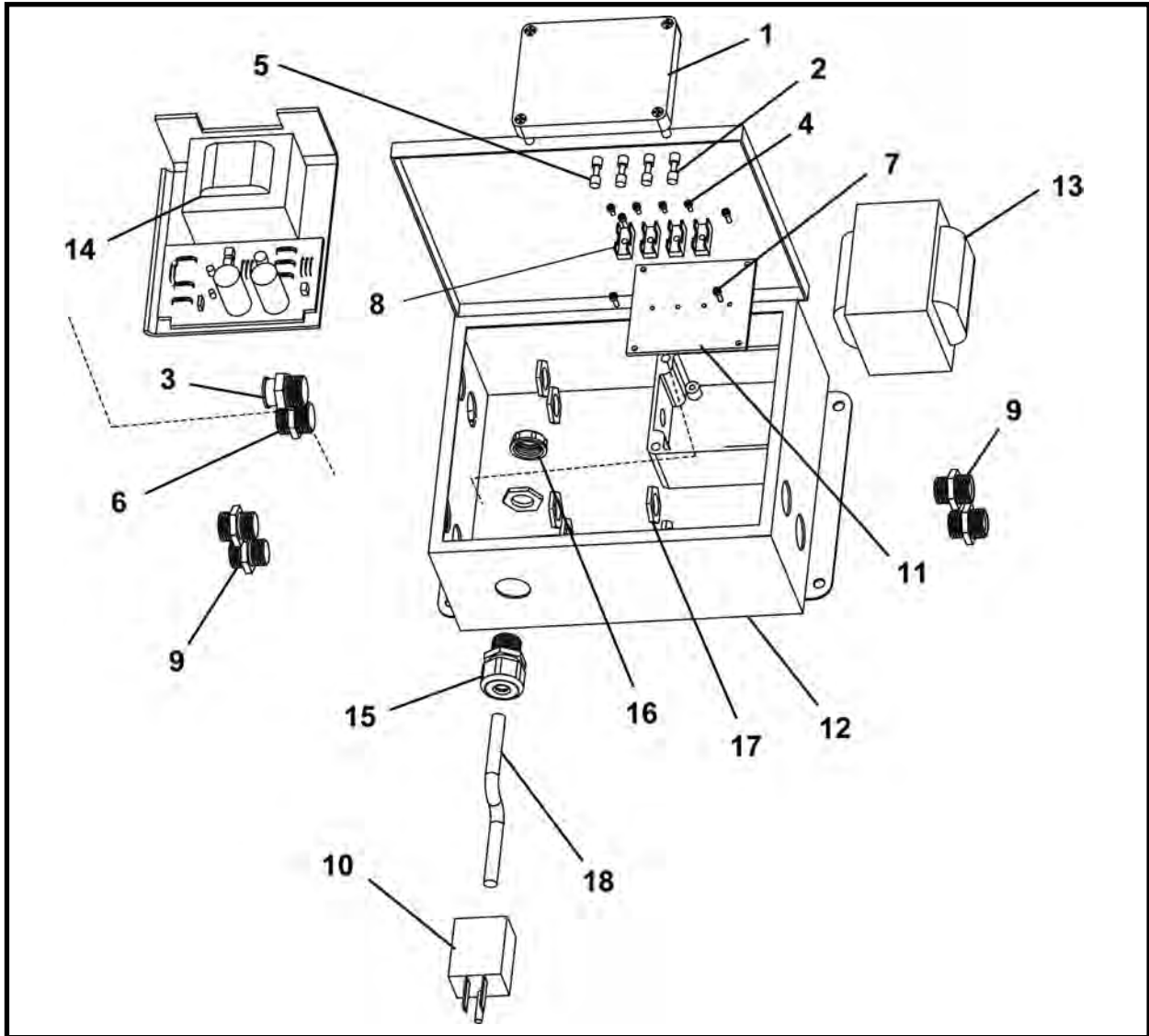


GAS DETECTOR ASSEMBLY SCHEMATIC

ZELLWEGER ANALYTICS



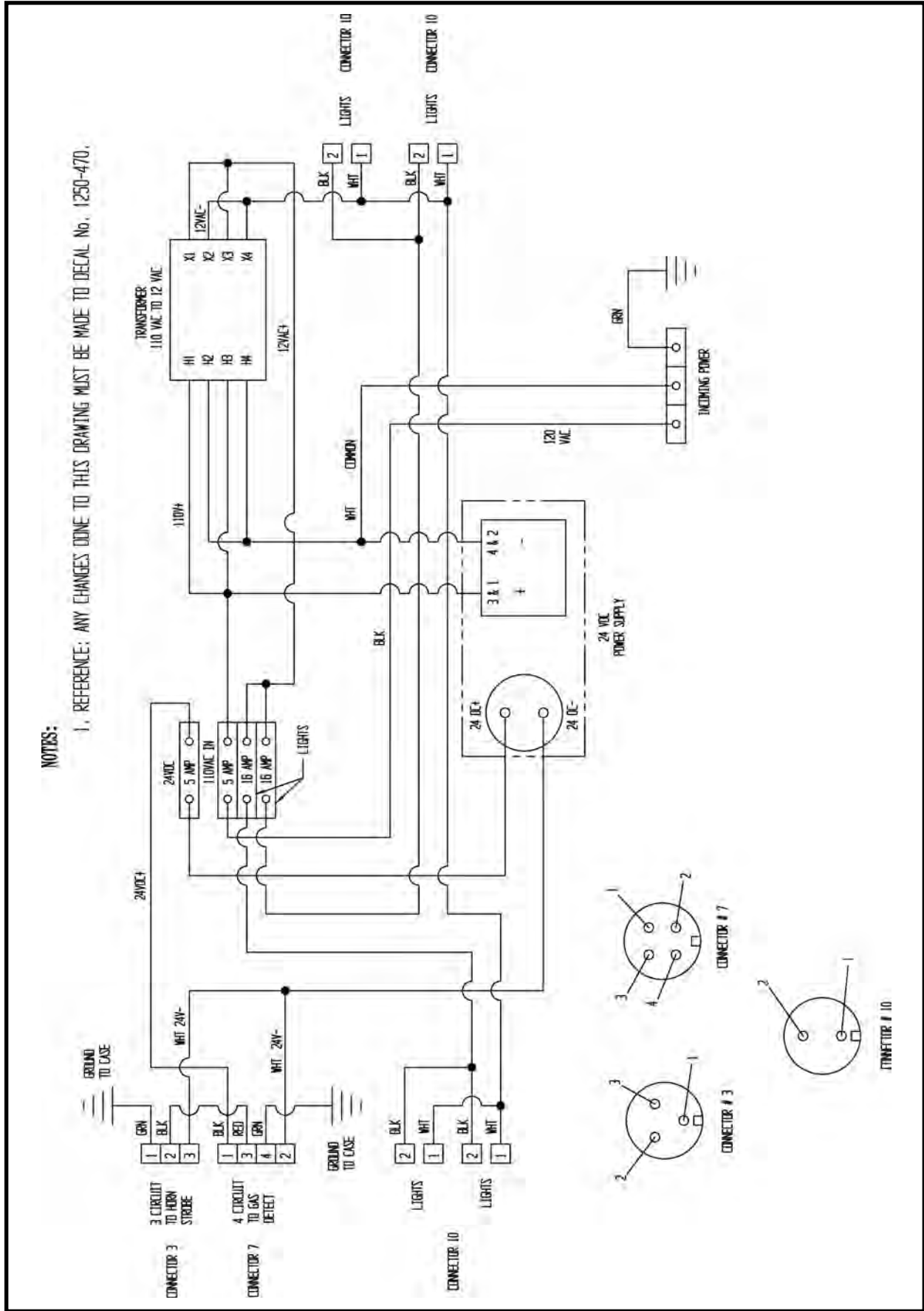
ELECTRICAL BOX ASSEMBLY, 016402A



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-------|----------------|---------------------------------------|
| 0 | 1 | 016402A | ELECTRICAL BOX ASSEMBLY |
| 1 | 1 | P0310-712 | FUSE BOX |
| 2 | 2 | P0310-582 | FUSE |
| 3 | 1 | P0054-068 | RECEPTACLE, Mini |
| 4 | 4 | P0031-03-375NC | SCREW, Socket Head Cap 4-40 UNC x .25 |
| 5 | 2 | P0310-579 | FUSE |
| 6 | 1 | P0313-049 | RECEPTACLE, 4 Pin Connector |
| 7 | 4 | P0031-M3-010 | SCREW, Slotted Head Cap, M3-.5 x 10mm |
| 8 | 4 | P0310-713 | FUSE BLOCK |
| 9 | 4 | P0313-044 | RECEPTACLE |
| 10 | 1 | P0311-041 | PLUG, Grounding 3 Wire |
| 11 | 1 | 016412P | PLATE, Fuse Block |
| 12 | 1 | 016406P | ELECTRICAL BOX |
| 13 | 1 | P0310-701 | TRANSFORMER |
| 14 | 1 | P0310-285A | POWER SUPPLY |
| 15 | 1 | P0311-121 | CONNECTOR, Strain Relief |
| 16 | 1 | P0311-032 | BUSHING, Insulating 1/2 |
| 17 | 1 | P0311-018 | NUT, Lock 1/2 |
| 18 | 24 LI | P0054-021 | CONDUIT |
| 19 | 18 OZ | P0310-390A | SILICONE ELASTOMER |
| 20 | 18 OZ | P0310-390B | SILICONE ELASTOMER |

LI - Linear Inch OZ - Ounce

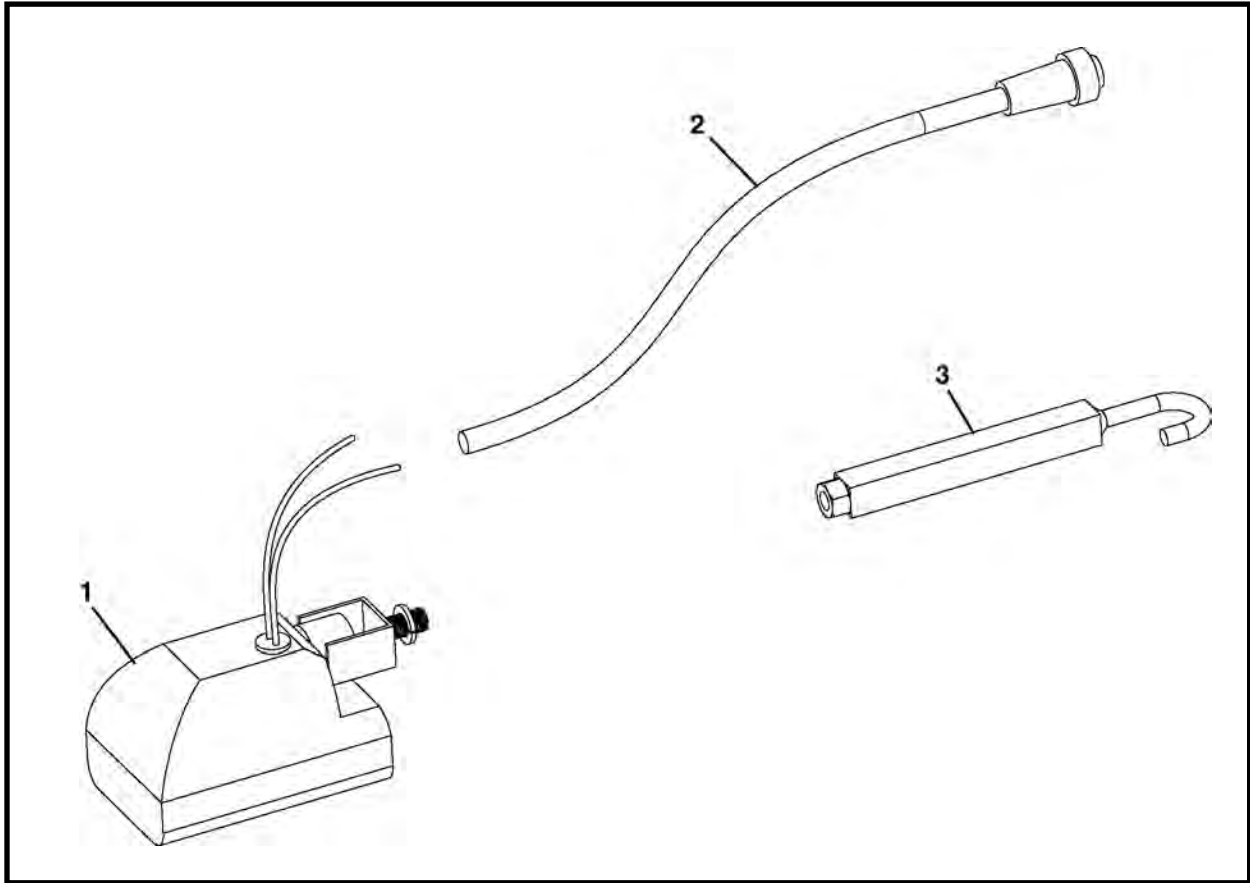
ELECTRICAL BOX SCHEMATIC



NOTES:

1. REFERENCE: ANY CHANGES DONE TO THIS DRAWING MUST BE MADE TO DECAL No. 1250-470.

EXTENSION LIGHT ASSEMBLY, 016415A



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|------------|---------------------------|
| 0 | 1 | 016415A | ASSEMBLY, Extension Light |
| 1 | 1 | P0053-026 | LIGHT (Includes item 1a) |
| 1a | 1 | P0053-026A | BULB, Light |
| 2 | 1 | P0054-167A | CABLE, 25' |
| 3 | 1 | 016416A | HANDLE, Extension Light |



Hydraulics

TBM 480 (SN F23800F-17 & BEFORE)
TBM 540 (SN F18300F-01 - F18300F-10)

| | |
|---|----|
| Hydraulic Schematic NPT, 023817A01 480 (SN F23800F-17 & Before), 540 (SN F18300F-01 Thru F18300F-03) | 4 |
| Hydraulic Schematic NPT, 010199A01 540 (SN F18300F-04 Thru 10) | 6 |
| Drive Valve Linkage, 003011A02 480 (SN F23800F-17 & Before), 540 (SN F18300F-01 Thru F18300F-03) ... | 8 |
| Filter Assembly, 004500A04 480 (SN F23800F-17 & Before), 540 (SN F18300F-01 Thru F18300F-10) | 9 |
| Coupler Assembly Coupler 1", 004902A00 480 (SN F23800F-17 & Before), 540 (SN F18300F-01 Thru F18300F-03) .. | 10 |
| Coupler 1-1/4", 005349A01 480 (SN F23800F-17 & Before), 540 (SN F18300F-01 Thru F18300F-10) .. | 11 |
| Closed Face (Old Style) Closed Face Control Assembly, 480 (Old Style), 019315A00 | 12 |
| Closed Face Control Assembly 540 (Old Style), 015010A00 | 14 |

TBM 480 (SN F23800F-18 & AFTER)
TBM 540 (SN F18300F-11 & AFTER)

| | |
|---|----|
| Hydraulic Schematic NPT/ORB, 029950A 480 (SN F18300F-18 & After) | 16 |
| Hydraulic Schematic ORB, 029951A 540 (SN F18300F-11 & After) | 18 |
| Dirt Wing Hydraulics TBM 480, 030162A | 22 |
| TBM 540, 030044A | 23 |
| Speed Control Hydraulics TBM 480, 030169A | 24 |
| TBM 540, 030051A | 26 |
| Conveyor Lift Hydraulics TBM 480, 030170A | 28 |
| TBM 540, 030052A | 29 |

(continued on next page)

Hydraulics (continued)

TBM 480 (SN F23800F00-18 & AFTER)

TBM 540 (SN F18300F00-11 & AFTER)

Hydraulic Assembly & Schematic (continued)

Motor Valve Hydraulics

| | |
|------------------------|----|
| TBM 480, 030163A | 31 |
| TBM 540, 030045A | 32 |

Flow Divider Hydraulics

| | |
|------------------------|----|
| TBM 480, 030149A | 34 |
| TBM 540, 030046A | 35 |

Filter Assembly Hydraulics

| | |
|---|----|
| TBM 480, 030165A | 37 |
| TBM 540, 030047A | 38 |
| Filter Assembly (TBM 540), 029910A | 40 |
| HP TBM Filter Service Assembly (TBM 480 & 540), 029995A | 41 |

Conveyor Valve Hydraulics

| | |
|------------------------|----|
| TBM 480, 030443A | 42 |
| TBM 540, 030048A | 43 |

Conveyor Safety Valve Hydraulics

| | |
|------------------------|----|
| TBM 480, 030167A | 44 |
| TBM 540, 030049A | 46 |

Manifold Hydraulics

| | |
|------------------------|----|
| TBM 480, 030168A | 48 |
| TBM 540, 030050A | 50 |

Drum Advance Hydraulics

| | |
|------------------------|----|
| TBM 480, 030172A | 52 |
| TBM 540, 029963A | 54 |

Steering Hydraulics

| | |
|------------------------|----|
| TBM 480, 030161A | 56 |
| TBM 540, 030043A | 58 |

Control Valve Hydraulics

| | |
|------------------------|----|
| TBM 480, 030171A | 60 |
| TBM 540, 030053A | 61 |

Hydraulic Control Linkage

| | |
|------------------------|----|
| TBM 480, 030025A | 62 |
| TBM 540, 030024A | 64 |

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| Hose Clamp Hydraulics (TBM 540), 002262A | 66 |
|--|----|

Attachments

Closed Face Rotary Hub Hydraulic Assembly (New Style)

| | |
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| TBM 480, 023986A | 68 |
| TBM 540, 027561A | 70 |

| | |
|---|----|
| TBM Hydraulic Tunnel Lines | 72 |
|---|----|

| | |
|-----------------------|----|
| Hydraulic Lines | 73 |
|-----------------------|----|

Intermediate Jacking Station

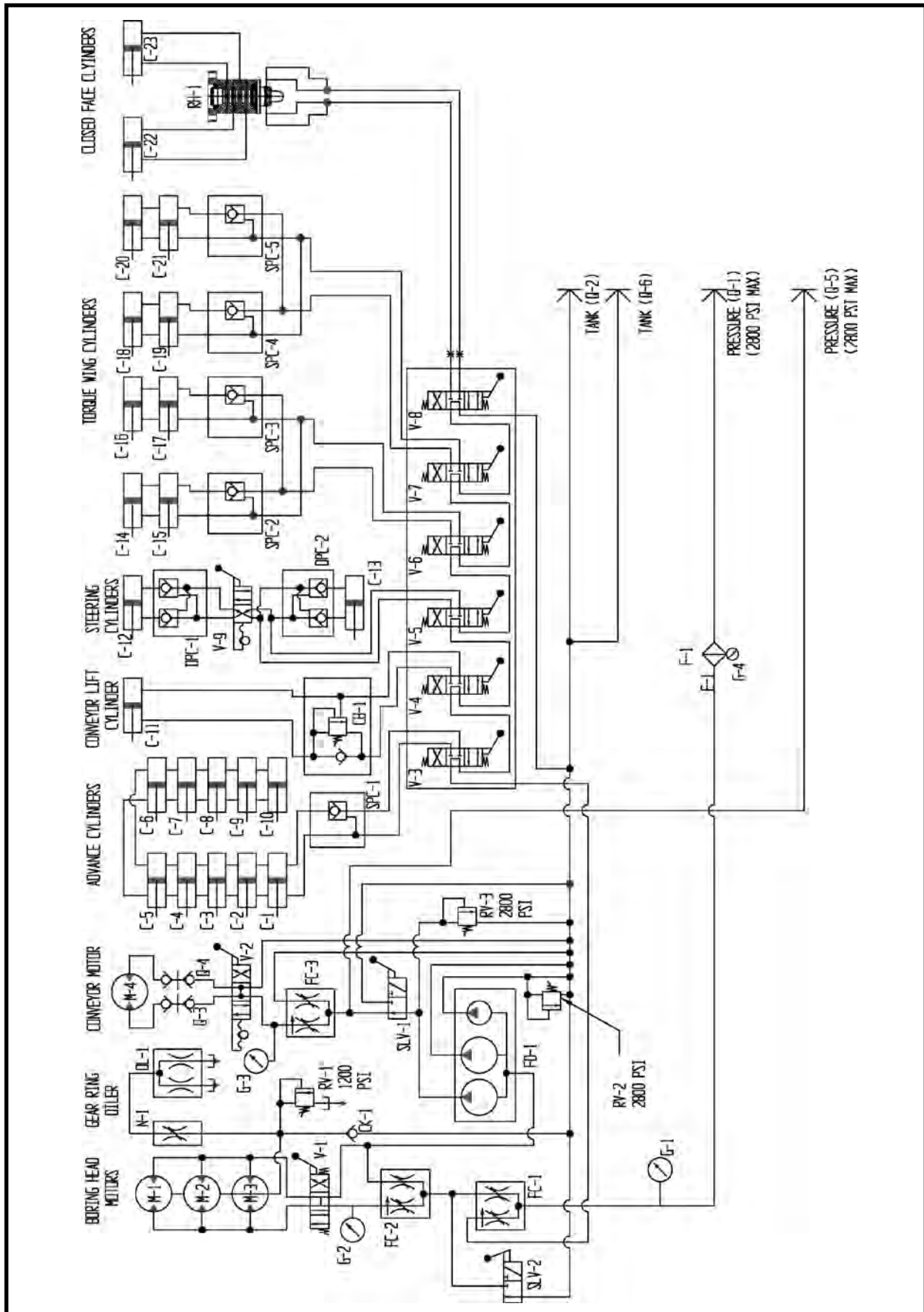
| | |
|-------------------------------|----|
| IJS Hydraulic Schematic | 74 |
|-------------------------------|----|

NOTES

HYDRAULIC SCHEMATIC (NPT), 023817A01

480: SN F23800F-17 & Before

540: SN F18300-F01 Thru F18300F-03



HYDRAULIC SCHEMATIC (NPT), 023817A01

480: SN F23800F-17 & Before

540: SN F18300-F01 Thru F18300F-03

| ITEM | QTY | PART NO. | DESCRIPTION |
|---------|-----|----------------|--|
| 0 | - | 023817A01 | SCHEMATIC, Hydraulic |
| CB-1 | 1 | P0302-175A | CARTRIDGE, Valve |
| CB-1 | 1 | P0302-175B | CARTRIDGE, Valve |
| CK-1 | 1 | P0302-101 | VALVE, Check |
| C-1-10 | REF | 010747A00 * | CYLINDER, Advance |
| C-11 | REF | 002691A00 * | CYLINDER, Conveyor Lift |
| C-12,13 | REF | 025292A * | CYLINDER, Steering (480) |
| C-12,13 | REF | 010385A01 * | CYLINDER, Steering (540) |
| C-14-21 | REF | 014603A00 * | CYLINDER, Torque (Dirt) Wing (optional) |
| C-22,23 | REF | 015007A00 * | CYLINDER, Closed Face (480) (optional) |
| C-22,23 | REF | 015265A00 * | CYLINDER, Closed Face (540) (optional) |
| C- | REF | 011720A00 * | CYLINDER, Liner Can, 38" Stroke (optional) |
| C- | REF | 002617A01 * | CYLINDER, Liner Can, 30" Stroke (optional) |
| DPC-1,2 | 2 | P0302-104 | CHECK, Pilot (Double) |
| E-1 | 1 | P0309-121 | ELEMENT |
| F-1 | 1 | 004500A04 ** | ASSEMBLY, Filter |
| FC-1-3 | 3 | P0302-112 ^ | VALVE, Flow Control |
| FD-1 | 1 | P0303-163 *** | FLOW DIVIDER |
| G-1-3 | 3 | P0301-100 | GAUGE, 5000 psi |
| G-4 | 1 | P0301-108 | GAUGE, Filter Indicator |
| M-1-3 | REF | P0304-123 **** | MOTOR, TBM Drive |
| M-4 | REF | P0304-157 **** | MOTOR, Conveyor Drive (1615 Belt) |
| M-4 | REF | P0304-109 **** | MOTOR, Conveyor Drive (120 Screw) |
| M-4 | REF | P0304-145 **** | MOTOR, Conveyor Drive (140 Screw) |
| N-1 | 1 | P0302-167 | VALVE, Needle |
| OL-1 | 1 | 007968A00 | OILER, Gear Ring(Includes item OL-1a) |
| OL-1a | 1 | P0300-144 | PLUG, 1/8 Hex |
| Q-1,2 | 1 | 005349A01 ** | ASSEMBLY, Coupler 1-1/4 |
| Q-3-4 | 1 | P0100-004A | COUPLER, Female |
| Q-3-4 | 1 | P0100-004B | COUPLER, Male |
| Q-9,10 | 1 | 004902A00 ** | ASSEMBLY, Coupler 1 |
| RH-1 | REF | 018700A00 ^^ | HUB, Rotary (Closed Face) |
| RB-1-3 | 3 | 010129P00 | BODY, Relief Valve |
| RV-1 | 1 | P0302-103 | VALVE, Relief 1200 psi |
| RV-2,3 | 3 | P0302-144 | VALVE, Relief 3000 psi |
| SLV-1 | 1 | P0302-113 ^ | VALVE, Conveyor |
| SPC-1-5 | 5 | P0302-154 | VALVE, Single Pilot Operated Check |
| V-1 | 1 | 003708A00 ^ | VALVE, Motor (Inner Drum Drive) |
| V-2 | 1 | 005280A00 ^ | VALVE, Motor (Conveyor Drive) |
| V-3-8 | 1 | P0302-260 ^ | VALVE, TBM Control |
| V-9 | 1 | P0302-118 < | VALVE, Steering |
| | 1 | 003011A02 | LINKAGE, Drive Valve |
| | 2 | 007193P01 | MANIFOLD |
| | 1 | 029991P | ARM, Linkage |
| | 1 | 029992P | MOUNT, Control Valve |
| | 1 | 029993P | MOUNT, Filter Indicator |
| | 1 | 002797P00 | ROD, Valve Link |
| | 1 | 002798P00 | ROD, Valve Link |
| | 1 | P0309-121 | FILTER, High Pressure |
| | 2 | P0302-113 ^ | VALVE |
| | 1 | 007185P00 | MANIFOLD |
| | 1 | 006909P00 | ROD, Motor Valve Linkage |
| | 2 | P0059-009 | KNOB/HANDLE |
| | 1 | P0091-003 | SHACKLE, Anchor |
| | 2 | P0302-104 | VALVE, Check |

* Refer to Section 10, Cylinders for parts information.

** Refer to this section for parts information.

*** Refer to Section 9, Pumps for parts information.

**** Refer to Section 8, Motors for parts information.

^ Refer to Section 7, Valves for parts information.

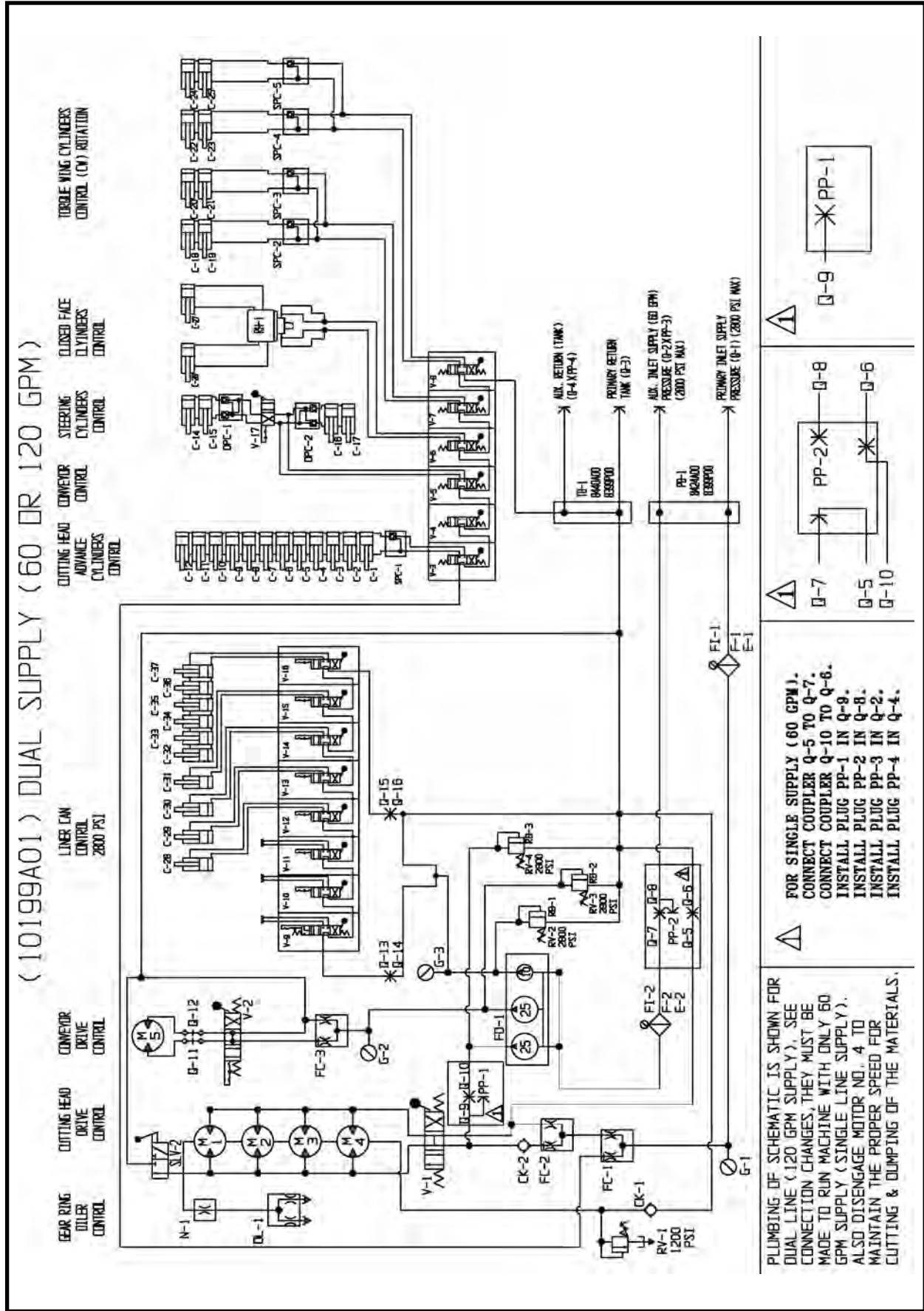
^^ Refer to Section 3, Structural for parts information.

< Refer to Section 7, Valves for parts information. Be sure load check balls are removed before operation.

Contact your Akkerman Aftermarket Support representative for more information.

HYDRAULIC SCHEMATIC (NPT), 010199A01

540: SN F18300F-04 Thru F18300F-10



(10199A01) DUAL SUPPLY (60 OR 120 GPM)

GEAR RING
ROLLER
CONTROL

CUTTING HEAD
DRIVE
CONTROL

CONVEYOR
DRIVE
CONTROL

CONVEYOR
CONTROL

STEERING
CYLINDERS
CONTROL

CLOSED FACE
CYLINDERS
CONTROL

TORQUE WING
CYLINDERS
CONTROL (CW) ROTATION

LINEAR CAM
CONTROL
2800 PSI

FOR SINGLE SUPPLY (60 GPM).
CONNECT COUPLER Q-5 TO Q-7.
INSTALL PLUG PP-1 IN Q-8.
INSTALL PLUG PP-2 IN Q-8.
INSTALL PLUG PP-3 IN Q-2.
INSTALL PLUG PP-4 IN Q-4.

PLUMBING OF SCHEMATIC IS SHOWN FOR
DUAL LINE (120 GPM SUPPLY). SEE
CONNECTION CHANGES, THEY MUST BE
MADE TO RUN MACHINE WITH ONLY 60
GPM SUPPLY (SINGLE LINE SUPPLY).
ALSO DISENGAGE MOTOR NO. 4 TO
MAINTAIN THE PROPER SPEED FOR
CUTTING & DUMPING OF THE MATERIALS.

HYDRAULIC SCHEMATIC (NPT), 010199A01

540: SN F18300F-04 Thru F18300F-10

| ITEM | QTY | PART NO. | DESCRIPTION |
|---------|-----|----------------|--|
| 0 | - | 010199A01 | SCHEMATIC, Hydraulic |
| C-1-12 | REF | 010747A00 * | CYLINDER, Advance |
| C-14-17 | REF | 010385A01 * | CYLINDER, Steering |
| C-18-25 | REF | 014603A00 * | CYLINDER, Torque (Dirt) Wing (optional) |
| C-26-27 | REF | 015265A00 * | CYLINDER, Closed Face (optional) |
| C-28-37 | REF | 011720A00 * | CYLINDER, Liner Can, 38" Stroke (optional) |
| C-28-37 | REF | 002617A01 * | CYLINDER, Liner Can, 30" Stroke (optional) |
| CK-1 | 1 | P0302-101 | VALVE, Check 1/4 |
| CK-2 | 1 | P0302-163 | VALVE, Check 1-1/4 |
| DPC-1,2 | 2 | P0302-104 | CHECK, Pilot (Double) |
| E-1-2 | 2 | P0309-121 | ELEMENT |
| F-1-2 | 2 | 004500A04 ** | ASSEMBLY, Filter |
| FC-1-3 | 3 | P0302-112 ^ | VALVE, Flow Control |
| FD-1 | 1 | P0303-163 *** | FLOW DIVIDER |
| FI-1-2 | 2 | P0301-108 | GAUGE, Filter Indicator |
| G-1-3 | 3 | P0301-100 | GAUGE, 5000 psi |
| M-1-4 | REF | P0304-123 **** | MOTOR, TBM Drive |
| M5 | REF | P0304-157 **** | MOTOR, Conveyor Drive (1615 Belt) |
| M5 | REF | P0304-109 **** | MOTOR, Conveyor Drive (120 Screw) |
| M5 | REF | P0304-145 **** | MOTOR, Conveyor Drive (140 Screw) |
| N-1 | 1 | P0302-167 | VALVE, Needle |
| OL-1 | 1 | 007968A00 | OILER, Gear Ring (Includes item OL-1a) |
| OL-1a | 1 | P0300-144 | PLUG, 1/8 Hex |
| PB-1 | 1 | 008385P00 | PRESSURE MANIFOLD BLOCK |
| PP-1-3 | 3 | 008149A00 | PRESSURE PLUG, Male |
| PP-2-4 | 3 | 008146P00 | PRESSURE PLUG, Female |
| Q-1-10 | 8 | 005349A01 ** | ASSEMBLY, Coupler 1-1/4 |
| Q-11-16 | 2 | P0100-004A | COUPLER, Female |
| Q-11-16 | 2 | P0100-004B | COUPLER, Male |
| RB-1-3 | 3 | 010129P00 | BODY, Relief Valve |
| RH-1 | REF | 018700A00 ^^ | HUB, Rotary (Closed Face) |
| RV-1 | 1 | P0302-103 | VALVE, Relief 1200 psi |
| RV-2-4 | 3 | P0302-144 | VALVE, Relief 3000 psi |
| SPC-1-5 | 5 | P0302-154 | VALVE, Single Pilot Operated Check |
| SLV-2 | 1 | P0302-183 ^ | VALVE, Conveyor Control |
| TB-1 | 1 | 008386P00 | BLOCK, Tank Manifold |
| V-1 | 1 | 007579A00 ^ | VALVE, Motor (Inner Drum Drive) |
| V-2 | 1 | 005280A00 ^ | VALVE, Motor (Conveyor Drive) |
| V-3-8 | 1 | P0302-260 ^ | VALVE, TBM Control |
| V-9-16 | 8 | P0302-388 | VALVE, Ball (Liner Can Cylinders) |
| V-17 | 1 | P0302-118 < | VALVE, Steering |

* Refer to Section 10, Cylinders for parts information.

** Refer to this section for parts information.

*** Refer to Section 9, Pumps for parts information.

**** Refer to Section 8, Motors for parts information.

^ Refer to Section 7, Valves for parts information.

^^ Refer to Section 3, Structural for parts information.

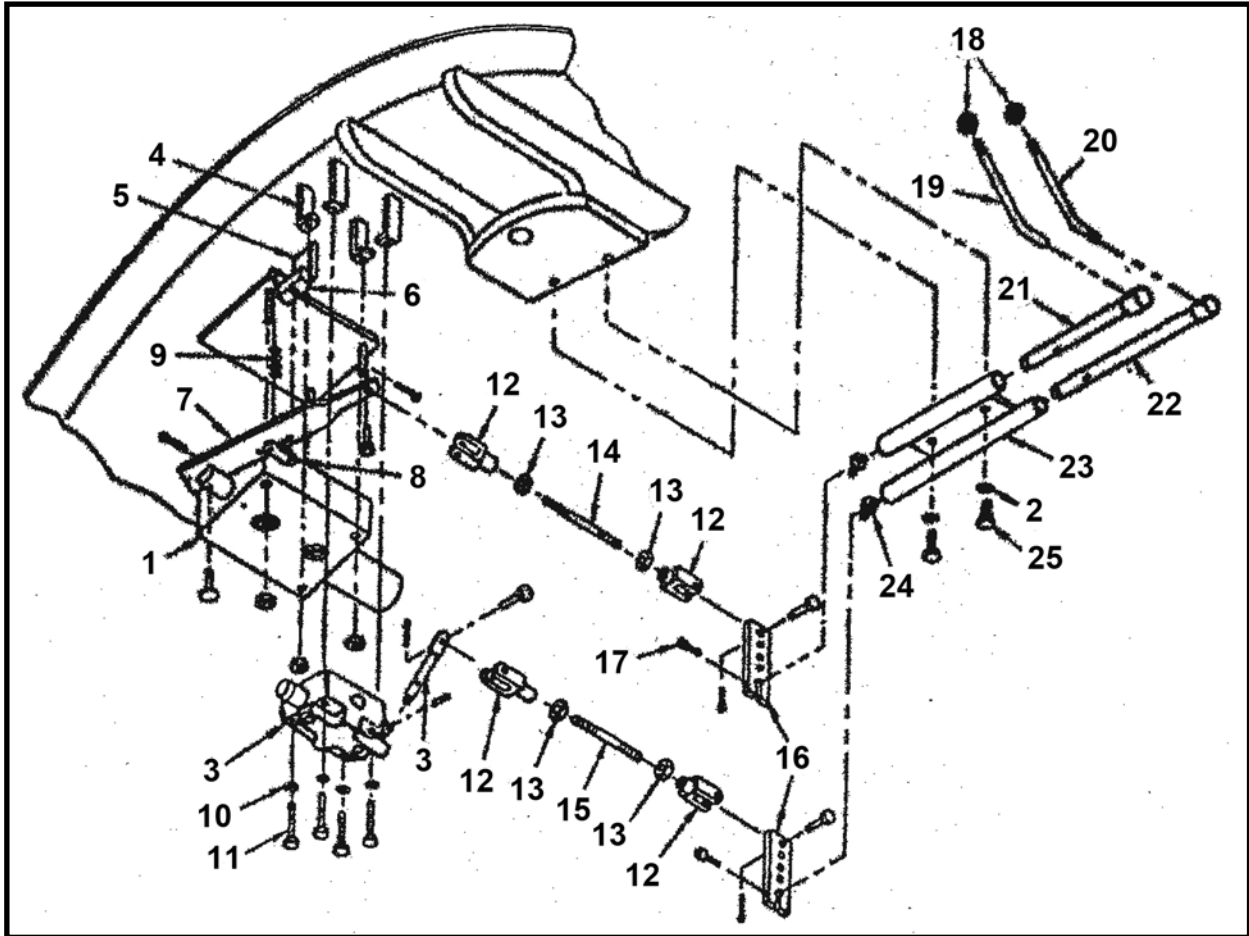
< Refer to Section 7, Valves for parts information. Be sure load check balls are removed before operation.

Contact your Akkerman Aftermarket Support representative for more information.

DRIVE VALVE LINKAGE, 003011A02

480: SN F23800F-17 & Before

540: SN F18300F-01 Thru F18300F-03

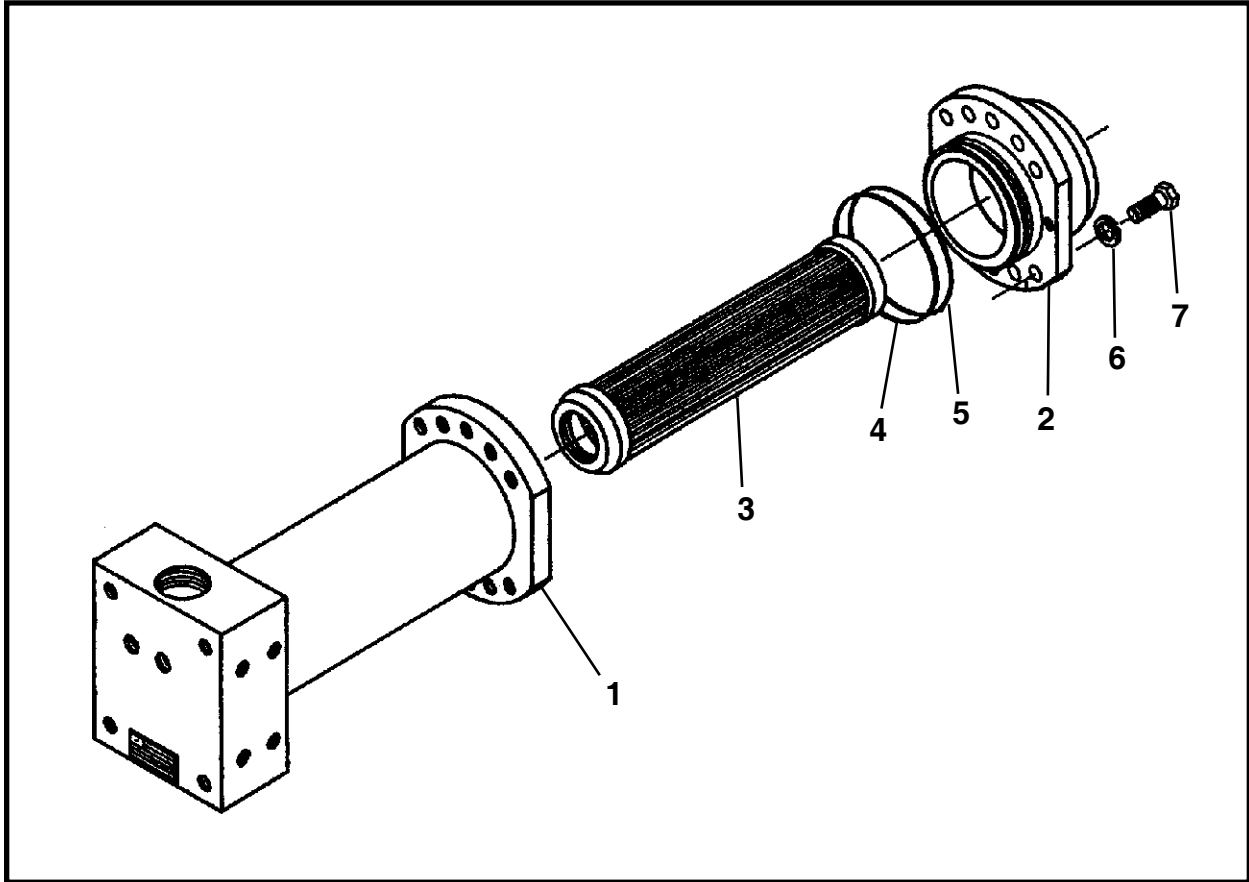


| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|--------------------------------------|
| 0 | 1 | 003011A02 | LINKAGE, Drive Valve |
| 1 | 1 | 003708A00 | VALVE, Motor 60 Gallon |
| 2 | 2 | P0045-006 | WASHER, Lock 3/8 |
| 3 | 1 | 005280A00 | VALVE, Conveyor Drive |
| 4 | 4 | 005279P00 | BRACE |
| 5 | 1 | 003010P00 | BAR |
| 6 | 1 | 002791P01 | BAR, Valve Linkage |
| 7 | 1 | 002790P01 | LINKAGE, Motor Valve |
| 8 | 1 | P0078-012 | LINK |
| 9 | 8 | P0040-005 | WASHER, Hardened Flat 5/16 |
| 10 | 4 | P0045-004 | WASHER, Lock 1/4 |
| 11 | 4 | P0001-04-014 | BOLT, 1 UNC x 4 |
| 12 | 4 | P0024-001 | YOKE, With Clevis Pin |
| 13 | 4 | P0004-06-000 | NUT, 3/8 UNF |
| 14 | 1 | 002800P00 | ROD, Valve Linkage |
| 15 | 1 | 002801P00 | ROD, Valve Link |
| 16 | 2 | 002796P00 | BRACKET |
| 17 | 2 | P0031-04-006 | SCREW, Socket Head Cap 1/4 UNC x 1.5 |
| 18 | 2 | P0059-009 | KNOB/HANDLE |
| 19 | 1 | 002799P00 | ROD |
| 20 | 1 | 004063P00 | ROD |
| 21 | 1 | 002798P00 | ROD, Valve Link |
| 22 | 1 | 002797P00 | ROD, Valve Link |
| 23 | 1 | 002792A00 | WELDMENT, Valve Link |
| 24 | 2 | P0063-002 | FITTING, Grease 1/4-28 x Degree |
| 25 | 2 | P0001-06-004 | BOLT, Hex 3/8 UNC x 1 |

FILTER ASSEMBLY, 004500A04

480: SN F23800F-17 & Before

540: SN F18300F-01 Thru F18300F-10



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|---------------------|
| 0 | 1 | 004500A04 | ASSEMBLY, Filter |
| 1 | 1 | 007965A01 | HOUSING, Filter |
| 2 | 1 | 007966P01 | COVER, Filter |
| 3 | 1 | P0309-121 | ELEMENT, Filter |
| 4* | 1 | P0085-156 | ORING |
| 5* | 1 | P0084-156 | ORING, Back Up |
| 6 | 10 | P0045-008 | WASHER, Lock 1/2 |
| 7 | 10 | P0001-08-010 | BOLT, 1/2 UNC x 2.5 |
| 8 | REF | 008190A00 | KIT, Seal |
| 9** | REF | P0301-108 | GAUGE, Indicator |

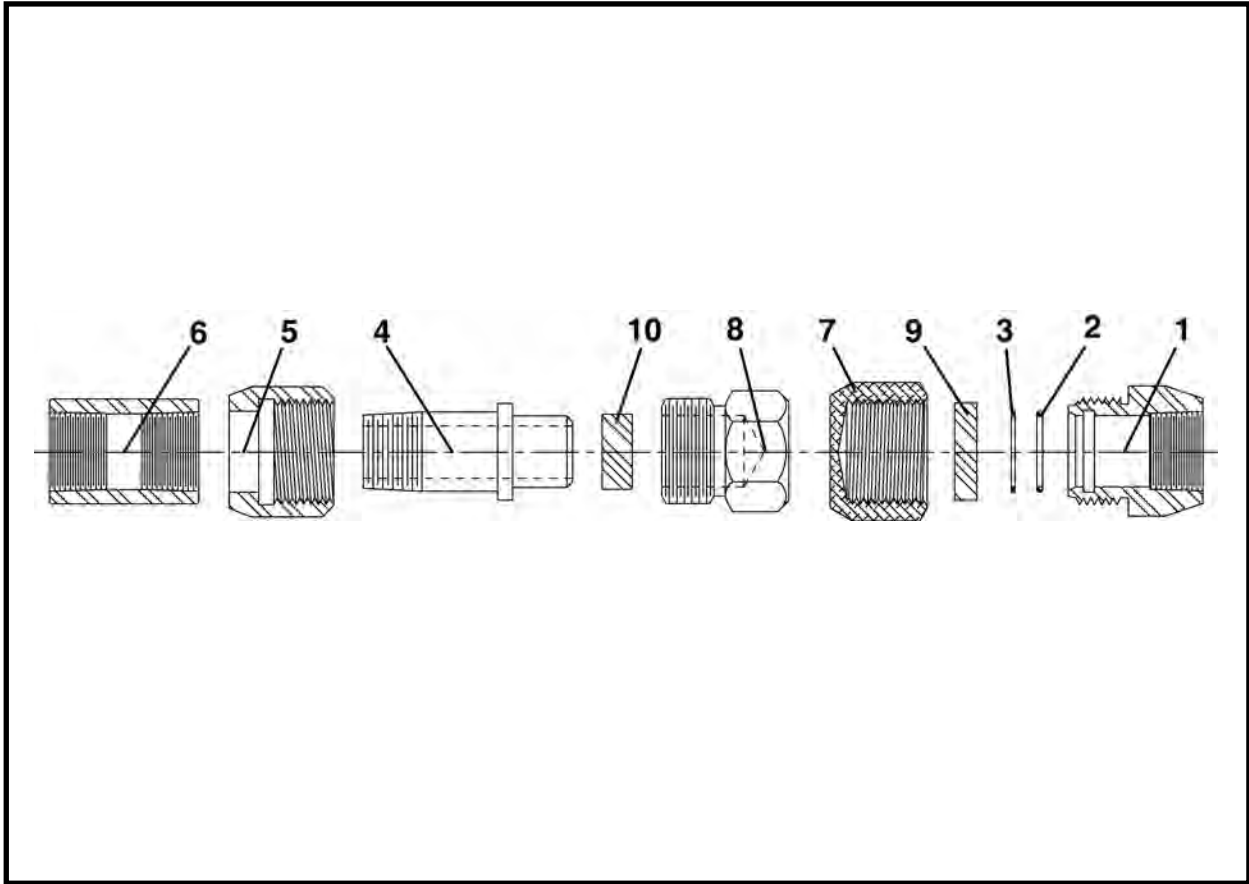
* Included in item 8, Seal Kit, 008190A00.

** Not Shown

1" COUPLER ASSEMBLY, 004902A00

480: SN F23800F-17 & Before

540: SN F18300F-01 Thru F18300F-03

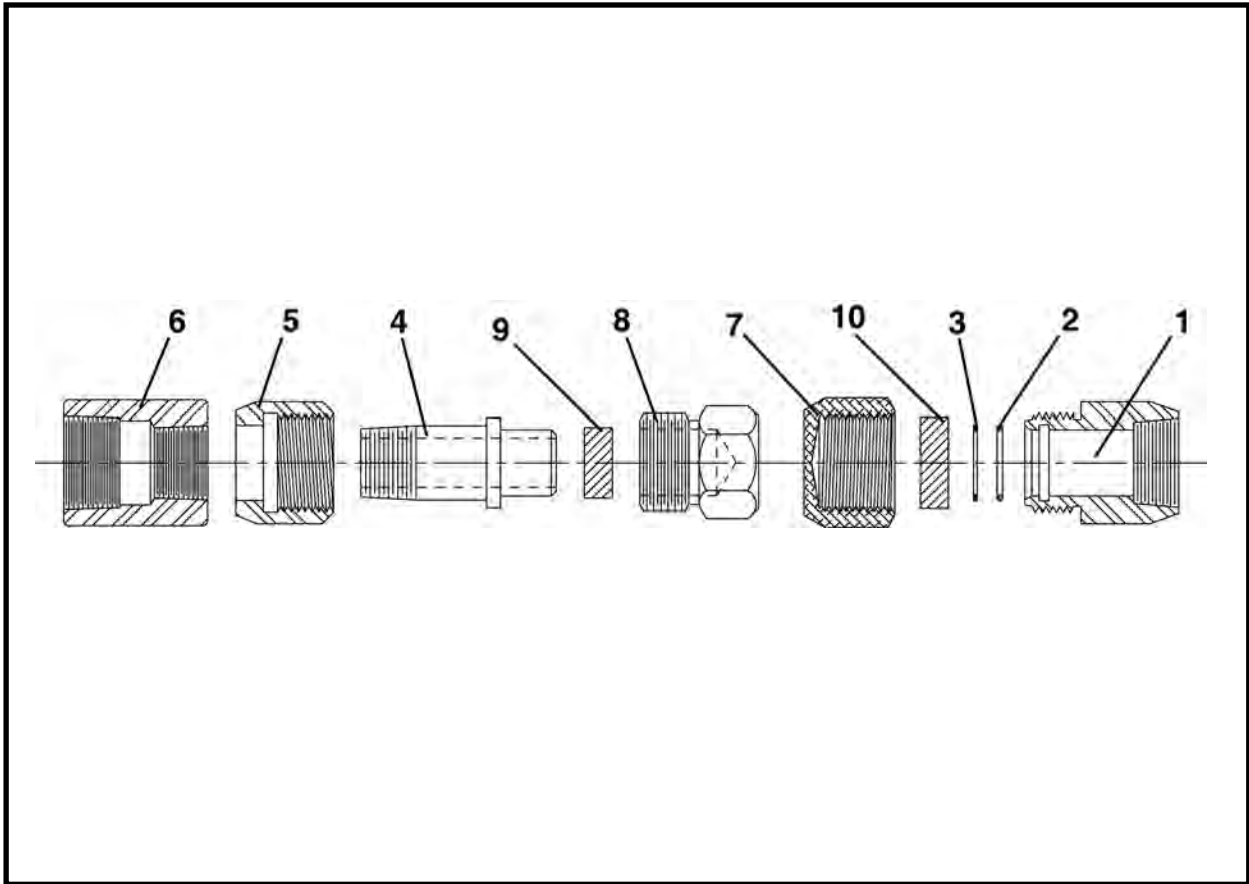


| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|-----------|---------------------|
| 0 | 1 | 004902A00 | ASSEMBLY, Coupler 1 |
| 1 | 1 | 004900P00 | COUPLER, Female |
| 2 | 1 | P0085-123 | ORING |
| 3 | 1 | P0084-123 | ORING, Back Up |
| 4 | 1 | 004899P00 | COUPLER UNION |
| 5 | 1 | 004901P01 | COUPLER |
| 6 | 1 | P0400-005 | COUPLER 1 |
| 7 | 1 | 007002P02 | CAP, Coupler |
| 8 | 1 | 005350P03 | CAP, Coupler |
| 9 | 1 | 007086P00 | PLUGS, Rubber |
| 10 | 1 | 007087P00 | PLUGS, Rubber |

1-1/4" COUPLER ASSEMBLY, 005349A01

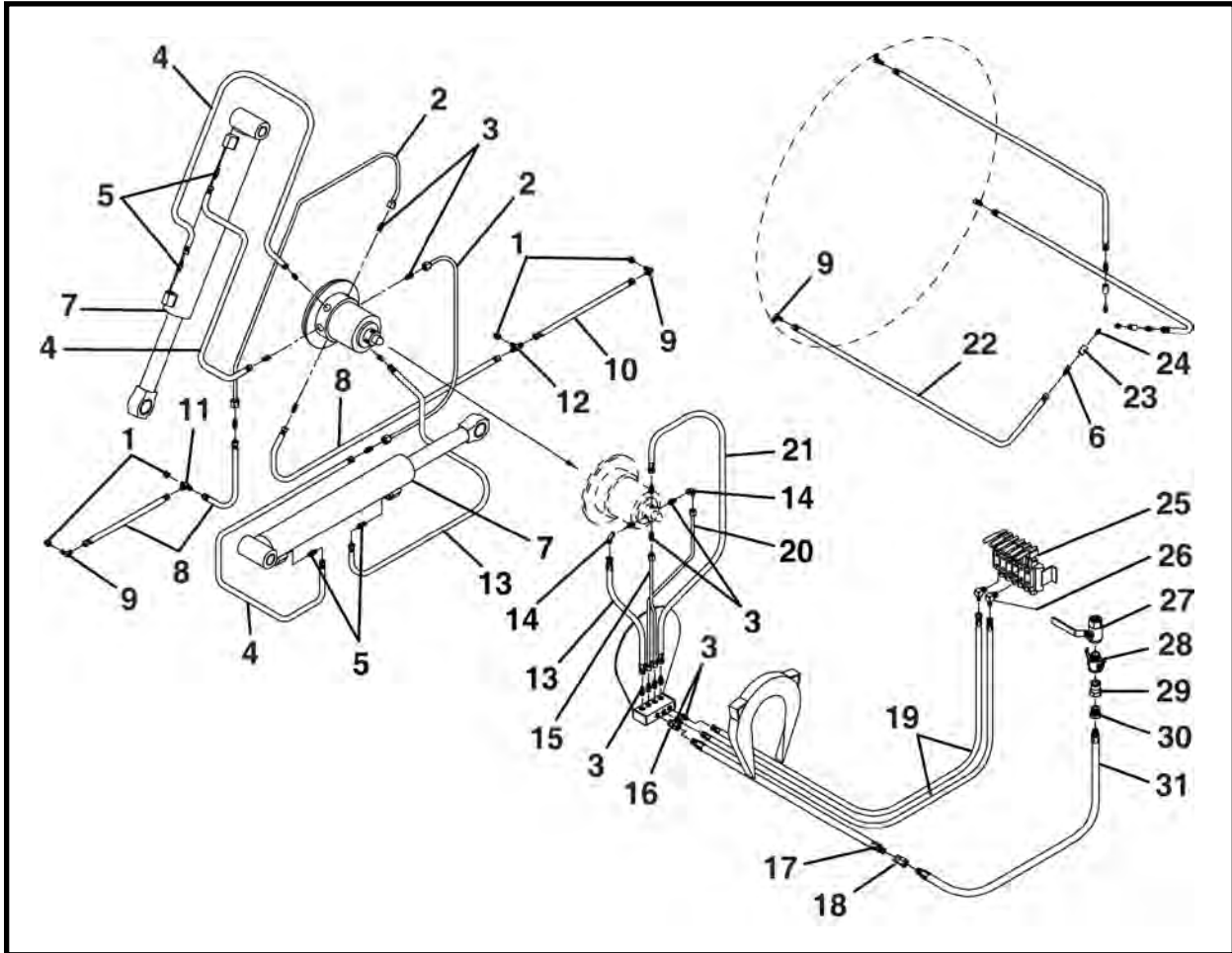
480: SN F23800F-17 & Before

540: SN F18300F-01 Thru F18300F-10



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|-----------|-------------------------|
| 0 | 1 | 005349A01 | ASSEMBLY, Coupler 1-1/4 |
| 1 | 1 | 005348P00 | COUPLER, Female |
| 2 | 1 | P0085-123 | ORING |
| 3 | 1 | P0084-123 | RING, Back Up |
| 4 | 1 | 004899P00 | COUPLER UNION |
| 5 | 1 | 004901P01 | COUPLER |
| 6 | 1 | P0421-012 | REDUCER |
| 7 | 1 | 007002P02 | CAP, Coupler |
| 8 | 1 | 005350P03 | CAP, Coupler |
| 9 | 1 | 007087P00 | PLUGS, Rubber |
| 10 | 1 | 007086P00 | PLUGS, Rubber |

CLOSED FACE CONTROL ASSEMBLY, 019315A00
480 CLOSED FACE (OLD STYLE)

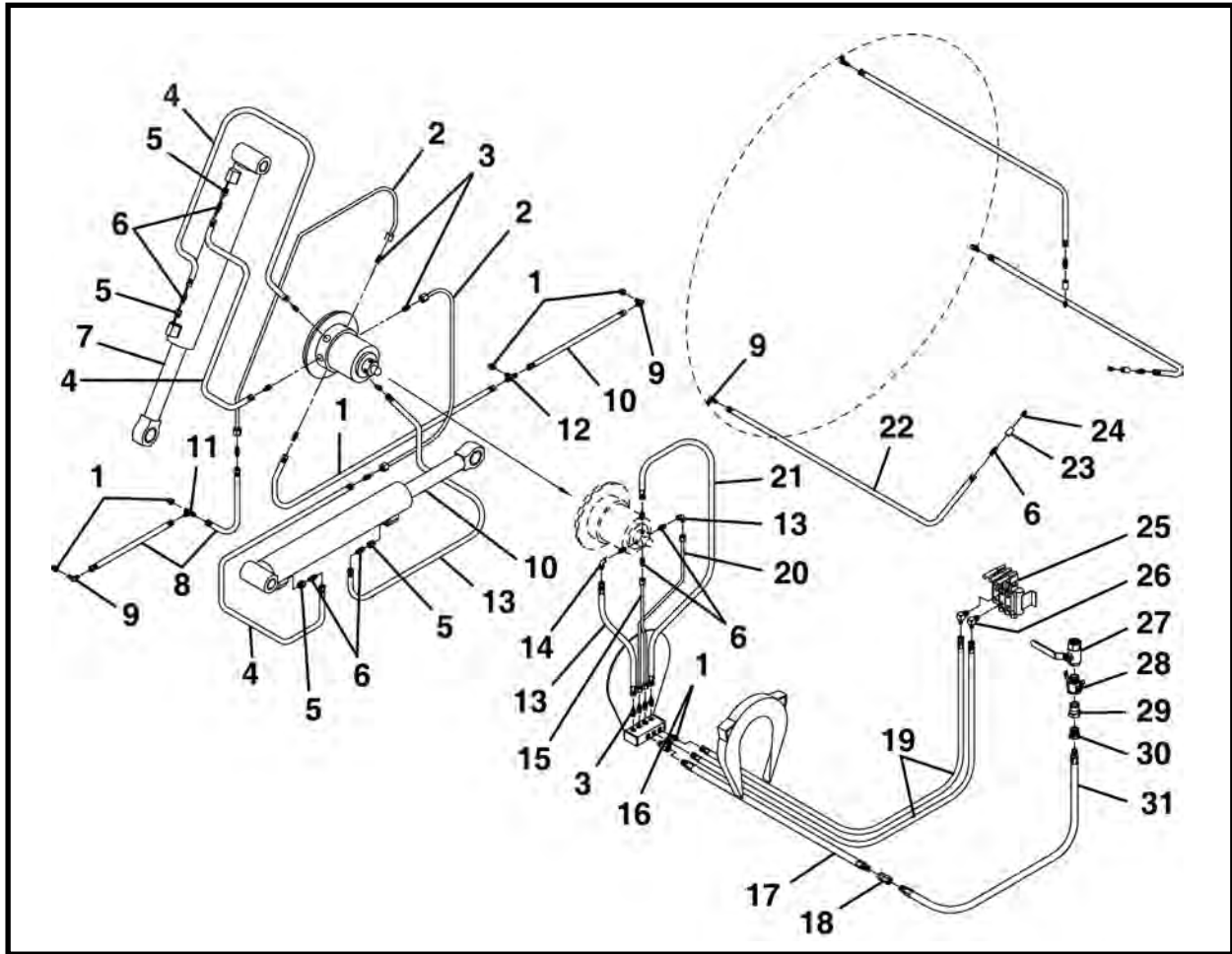


| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|---------------|-------------------------------|
| 0 | 1 | 019315A00 | ASSEMBLY, Closed Face Control |
| 1 | 4 | P0300-067 | BUSHING, Reducer |
| 2 | 2 | P0110-106-012 | TUBING 3/8 x 12 |
| 3 | 12 | P0300-041 | CONNECTOR |
| 4 | 3 | P0506-036 | HOSE ASSEMBLY 3/8 x 36 |
| 5 | 4 | P0300-269 | ADAPTER, 3/4 ORB x 9 1/6 |
| 6 | 3 | P0300-121 | ADAPTER, 3/8 x 1/4 NPTF |
| 7 | REF | REF | CYLINDER ASSEMBLY |
| 8 | 2 | P0506-012 | HOSE, Hydraulic 3/8 x 12 |
| 9 | 5 | P0300-125 | ELBOW, 90 Degree |
| 10 | 1 | P0506-018 | HOSE ASSEMBLY 3/8 x 18 |
| 11 | 1 | P0300-132 | TEE |
| 12 | 1 | P0300-132 | TEE |
| 13 | 1 | P0506-038 | HOSE ASSEMBLY 3/8 x 38 |
| 14 | 2 | P0300-123 | ADAPTER, 90 Degree |
| 15 | 1 | P0110-106-009 | TUBING 3/8 x 9 |
| 16 | 1 | P0300-010 | SWIVEL |
| 17 | 1 | P0508-084 | HOSE ASSEMBLY 1/2 x 84 |
| 18 | 1 | P0300-059 | SWIVEL |
| 19 | 2 | P0506-090 | HOSE ASSEMBLY 3/8 x 90 |
| 20 | 1 | P0110-106-010 | TUBING 3/8 x 10 |

CLOSED FACE CONTROL ASSEMBLY, 019315A00
480 CLOSED FACE (OLD STYLE)

| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|-----------|--------------------------|
| 21 | 1 | P0506-020 | HOSE ASSEMBLY 3/8 x 20 |
| 22 | 3 | P0506-048 | HOSE ASSEMBLY 3/8 x 48 |
| 23 | 3 | P0400-001 | COUPLING |
| 24 | 3 | P0063-016 | FITTING, Grease |
| 25 | 1 | REF | VALVE, Control |
| 26 | 2 | P0300-042 | ELBOW, 90 Degree |
| 27 | 1 | P0302-231 | VALVE, Ball |
| 28 | 1 | P0100-023 | SOCKET, MPT |
| 29 | 1 | P0100-024 | PLUG |
| 30 | 1 | P0300-078 | BUSHING, Reducer 1 x 1/2 |
| 31 | 1 | P0508-036 | HOSE ASSEMBLY 1/2 x 36 |

CLOSED FACE CONTROL ASSEMBLY, 015010A00
540 CLOSED FACE (OLD STYLE)



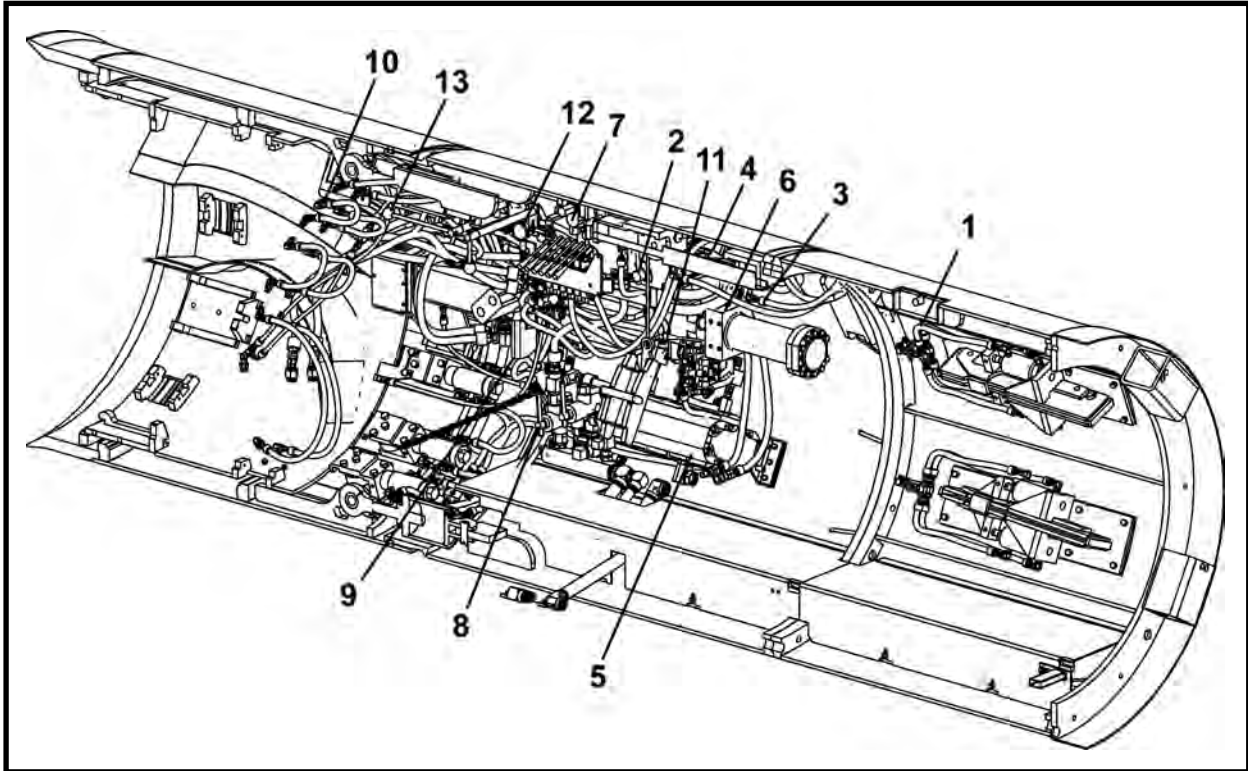
| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|---------------|-------------------------------|
| 0 | 1 | 015010A00 | ASSEMBLY, Closed Face Control |
| 1 | 4 | P0300-067 | BUSHING, Reducer |
| 2 | 2 | P0110-106-012 | TUBING 3/8 x 12 |
| 3 | 12 | P0300-041 | CONNECTOR |
| 4 | 3 | P0506-036 | HOSE ASSEMBLY 3/8 x 36 |
| 5 | 4 | 018736P00 | PLUG |
| 6 | 8 | P0300-121 | ADAPTER, 3/8 x 1/4 NPTF |
| 7 | 2 | 015265A00 | CYLINDER ASSEMBLY |
| 8 | 2 | P0506-012 | HOSE ASSEMBLY 3/8 x 12 |
| 9 | 5 | P0300-125 | ELBOW, 90 Degree |
| 10 | 1 | P0506-018 | HOSE ASSEMBLY 3/8 x 18 |
| 11 | 1 | P0300-132 | TEE |
| 12 | 1 | P0300-132 | TEE |
| 13 | 1 | P0506-038 | HOSE ASSEMBLY 3/8 x 38 |
| 14 | 2 | P0300-123 | ADAPTER, 90 Degree |
| 15 | 1 | P0110-106-009 | TUBING 3/8 x 9 |
| 16 | 1 | P0300-010 | SWIVEL |
| 17 | 1 | P0508-084 | HOSE ASSEMBLY 1/2 x 84 |
| 18 | 1 | P0300-059 | SWIVEL |
| 19 | 2 | P0506-090 | HOSE ASSEMBLY 3/8 x 90 |
| 20 | 1 | P0110-106-010 | TUBING 3/8 x 10 |

CLOSED FACE CONTROL ASSEMBLY, 015010A00
540 CLOSED FACE (OLD STYLE)

| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|-----------|--------------------------|
| 21 | 1 | P0506-020 | HOSE ASSEMBLY 3/8 x 20 |
| 22 | 3 | P0506-048 | HOSE ASSEMBLY 3/8 x 48 |
| 23 | 3 | P0400-001 | COUPLING |
| 24 | 3 | P0063-016 | FITTING, Grease |
| 25 | 1 | REF | VALVE, Control |
| 26 | 2 | P0300-042 | ELBOW, 90 Degree |
| 27 | 1 | P0302-231 | VALVE, Ball |
| 28 | 1 | P0100-023 | SOCKET, MPT |
| 29 | 1 | P0100-024 | PLUG |
| 30 | 1 | P0300-078 | BUSHING, Reducer 1 x 1/2 |
| 31 | 1 | P0508-036 | HOSE ASSEMBLY 1/2 x 36 |

HYDRAULIC ASSEMBLY & SCHEMATIC 480 (NPT/ORB), 029950A

480: SN F23800F-18 & After

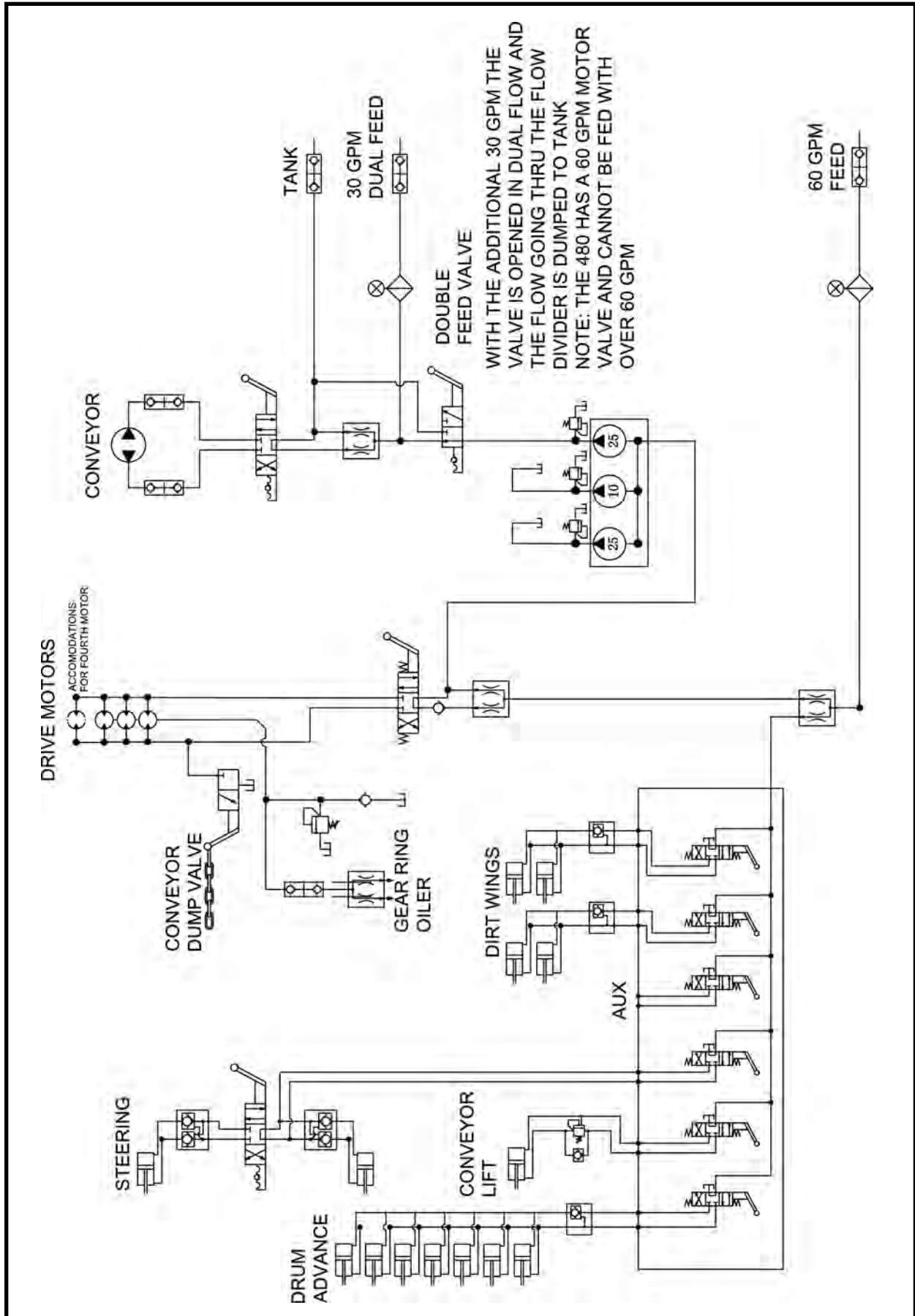


| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|----------|------------------------------------|
| 0 | 1 | 029950A | HYDRAULIC ASSEMBLY & SCHEMATIC 480 |
| 1* | 1 | 030162A | HYDRAULICS, DIRT WING |
| 2* | 1 | 030169A | HYDRAULICS, Speed Control |
| 3* | 1 | 030170A | HYDRAULICS, Conveyor Lift |
| 4* | 1 | 030163A | HYDRAULICS, Motor Valve |
| 5* | 1 | 030149A | HYDRAULICS, Flow Divider |
| 6* | 1 | 030165A | HYDRAULICS, Filter |
| 7* | 1 | 030443A | HYDRAULICS, Conveyor Valve |
| 8* | 1 | 030167A | HYDRAULICS, Conveyor Safety Valve |
| 9* | 1 | 030168A | HYDRAULICS, Motor Manifold |
| 10* | 1 | 030172A | HYDRAULICS, Drum Advance |
| 11* | 1 | 030161A | HYDRAULICS, Steering |
| 12* | 1 | 030171A | CONTROL VALVE ASSEMBLY |
| 13* | 1 | 030025A | LINKAGE, Hydraulic Control |

* Refer to this section for parts information.

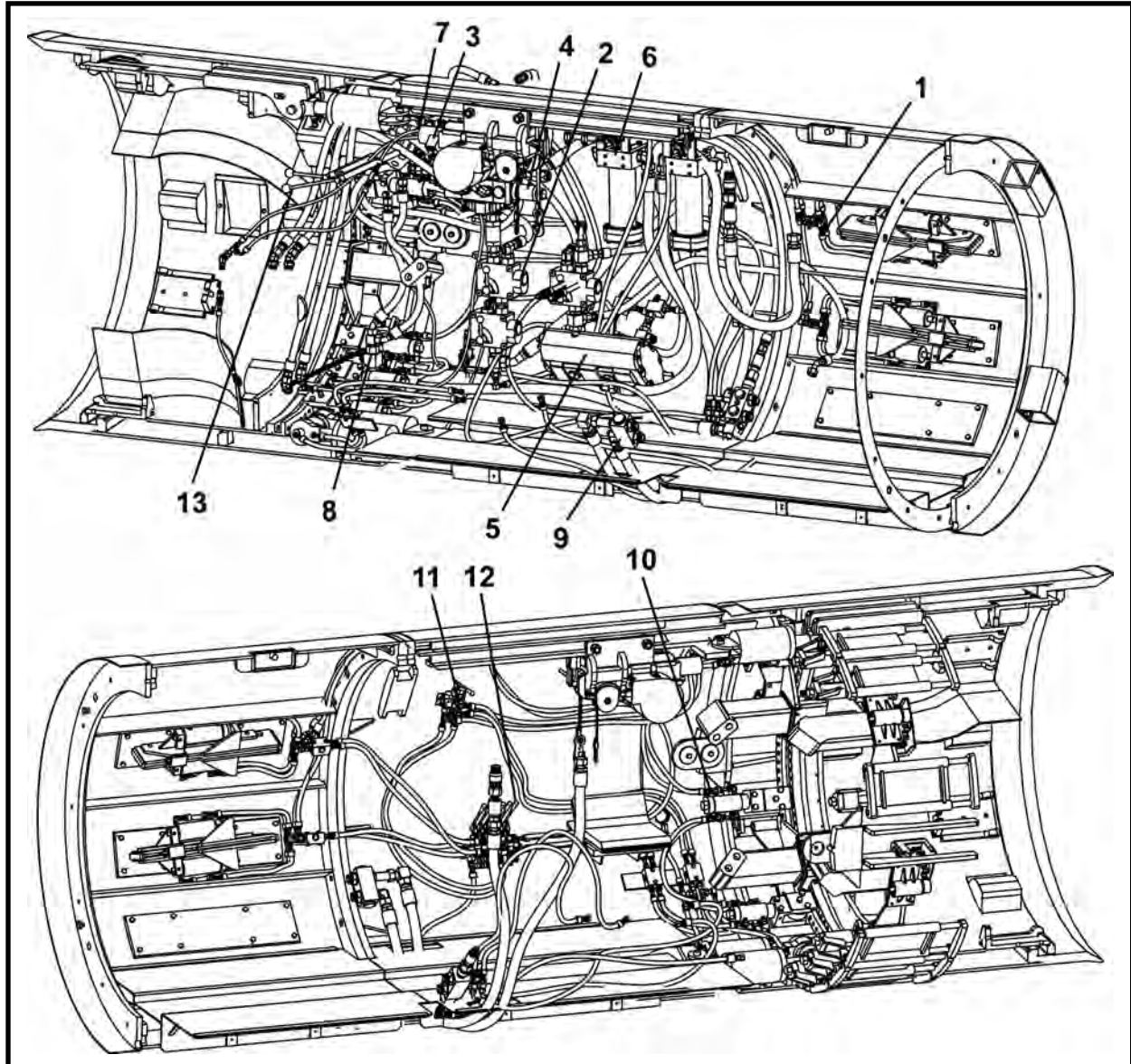
HYDRAULIC ASSEMBLY & SCHEMATIC 480 (NPT/ORB), 029950A

480: SN F23800F-18 & After



HYDRAULIC ASSEMBLY & SCHEMATIC 540 (ORB), 029951A

540: SN F18300F-11 & After



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|----------|------------------------------------|
| 0 | 1 | 029951A | HYDRAULIC ASSEMBLY & SCHEMATIC 540 |
| 1* | 1 | 030044A | HYDRAULICS, DIRT WING |
| 2* | 1 | 030051A | HYDRAULICS, Speed Control |
| 3* | 1 | 030052A | HYDRAULICS, Conveyor Lift |
| 4* | 1 | 030045A | HYDRAULICS, Motor Valve |
| 5* | 1 | 030046A | HYDRAULICS, Flow Divider |
| 6* | 1 | 030047A | HYDRAULICS, Filter |
| 7* | 1 | 030048A | HYDRAULICS, Conveyor Valve |
| 8* | 1 | 030049A | HYDRAULICS, Conveyor Safety Valve |
| 9* | 1 | 030050A | HYDRAULICS, Motor Manifold |
| 10* | 1 | 029963A | HYDRAULICS, Drum Advance |
| 11* | 1 | 030043A | HYDRAULICS, Steering |
| 12* | 1 | 030053A | CONTROL VALVE ASSEMBLY |
| 13* | 1 | 030024A | LINKAGE, Hydraulic Control |
| 14** | 1 | 002262A | CLAMP, Hose |

* Refer to this section for parts information.

** Not Shown

HYDRAULIC ASSEMBLY & SCHEMATIC 540 (ORB), 029951A

540: SN F18300F-11 & After

DUAL FEED

007968A00
GEAR RING
OILER

030048A
CONVEYOR
VALVE

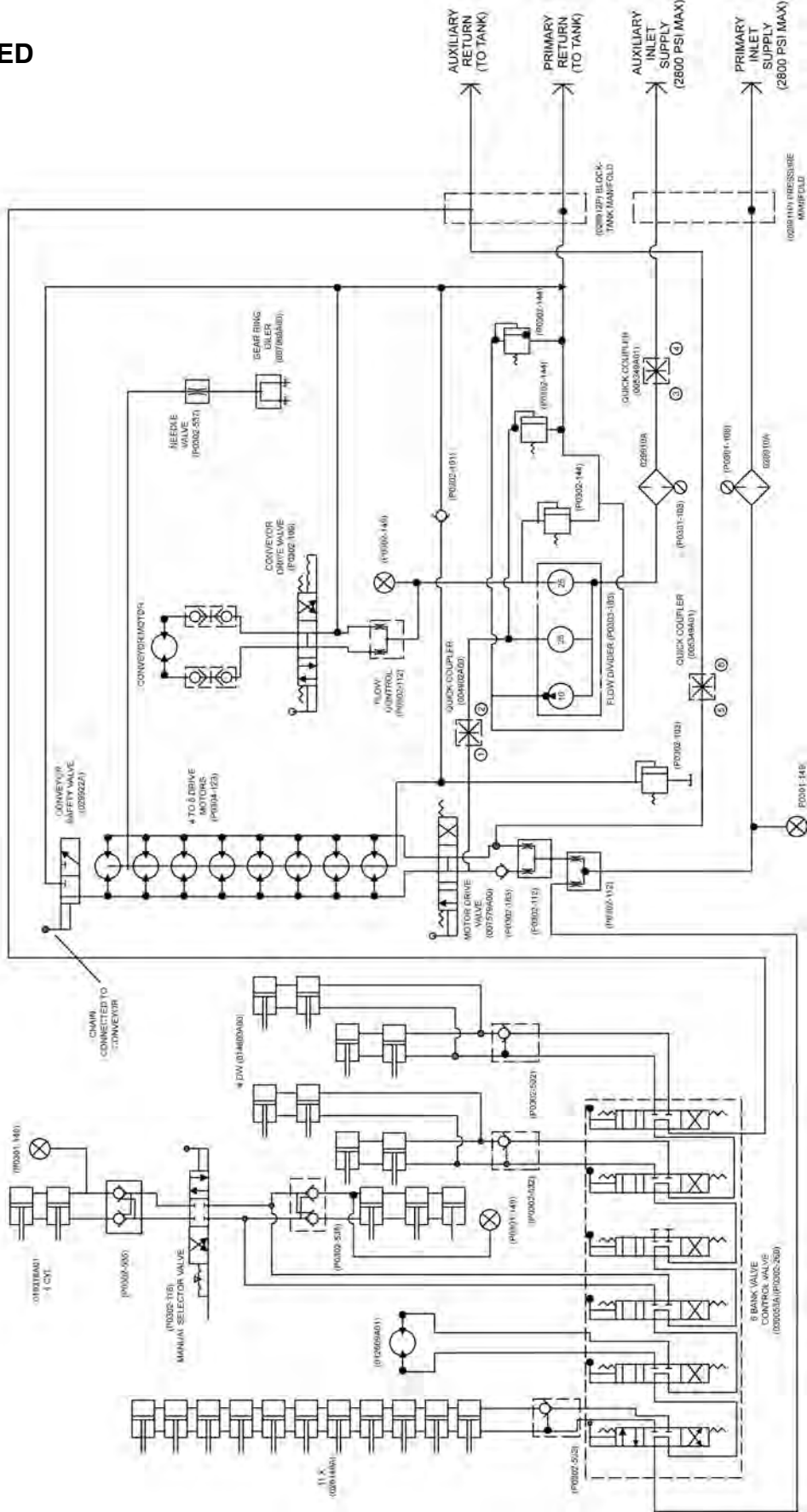
030045A
MOTOR VALVE
DRIVE CONTROL

030044A
DIRT WING (CW)
ROTATION

030043A
STEERING
CYLINDERS

030052A
CONVEYOR
LIFT

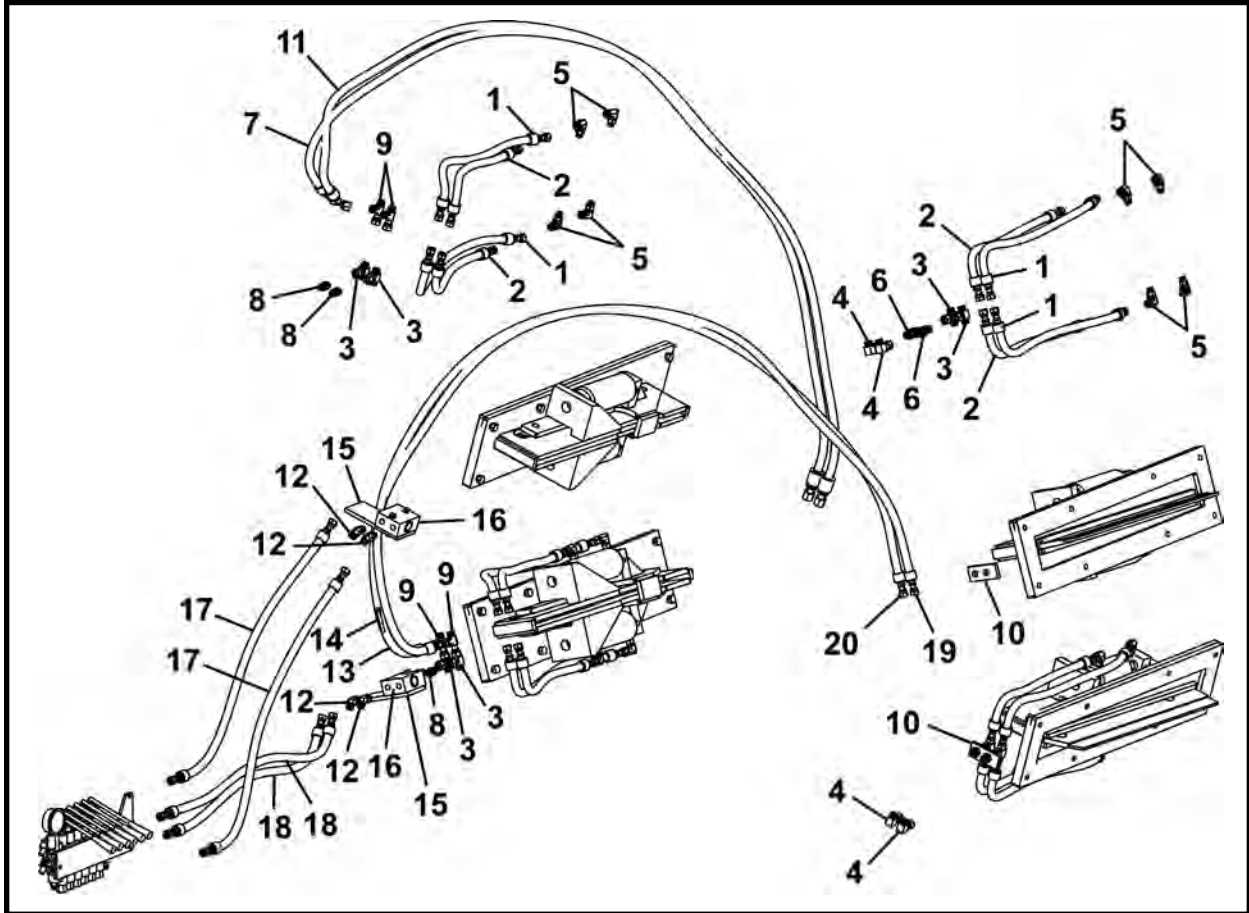
029963A
DRUM
ADVANCE



NOTES

DIRT WING HYDRAULICS 480, 030162A

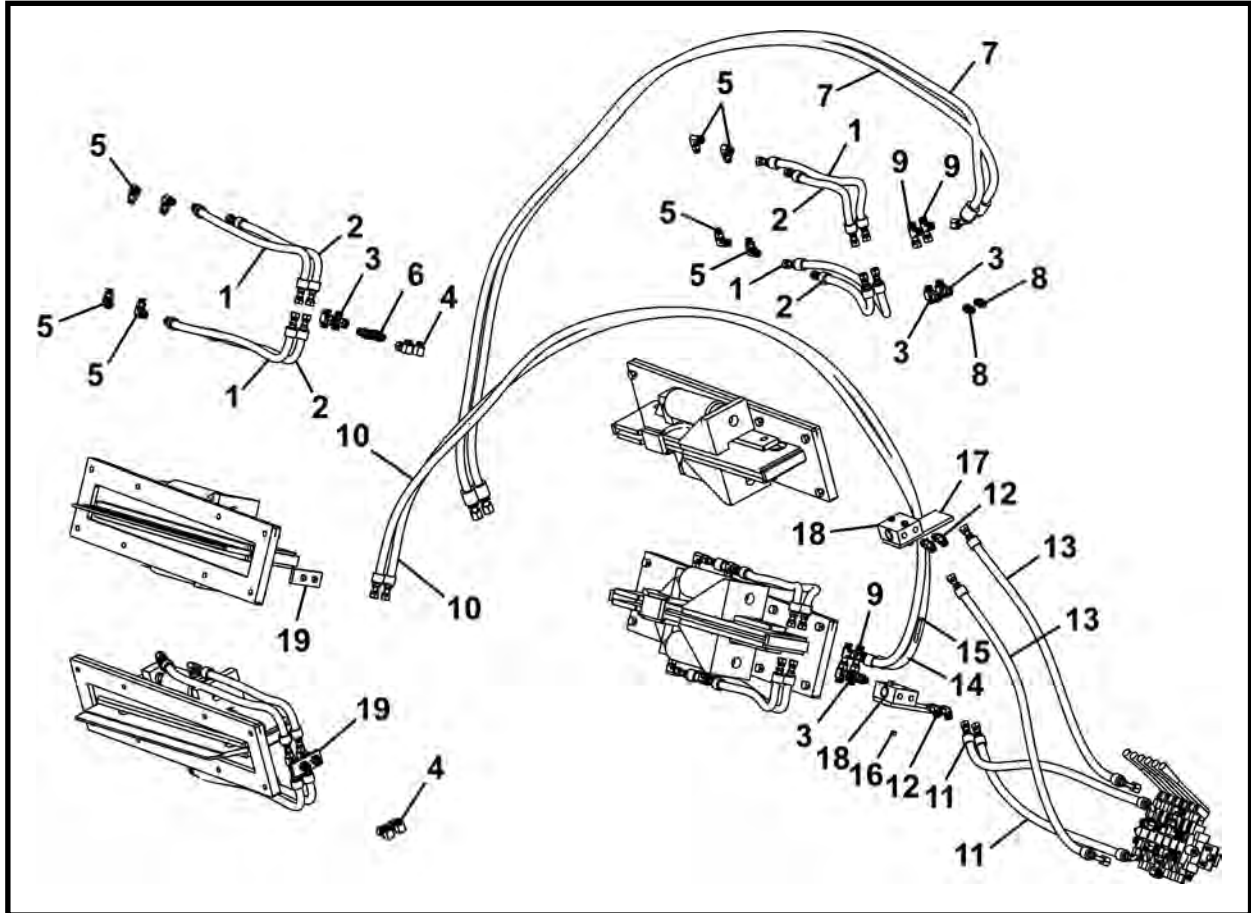
480: SN F23800F-18 & After



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|--------------------------------|
| 0 | 1 | 030162A | DIRT WING HYDRAULICS 480 |
| 1 | 8 | A10313A-022 | HOSE ASSEMBLY 3/8 x 22 |
| 2 | 8 | A10313A-017 | HOSE ASSEMBLY 3/8 x 17 |
| 3 | 8 | P0300-602 | FITTING, 06MFOR-06MFOR-06FFORX |
| 4 | 4 | P0300-603 | FITTING, 06MFOR-06FFORX90 |
| 5 | 16 | P0300-355 | FITTING, 06MFOR-06MB90 |
| 6 | 4 | P0300-581 | FITTING, 6MFFOR-6MFFOR-BKHD |
| 7 | 1 | A10082A-084 | HOSE ASSEMBLY 3/8 x 84 |
| 8 | 4 | P0300-356 | FITTING, 06MFOR-06MB |
| 9 | 4 | P0300-613 | FITTING, 06MFOR-06FFORX-06MFOR |
| 10 | 2 | 029914P | PLATE |
| 11 | 1 | A10082A-086 | HOSE ASSEMBLY 3/8 x 86 |
| 12 | 4 | P0300-612 | FITTING, 06MFOR-06MB45 |
| 13 | 4 | P0045-005 | WASHER, Lock 5/16 |
| 14 | 4 | P0001-05-009 | BOLT, 5/16 UNC x 2.25 |
| 15 | 2 | 029913P | PLATE |
| 16 | 2 | P0302-532 | VALVE, Check |
| 17 | 2 | A10313A-040 | HOSE ASSEMBLY 3/8 x 40 |
| 18 | 2 | A10313A-031 | HOSE ASSEMBLY 3/8 x 31 |
| 19 | 1 | A10313A-084 | HOSE ASSEMBLY 3/8 x 84 |
| 20 | 1 | A10313A-086 | HOSE ASSEMBLY 3/8 x 86 |

DIRT WING HYDRAULICS 540, 030044A

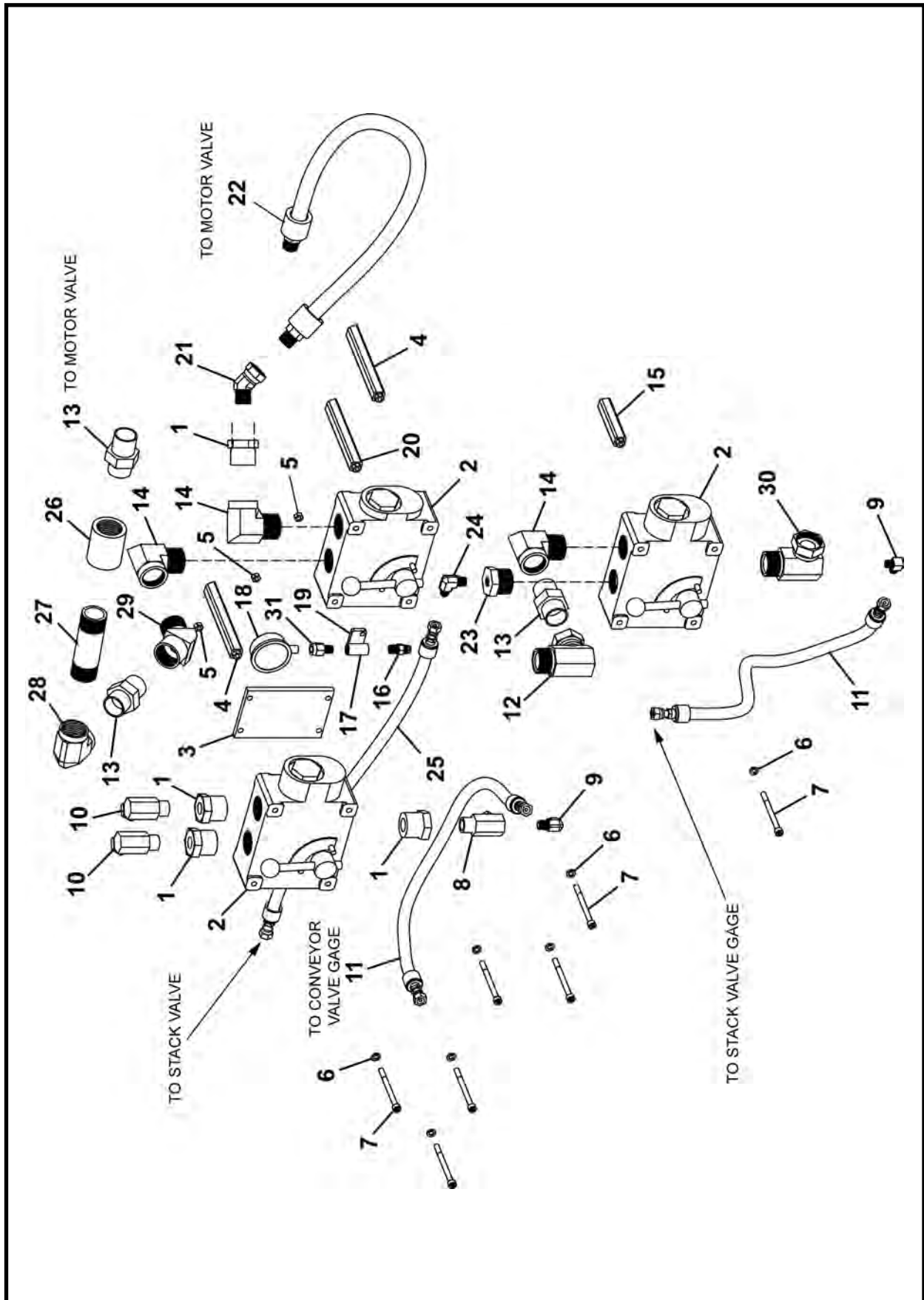
540: SN F18300F-11 & After



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|--------------------------------|
| 0 | 1 | 030044A | DIRT WING HYDRAULICS 540 |
| 1 | 8 | A10313A-022 | HOSE ASSEMBLY 3/8 x 22 |
| 2 | 8 | A10313A-017 | HOSE ASSEMBLY 3/8 x 17 |
| 3 | 8 | P0300-602 | FITTING, 06MFOR-06MFOR-06FFORX |
| 4 | 4 | P0300-603 | FITTING, 06MFOR-06FFORX90 |
| 5 | 16 | P0300-355 | FITTING, 06MFOR-06MB90 |
| 6 | 4 | P0300-581 | FITTING, 6MFFOR-6MFFOR-BKHD |
| 7 | 1 | A10082A-106 | HOSE ASSEMBLY 3/8 x 106 |
| 8 | 4 | P0300-356 | FITTING, 06MFOR-06MB |
| 9 | 4 | P0300-613 | FITTING, 06MFOR-06FFORX-06MFOR |
| 10 | 2 | A10313A-115 | HOSE ASSEMBLY 3/8 x 115 |
| 11 | 2 | A10079A-031 | HOSE ASSEMBLY 3/8 x 31 |
| 12 | 4 | P0300-612 | FITTING, 06MFOR-06MB45 |
| 13 | 2 | A10079A-040 | HOSE ASSEMBLY 3/8 x 40 |
| 14 | 4 | P0045-005 | WASHER, Lock 5/16 |
| 15 | 4 | P0001-05-009 | BOLT, 5/16 UNC x 2.25 |
| 16 | 4 | P0003-05-000 | NUT, 5/16 |
| 17 | 2 | 029913P | PLATE |
| 18 | 2 | P0302-532 | VALVE, Check |
| 19 | 2 | 029914P | PLATE |

SPEED CONTROL HYDRAULICS 480, 030169A

480: SN F23800F-18 & After



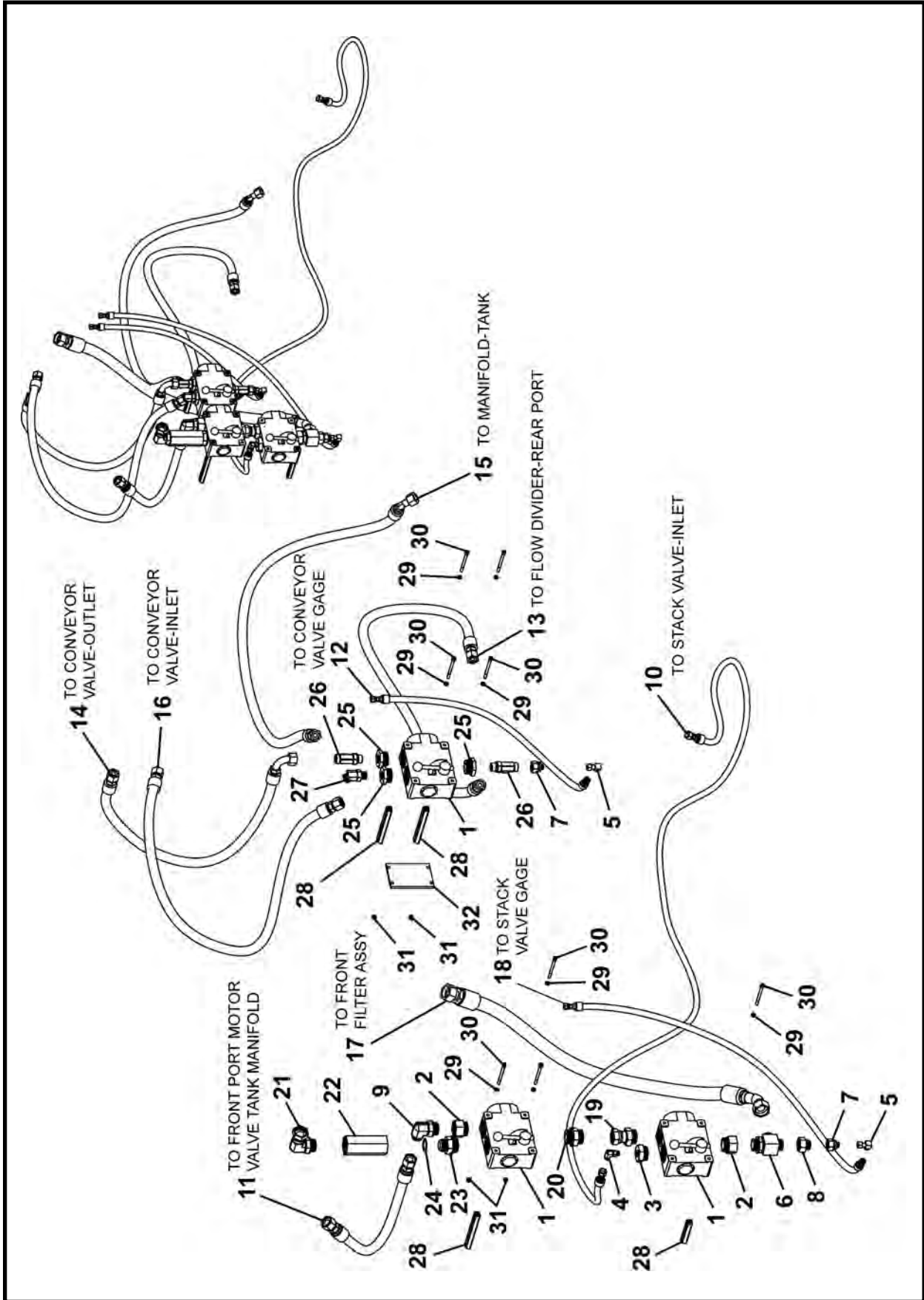
SPEED CONTROL HYDRAULICS 480, 030169A
480: SN F23800F-18 & After

| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|--|
| 0 | 1 | 030169A | HYDRAULICS, SPEED CONTROL 480 |
| 1 | 4 | P0300-008 | FITTING, 20MP-12FPS |
| 2* | 3 | P0302-112 | VALVE, Flow Control |
| 3 | 1 | 030092P | PLATE, Connector |
| 4 | 2 | 030199A | STANDOFF |
| 5 | 4 | P0003-05-000 | NUT, 5/16 |
| 6 | 7 | P0045-005 | WASHER, Lock 5/16 |
| 7 | 7 | P0031-05-013 | SCREW, Socket Head Cap 5/16 UNC x 3.75 |
| 8 | 1 | 030182P | FITTING |
| 9 | 2 | P0300-125 | FITTING, 06MJ-04MP90 |
| 10 | 2 | P0300-034 | FITTING, 12MP-12FPX90 |
| 11 | 1 | A10311A-028 | HOSE ASSEMBLY 3/8 x 28 |
| 12 | 1 | P0300-179 | FITTING, 20MP-20FPX90 |
| 13 | 3 | P0300-066 | FITTING, 20MP-20MP |
| 14 | 3 | P0300-040 | FITTING, 20MP-20FP90 |
| 15 | 1 | 030197A | STANDOFF |
| 16 | 1 | P0300-121 | FITTING, 06MJ-04MP |
| 17 | 1 | P0400-001 | COUPLING |
| 18 | 1 | P0301-100 | GAUGE, 5000 PSI |
| 19 | 1 | 030088P | MOUNT, Gauge |
| 20 | 1 | 030198A | STANDOFF |
| 21 | 1 | P0300-191 | FITTING, 12MP-12FPX45 |
| 22 | 1 | A10330A-032 | HOSE ASSEMBLY 3/4 x 32 |
| 23 | 1 | P0300-777 | FITTING, 20MP-06FP |
| 24 | 1 | P0300-106 | FITTING, 06MJ-06MP90 |
| 25 | 1 | A10311A-031 | HOSE ASSEMBLY 3/8 x 31 |
| 26 | 1 | P0400-006 | COUPLING |
| 27 | 1 | 030078P | PIPE |
| 28 | 1 | P0300-097 | FITTING, 20FP-20FP90 |
| 29 | 1 | P0300-110 | FITTING, 20MP-20FP45 |
| 30 | 1 | 029999P | FITTING |
| 31 | 1 | P0260-003 | SNUBBER |

* Refer to Section 7, Valves for parts information.

SPEED CONTROL HYDRAULICS 540, 030051A

540: SN F18300F-11 & After



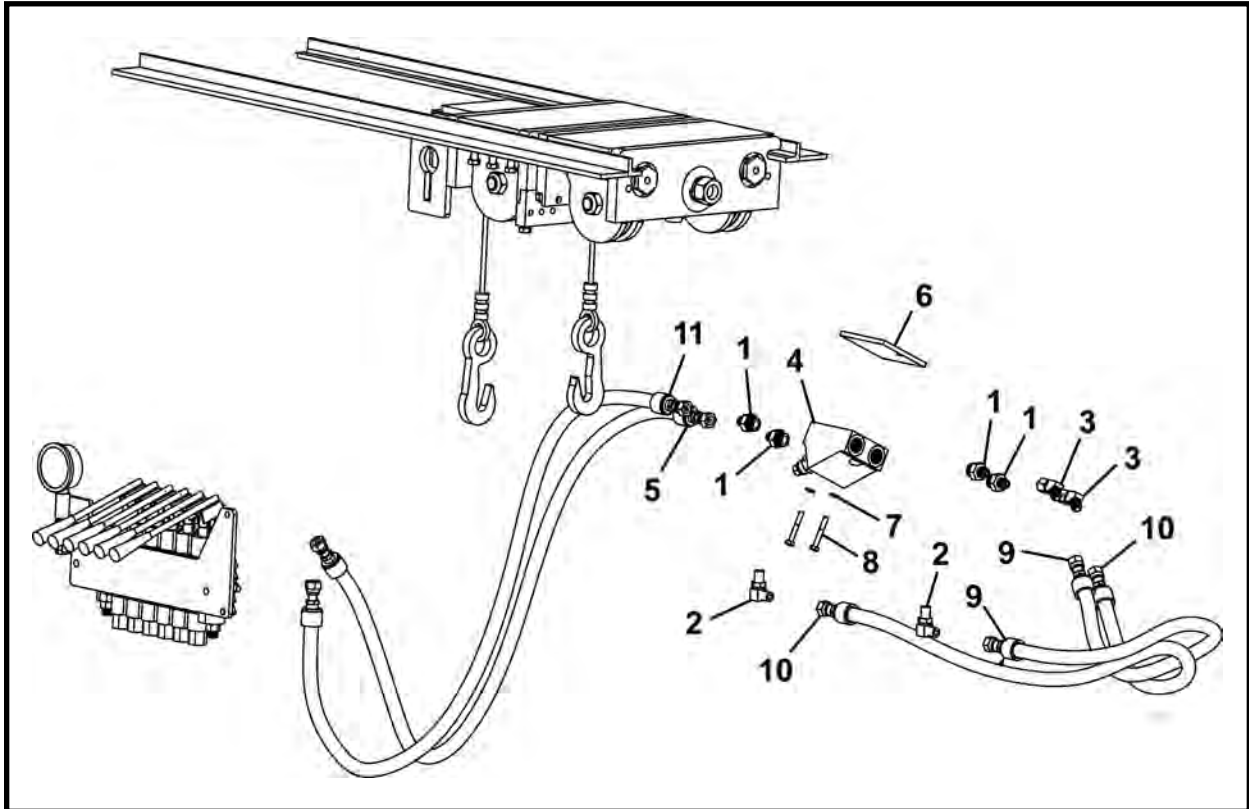
SPEED CONTROL HYDRAULICS 540, 030051A
540: SN F18300F-11 & After

| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|--|
| 0 | 1 | 030051A | HYDRAULICS, SPEED CONTROL 540 |
| 1* | 3 | P0302-533 | VALVE, Flow Control |
| 2 | 2 | P0300-161 | FITTING, 24MB-20FB |
| 3 | 1 | P0300-674 | FITTING, 24MB-6FB |
| 4 | 1 | P0300-355 | FITTING, 06MFOR-06MB90 |
| 5 | 2 | P0300-603 | FITTING, 06MFOR-06FFORX90 |
| 6 | 1 | P0300-548 | FITTING, 20MFFOR-20MB-20MFFOR |
| 7 | 2 | P0300-610 | FITTING, 12FFOR-06MFOR |
| 8 | 1 | P0300-609 | FITTING, 20FFOR-12MFOR |
| 9 | 1 | P0300-450 | FITTING, 16MFOR-20MB90 |
| 10 | 1 | A10308A-145 | HOSE ASSEMBLY, 3/8 x 145 |
| 11 | 1 | A10063A-030 | HOSE ASSEMBLY, 1 x 30 |
| 12 | 1 | A10313A-040 | HOSE ASSEMBLY, 3/8 x 40 |
| 13 | 1 | A10437A-030 | HOSE ASSEMBLY, 3/4 x 30 |
| 14 | 1 | A10436A-036 | HOSE ASSEMBLY, 3/4 x 36 |
| 15 | 1 | A09951A-065 | HOSE ASSEMBLY, 3/4 x 65 |
| 16 | 1 | A10437A-062 | HOSE ASSEMBLY, 3/4 x 62 |
| 17 | 1 | A10081A-080 | HOSE ASSEMBLY, 1-1/4 x 80 |
| 18 | 1 | A10313A-056 | HOSE ASSEMBLY, 3/8 x 56 |
| 19 | 1 | P0300-685 | FITTING, 24MB-24FFORX |
| 20 | 1 | P0300-686 | FITTING, 24MFFOR-24MB |
| 21 | 1 | P0300-624 | FITTING, 20FFORX-20MB90 |
| 22 | 1 | P0302-500 | VALVE, Check |
| 23 | 1 | P0300-684 | FITTING, 20MJ-24MB |
| 24 | 1 | P0085-920 | ORING |
| 25 | 3 | P0300-678 | FITTING, 24MB-12FB |
| 26 | 2 | P0300-579 | FITTING, 12MFS-12MAORB-12MFS |
| 27 | 1 | P0300-359 | FITTING, 12MFOR-12MB45 |
| 28 | 4 | 030199A | STANDOFF |
| 29 | 8 | P0045-005 | WASHER, Lock 5/16 |
| 30 | 8 | P0031-05-013 | SCREW, Socket Head Cap 5/16 UNC x 3.75 |
| 31 | 4 | P0003-05-000 | NUT, 5/16 |
| 32 | 1 | 030092P | PLATE, Connector |

* Refer to Section 7, Valves for parts information.

CONVEYOR LIFT HYDRAULICS 480, 030170A

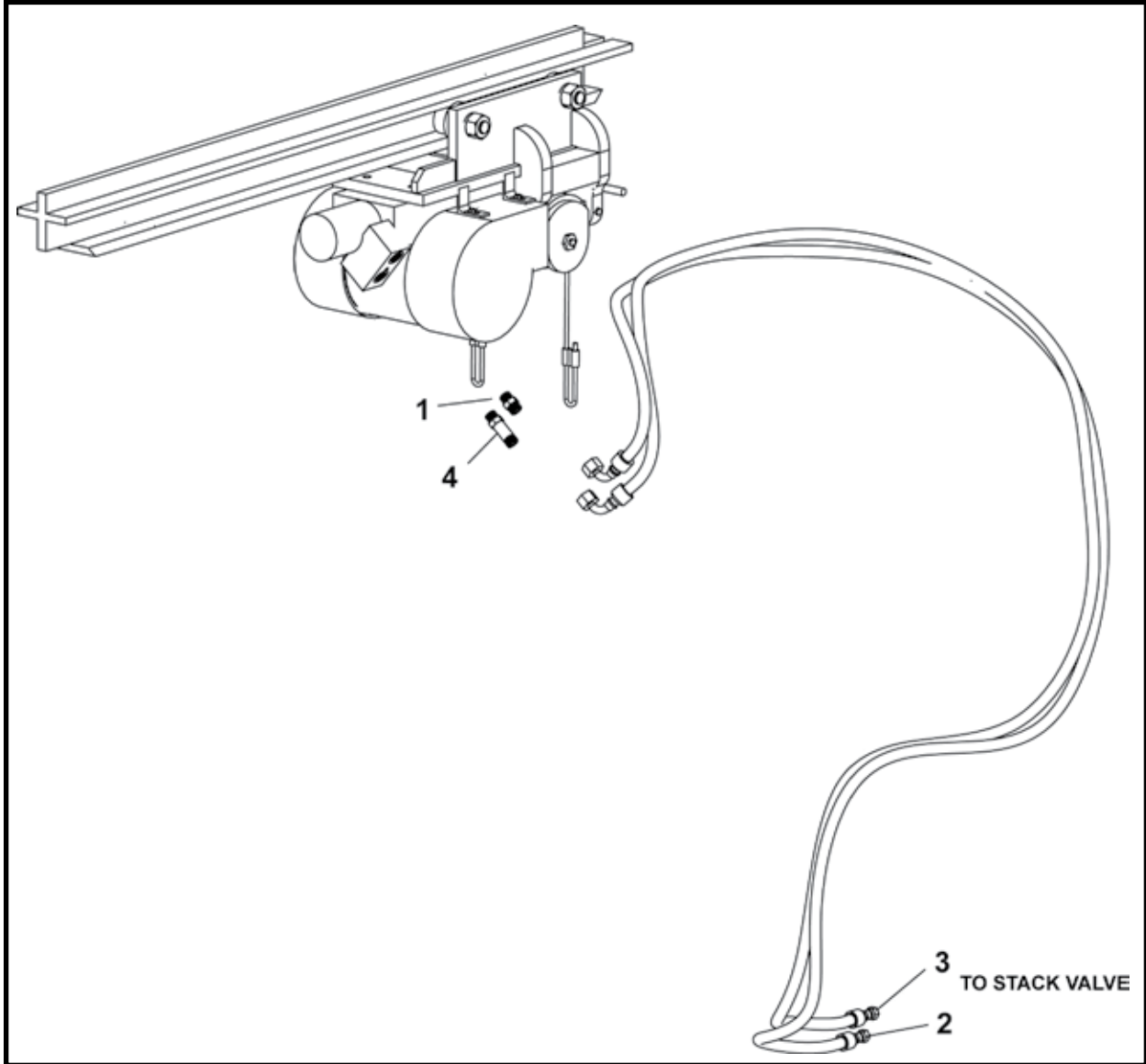
480: SN F23800F-18 & After



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|------------------------------------|
| 0 | 1 | 030170A | CONVEYOR LIFT HYDRAULICS 480 |
| 1 | 4 | P0300-269 | FITTING, 06MJ-08MB |
| 2 | 2 | P0300-042 | FITTING, 06MJ-06MB90 |
| 3 | 2 | P0300-280 | FITTING, 06MJ-06FJX45 |
| 4 | 1 | P0302-680 | VALVE |
| 5 | 1 | A10311A-062 | HOSE ASSEMBLY, 3/8 x 62 |
| 6 | 1 | 029998P | MOUNT, Check Valve |
| 7 | 2 | P0045-004 | WASHER, Lock 1/4 |
| 8 | 2 | P0001-04-007 | SCREW, Hex Head Cap 1/4 UNC x 1.75 |
| 9 | 1 | A10311A-032 | HOSE ASSEMBLY 3/8 x 32 |
| 10 | 1 | A10311A-042 | HOSE ASSEMBLY 3/8 x 42 |
| 11 | 1 | A10311A-061 | HOSE ASSEMBLY 3/8 x 61 |

CONVEYOR LIFT HYDRAULICS 540, 030052A

540: SN F18300F-11 & After

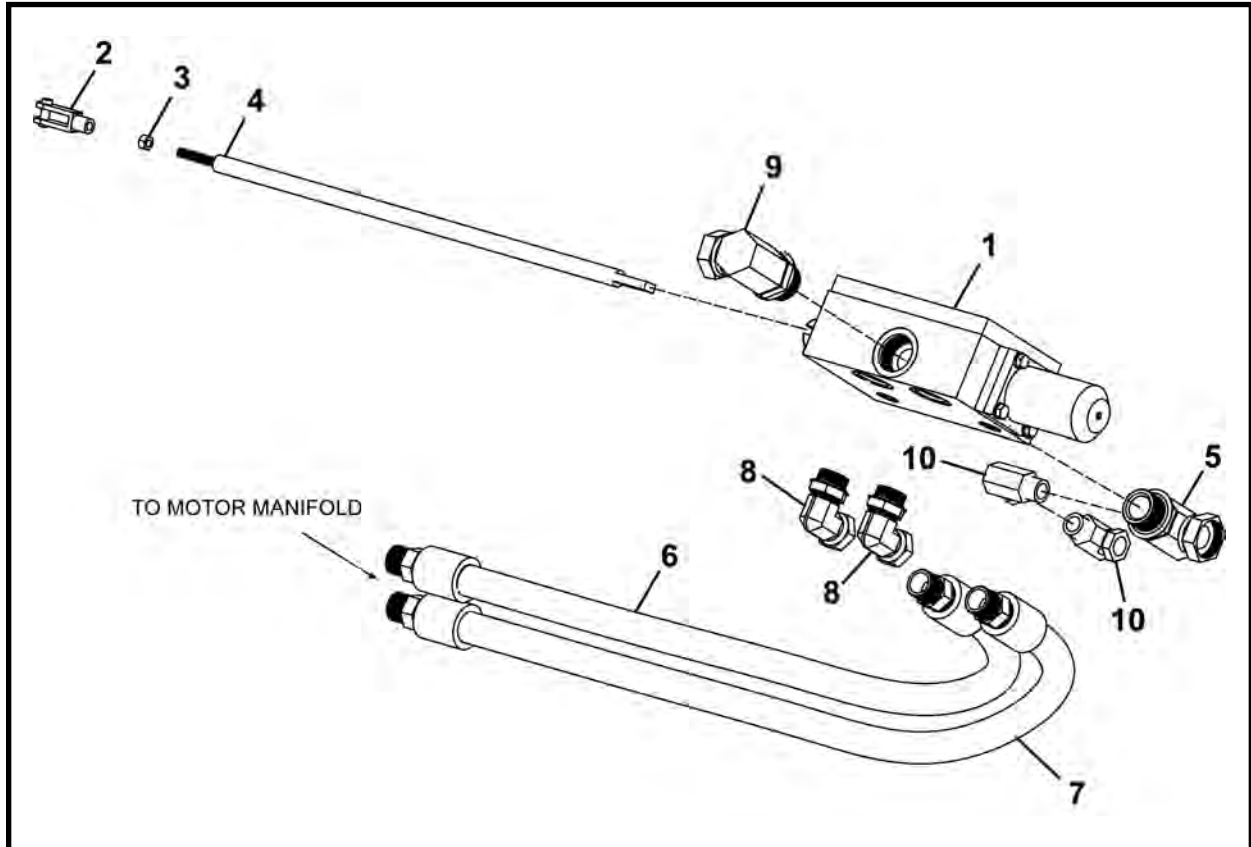


| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|-------------|------------------------------|
| 0 | 1 | 030052A | CONVEYOR LIFT HYDRAULICS 540 |
| 1 | 1 | P0300-305 | FITTING, 08MFOR-08MB |
| 2 | 1 | A10366A-135 | HOSE ASSEMBLY, 3/8 x 135 |
| 3 | 1 | A10366A-133 | HOSE ASSEMBLY, 3/8 x 133 |
| 4 | 1 | P0300-400 | FITTING, 08MFOR-08MB |

NOTES

MOTOR VALVE HYDRAULICS 480, 030163A

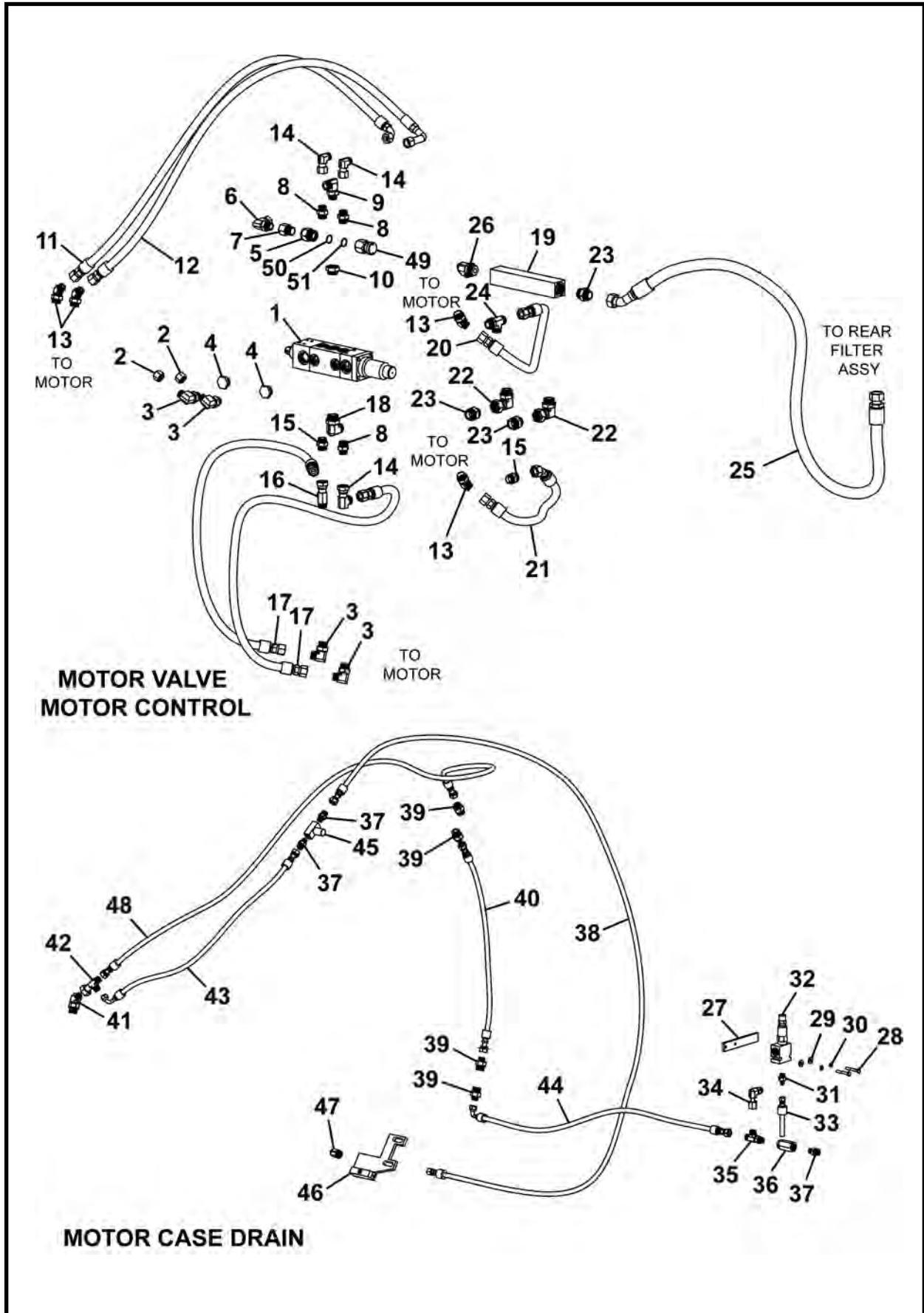
480: SN F23800F-18 & After



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|----------------------------|
| 0 | | 030163A | MOTOR VALVE HYDRAULICS 480 |
| 1 | 1 | 003708A00 | VALVE, Motor 60 Gallon |
| 2 | 1 | P0024-001 | YOKE/WITH CLEVIS PIN |
| 3 | 1 | P0003-06-000 | NUT, 3/8 UNC |
| 4 | 1 | 006909P00 | ROD, Motor Valve Linkage |
| 5 | 1 | 030027P | FITTING |
| 6 | 1 | A10340A-042 | HOSE ASSEMBLY 1 x 42 |
| 7 | 1 | A10340A-044 | HOSE ASSEMBLY 1 x 44 |
| 8 | 2 | P0300-052 | FITTING, 16MB-16FPX90 |
| 9 | 1 | P0300-148 | FITTING, 20MB-20FPX90 |
| 10 | 2 | P0300-034 | FITTING, 12MP-12FPX90 |

MOTOR VALVE HYDRAULICS 540, 030045A

540: SN F18300F00-11 & After



MOTOR VALVE HYDRAULICS 540, 030045A

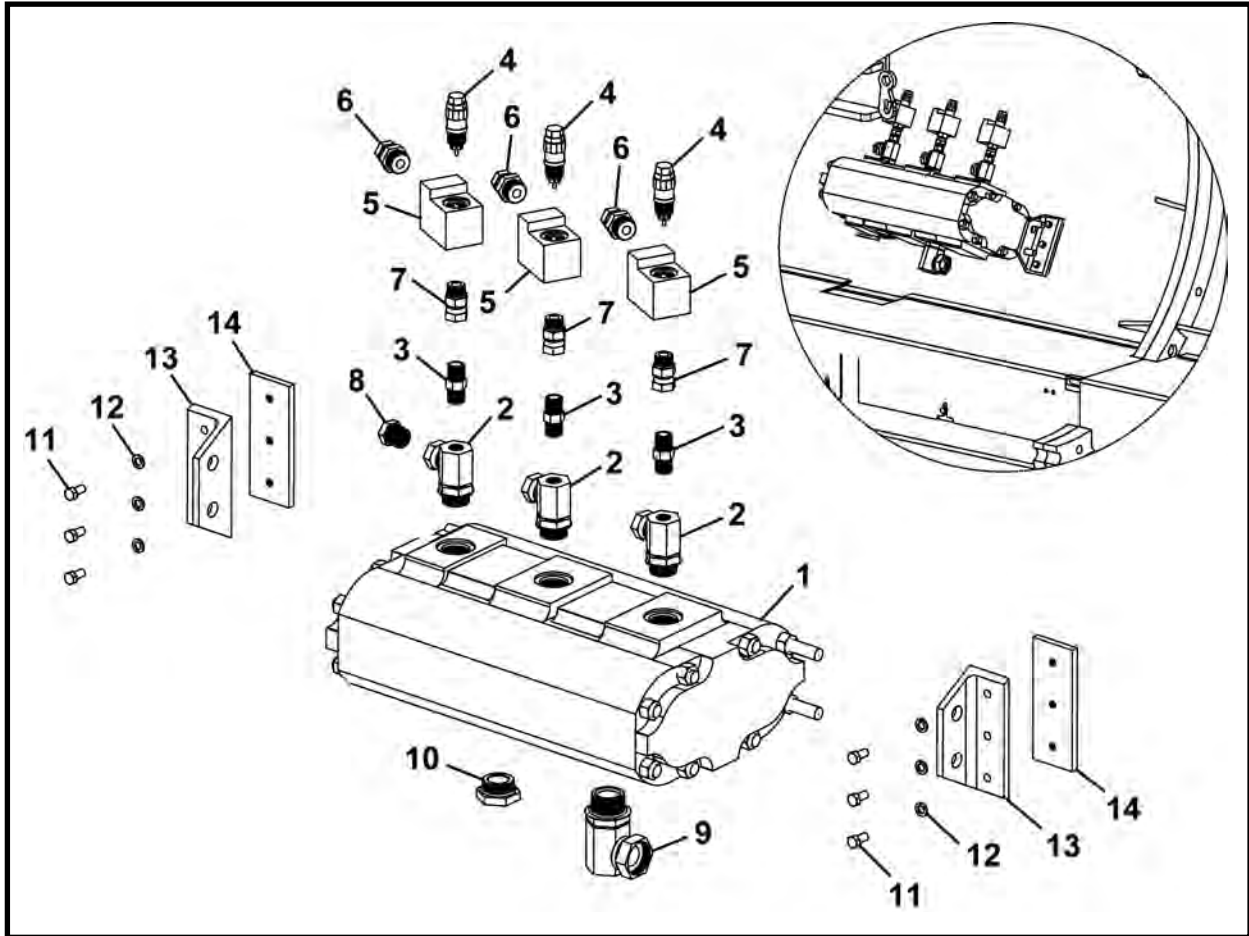
540: SN F18300F00-11 & After

| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|--------------------------------|
| 0 | 1 | 030045A | MOTOR VALVE HYDRAULICS 540 |
| 1* | 1 | 007579A00 | VALVE, Motor 120 Gal |
| 2 | 2 | P0300-410 | CAP, 12FFOR |
| 3 | 4 | P0300-671 | FITTING, 12MFFOR-16FMB90 |
| 4 | 2 | P0300-146 | PLUG, 20MB |
| 5 | 1 | 004900P00 | COUPLER 1 |
| 6 | 1 | P0300-615 | FITTING, 16FFORX-16MB90 |
| 7 | 1 | P0300-616 | FITTING, 16FB-16MP |
| 8 | 3 | P0300-378 | FITTING, 12FOR-16MB |
| 9 | 1 | P0300-371 | FITTING, 16MFOR-16MB90 |
| 10 | 1 | P0300-380 | FITTING, 20MB-16FB |
| 11 | 1 | A10436A-076 | HOSE ASSEMBLY 3/4 x 76 |
| 12 | 1 | A09955A-079 | HOSE ASSEMBLY 3/4 x 79 |
| 13 | 4 | P0300-561 | FITTING, 12MFFOR-16MB45 |
| 14 | 3 | P0300-424 | FITTING, 12MFOR-12FFORX90 |
| 15 | 2 | P0300-319 | FITTING, 16MFOR-16MB |
| 16 | 1 | P0300-328 | FITTING, 16MFOR-16FFORX-16MFOR |
| 17 | 1 | A10437A-050 | HOSE ASSEMBLY 3/4 x 50 |
| 18 | 1 | P0300-620 | FITTING, 20MFOR-20MB90 |
| 19 | 1 | 029929P | MANIFOLD |
| 20 | 2 | A09954A-030 | HOSE ASSEMBLY 3/4 x 30 |
| 21 | 2 | A09953A-054 | HOSE ASSEMBLY 3/4 x 54 |
| 22 | 2 | P0300-624 | FITTING, 20FFORX-20MB90 |
| 23 | 3 | P0300-366 | FITTING, 20MFOR-20MB |
| 24 | 1 | P0300-419 | FITTING, 16MFOR-16MB-16MFOR |
| 25 | 1 | A10081A-090 | HOSE ASSEMBLY 1-1/4 x 90 |
| 26 | 1 | P0300-450 | FITTING, 16MFOR-20MB90 |
| 27 | 1 | 029917P | PLATE |
| 28 | 2 | P0001-04-007 | SCREW, 1/4 UNC x 1.75 |
| 29 | 2 | P0040-004 | WASHER, Hardened Flat 1/4 |
| 30 | 2 | P0045-004 | WASHER, Lock 1/4 |
| 31 | 1 | P0300-245 | FITTING, 04MJ-06MB |
| 32 | 1 | P0302-103 | VALVE, Relief |
| 33 | 1 | A10074A-008 | HOSE ASSEMBLY, 1/4 x 8 |
| 34 | 1 | P0300-618 | FITTING, 06FFORX-06MB90 |
| 35 | 1 | P0300-386 | FITTING, 06MFOR-06MB-06MFOR |
| 36 | 1 | P0302-536 | VALVE, Check |
| 37 | 3 | P0300-356 | FITTING, 06MFOR-06MB |
| 38 | 1 | A10313A-115 | HOSE ASSEMBLY 3/8 x 115 |
| 39 | 4 | P0300-634 | FITTING, 06MFOR-10MB |
| 40 | 1 | A10313A-027 | HOSE ASSEMBLY, 3/8 x 27 |
| 41 | 1 | P0300-769 | FITTING, 06MFFOR-10MB45 |
| 42 | 1 | P0300-613 | FITTING, 06MFOR-06FFORX-06MFOR |
| 43 | 1 | A10079A-027 | HOSE ASSEMBLY 3/8 x 27 |
| 44 | 1 | A10079A-045 | HOSE ASSEMBLY 3/8 x 45 |
| 45 | 1 | P0302-537 | VALVE, Needle |
| 46 | 1 | 007968A00 | OILER, Gear Ring |
| 47 | 1 | P0300-770 | FITTING, 06MFFOR-04MP90 |
| 48 | 1 | A10313A-062 | HOSE ASSEMBLY 3/8 x 62 |
| 49 | 1 | 008149A00 | COUPLER UNION |
| 50 | 1 | P0085-123 | ORING |
| 51 | 1 | P0084-123 | RING, Back-Up |

* Refer to Section 7, Valves for parts information.

FLOW DIVIDER HYDRAULICS 480, 030149A

480: SN F23800F-18 & After

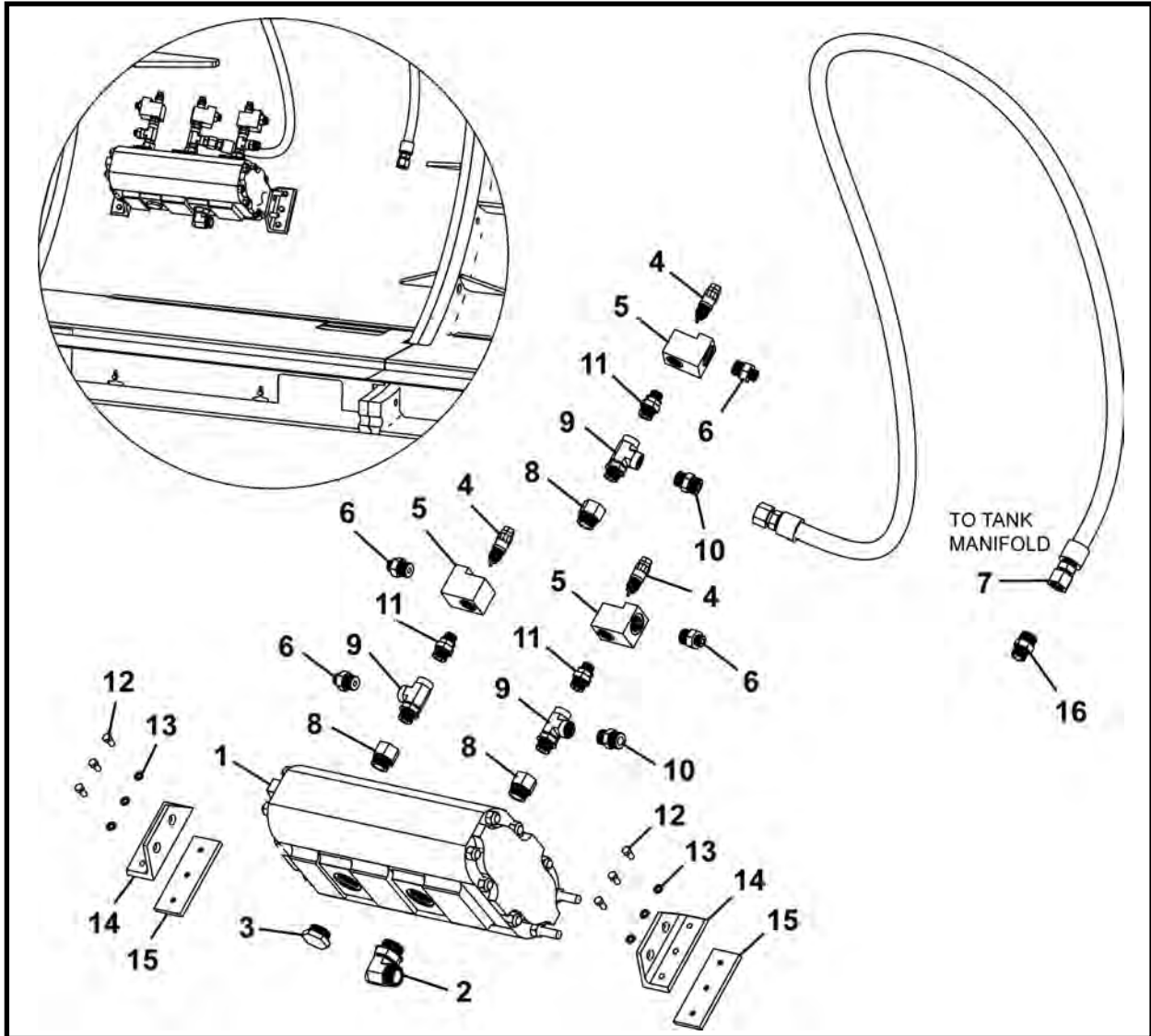


| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|-----------------------------|
| 0 | 1 | 030149A | FLOW DIVIDER HYDRAULICS 480 |
| 1* | 1 | P0303-163 | PUMP |
| 2 | 3 | 030191P | FITTING |
| 3 | 3 | P0300-048 | FITTING, 08MP-08MP |
| 4 | 3 | P0302-144 | CARTRIDGE, Relief |
| 5 | 3 | 010129P00 | BODY, Valve |
| 6 | 3 | P0300-210 | FITTING, 12MB-08FPX |
| 7 | 3 | P0300-094 | FITTING, 10MB-08FPX |
| 8 | 1 | P0300-012 | FITTING, 12MP-08FPS |
| 9 | 1 | P0300-148 | FITTING, 20MB-20FPX90-BR |
| 10 | 1 | P0300-146 | PLUG, 20MB |
| 11 | 6 | P0001-06-003 | BOLT, 3/8 UNC x .75 |
| 12 | 6 | P0045-006 | WASHER, Lock 3/8 |
| 13 | 2 | 029938P | MOUNT |
| 14 | 2 | 029843P | BAR, Mount |

* Refer to Section 9, Pumps for parts information.

FLOW DIVIDER HYDRAULICS 540, 030046A

540: SN F18300F-11 & After



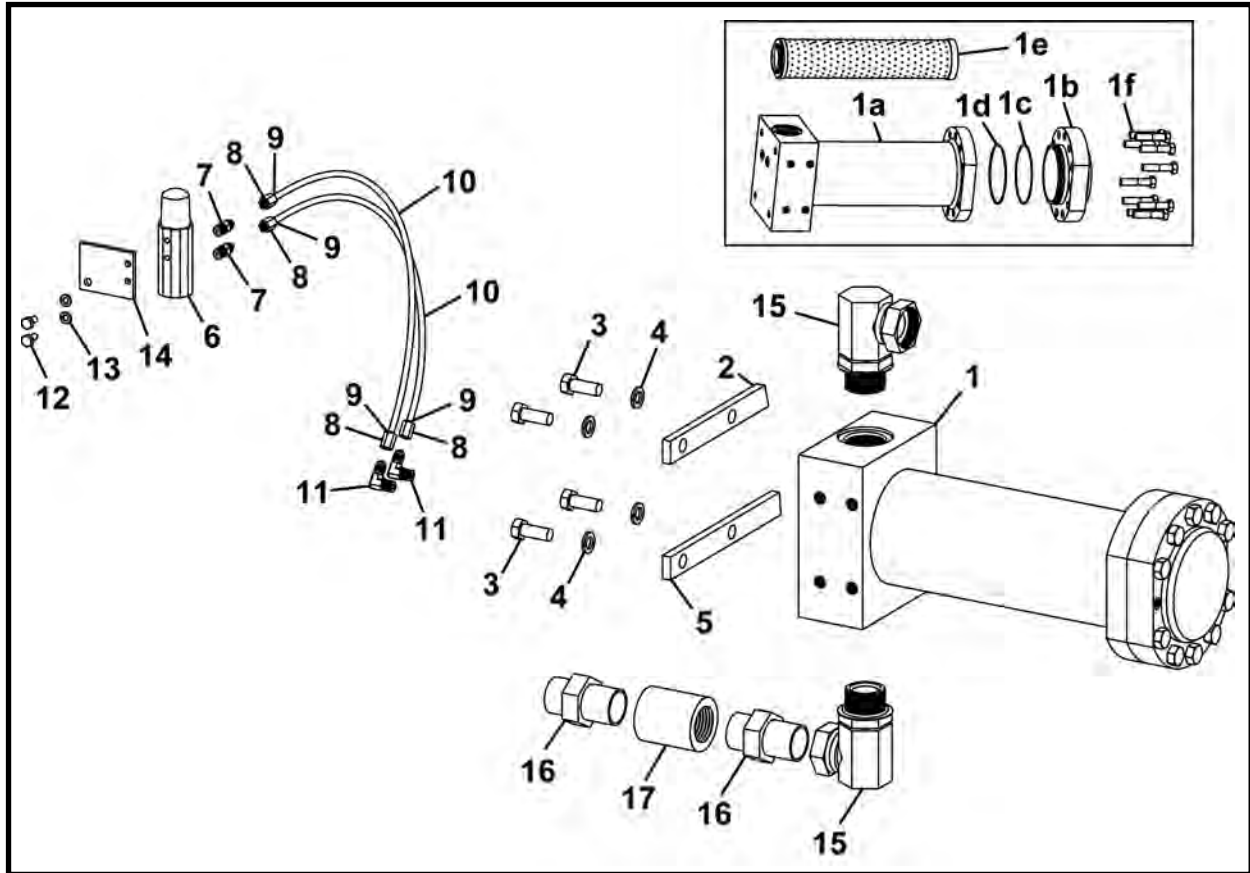
| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|-----------------------------|
| 0 | 1 | 030046A | FLOW DIVIDER HYDRAULICS 540 |
| 1* | 1 | P0303-163 | PUMP |
| 2 | 1 | P0300-620 | FITTING, 20MFOR-20MB90 |
| 3 | 1 | P0300-146 | PLUG, 20MB |
| 4 | 3 | P0302-144 | CARTRIDGE, Relief Valve |
| 5 | 3 | 010129P00 | BODY, Relief Valve |
| 6 | 4 | P0300-375 | FITTING, 08MFOR-12MB |
| 7 | 1 | A10437A-125 | HOSE ASSEMBLY, 3/4 x125 |
| 8 | 3 | P0300-587 | FITTING, 16MB-12FB |
| 9 | 3 | P0300-536 | FITTING, 12MB-12FB-12FB |
| 10 | 2 | P0300-329 | FITTING, 12MFOR-12MB |
| 11 | 3 | P0300-680 | FITTING, 12MB-10MB |
| 12 | 6 | P0001-06-003 | BOLT, 3/8 UNC x .75 |
| 13 | 6 | P0045-006 | WASHER, Lock 3/8 |
| 14 | 2 | 029938P | MOUNT |
| 15 | 2 | 029843P | BAR, Mount |
| 16 | 1 | P0300-369 | FITTING, 21MFOR-12MP |

* Refer to Section 9, Pumps for parts information.

NOTES

FILTER ASSEMBLY HYDRAULICS 480, 030165A

480: SN F23800F-18 & After



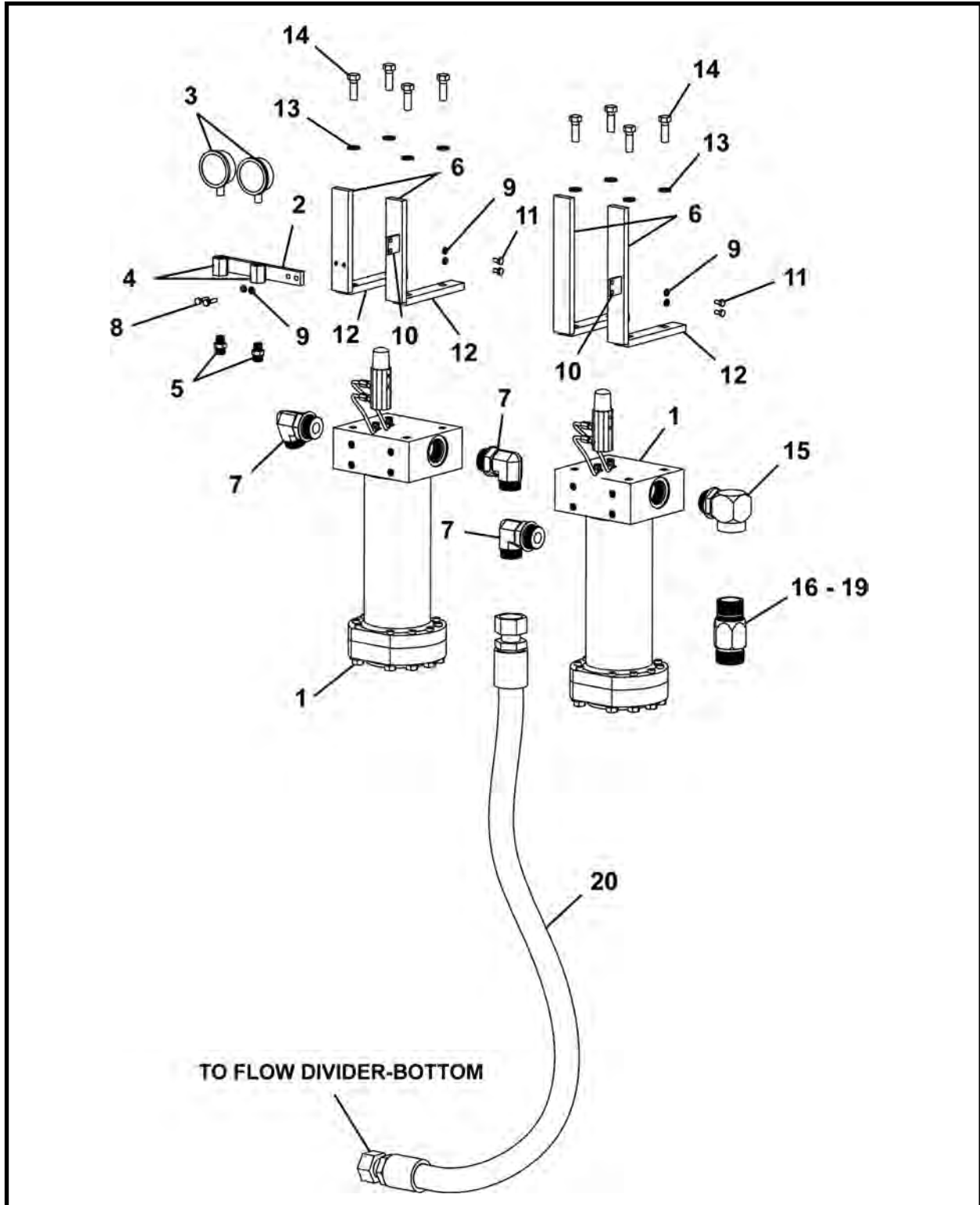
| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|---------------|--|
| 0 | 1 | 030165A | FILTER ASSEMBLY HYDRAULICS 480 |
| 1* | 1 | 030442A | FILTER ASSEMBLY (Includes items 1a - 1f) |
| 1a | 1 | 029909A | HOUSING, Filter |
| 1b | 1 | 007966P01 | COVER |
| 1c** | 1 | P0084-156 | RING, Back-Up |
| 1d** | 1 | P0085-156 | ORING |
| 1e | 1 | P0309-121 | FILTER, High Pressure |
| 1f | 10 | P0001-08-009 | BOLT, 1/2 UNC x 2.25 |
| 2 | 1 | 030187P | MOUNT, Filter |
| 3 | 4 | P0001-08-005 | BOLT, 1/2 UNC x 1.25 |
| 4 | 4 | P0045-008 | WASHER, Lock 1/2 |
| 5 | 1 | 030181P | MOUNT, Filter |
| 6 | 1 | P0301-108 | PRESSURE INDICATOR |
| 7 | 2 | P0300-158 | FITTING, 03MJ-02MP |
| 8 | 4 | P0300-155 | NUT, 03TSN |
| 9 | 4 | P0300-154 | SLEEVE, 03TS |
| 10 | 2 | P0110-105-019 | TUBE, Hydraulic Steel 3/16 x 19 |
| 11 | 2 | P0300-159 | FITTING, 03MJ-02MP90 |
| 12 | 2 | P0001-04-002 | BOLT, 1/4 UNC x .5 |
| 13 | 2 | P0045-004 | WASHER, Lock 1/4 |
| 14 | 1 | 030090P | MOUNT, Filter Indicator |
| 15 | 2 | P0300-148 | FITTING, 20MB-20FPX90-BR |
| 16 | 2 | P0300-066 | FITTING, 20MP-20MP |
| 17 | 1 | P0400-006 | COUPLING, Pipe 1-1/4 |

* Use 029995A, HP TBM Filter Service Assembly when ordering complete filter housing assembly. Refer to this section for parts information.

** Included in Seal Kit, 008190A00.

FILTER ASSEMBLY 540, 030047A

540: SN F18300F-11 & After



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|-----------|--------------------------------|
| 0 | 1 | 030047A | FILTER ASSEMBLY HYDRAULICS 540 |
| 1* | 2 | 029910A | FILTER ASSEMBLY |
| 2 | 1 | 029933P | MOUNT, Gauge |
| 3 | 2 | P0301-150 | SNUBBER |
| 4 | 2 | 029921P | FITTING |

FILTER ASSEMBLY 540, 030047A

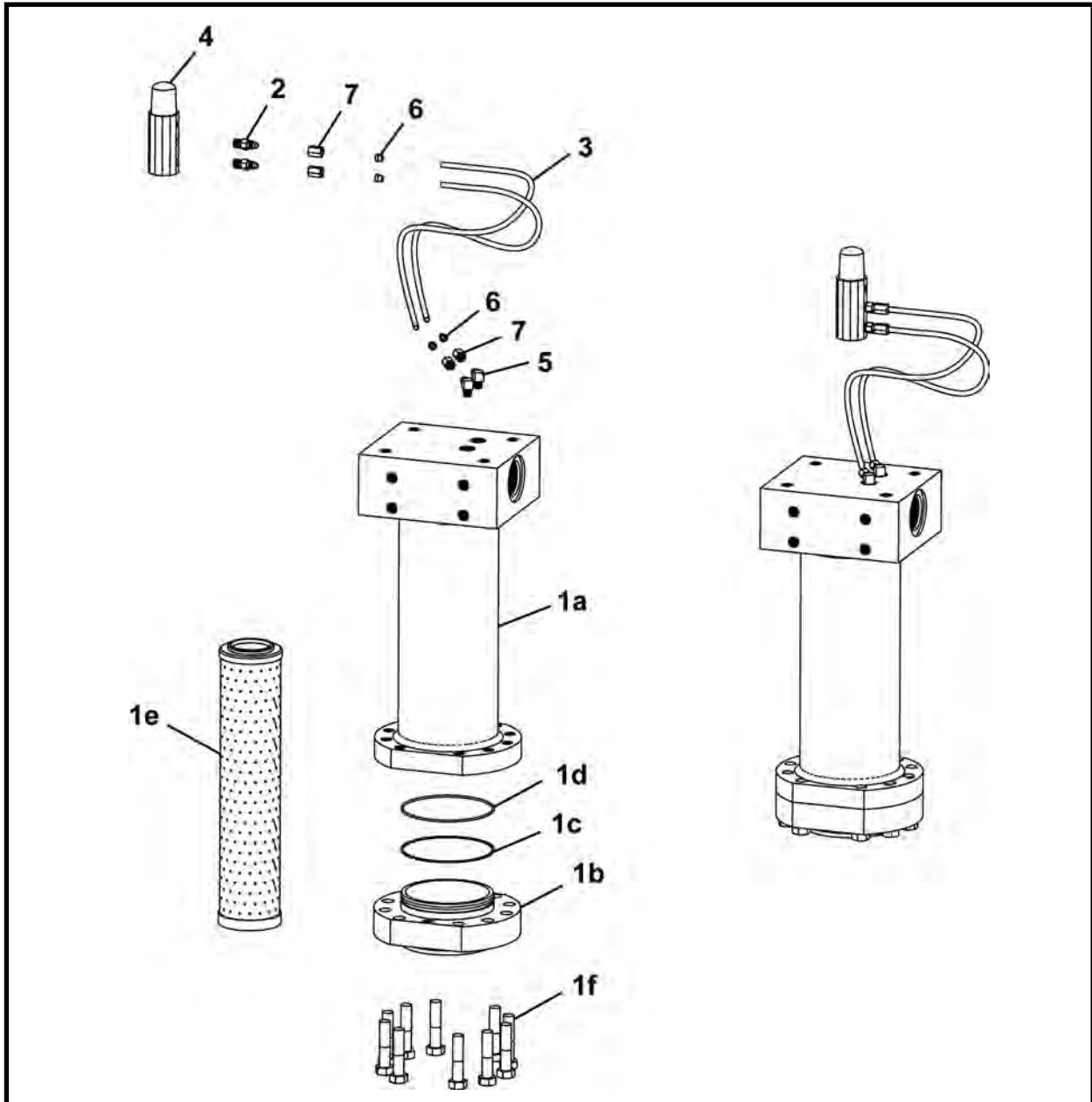
540: SN F18300F-11 & After

| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|--------------------------|
| 5 | 2 | P0300-356 | FITTING, 06MFOR-06MB |
| 6 | 4 | 029964P | MOUNT, Filter |
| 7 | 3 | P0300-620 | FI(TTING, 20MFOR-20MB90 |
| 8 | 2 | P0001-04-004 | BOLT, 1/4 UNC x 1 |
| 9 | 6 | P0045-004 | WASHER, Lock 1/4 |
| 10 | 2 | 029932P | MOUNT, Filter Indicator |
| 11 | 4 | P0001-04-002 | BOLT, 1/4 UNC x .5 |
| 12 | 4 | 029930P | MOUNT, Filter |
| 13 | 8 | P0045-008 | WASHER, Lock 1/2 |
| 14 | 8 | P0001-08-006 | BOLT, 1/2 UNC x 1.5 |
| 15 | 1 | P0300-046 | FITTING, 20MB-20FP90 |
| 16 | 1 | 005348P00 | COUPLER, Female 1-1/4 |
| 17 | 1 | P0084-123 | RING, Back-Up |
| 18 | 1 | P0085-123 | ORING |
| 19 | 1 | P0402-006 | NIPPLE, Close 1-1/4 |
| 20 | 1 | A10458A-072 | HOSE ASSEMBLY 1-1/4 X 72 |

* Refer to this section for parts information.

FILTER ASSEMBLY, 029910A

540: SN F18300F-11 & After



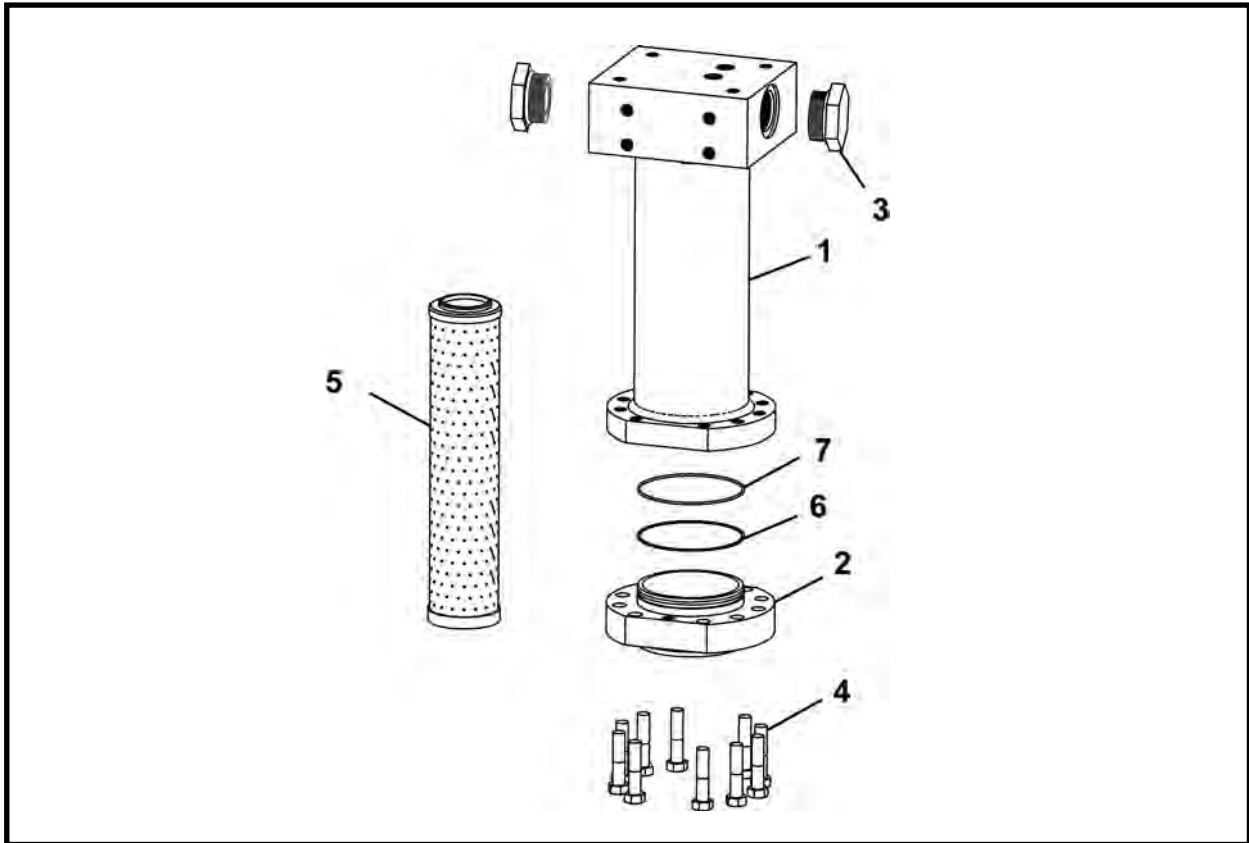
| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|---------------|---|
| 0 | 1 | 029910A | FILTER ASSEMBLY 540 |
| 1* | 1 | 030442A | FILTER ASSEMBLY, ORB (Includes items 1a - 1f) |
| 1a | 1 | 029909A | HOUSING, Filter |
| 1b | 1 | 007966P01 | COVER |
| 1c** | 1 | P0084-156 | RING, Back-Up |
| 1d** | 1 | P0085-156 | ORING |
| 1e | 1 | P0309-121 | FILTER, High Pressure |
| 1f | 10 | P0001-08-009 | BOLT, 1/2 UNC x 2.25 |
| 2 | 2 | P0300-158 | FITTING, 03MJ-02MP |
| 3 | 2 | P0110-105-014 | TUBE, Steel |
| 4 | 1 | P0301-108 | INDICATOR, Pressure |
| 5 | 2 | P0300-623 | FITTING, 03MJ-03MB90 |
| 6 | 4 | P0300-154 | SLEEVE, 03TS |
| 7 | 4 | P0300-155 | NUT, Sleeve 03TSN |

* Use 029995A, HP TBM Filter Service Assembly when ordering complete filter housing assembly. Refer to this section for parts information.

** Included in Seal Kit, 008190A00.

HP TBM FILTER SERVICE ASSEMBLY, 029995A

480: SN F23800F-18 & After; 540: SN F18300F-11 & After

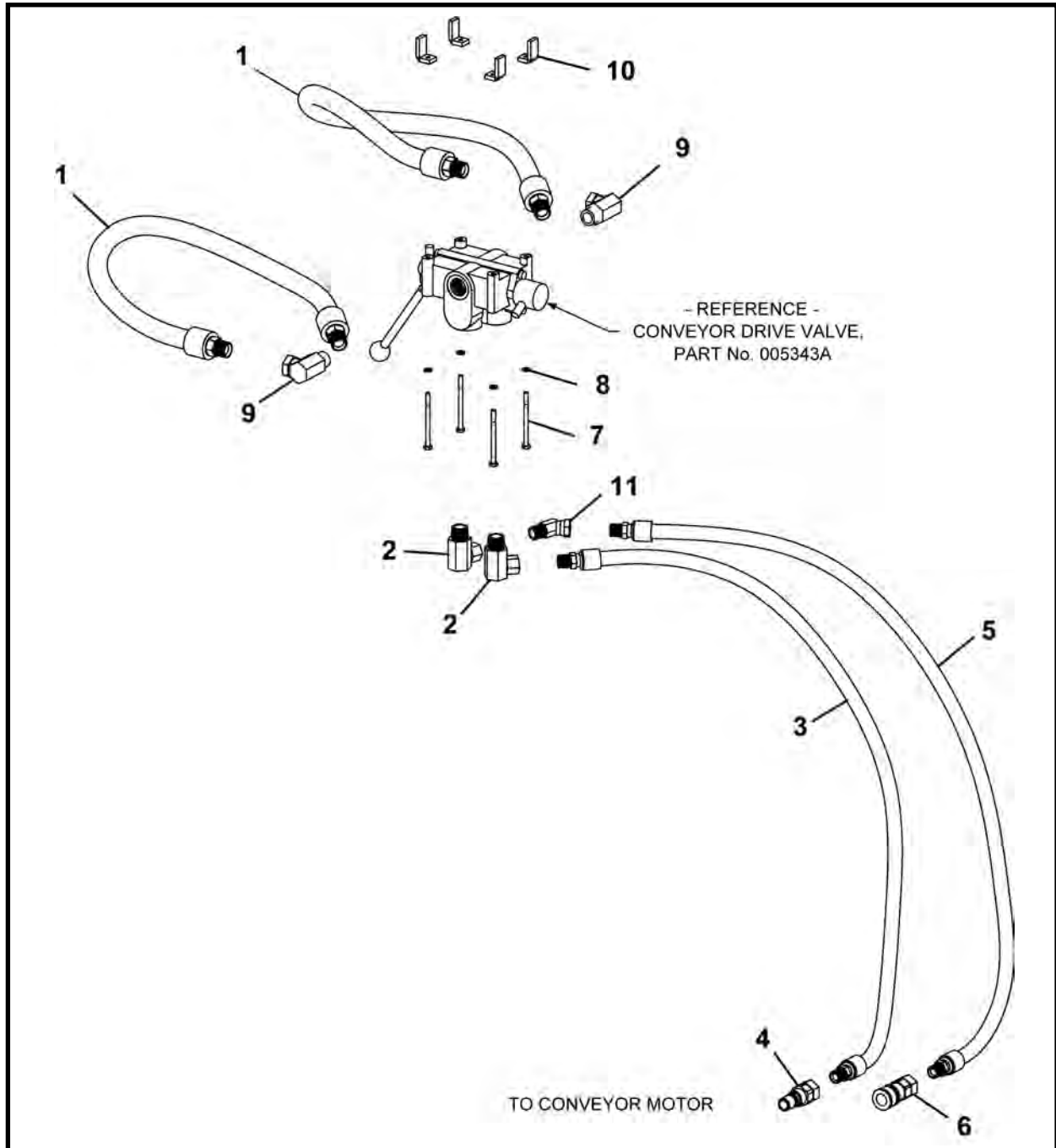


| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|--------------------------------|
| 0 | 1 | 029995A | HP TBM FILTER SERVICE ASSEMBLY |
| 1 | 1 | 029909A | HOUSING, Filter |
| 2 | 1 | 007966P01 | COVER |
| 3 | 2 | P0300-146 | PLUG, 20MB |
| 4 | 10 | P0001-08-009 | BOLT, 1/2 UNC x 2.25 |
| 5 | 1 | P0309-121 | FILTER, High Pressure |
| 6* | 1 | P0084-156 | RING, Back-Up |
| 7* | 1 | P0085-156 | ORING |

* Included in Seal Kit, 008190A00.

CONVEYOR VALVE HYDRAULICS 480, 030443A

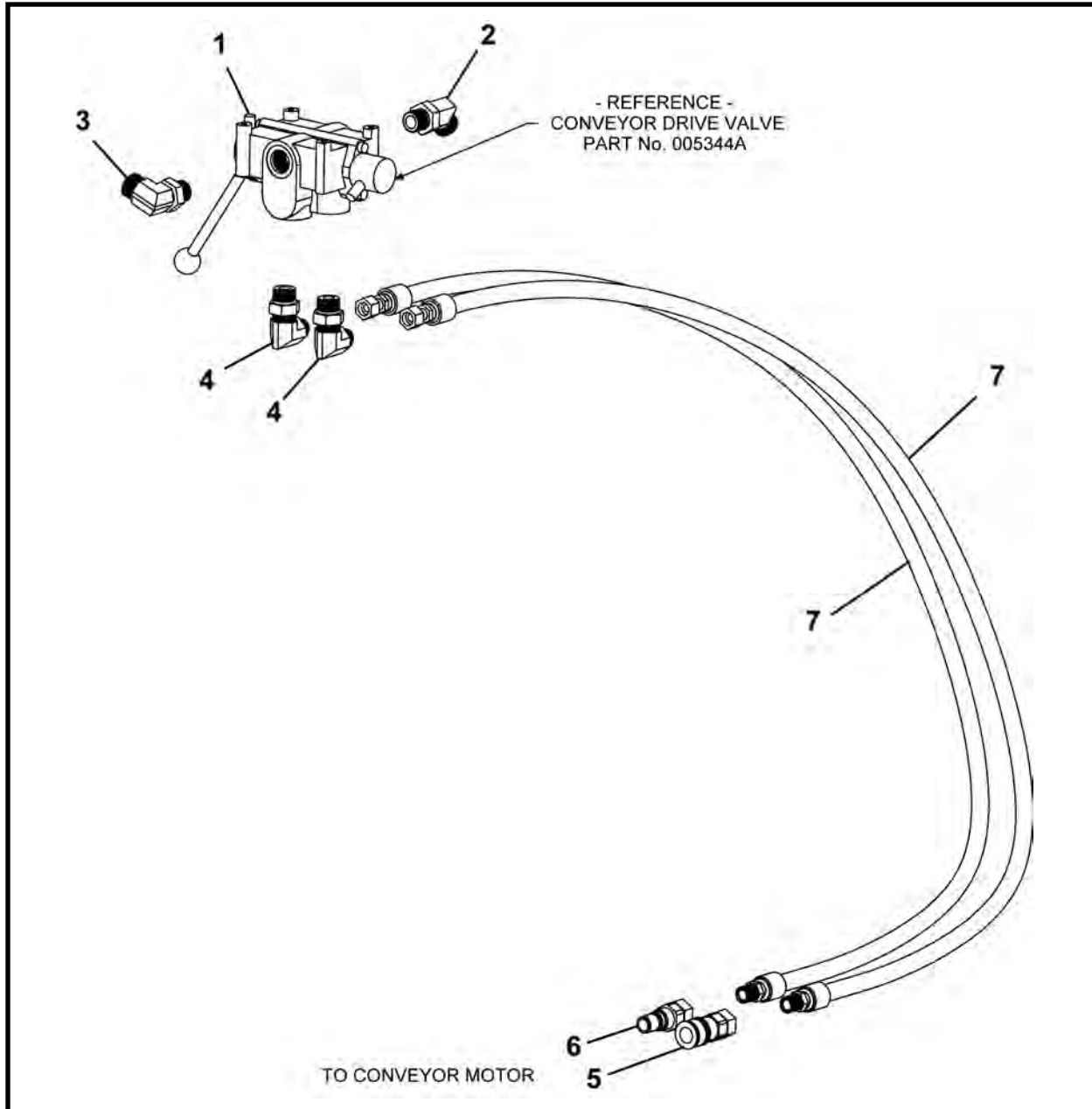
480: SN F23800F-18 & After



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|-------------------------------|
| 0 | 1 | 030443A | CONVEYOR VALVE HYDRAULICS 480 |
| 1 | 2 | A10330A-037 | HOSE ASSEMBLY 3/4 x 37 |
| 2 | 2 | P0300-022 | FITTING, 12MP-08FPX90-BR |
| 3 | 1 | A10320A-048 | HOSE ASSEMBLY 1/2 x 48 |
| 4 | 1 | P0100-004B | COUPLER, Male |
| 5 | 1 | A10320A-048 | HOSE ASSEMBLY 1/2 x 48 |
| 6 | 1 | P0100-004A | COUPLER, Female |
| 7 | 4 | P0001-04-014 | BOLT, 1 UNC x 4 |
| 8 | 4 | P0045-004 | WASHER, Lock 1/4 |
| 9 | 2 | P0300-034 | FITTING, 12MP-12FPX90 BR |
| 10 | 4 | 005279P02 | BRACE, Conveyor Valve |
| 11 | 1 | P0300-173 | FITTING, 08MP-08PX45 |

CONVEYOR VALVE HYDRAULICS 540, 030048A

540: SN F18300F-11 & After

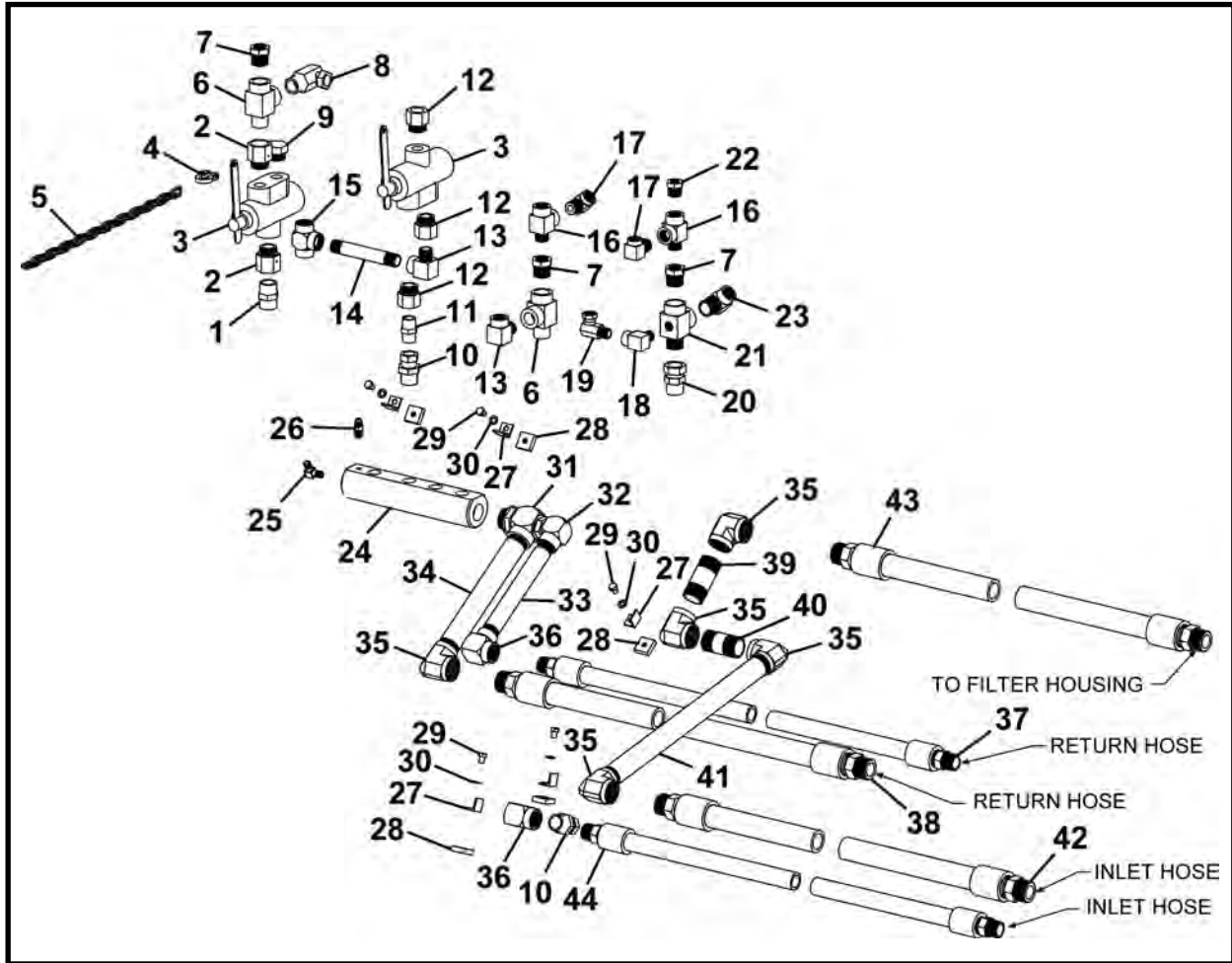


| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|-------------|-------------------------------|
| 0 | 1 | 030048A | CONVEYOR VALVE HYDRAULICS 540 |
| 1* | 0 | P0302-538 | VALVE, Conveyor Drive |
| 2 | 1 | P0300-359 | FITING, 12MFOR-12MB45 |
| 3 | 1 | P0300-372 | FITTING, 12MFOR-12MB90 |
| 4 | 2 | P0300-373 | FITTING, 08MFOR-12MB90 |
| 5 | 1 | P0100-004A | COUPLER, Female |
| 6 | 1 | P0100-004B | COUPLER, Male |
| 7 | 2 | A10080A-060 | HOSE ASSEMBLY 1/2 x 60 |

* Refer to Section 7, Valves for parts information.

CONVEYOR SAFETY VALVE HYDRAULICS 480, 030167A

480: SN F23800F-18 & After



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-------|-----------|--------------------------------------|
| 0 | 1 | 030167A | CONVEYOR SAFETY VALVE HYDRAULICS 480 |
| 1 | 1 | P0300-013 | FITTING, 16MP-16MP |
| 2 | 2 | P0300-051 | FITTING, 16MB-16FP |
| 3* | 2 | P0302-113 | VALVE |
| 4 | 1 | P0091-003 | SHACKLE, Anchor |
| 5 | 72 LI | P0094-004 | CHAIN, 3/16 |
| 6 | 2 | P0300-076 | FITTING, 16MP-16FP-16FP |
| 7 | 3 | P0300-133 | FITTING, 16MP-12FPS |
| 8 | 1 | P0300-105 | FITTING, 16MP-12FPX90 |
| 9 | 1 | P0300-028 | FITTING, 16MP-PLUG-SOLID BACK |
| 10 | 2 | P0300-118 | FITTING, 16MP-12FPX |
| 11 | 1 | P0300-107 | FITTING, 12MP-12MP |
| 12 | 3 | P0300-068 | FITTING, 16MB-12FP |
| 13 | 2 | P0300-009 | FITTING, 12MP-12FP90 |
| 14 | 1 | P0406-010 | NIPPLE, 3/4 x 6 |
| 15 | 1 | P0300-062 | FITTING, 12FP-12FP-12FP |
| 16 | 2 | P0300-019 | FITTING, 12MP-12FP-12FP |
| 17 | 2 | P0300-023 | FITTING, 12MP-08FP90 |
| 18 | 1 | P0300-032 | FITTING, 08MP-08FP90 |
| 19 | 1 | P0300-018 | FITTING, 08MP-08FPX90 |
| 20 | 1 | P0300-074 | FITTING, 16MP-16FPX |
| 21 | 1 | 030157P | FITTING |
| 22 | 1 | P0300-012 | FITTING, 12MP-08FPS |

CONVEYOR SAFETY VALVE HYDRAULICS 480, 030167A

480: SN F23800F-18 & After

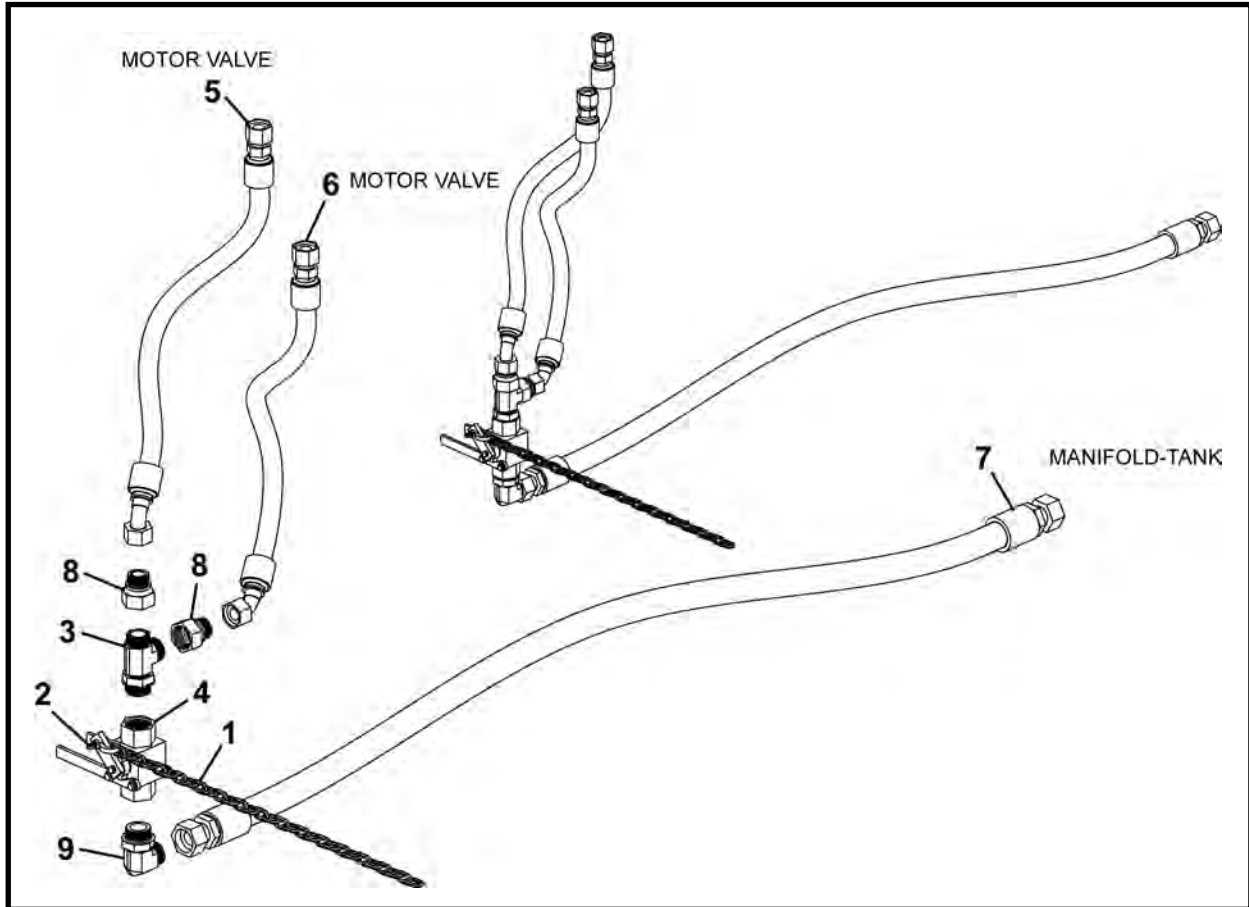
| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|---------------------------|
| 23 | 1 | P0300-115 | FITTING, 16MP-12FP90 |
| 24 | 1 | 007185P00 | ROD |
| 25 | 1 | P0300-124 | FITTING, 04MP-04MP90 |
| 26 | 1 | P0300-121 | FITTING, 06MJ-04MP |
| 27 | 5 | 029997P | TAB, Mounting |
| 28 | 5 | P0011-006A | NUT, Strut Square 3/8 UNC |
| 29 | 5 | P0001-06-002 | BOLT, 3/8 UNC x 1/2 |
| 30 | 5 | P0045-006 | WASHER, Lock 3/8 |
| 31 | 1 | 030059P | FITTING |
| 32 | 1 | P0300-033 | FITTING, 16MB-16FP90 |
| 33 | 1 | 030159P | PIPE, 1 |
| 34 | 1 | 030158P | PIPE, 1-1/4 |
| 35 | 5 | P0300-097 | FITTING, 20FP-20FP90 |
| 36 | 2 | P0300-072 | FITTING, 16FP-16FP90-BR |
| 37 | 1 | A10340A-132 | HOSE ASSEMBLY 1 x 132 |
| 38 | 1 | A10350A-132 | HOSE ASSEMBLY 1-1/4 x 132 |
| 39 | 1 | P0408-004 | NIPPLE |
| 40 | 1 | P0408-003 | NIPPLE |
| 41 | 1 | 030174P | PIPE, 1-1/4 |
| 42 | 1 | A10350A-122 | HOSE ASSEMBLY 1-1/4 x 122 |
| 43 | 1 | A10350A-066 | HOSE ASSEMBLY 1-1/4 x 66 |
| 44 | 1 | A10340A-130 | HOSE ASSEMBLY 1 x 130 |

* Refer to Section 7, Valves for parts information.

LI - Linear Inch

CONVEYOR SAFETY VALVE HYDRAULICS 540, 030049A

540: SN F18300F-11 & After



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-------|-------------|--------------------------------------|
| 0 | 1 | 030049A | CONVEYOR SAFETY VALVE HYDRAULICS 540 |
| 1 | 72 LI | P0094-004 | CHAIN, 3/16 |
| 2 | 1 | P0091-003 | SHACKLE, Anchor |
| 3 | 1 | P0300-548 | FITTING, 20MFFOR-20MB-20MFFOR |
| 4* | 1 | 029920A | VALVE, Safety |
| 5 | 1 | A10019A-024 | HOSE ASSEMBLY 1 x 24 |
| 6 | 1 | A10019A-023 | HOSE ASSEMBLY 1 x 23 |
| 7 | 1 | A10458A-063 | HOSE ASSEMBLY 1-1/4 x 63 |
| 8 | 2 | P0300-552 | FITTING, 16MFFOR-20FFORX |
| 9 | 1 | P0300-620 | FITTING, 20MFOR-20MB90 |

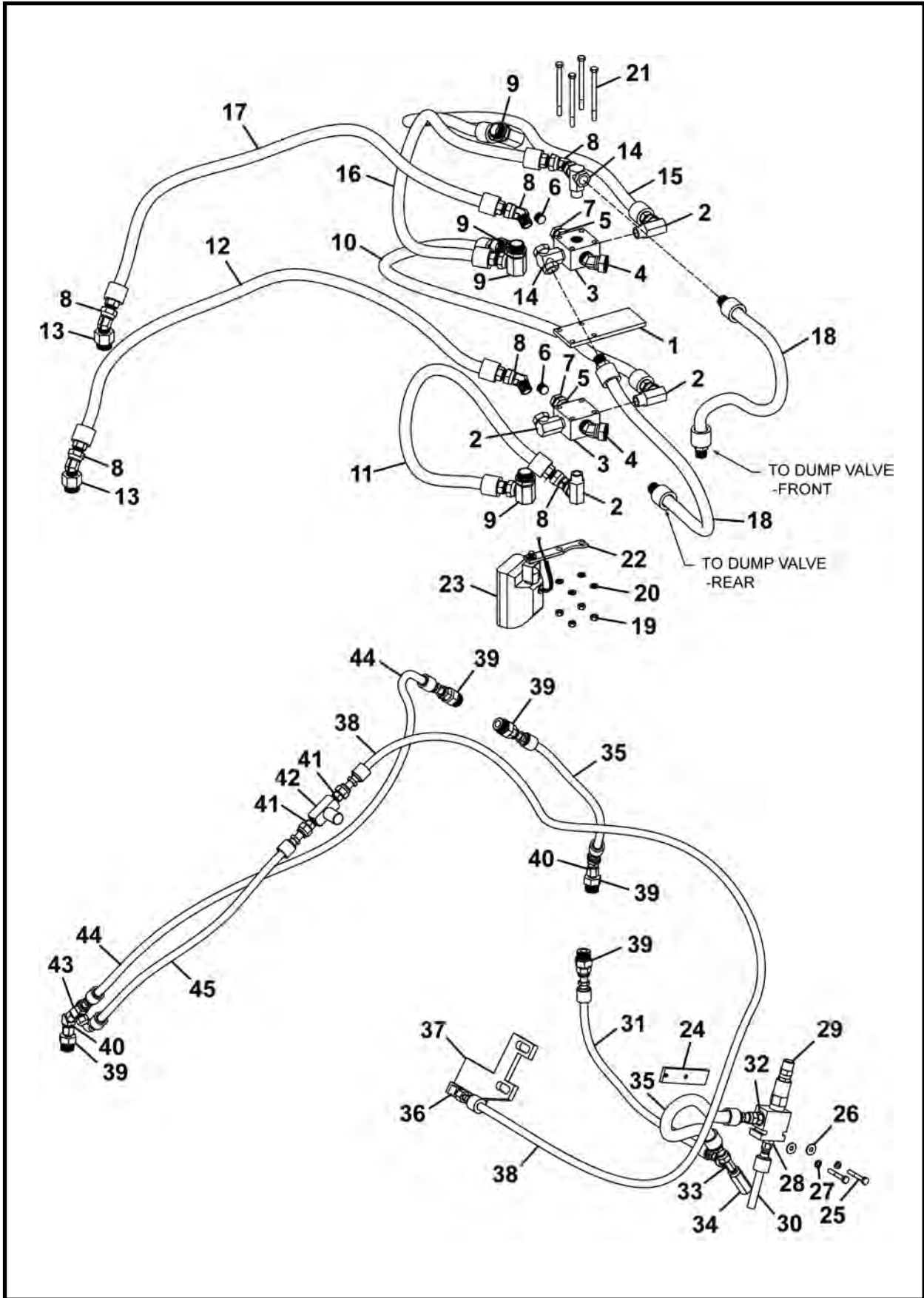
* Refer to Section 7, Valves for parts information.

LI - Linear Inch

NOTES

MANIFOLD HYDRAULICS 480, 030168A

480: SN F23800F-18 & After



MANIFOLD HYDRAULICS 480, 030168A

480: SN F23800F-18 & After

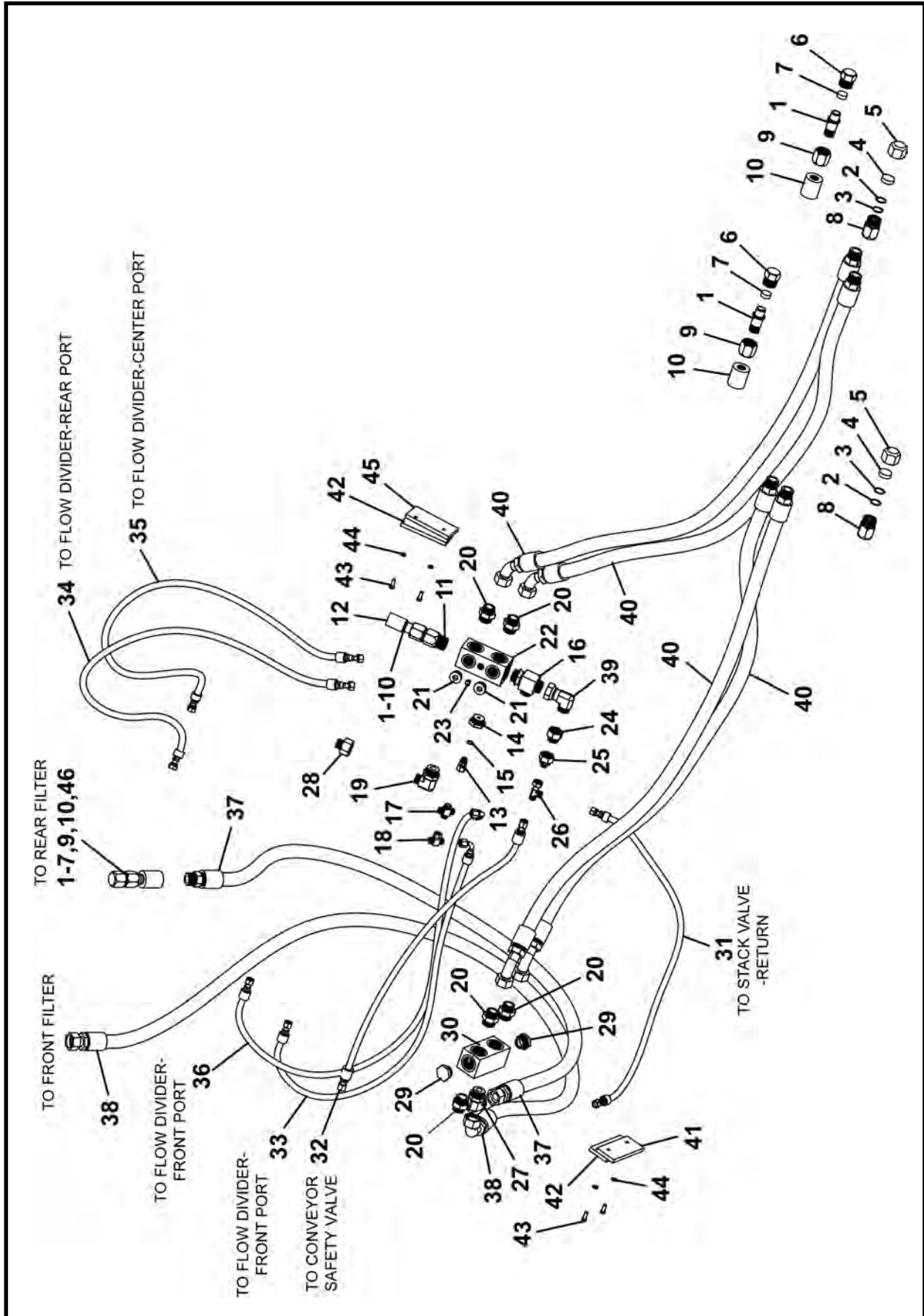
| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|--------------------------------|
| 0 | 1 | 030168A | MANIFOLD HYDRAULICS 480 |
| 1 | 1 | 030096P | MOUNT, Manifold |
| 2 | 4 | P0300-034 | FITTING, 12MP-12FPX90 |
| 3 | 2 | 007193P01 | MANIFOLD, Connection |
| 4 | 2 | P0300-215 | FITTING, 16MP-16FPX45 |
| 5 | 2 | P0300-117 | FITTING, 12MP-12FPX |
| 6 | 2 | P0300-079 | FITTING, 08MP-HHP |
| 7 | 2 | P0300-012 | FITTING, 12MP-08FPS |
| 8 | 6 | P0300-191 | FITTING, 12MP-12FPX45 |
| 9 | 4 | P0300-233 | FITTING, 16MB-12FPX90 |
| 10 | 1 | A10330A-044 | HOSE ASSEMBLY 3/4 x 44 |
| 11 | 1 | A10330A-032 | HOSE ASSEMBLY 3/4 x 32 |
| 12 | 1 | A10330A-038 | HOSE ASSEMBLY 3/4 x 38 |
| 13 | 2 | P0300-068 | FITTING, 16MB-12FP |
| 14 | 2 | P0300-209 | FITTING, 12MP-12FPX-12FPX |
| 15 | 1 | A10330A-045 | HOSE ASSEMBLY 3/4 x 45 |
| 16 | 1 | A10330A-027 | HOSE ASSEMBLY 3/4 x 27 |
| 17 | 1 | A10330A-047 | HOSE ASSEMBLY 3/4 x 47 |
| 18 | 2 | A10330A-030 | HOSE ASSEMBLY 3/4 x 30 |
| 19 | 4 | P0003-06-000 | NUT, 3/8 |
| 20 | 4 | P0045-006 | WASHER, Lock 3/8 |
| 21 | 4 | P0001-06-020 | BOLT, 3/8 UNC x 5 |
| 22 | 1 | 030079P | BRACKET, Light |
| 23 | 1 | P0053-026 | LIGHT, Halogen Flood |
| 24 | 1 | 030073P | PLATE, Check Valve |
| 25 | 2 | P0001-04-007 | SCREW, Hex Head 1/4 UNC x 1.75 |
| 26 | 2 | P0040-004 | WASHER, Hardened Flat 1/4 |
| 27 | 2 | P0045-004 | WASHER, Lock 1/4 |
| 28 | 1 | P0300-245 | FITTING, 04MJ-06MB |
| 29 | 1 | P0302-103 | VALVE, Relief |
| 30 | 1 | A10074A-008 | HOSE ASSEMBLY 1/4 x 8 |
| 31 | 1 | A10311A-020 | HOSE ASSEMBLY 3/8 x 20 |
| 32 | 1 | P0300-041 | FITTING, 06MJ-06MB |
| 33 | 1 | P0300-132 | FITTING, 06MJ-04MP-06MJ |
| 34 | 1 | P0302-101 | VALVE, Check |
| 35 | 2 | A10311A-015 | HOSE ASSEMBLY 3/8 x 15 |
| 36 | 1 | P0300-125 | FITTING, 06MJ-04MP90 |
| 37 | 1 | 007968A00 | OILER, Gear Ring |
| 38 | 1 | A10311A-075 | HOSE ASSEMBLY 3/8 x 75 |
| 39 | 5 | P0300-223 | FITTING, 06MJ-10MB |
| 40 | 2 | P0300-280 | FITTING, 06MJ-06FJX45 |
| 41 | 2 | P0300-121 | FITTING, 06MJ-04MP |
| 42 | 1 | P0302-167 | VALVE, Needle |
| 43 | 1 | P0300-192 | FITTING, 06MJ-06FJX-06MJ |
| 44 | 1 | A10311A-040 | HOSE ASSEMBLY 3/8 x 40 |
| 45 | 1 | A09952A-018 | HOSE ASSEMBLY 3/8 x 18 |

* Refer to Section 7, Valves for parts information.

LI - Linear Inch

MANIFOLD HYDRAULICS 540, 030050A

540: SN F18300F-11 & After



MANIFOLD HYDRAULICS 540, 030050A

540: SN F18300F-11 & After

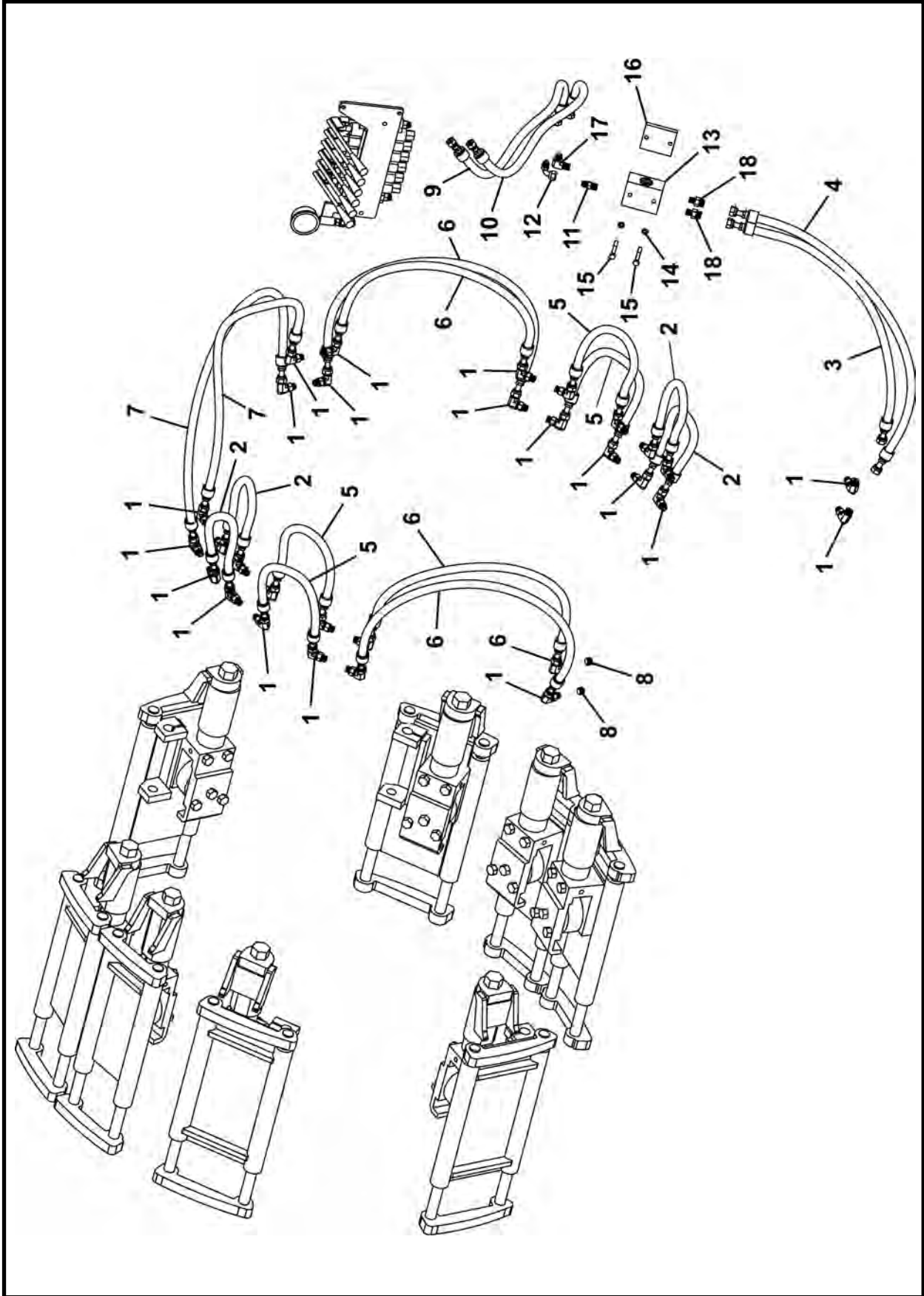
| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|---|
| 0 | 1 | 030050A | MANIFOLD HYDRAULICS 540 |
| 1 | 4 | 004899P00 | UNION, Coupler |
| 2 | 4 | P0084-123 | RING, Backup |
| 3 | 4 | P0085-123 | ORING |
| 4 | 4 | 007086P00 | PLUG |
| 5 | 4 | 007002P02 | CAP, Coupler 1-1/4 |
| 6 | 4 | 005350P03 | CAP, Coupler 1-1/4 |
| 7 | 4 | 007087P00 | PLUG |
| 8 | 3 | 005348P00 | COUPLER, Female 1-1/4 |
| 9 | 4 | 004901P01 | COUPLER |
| 10 | 3 | P0421-012 | COUPLER, Reducer |
| 11 | 1 | P0402-006 | NIPPLE, Close |
| 12 | 1 | P0400-005 | COUPLING, Pipe |
| 13 | 1 | P0300-628 | FITTING, 08FFORX-08MJ |
| 14 | 1 | P0300-675 | FITTING, 20MB-8FB |
| 15 | 1 | P0300-332 | ORING, 08OR |
| 16 | 1 | P0300-548 | FITTING, 20MFFOR-20MB-20MFFOR |
| 17 | 1 | P0300-629 | FITTING, 08MFOR-08MFOR-08MFOR-08MFOR TE |
| 18 | 1 | P0300-428 | FITTING, 08MFOR-08MFOR-08FFORX |
| 19 | 1 | P0300-608 | FITTING, 12MFFOR-20MB90 |
| 20 | 5 | P0300-366 | FITTING, 20MFOR-20MB |
| 21 | 2 | P0300-273 | FITTING, 16MB-HHP |
| 22 | 1 | 029912P | BLOCK, Outlet |
| 23 | 1 | P0300-185 | PLUG, 04MB-PLUG |
| 24 | 1 | P0300-630 | FITTING, 20FFOR-16MFOR |
| 25 | 1 | P0300-631 | FITTING, 16FFOR-08MFFOR |
| 26 | 1 | P0300-318 | FITTING, 08MFOR-08FFORX-08MFOR |
| 27 | 1 | P0300-620 | FITTING, 20MFOR-20MB90 |
| 28 | 1 | P0300-609 | FITTING, 20FFOR-12MFOR |
| 29 | 2 | P0300-146 | PLUG, 20MB-PLUG HOLLOW BACK |
| 30 | 1 | 029911P | BLOCK, Inlet |
| 31 | 1 | A10308A-056 | HOSE ASSEMBLY, 3/8 x 56 |
| 32 | 1 | A10372A-052 | HOSE ASSEMBLY 1/2 x 52 |
| 33 | 1 | A10324A-066 | HOSE ASSEMBLY 1/2 x |
| 34 | 1 | A10362A-040 | HOSE ASSEMBLY 1/2 x |
| 35 | 1 | A10362A-037 | HOSE ASSEMBLY 1/2 x |
| 36 | 1 | A10324A-067 | HOSE ASSEMBLY 1/2 x |
| 37 | 1 | A10093A-082 | HOSE ASSEMBLY 1-1/4 x |
| 38 | 1 | A09903A-110 | ASSY, 1 1/4 HOSE |
| 39 | 1 | P0300-626 | 20MFOR-20FFORX90 |
| 40 | 4 | A10094A-090 | ASSY, 1 1/4 HOSE |
| 41 | 1 | 029935P | MOUNT, BLOCK-INLET |
| 42 | 2 | 029937P | PLATE, BLOCK MOUNT |
| 43 | 4 | P0001-06-004 | 3/8 X 1 NC GRD 8 HEX BOLT |
| 44 | 4 | P0045-006 | 3/8-REGULAR LOCK WASHER |
| 45 | 1 | 029936P | MOUNT, BLOCK-OUTLET |
| 46 | 1 | 008146P00 | CAP-AUX UNIT PRESSURE LINE |

* Refer to Section 7, Valves for parts information.

LI - Linear Inch

DRUM ADVANCE HYDRAULICS 480, 030172A

480: SN F23800F-18 & After



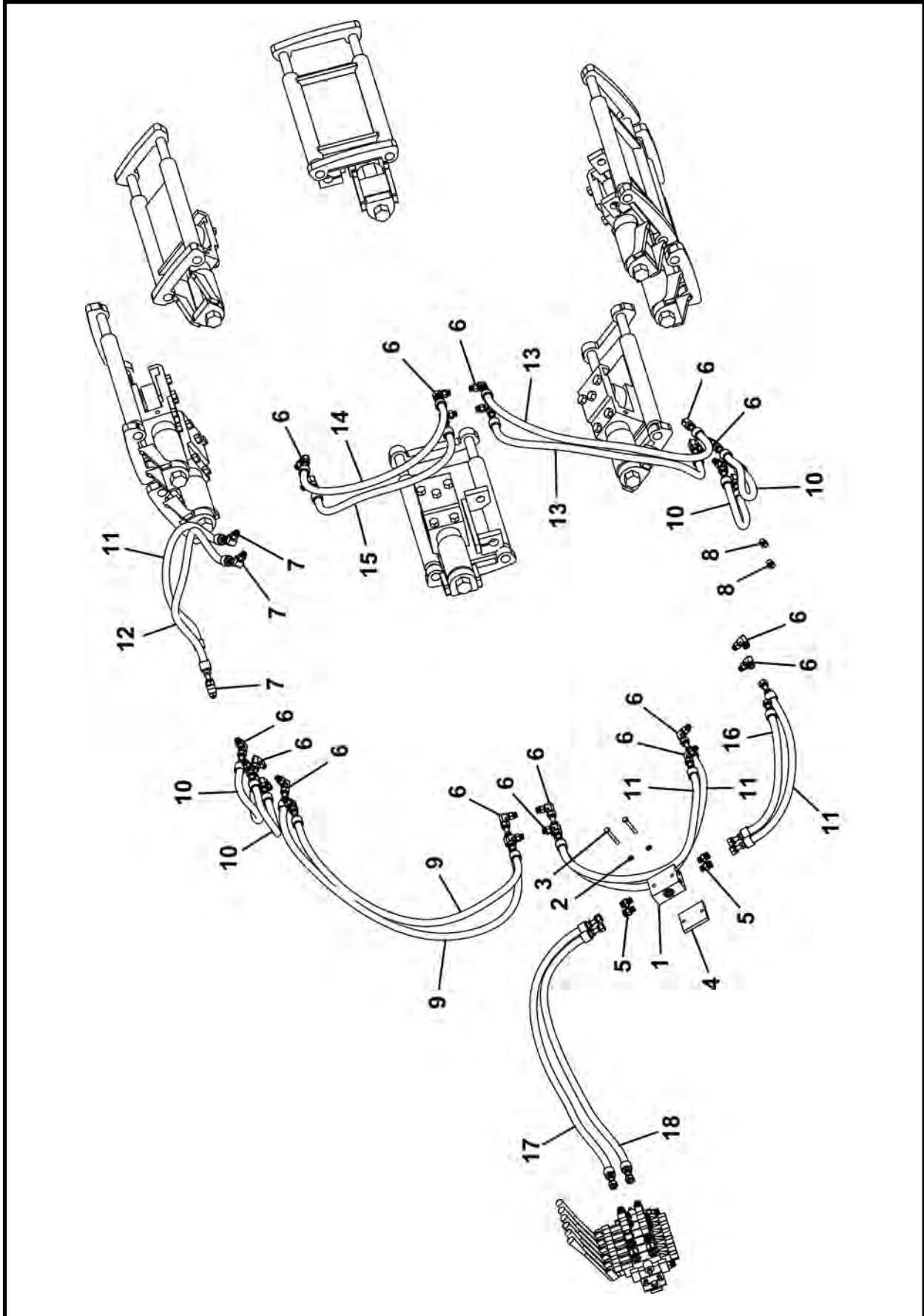
DRUM ADVANCE HYDRAULICS 480, 030172A

480: SN F23800F-18 & After

| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|-----------------------------|
| 0 | 1 | 030172A | DRUM ADVANCE HYDRAULICS 480 |
| 1 | 30 | P0300-355 | FITTING, 06MFOR-06MB90 |
| 2 | 4 | A10313A-017 | HOSE ASSEMBLY 3/8 x 17 |
| 3 | 1 | A10313A-031 | HOSE ASSEMBLY 3/8 x 31 |
| 4 | 1 | A10313A-036 | HOSE ASSEMBLY 3/8 x 36 |
| 5 | 4 | A10313A-025 | HOSE ASSEMBLY 3/8 x 25 |
| 6 | 4 | A10313A-050 | HOSE ASSEMBLY 3/8 x 50 |
| 7 | 2 | A10313A-070 | HOSE ASSEMBLY 3/8 x 70 |
| 8 | 2 | P0300-015 | PLUG, 06MP-HHP |
| 9 | 1 | A10311A-030 | HOSE ASSEMBLY 3/8 x 30 |
| 10 | 1 | A10311A-028 | HOSE ASSEMBLY 3/8 x 28 |
| 11 | 1 | P0300-121 | FITTING, 06MJ-04MP |
| 12 | 1 | P0300-123 | FITTING, 500454-6S |
| 13 | 1 | P0302-104 | VALVE, Check |
| 14 | 2 | P0045-005 | WASHER, Lock 5/16 |
| 15 | 2 | P0001-05-009 | BOLT, 5/16 UNC x 2.25 |
| 16 | 1 | 029949P | PLATE, Check Valve |
| 17 | 1 | P0300-106 | FITTING, 06MJ-06MP90 |
| 18 | 2 | P0300-679 | FITTING, 6MFFOR-4MP |

DRUM ADVANCE HYDRAULICS 540, 029963A

540: SN F18300F-11 & After



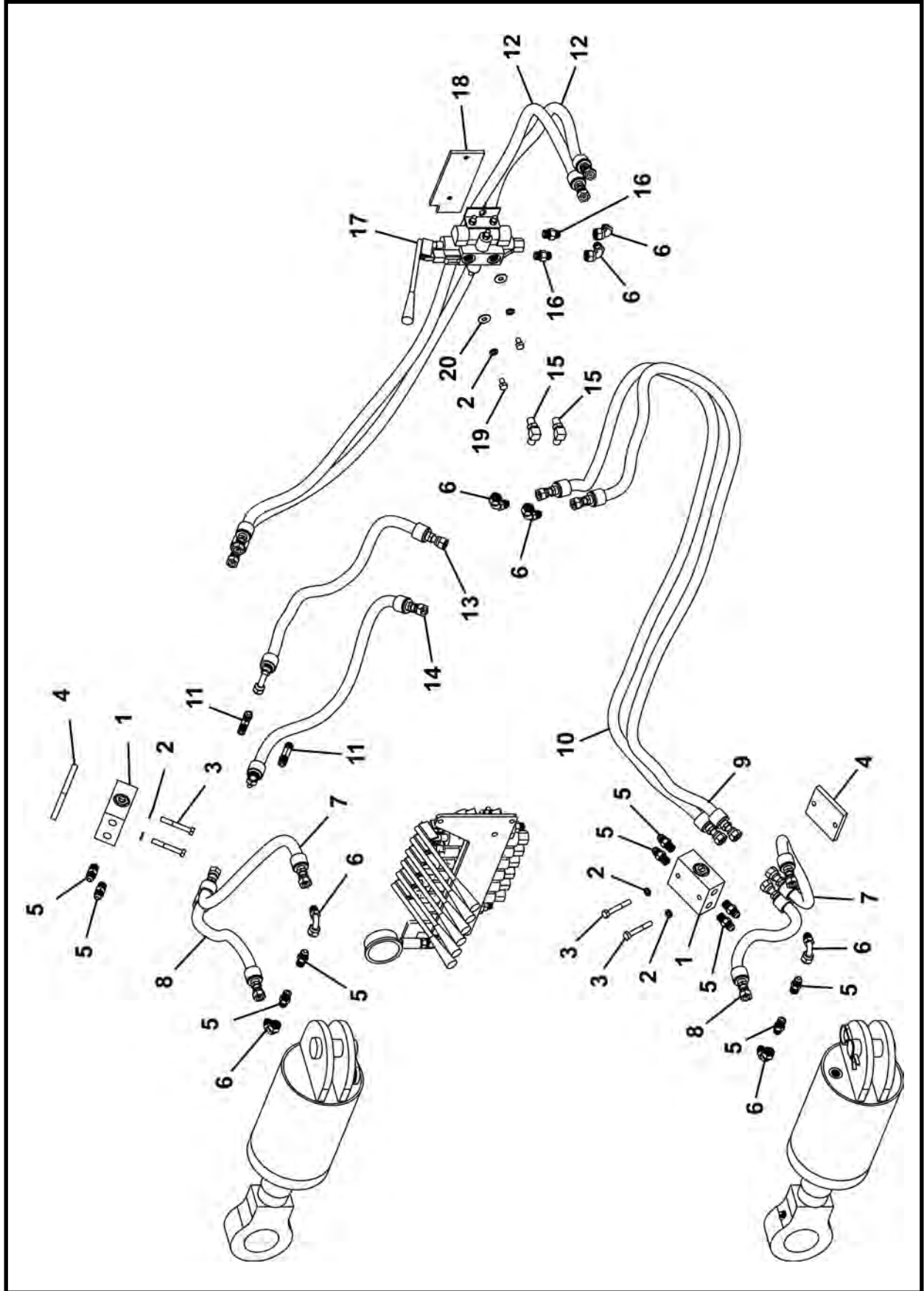
DRUM ADVANCE HYDRAULICS 540, 029963A

540: SN F18300F-11 & After

| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|-----------------------------|
| 0 | 1 | 029963A | DRUM ADVANCE HYDRAULICS 540 |
| 1 | 1 | P0302-532 | VALVE, Check |
| 2 | 2 | P0045-005 | WASHER, Lock 5/16 |
| 3 | 2 | P0001-05-009 | BOLT, 5/16 UNC x 2.25 |
| 4 | 1 | 029949P | PLATE, Check Valve |
| 5 | 4 | P0300-356 | FITTING, 06MFOR-06MB |
| 6 | 26 | P0300-355 | FITTING, 06MFOR-06MB90 |
| 7 | 4 | P0300-612 | FITTING, 06MFOR-06MB45 |
| 8 | 2 | P0300-027 | PLUG, 06MB-PLUG |
| 9 | 2 | A10313A-038 | HOSE ASSEMBLY 3/8 x 38 |
| 10 | 4 | A10313A-013 | HOSE ASSEMBLY 3/8 x 13 |
| 11 | 4 | A10313A-022 | HOSE ASSEMBLY 3/8 x 22 |
| 12 | 1 | A10313A-027 | HOSE ASSEMBLY 3/8 x 27 |
| 13 | 2 | A10313A-033 | HOSE ASSEMBLY 3/8 x 33 |
| 14 | 1 | A10313A-031 | HOSE ASSEMBLY 3/8 x 31 |
| 15 | 1 | A10313A-025 | HOSE ASSEMBLY 3/8 x 25 |
| 16 | 1 | A10313A-026 | HOSE ASSEMBLY 3/8 x 26 |
| 17 | 1 | A10313A-036 | HOSE ASSEMBLY 3/8 x 36 |
| 18 | 1 | A10313A-035 | HOSE ASSEMBLY 3/8 x 35 |

STEERING HYDRAULICS 480, 030161A

480: SN F23800F-18 & After



STEERING HYDRAULICS 480, 030161A

480: SN F23800F-18 & After

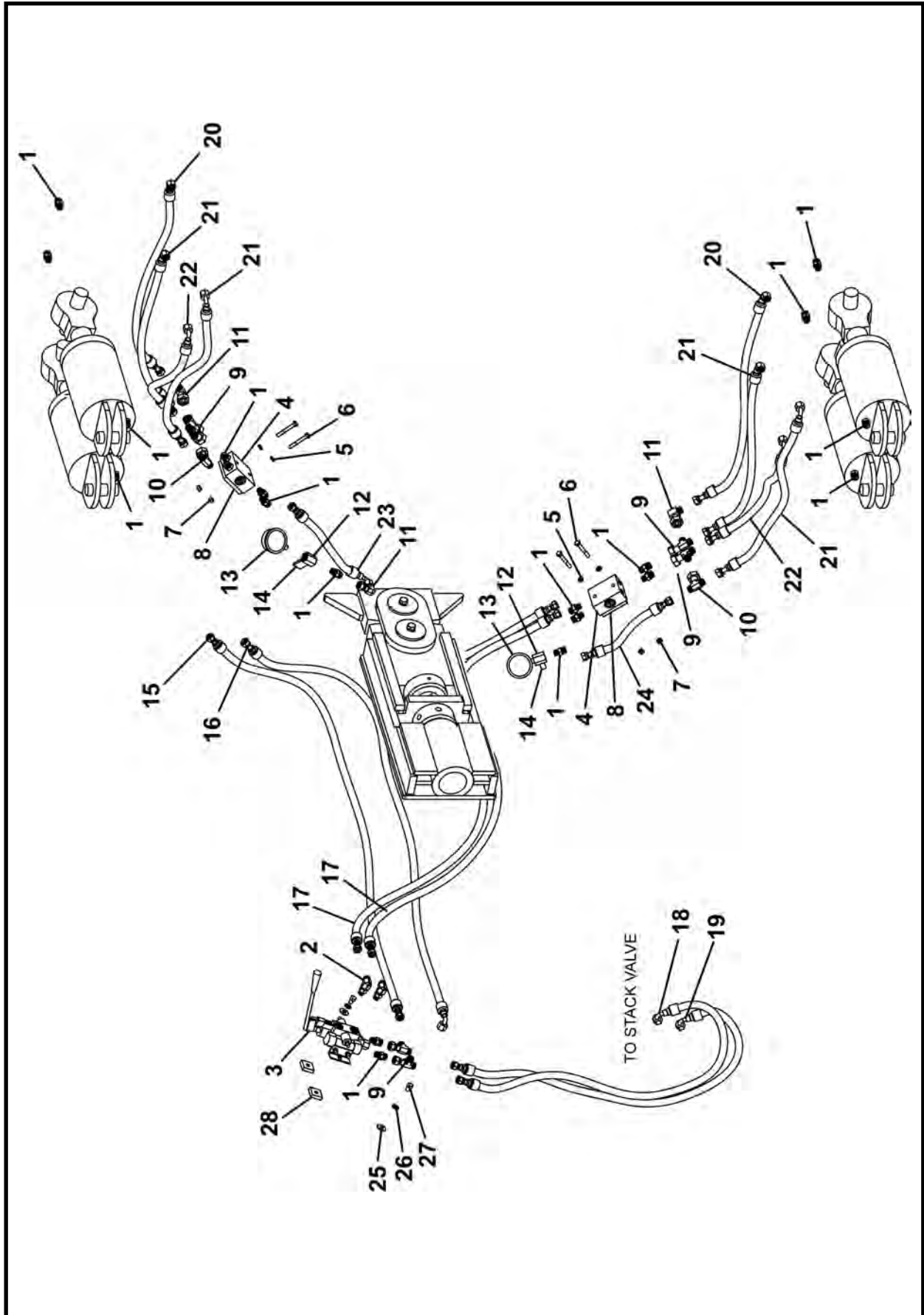
| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-------|--------------|----------------------------|
| 0 | 1 | 030161A | STEERING HYDRAULICS 480 |
| 1 | 2 | P0302-154 | VALVE, Pilot Check |
| 2 | 6 | P0045-005 | WASHER, Lock 5/16 |
| 3 | 4 | P0001-05-009 | BOLT, 5/16 UNC x 2.25 |
| 4 | 2 | 029949P | PLATE, Check Valve |
| 5 | 10 | P0300-121 | FITTING, 06MJ-04MP |
| 6 | 8 | P0300-123 | FITTING, 500454-6S |
| 7 | 2 | A10311A-023 | HOSE ASSEMBLY 3/8 x 23 |
| 8 | 2 | A10311A-020 | HOSE ASSEMBLY 3/8 x 20 |
| 9 | 2 | A10311A-064 | HOSE ASSEMBLY 3/8 x 64 |
| 10 | 2 | A10311A-066 | HOSE ASSEMBLY 3/8 x 66 |
| 11 | 2 | P0300-132 | FITTING, 06MJ-04MP-06MJ |
| 12 | 2 | A10311A-040 | HOSE ASSEMBLY 3/8 x 40 |
| 13 | 1 | A09952A-027 | HOSE ASSEMBLY 3/8 x 27 |
| 14 | 1 | A09952A-028 | HOSE ASSEMBLY 3/8 x 28 |
| 15 | 2 | P0300-042 | FITTING, 06MJ-06MB90 |
| 16 | 2 | P0300-041 | FITTING, 06MJ-06MB |
| 17* | 1 | P0302-118 | VALVE, Steering |
| 18 | 1 | 030056P | MOUNT, Selector Valve |
| 19 | 2 | P0001-05-002 | BOLT, 5/16 UNC x .5 |
| 20 | 2 | P0040-005 | WASHER, Hardened Flat 5/16 |
| 21 | 53 LI | P0068-024 | BELTING, PVC 1/4 x 24 |

* Refer to Section 7, Valves for parts information. Be sure load check balls are removed before operation. Contact your Akkerman Aftermarket Support representative for more information.

LI - Linear Inch

STEERING HYDRAULICS 540, 030043A

540: SN F18300F-11 & After



STEERING HYDRAULICS 540, 030043A

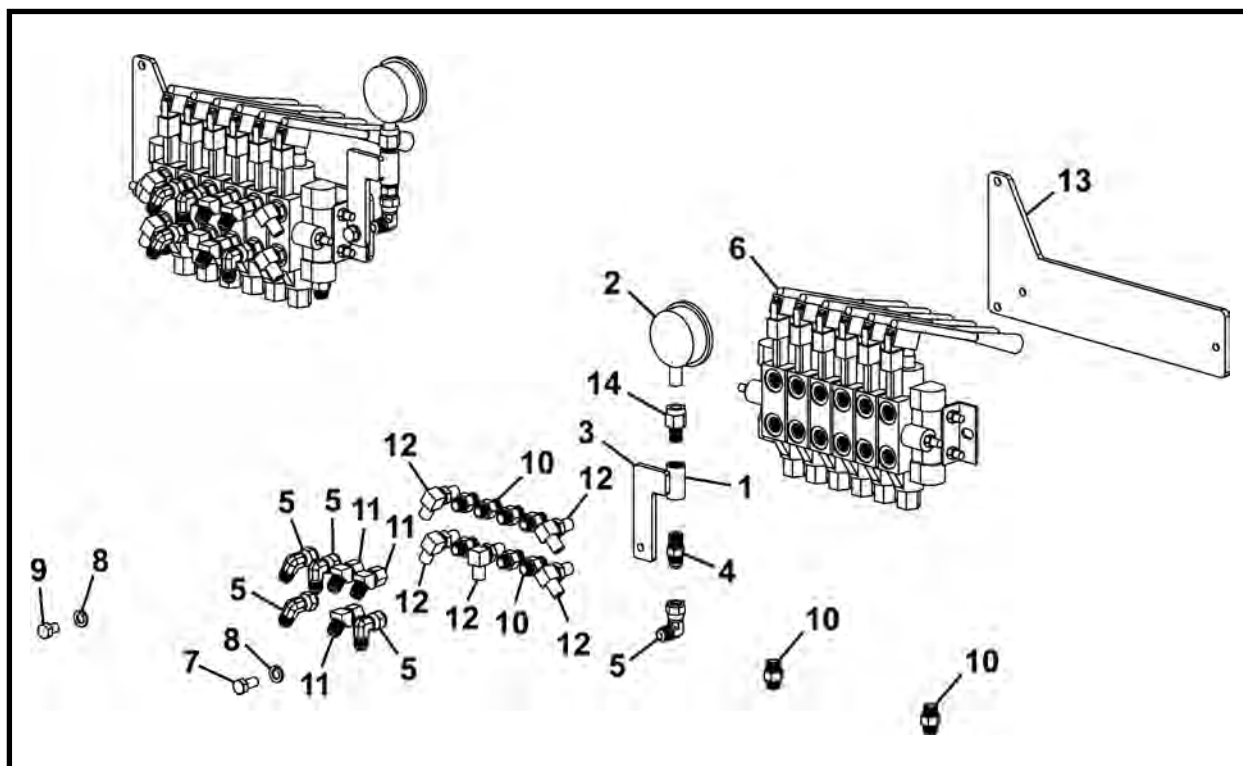
540: SN F18300F-11 & After

| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-------|--------------|--------------------------------|
| 0 | 1 | 030043A | STEERING HYDRAULICS 540 |
| 1 | 20 | P0300-356 | FITTING, 06MFOR-06MB |
| 2 | 2 | P0300-355 | FITTING, 06MFOR-06MB90 |
| 3* | 1 | P0302-118 | VALVE, Steering |
| 4 | 2 | P0302-535 | VALVE, Check |
| 5 | 4 | P0045-005 | WASHER, Lock 5/16 |
| 6 | 4 | P0001-05-009 | BOLT, 5/16 UNC 2.25 |
| 7 | 4 | P0003-05-000 | NUT, 5/16 |
| 8 | 2 | 029949P | PLATE, Check Valve |
| 9 | 6 | P0300-613 | FITTING, 06MFOR-06FFORX-06MFOR |
| 10 | 2 | P0300-602 | FITTING, 06MFOR-06MFOR-06FFORX |
| 11 | 3 | P0300-603 | FITTING, 06MFOR-06FFORX90 |
| 12 | 2 | 029921P | FITTING |
| 13 | 2 | P0301-149 | GAUGE, 5000 PSI |
| 14 | 2 | 029927P | PLATE, Mount |
| 15 | 1 | A10313A-057 | HOSE ASSEMBLY 3/8 x 57 |
| 16 | 1 | A10079A-061 | HOSE ASSEMBLY 3/8 x 61 |
| 17 | 2 | A10313A-066 | HOSE ASSEMBLY 3/8 x 66 |
| 18 | 1 | A10079A-033 | HOSE ASSEMBLY 3/8 x 33 |
| 19 | 1 | A10079A-037 | HOSE ASSEMBLY 3/8 x 37 |
| 20 | 2 | A10079A-017 | HOSE ASSEMBLY 3/8 x 17 |
| 21 | 4 | A10079A-015 | HOSE ASSEMBLY 3/8 x 15 |
| 22 | 2 | A10079A-012 | HOSE ASSEMBLY 3/8 x 12 |
| 23 | 1 | A10079A-014 | HOSE ASSEMBLY 3/8 x 14 |
| 24 | 1 | A10313A-019 | HOSE ASSEMBLY 3/8 x 19 |
| 25 | 2 | P0040-006 | WASHER, Hardened Flat 3/8 |
| 26 | 2 | P0045-006 | WASHER, Lock 3/8 |
| 27 | 2 | P0001-06-002 | BOLT, 3/8 UNC x .5 |
| 28 | 2 | P0011-006A | NUT, Strut Square 3/8 |
| 29 | 56 LI | P0068-024 | BELTING, PVC 1/4 x 24 |

* Refer to Section 7, Valves for parts information. Be sure load check balls are removed before operation. Contact your Akkerman Aftermarket Support representative for more information.

LI - Linear Inch

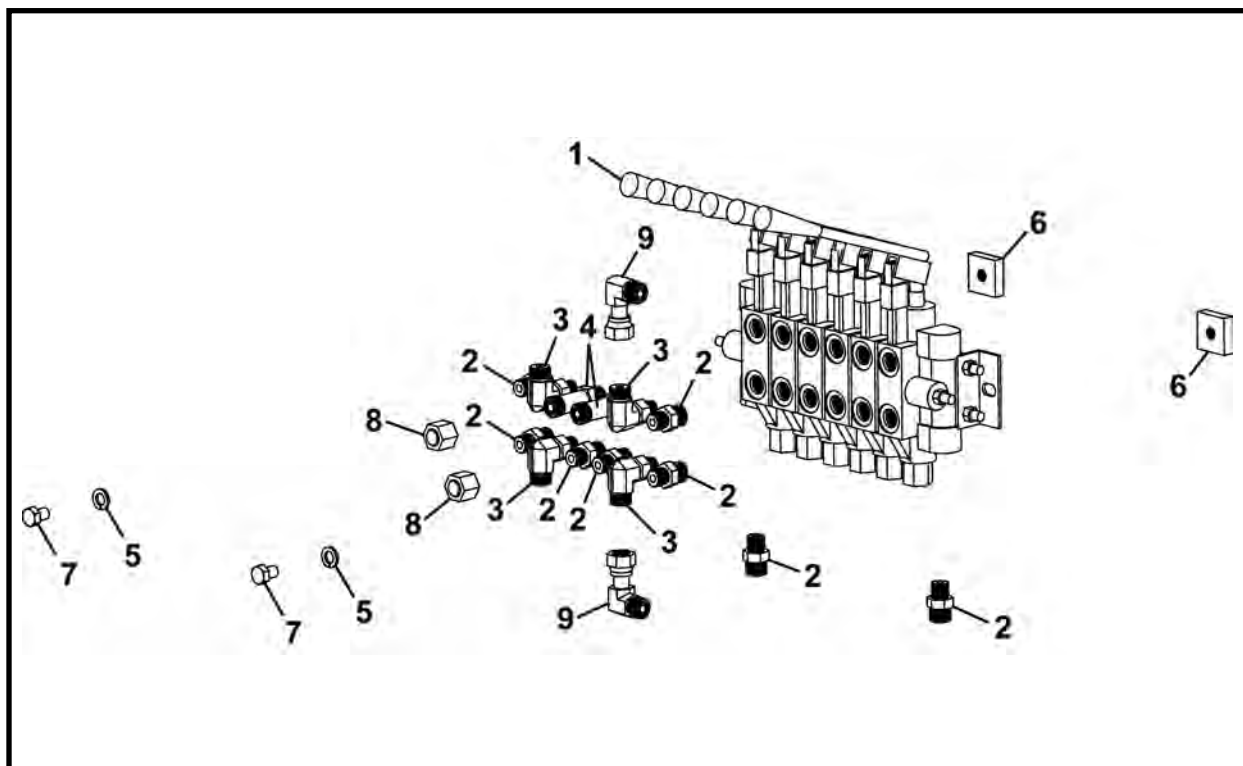
CONTROL VALVE HYDRAULICS 480, 030171A
480: SN F23800F-18 & After



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|------------------------------|
| 0 | 1 | 030171A | CONTROL VALVE HYDRAULICS 480 |
| 1 | 1 | P0400-001 | COUPLING, Pipe 1/4 |
| 2 | 1 | P0301-100 | GAUGE, 5000 PSI |
| 3 | 1 | 030089P | MOUNT, Gage- Front |
| 4 | 1 | P0300-121 | FITTING, 06MJ-04MP |
| 5 | 5 | P0300-149 | FITTING, 06MJ-06FJX90 |
| 6* | 1 | P0302-260 | VALVE, 6 Section |
| 7 | 1 | P0001-06-003 | BOLT, 3/8 UNC x .75 |
| 8 | 2 | P0045-006 | WASHER, Lock 3/8 |
| 9 | 1 | P0001-06-002 | BOLT, 3/8 UNC x .5 |
| 10 | 9 | P0300-041 | FITTING, 06MJ-06MB |
| 11 | 3 | P0300-280 | FITTING, 06MJ-06FJX45 |
| 12 | 5 | P0300-042 | FITTING, 06MJ-06MB90 |
| 13 | 1 | 029992P | MOUNT, Control Valve |
| 14 | 1 | P0260-003 | SNUBBER |

* Refer to Section 7, Valves for parts information.

CONTROL VALVE HYDRAULICS 540, 030053A
540: SN F18300F-11 & After

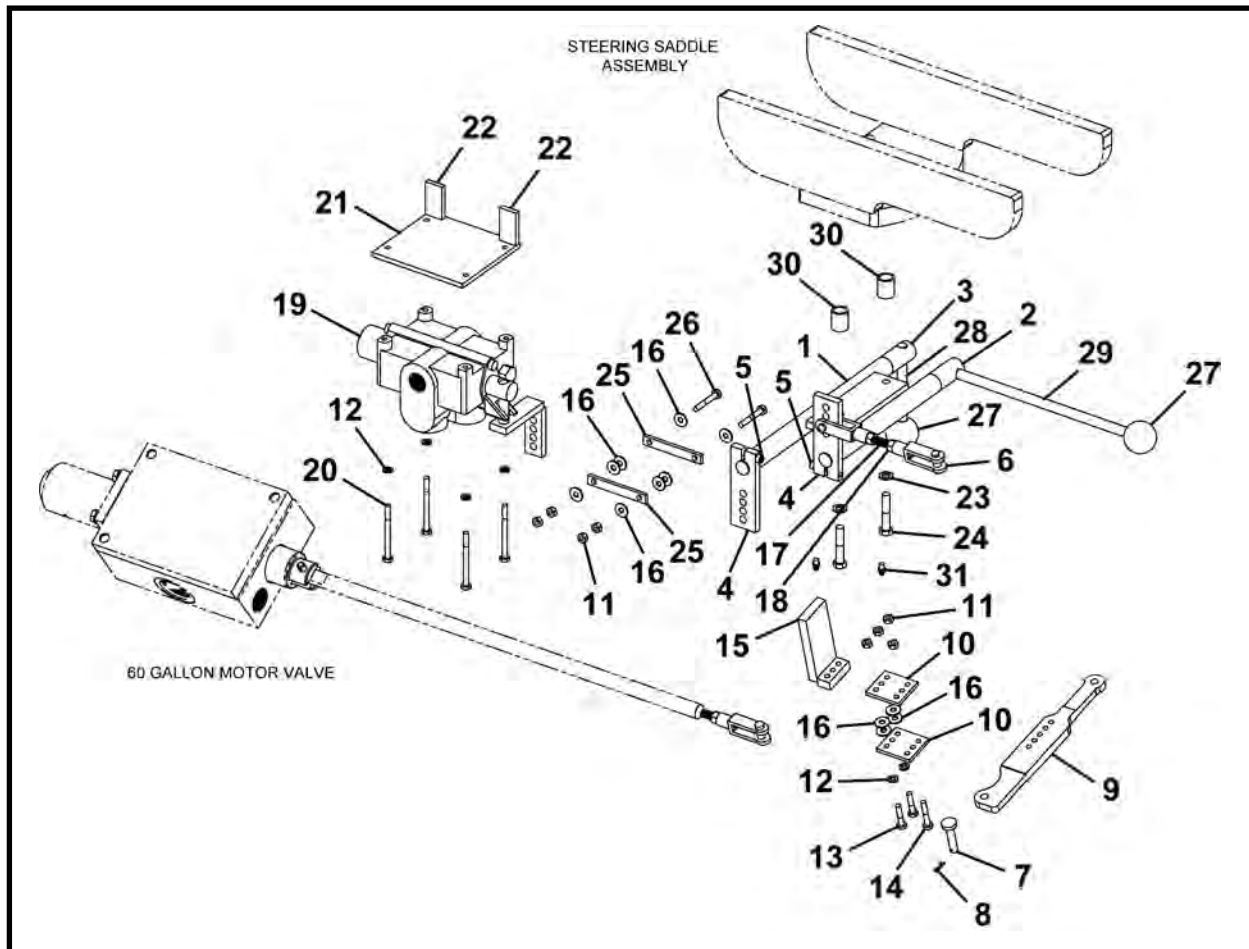


| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|------------------------------|
| 0 | 1 | 030053A | CONTROL VALVE HYDRAULICS 540 |
| 1 | 1 | P0302-260 | VALVE, 6 Section |
| 2 | 8 | P0300-356 | FITTING, 06MFOR-06MB |
| 3 | 4 | P0300-355 | FITTING, 06MFOR-06MB90 |
| 4 | 2 | P0300-605 | FITTING, 06MFOR-06MBLONG |
| 5 | 2 | P0045-006 | 3/8-REGULAR LOCK WASHER |
| 6 | 2 | P0011-006A | NUT, Strut Square 3/8 |
| 7 | 2 | P0001-06-002 | BOLT, 3/8 UNC x .5 |
| 8 | 2 | P0300-390 | CAP, 06FOR-CAP |
| 9 | 2 | P0300-603 | FITTING, 06MFOR-06FFORX90 |

* Refer to Section 7, Valves for parts information.

HYDRAULIC CONTROL LINKAGE 480, 030025A

480: SN F23800F-18 & After



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|------------------|--------------------------------------|
| 0 | 1 | 030025A | HYDRAULIC CONTROL LINKAGE 480 |
| 1 | 1 | 004057A | WELD, VALVE LINK-480 |
| 2 | 1 | 002798P00 | ROD |
| 3 | 1 | 002797P00 | ROD |
| 4 | 2 | 002796P00 | BAR |
| 5 | 2 | P0031-04-006 | SCREW, Socket Head Cap 1/4 UNC x 1.5 |
| 6 | 2 | P0024-001 | YOKE WITH CLEVIS PIN |
| 7 | 1 | 003860P01 | PIN, Valve |
| 8 | 1 | P0048-012 | PIN, Cotter 3/32 x .75 |
| 9 | 1 | 004059P | ARM, Linkage |
| 10 | 2 | 004060P | PLATE, Link |
| 11 | 8 | P0003-04-000 | NUT, 1/4 |
| 12 | 6 | P0045-004 | WASHER, Lock 1/4 |
| 13 | 2 | P0001-04-005 | BOLT, 1/4 UNC x 1.25 |
| 14 | 1 | P0001-04-006 | BOLT, 1/4 UNC x 1.5 |
| 15 | 1 | 004051A | MOUNT, Pivot |
| 16 | 12 | P0040-004 | WASHER, Hardened Flat 1/4 |
| 17 | 1 | P0023-374A-002.5 | ROD, Threaded 3/8 UNF x 2.5 |
| 18 | 2 | P0004-06-000 | NUT, 3/8 |
| 19* | 1 | 005343A | VALVE, Conveyor Drive |
| 20 | 4 | P0001-04-014 | BOLT, 1 UNC x 4 |
| 21 | 1 | 006673P | PLATE, Conveyor Drive Valve |

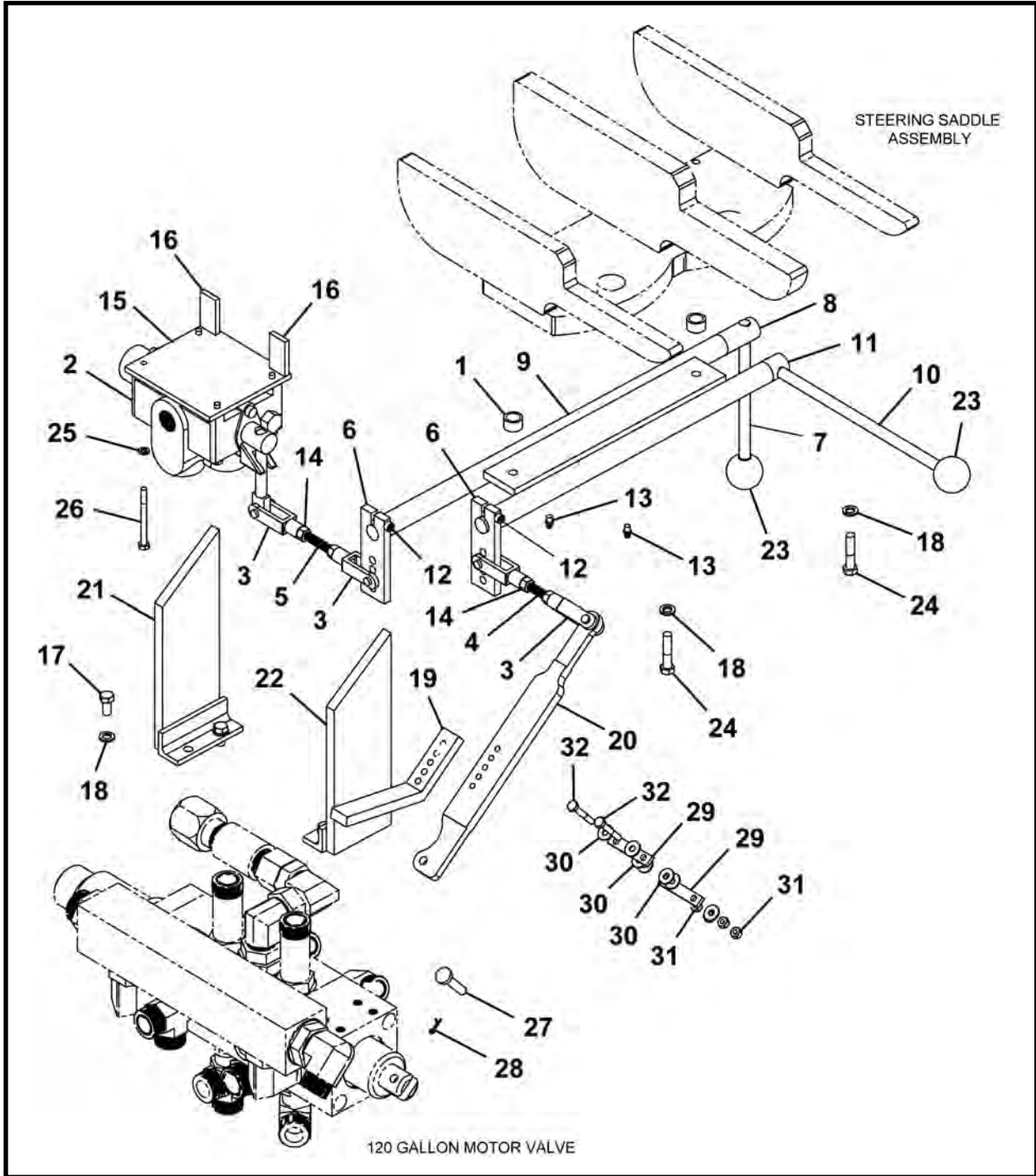
HYDRAULIC CONTROL LINKAGE 480, 030025A
480: SN F23800F-18 & After

| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|--------------------------------|
| 22 | 2 | 006674P | BAR, Spacer |
| 23 | 2 | P0045-006 | WASHER, Lock 3/8 |
| 24 | 2 | P0001-06-008 | BOLT, 3/8 UNC x 2 |
| 25 | 2 | 030185P | PLATE, Link |
| 26 | 2 | P0001-04-007 | SCREW, Hex Head 1/4 UNC x 1.75 |
| 27 | 2 | P0059-009 | KNOB |
| 28 | 1 | 002799P00 | ROD |
| 29 | 1 | 004063P00 | ROD |
| 30 | 2 | 006645P | SPACER |
| 31 | 2 | P0063-001 | FITTING, Grease Straight |

* Refer to Section 7, Valves for parts information.

HYDRAULIC CONTROL LINKAGE 540, 030024A

540: SN F18300F-11 & After



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|------------------|-------------------------------|
| 0 | 1 | 030024A | HYDRAULIC CONTROL LINKAGE 540 |
| 1 | 2 | 006645P | SPACER |
| 2* | 1 | 005344A | VALVE, Conveyor Drive |
| 3 | 4 | P0024-001 | YOKE WITH CLEVIS PIN |
| 4 | 1 | P0023-374A-002.5 | ROD, Threaded 3/8 UNF x 2.5 |
| 5 | 1 | P0023-374A-3.25 | ROD, Threaded 3/8 UNF x 3.5 |
| 6 | 2 | 002796P00 | BAR, Valve Link |
| 7 | 1 | 002799P00 | ROD, Valve Link |
| 8 | 1 | 006342P00 | SHAFT |

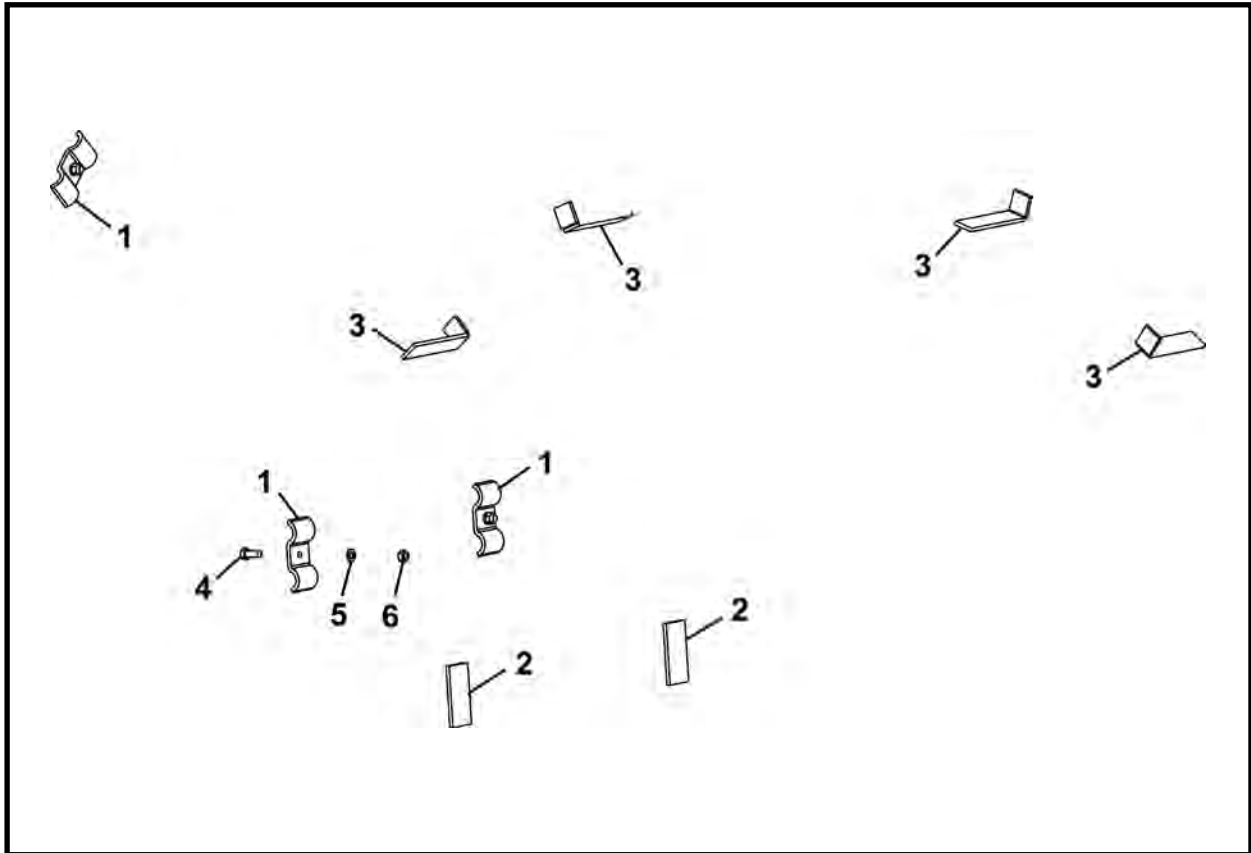
HYDRAULIC CONTROL LINKAGE 540, 030024A

540: SN F18300F-11 & After

| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|--------------------------------------|
| 9 | 1 | 006338A00 | LINKAGE, Valve |
| 10 | 1 | 004063P00 | ROD |
| 11 | 1 | 006343P00 | SHAFT |
| 12 | 2 | P0031-04-006 | SCREW, Socket Head Cap 1/4 UNC x 1.5 |
| 13 | 2 | P0063-001 | FITTING, Grease Straight |
| 14 | 4 | P0004-06-000 | NUT, 3/8 UNF |
| 15 | 1 | 006673P | PLATE |
| 16 | 2 | 006674P | BAR |
| 17 | 4 | P0001-06-003 | BOLT, 3/8 UNC x .75 |
| 18 | 6 | P0045-006 | WASHER, Lock 3/8 |
| 19 | 1 | 030026P | MOUNT, Motor Valve Pivot |
| 20 | 1 | 002790P01 | LINKAGE, Motor Valve |
| 21 | 1 | 030030A | MOUNT, Back |
| 22 | 1 | 030031A | MOUNT, Front |
| 23 | 2 | P0059-009 | KNOB |
| 24 | 2 | P0001-06-007 | BOLT, 3/8 UNC x 1.75 |
| 25 | 4 | P0045-004 | WASHER, Lock 1/4 |
| 26 | 4 | P0001-04-014 | BOLT, 1 UNC x 4 |
| 27 | 1 | 003860P01 | PIN, Valve |
| 28 | 1 | P0048-012 | PIN, Cotter 3/32 x .75 |
| 29 | 2 | 006639P | PLATE, Link |
| 30 | 8 | P0040-004 | WASHER, Hardened Flat 1/4 |
| 31 | 4 | P0003-04-000 | NUT, 1/4 |
| 32 | 2 | P0001-04-007 | SCREW, Hex Head 1/4 UNC x 1.75 |

HOSE CLAMP ASSEMBLY, 002262A

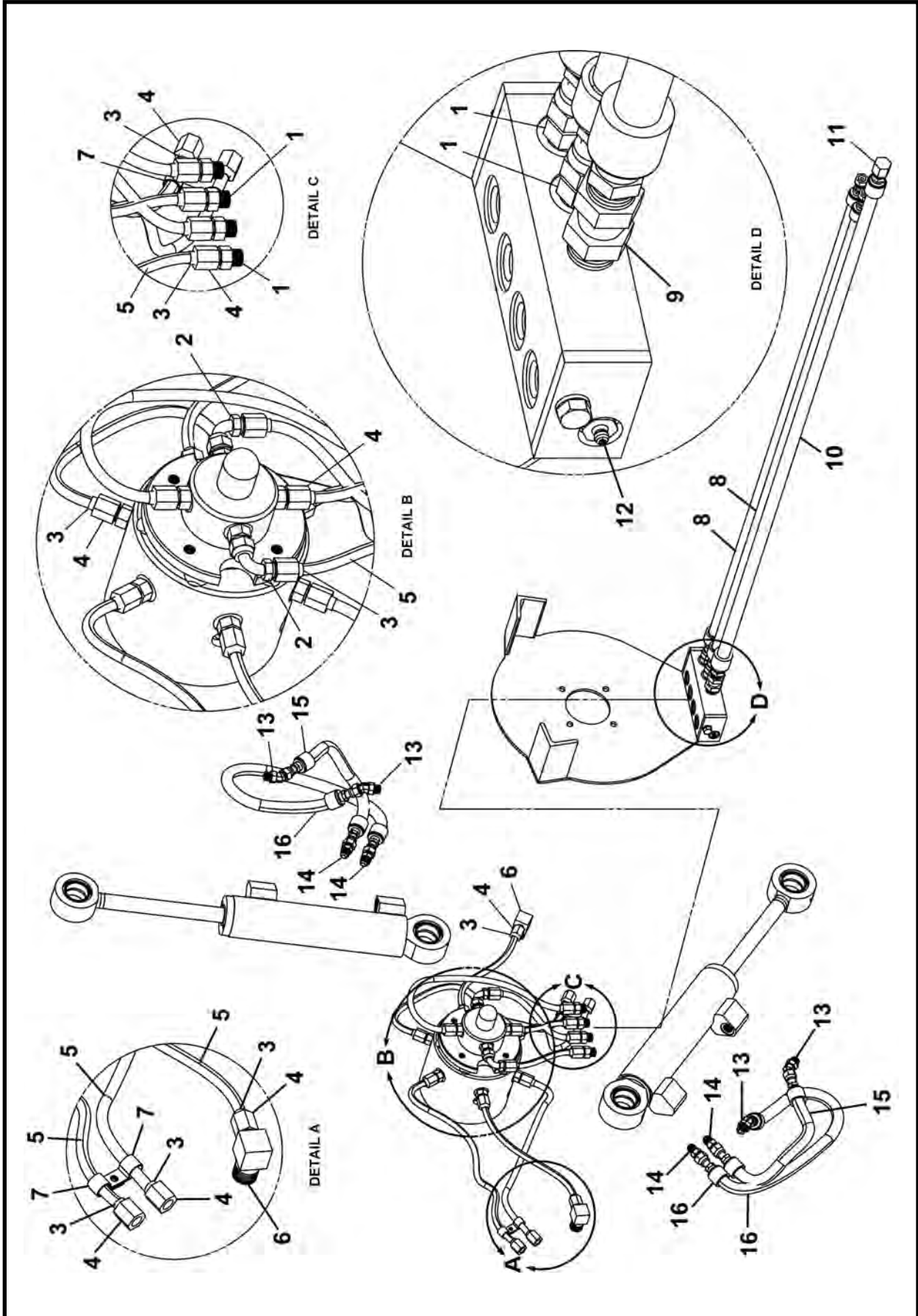
540: SN F18300F-11 & After



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|----------------------|
| 0 | 1 | 002262A | HOSE CLAMP ASSEMBLY |
| 1 | 3 | 002269P01 | CLAMP, Line |
| 2 | 2 | 002270P | HOSE HOLDER |
| 3 | 4 | 002271P | HOSE HOLDER |
| 4 | 3 | P0001-05-003 | BOLT, 5/16 UNC x .75 |
| 5 | 3 | P0045-005 | WASHER, Lock 5/16 |
| 6 | 3 | P0003-05-000 | NUT, 5/16 |

NOTES

CLOSED FACE ROTARY HUB HYDRAULIC ASSEMBLY 480, 023986A
480 CLOSED FACE (NEW STYLE)

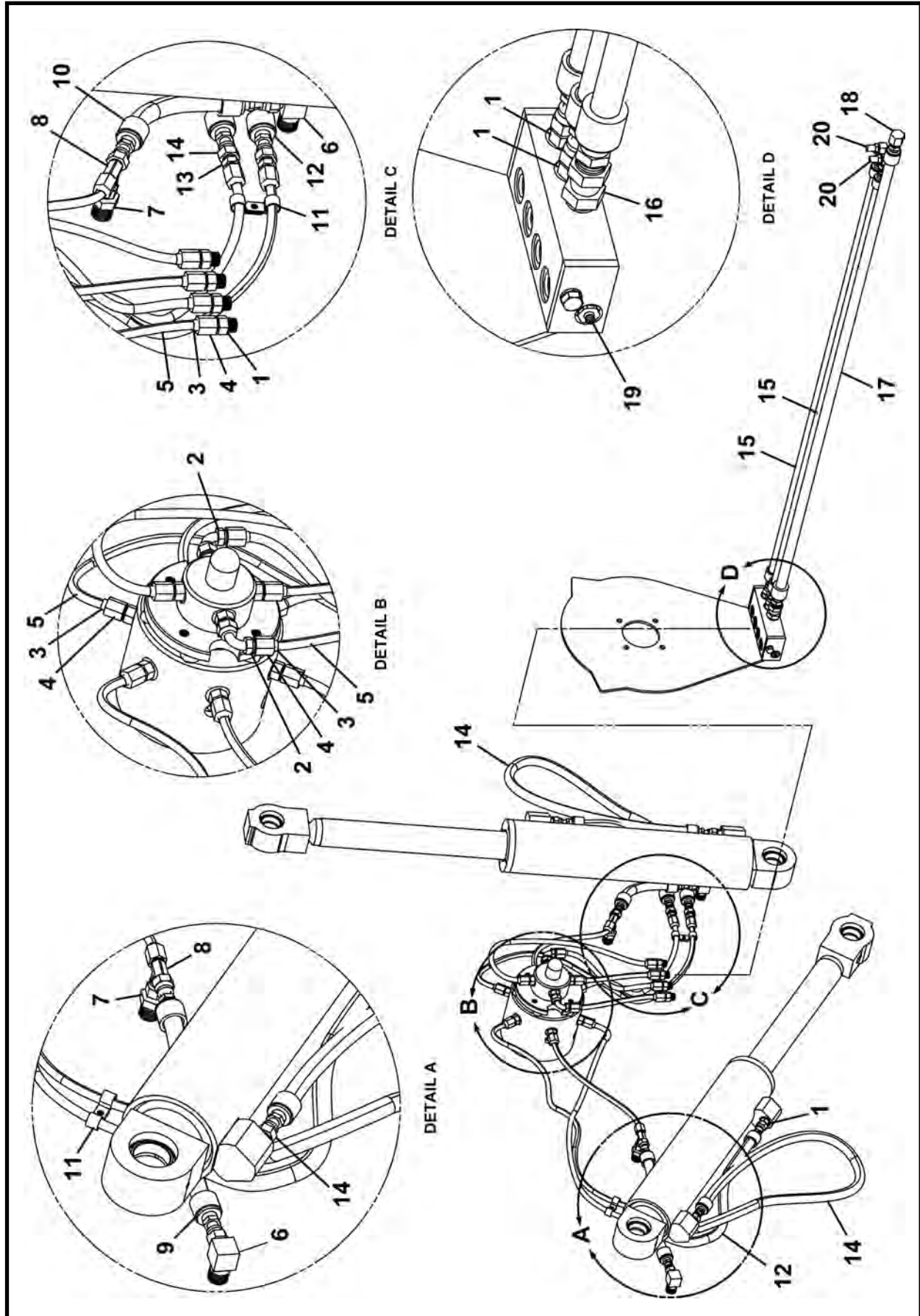


CLOSED FACE ROTARY HUB HYDRAULIC ASSEMBLY 480, 023986A
480 CLOSED FACE (NEW STYLE)

| ITEM | QTY | PART NO. | DESCRIPTION |
|------|--------|-------------|-----------------------------------|
| 0 | 1 | 023986A | ROTARY HUB HYDRAULIC ASSEMBLY 480 |
| 1 | 6 | P0300-041 | FITTING, 06MJ-06MB |
| 2 | 2 | P0300-123 | FITTING, 500454-6S |
| 3 | 20 | P0300-127 | SLEEVE, 06TS |
| 4 | 20 | P0300-128 | NUT, Sleeve 06TSN |
| 5 | 190 LI | P0110-106 | TUBING, Hydraulic Steel 3/8 |
| 6 | 2 | P0300-014 | FITTING, 06MJ-08MP90 |
| 7 | 4 | P0055-126 | CLAMP, Tubing 1/2 |
| 8 | 2 | A10311A-090 | HOSE ASSEMBLY, 3/8 x 90 |
| 9 | 1 | P0300-010 | FITTING, 08MP-08FPX |
| 10 | 1 | A10320A-120 | HOSE ASSEMBLY, 1/2 x 120 |
| 11 | 1 | P0417-003 | CAP, Pipe 1/2 |
| 12 | 1 | P0063-016 | FITTING, Grease 1/4 |
| 13 | 4 | P0300-043 | FITTING, 06MJ-06MB45 |
| 14 | 4 | P0300-129 | FITTING, 06MJ-06MJ |
| 15 | 2 | A10311A-021 | HOSE ASSEMBLY, 3/8 x 21 |
| 16 | 2 | A10311A-037 | HOSE ASSEMBLY, 3/8 x 37 |

LI - Linear Inch

CLOSED FACE ROTARY HUB HYDRAULIC ASSEMBLY 540, 027561A
540 CLOSED FACE (NEW STYLE)

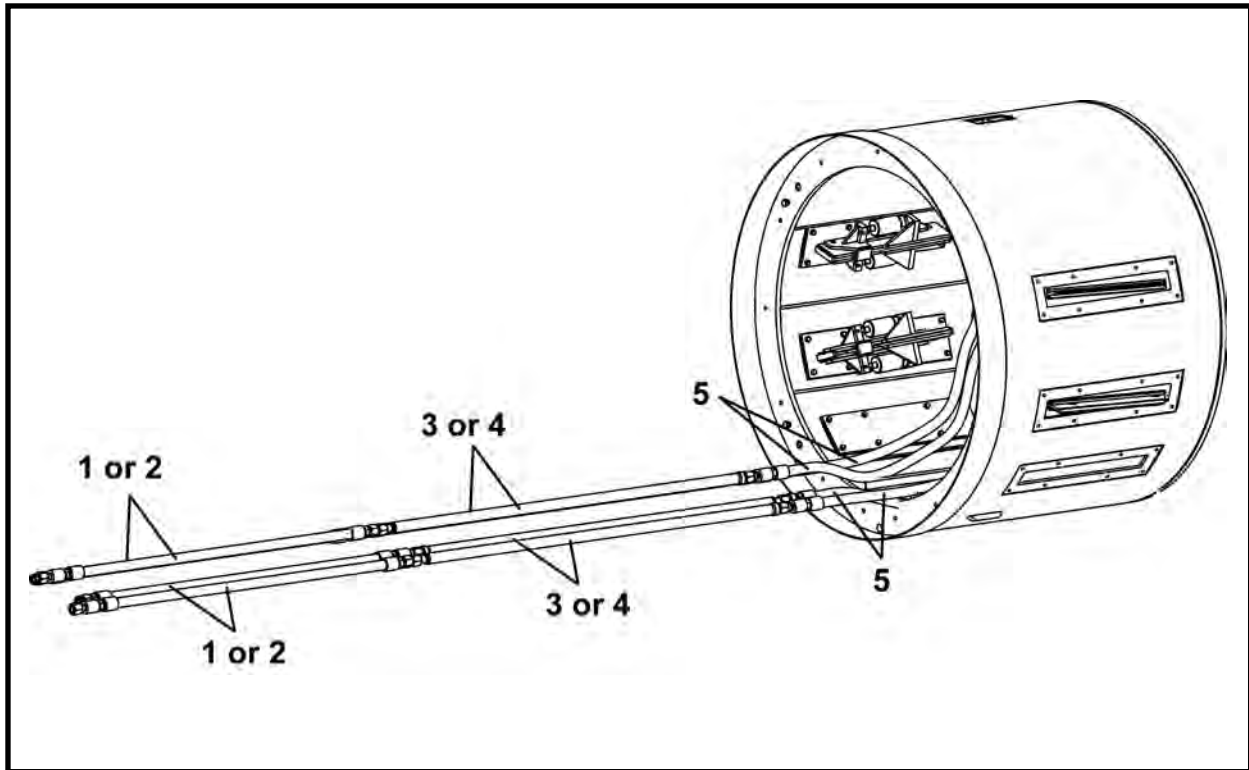


CLOSED FACE ROTARY HUB HYDRAULIC ASSEMBLY 540, 027561A
540 CLOSED FACE (NEW STYLE)

| ITEM | QTY | PART NO. | DESCRIPTION |
|------|--------|-------------|-----------------------------------|
| 0 | 1 | 027561A | ROTARY HUB HYDRAULIC ASSEMBLY 540 |
| 1 | 10 | P0300-041 | FITTING, 06MJ-06MB |
| 2 | 2 | P0300-123 | FITTING, 500454-6S |
| 3 | 20 | P0300-127 | FITTING, 06TS |
| 4 | 20 | P0300-128 | FITTING, 06TSN |
| 5 | 190 LI | P0110-106 | TUBING, Hydraulic Steel 3/8 |
| 6 | 2 | P0300-014 | FITTING, 06MJ-08MP90 |
| 7 | 2 | P0300-120 | FITTING, 06MJ-08MP |
| 8 | 2 | P0300-131 | FITTING, 06MJ-06MJ-06FJX |
| 9 | 1 | A10311A-014 | HOSE ASSEMBLY, 3/8 x 14 |
| 10 | 1 | A10311A-008 | HOSE ASSEMBLY, 3/8 x 8 |
| 11 | 4 | P0055-126 | CLAMP, Tubing 1/2 |
| 12 | 2 | A10311A-025 | HOSE ASSEMBLY, 3/8 x 25 |
| 13 | 4 | P0300-129 | FITTING, 06MJ-06MJ |
| 14 | 2 | A10311A-040 | HOSE ASSEMBLY, 3/8 x 40 |
| 15 | 2 | A10311A-090 | HOSE ASSEMBLY, 3/8 x 90 |
| 16 | 1 | P0300-010 | FITTING, 08MP-08FPX |
| 17 | 1 | A10320A-120 | HOSE ASSEMBLY, 1/2 x 120 |
| 18 | 1 | P0417-003 | CAP, Pipe 1/2 |
| 19 | 1 | P0063-016 | FITTING, Grease 1/4 |
| 20 | 2 | P0300-042 | FITTING, 06MJ-06MB90 |

LI - Linear Inch

TBM HYDRAULIC TUNNEL LINES

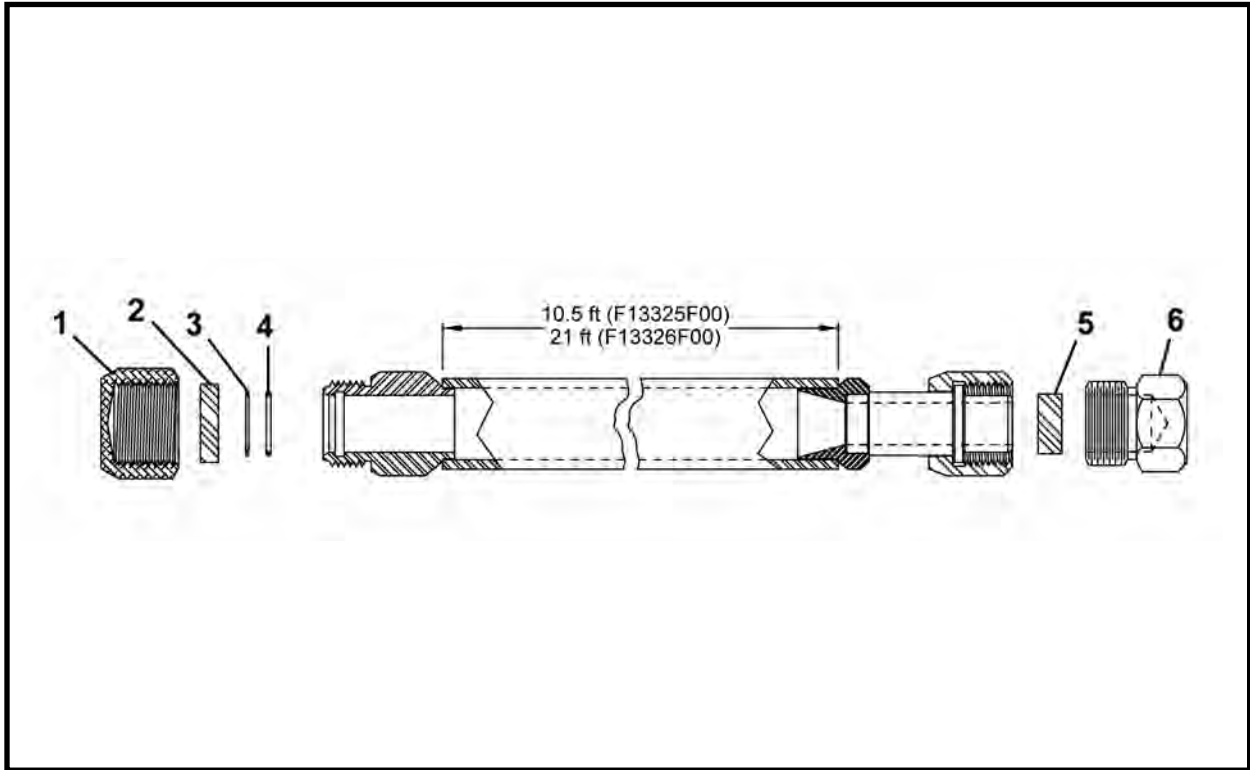


| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|-------------|--|
| 1 | AR | F13598F00 | HOSE ASSEMBLY, 1-1/4 x 20' |
| 2 | AR | F13597F00 | HOSE ASSEMBLY, 1-1/4 x 35' |
| 3* | AR | F13325F00 | HYDRAULIC LINE, 1.5 x 10.5' (1-1/4 Ends) |
| 4* | AR | F13326F00 | HYDRAULIC LINE, 1.5 x 21' (1-1/4 Ends) |
| 5 | 4 | A10094A-090 | HOSE ASSEMBLY, 1-1/4 x 90 |

AR - As Required (Per Job)

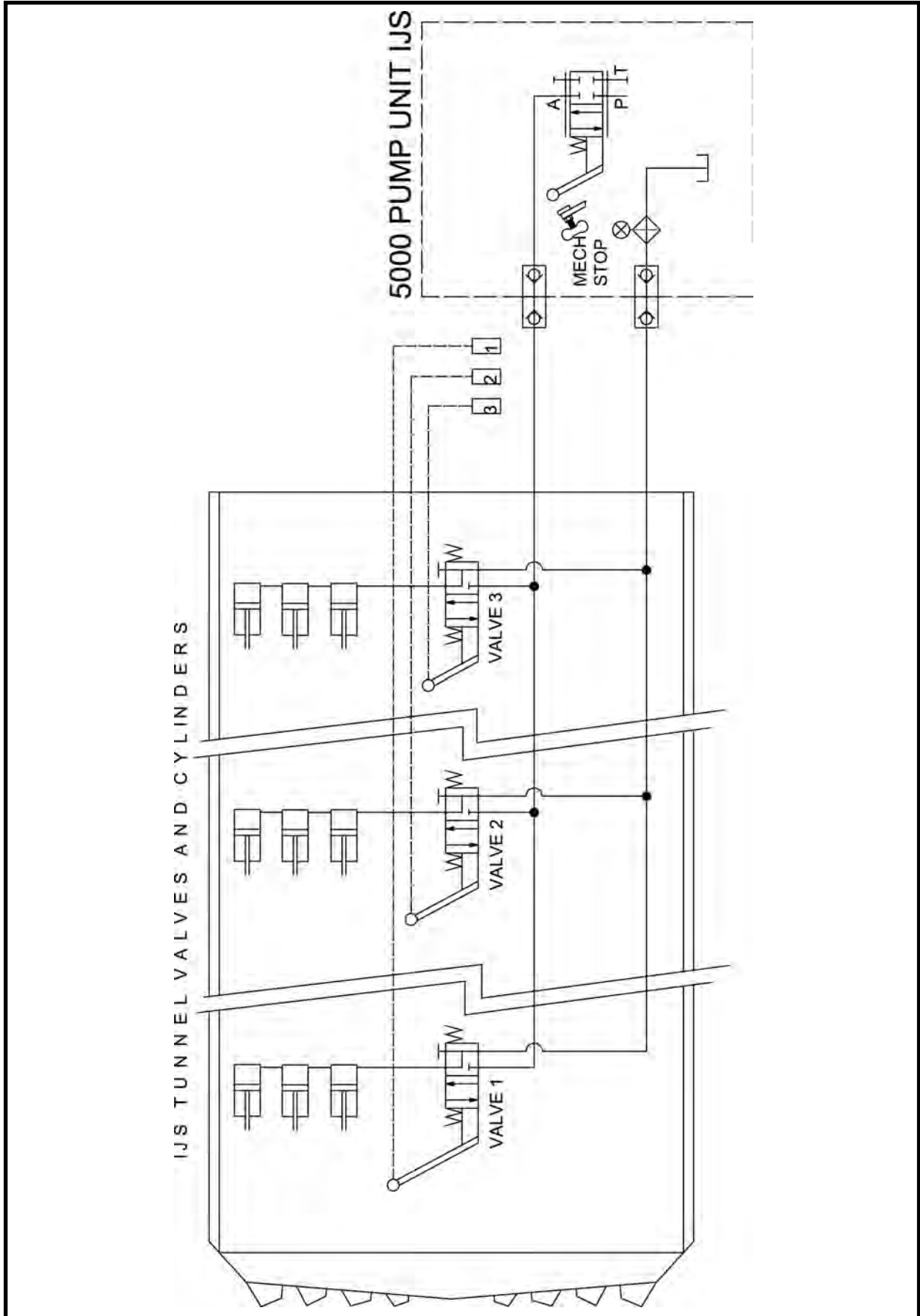
* Refer to Hydraulic Lines, in this section for parts information.

HYDRAULIC LINES



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|-----------|--|
| 0.1 | 1 | F13325F00 | HYDRAULIC LINE, 1.5 x 10.5' (1-1/4 Ends) |
| 0.2 | 1 | F13326F00 | HYDRAULIC LINE, 1.5 x 21' (1-1/4 Ends) |
| 1 | 1 | 007002P02 | CAP, Coupler 1-1/4 |
| 2 | 1 | 007086P00 | PLUGS, Rubber 1/2 x 1.625 OD |
| 3 | 1 | P0084-123 | RING, Back-Up |
| 4 | 1 | P0085-123 | ORING |
| 5 | 1 | 007087P00 | PLUGS, Rubber 1/2 x 1.25 OD |
| 6 | 1 | 005350P03 | CAP, Coupler 1-1/4 |

INTERMEDIATE JACKING STATION SCHEMATIC

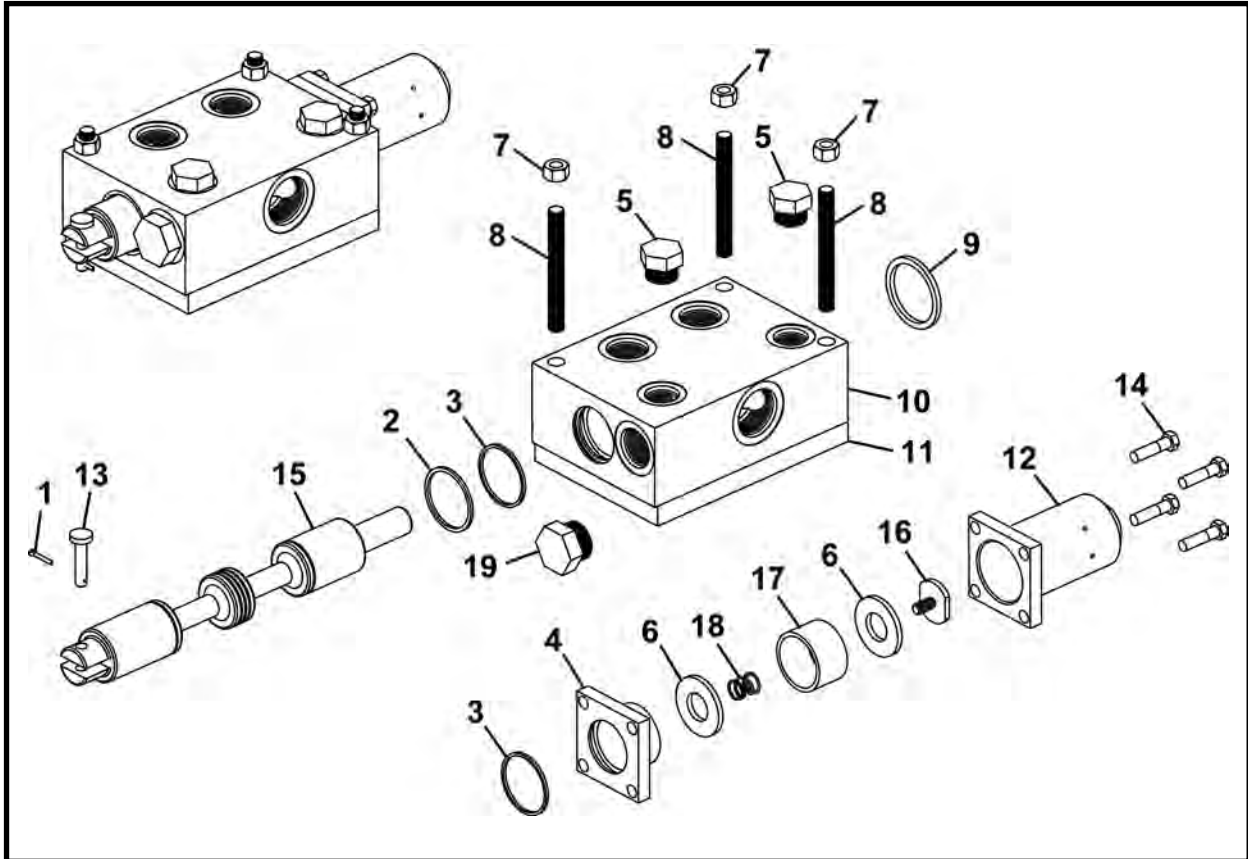




Valves

| | |
|--|----|
| Motor Valve | |
| 480 & 540 - 60 Gallon - (SN F18300F-01 Thru 03), 003708A00 | 2 |
| 540 - 120 Gallon (SN F18300F-04 & After), 007579A00 | 3 |
| Conveyor Drive Control Valve | |
| 480 (SN F23800F-17 & Before), 540 (SN F18300F-01 Thru 10), 005280A00 | 4 |
| 480 (SN F23800F-18 & After), 005343A | 5 |
| 540 (SN F18300F-11 & After), 005344A | 6 |
| Conveyor Control | |
| Single/Dual Feed Control, 480, 540 (SN F18300F-01 - 03), P0302-113 | 7 |
| Conveyor Control Valve, 540 (SN F18300F-04 Thru 10), P0302-183 | 8 |
| Conveyor Control/Safety Valve, 540 (SN F18300F-11 & After), 029920A | 9 |
| Flow Control Valve | |
| 480 & 540 (SN F18300F-01 Thru 10), P0302-112 | 10 |
| 540 (SN F18300F-11 & After), P0302-533 | 11 |
| Steering Valve, P0302-118 | 12 |
| TBM Control Valve, P0302-260 | 13 |

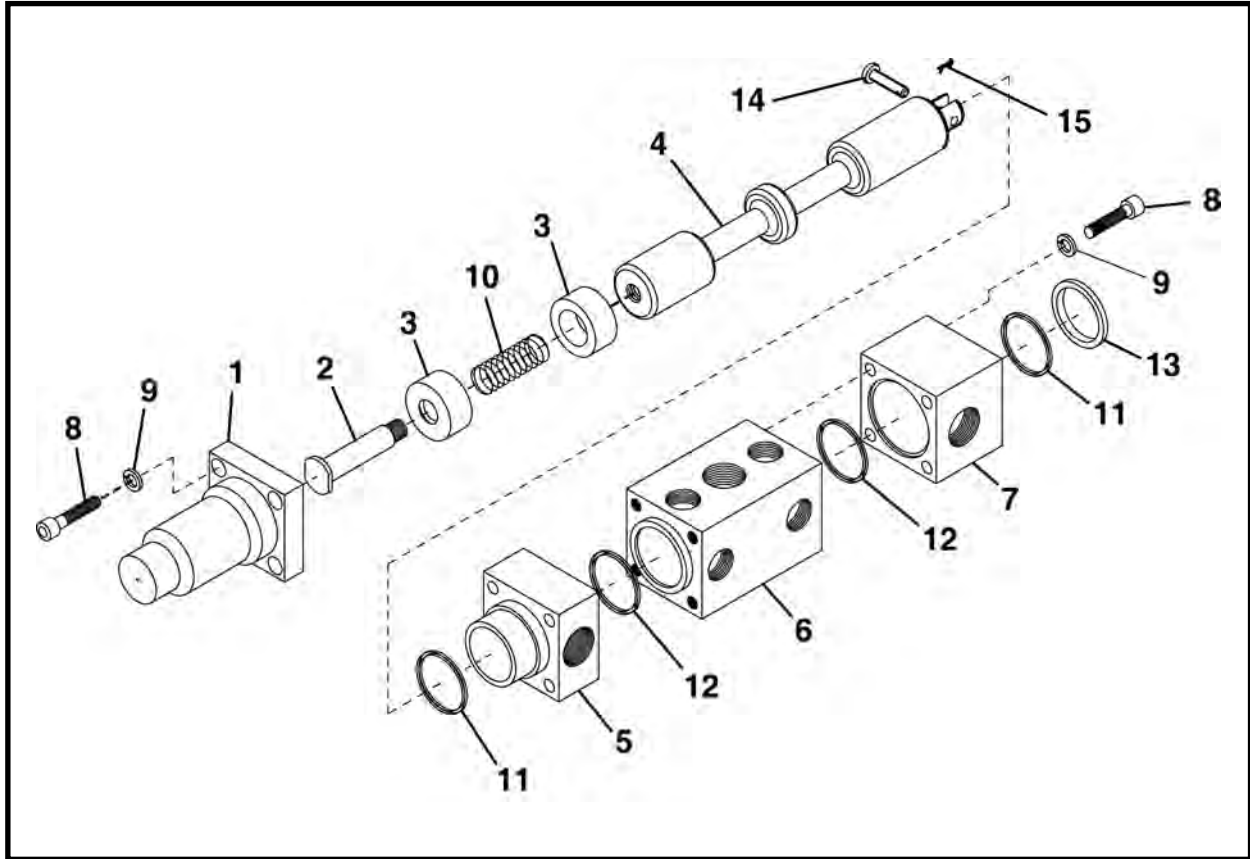
MOTOR (60 GALLON) VALVE, 003708A00
480, 540 (SN F18300F-01 Thru F18300F-03)



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|--------------------------|
| 0 | 1 | 003708A00 | VALVE, Motor (60 Gallon) |
| 1 | 1 | P0048-024 | PIN, Cotter |
| 2* | 1 | P0087-001 | WIPER |
| 3* | 2 | P0085-328 | ORING |
| 4 | 1 | 003712P00 | CAP, Oring |
| 5 | 2 | P0300-145 | PLUG, 12MB-PLUG |
| 6 | 2 | 003714P00 | WASHER, Spring |
| 7 | 3 | P0003-08-000 | NUT, 1/2 |
| 8 | 3 | 003837P00 | ROD |
| 9* | 1 | P0085-330 | ORING |
| 10 | 1 | 003710P00 | BODY, Valve |
| 11 | 1 | 003836P00 | PLATE, Mounting |
| 12 | 1 | 003711P00 | COVER, Spring Valve |
| 13 | 1 | 003860P01 | PIN, Valve |
| 14 | 4 | P0001-06-006 | BOLT, 3/8-16 UNC x 1-1/2 |
| 15 | 1 | 003709P01 | SPOOL |
| 16 | 1 | 003713P00 | RETAINER, Spring |
| 17 | 1 | 003715P00 | GUARD, Spring |
| 18 | 1 | P0070-019 | SPRING |
| 19 | 1 | P0300-028 | PLUG, 16MP-PLUG |
| 20 | 1 | 010749A00 | KIT, Seal |

* Included in item 20, 010749A00, Seal Kit.

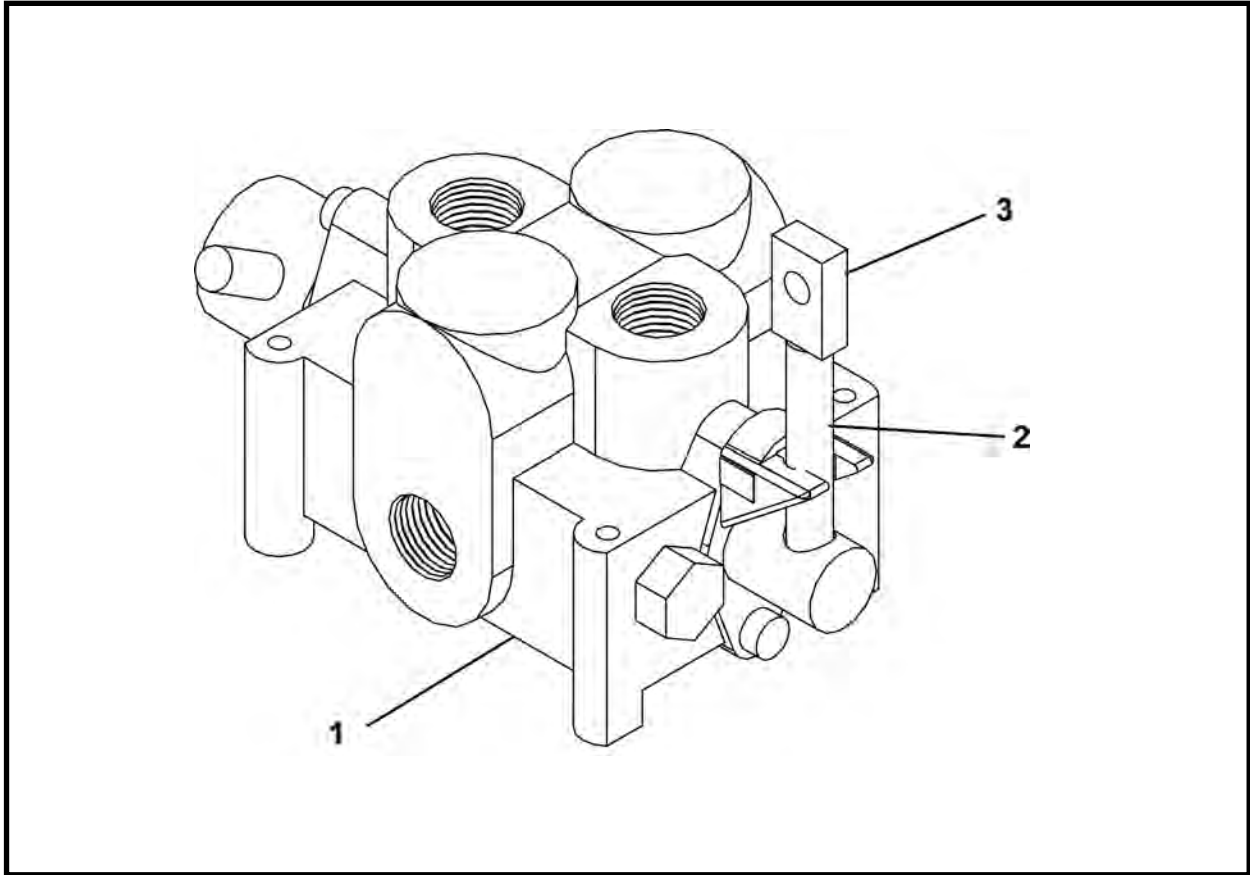
MOTOR (120 GALLON) VALVE, 007579A00
540 (SN F18300F-04 & After)



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|---|
| 0 | 1 | 007579A00 | VALVE, Motor (120 Gallon) |
| 1 | 1 | 007585P01 | BLOCK |
| 2 | 1 | 007583P00 | PIN |
| 3 | 2 | 007582P00 | SPACER |
| 4 | 1 | 007581P00 | SHAFT |
| 5 | 1 | 007584P01 | BLOCK, End |
| 6 | 1 | 007586P01 | BODY |
| 7 | 1 | 007580P01 | BLOCK, End |
| 8 | 8 | P0031-08-014 | SCREW, Socket Head Cap 1/2-13 UNC x 3-1/2 |
| 9 | 8 | P0046-008 | WASHER, Hi-Collar Lock 1/2 |
| 10 | 1 | P0070-019 | SPRING |
| 11* | 2 | P0085-228 | ORING |
| 12* | 2 | P0085-234 | ORING |
| 13* | 1 | P0087-004 | WIPER |
| 14 | 1 | 003860P01 | PIN, Valve |
| 15 | 1 | P0048-012 | PIN, Cotter |
| 16 | 1 | 007587A00 | KIT, Seal |

* Included in item 16, 007587A00, Seal Kit.

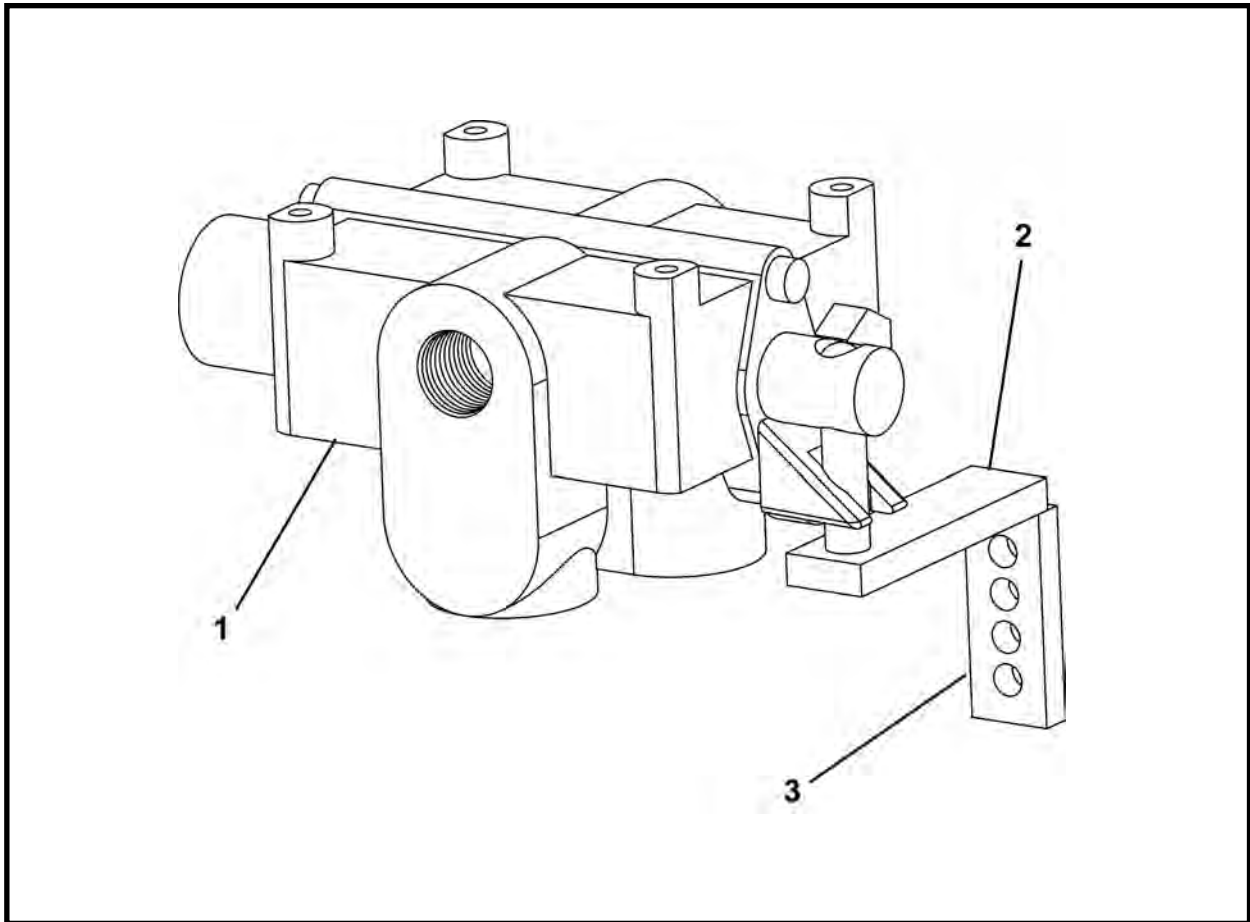
CONVEYOR DRIVE CONTROL VALVE, 005280A00
480 (SN F23800F-17 & Before), 540 (SN F18300F-01 Thru F18300F-10)



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|------------|-------------------------------|
| 0 | 1 | 005280A00 | VALVE, Conveyor Drive Control |
| 1 | 1 | P0302-109 | VALVE |
| 2 | 1 | P0302-109B | KIT, Handle |
| 3 | 1 | 005346P | BAR, Valve Handle |
| 4* | 1 | P0302-109A | KIT, Seal |

* Not Shown

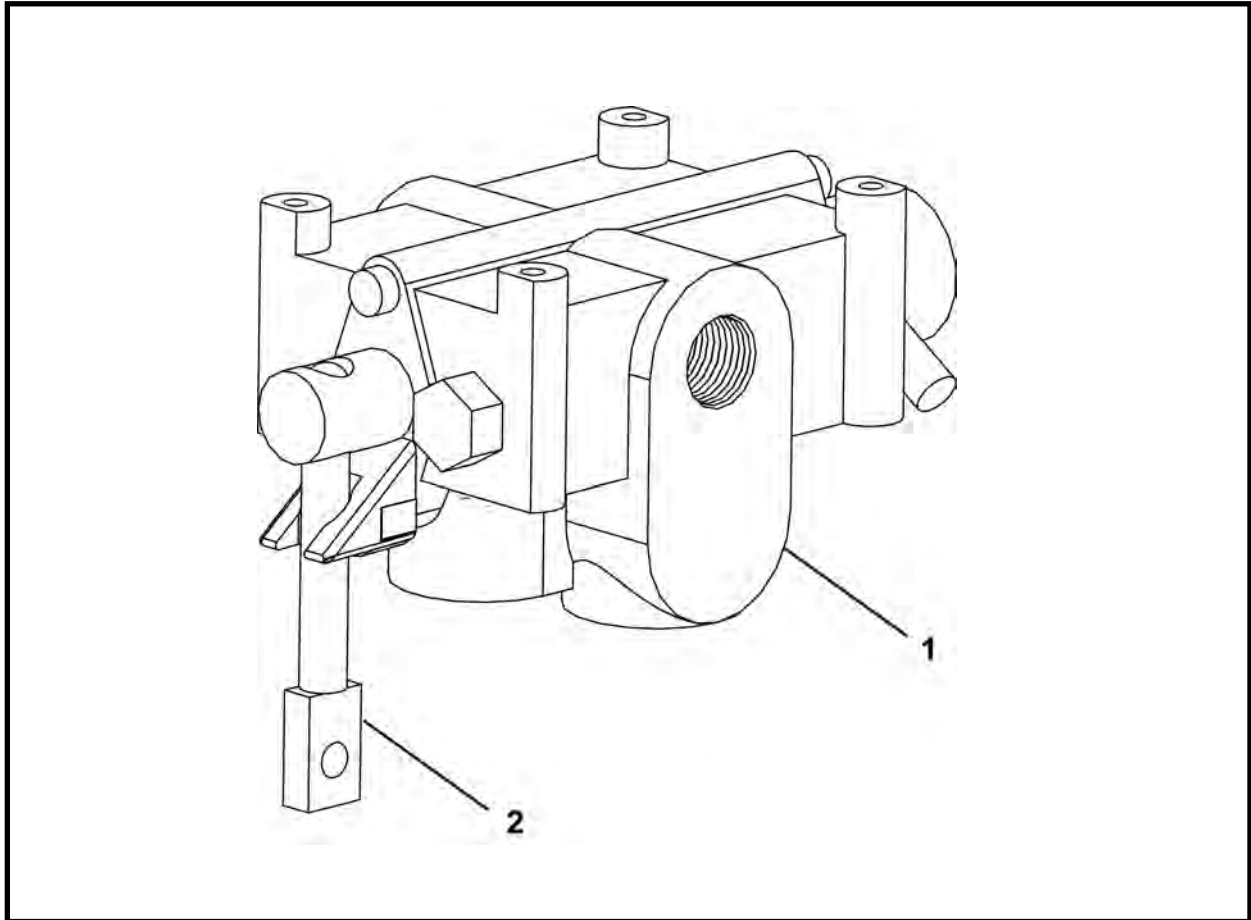
CONVEYOR DRIVE VALVE, 005343A
480 (SN F23800F-18 & After)



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|------------|-----------------------|
| 0 | 1 | 005343A | VALVE, Conveyor Drive |
| 1 | 1 | P0302-538 | VALVE, Drive |
| 2 | 1 | 005310P | BAR, Valve Linkage |
| 3 | 1 | 005342P | BAR, Valve Strap |
| 4* | 1 | P0302-109K | KIT, Seal |

* Not Shown

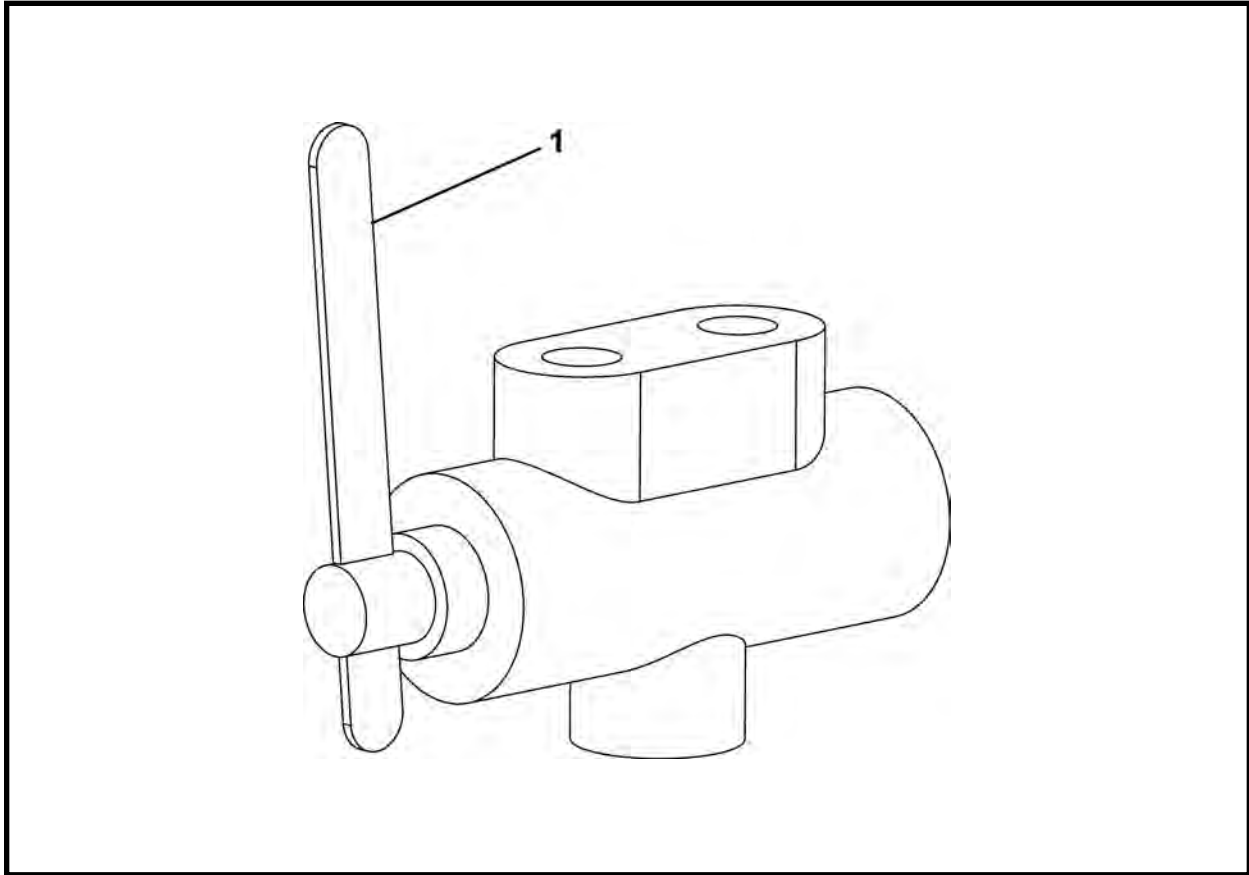
CONVEYOR DRIVE VALVE, 005344A
540 (SN F18300F-11 & After)



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|------------|-----------------------------|
| 0 | 1 | 005344A | VALVE, Conveyor Drive (ORB) |
| 1 | 1 | P0302-538 | VALVE, Drive |
| 2 | 1 | 005346P | BAR, Valve Handle |
| 3* | 1 | P0302-109K | KIT, Seal |

* Not Shown

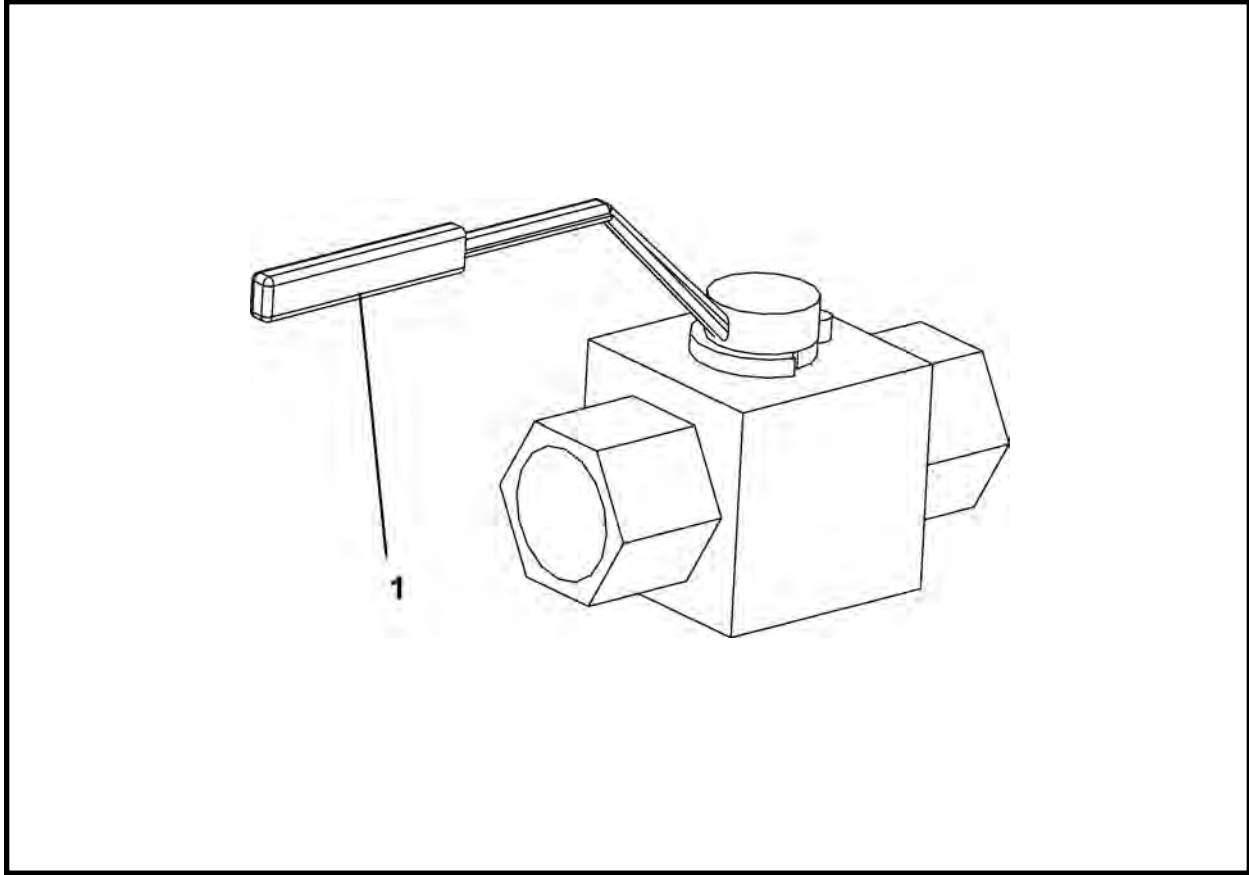
CONVEYOR CONTROL, SINGLE/DUAL FEED CONTROL VALVE, P0302-113
480, 540 (SN F18300F-01 Thru F18300F-03)



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|------------|---|
| 0 | 1 | P0302-113 | VALVE, Conveyor Control, Single/Dual Feed Control |
| 1 | 1 | P0302-113A | HANDLE |
| 2* | 1 | P0302-113B | KIT, Seal |

* Not Shown

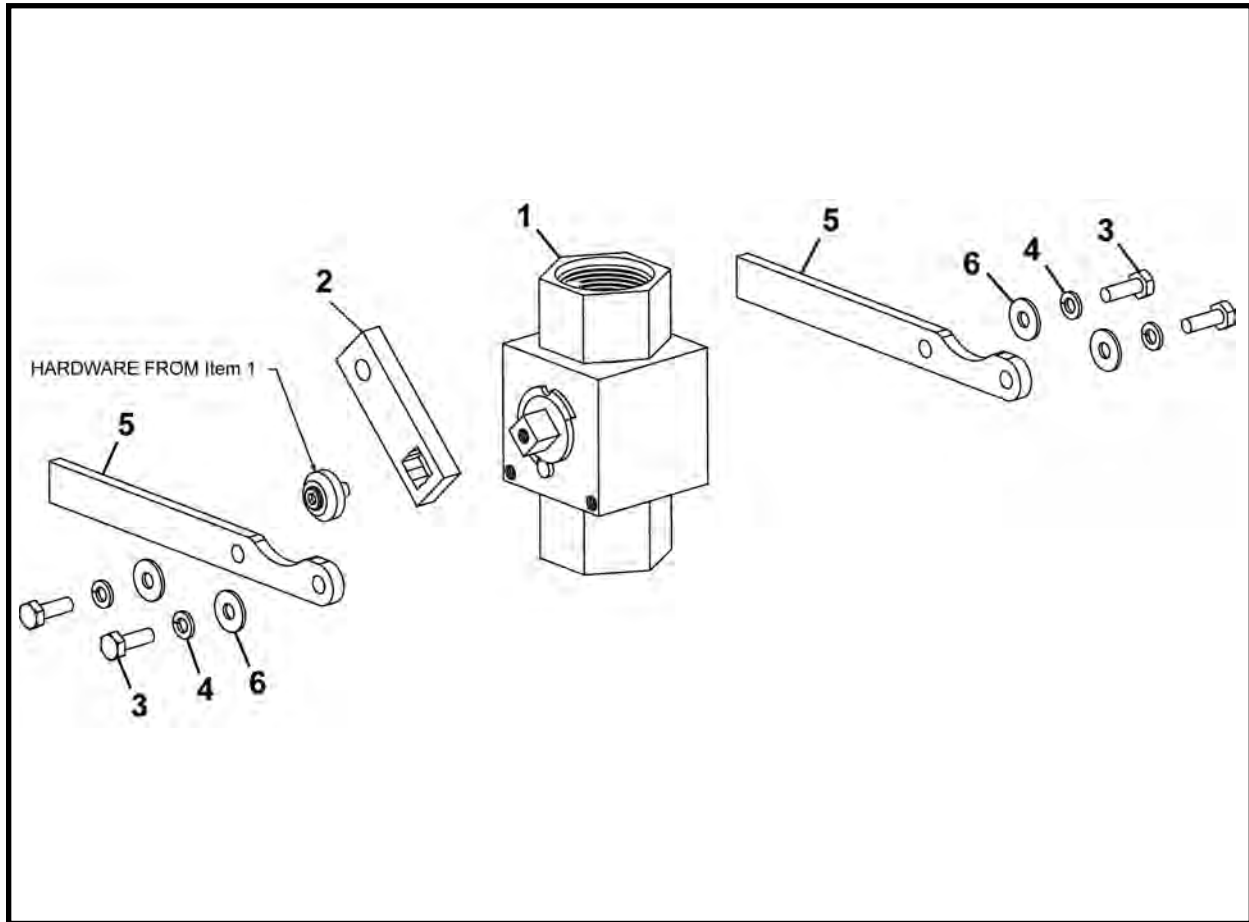
CONVEYOR CONTROL VALVE, P0302-183
540 (SN F18300F-04 Thru F18300F-10)



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|-----------|-------------------------|
| 0 | 1 | P0302-183 | VALVE, Conveyor Control |
| 1 | 1 | P0302-197 | HANDLE |
| 2* | 1 | P0302-198 | KIT, Seal |

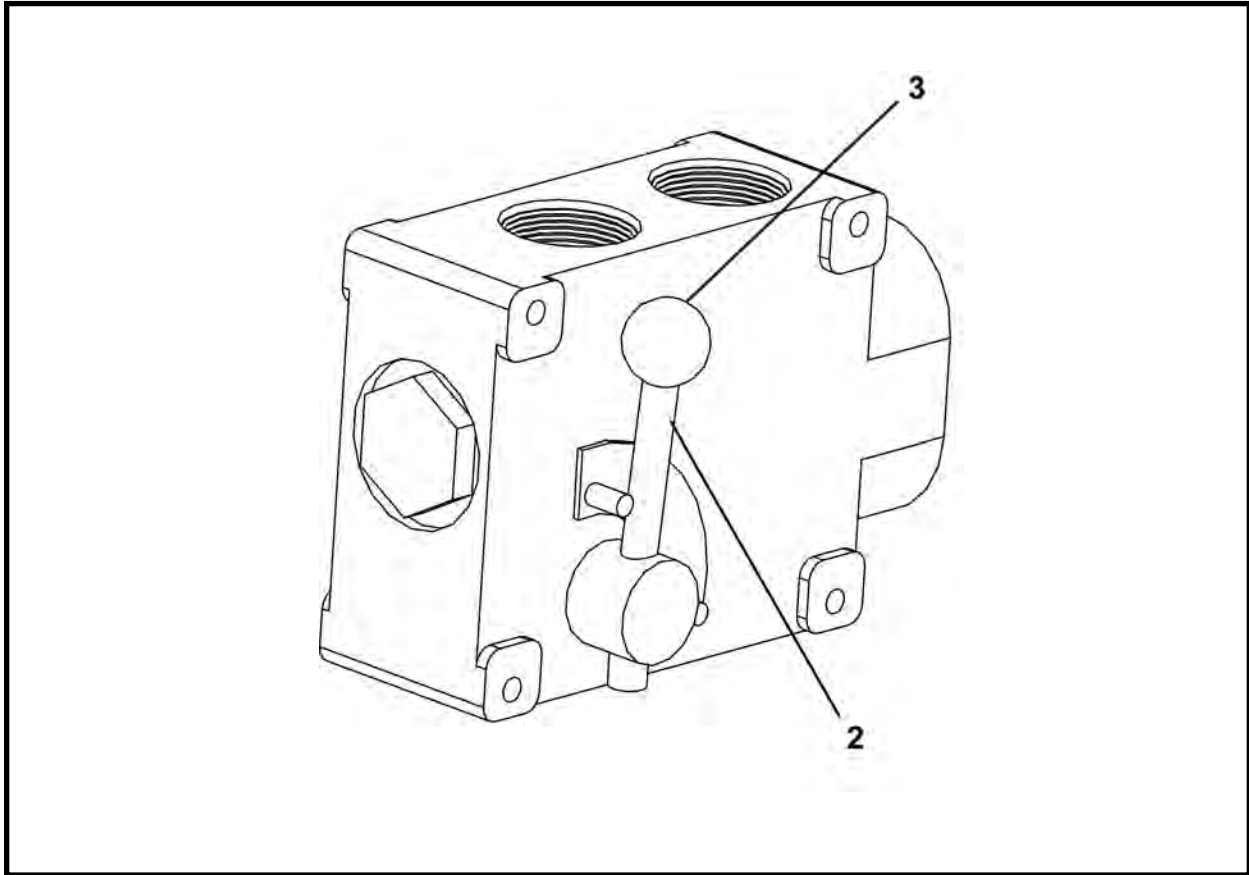
* Not Shown

CONVEYOR SAFETY VALVE, 029920A
540 (SN F18300F-11 & After)



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|---------------------------|
| 0 | 1 | 029920A | VALVE, Conveyor Safety |
| 1 | 1 | P0302-539 | VALVE, Dump |
| 2 | 1 | 029919P | HANDLE |
| 3 | 4 | P0001-04-003 | BOLT, 1/4 UNC x .75 |
| 4 | 4 | P0045-004 | WASHER, Lock 1/4 |
| 5 | 2 | 030555P | MOUNT, Valve |
| 6 | 4 | P0040-004 | WASHER, Hardened Flat 1/4 |

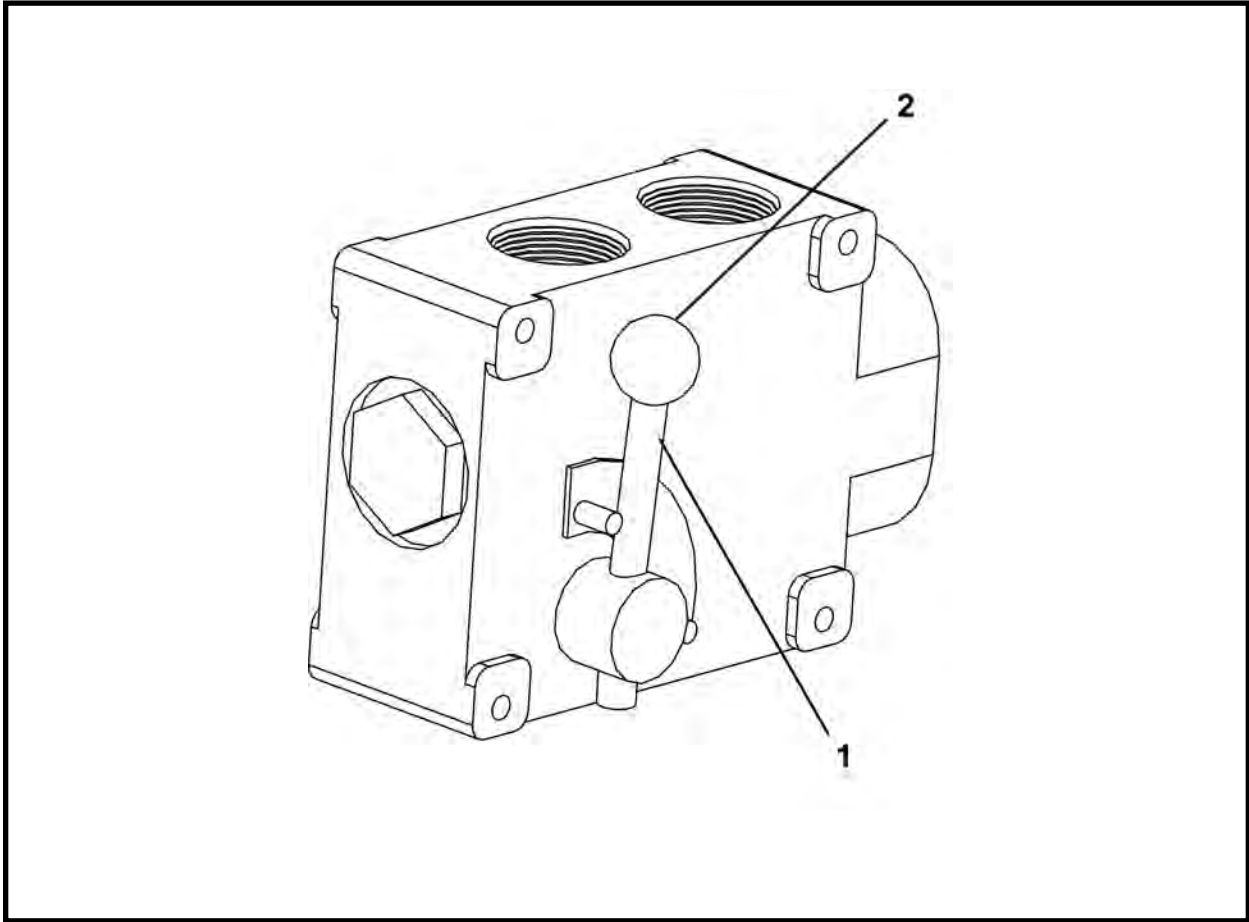
FLOW CONTROL VALVE, P0302-112
480, 540 (SN F18300F-01 Thru F18300F-10)



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|------------|---------------------|
| 0 | 1 | P0302-112 | VALVE, Flow Control |
| 1* | 1 | P0302-112A | KIT, Seal |
| 2 | 1 | P0302-112B | HANDLE |
| 3 | 1 | P0302-112C | KNOB |

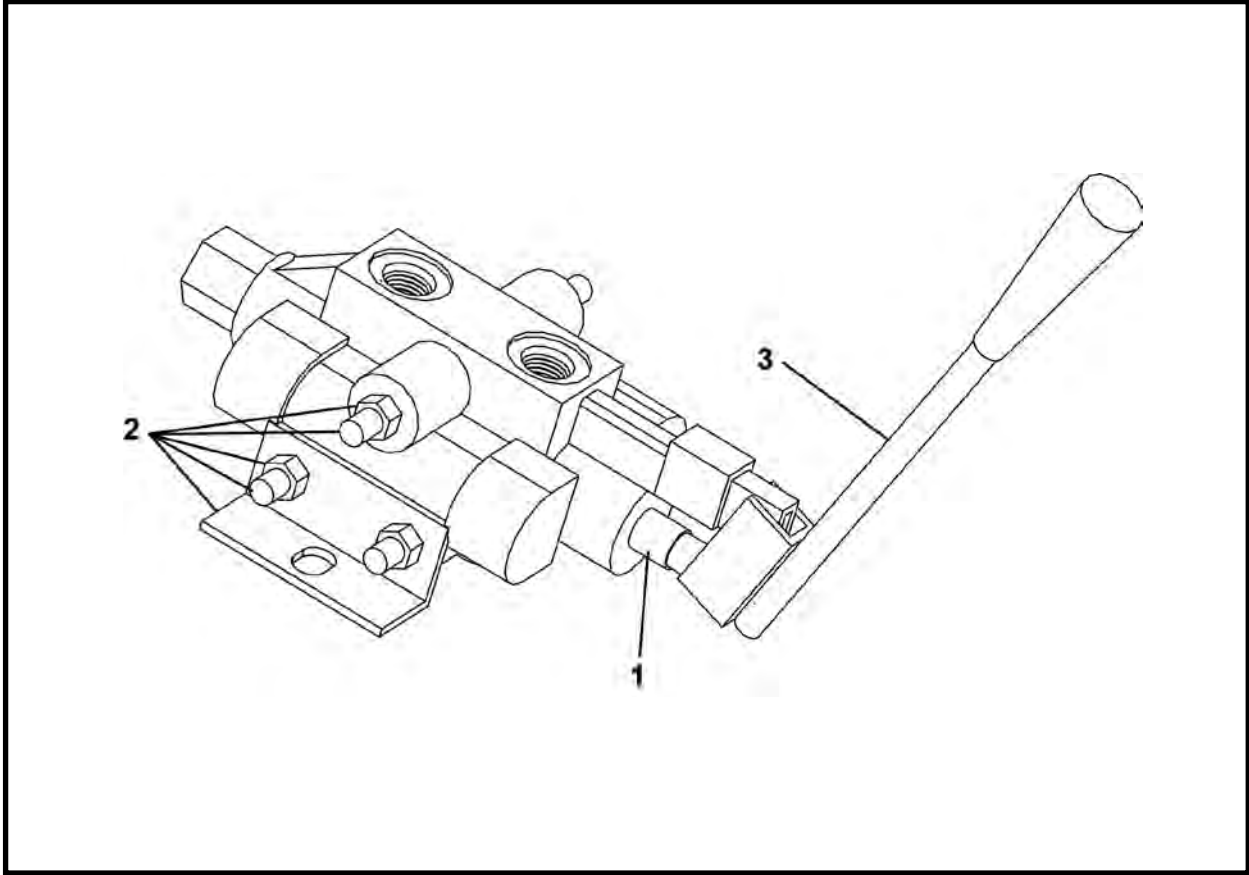
* Not Shown

FLOW CONTROL VALVE (ORB), P0302-533
540 (SN F18300F-11 & After)



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|------------|---------------------------|
| 0 | 1 | P0302-533 | VALVE, Flow Control (ORB) |
| 1 | 1 | P0302-112B | HANDLE |
| 2 | 1 | P0302-112C | KNOB |
| 3 | 1 | P0302-533A | KIT, Seal |

STEERING VALVE, P0302-118

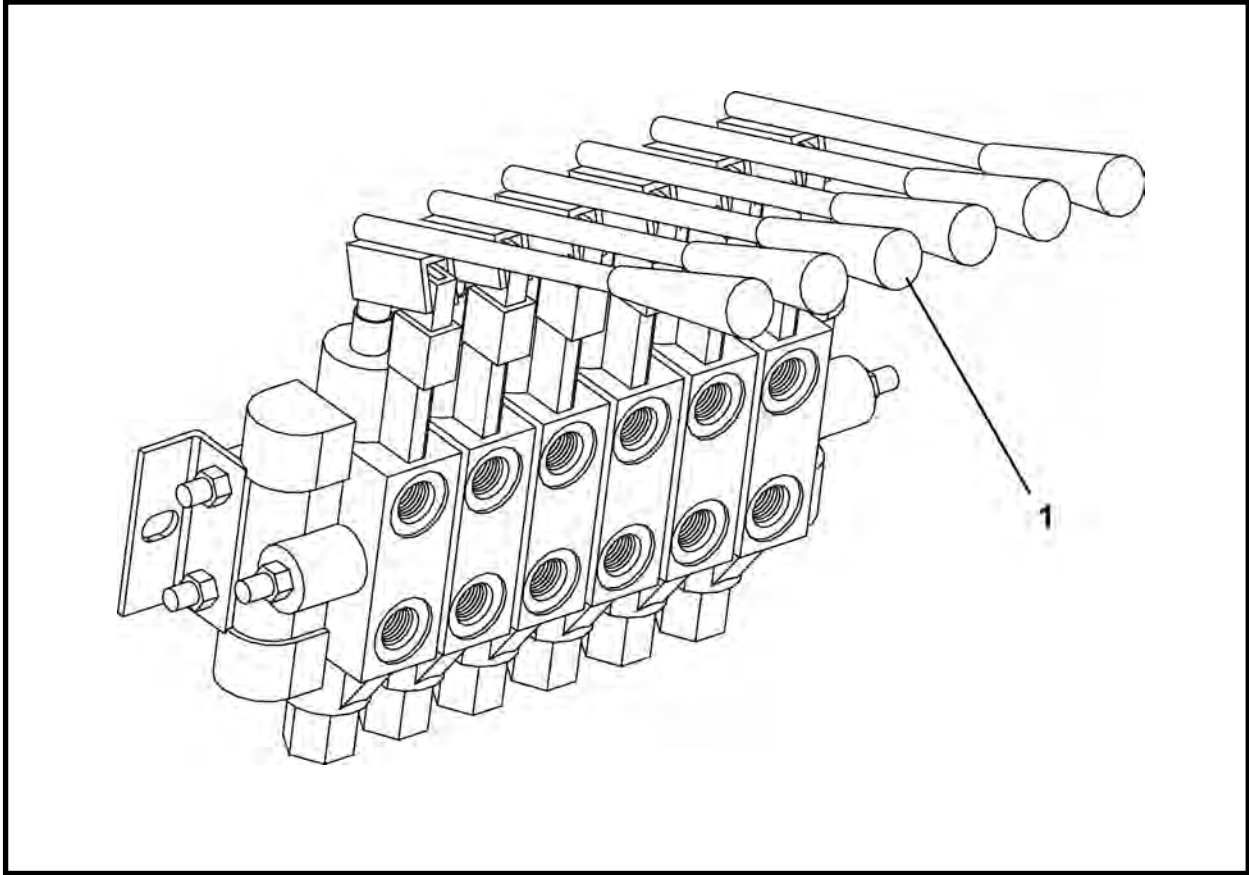


| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|------------|-----------------|
| 0 | 1 | P0302-118 | VALVE, Steering |
| 1 | 1 | P0302-118A | SPOOL |
| 2 | 1 | P0302-118B | KIT, Valve |
| 3 | 1 | P0302-118C | KIT, Handle |
| 4* | 1 | P0302-118E | ORING |
| 5* | 1 | P0302-118F | WASHER |

* Not Shown

Note: Be sure load check balls are removed before operation. Contact your Akkerman Aftermarket Support representative for more information.

TBM CONTROL VALVE, P0302-260



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|------------|--------------------|
| 0 | 1 | P0302-260 | VALVE, TBM Control |
| 1 | 6 | P0302-118C | KIT, Handle |
| 2 | * | P0302-118E | ORING |

* There are 5 orings between each stack.

NOTES



Motors

TBM

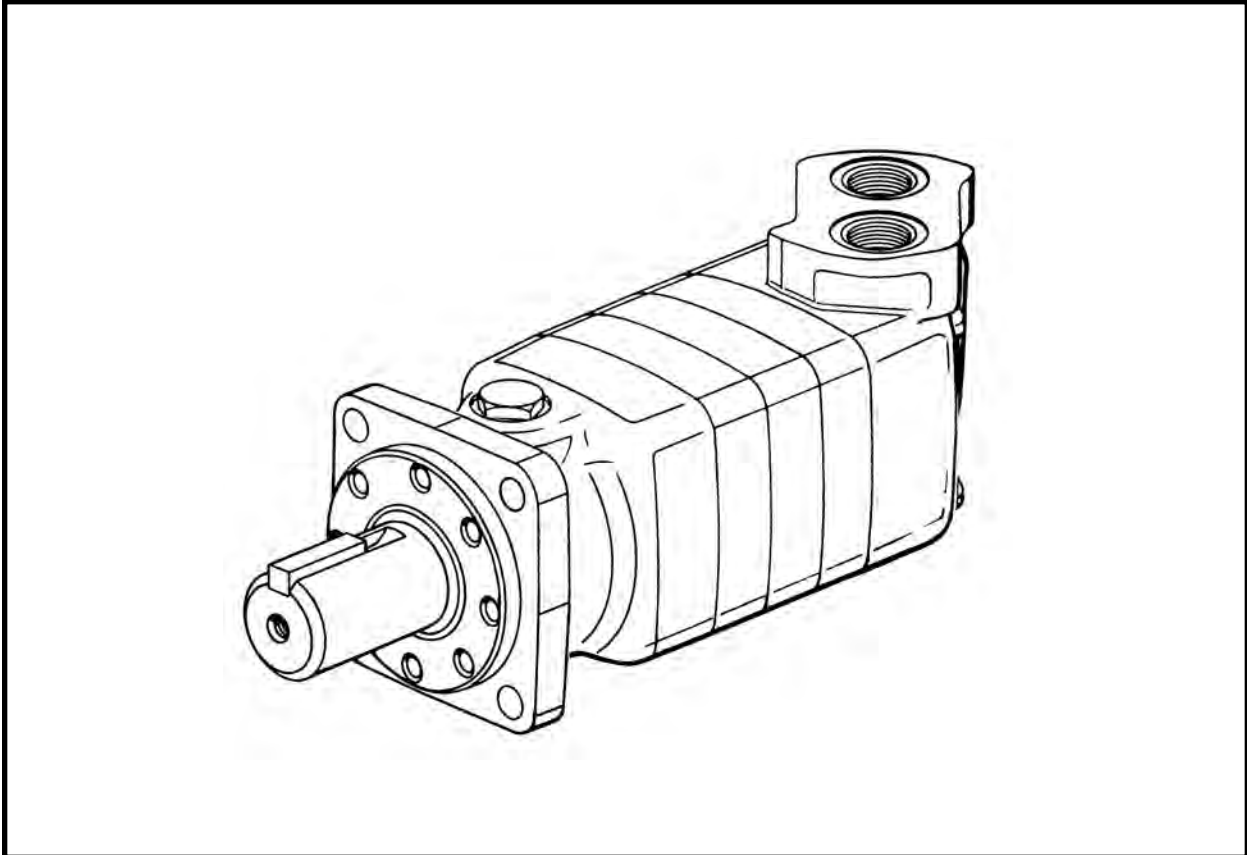
| | |
|----------------------------------|---|
| TBM Drive Motor, P0304-123 | 2 |
|----------------------------------|---|

Conveyors

Conveyor Drive Motor

| | |
|-------------------------------------|---|
| 1615 Belt Conveyor, P0304-157 | 3 |
| 120 Screw Conveyor, P0304-109 | 4 |
| 140 Screw Conveyor, P0304-145 | 5 |

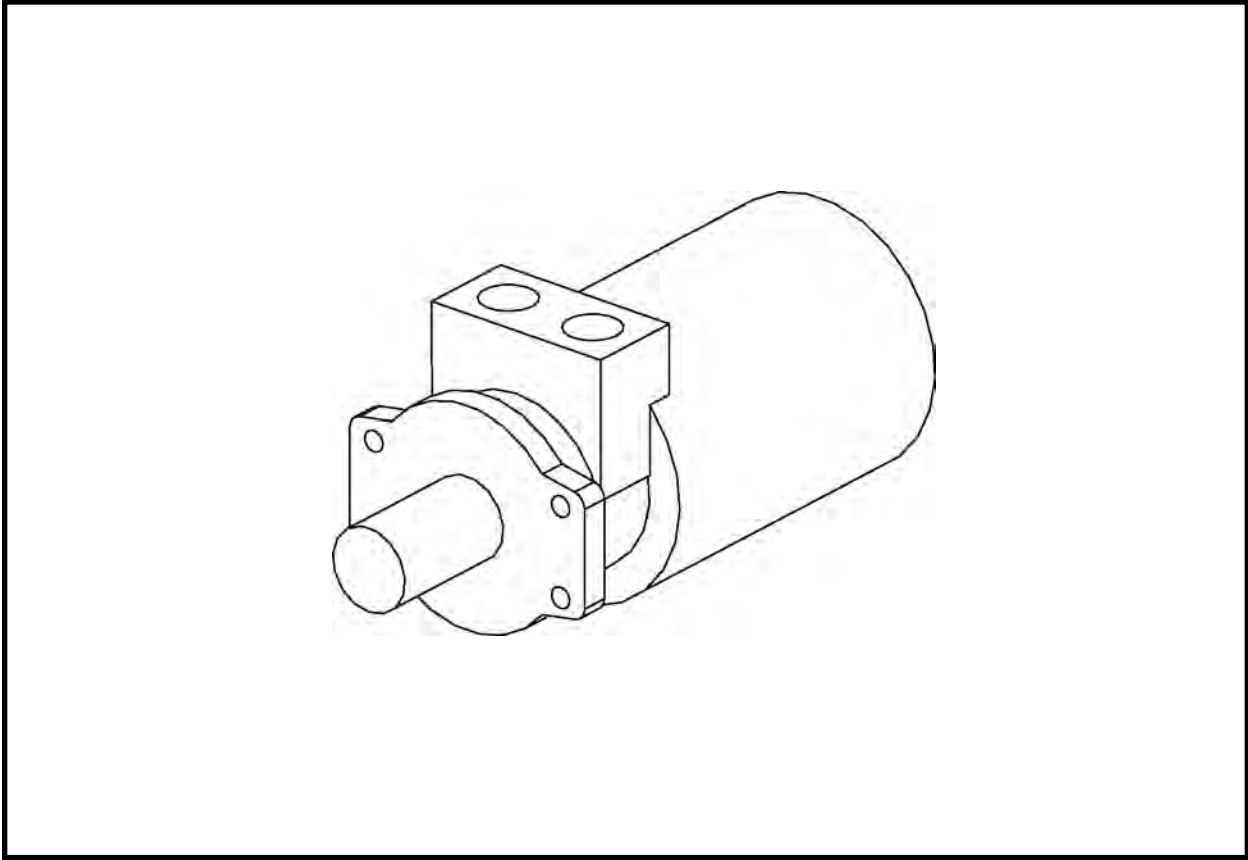
TBM DRIVE MOTOR, P0304-123
TBM MOTOR



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|------------|----------------------|
| 0 | 1 | P0304-123 | MOTOR, TBM Drive |
| 1* | 1 | P0304-107 | KIT, Shaft End Seal |
| 2* | 4 | P0304-107A | SCREW, Shaft End Cap |
| 3* | 1 | P0304-127 | KIT, Motor Seal |

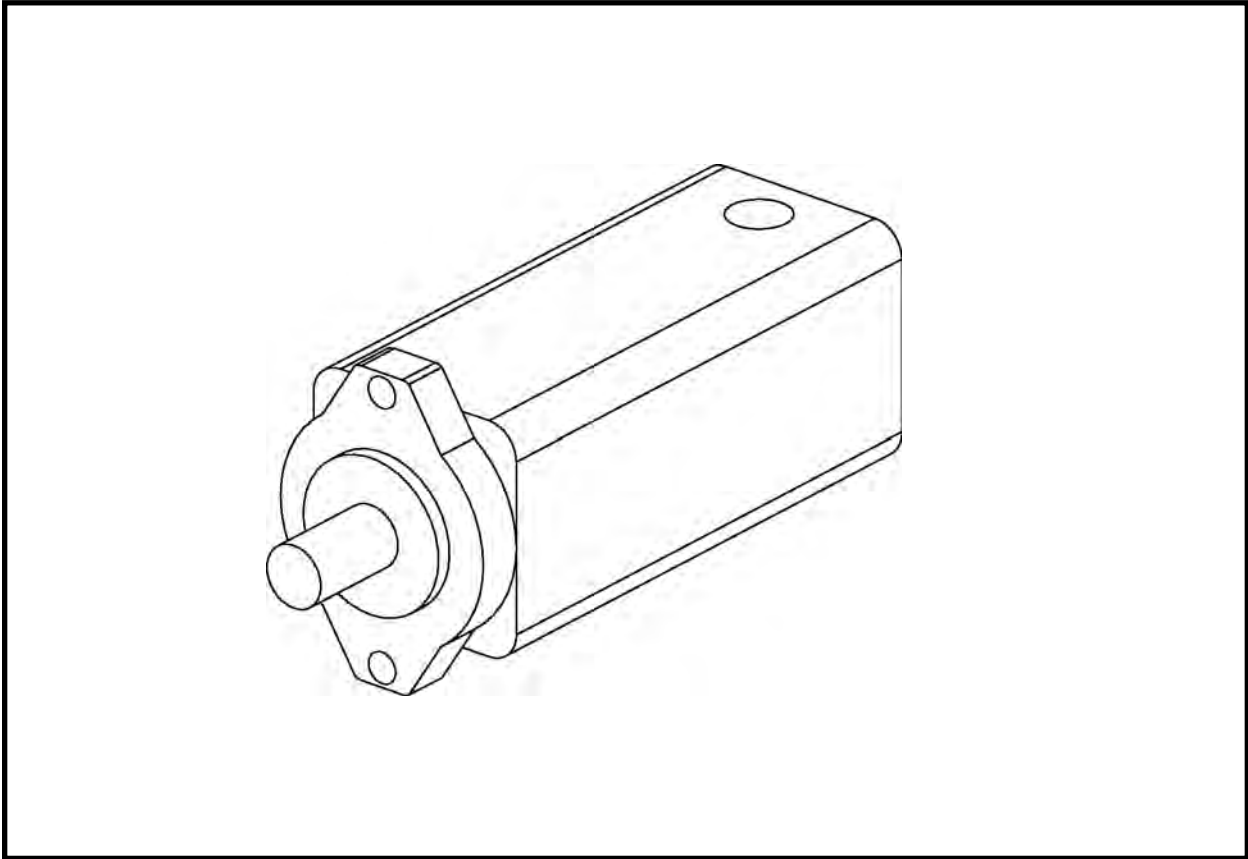
* Not Shown

CONVEYOR DRIVE MOTOR, P0304-157
1615 BELT CONVEYOR



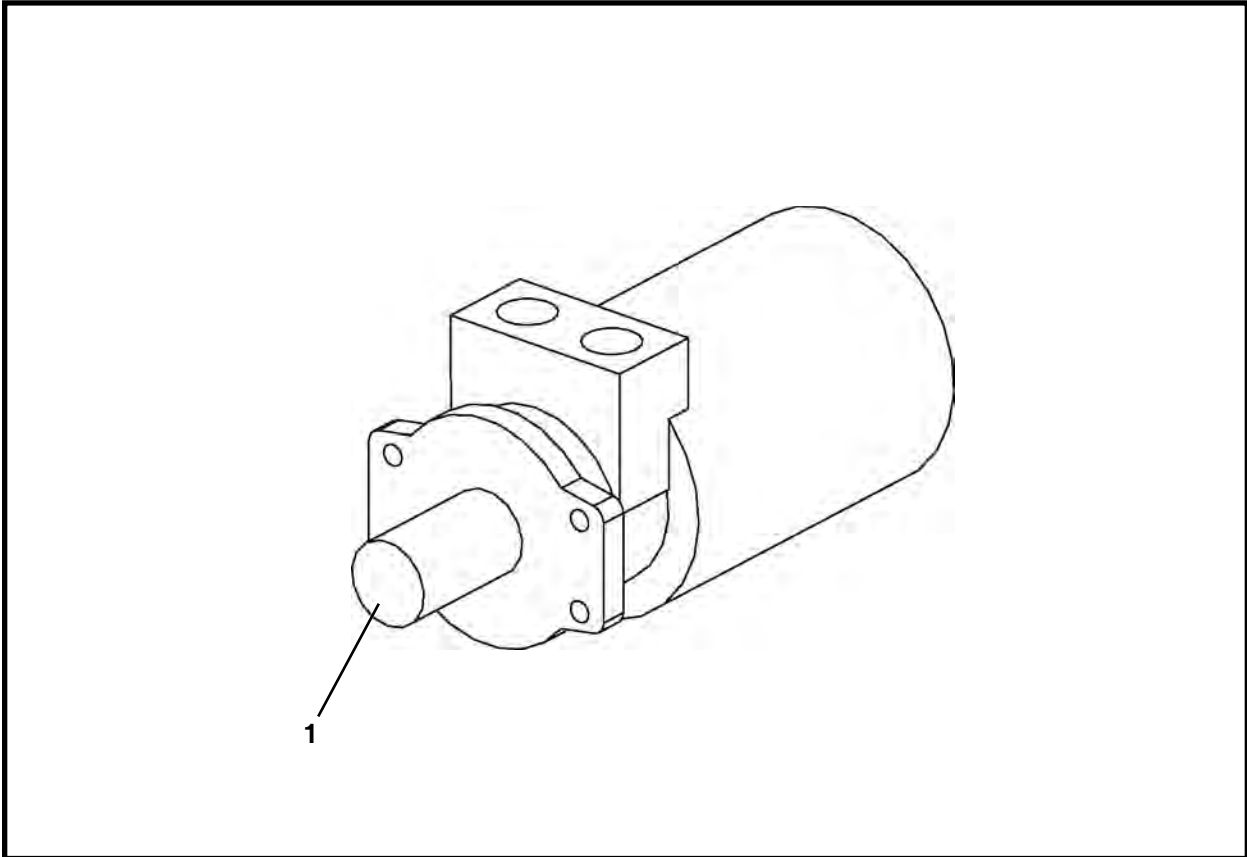
| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|-----------|----------------------------|
| 0 | 1 | P0304-157 | MOTOR, 1615 Conveyor Drive |

SCREW CONVEYOR DRIVE MOTOR, P0304-109
120 SCREW CONVEYOR



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|-----------|---------------------------------|
| 0 | 1 | P0304-109 | MOTOR, 120 Screw Conveyor Drive |

140 SCREW CONVEYOR DRIVE MOTOR, P0304-145
140 SCREW CONVEYOR



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|-----------|---------------------------------|
| 0 | 1 | P0304-145 | MOTOR, 140 Screw Conveyor Drive |
| 1 | 1 | P0304-147 | SHAFT |
| 2* | 1 | P0304-148 | KIT, Seal |

* Not Shown

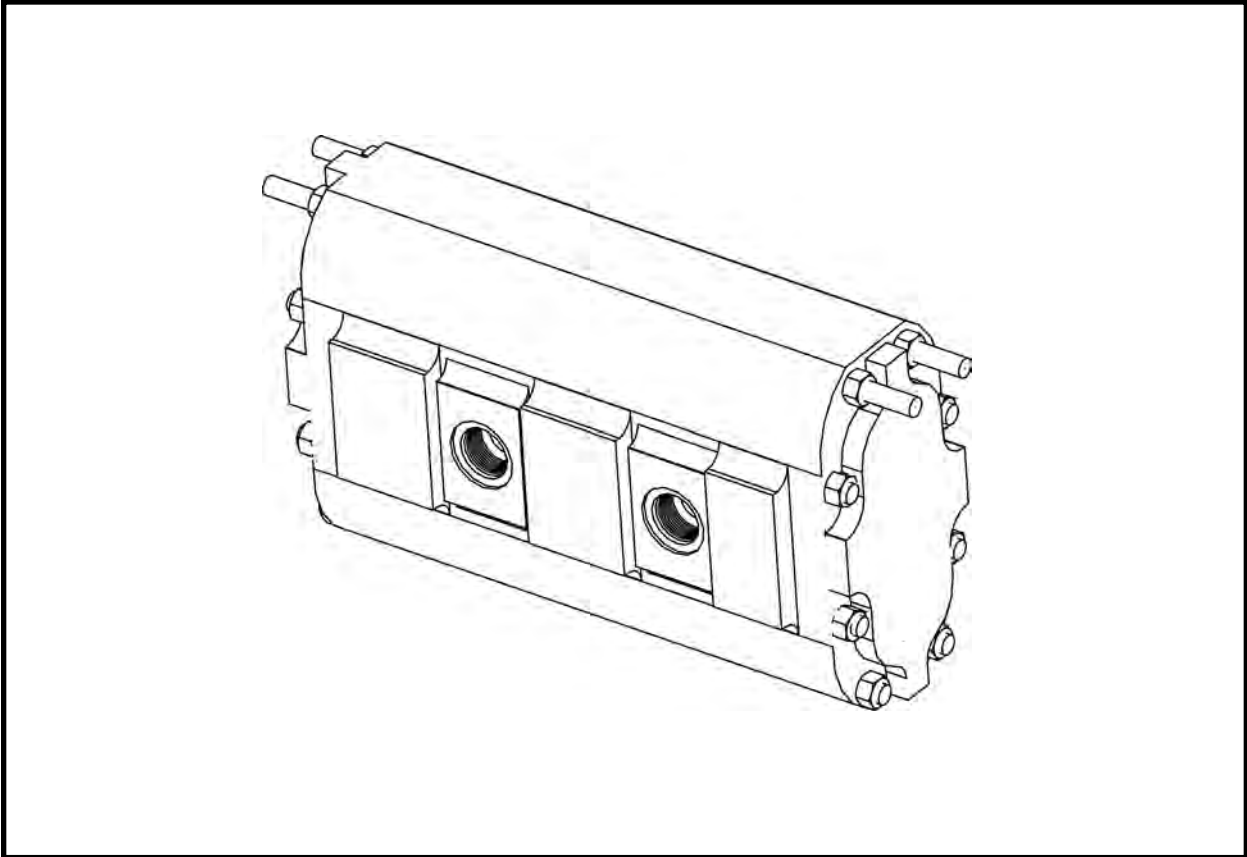
NOTES



Pumps

Flow Divider, P0303-163 2

FLOW DIVIDER, P0303-163



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|------------|--------------|
| 0 | 1 | P0303-163 | FLOW DIVIDER |
| 1* | 6 | P0303-163B | RING |
| 2* | 3 | P0303-163D | SEAL, Pocket |

* Not Shown



Cylinders

TBM

| | |
|--|----|
| Advance Cylinder Assembly, 010747A00 | 2 |
| Conveyor Lift Cylinder Assembly | |
| With NPT Fittings, 002691A00 | 4 |
| With ORB Fittings, 020300A | 5 |
| Hydraulic Dirt Wing Cylinder Assembly, 014603A00 | 6 |
| Steering Cylinder Assembly, 480, 540 SN F18300F-01 Thru 03 | |
| With NPT Fittings, 025292A | 8 |
| With ORB Fittings, 020301A | 9 |
| Steering Cylinder Assembly 540 SN F18300F-04 & After | |
| With NPT Fittings, 010385A01 | 10 |
| With ORB Fittings, 020302A | 11 |

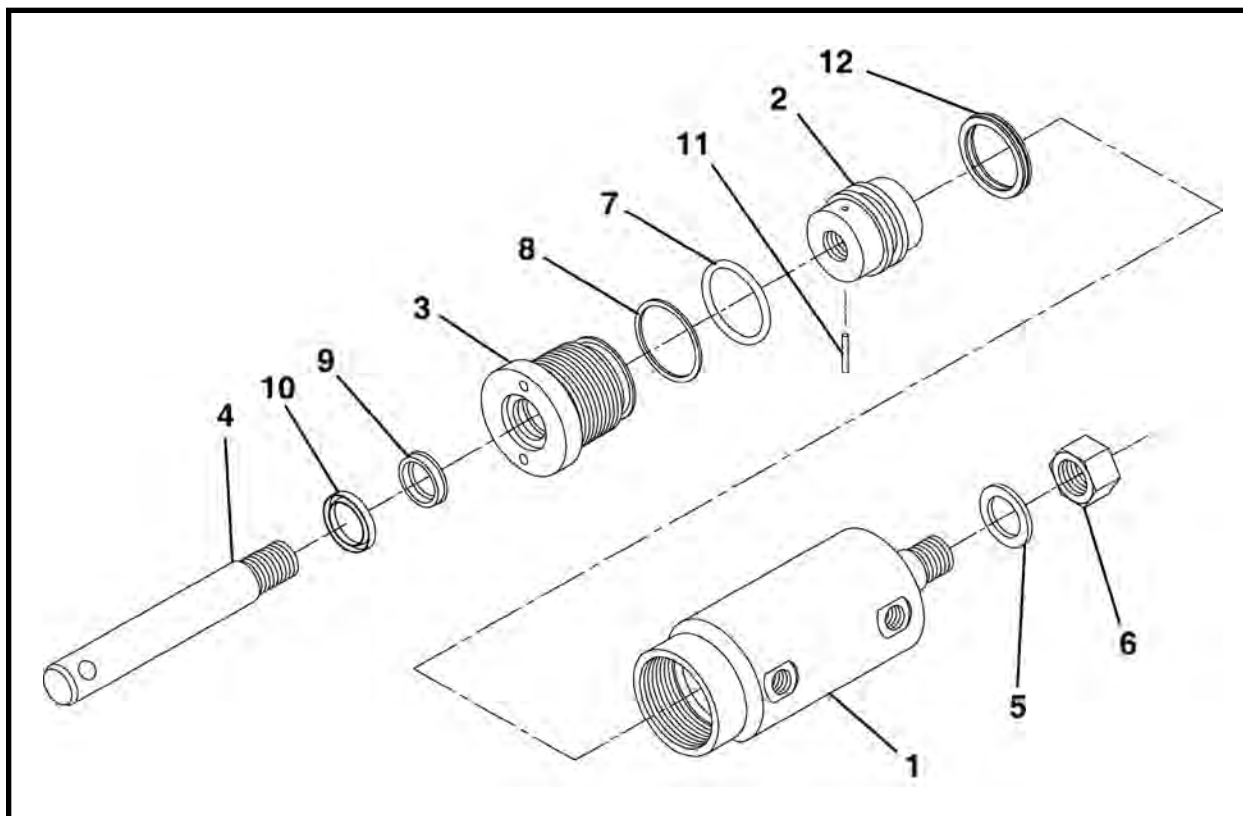
Attachments

| | |
|--|----|
| Closed Face (Old Style) | |
| Closed Face Cylinder Assembly (480), 015007A00 | 12 |
| Closed Face Cylinder Assembly (540), 015265A00 | 13 |
| Closed Face (New Style) | |
| Closed Face Cylinder Assembly (480), 015065A | 14 |
| Closed Face Cylinder Assembly (540), 015060A | 15 |

Miscellaneous

| | |
|--|----|
| Intermediate Jacking Station Cylinder, F03531F02 | 17 |
| Liner Can | |
| Liner Can Cylinder Assembly, 30" Stroke, 002617A01 | 18 |
| Liner Can Cylinder Assembly, 38" Stroke, 011720A00 | 19 |

ADVANCE CYLINDER ASSEMBLY, 010747A00
ADVANCE CYLINDERS



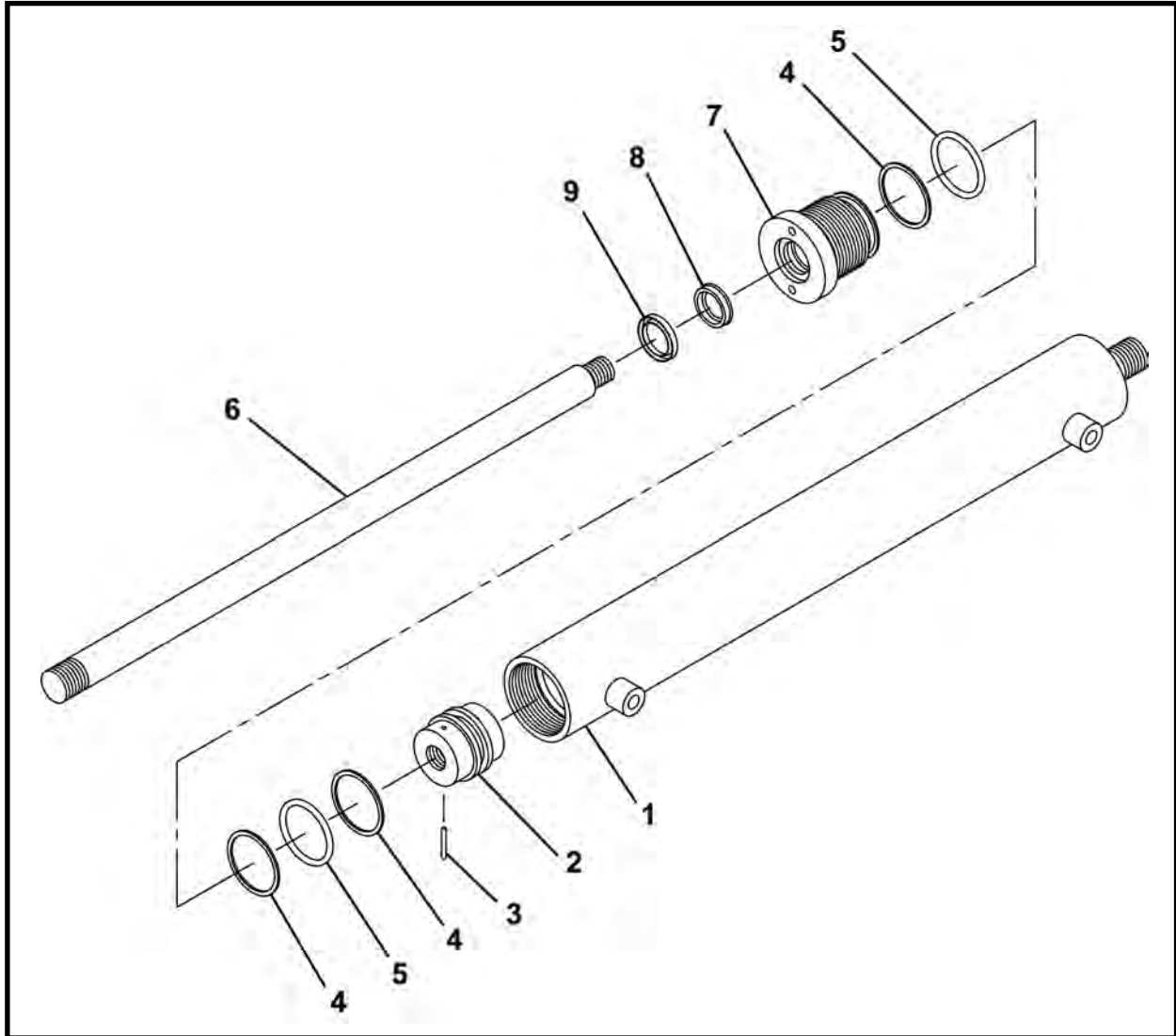
| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|----------------------------|
| 0 | 1 | 010747A00 | ASSEMBLY, Advance Cylinder |
| 1 | 1 | 010865P00 | BARREL, Cylinder |
| 2 | 1 | 010864P00 | PISTON |
| 3 | 1 | 001245P00 | GLAND |
| 4 | 1 | 001243P01 | SHAFT |
| 5 | 1 | P0040-014 | WASHER, 7/8 |
| 6 | 1 | P0004-14-000 | NUT, 7/8 UNF |
| 7* | 1 | P0085-224 | ORING |
| 8* | 1 | P0084-224 | RING, Back Up |
| 9* | 1 | P0086-001 | POLYSEAL |
| 10* | 1 | P0080-001 | WIPER |
| 11 | 1 | P0049-042 | PIN, Spring |
| 12* | 1 | P0085-C2 | SEAL |
| 13 | 1 | 010748A00 | KIT, Seal |

* Items included in item 13, 010748A00 Seal Kit.

NOTE: Install item 10 as shown with "cupped" side pointing toward rod end.

NOTES

CONVEYOR LIFT CYLINDER ASSEMBLY WITH NPT FITTINGS, 002691A00
CONVEYOR LIFT CYLINDER WITH NPT FITTINGS

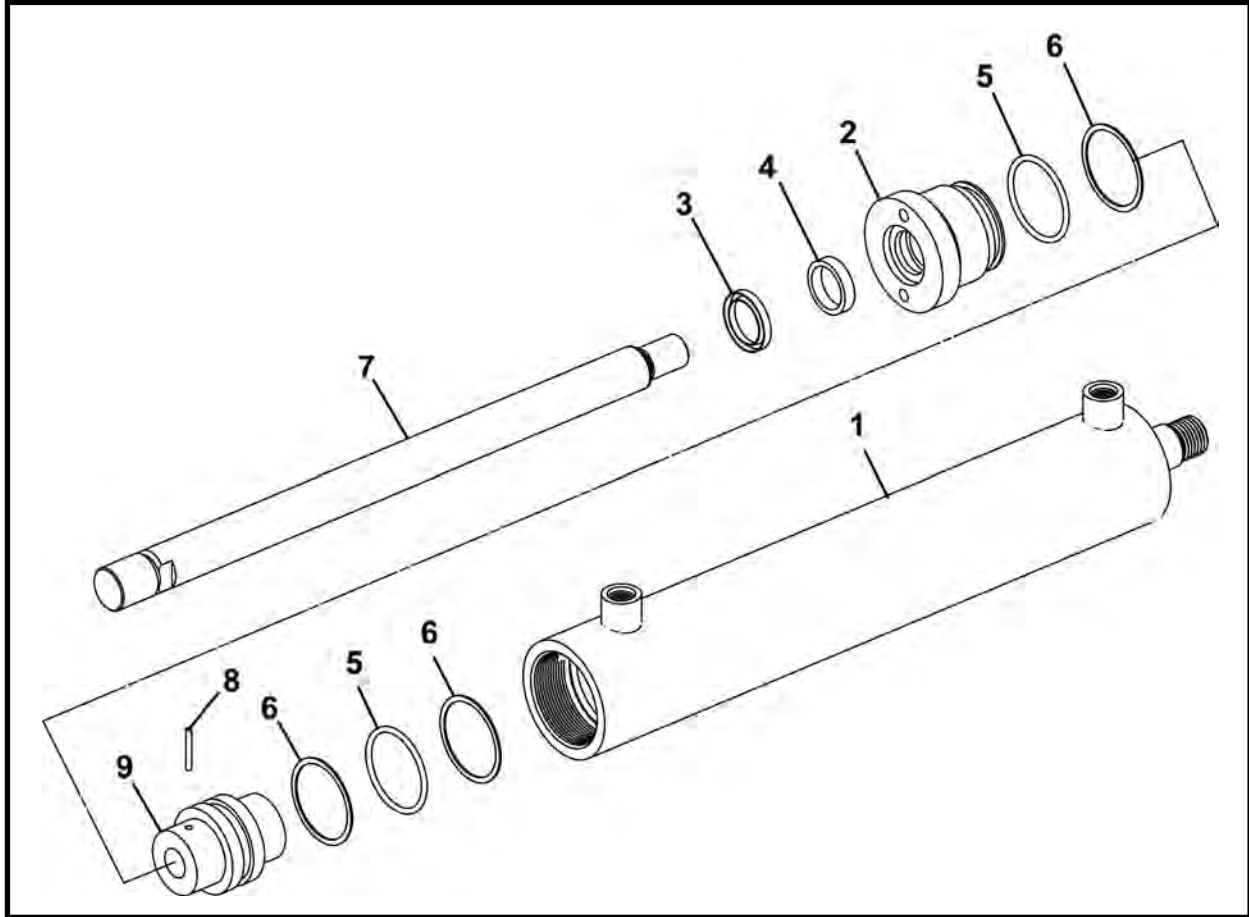


| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|-----------|----------------------------------|
| 0 | 1 | 002691A00 | ASSEMBLY, Conveyor Lift Cylinder |
| 1 | 1 | 002683A00 | BARREL, Cylinder |
| 2 | 1 | 001303P01 | PISTON |
| 3 | 1 | P0049-042 | PIN, Roll |
| 4 | 3 | P0085-224 | RING, Back Up |
| 5 | 2 | P0084-224 | ORING |
| 6 | 1 | 002684P00 | SHAFT |
| 7 | 1 | 001245P00 | GLAND |
| 8 | 1 | P0086-001 | POLYSEAL |
| 9 | 1 | P0080-001 | WIPER |

NOTE:

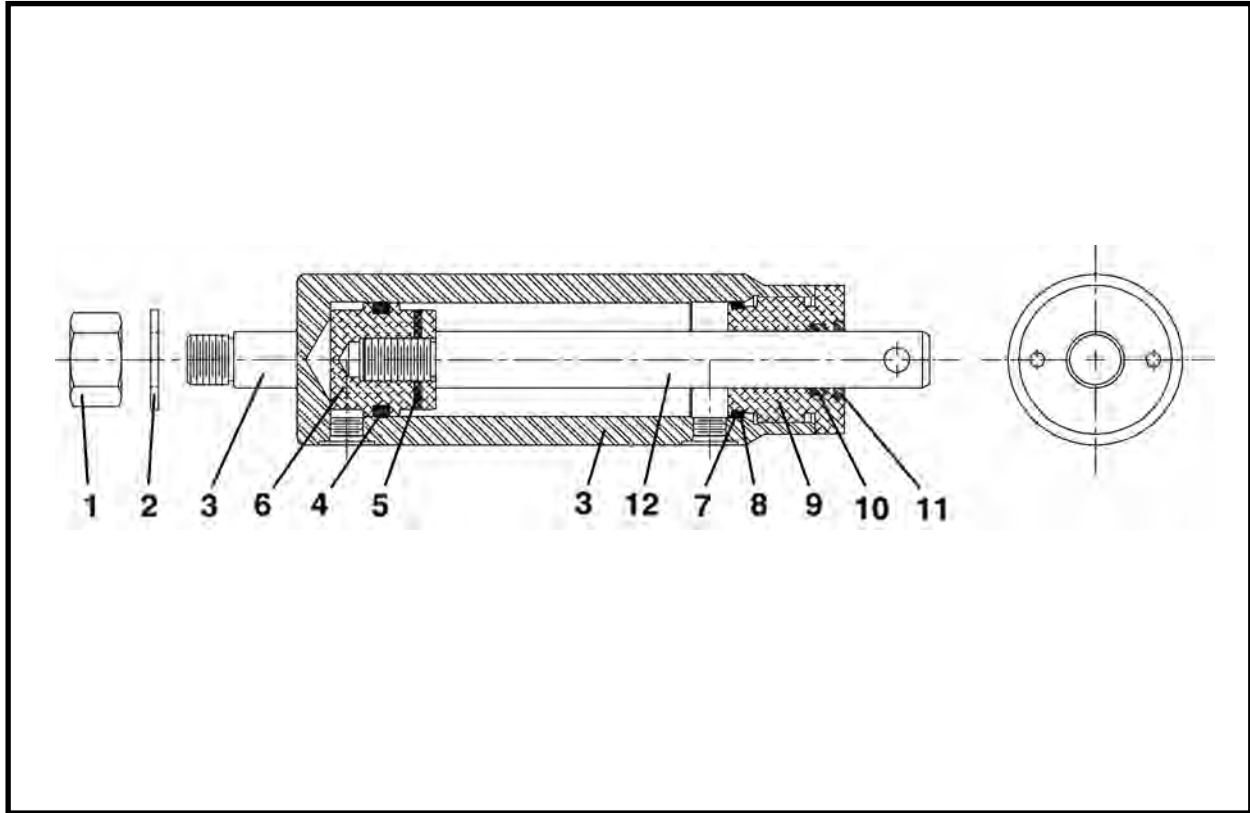
1. Item 9, Wiper installed as shown with "cupped" side pointing toward rod end.
2. Item 7, Gland must be put on rod from piston end only.

CONVEYOR LIFT CYLINDER WITH ORB FITTINGS, 020300A
CONVEYOR LIFT CYLINDER WITH ORB FITTINGS



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|-----------|---|
| 0 | 1 | 020300A | CYLINDER, Conveyor Lift (With ORB Fittings) |
| 1 | 1 | 020305A | BARREL, Cylinder |
| 2 | 1 | 001245P00 | GLAND |
| 3 | 1 | P0080-001 | WIPER |
| 4 | 1 | P0086-001 | POLYSEAL |
| 5 | 2 | P0085-224 | ORING |
| 6 | 3 | P0084-224 | RING, Back Up |
| 7 | 1 | 002684P00 | SHAFT |
| 8 | 1 | P0049-042 | PIN, Spring |
| 9 | 1 | 001303P01 | PISTON |

HYDRAULIC DIRT WING CYLINDER ASSEMBLY, 014603A00
HYDRAULIC DIRT WING CYLINDERS



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|--|
| 0 | 1 | 014603A00 | ASSEMBLY, Hydraulic Dirt Wing Cylinder |
| 1 | 1 | P0004-14-000 | NUT, 7/8 UNF |
| 2 | 1 | P0040-014 | WASHER, 7/8 |
| 3 | 1 | 014605P00 | BARREL, Cylinder |
| 4* | 1 | P0085-C2 | SEAL |
| 5 | 1 | P0049-042 | PIN, Roll |
| 6 | 1 | 010864P00 | PISTON |
| 7* | 1 | P0085-224 | ORING |
| 8* | 1 | P0084-224 | RING, Back Up |
| 9 | 1 | 001245P00 | GLAND |
| 10* | 1 | P0086-001 | POLYSEAL |
| 11* | 1 | P0080-001 | WIPER |
| 12 | 1 | 014604P00 | SHAFT |
| 13 | 1 | 010748A00 | KIT, Seal |

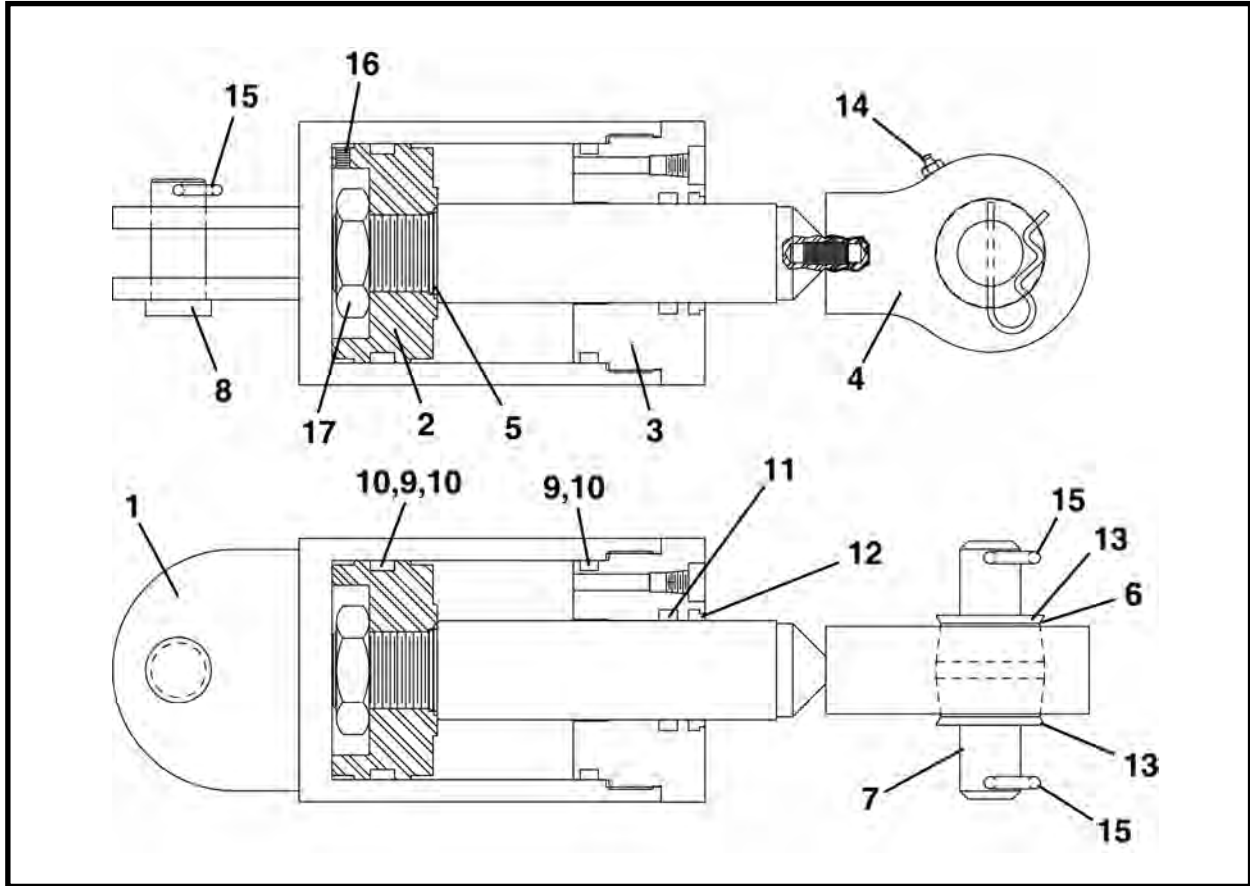
* Items included in item 13, 010748A00 Seal Kit.

NOTE: Install item 11 with "cupped" side pointing toward rod end.

NOTES

STEERING CYLINDER WITH NPT FITTINGS, 025292A

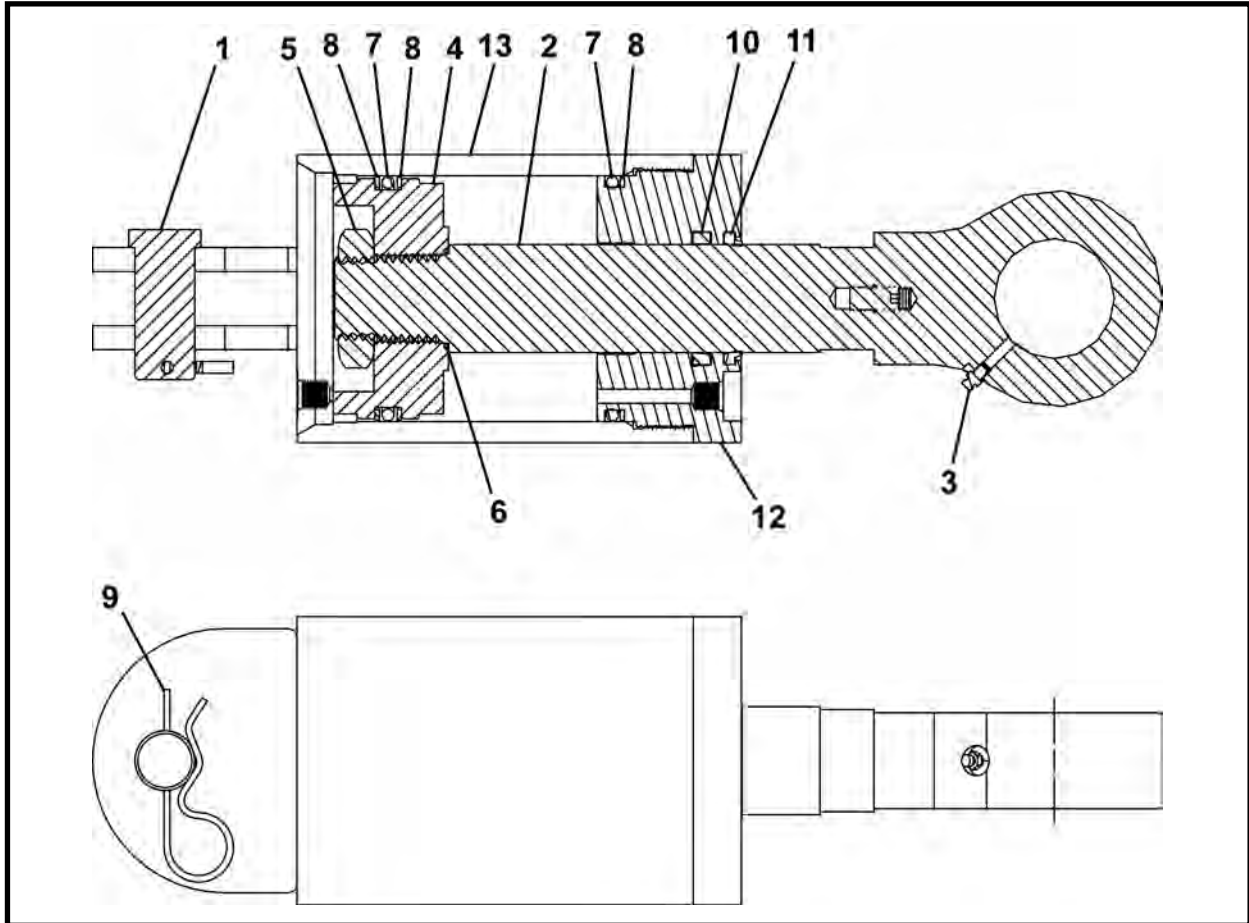
480, 540 (SN F18300F-01-03)



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|------|--------------|---------------------------------------|
| 0 | 1 | 025292A | STEERING CYLINDER (With NPT Fittings) |
| 1 | 1 | 002859A01 | WELDMENT, Steering Cylinder |
| 2 | 1 | 011704P00 | ROD |
| 3 | 1 | 007407P00 | GLAND |
| 4 | 1 | 011711A00 | WELDMENT, Shaft & Clevis |
| 5 | 1 | P0085-134 | ORING |
| 6 | 1 | 025291P | BUSHING |
| 7 | 1 | 007158P00 | PIN, Steering Cylinder |
| 8 | 1 | 002856P00 | PIN, Cylinder |
| 9 | 2 | P0085-426 | ORING |
| 10 | 3 | P0084-426 | RING, Back Up |
| 11 | 1 | P0086-005 | POLYSEAL |
| 12 | 1 | P0087-004 | WIPER |
| 13 | 2 | P0085-328 | ORING |
| 14 | 1 | P0063-001 | FITTING, Grease 1/4 UNF |
| 15 | 3 | P0090-005 | PIN, Hitch |
| 16 | 1 | P0033-06-016 | SCREW, Socket Head Set 3/8 UNC x 1 |
| 17 | 1 | 011713P00 | NUT |
| 18 | REF. | 011709A00 | SEAL KIT |

STEERING CYLINDER WITH ORB FITTINGS, 020301A

480, 540 (SN F18300F-01-03)

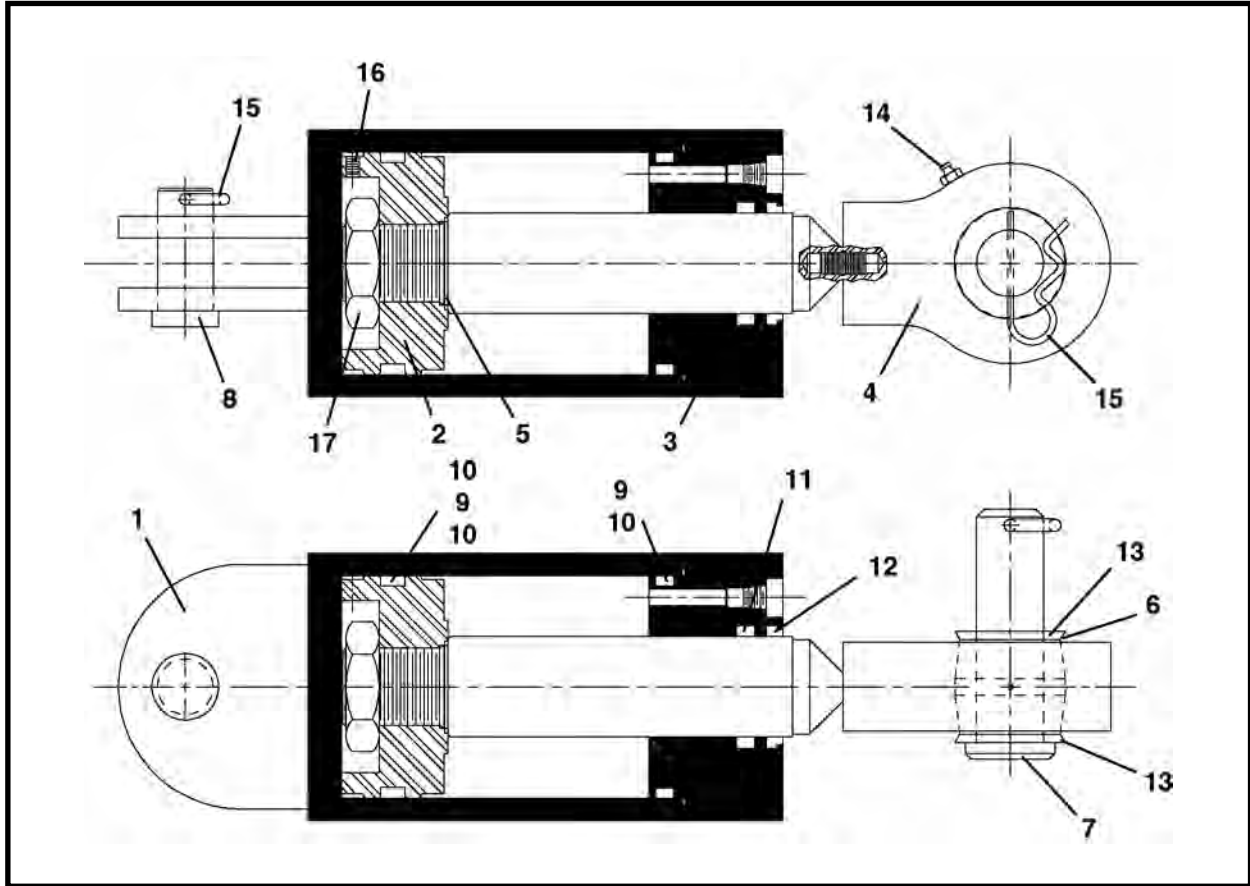


| ITEM | QTY | PART NO. | DESCRIPTION |
|------|------|-----------|---------------------------------------|
| 0 | 1 | 020301A | STEERING CYLINDER (With ORB Fittings) |
| 1 | 1 | 002856P00 | PIN, Mounting |
| 2 | 1 | 011711A00 | WELDMENT, Shaft & Clevis |
| 3 | 1 | P0063-001 | FITTING, Grease 1/4 UNF |
| 4 | 1 | 011704P00 | PISTON |
| 5 | 1 | 011713P00 | NUT |
| 6* | 1 | P0085-134 | ORING |
| 7* | 2 | P0085-426 | ORING |
| 8* | 3 | P0084-426 | RING, Back Up |
| 9 | 1 | P0090-005 | PIN, Hitch |
| 10* | 1 | P0086-005 | POLYSEAL |
| 11* | 1 | P0087-004 | WIPER |
| 12 | 1 | 020309P | GLAND |
| 13 | 1 | 020308A | WELDMENT, Steering Cylinder |
| 14 | REF. | 011709A00 | SEAL KIT |

* Items included in item 14, 011709A00 Seal Kit.

STEERING CYLINDER WITH NPT FITTINGS, 010385A01

540 (SN F18300F-04 & After)

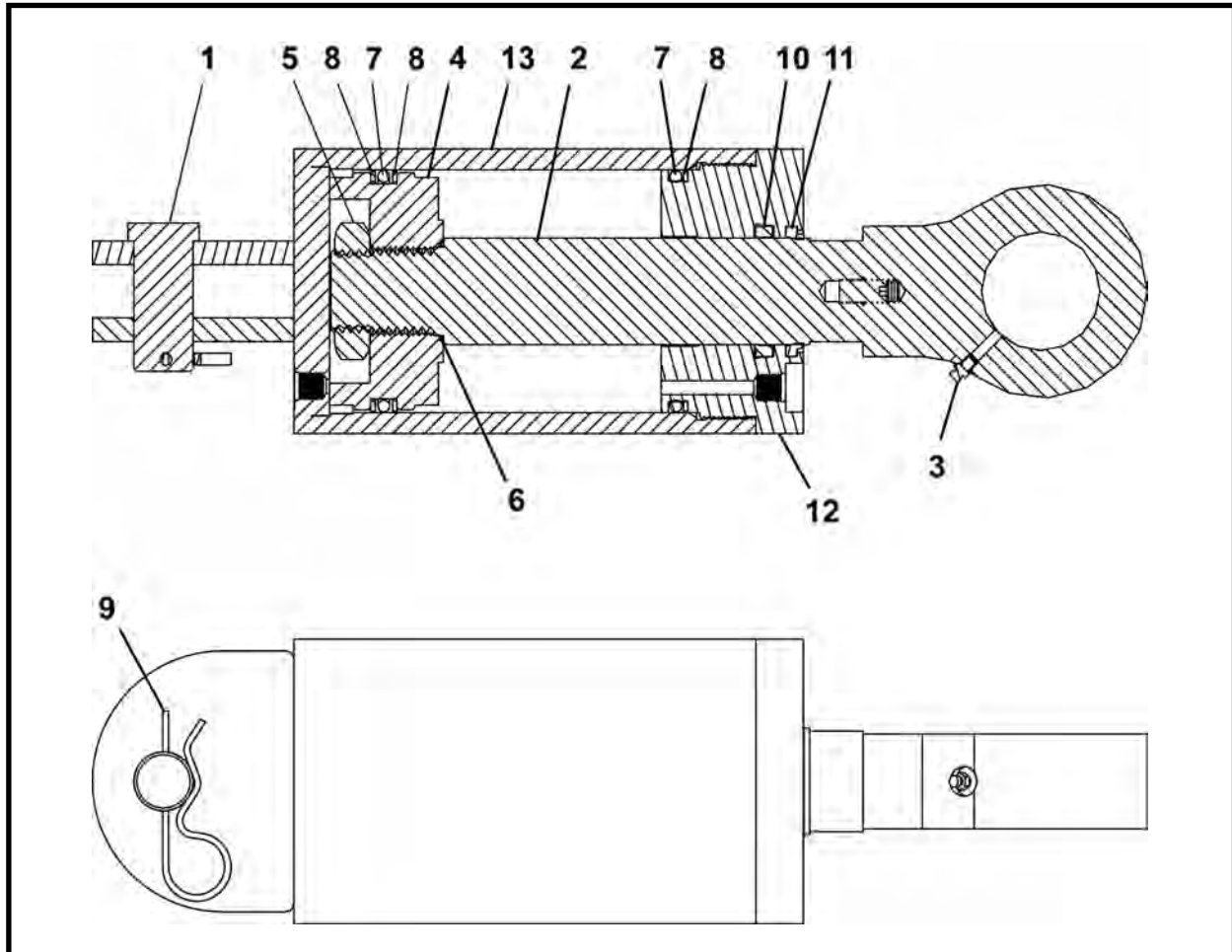


| ITEM | QTY | PART NO. | DESCRIPTION |
|------|------|--------------|---------------------------------------|
| 0 | 1 | 010385A01 | STEERING CYLINDER (With NPT Fittings) |
| 1 | 1 | 003602A02 | WELDMENT, Steering Cylinder |
| 2 | 1 | 011704P00 | ROD |
| 3 | 1 | 007407P00 | GLAND |
| 4 | 1 | 011711A00 | WELDMENT, Shaft & Clevis |
| 5* | 1 | P0085-134 | ORING |
| 6 | 1 | 007412P00 | BUSHING |
| 7 | 1 | 005868P00 | PIN, Steering Cylinder |
| 8 | 1 | 002856P00 | PIN, Cylinder |
| 9* | 2 | P0085-426 | ORING |
| 10* | 3 | P0084-426 | RING, Back Up |
| 11* | 1 | P0086-005 | POLYSEAL |
| 12* | 1 | P0087-004 | WIPER |
| 13* | 2 | P0085-328 | ORING |
| 14 | 1 | P0063-001 | FITTING, Grease 1/4-28 UNF |
| 15 | 2 | P0090-005 | PIN, Hitch |
| 16 | 1 | P0033-06-016 | SCREW, Socket Head Set 3/8 UNC x 1 |
| 17 | 1 | 011713P00 | NUT |
| 18 | REF. | 011709A00 | SEAL KIT |

* Items included in item 1, 011709A00 Seal Kit.

STEERING CYLINDER WITH ORB FITTINGS, 020302A

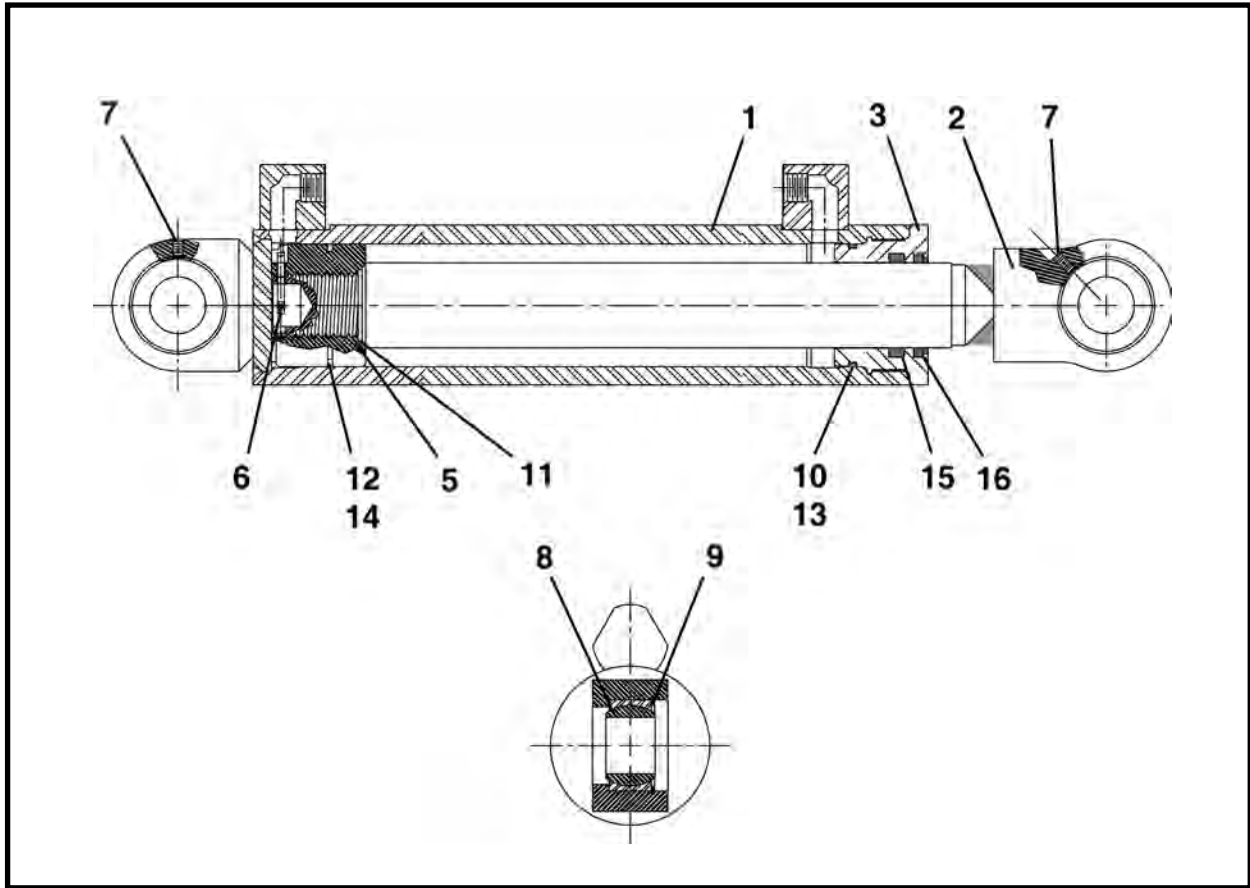
540: SN F18300F-04 & After



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|------|-----------|---------------------------------------|
| 0 | 1 | 020302A | STEERING CYLINDER (With ORB Fittings) |
| 1 | 1 | 002856P00 | PIN, Mounting |
| 2 | 1 | 011711A00 | WELDMENT, Shaft & Clevis |
| 3 | 1 | P0063-001 | FITTING, Grease 1/4 UNF |
| 4 | 1 | 011704P00 | PISTON |
| 5 | 1 | 011713P00 | NUT |
| 6* | 1 | P0085-134 | ORING |
| 7* | 2 | P0085-426 | ORING |
| 8* | 3 | P0084-426 | RING, Back Up |
| 9 | 1 | P0090-005 | PIN, Hitch |
| 10* | 1 | P0086-005 | POLYSEAL |
| 11* | 1 | P0087-004 | WIPER |
| 12 | 1 | 020309P | GLAND |
| 13 | 1 | 020306A | WELDMENT, Steering Cylinder |
| 14 | REF. | 011709A00 | SEAL KIT |

* Items included in item 14, 011709A00 Seal Kit.

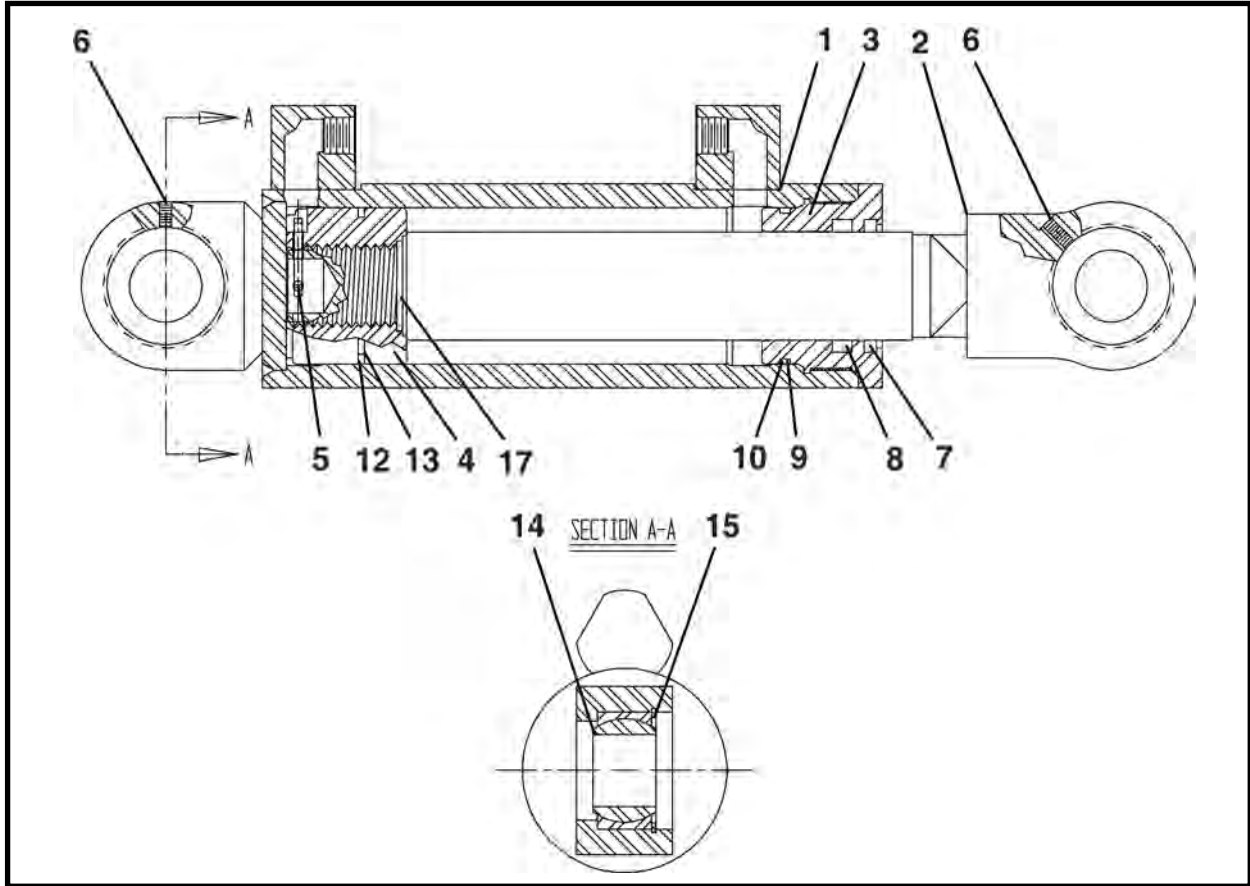
CYLINDER ASSEMBLY, 015007A00
480 CLOSED FACE (OLD STYLE)



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|-----------|--------------------------|
| 0 | 1 | 015007A00 | ASSEMBLY, Cylinder |
| 1 | 1 | 015008A00 | BARREL |
| 2 | 1 | 015009A00 | WELDMENT, Shaft & Clevis |
| 3 | 1 | 008945P01 | GLAND |
| 4 | REF | 009918A00 | KIT, Seal |
| 5 | 1 | 014481P00 | PISTON |
| 6 | 1 | P0048-033 | PIN, Cotter |
| 7 | 2 | P0063-001 | FITTING, Grease 1/4 |
| 8 | 2 | P0065-086 | BEARING |
| 9 | 2 | P0076-050 | RING, Snap |
| 10* | 1 | P0084-234 | RING, Back Up |
| 11* | 1 | P0085-134 | ORING |
| 12* | 1 | P0085-149 | ORING |
| 13* | 1 | P0085-234 | ORING |
| 14* | 1 | P0085-C3 | SEAL, Piston |
| 15* | 1 | P0086-005 | POLYSEAL |
| 16* | 1 | P0087-004 | WIPER |

* Included in item 4, 009918A00, Seal Kit

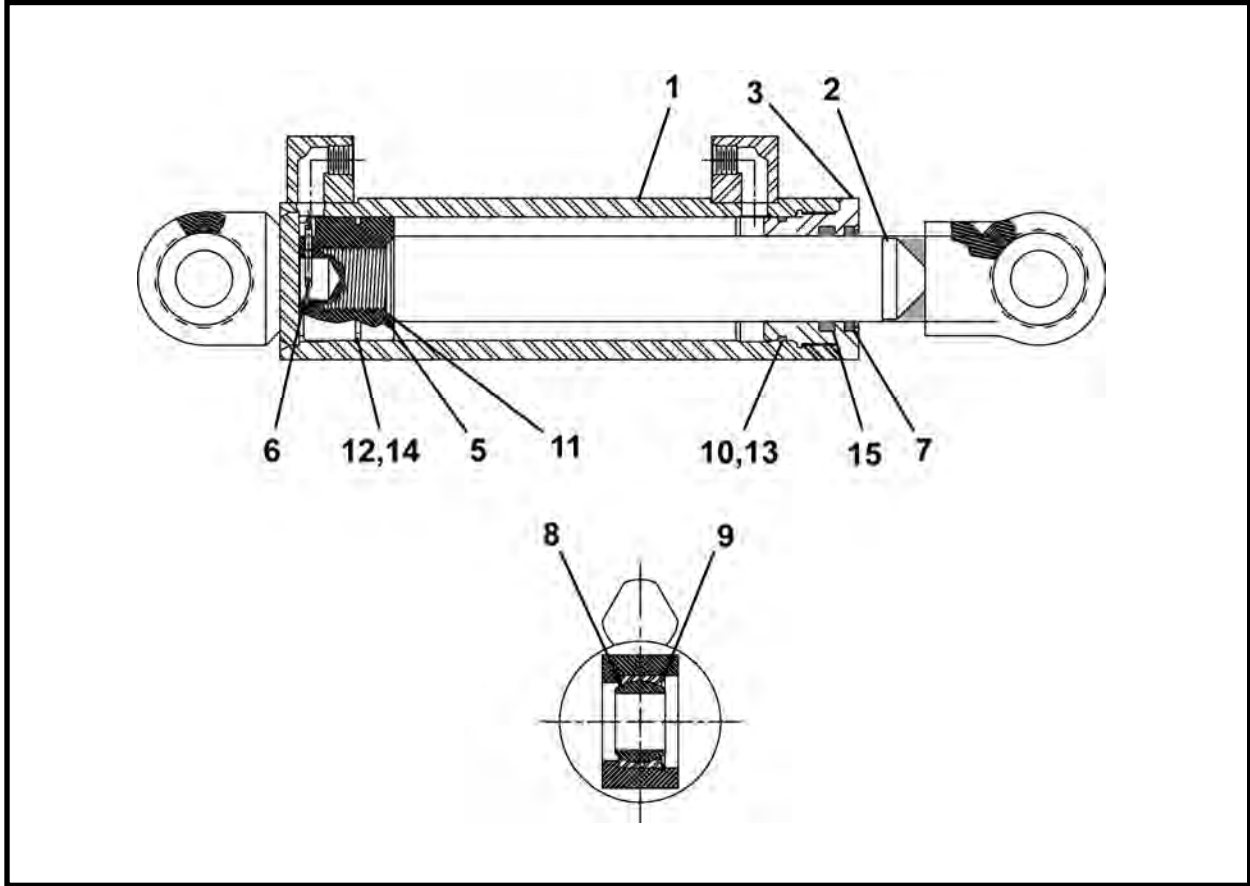
CYLINDER ASSEMBLY, 015265A00
540 CLOSED FACE (OLD STYLE)



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|-----------|--------------------------|
| 0 | 1 | 015265A00 | ASSEMBLY, Cylinder |
| 1 | 1 | 015266A00 | BARREL |
| 2 | 1 | 015267A00 | WELDMENT, Shaft & Clevis |
| 3 | 1 | 008945P01 | GLAND |
| 4 | 1 | 014481P00 | PISTON |
| 5 | 1 | P0048-043 | PIN, Cotter |
| 6 | 2 | P0063-001 | FITTING, Grease 1/4 |
| 7* | 1 | P0087-004 | WIPER |
| 8* | 1 | P0086-005 | POLYSEAL |
| 9* | 1 | P0084-234 | RING, Back Up |
| 10* | 1 | P0085-234 | ORING |
| 11 | - | - | - |
| 12* | 1 | P0085-C3 | SEAL, Piston |
| 13* | 1 | P0085-149 | ORING |
| 14 | 2 | P0065-086 | BEARING |
| 15 | 2 | P0076-050 | RING, Snap |
| 16 | REF | 009918A00 | KIT, Seal |
| 17* | 1 | P0085-134 | ORING |

* Included in item 16, Seal Kit 009918A00.

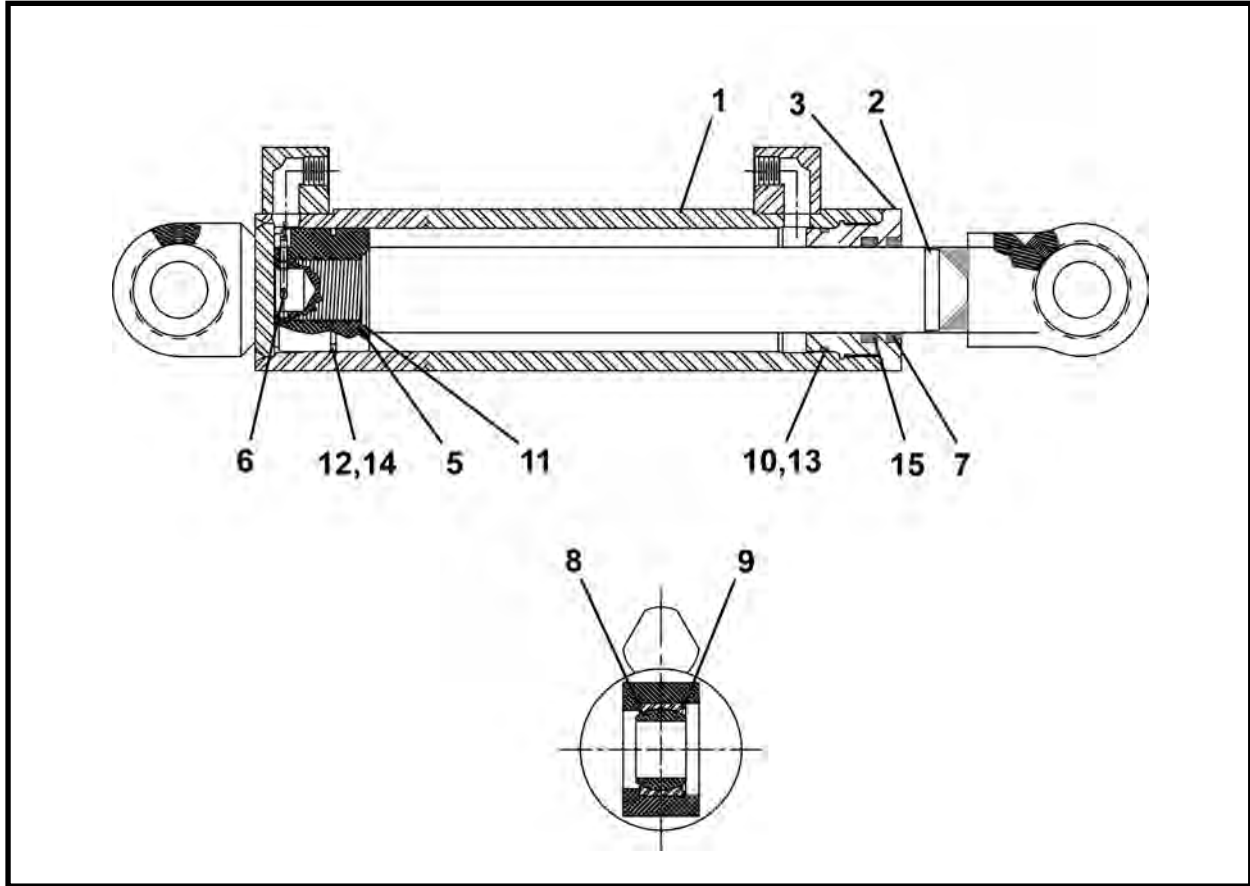
CYLINDER ASSEMBLY, 015065A
480 CLOSED FACE (NEW STYLE)



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|-----------|--------------------|
| 0 | 1 | 015065A | ASSEMBLY, Cylinder |
| 1 | 1 | 015066A | BARREL |
| 2 | 1 | 015068A | SHAFT |
| 3 | 1 | 008945P01 | GLAND |
| 4 | REF | 009918A00 | KIT, Seal |
| 5 | 1 | 014481P00 | PISTON |
| 6 | 1 | P0048-033 | PIN, Cotter |
| 7* | 1 | P0087-004 | WIPER |
| 8 | 2 | P0065-086 | BEARING |
| 9 | 2 | P0076-050 | RING, Snap |
| 10* | 1 | P0084-234 | RING, Back Up |
| 11* | 1 | P0085-134 | ORING |
| 12* | 1 | P0085-149 | ORING |
| 13* | 1 | P0085-234 | ORING |
| 14* | 1 | P0085-C3 | SEAL, Piston |
| 15* | 1 | P0086-005 | POLYSEAL |

* Included in item 4, 009918A00, Seal Kit

CYLINDER ASSEMBLY, 015060A
540 CLOSED FACE (NEW STYLE)

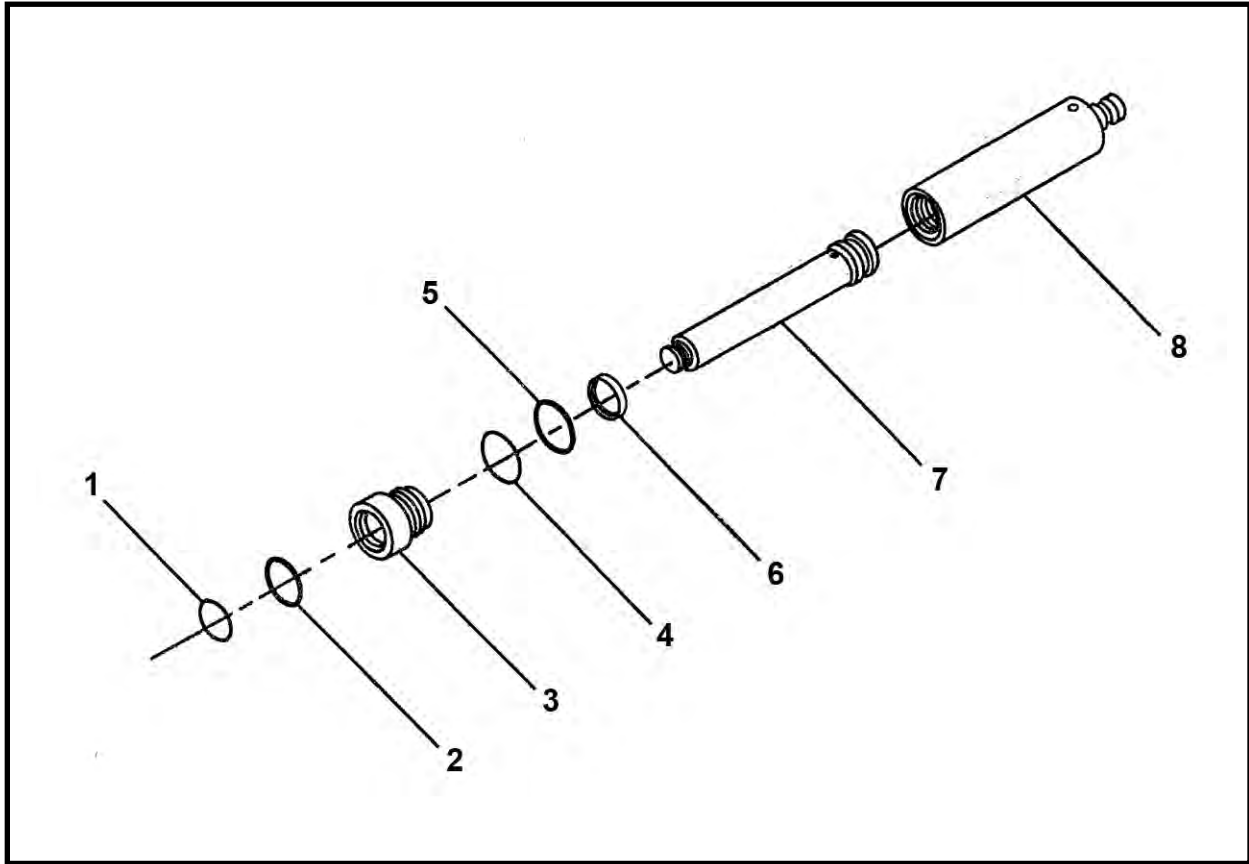


| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|-----------|--------------------------|
| 0 | 1 | 015060A | ASSEMBLY, Cylinder |
| 1 | 1 | 015061A | BARREL |
| 2 | 1 | 015063A | WELDMENT, Shaft & Clevis |
| 3 | 1 | 008945P01 | GLAND |
| 4 | REF | 009918A00 | KIT, Seal |
| 5 | 1 | 014481P00 | PISTON |
| 6 | 1 | P0048-033 | PIN, Cotter |
| 7* | 1 | P0087-004 | WIPER |
| 8 | 2 | P0065-086 | BEARING |
| 9 | 2 | P0076-050 | RING, Snap |
| 10* | 1 | P0084-234 | RING, Back Up |
| 11* | 1 | P0085-134 | ORING |
| 12* | 1 | P0085-149 | ORING |
| 13* | 1 | P0085-234 | ORING |
| 14* | 1 | P0085-C3 | SEAL, Piston |
| 15* | 1 | P0086-005 | POLYSEAL |

* Included in item 4, 009918A00, Seal Kit

NOTES

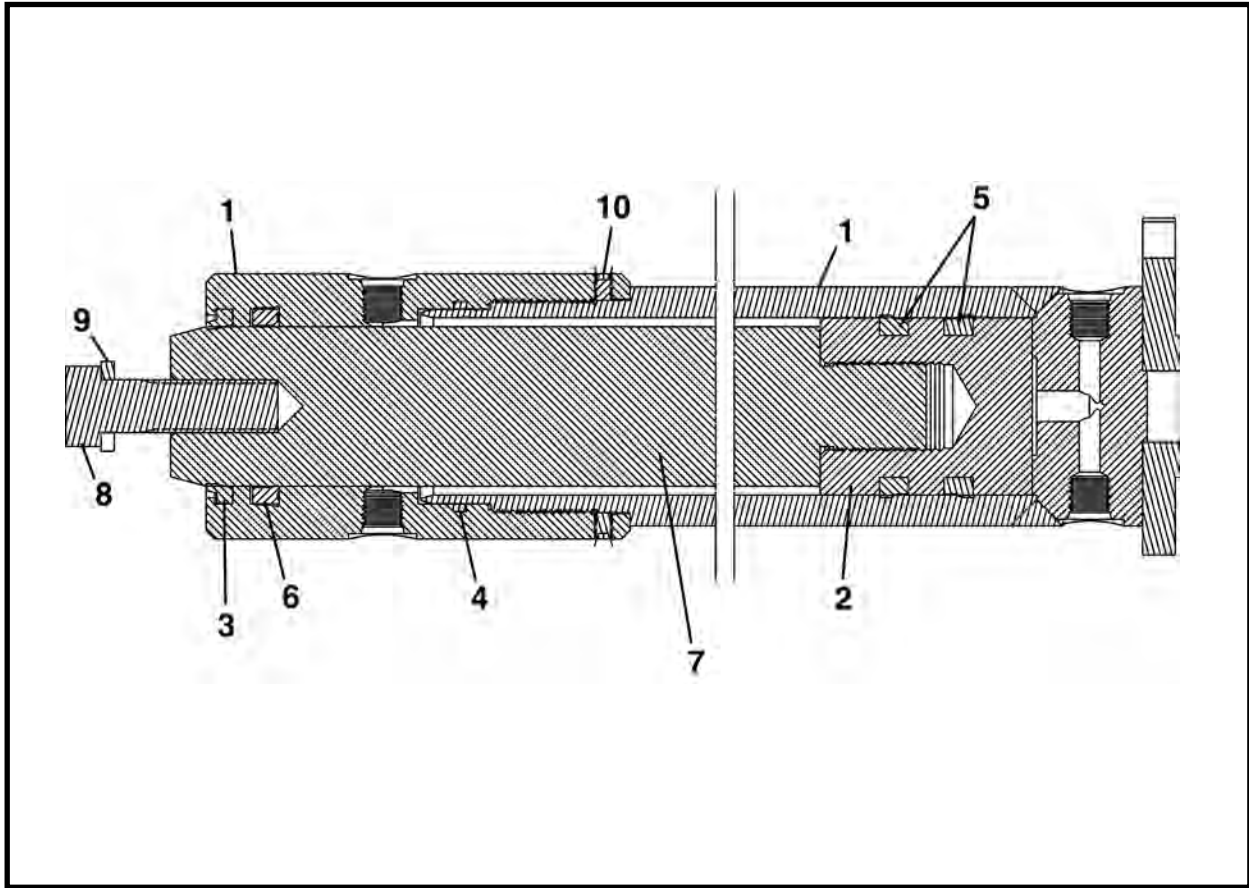
IJS CYLINDER, F03531F02



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|-----------|---------------|
| 0 | 1 | F03531F02 | CYLINDER, IJS |
| 1* | 1 | P0087-001 | WIPER |
| 2* | 1 | P0086-003 | POLYSEAL |
| 3 | 1 | 003095P02 | CAP, End |
| 4* | 1 | P0084-139 | RING, Back-Up |
| 5* | 1 | P0085-139 | ORING |
| 6* | 1 | P0088-002 | RING, Wear |
| 7 | 1 | 003348P02 | SHAFT |
| 8 | 1 | 003364A01 | BARREL |
| 9 | REF | 007344A00 | KIT, Seal |

* Included in item 9, 007344A00 Seal Kit.

LINER CAN CYLINDER ASSEMBLY, 30" STROKE, 002617A01
LINER CAN

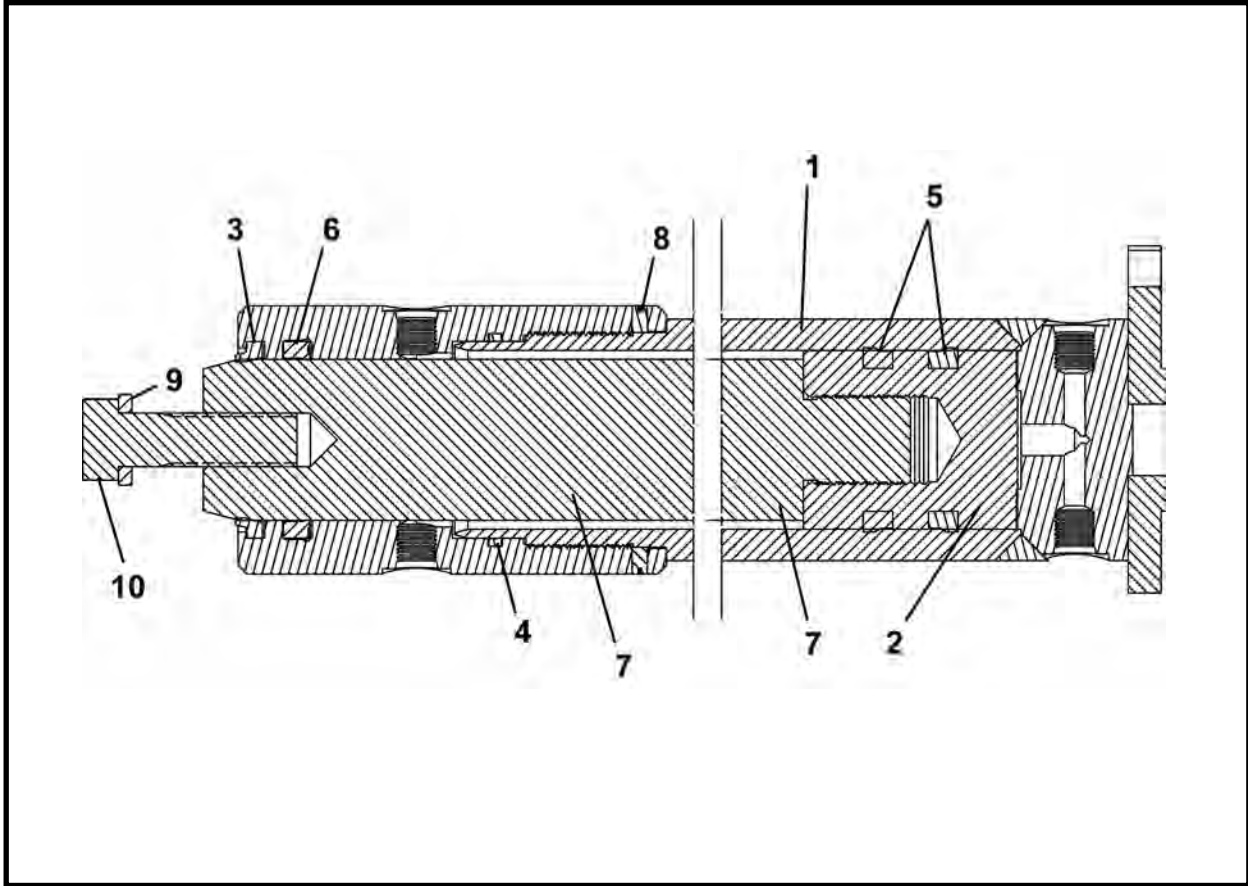


| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|--|
| 0 | 1 | 002617A01 | CYLINDER ASSEMBLY, Liner Can, 30" Stroke |
| 1 | 1 | 022831A | BARREL & GLAND (Includes items 1a - 1b) |
| 1a | 1 | 003051A00 | PISTON |
| 1b | 1 | 003054P00 | CAP |
| 2 | 1 | 003050P01 | PISTON |
| 3 | 1 | P0087-004 | WIPER |
| 4 | 1 | P0085-S1 | ORING, Square |
| 5 | 2 | P0086-009 | POLYSEAL |
| 6 | 1 | P0086-005 | POLYSEAL |
| 7 | 1 | 003053P00 | SHAFT |
| 8 | 1 | P0001-12-010 | BOLT, 3/4 UNC x 2.5 |
| 9 | 1 | P0045-012 | WASHER, Lock 3/4 |
| 10 | 2 | P0033-04-006 | SCREW, Socket Head Cap, 1/4 UNC x 3/8 |

* Install polyseals back to back as shown.

** Install with large part of lip toward pressure.

LINER CAN CYLINDER ASSEMBLY, 38" STROKE, 011720A00
LINER CAN



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|--|
| 0 | 1 | 011720A00 | CYLINDER ASSEMBLY, Liner Can, 38" Stroke |
| 1 | 1 | 022832A | BARREL (Includes items 1a - 1b) |
| 1a | 1 | 011721A00 | BARREL |
| 1b | 1 | 003054P00 | CAP |
| 2 | 1 | 003050P01 | PISTON |
| 3 | 1 | P0087-004 | WIPER |
| 4 | 1 | P0085-S1 | ORING, Square |
| 5* | 2 | P0086-009 | POLYSEAL |
| 6** | 1 | P0086-005 | POLYSEAL |
| 7 | 1 | 011723P00 | SHAFT |
| 8 | 2 | P0033-04-006 | SCREW, Socket Head Cap, 1/4 UNC x .375 |
| 9 | 1 | P0045-012 | WASHER, Lock 3/4 |
| 10 | 1 | P0001-12-010 | BOLT, 3/4 UNC x 2.5 |

* Install polyseals back to back as shown.

** Install with large part of lip toward pressure.

NOTES



Miscellaneous / Conveyors

Belt Conveyors

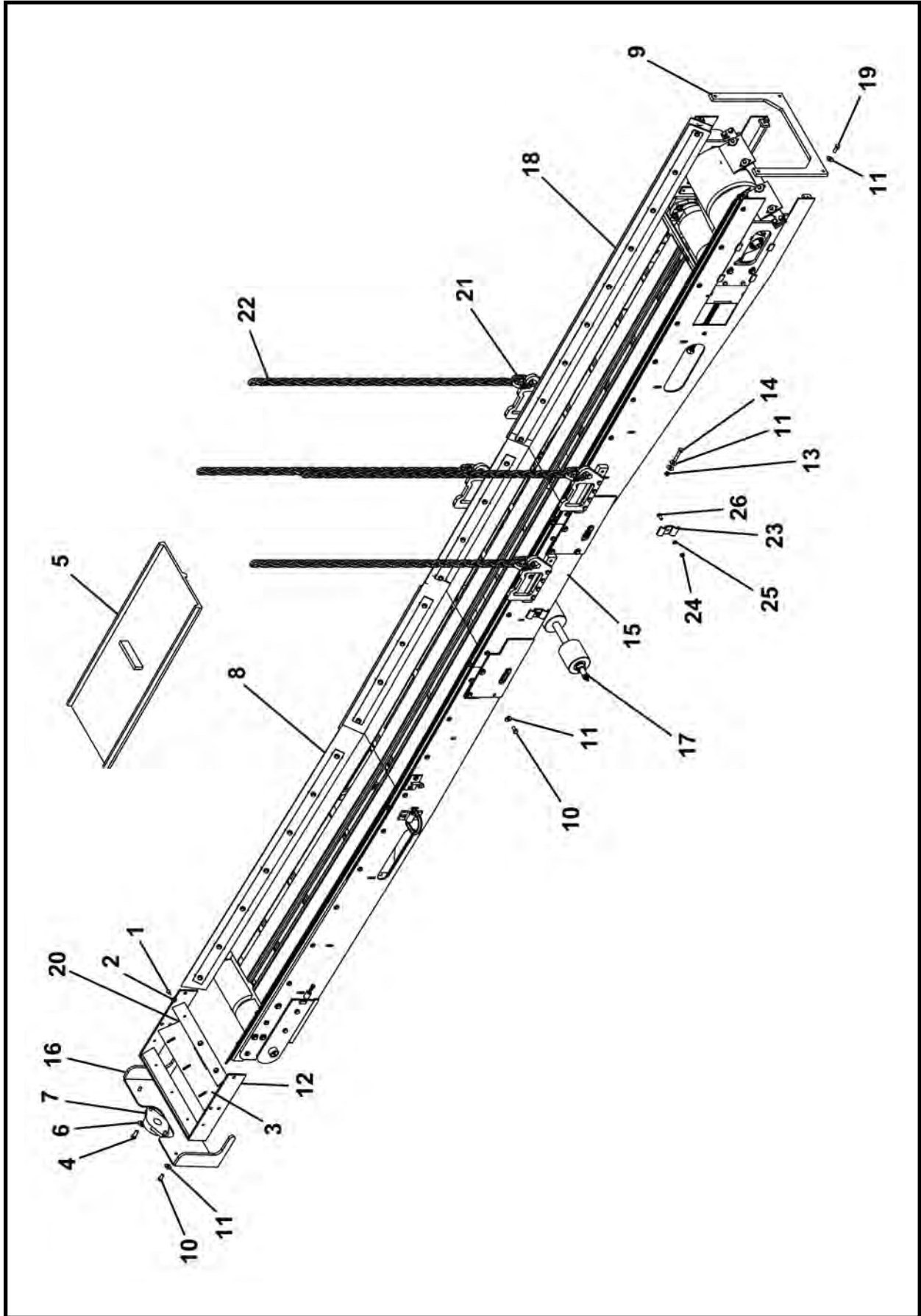
| | |
|---|----|
| 1615 Belt Conveyor, F27250F00 | 2 |
| Feed Frame Assembly, 027263A00 | 5 |
| Feed Frame Spoils Guide Assembly - Left Front, 027137A00 | 6 |
| Feed Frame Spoils Guide Assembly - Right Front, 027221A00 | 7 |
| Front Roller Assembly, 027257A00 | 9 |
| Feed Frame Spoils Guide Assembly - Left Rear, 027265A00 | 10 |
| Feed Frame Spoils Guide Assembly - Right Rear, 027266A00 | 11 |
| Extension Frame Assembly, 027264A00 | 13 |
| Short Spoils Guide Assembly - Left, 027134A00 | 14 |
| Short Spoils Guide Assembly - Right 027267A00 | 15 |
| Idler Roller Assembly, 027261A00 | 16 |
| Drive Frame Assembly, 027262A00 | 17 |
| Drive Frame Spoils Guide Assembly - Left, 027131A00 | 18 |
| Drive Frame Spoils Guide Assembly - Right, 027219A00 | 19 |
| Drive Motor & Roller Assembly, 027254A00 | 20 |

Screw Conveyor

| | |
|-------------------------------------|----|
| 120 Screw Conveyor, F23520F00 | 22 |
| Motor Mount Assembly, 023543A | 23 |
| 140 Screw Conveyor, F24500F00 | 24 |

| | |
|---|----|
| Intermediate Jacking Station | 26 |
| High Pressure Starter Hose 30', F09802F01 | 27 |
| Low Pressure Starter Hose 30', F09803F01 | 28 |
| IJS Tunnel Line 10' 6", F09800F00 | 29 |
| Tee Connector, F09804F00 | 30 |
| IJS Valve (With Cable), F04908F01 | 32 |
| Starter Connection, F09805F00 | 34 |
| IJS Coupler Assembly, 005133A02 | 35 |
| IJS Segment Assembly (480 - 007300A00, 540 - 007301A00) | 36 |
| IJS Cylinder, F03531F02 | 37 |
| IJS Hydraulic Schematic | 38 |

BELT CONVEYOR, F27250F00
1615 BELT CONVEYOR



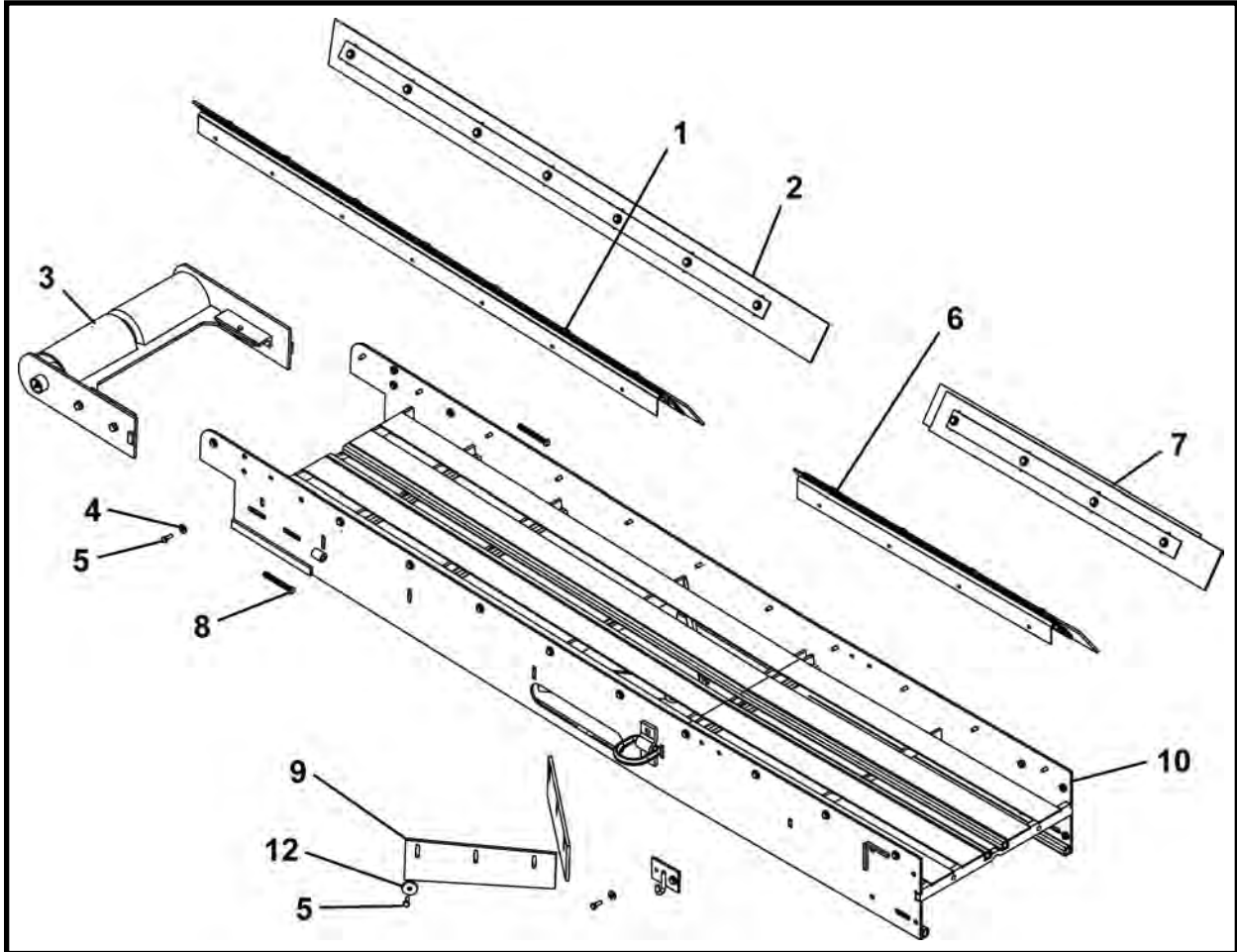
BELT CONVEYOR, F27250F00
1615 BELT CONVEYOR

| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|---------------|--|
| 0 | 1 | F27250F00 | 1615 BELT CONVEYOR |
| 1 | 3 | P0001-04-003 | BOLT, 1/4 UNC x 3/4 |
| 2 | 3 | P0040-004 | WASHER, Hardened Flat 1/4 |
| 3 | 1 | 027289P00 | SCRAPER, External Belt |
| 4 | 2 | P0001-07-004 | BOLT, 7/16 UNC x 1 |
| 5.1 | 1 | P0067-041 | BELTING, 16" x 29' 8" (belt with extension frame) |
| 5.2 | 1 | P0067-007 | BELTING, 16" x 24' 8" (belt without extension frame) |
| 6 | 2 | P0040-007 | WASHER, Hardened Flat 7/16 |
| 7 | 1 | P0065-017 | BEARING, Conveyor End Pivot |
| 8 | 1 | 027263A00 | FEED FRAME ASSEMBLY |
| 9 | 1 | 027286P00 | SUPPORT, Drive Frame Free End |
| 10 | 24 | P0001-06-003 | BOLT, 3/8 UNC x .75 |
| 11 | 36 | P0040-006 | WASHER, Hardened Flat 3/8 |
| 12 | 1 | 027259A00 | MOUNT, Nose Bearing |
| 13 | 4 | P0003-06-000 | NUT, 3/8 |
| 14 | 4 | P0001-06-008 | BOLT, 3/8 UNC x 2 |
| 15 | 1 | 027264A00 | EXTENSION FRAME ASSEMBLY |
| 16 | 1 | 027258A00 | COVER, Front Roller Clean Out |
| 17 | 2 | 027261A00 | IDLER ROLLER ASSEMBLY |
| 18 | 1 | 027262A00 | DRIVE FRAME ASSEMBLY |
| 19 | 4 | P0001-06-004 | BOLT, 3/8 UNC x 1 |
| 20 | 1 | 027144P | PLATE, Feed Belt Retainer |
| 21 | 4 | P0098-010 | LINK, 3/8 Hammerlock |
| 22 | 4 | P0094-003-030 | CHAIN, 3/8 x 30 |
| 23 | 2 | 002269P01 | CLAMP, Line |
| 24 | 2 | P0004-05-000 | NUT, 5/16 UNF |
| 25 | 2 | P0045-005 | WASHER, Lock 5/16 |
| 26 | 2 | P0001-05-003 | BOLT, 5/16 x .75 |
| 27* | 2 | A10320A-132 | HOSE ASSEMBLY 1/2 x 132 |
| 28* | 1 | P0100-004A | COUPLER, Female |
| 29* | 1 | P0100-004B | COUPLER, Male |

* Not Shown

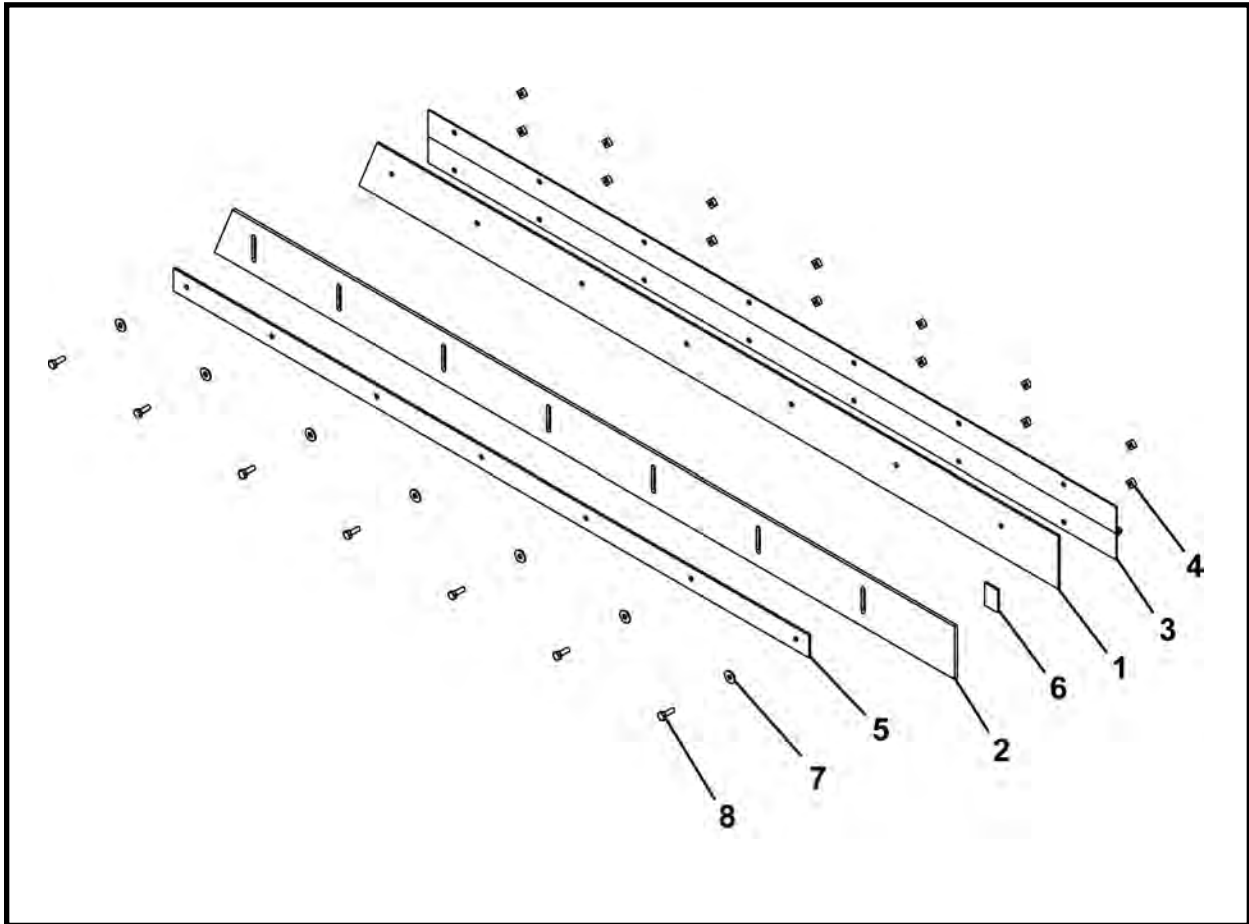
NOTES

FEED FRAME ASSEMBLY, 027263A00
1615 BELT CONVEYOR



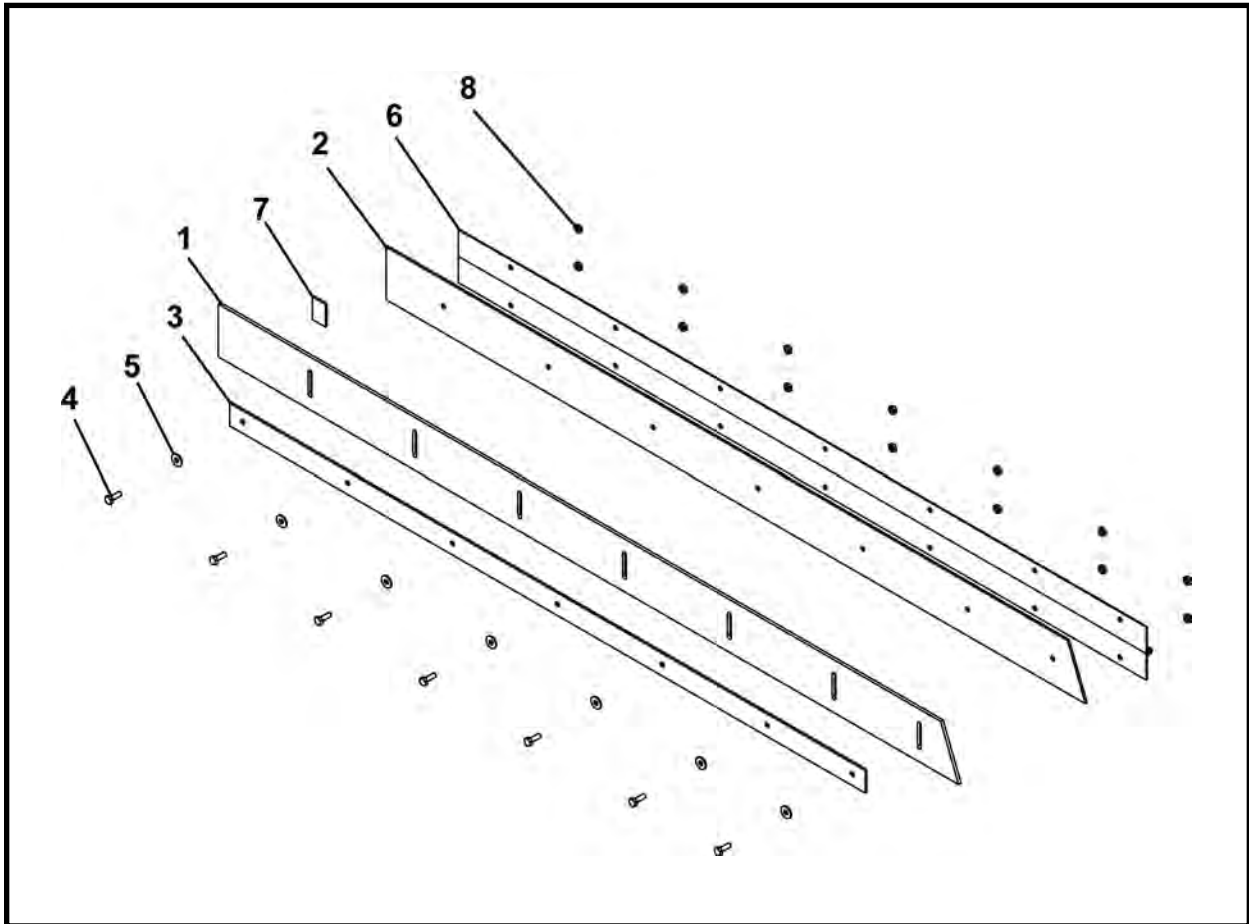
| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|---|
| 0 | 1 | 027263A00 | FEED FRAME ASSEMBLY |
| 1 | 1 | 027137A00 | GUIDE, Feed Frame Spoils - Left Front |
| 2 | 1 | 027221A00 | GUIDE, Feed Frame Spoils - Right Front |
| 3 | 1 | 027257A00 | FRONT ROLLER ASSEMBLY |
| 4 | 24 | P0045-004 | WASHER, Lock 1/4 |
| 5 | 30 | P0001-04-003 | BOLT, 1/4 UNC x .75 |
| 6 | 1 | 027265A00 | GUIDE, Feed Frame Spoils - Left Rear |
| 7 | 1 | 027266A00 | GUIDE, Feed Frame Spoils - Right Rear |
| 8 | 2 | P0034-06-012 | SCREW, Square Head Set 3/8 UNC x 3 |
| 9 | 2 | 027296P00 | BELTING, Inner Belt Scraper |
| 10 | 1 | 027252A00 | WELDMENT, Feed Frame (Includes items 10a-10c) |
| 10a | 2 | 001496P00 | ROD, Adjustment |
| 10b | 14 | P0007-06-000 | NUT, Jam 3/8-16 UNC |
| 10c | 2 | P0079-003 | D-RING, 1/2 |
| 11 | 1 | 005436A00 | PLATE, Hook |
| 12 | 6 | 002624P00 | WASHER, Dirt Paddle |

FEED FRAME SPOILS GUIDE ASSEMBLY - LEFT FRONT, 027137A00
1615 BELT CONVEYOR



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|---------------------------------------|
| 0 | 1 | 027137A00 | GUIDE, Feed Frame Spoils - Left Front |
| 1 | 1 | 027139P00 | SUPPORT BAR, Feed Frame Spoils |
| 2 | 1 | 027140P00 | STRIP, Wear, Feed Frame Spoils |
| 3 | 1 | 027138P00 | HINGE, Feed Frame Spoils |
| 4 | 14 | P0011-004B | NUT, Weld 1/4 UNC |
| 5 | 1 | 027248P00 | BRACKET, Feed Frame Wear Strip |
| 6 | 1 | 027216P00 | TAB, Feed Frame Support Bar |
| 7 | 7 | P0040-004 | WASHER, Hardened Flat 1/4 |
| 8 | 7 | P0001-04-003 | BOLT, 1/4 UNC x .75 |

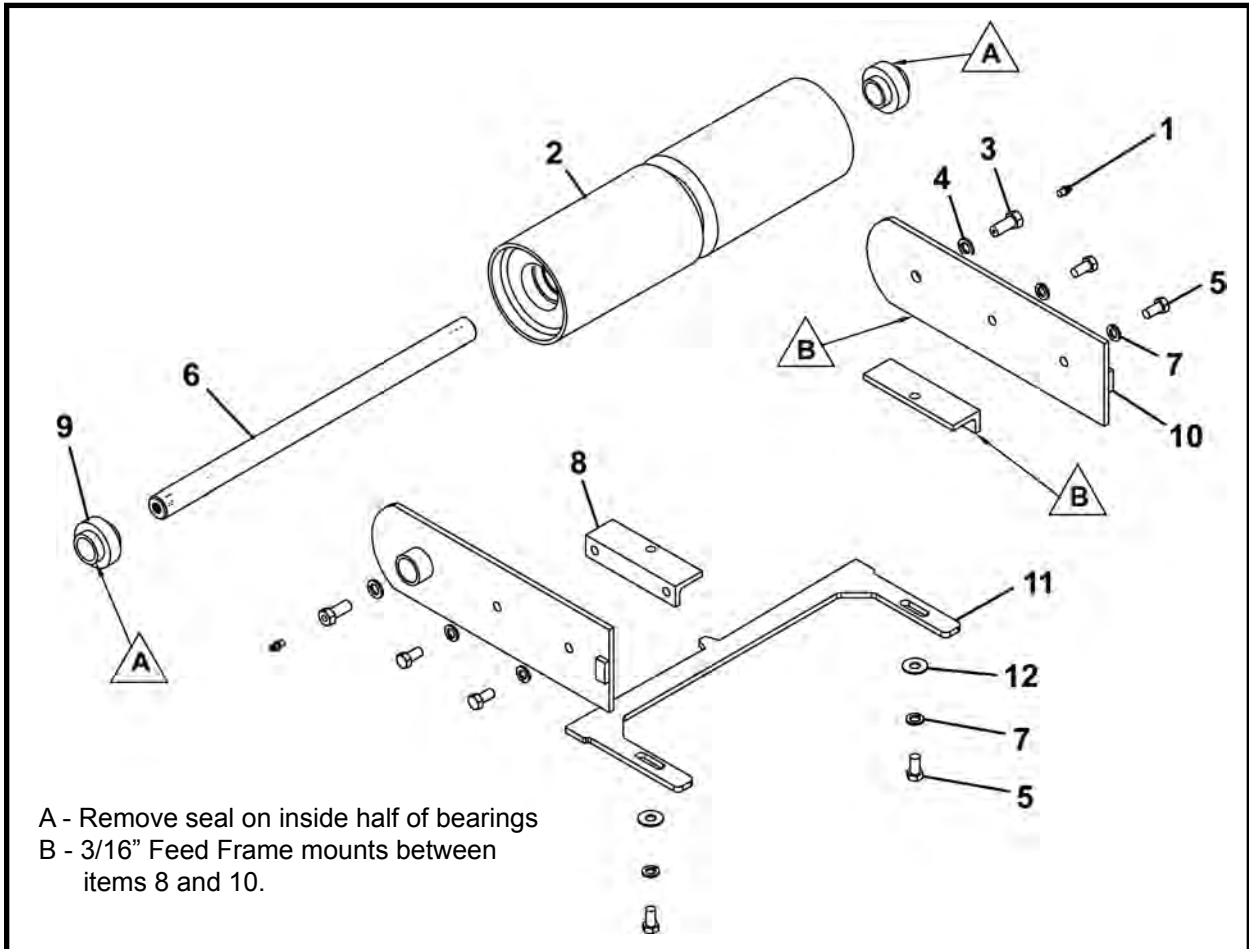
FEED FRAME SPOILS GUIDE ASSEMBLY - RIGHT FRONT, 027221A00
1615 BELT CONVEYOR



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|--|
| 0 | 1 | 027221A00 | GUIDE, Feed Frame Spoils - Right Front |
| 1 | 1 | 027140P00 | STRIP, Wear, Feed Frame Spoils |
| 2 | 1 | 027139P00 | SUPPORT BAR, Feed Frame Spoils - Right |
| 3 | 1 | 027248P00 | BRACKET, Feed Frame Wear Strip |
| 4 | 7 | P0001-04-003 | BOLT, 1/4 UNC x .75 |
| 5 | 7 | P0040-004 | WASHER, Lock 1/4 |
| 6 | 1 | 027138P00 | HINGE, Feed Frame Spoils |
| 7 | 1 | 027216P00 | TAB, Feed Frame Support Bar |
| 8 | 14 | P0011-004B | NUT, Weld 1/4 UNC |

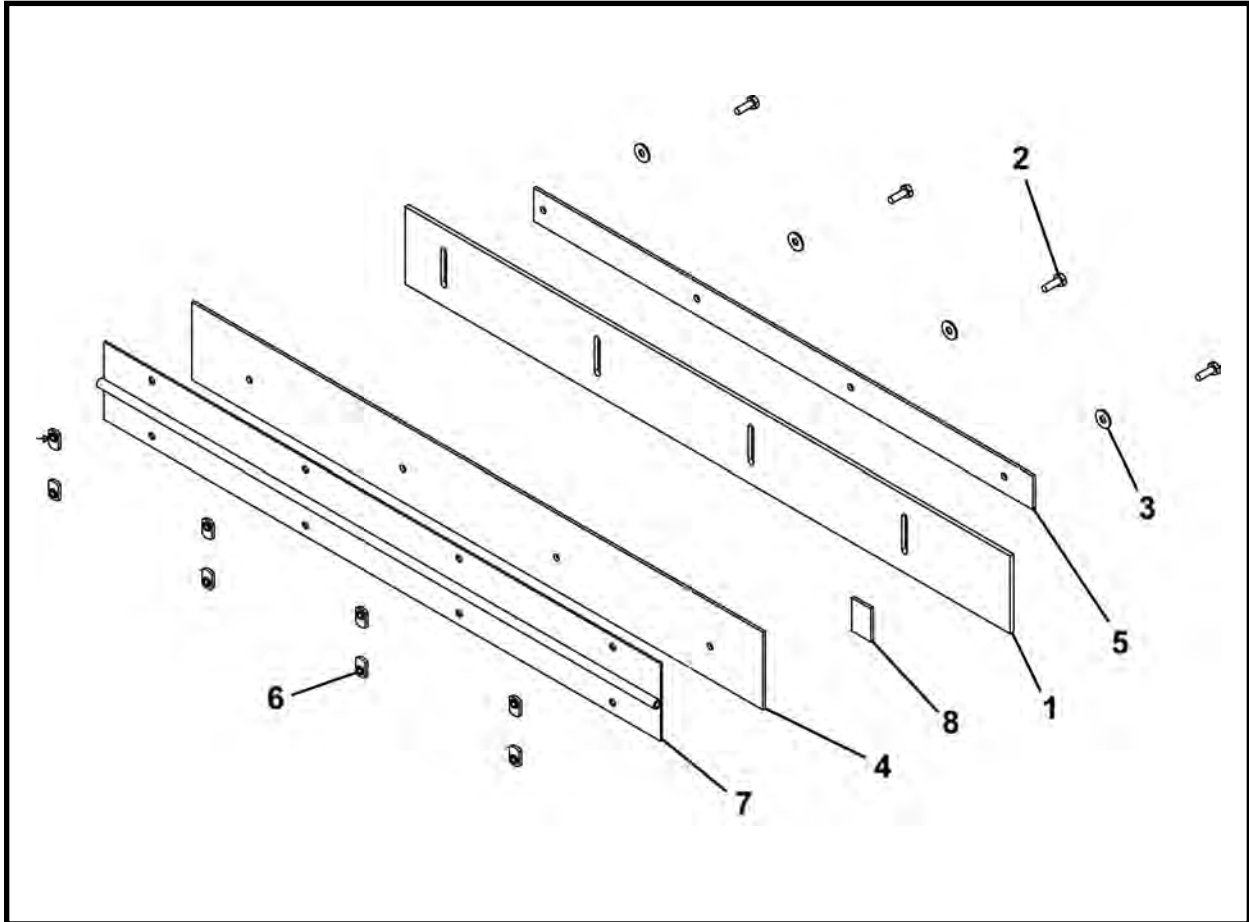
NOTES

FRONT ROLLER ASSEMBLY, 027257A00
1615 BELT CONVEYOR



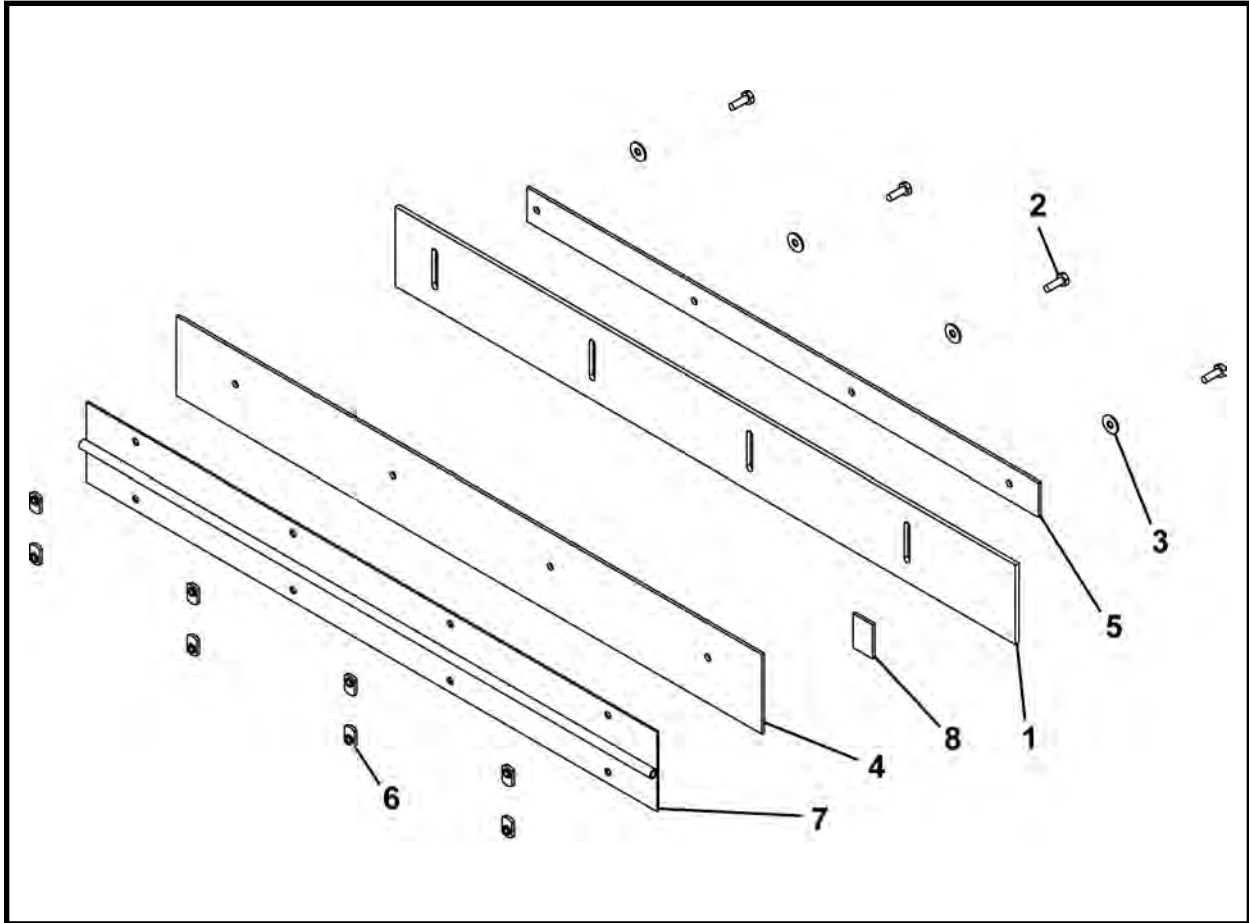
| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|--------------------------------|
| 0 | 1 | 027257A00 | FRONT ROLLER ASSEMBLY |
| 1 | 2 | P0063-001 | FITTING, Grease Str. |
| 2 | 1 | 002256A00 | WELDMENT, Front Roller |
| 3 | 2 | 002386P01 | BOLT, Grease |
| 4 | 2 | P0045-007 | WASHER, Lock 7/16 |
| 5 | 6 | P0001-06-003 | BOLT, 3/8 UNC x 3/4 |
| 6 | 1 | 027293P00 | SHAFT, Front Roller |
| 7 | 2 | P0045-006 | WASHER, Lock 3/8 |
| 8 | 2 | 027130P00 | MOUNT, Front Roller Scraper |
| 7 | 2 | P0065-006 | BEARING |
| 10 | 2 | 027109A00 | BRACKET, Front Roller Mounting |
| 11 | 1 | 027290P00 | SCRAPER, Front Roller |
| 12 | 2 | P0040-006 | WASHER, Hardened Flat 3/8 |

FEED FRAME SPOILS GUIDE ASSEMBLY - LEFT REAR, 027265A00
1615 BELT CONVEYOR



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|---------------------------------------|
| 0 | 1 | 027265A00 | GUIDE, Feed Frame Spoils - Left Rear |
| 1 | 1 | 027217P00 | SUPPORT BAR, Feed Frame Spoils - Left |
| 2 | 1 | 027135P00 | HINGE, Short Spoils Guide |
| 3 | 8 | P0011-004B | NUT, Weld 1/4 UNC |
| 4 | 1 | 027136P00 | STRIP, Short Spoils Guide Wear |
| 5 | 4 | P0040-004 | WASHER, Hardened Flat 1/4 |
| 6 | 4 | P0001-04-003 | BOLT, 1/4 UNC x 3/4 |
| 7 | 1 | 027249P00 | BRACKET, Short Spoils Wear Strip |
| 8 | 1 | 027216P00 | TAB, Feed Frame Support Bar |

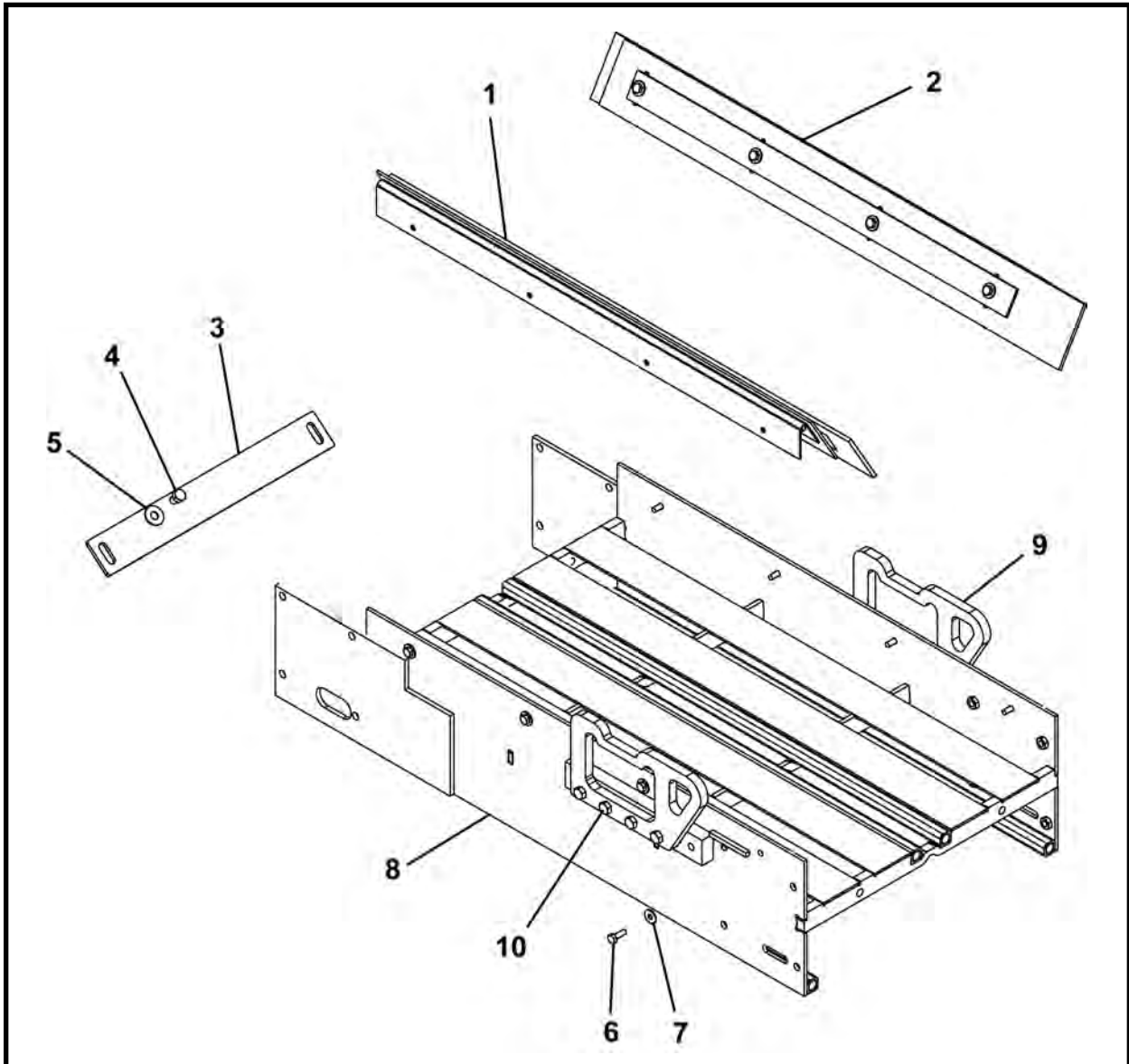
FEED FRAME SPOILS GUIDE ASSEMBLY - RIGHT REAR, 027266A00
1615 BELT CONVEYOR



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|--|
| 0 | 1 | 027266A00 | GUIDE, Feed Frame Spoils - Right Rear |
| 1 | 1 | 027136P00 | STRIP, Short Spoils Guide Wear |
| 2 | 4 | P0001-04-003 | BOLT, 1/4 UNC x .75 |
| 3 | 4 | P0040-004 | WASHER, Hardened Flat 1/4 |
| 4 | 1 | 027217P00 | SUPPORT BAR, Feed Frame Spoils - Right |
| 5 | 1 | 027249P00 | BRACKET, Short Spoils Wear Strip |
| 6 | 8 | P0011-004B | NUT, Weld 1/4 UNC |
| 7 | 1 | 027135P00 | HINGE, Short Spoils Guide |
| 8 | 1 | 027216P00 | TAB, Feed Frame Support Bar |

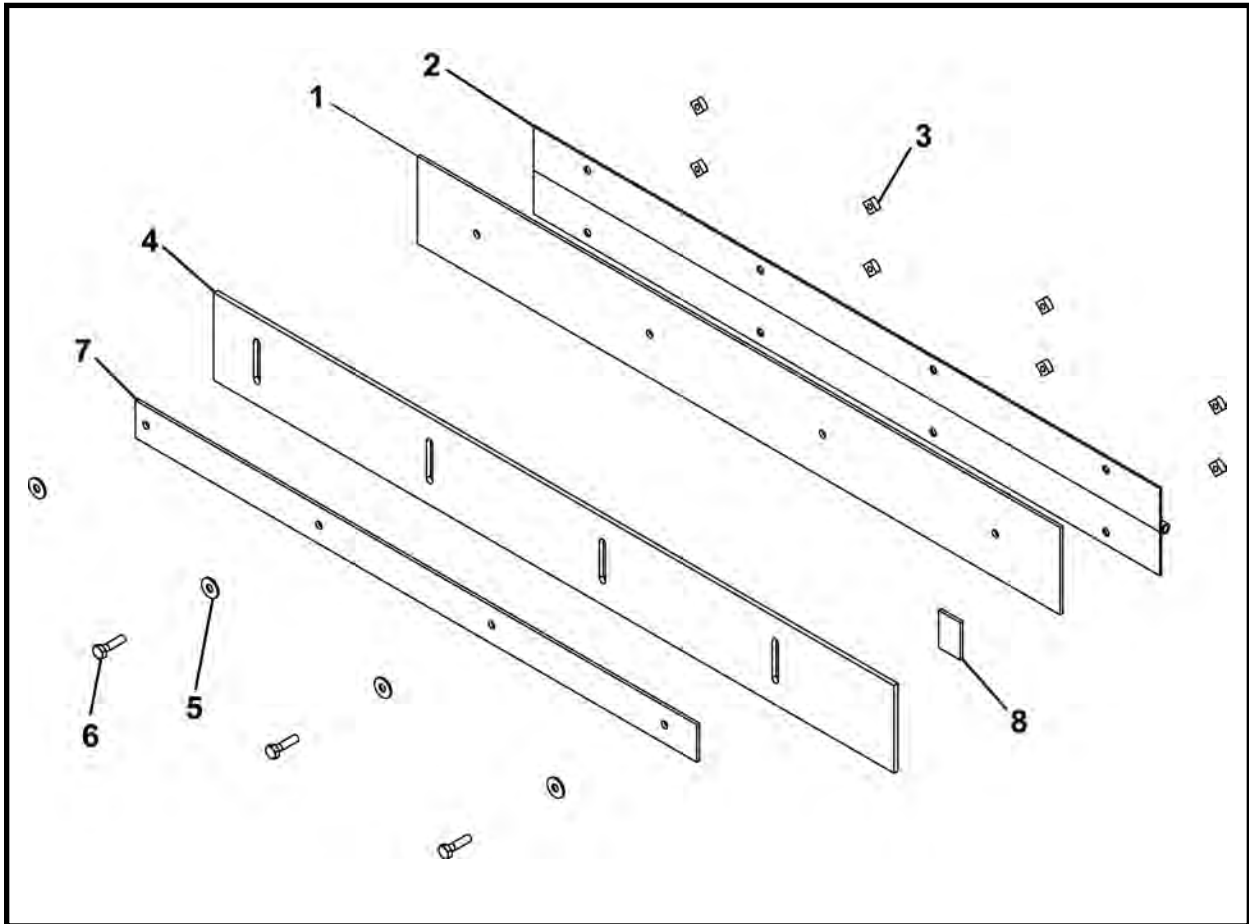
NOTES

EXTENSION FRAME ASSEMBLY, 027264A00
1615 BELT CONVEYOR - EXTENSION



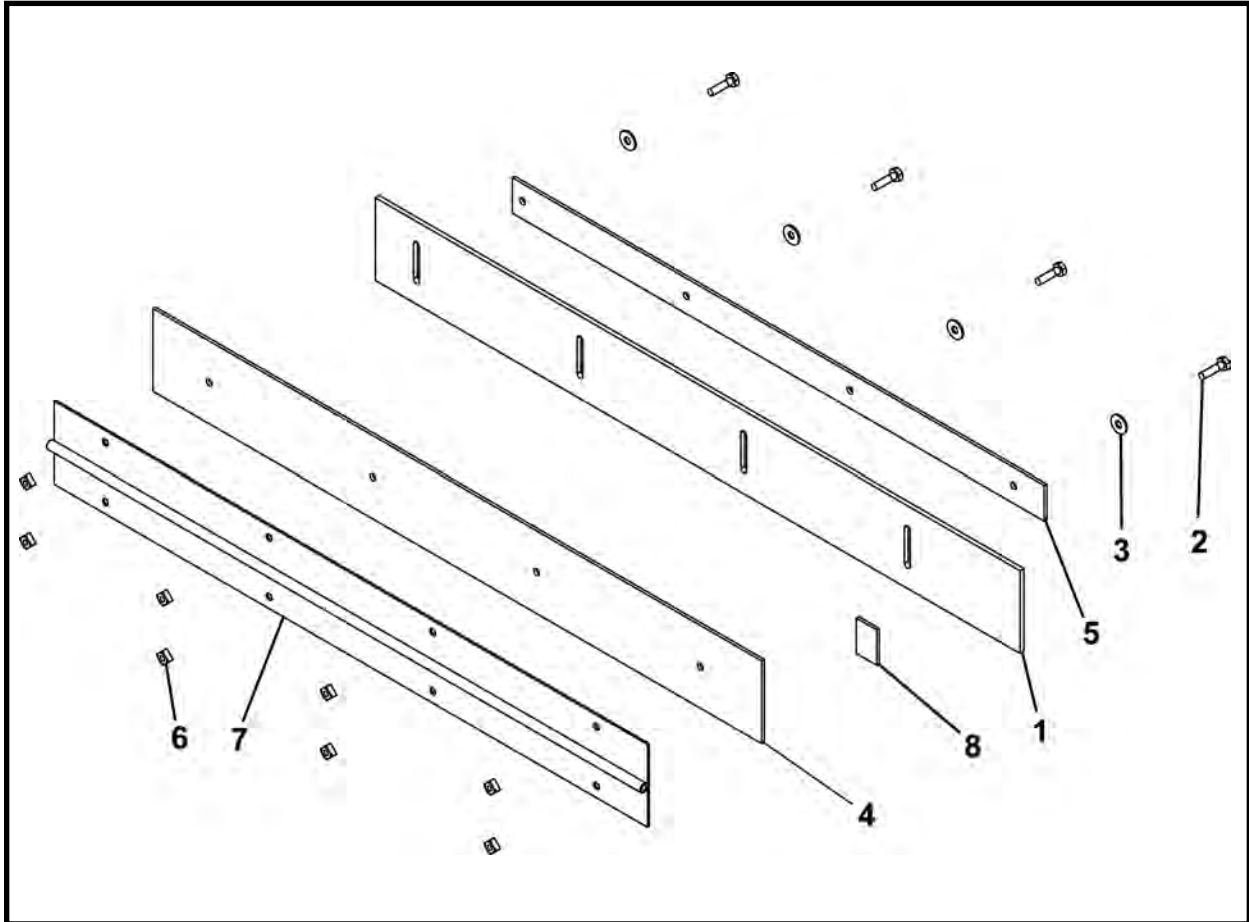
| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|--|
| 0 | 1 | 027264A00 | EXTENSION FRAME ASSEMBLY |
| 1 | 1 | 027134A00 | GUIDE, Short Spoils - Left |
| 2 | 1 | 027267A00 | GUIDE, Short Spoils - Right |
| 3 | 1 | 027295P00 | SCRAPER, Idler Roller |
| 4 | 2 | P0001-06-002 | BOLT, Hex 3/8 UNC x 1/2 |
| 5 | 2 | P0040-006 | WASHER, Hardened Flat 3/8 |
| 6 | 8 | P0001-04-003 | BOLT, Hex 1/4 UNC x 3/4 |
| 7 | 8 | P0045-004 | WASHER, Lock 1/4 |
| 8 | 1 | 027253A00 | WELDMENT, Extension Frame (Includes items 8a-8b) |
| 8a | 2 | P0011-006A | NUT, Strut Square 3/8 |
| 8b | 8 | P0007-06-000 | NUT, Jam 3/8-16 UNC |
| 9 | 2 | 025344P | LIFT EYE |
| 10 | 8 | P0001-06-005 | BOLT, Hex 3/8 UNC x 1.25 |

SHORT SPOILS GUIDE ASSEMBLY - LEFT, 027134A00
1615 BELT CONVEYOR - EXTENSION



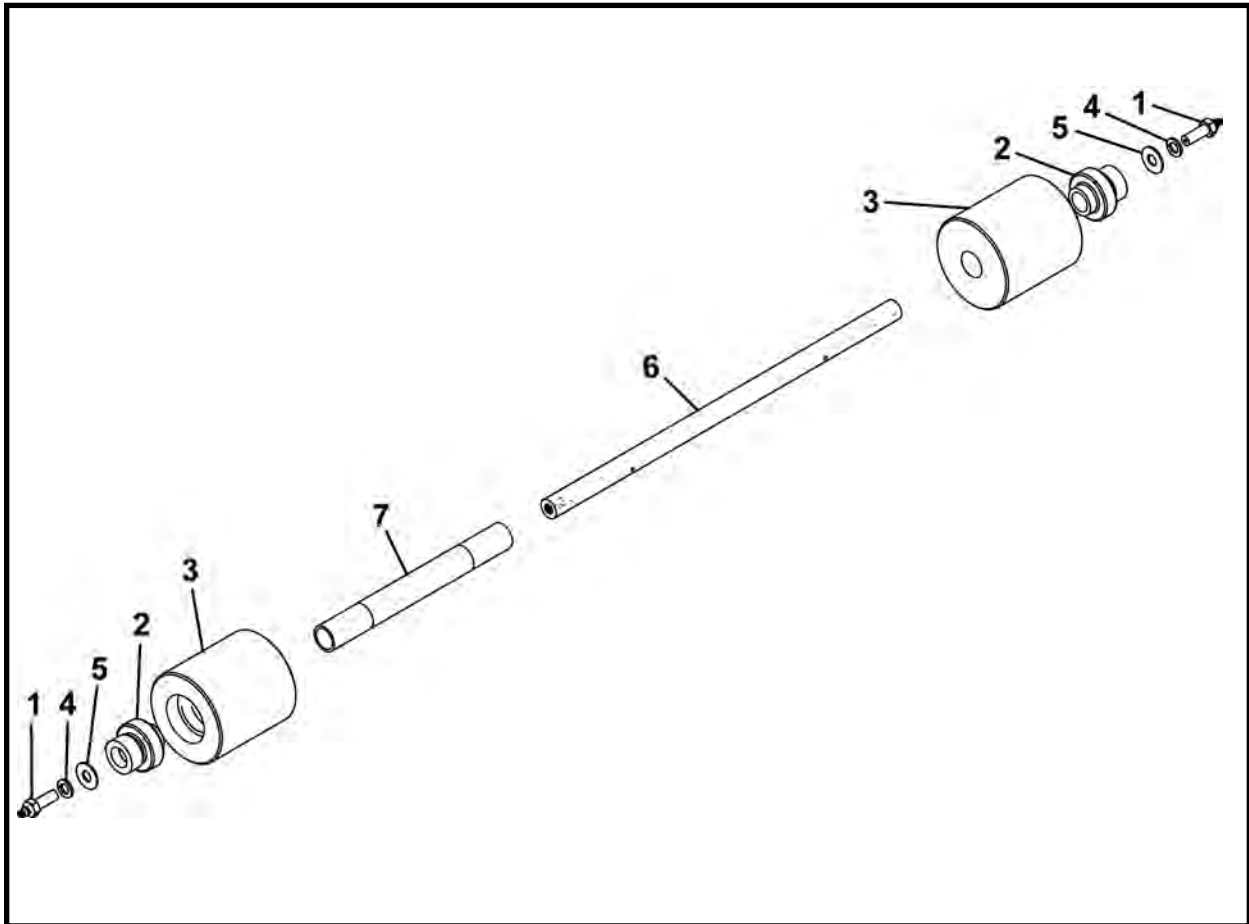
| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|---------------------------------------|
| 0 | 1 | 027134A00 | SHORT SPOILS GUIDE - Left |
| 1 | 1 | 027217P00 | SUPPORT BAR, Feed Frame Spoils - Left |
| 2 | 1 | 027135P00 | HINGE, Short Spoils Guide |
| 3 | 8 | P0011-004B | NUT, Weld 1/4 UNC |
| 4 | 1 | 027136P00 | STRIP, Short Spoils Guide Wear |
| 5 | 4 | P0045-004 | WASHER, Lock 1/4 |
| 6 | 4 | P0001-04-003 | BOLT, Hex 1/4 UNC x 3/4 |
| 7 | 1 | 027249P00 | BRACKET, Short Spoils Wear Strip |
| 8 | 1 | 027216P00 | TAB, Feed Frame Support Bar |

SHORT SPOILS GUIDE ASSEMBLY - RIGHT, 027267A00
1615 BELT CONVEYOR - EXTENSION



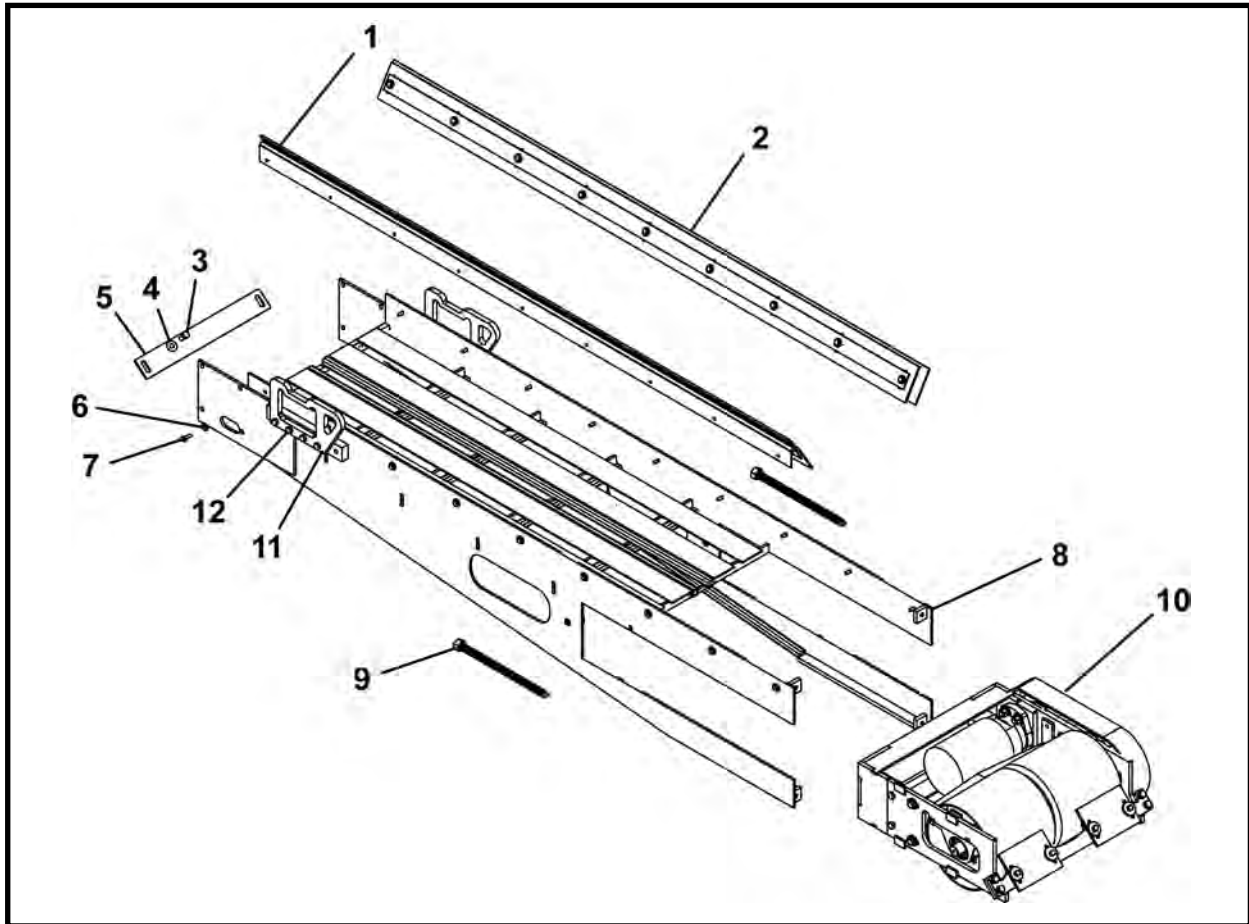
| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|--|
| 0 | 1 | 027267A00 | SHORT SPOILS GUIDE - Right |
| 1 | 1 | 027136P00 | STRIP, Short Spoils Guide Wear |
| 2 | 4 | P0001-04-003 | BOLT, Hex 1/4 UNC x 3/4 |
| 3 | 4 | P0045-004 | WASHER, Lock 1/4 |
| 4 | 1 | 027217P00 | SUPPORT BAR, Feed Frame Spoils - Right |
| 5 | 1 | 027249P00 | BRACKET, Short Spoils Wear Strip |
| 6 | 8 | P0011-004B | NUT, Weld 1/4 UNC |
| 7 | 1 | 027135P00 | HINGE, Short Spoils Guide |
| 8 | 1 | 027216P00 | TAB, Feed Frame Support Bar |

IDLER ROLLER ASSEMBLY, 027261A00
1615 BELT CONVEYOR



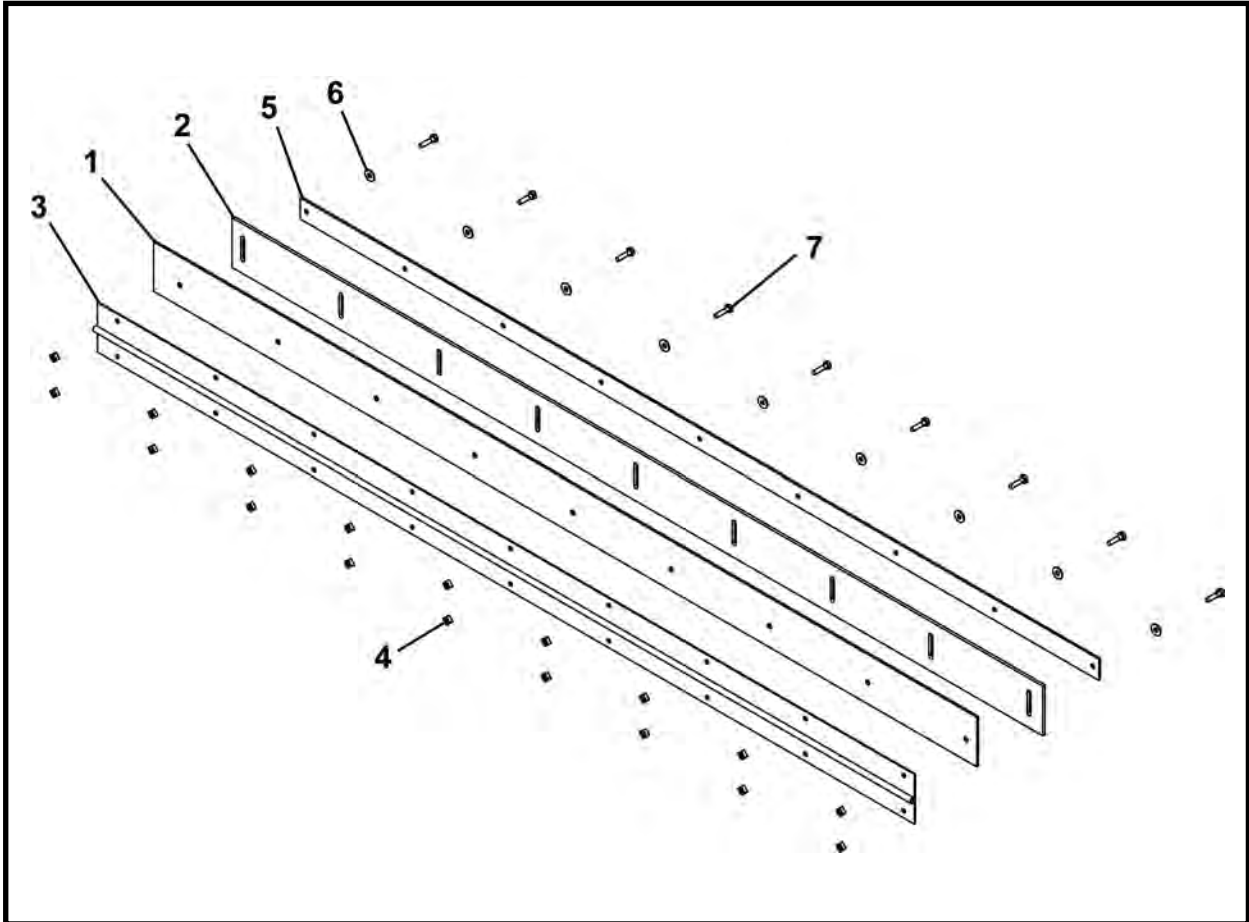
| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|-----------|--|
| 0 | 1 | 027261A00 | ASSEMBLY, Idler Roller |
| 1 | 2 | 001341A00 | BOLT, 3/8 UNC x 1-1/4 With Grease Fitting (Includes item 1a) |
| 1a | 2 | P0063-001 | FITTING, Grease |
| 2 | 2 | P0065-007 | BEARING |
| 3 | 2 | 002306P00 | ROLLER, Idler |
| 4 | 2 | P0045-006 | WASHER, Lock 3/8 |
| 5 | 2 | P0040-006 | WASHER, Hardened Flat 3/8 |
| 6 | 1 | 002416P00 | SHAFT, Idler |
| 7 | 1 | 001085P00 | TUBE, Idler |

DRIVE FRAME ASSEMBLY, 027262A00
1615 BELT CONVEYOR



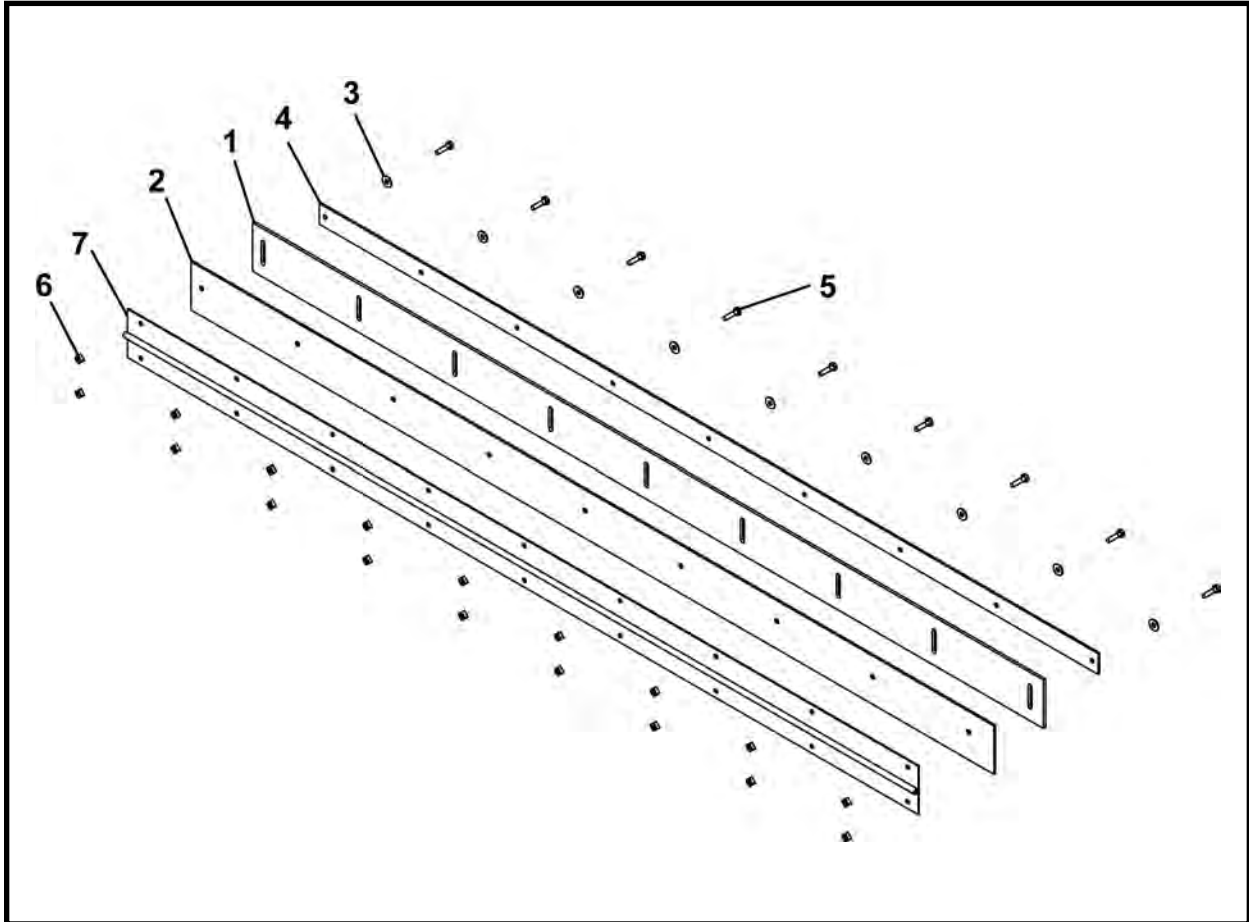
| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|--|
| 0 | 1 | 027262A00 | ASSEMBLY, Drive Frame |
| 1 | 1 | 027131A00 | GUIDE, Drive Frame Spoils - Left |
| 2 | 1 | 027219A00 | GUIDE, Drive Frame Spoils - Right |
| 3 | 2 | P0001-06-003 | BOLT, Hex 3/8 UNC x .75 |
| 4 | 2 | P0045-006 | WASHER, Lock 3/8 |
| 5 | 1 | 027295P00 | SCRAPER, Idler Roller |
| 6 | 18 | P0045-004 | WASHER, Lock 1/4 |
| 7 | 18 | P0001-04-003 | BOLT, Hex 1/4 UNC x .75 |
| 8 | 1 | 027251A00 | WELDMENT, Drive Frame (Includes items 8a-8b) |
| 8a | 6 | P0011-006A | NUT, Strut Square 3/8 |
| 8b | 2 | P0063-001 | FITTING, Grease 1/4 |
| 9 | 2 | 002824A01 | SCREW, Adjusting |
| 10 | 1 | 027254A00 | ASSEMBLY, Drive Motor Frame |
| 11 | 2 | 025344P | LIFT EYE |
| 12 | 8 | P0001-06-005 | BOLT, Hex 3/8 UNC x 1.25 |

DRIVE FRAME SPOILS GUIDE ASSEMBLY - LEFT, 027131A00
1615 BELT CONVEYOR



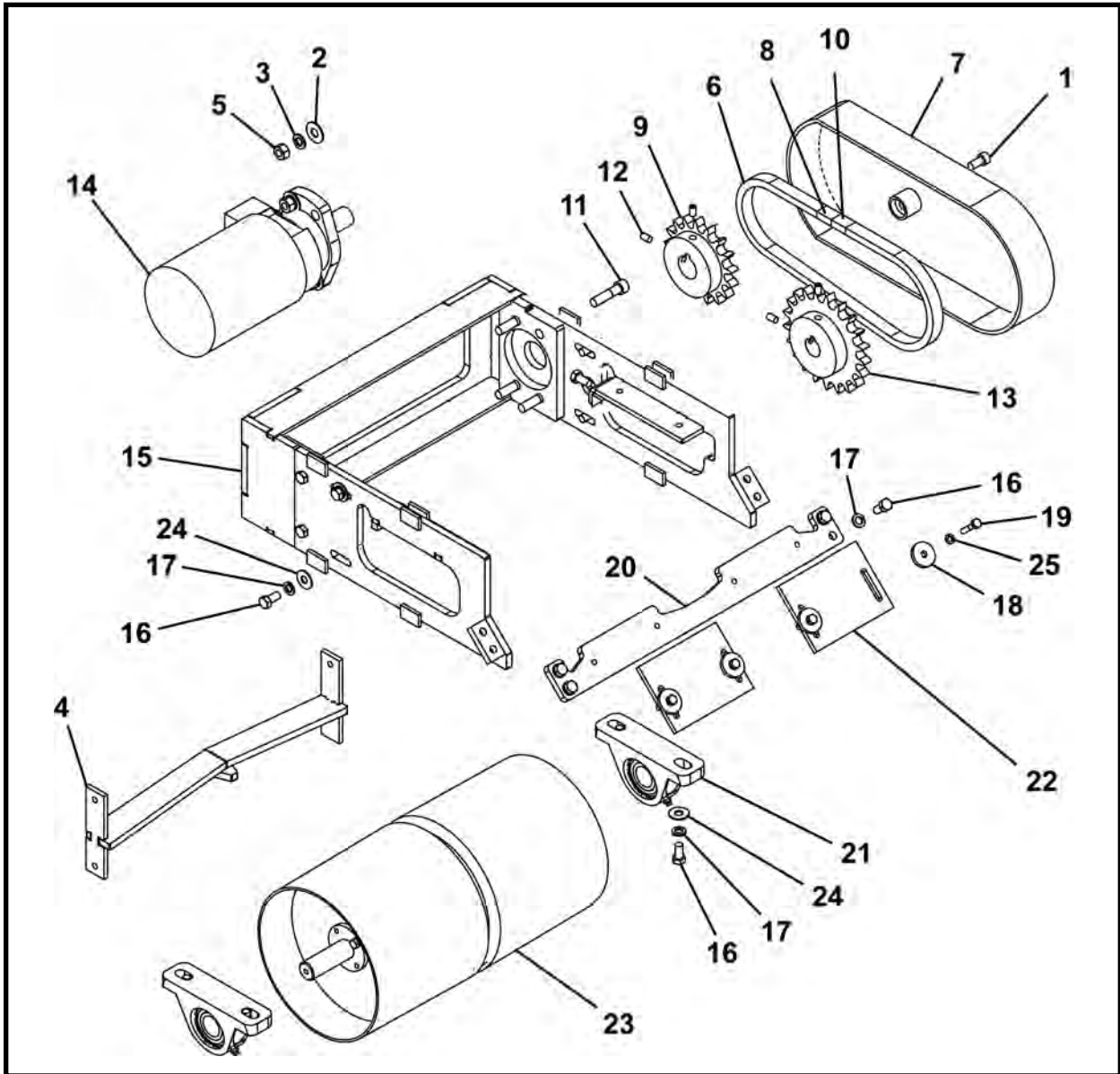
| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|----------------------------------|
| 0 | 1 | 027131A00 | GUIDE, Drive Frame Spoils - Left |
| 1 | 1 | 027218P00 | SUPPORT BAR, Drive Frame Spoils |
| 2 | 1 | 027133P00 | STRIP, Feed Frame Spoils Wear |
| 3 | 1 | 027132P00 | HINGE, Drive Frame Spoils Guide |
| 4 | 18 | P0011-004B | NUT, Weld 1/4 UNC |
| 5 | 1 | 027247P00 | BRACKET, Drive Frame Wear Strip |
| 6 | 9 | P0040-004 | WASHER, Hardened Flat 1/4 |
| 7 | 9 | P0001-04-003 | BOLT, Hex 1/4 UNC x .75 |

DRIVE FRAME SPOILS GUIDE ASSEMBLY - RIGHT, 027219A00
1615 BELT CONVEYOR



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|-----------------------------------|
| 0 | 1 | 027219A00 | GUIDE, Drive Frame Spoils - Right |
| 1 | 1 | 027133P00 | STRIP, Drive Frame Spoils Wear |
| 2 | 1 | 027218P00 | SUPPORT BAR, Drive Frame Spoils |
| 3 | 9 | P0040-004 | WASHER, Hardened Flat 1/4 |
| 4 | 1 | 027247P00 | BRACKET, Drive Frame Wear Strip |
| 5 | 9 | P0001-04-003 | BOLT, Hex 1/4 UNC x .75 |
| 6 | 18 | P0011-004B | NUT, Weld 1/4 UNC |
| 7 | 1 | 027132P00 | HINGE, Drive Frame Spoils Guide |

DRIVE MOTOR & ROLLER ASSEMBLY, 027254A00
1615 BELT CONVEYOR



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-------|--------------|--|
| 0 | 1 | 027254A00 | ASSEMBLY, Drive Motor & Roller |
| 1 | 1 | P0031-06-003 | SCREW, Socket Head Cap 3/8 UNC x .75 |
| 2 | 4 | P0040-007 | WASHER, Flat 7/16 |
| 3 | 4 | P0045-007 | WASHER, Lock 7/16 |
| 4 | 1 | 027256A00 | SCRAPER, Internal Drive Roller |
| 5 | 4 | P0003-07-000 | NUT, 7/16 UNC |
| 6 | 36 LI | P0078-002 | CHAIN, Roller #60 x 35 |
| 7 | 1 | 001429A00 | COVER, Conveyor Chain |
| 8 | 1 | P0078-008 | LINK, Connect #60 |
| 9 | 1 | 001399P00 | SPROCKET, Drive 17 Teeth |
| 10 | 1 | P0078-005 | LINK, Repair #60 |
| 11 | 4 | P0001-07-007 | SCREW, Socket Head Cap 7/16-14 UNC x 1-3/4 |
| 12 | 4 | P0033-05-008 | SCREW, Socket Head Set 5/16-18 UNC x 1/2 |
| 13 | 1 | 001398P00 | SPROCKET, Drive 21 Teeth |
| 14 | 1 | P0304-157 | MOTOR |

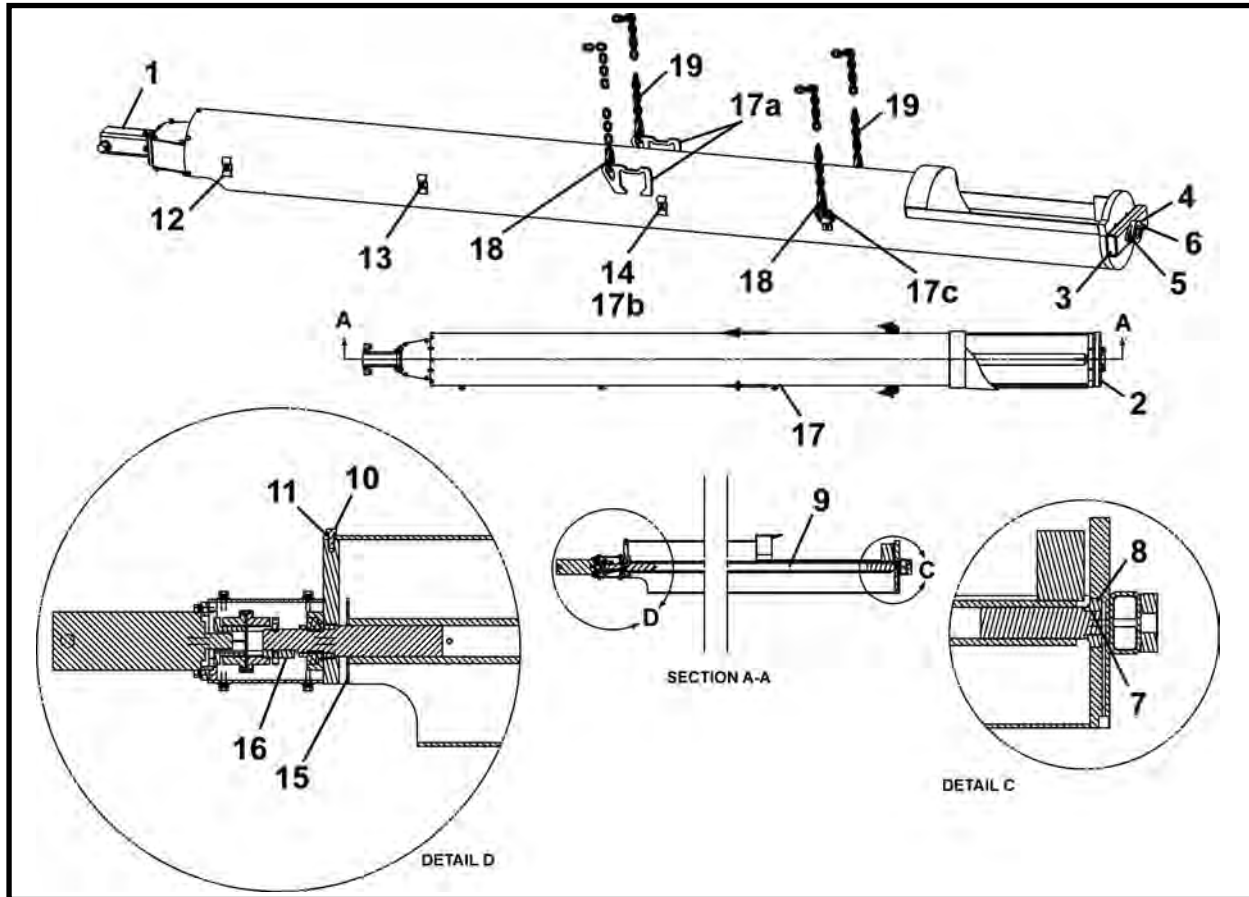
DRIVE MOTOR & ROLLER ASSEMBLY, 027254A00
1615 BELT CONVEYOR

| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|---|
| 15 | 1 | 027255A00 | WELDMENT, Drive Motor Frame (Includes item 15a) |
| 15a | 2 | P0001-06-003 | BOLT, Hex 3/8 UNC x .75 |
| 16 | 14 | P0001-06-003 | BOLT, Hex 3/8 UNC x .75 |
| 17 | 12 | P0045-006 | WASHER, Lock 3/8 |
| 18 | 4 | 002624P00 | WASHER, Lock 1/4 |
| 19 | 4 | P0001-04-005 | BOLT, 1/4 UNC x 1.25 |
| 20 | 1 | 027283P00 | MOUNT, External Scraper |
| 21 | 2 | P0065-014 | BEARING |
| 22 | 2 | 027285P00 | SCRAPER, External Belt |
| 23 | 1 | 001969A00 | ROLLER, Drive |
| 24 | 8 | P0040-006 | WASHER, Hardened Flat 3/8 |
| 25 | 4 | P0045-004 | WASHER, Lock 1/4 |

LI - Linear Inch

120 SCREW CONVEYOR, F23520F00

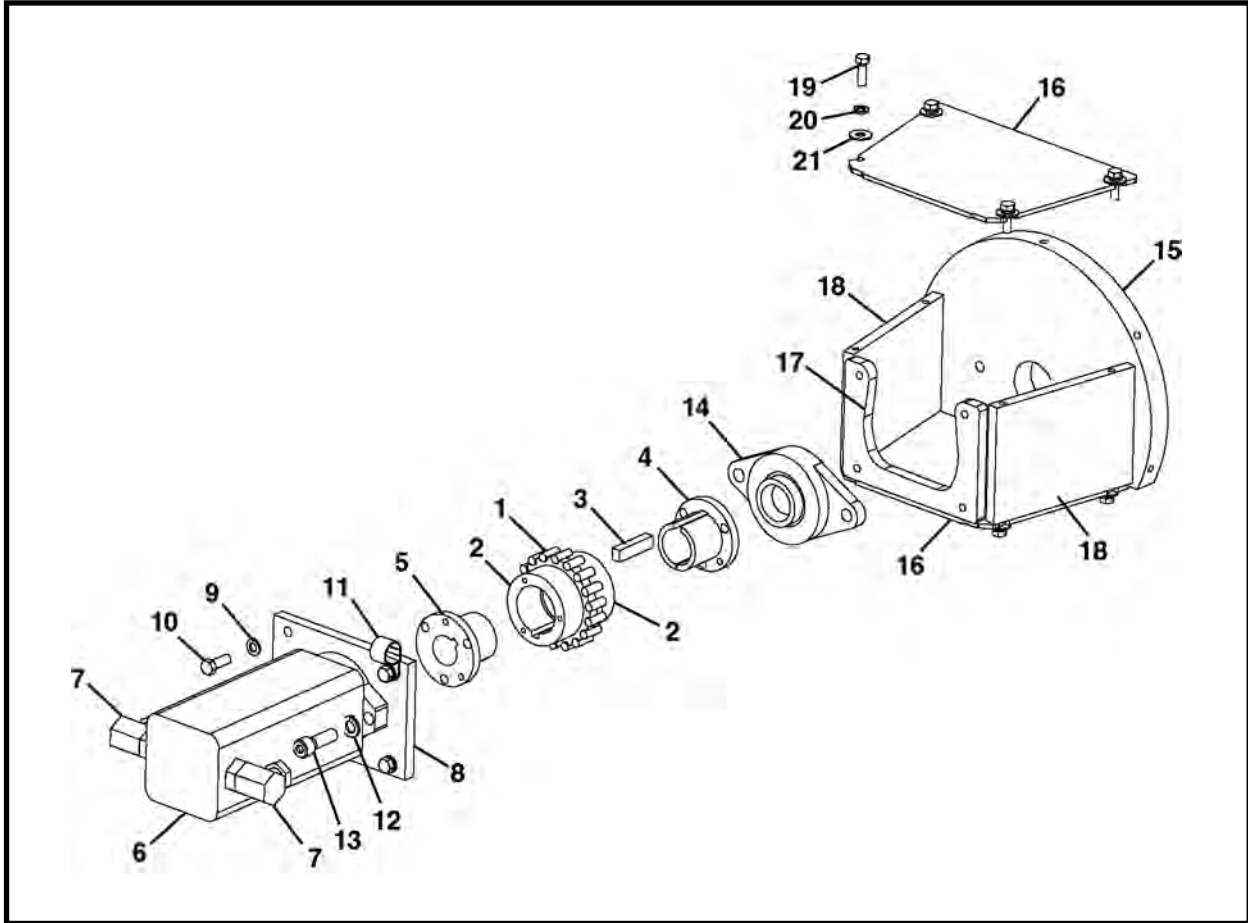
120 SCREW CONVEYOR



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|---------------|---|
| 0 | 1 | F23520F00 | SCREW CONVEYOR 120 |
| 1 | 1 | 023543A | MOTOR MOUNT ASSEMBLY |
| 2 | 1 | 023541P00 | TUBE |
| 3 | 2 | 023540P00 | CAP, Tube End |
| 4 | 1 | P0065-017 | BEARING, Pivot |
| 5 | 2 | P0045-008 | WASHER, Lock 1/2 |
| 6 | 2 | P0001-08-016 | BOLT, Hex 1/2 UNC x 4 |
| 7 | 1 | P0085-028 | ORING |
| 8 | 1 | P0065-004 | BEARING |
| 9 | 1 | 023521A00 | AUGER ASSEMBLY, 12" |
| 10 | 5 | P0001-06-004 | BOLT, Hex 3/8 UNC x 1 |
| 11 | 5 | P0045-006 | WASHER, Lock 3/8 |
| 12 | 3 | 002269P01 | CLAMP, Line |
| 13 | 3 | P0003-05-000 | NUT, 5/16 UNC |
| 14 | 3 | P0045-005 | WASHER, Lock 5/16 |
| 15 | 1 | 023522P00 | SHIELD, Shaft |
| 16 | 1 | P0047-010 | KEY |
| 17 | 1 | 023542A | WELDMENT, Tube (Includes items 17a - 17c) |
| 17a | 2 | 023524P00 | BRACKET, Conveyor |
| 17b | 3 | P0001-05-003 | BOLT, Hex 5/16 UNC x .75 |
| 17c | 2 | P0079-003 | D-RING 1/2 |
| 18 | 4 | P0098-010 | LINK 3/8 |
| 19 | 4 | P0094-003-030 | CHAIN, 3/8 x 30 |
| 20 | 2 | A10320A-150 | ASSEMBLY, Hose 1/2 x 150 |
| 21 | 1 | P0100-004A | COUPLER, Quick 1/2 Female |
| 22 | 1 | P0100-004B | COUPLER, Quick 1/2 Male |

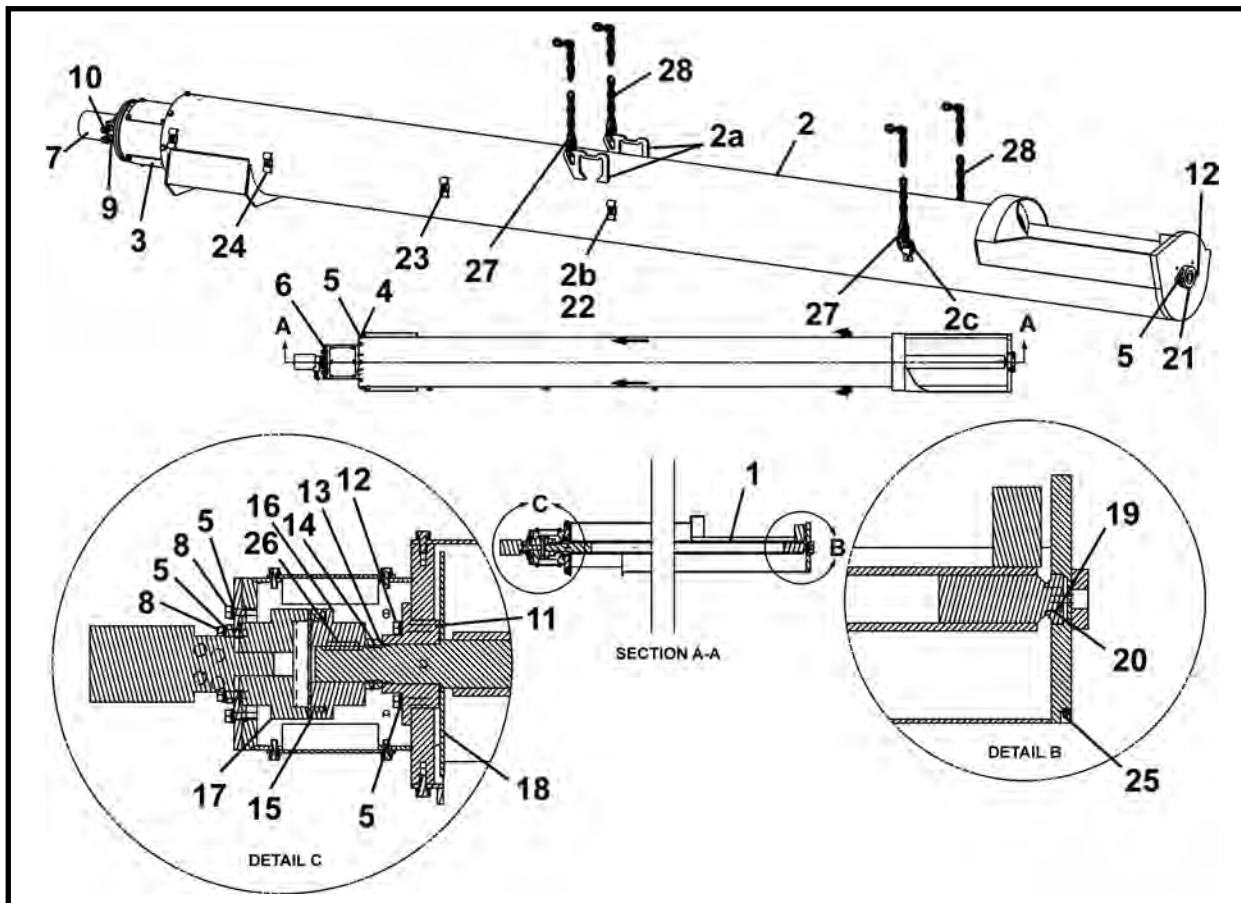
NOTE: Use bulkhead seal assembly (listed below) with the 120 Screw Conveyor. Refer to Bulkhead Seal & Door Assembly in Section 3, Structural for more information. 480 - 023870A, 540 - 018359A

MOTOR MOUNT ASSEMBLY, 023543A
120 SCREW CONVEYOR



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|--------------------------------------|
| 0 | 1 | 023543A | ASSEMBLY, Motor Mount |
| 1 | 1 | P0305-114A | CHAIN |
| 2 | 2 | P0305-114C | SPROCKET |
| 3 | 1 | P0047-010 | KEY |
| 4 | 1 | P0066-028 | BUSHING 1-1/2 |
| 5 | 1 | 004544P00 | BUSHING, Power Drive |
| 6 | 1 | P0304-109 | MOTOR |
| 7 | 2 | P0300-198 | FITTING, 12MB-08FPX90 |
| 8 | 1 | 007142P00 | PLATE, Motor Mounting |
| 9 | 4 | P0045-006 | WASHER, Lock 3/8 |
| 10 | 4 | P0001-06-004 | BOLT, Hex 3/8 UNC x 1 |
| 11 | 1 | P0055-129 | CLAMP, 3/4 |
| 12 | 2 | P0045-008 | WASHER, LOCK 1/2 |
| 13 | 2 | P0031-08-006 | SCREW, Socket Head Cap 1/2 UNC x 1.5 |
| 14 | 1 | P0065-163 | BEARING |
| 15 | 1 | 007140P00 | PLATE, Idler End |
| 16 | 2 | 007143P00 | PLATE |
| 17 | 1 | 007141P00 | PLATE |
| 18 | 2 | 004547P02 | PLATE |
| 19 | 8 | P0001-05-003 | BOLT, Hex 5/16 UNC x .75 |
| 20 | 8 | P0045-005 | WASHER, Lock 5/16 |
| 21 | 8 | P0040-005 | WASHER, Hardened Flat 5/16 |

140 SCREW CONVEYOR, F24500F00
140 SCREW CONVEYOR



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|---|
| 0 | 1 | F24500F00 | SCREW CONVEYOR 140 |
| 1 | 1 | 024501A00 | WELDMENT, 14" Screw |
| 2 | 1 | 024503A00 | WELDMENT, 14" Pipe (Includes items 2a-2c) |
| 2a | 2 | 023524P00 | BRACKET, Conveyor |
| 2b | 4 | P0001-05-003 | BOLT, Hex 5/16 UNC x .75 |
| 2c | 2 | P0079-003 | D-RING 1/2 |
| 3 | 1 | 024502A00 | MOTOR ADAPTER |
| 4 | 8 | P0001-08-004 | BOLT, Hex 1/2 UNC x 1 |
| 5 | 24 | P0045-008 | WASHER, Lock 1/2 |
| 6 | 1 | 009893P00 | PLATE, Mounting |
| 7 | 1 | P0304-145 | MOTOR, Hydraulic |
| 8 | 8 | P0001-08-006 | BOLT, Hex 1/2 UNC x 1.5 |
| 9 | 2 | P0300-167 | FITTING, 10MB-08FP |
| 10 | 2 | P0300-173 | SWIVEL, 08MP-08PX45 |
| 11 | 1 | P0065-107 | BEARING |
| 12 | 6 | P0001-08-008 | BOLT, Hex 1/2 UNC x 2 |
| 13 | 2 | P0065-108 | NUT, Lock |
| 14 | 1 | P0065-109 | WASHER, Lock |
| 15 | 1 | P0305-134C | INSERT, Coupler |
| 16 | 1 | P0305-134A | COUPLER, Keyway |
| 17 | 1 | P0305-134B | COUPLER, Spline |
| 18 | 1 | 024559P | WASHER, Conveyor Flighting |
| 19 | 1 | P0065-004 | BEARING |
| 20 | 1 | P0085-028 | O-RING |

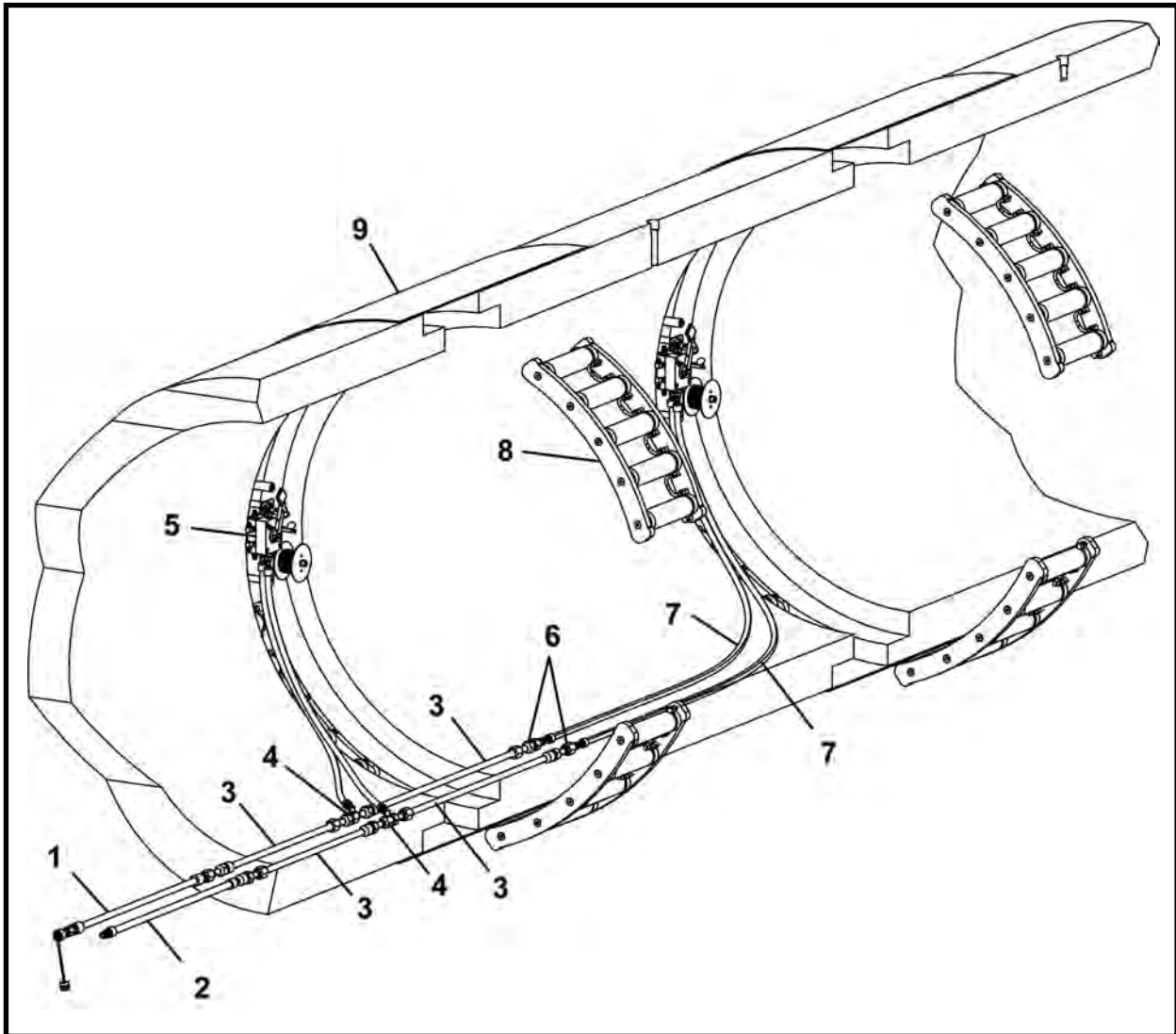
140 SCREW CONVEYOR, F24500F00
140 SCREW CONVEYOR

| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|---------------|---------------------------|
| 21 | 1 | P0065-017 | BEARING, Pivot |
| 22 | 4 | P0004-05-000 | NUT, 5/16 UNF |
| 23 | 4 | P0045-005 | WASHER, Lock 5/16 |
| 24 | 4 | 002269P01 | CLAMP, Line |
| 25 | 1 | P0063-001 | FITTING, Grease 1/4 |
| 26 | 1 | P0047-007 | KEY |
| 27 | 4 | P0098-010 | LINK, 3/8 |
| 28 | 4 | P0094-003-030 | CHAIN, 3/8 x 30 |
| 29 | 2 | A10320A-200 | HOSE ASSEMBLY, 1/2 x 200 |
| 30 | 1 | P0100-004A | COUPLER, Quick 1/2 Female |
| 31 | 1 | P0100-004B | COUPLER, Quick 1/2 Male |

NOTE:

1. The 140 Screw Conveyor can be used with the 540 TBM.
2. Use bulkhead seal assembly, 018359A with the 140 Screw Conveyor. Refer to Bulkhead Seal & Door Assembly in Section 3, Structural for more information.

INTERMEDIATE JACKING STATION



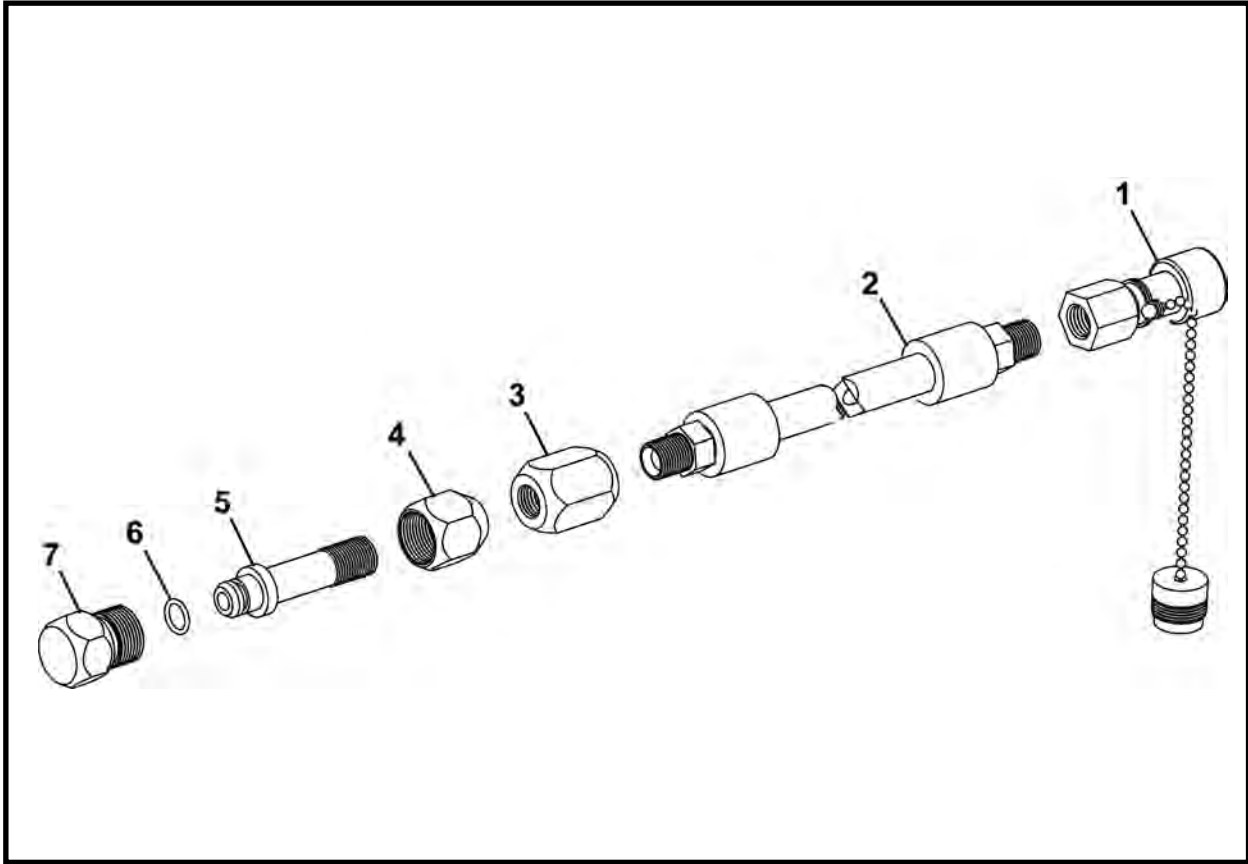
| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|-------------|---------------------------------|
| 1* | 1 | F09802F01 | STARTER HOSE, High Pressure 30' |
| 2* | 1 | F09803F01 | STARTER HOSE, Low Pressure 30' |
| 3* | AR | F09800F00 | TUNNEL LINE |
| 4* | AR | F09804F00 | TEE CONNECT |
| 5* | AR | F04908F01 | VALVE, IJS (With Cable) |
| 6* | 1 | F09805F00 | STARTER CONNECTION |
| 7 | 2 | A10311A-xxx | HOSE ASSEMBLY, 3/8 JIC x length |
| 8.1* | 4 | 007300A00 | IJS SEGMENT ASSEMBLY - 480 |
| 8.2* | 5 | 007301A00 | IJS SEGMENT ASSEMBLY - 540 |
| 9** | AR | - | IJS HOUSING |

AR - As Required (Per Job)

* Refer to this section for parts information.

** Contact your Akkerman Sales Representative for information regarding IJS housings.

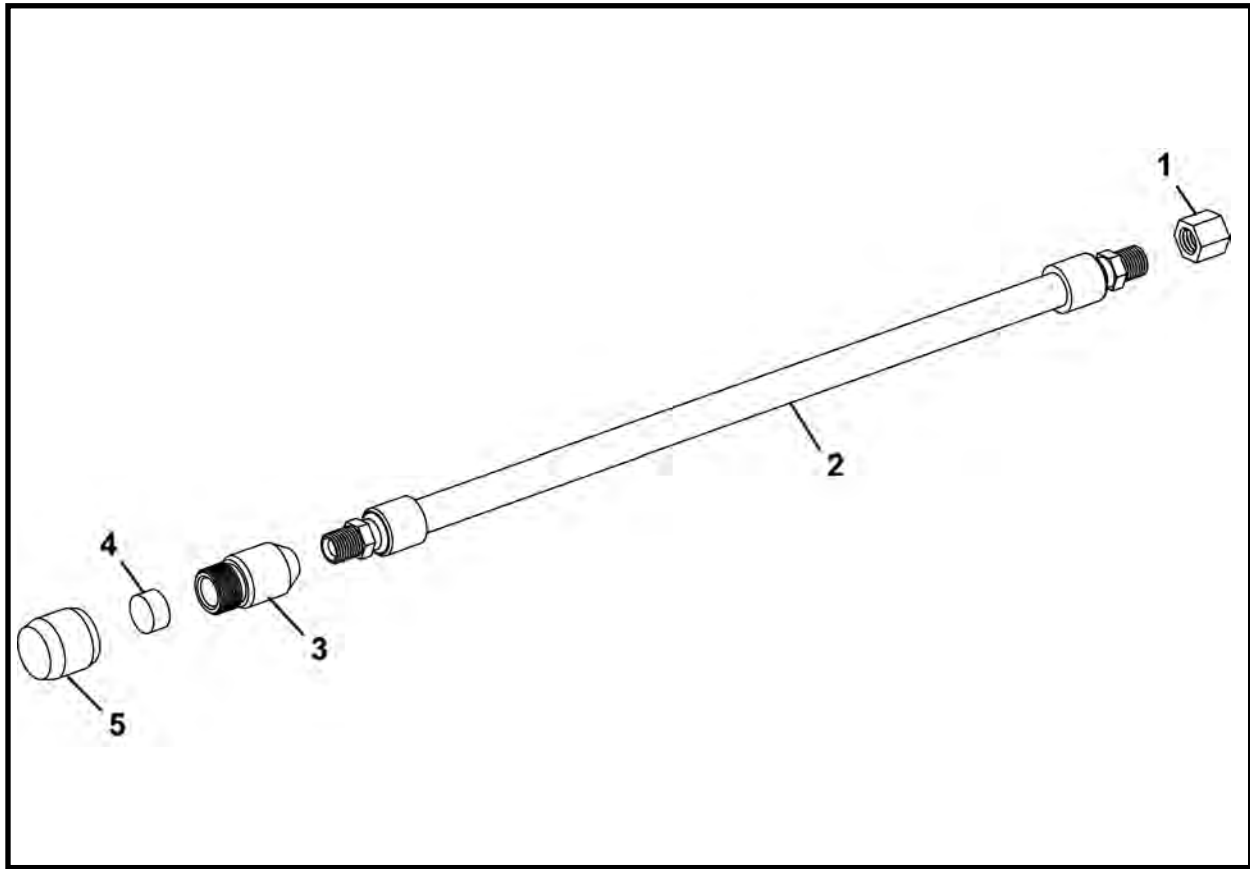
STARTER HOSE, HIGH PRESSURE 30', F09802F01



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|-------------|---------------------------------|
| 0 | 1 | F09802F01 | HOSE, High Pressure Starter 30' |
| 1 | 1 | P0100-001B | COUPLER, Male |
| 2 | 1 | A10420A-360 | HOSE ASSEMBLY, 1/2 x 360 |
| 3* | 1 | 009812P01 | COUPLER, Hi-Pressure 1/2 NPT |
| 4* | 1 | 005135P00 | COUPLER, 1/2 |
| 5* | 1 | 005134P00 | COUPLER, Male 1/2 |
| 6* | 1 | P0085-113 | ORING |
| 7* | 1 | 009808P00 | CAP, Female |

* Included in IJS Coupler Assembly, 005133A02. Refer to this section for parts information.

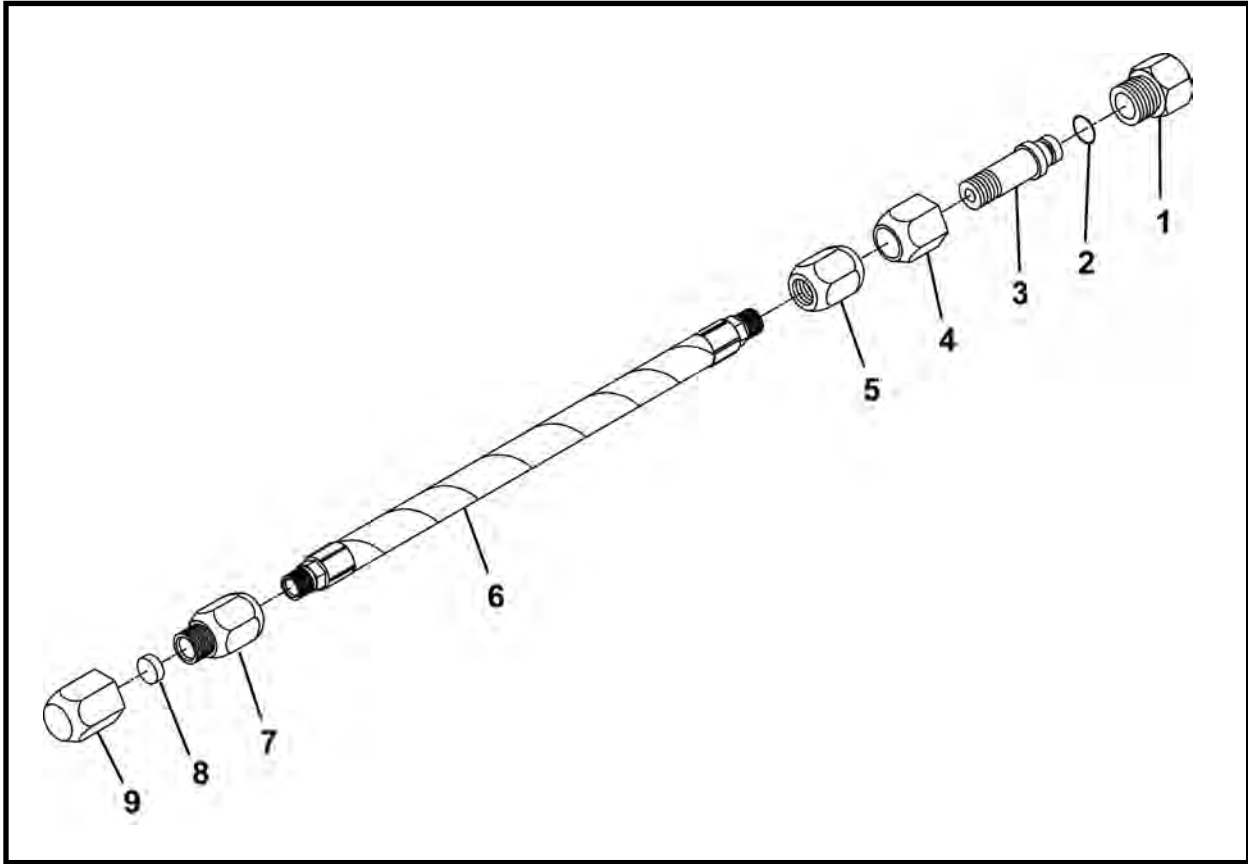
STARTER (RETURN) HOSE, LOW PRESSURE 30', F09803F01



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|-------------|---|
| 0 | 1 | F09803F01 | HOSE, Low Pressure Starter (Return) 30' |
| 1 | 1 | P0417-003 | CAP, Hex Pipe 1/2 |
| 2 | 1 | A10320A-360 | HOSE ASSEMBLY, 1/2 x 360 |
| 3* | 1 | 009809P00 | COUPLER, Female 1/2 |
| 4* | 1 | 007085P00 | PLUG, Coupler 1 OD |
| 5* | 1 | 009811P01 | CAP, Male |

* Included in IJS Coupler Assembly, 005133A02. Refer to this section for parts information.

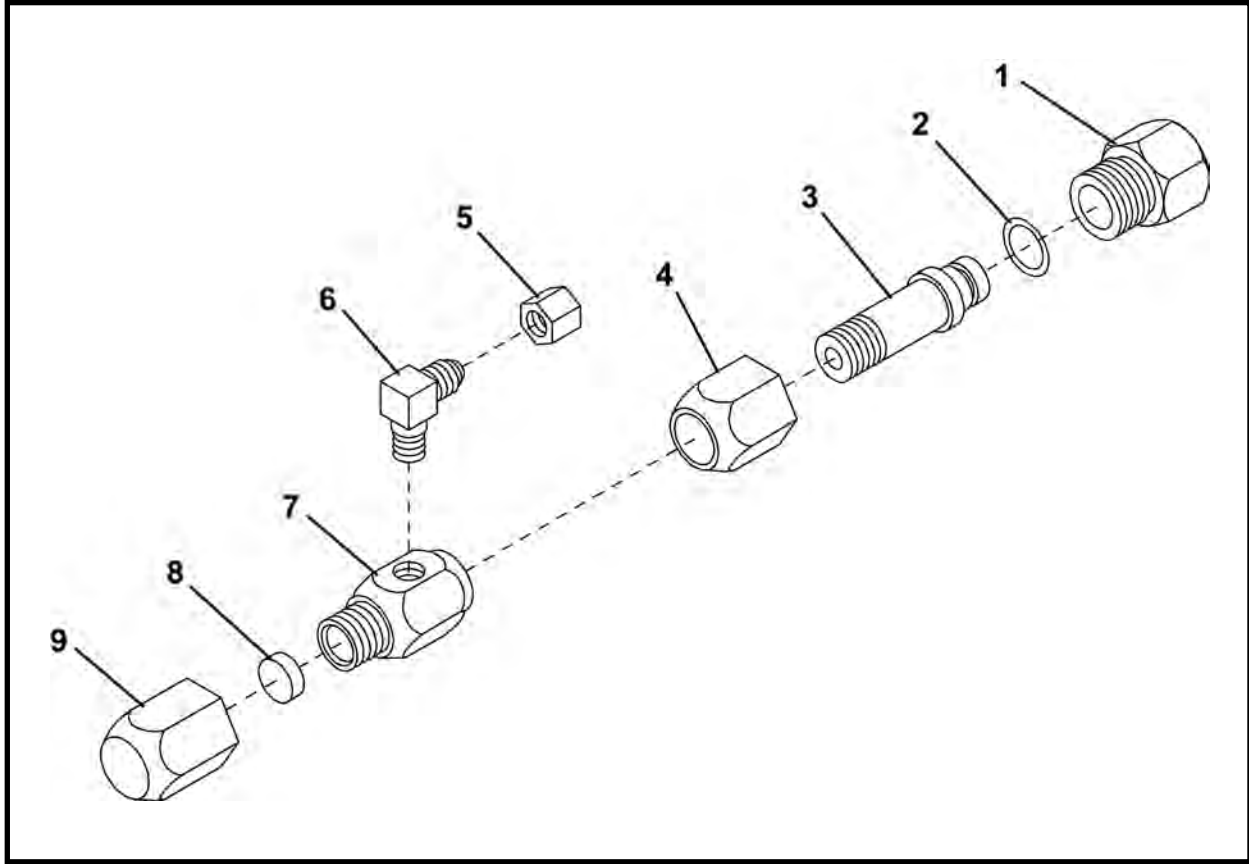
IJS TUNNEL LINE 10' 6", F09800F00



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|-----------|------------------------|
| 0 | 1 | F09800F00 | IJS TUNNEL LINE 10' 6" |
| 1* | 1 | 009808P00 | CAP, Female |
| 2* | 1 | P0085-113 | ORING |
| 3* | 1 | 005134P00 | COUPLER, Male |
| 4* | 1 | 005135P00 | COUPLER |
| 5* | 1 | 009812P01 | COUPLER, High Pressure |
| 6 | 1 | 009806P00 | PIPE |
| 7* | 1 | 009809P00 | COUPLER, Female |
| 8* | 1 | 007085P00 | PLUG, Coupler |
| 9* | 1 | 009811P01 | CAP, Male |

* Included in IJS Coupler Assembly, 005133A02. Refer to this section for parts information.

TEE CONNECTOR, F09804F00



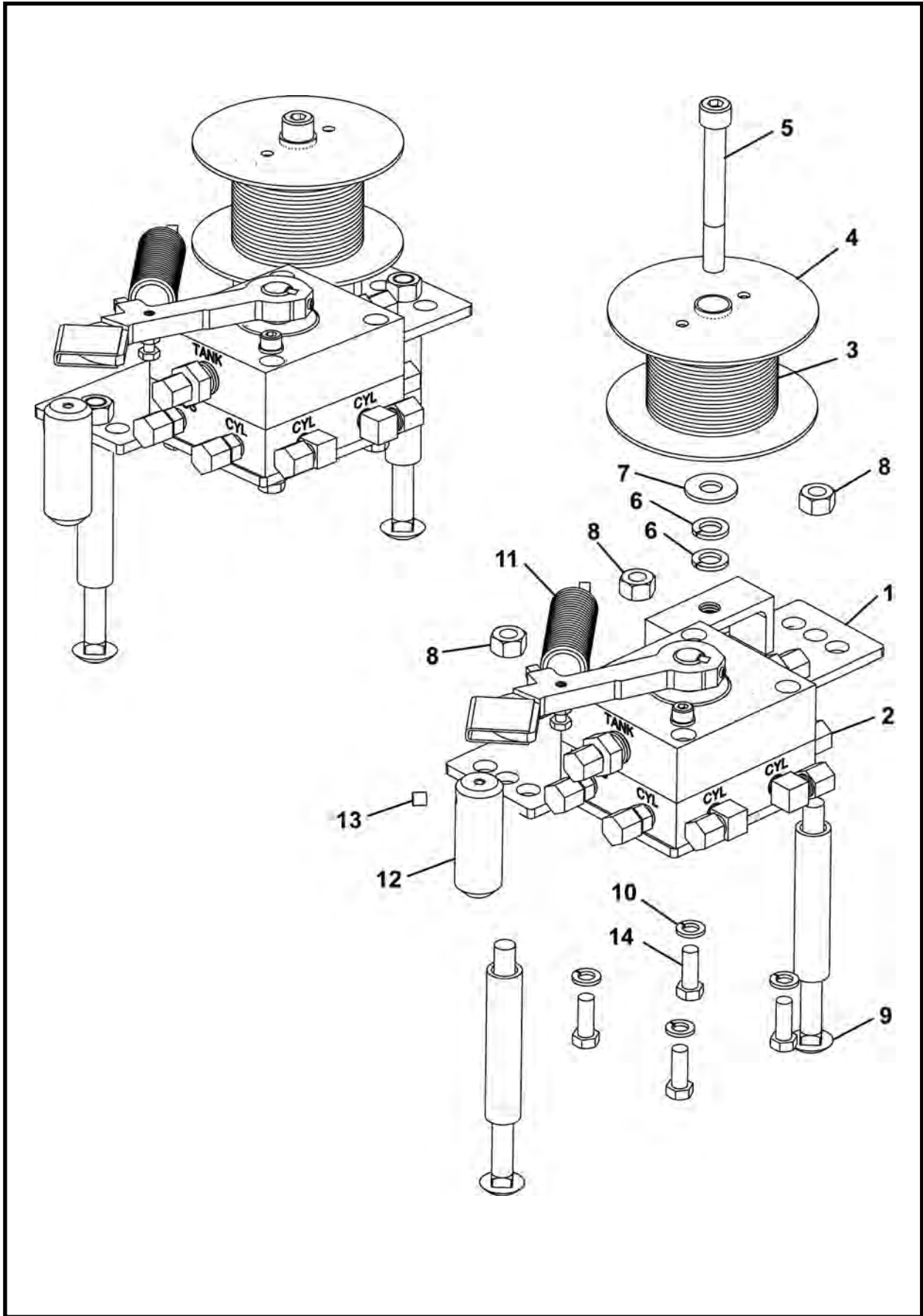
| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|-----------|----------------------|
| 0 | 1 | F09804F00 | TEE CONNECTOR |
| 1* | 1 | 009808P00 | CAP, Female |
| 2* | 1 | P0085-113 | ORING |
| 3* | 1 | 005134P00 | COUPLER, Male |
| 4* | 1 | 005135P00 | COUPLER, 1/2 |
| 5 | 1 | P0300-126 | CAP, 06FJ |
| 6 | 1 | P0300-125 | FITTING, 06MJ-04MP90 |
| 7 | 1 | 009810P00 | COUPLER, Female |
| 8* | 1 | 007085P00 | PLUG, Coupler Cap |
| 9* | 1 | 009811P01 | CAP, Male |

NOTE: Two connectors required per jack station.

* Included in IJS Coupler Assembly, 005133A02. Refer to this section for parts information.

NOTES

IJS VALVE (With Cable), F04908F01

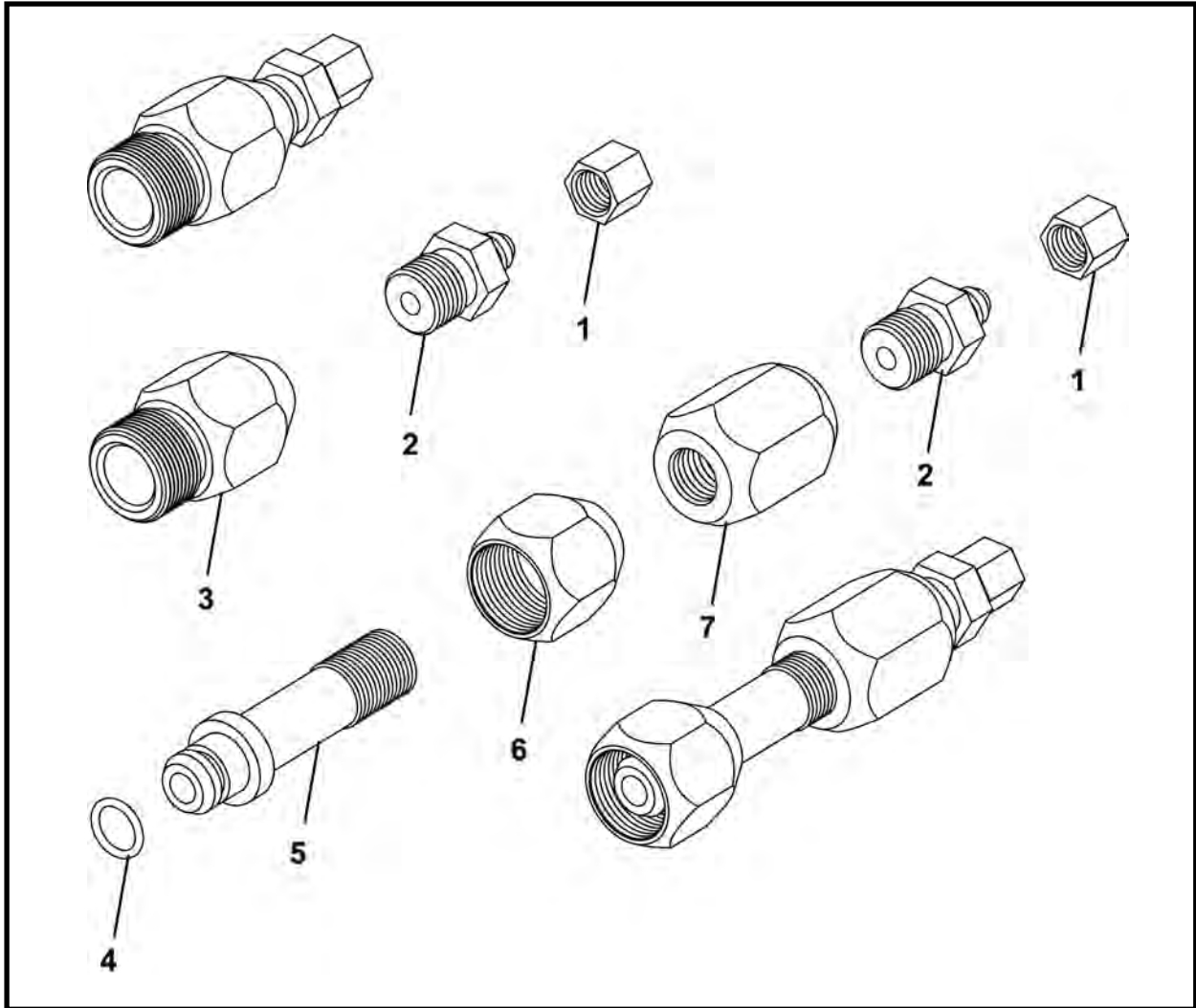


IJS VALVE (With Cable), F04908F01

| ITEM | QTY | PART NO. | DESCRIPTION |
|------|---------|--------------|------------------------------------|
| 0 | 1 | F04908F01 | IJS VALVE (With Cable) |
| 1 | 1 | 005764A00 | PLATE ASSEMBLY |
| 2 | 1 | 004725A00 | VALVE |
| 3 | 7200 LI | P0075-001 | CABLE |
| 4 | 1 | 002373A00 | SPOOL ASSEMBLY |
| 5 | 1 | P0031-08-016 | SCREW, Socket Head Cap 1/2 UNC x 4 |
| 6 | 2 | P0043-008 | WASHER, Spring 1/2 |
| 7 | 1 | P0040-008 | WASHER, Hardened Flat 1/2 |
| 8 | 3 | P0003-08-000 | NUT, 1/2 UNC |
| 9 | 2 | P0026-011 | BOLT, Carriage 1/2 x 6.5 |
| 10 | 4 | P0045-006 | WASHER, Lock 3/8 |
| 11 | 1 | P0070-031 | SPRING |
| 12 | 1 | 001335P00 | WEIGHT, Valve |
| 13 | 1 | P0033-05-004 | SCREW, Socket Set 5/16 x .25 |
| 14 | 4 | P0001-06-004 | BOLT, Hex 3/8 UNC x 1 |

LI - Linear Inch

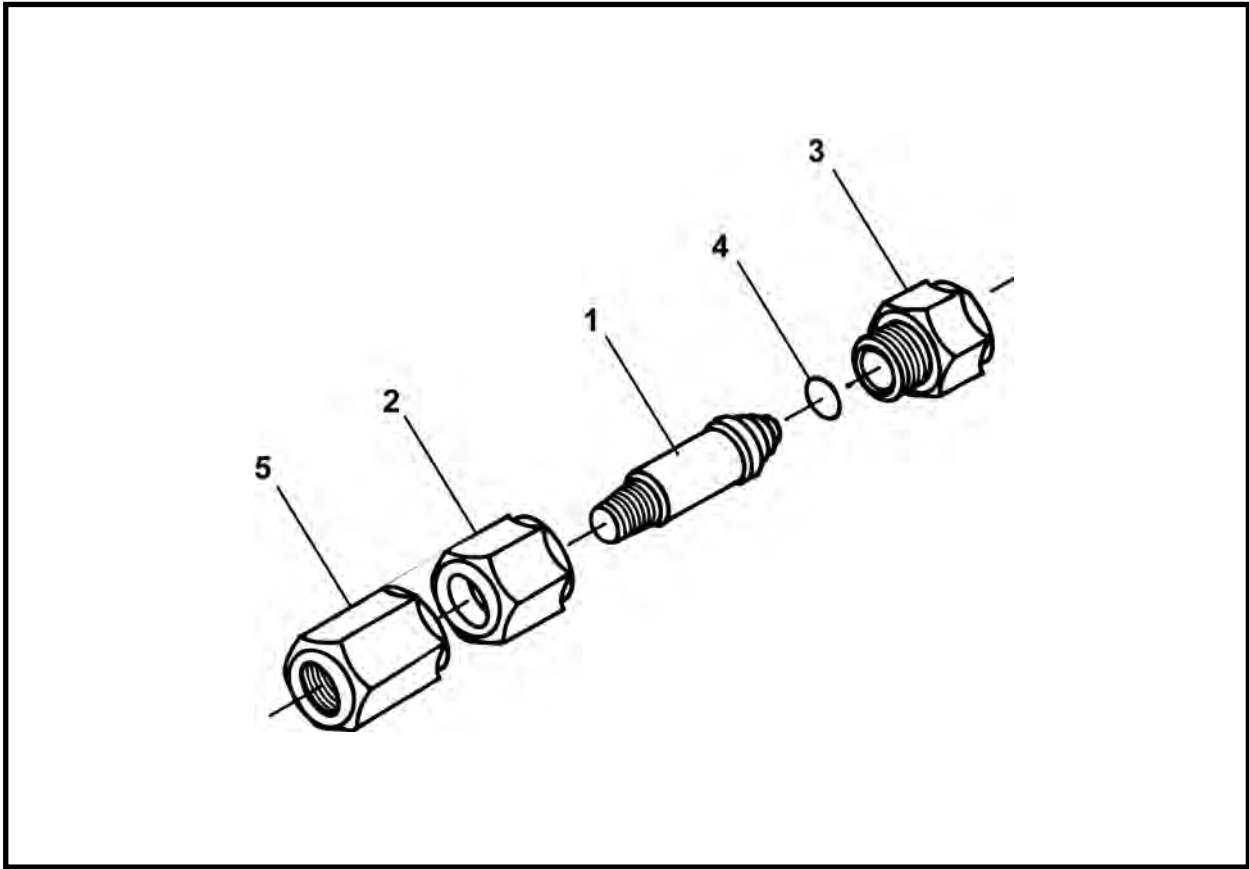
IJS STARTER CONNECTION, F09805F00



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|-----------|------------------------|
| 0 | 1 | F09805F00 | STARTER CONNECTION |
| 1 | 2 | P0300-126 | CAP, 06FJ |
| 2 | 2 | P0300-120 | FITTING, 06MJ-08MP |
| 3* | 1 | 009809P00 | COUPLER, Female |
| 4* | 1 | P0085-113 | ORING |
| 5* | 1 | 005134P00 | COUPLER, Male |
| 6* | 1 | 005135P00 | COUPLER |
| 7* | 1 | 009812P01 | COUPLER, High Pressure |

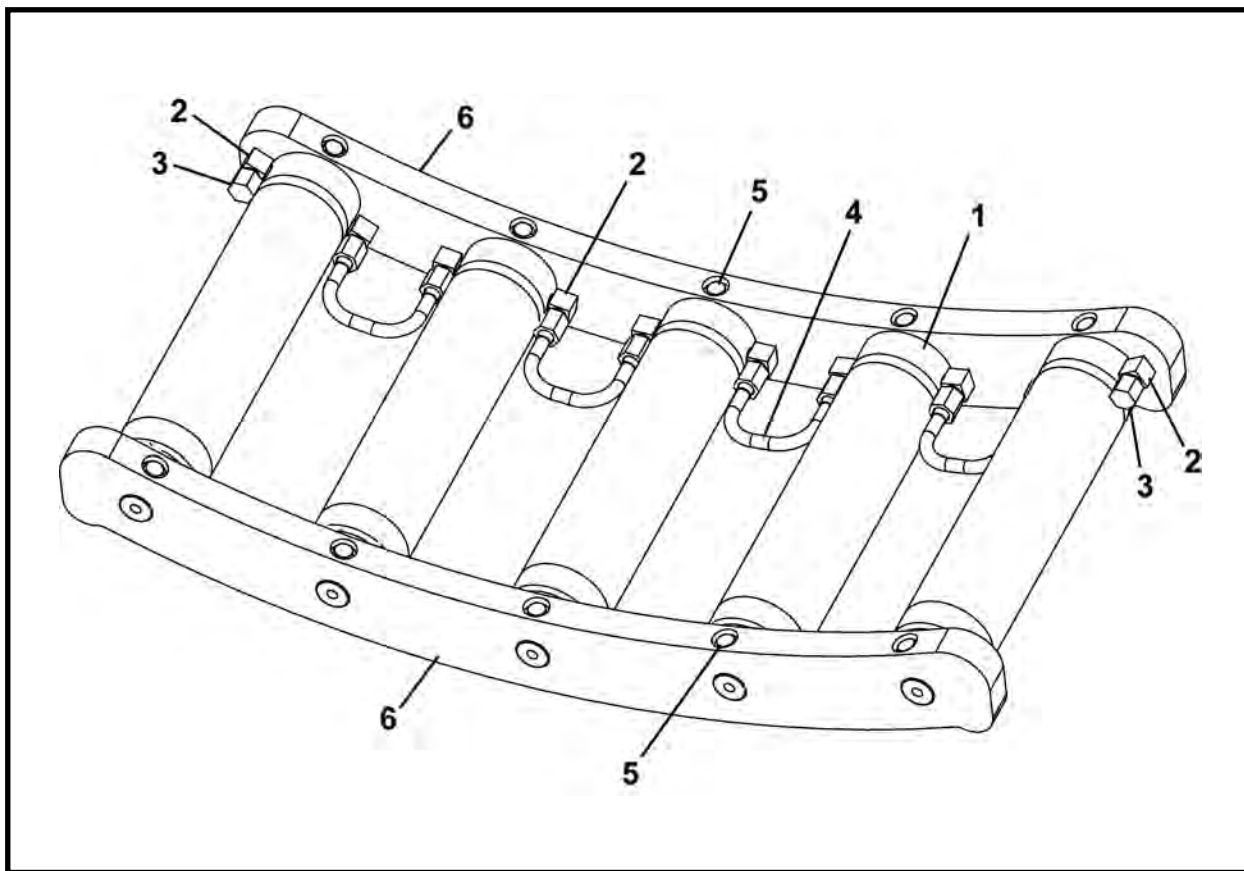
* Included in IJS Coupler Assembly, 005133A02. Refer to this section for parts information.

IJS COUPLER ASSEMBLY, 005133A02



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|-----------|------------------------|
| 0 | 1 | 005133A02 | IJS COUPLER ASSEMBLY |
| 1 | 1 | 005134P00 | COUPLER, Male |
| 2 | 1 | 005135P00 | COUPLER |
| 3 | 1 | 009809P00 | COUPLER, Female |
| 4 | 1 | P0085-113 | ORING |
| 5 | 1 | 009812P01 | COUPLER, High Pressure |
| 6 | 1 | 009808P00 | CAP, Female |
| 7 | 1 | 007085P00 | PLUG, Coupler |
| 8 | 1 | 009811P01 | CAP, Male |

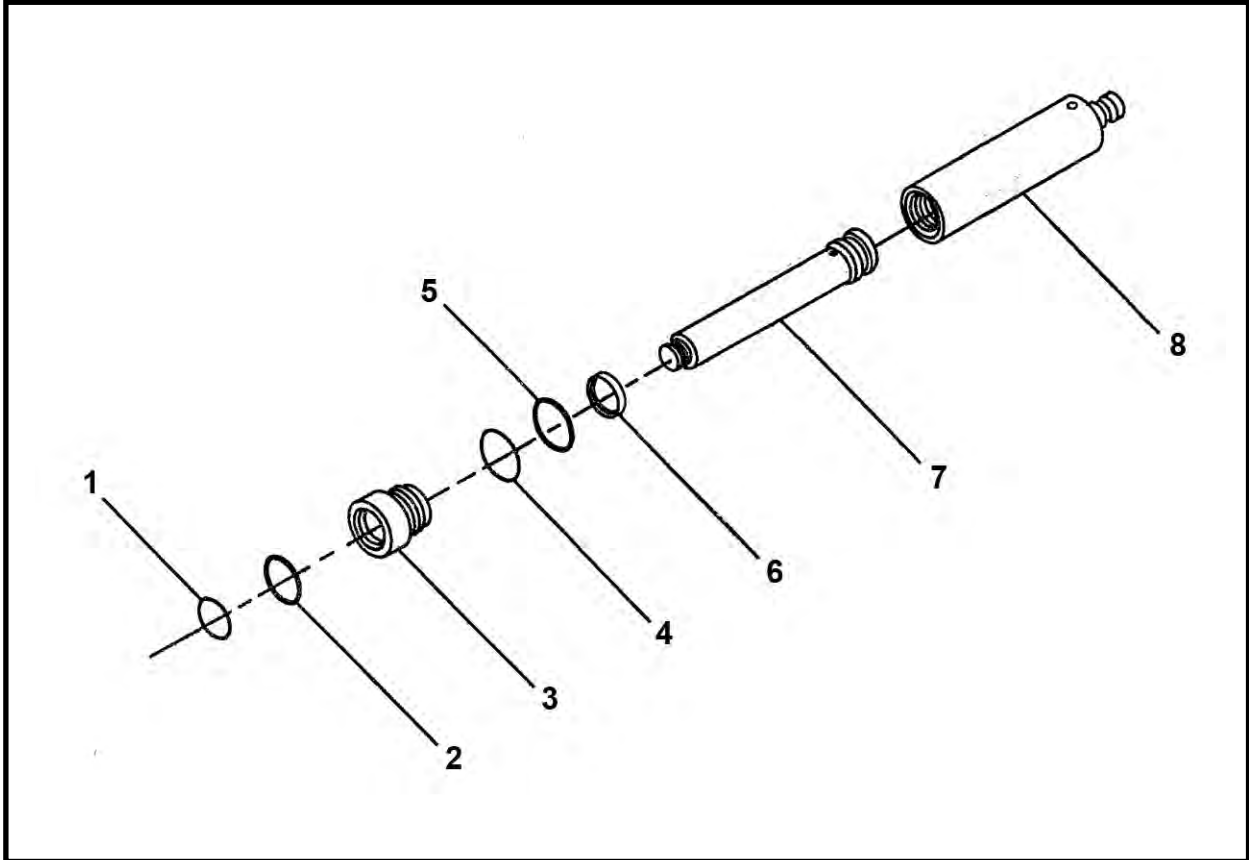
IJS SEGMENT ASSEMBLY



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|--------------|----------------------------|
| 0.1 | 1 | 007300A00 | IJS SEGMENT ASSEMBLY - 480 |
| 0.2 | 1 | 007301A00 | IJS SEGMENT ASSEMBLY - 540 |
| 1* | 5 | F03531F02 | CYLINDER, IJS |
| 2 | 10 | P0300-125 | FITTING, 04MP-06MJ |
| 3 | 2 | P0300-126 | CAP |
| 4 | 4 | 001907A00 | TUBE |
| 5 | 10 | P0001-05-003 | BOLT, 5/16 UNC x .75 |
| 6.1 | 2 | F01390F00 | END IRONS, Plate - 480 |
| 6.2 | 2 | F07297F00 | END IRONS, Plate - 540 |

* Refer to this section for parts information.

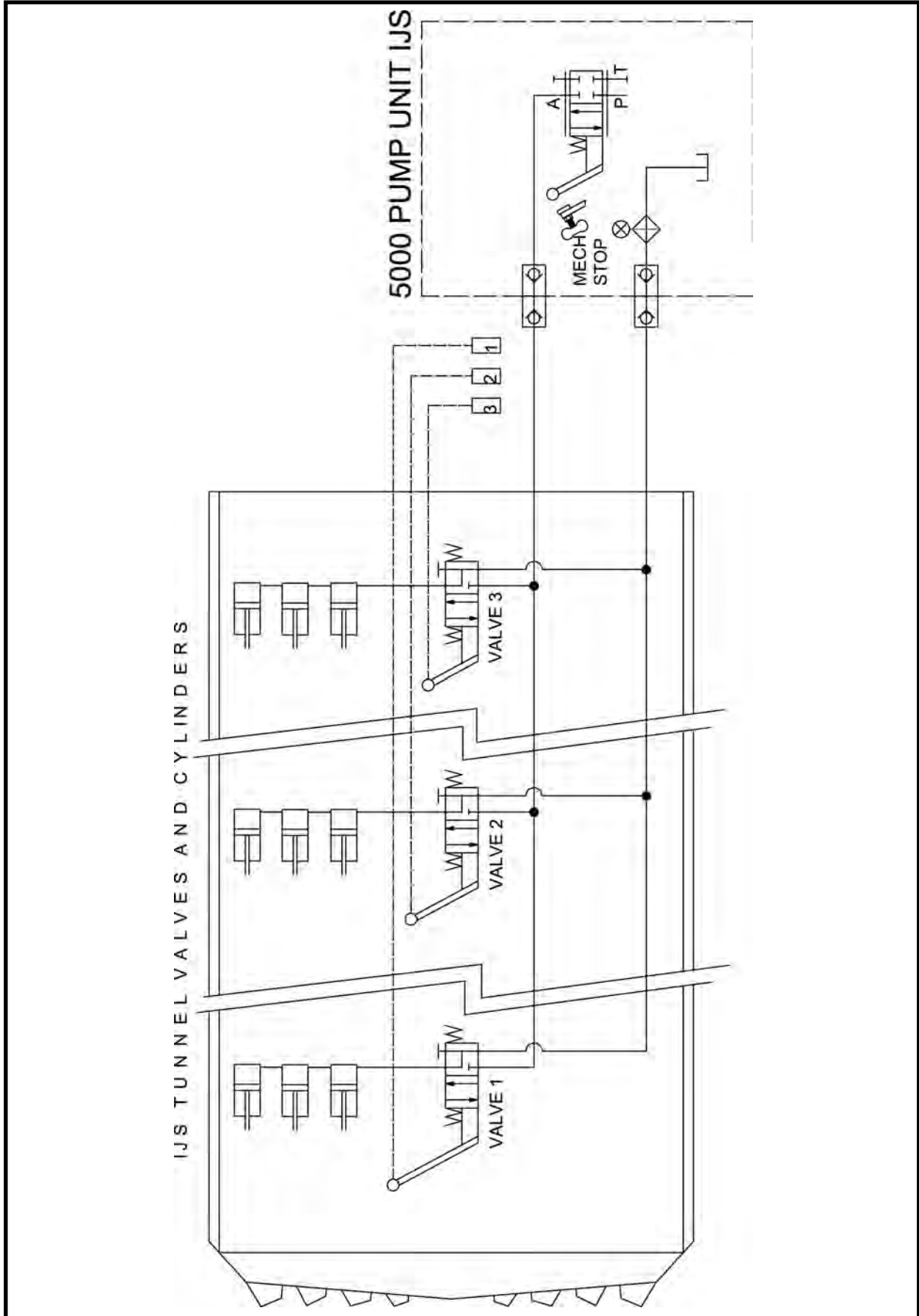
IJS CYLINDER, F03531F02



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|-----------|---------------|
| 0 | 1 | F03531F02 | CYLINDER, IJS |
| 1* | 1 | P0087-001 | WIPER |
| 2* | 1 | P0086-003 | POLYSEAL |
| 3 | 1 | 003095P02 | CAP, End |
| 4* | 1 | P0084-139 | RING, Back-Up |
| 5* | 1 | P0085-139 | ORING |
| 6* | 1 | P0088-002 | RING, Wear |
| 7 | 1 | 003348P02 | SHAFT |
| 8 | 1 | 003364A01 | BARREL |
| 9 | REF | 007344A00 | KIT, Seal |

* Included in item 9, 007344A00 Seal Kit.

INTERMEDIATE JACKING STATION HYDRAULIC SCHEMATIC





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