



# **PARTS MANUAL**

## **Tunnel Boring Machine D Series**

**48SC-D - 420D - 480D**

**S/N: F32300F - F32140F - F32348F**

**Publication No. 050173A**

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# Introduction

This parts manual contains assembly illustrations of the Akkerman D Series 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](http://www.akkerman.com).

The TBM consists of the boring head, cutter head attachment (dirt bar, quad carbide head, mixed ground disc cutter or closed face), conveyor, and target laser stand. Tunnel Boring Machines are articulated and can be steered hydraulically in any direction. The TBM has powerful hydraulic motors which rotate an bearing/inner drum. The cutter head or closed face attachment is connected to the drum. As it rotates, the teeth excavate the face and the spoils fall into the drum. Scoops and paddles in the drum dump the spoils onto a conveyor which carries the material to the dirt bucket. Once the dirt bucket is full, the dirt bucket is removed from the pipeline via a haul nit to the unloading area in the launch shaft where the dirt bucket is hoisted out of the shaft and unloaded. 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, 55918.

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



**Akkerman Tunnel Boring Machine 420D**

## **NOTES**



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**NOTES**

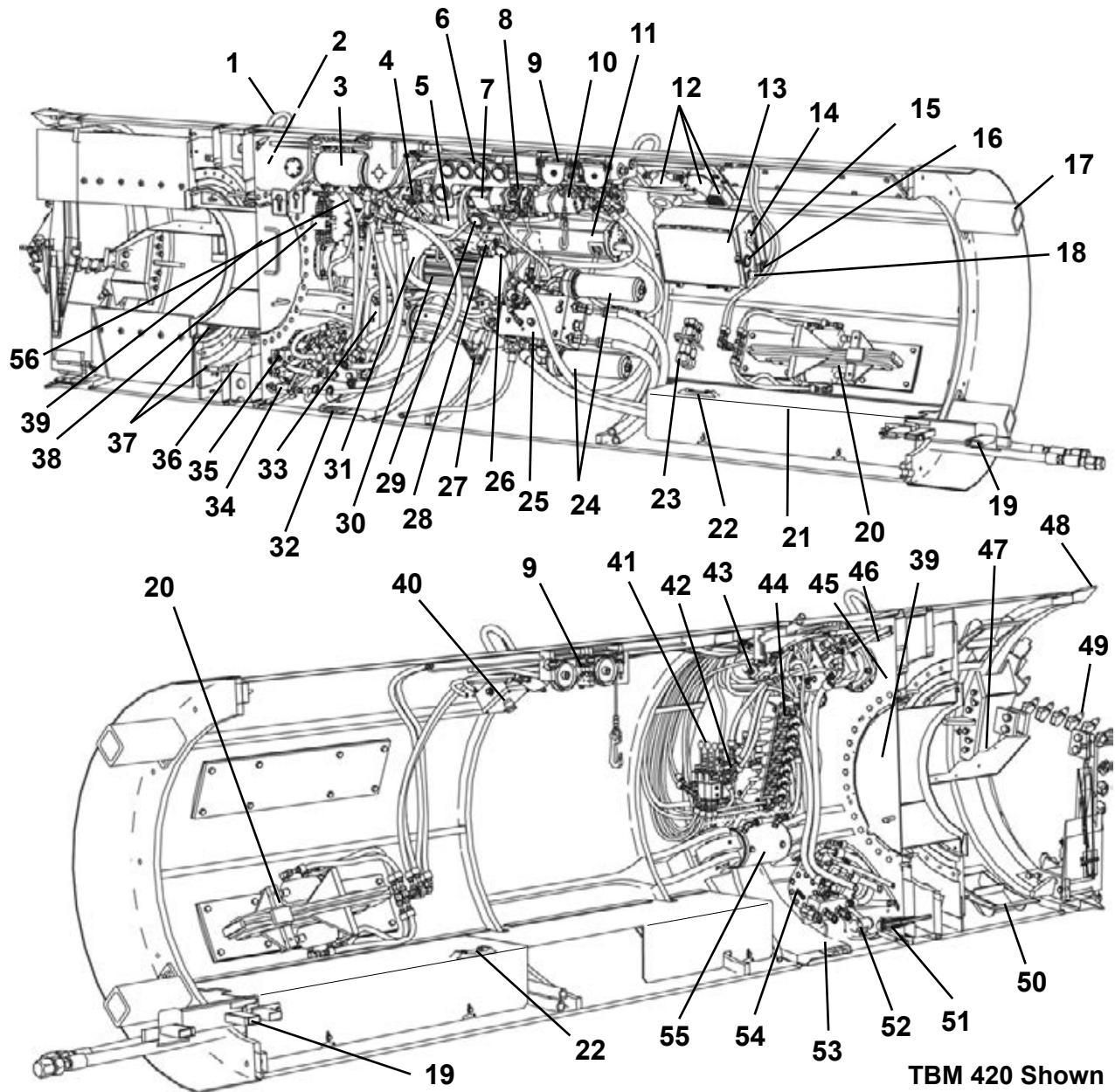


# General Information

## Terminology

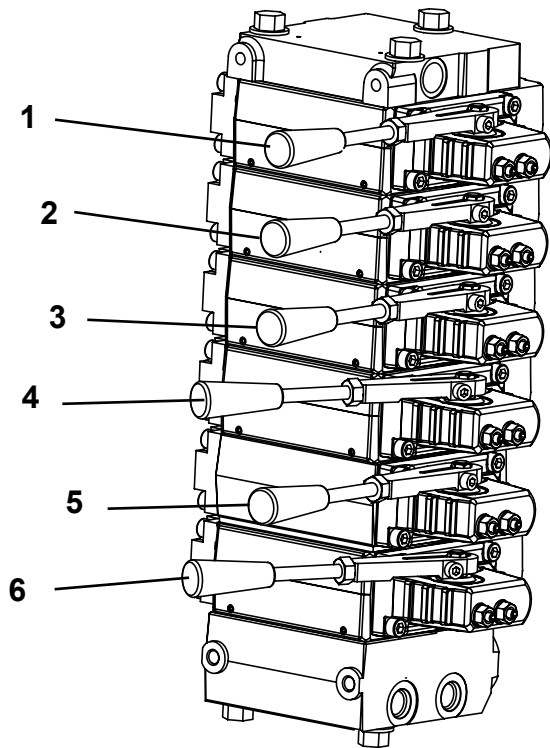
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## TUNNEL BORING MACHINE - 48SC-D - 420D - 480D

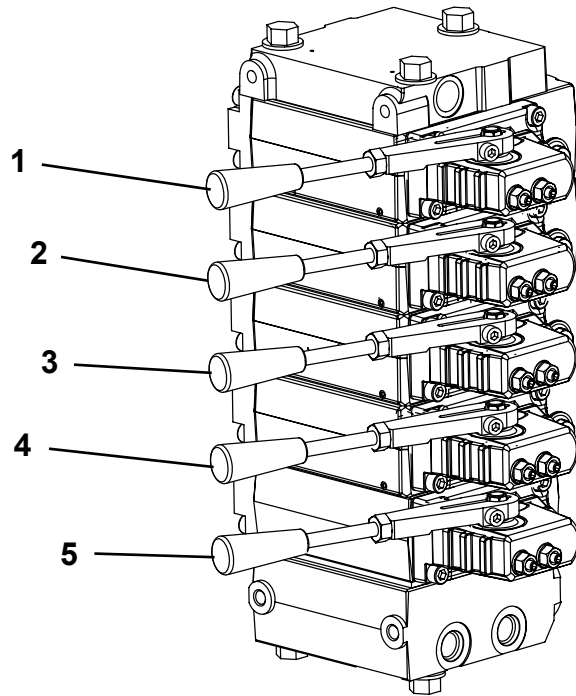


- |  |                                      |   |
|--|--------------------------------------|---|
| 1. Lift Eye  | 19. Haul Unit Track Adapter          | 38. Bearing Seal Grease Manifold        |
| 2. Bearing Cavity Oil Fill Port                    | 20. Dirt Wing/Torque Wing            | 39. Bulkhead Door                       |
| 3. Steering Cylinders (Top)                        | 21. Floor Assembly                   | 40. Emergency Stop                      |
| 4. Boring Head Control Manifold                    | 22. Haul Unit Stop                   | 41. Conveyor-Jack Can-BH Control        |
| 5. Bearing Oil Lube Filter                         | 23. Low Pressure Adapters            | 42. Steering Pressure Relief Valve      |
| 6. System-Steering Cyl.-Boring Hd. Pressure Gauges | 24. Pressure Filters                 | 43. Two Speed Motor Control             |
| 7. Gear Reducer/Gear Box                           | 25. Unloading Compensator Block      | 44. TBM Control Valve                   |
| 8. Lube/Grease Hydraulic Motor                     | 26. Boring Grease Pressure Gauge     | 45. Boring Head Cavity Sight Gauge      |
| 9. Conveyor Lift Assembly                          | 27. Conveyor Safety Switch           | 46. Boring Head Cavity Vent             |
| 10. Bearing Lube Pump                              | 28. Seal Grease Pump                 | 47. Dirt Paddles                        |
| 11. Seal Grease Reservoir                          | 29. Boring Lube Pressure Gauge       | 48. Cutter Ring                         |
| 12. Gas Detector Horn & Strobe                     | 30. Scavenging Pump                  | 49. Cutter Head & Teeth                 |
| 13. Electrical Control Box                         | 31. Scavenging Pump Reservoir        | 50. Dirt Scoop                          |
| 14. Main Power Switch                              | 32. Steering Joint Seals             | 51. Bearing Oil Magnetic Rod            |
| 15. Hourmeter                                      | 33. Steering Cylinders (Right)       | 52. Bearing Oil Drain Valve Fitting     |
| 16. 480V Incoming Power Connection                 | 34. Bearing Oil Cavity Shutoff Valve | 53. Steering Joint Grease Fitting       |
| 17. Push Block                                     | 35. Bearing Lube Manifold            | 54. Drive Motor                         |
| 18. Tunnel Power Phase OK Light                    | 36. Bearing                          | 55. Steering Cylinders (Left)           |
|  | 37. Bearing Seals                    | 56. Single/Dual Feed Hyd Supply Control |

## TBM CONTROL VALVES



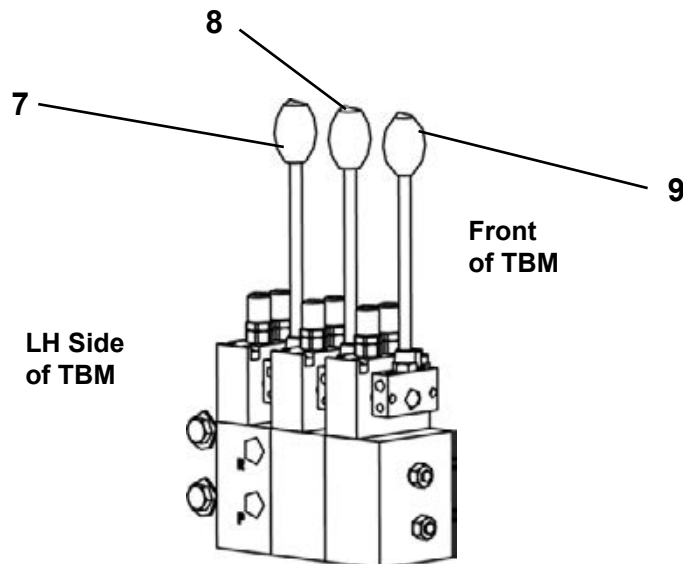
**420D & 480D**



**48DC-D**

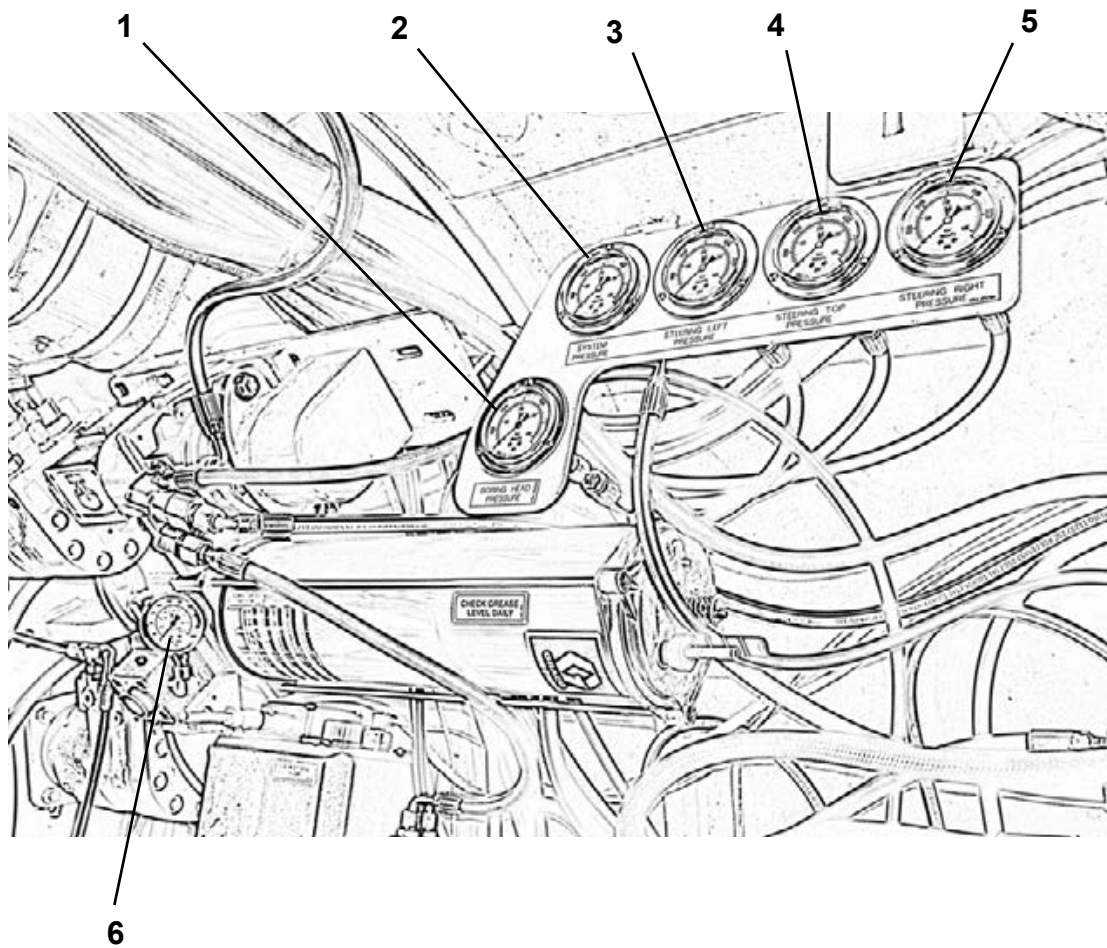
- 1. Closed Face or Auxiliary
- 2. Steering - Left
- 3. Steering - Top

- 4. Steering - Right
- 5. Conveyor Lift
- 6. Dirt Wings (Used on 420D/480D Only)



- 7. Conveyor Drive
- 8. Jacking Can Cylinders
- 9. Boring Head Control

## TBM PRESSURE GAUGES

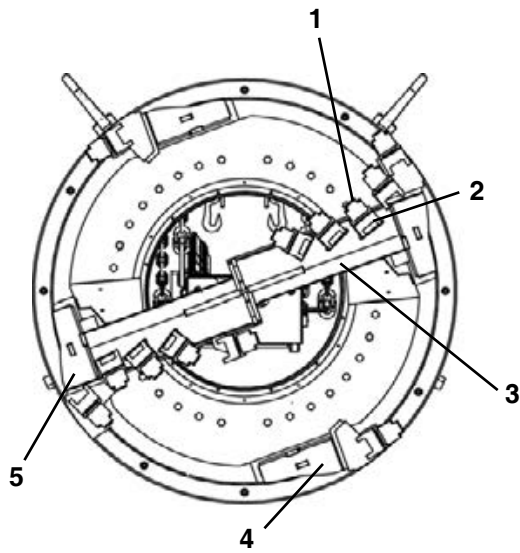


- 1. Boring Head Pressure
- 2. System Pressure
- 3. Steering Cylinder Pressure - Left

- 4. Steering Cylinder Pressure - Top
- 5. Steering Cylinder Pressure - Right
- 6. Boring Grease Pressure

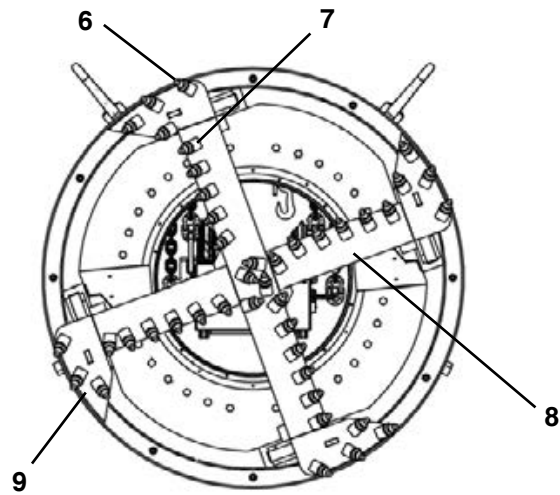
## CUTTER HEAD ATTACHMENTS

**Dirt Bar Cutter Head**

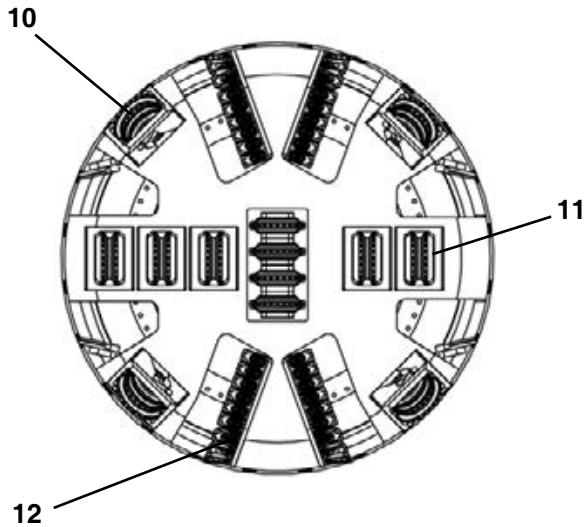


- 1. Cutter Tooth
- 2. Tooth Pocket
- 3. Dirt Cutter Bar
- 4. Gauge Cutter Mount
- 5. Cutter Bar Mount

**Carbide Quad Bar Cutter Head**

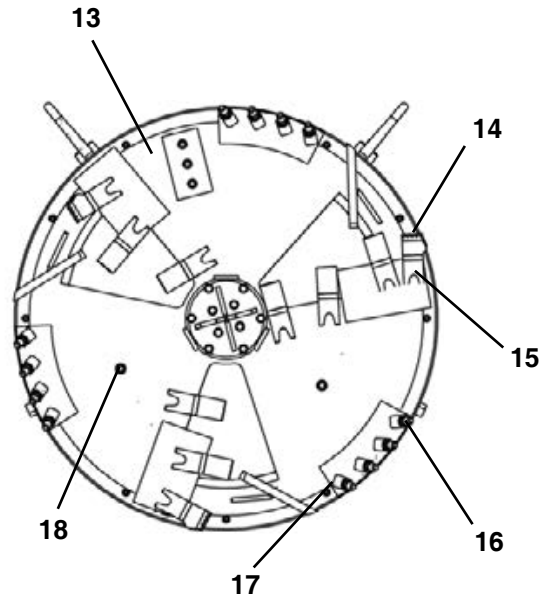


- 6. Carbide Tooth
- 7. Tooth Holder
- 8. Quad Cutter Bar
- 9. Quad Bar Mount



**Mixed Ground Disc Cutter Head**

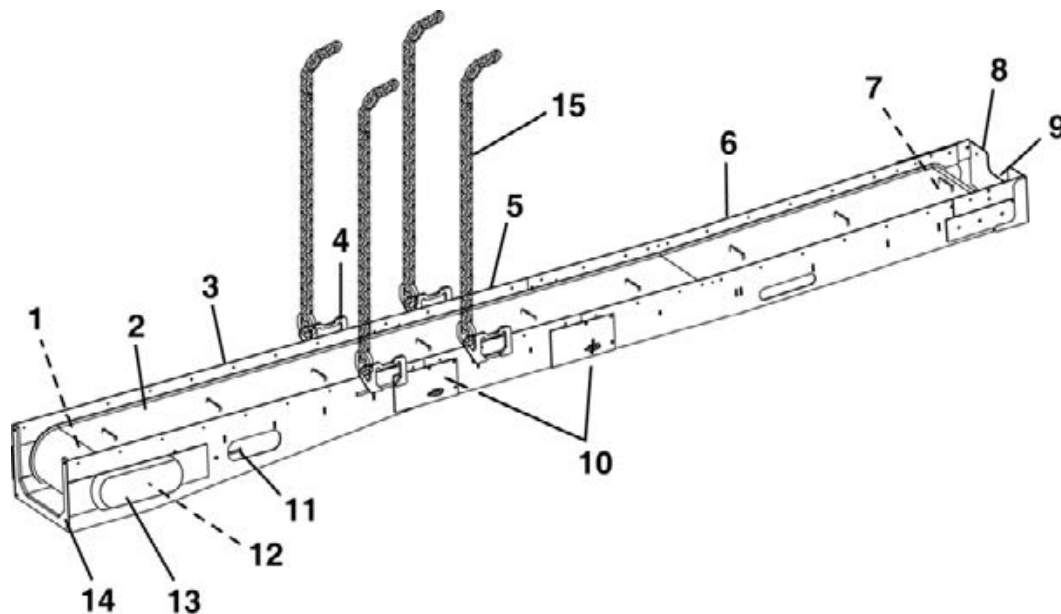
- 10. Triple Disc Cutter
- 11. Twin Disc Cutter
- 12. Face Scrapers



**Closed Face Cutter Head**

- 13. Closed Face
- 14. Cutter Tooth
- 15. Tooth Pocket
- 16. Carbide Tooth
- 17. Tooth Holder
- 18. Water/Lubrication Ports

## CONVEYOR - BELT

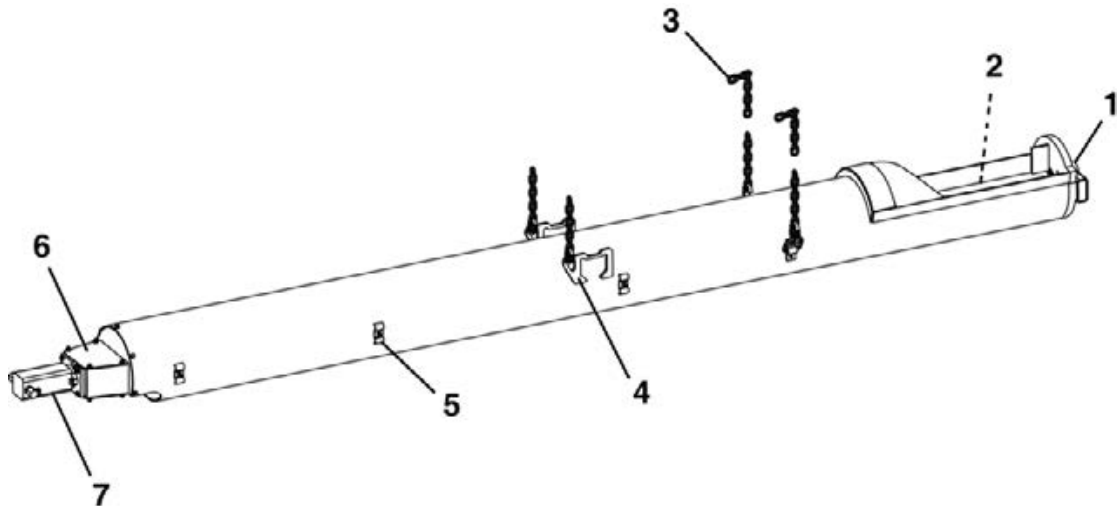


- 1. Drive Motor Frame Assembly
- 2. Belting
- 3. Drive Frame Assembly
- 4. Lift Bracket
- 5. Extension Frame Assembly

- 6. Feed Frame Assembly
- 7. Front Roller Assembly
- 8. Dirt Guard
- 9. Carrier Bearing
- 10. Idler Roller

- 11. Belt Tensioning Screw
- 12. Drive Motor & Roller Assembly
- 13. Conveyor Chain Cover
- 14. Drive Frame Free End Support
- 15. Safety Chain

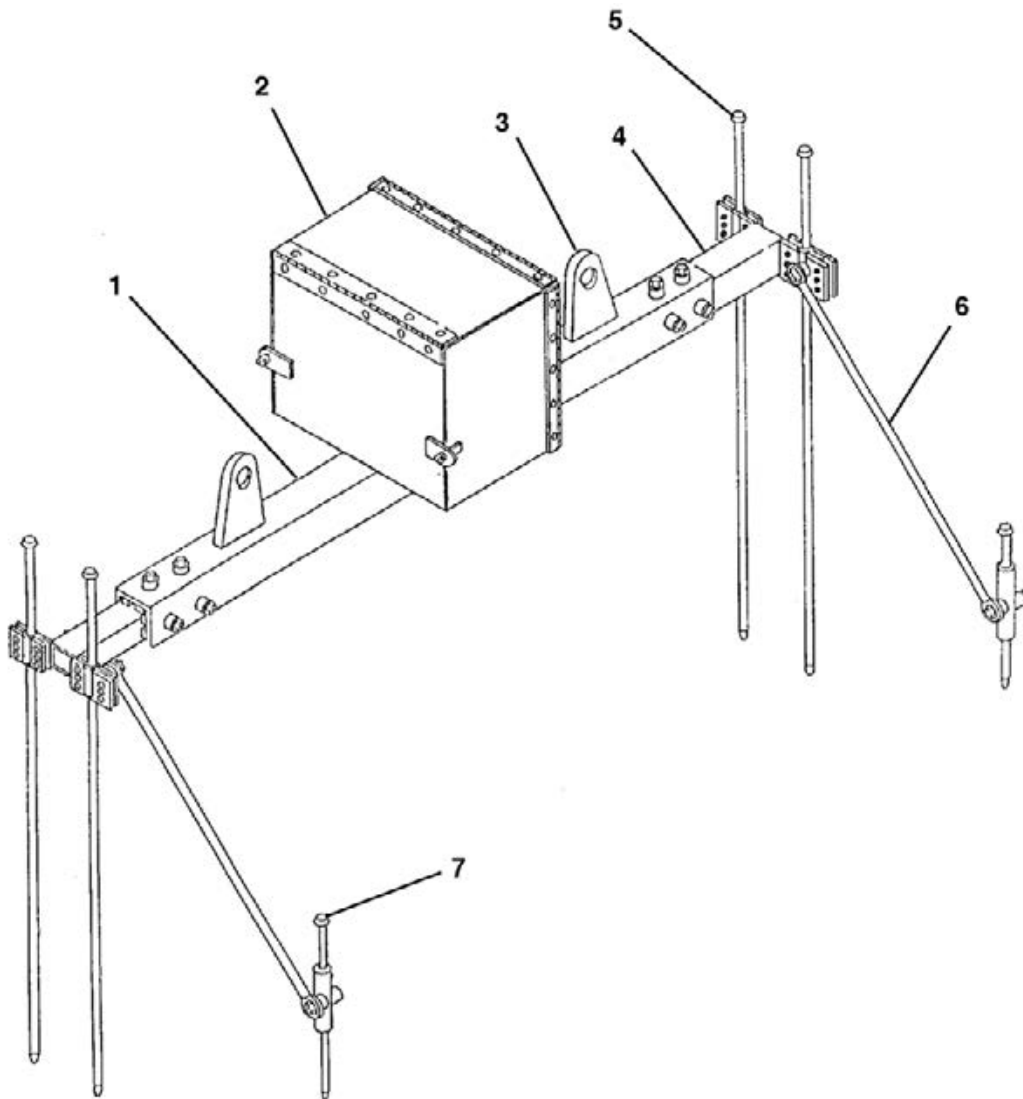
## CONVEYOR - SCREW



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

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

## LASER LIGHT STAND (VERSION 1)

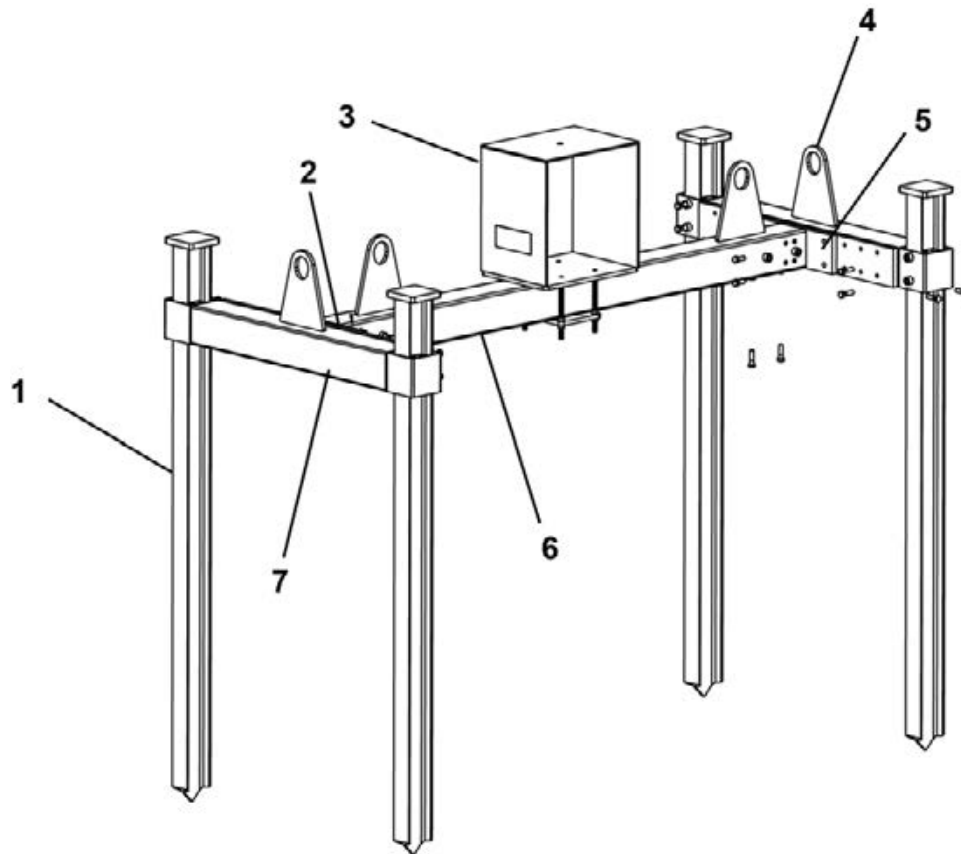


- 1. Adjustable Frame
- 2. Laser Box Assembly
- 3. Lift Bracket
- 4. Sliding Tube

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

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## LASER LIGHT STAND (VERSION 2)



- 1. Laser Stand Leg
- 2. Right Adjustable Support
- 3. Laser Box Assembly
- 4. Lift Eye Bracket

- 5. Left Adjustable Support
- 6. Adjustable Frame
- 7. Side Support

## **NOTES**



## Decals

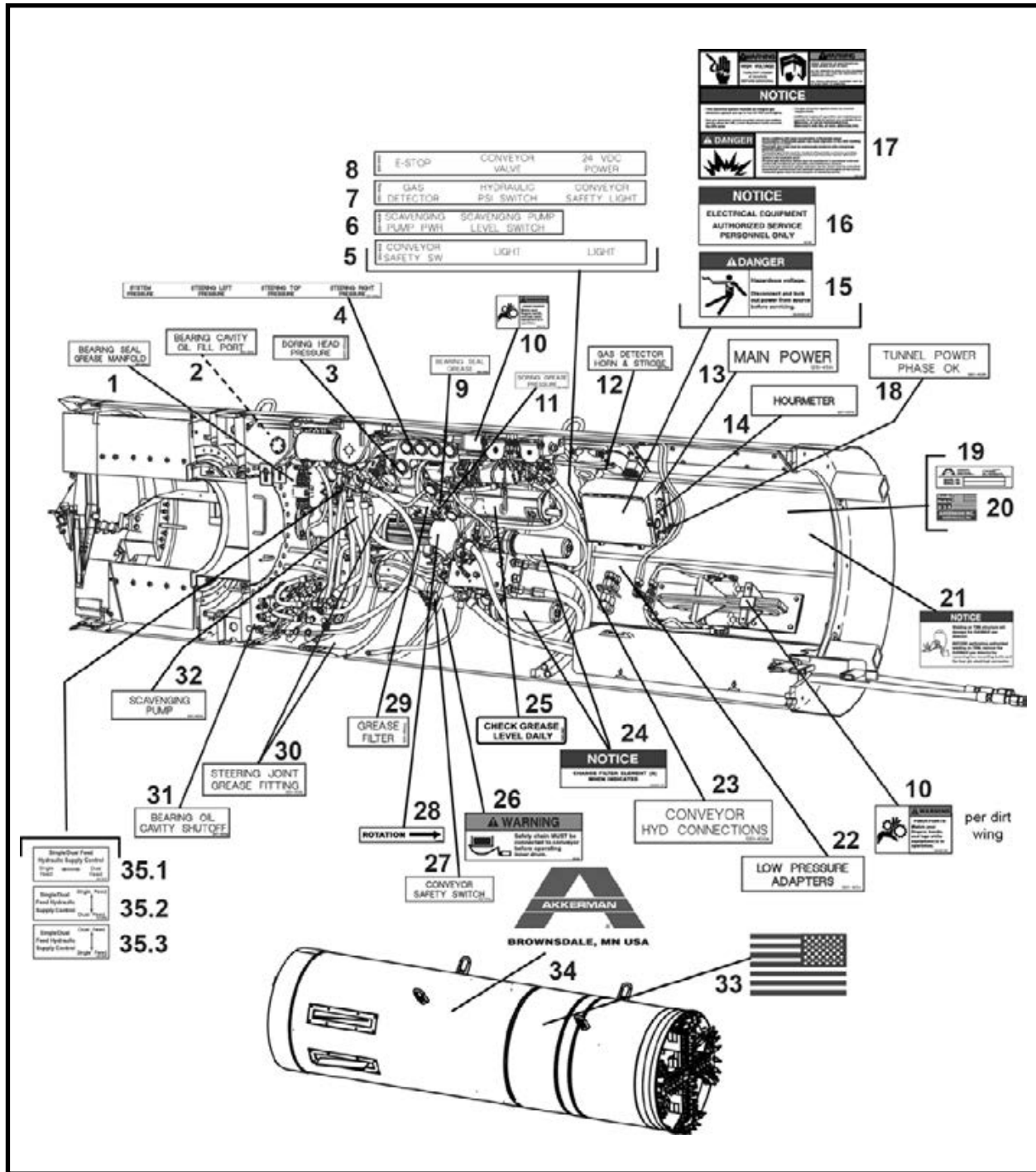
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**TUNNEL BORING MACHINE DECALS - LEFT SIDE, 1255-102**  
**TBM D Series: 48SC-D - 420D - 480D**

ITEM	QTY	PART NO.	DESCRIPTION
1	1	1251-320	DECAL, Notice, Welding Gas Detector Damage
2	1	1250-532A	DECAL, Warning, Conveyor Swing
3	1	1250-581	DECAL, Methane Warning System
4	1	1250-385	DECAL, Danger, Hazardous Voltage
5	1	P0310-474F	DECAL, Emergency Stop
6	1	1251-450AN	DECAL, Conveyor Control
7	1	1251-450AO	DECAL, Jack Can Cylinder Control
8	1	1251-450AP	DECAL, Boring Head Control
9	1	1250-859	DECAL, TBM Warning Notice
10	1	1251-450AA	DECAL, Steer PSI Relief Valve
11	1	1251-450AB2	DECAL, Motor Speed Control
12	1	1251-450AJ	DECAL, Dirt Wing Control
13	1	1251-450AI	DECAL, Conveyor Lift Control
14	1	1251-450AH	DECAL, Steering-Left Control
15	1	1251-450AG	DECAL, Steering-Right Control
16	1	1251-450AF	DECAL, Steering-Top Control
17	1	1251-450AE	DECAL, Closed Face Control
18	1	1251-450N	DECAL, Bearing Cavity Oil Level
19	1	1251-450Q	DECAL, Bearing Cavity Oil Vent
20	1	1251-448	DECAL, Closed Face Level Bar
21	1	1251-447	DECAL, Dirt/Carbide Bar Level Bar
22	1	1251-450B	DECAL, Steering Joint Grease Fitting
23	1	1251-450AS	DECAL, Bearing Cavity Magnet
24	3	1250-480	DECAL, Warning Pinch Points
25	1	1251-450AV	DECAL, Steer Retract Relief Valve
26	1	1252-063	DECAL, TBM Feed Rates
27	5	1250-562	DECAL, Warning, Pinch Points
28	1	1252-004	DECAL, Akkerman XX-Large
29	1	1250-560	DECAL, USA Flag, Large - Left
30	1	1251-419	DECAL, Motor Numbers

**TUNNEL BORING MACHINE DECALS - RIGHT SIDE, 1255-102**  
**TBM D Series: 48SC-D - 420D - 480D**

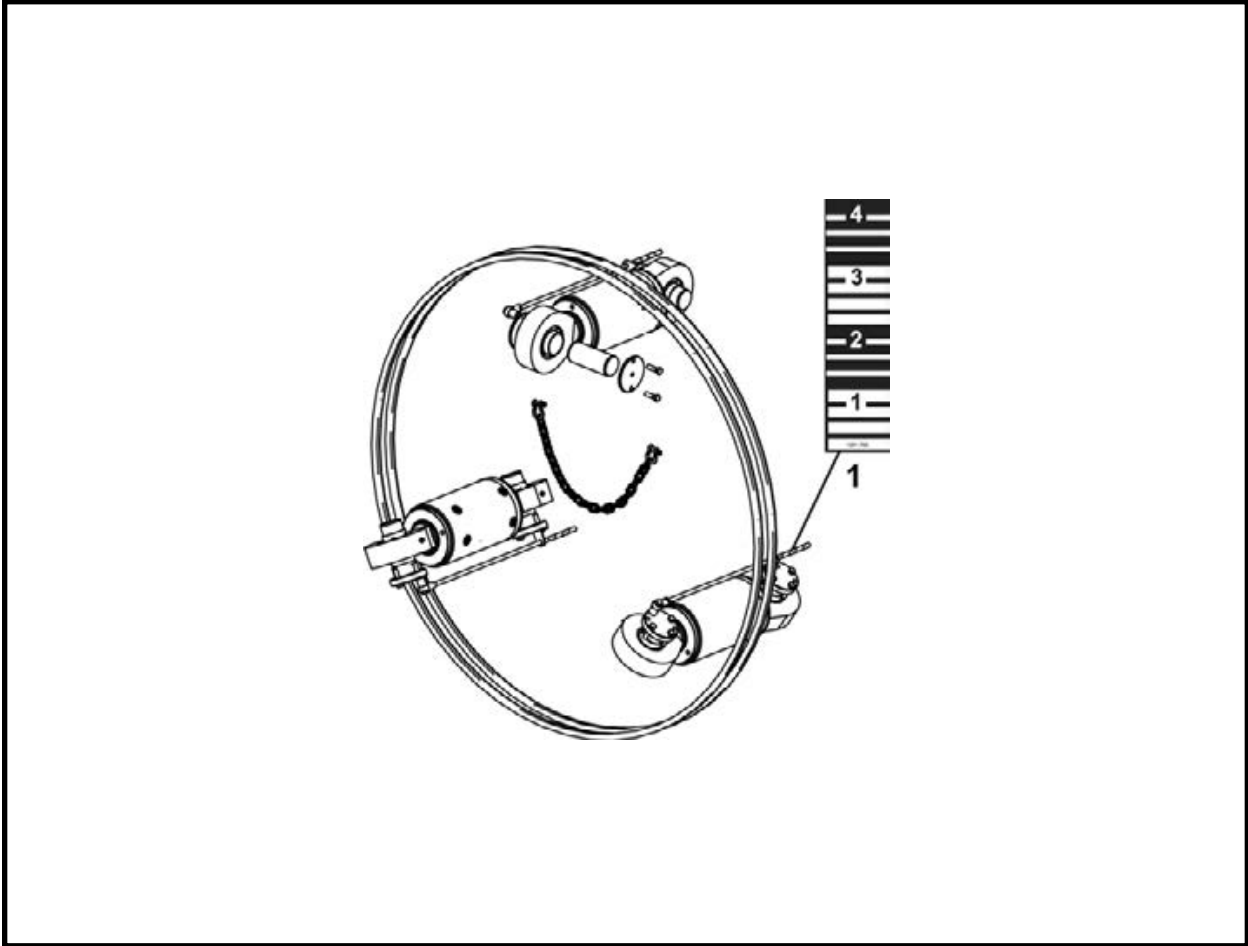


ITEM	QTY	PART NO.	DESCRIPTION
1	1	1251-450H	DECAL, Bearing Seal Grease Manifold
2	1	1251-450O	DECAL, Bearing Cavity Oil Fill Port
3	1	1251-450AD	DECAL, Boring Head Pressure
4	1	1251-450AC	DECAL, System-Steering Pressure
5	1	1251-443I	DECAL, Conveyor Safety Switch-Light-Light
6	1	1251-443H	DECAL, Scavenging Pump Pwr-Scavenging Pump Level Switch
7	1	1251-443G	DECAL, Gas Detector-Hydraulic PSI-Conveyor Safety Light
8	1	1251-443F	DECAL, E-Stop-Conveyor Valve-24 VDC Power

**TUNNEL BORING MACHINE DECALS - RIGHT SIDE, 1255-102**  
**TBM D Series: 48SC-D - 420D - 480D**

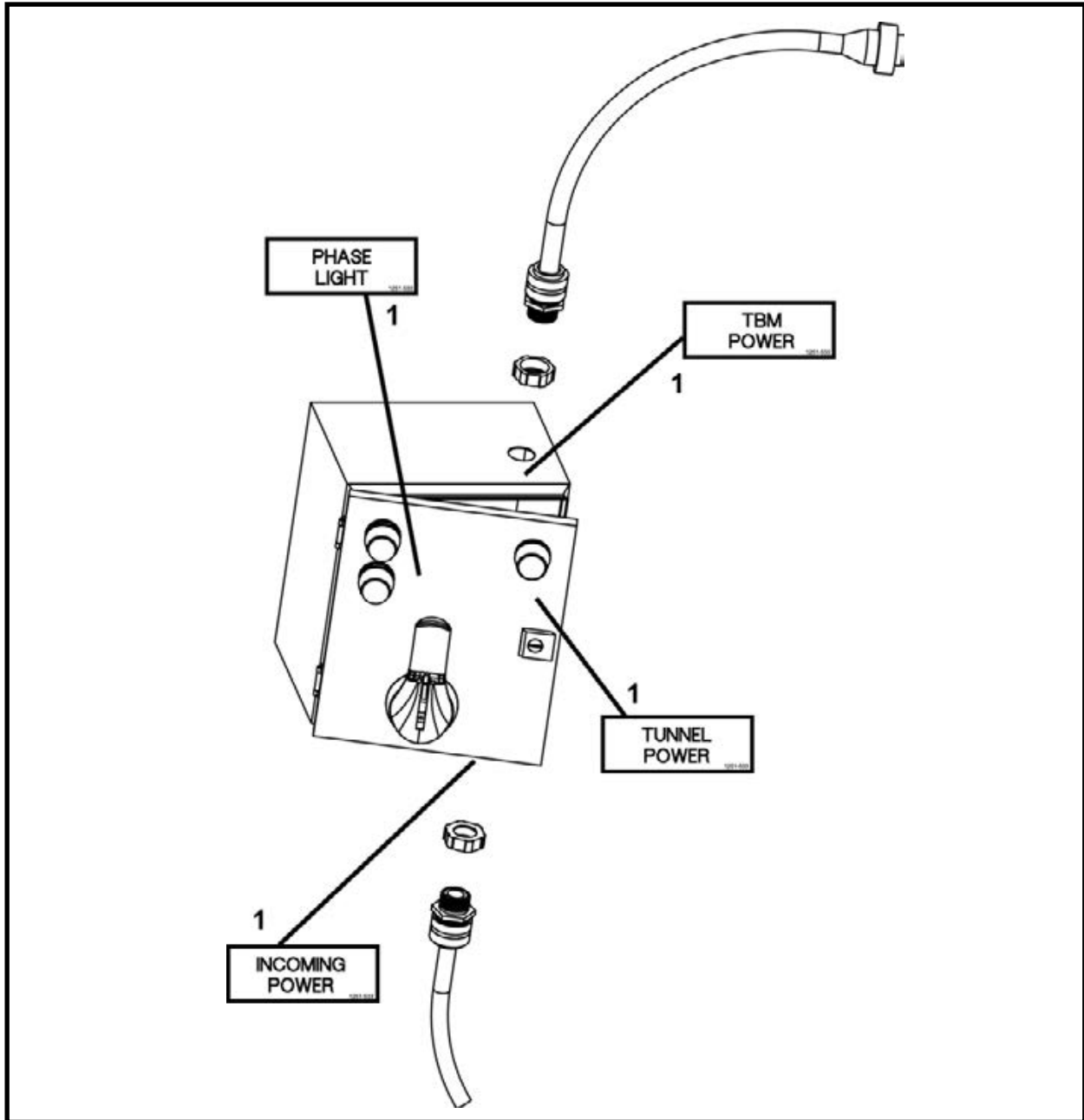
ITEM	QTY	PART NO.	DESCRIPTION
9	1	1251-450AR	DECAL, Bearing Seal Grease
10	5	1250-562	DECAL, Warning, Pinch Points
11	1	1251-450AL	DECAL, Boring Grease Pressure
12	1	1251-450I	DECAL, Gas Detector Horn & Strobe
13	1	1251-450T	DECAL, Main Power
14	1	1251-450W	DECAL, Hourmeter
15	1	1250-385	DECAL, Danger, Hazardous Voltage
16	1	1250-383	DECAL, Notice, Electrical Equipment
17	1	1251-649	DECAL, Danger, Warning, Notice, Gas Detector
18	1	1251-450K	DECAL, Tunnel Power Phase OK
19	1	REF	PLATE, Serial Number
20	1	1250-544	DECAL, Made In USA
21	1	1251-320	DECAL, Notice, Welding Gas Detector Damage
22	1	1251-450X	DECAL, Low Pressure Adapters
23	1	1251-450E	DECAL, Conveyor Hyd Connections
24	2	40000-16	DECAL, Notice, Change Filter
25	1	1251-382	DECAL, Check Grease Level Daily
26	1	1250-006	DECAL, Warning, Safety Chain To Conveyor
27	1	1251-450J	DECAL, Conveyor Safety Switch
28	1	3-700Rw	DECAL, Rotation - Right
29	1	1251-450AQ	DECAL, Grease Filter
30	2	1251-450B	DECAL, Steering Joint Grease Fitting
31	1	1251-450P	DECAL, Bearing Oil Cavity Shutoff
32	1	1251-450S	DECAL, Scavenging Pump
33	1	1251-326	DECAL, USA Flag, Large - Right
34	1	1252-004	DECAL, Akkerman XX-Large
35.1	1	1251-924C	DECAL, Single/Dual Feed Hydraulic Supply Control
35.2	1	1251-924G	DECAL, Single/Dual Feed Hydraulic Supply Control
35.3	1	1251-924H	DECAL, Single/Dual Feed Hydraulic Supply Control

## CYLINDER STROKE INDICATOR DECALS



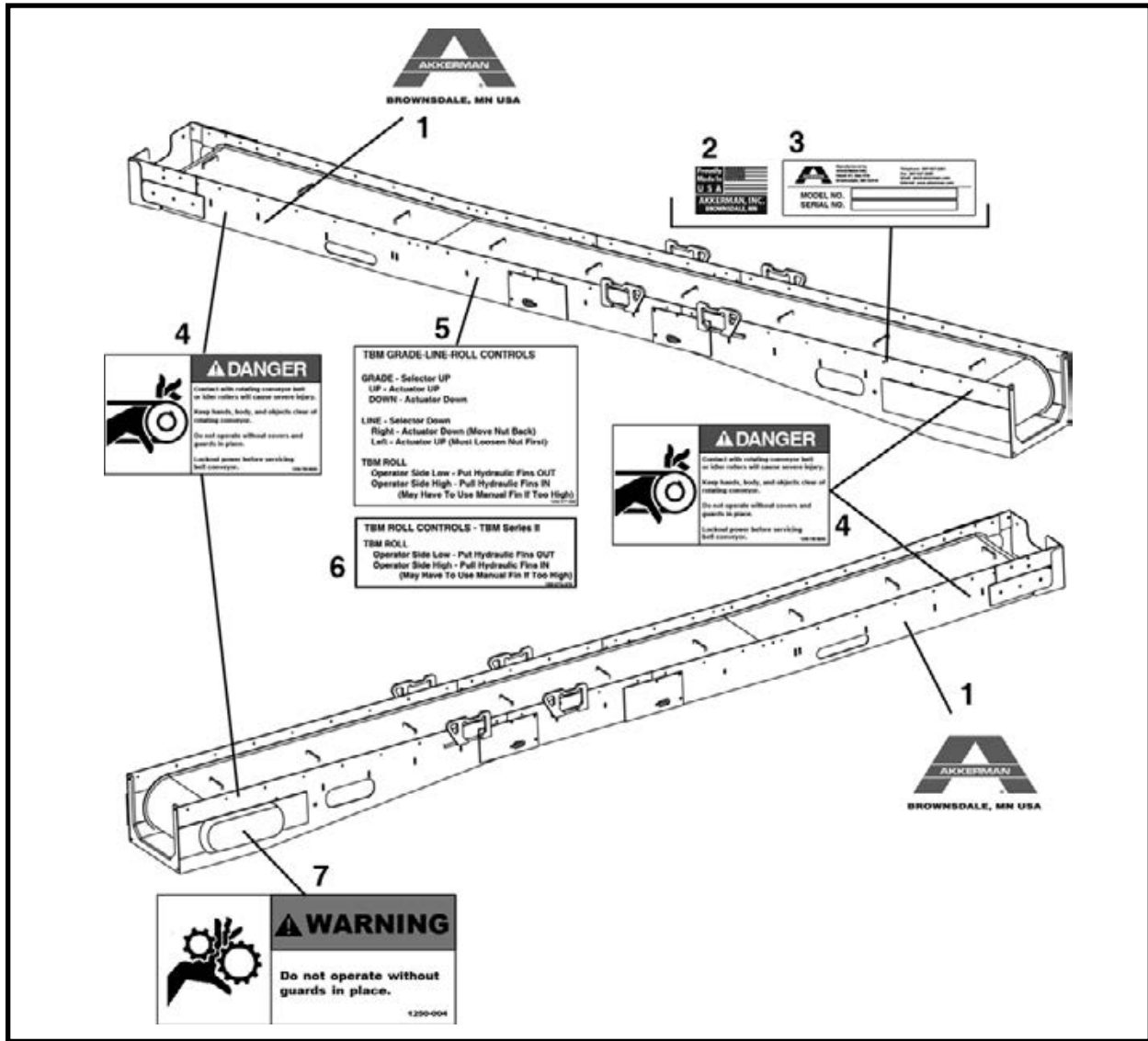
ITEM	QTY	PART NO.	DESCRIPTION
1	3	1251-785	DECAL, Cylinder Stroke Indicator - 4" - 48SC-D-420D-480D

## PIT POWER BOX (F19051F) DECALS



ITEM	QTY	PART NO.	DESCRIPTION
1	1	1251-533	DECAL, Pit Box F19051F

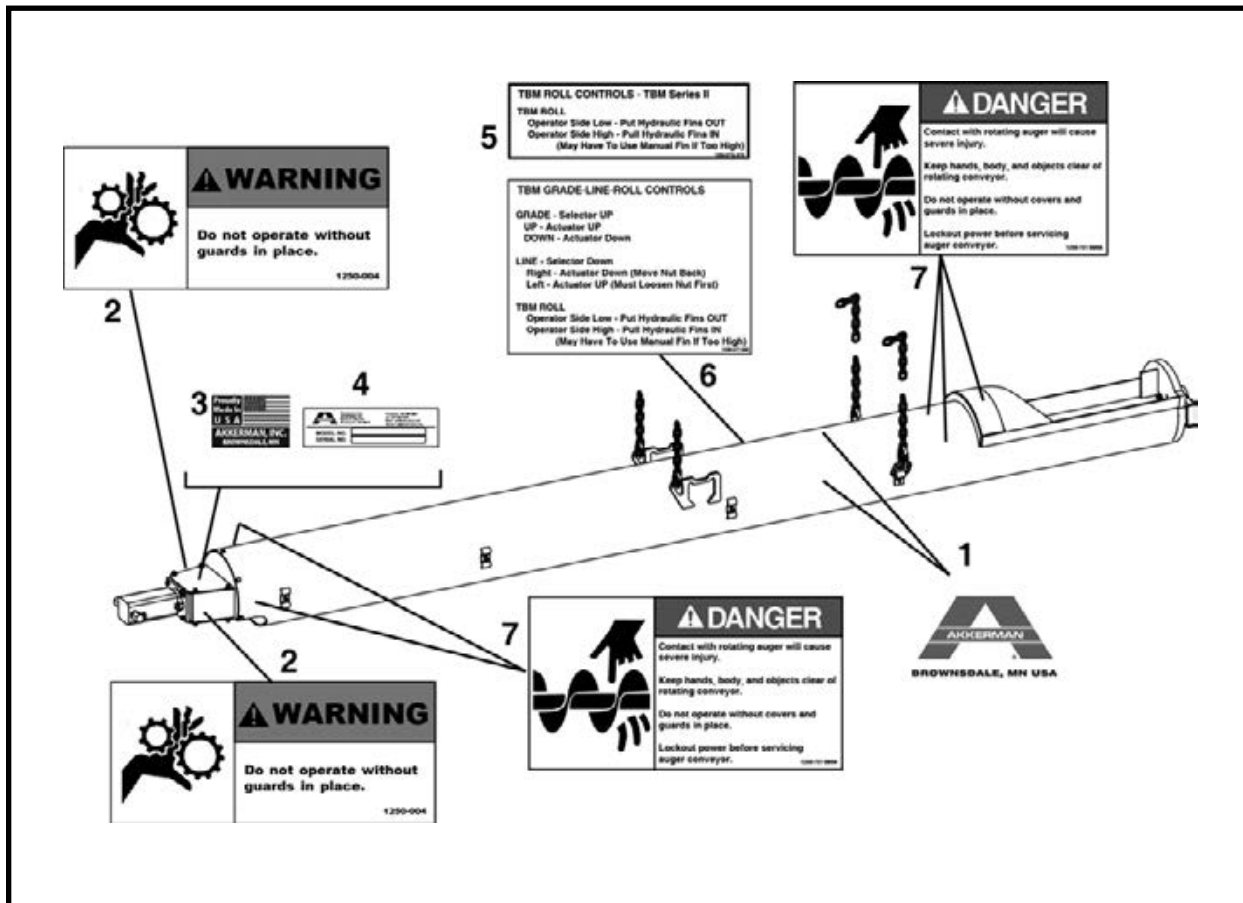
**BELT CONVEYOR DECALS, 1255-018**  
**1015 - 1215 - 1615 - 2015 - 2415 - 2418 BELT CONVEYORS**



ITEM	QTY	PART NO.	DESCRIPTION
0	1	1255-018	KIT, Decal Belt Conveyor
1	2	1251-246	DECAL, Akkerman, Large
2	1	1250-544	DECAL, Made In USA
3	1	REF	PLATE, Serial Number
4	4	1250-750	DECAL, Danger Rotating Belt Conveyor
5	1	1250-577	DECAL, TBM Steering Controls
6	1	1250-577A	DECAL, TBM Steering Controls - TBM Series II
7	1	1250-004	DECAL, Warning, Guards Must Be In Place

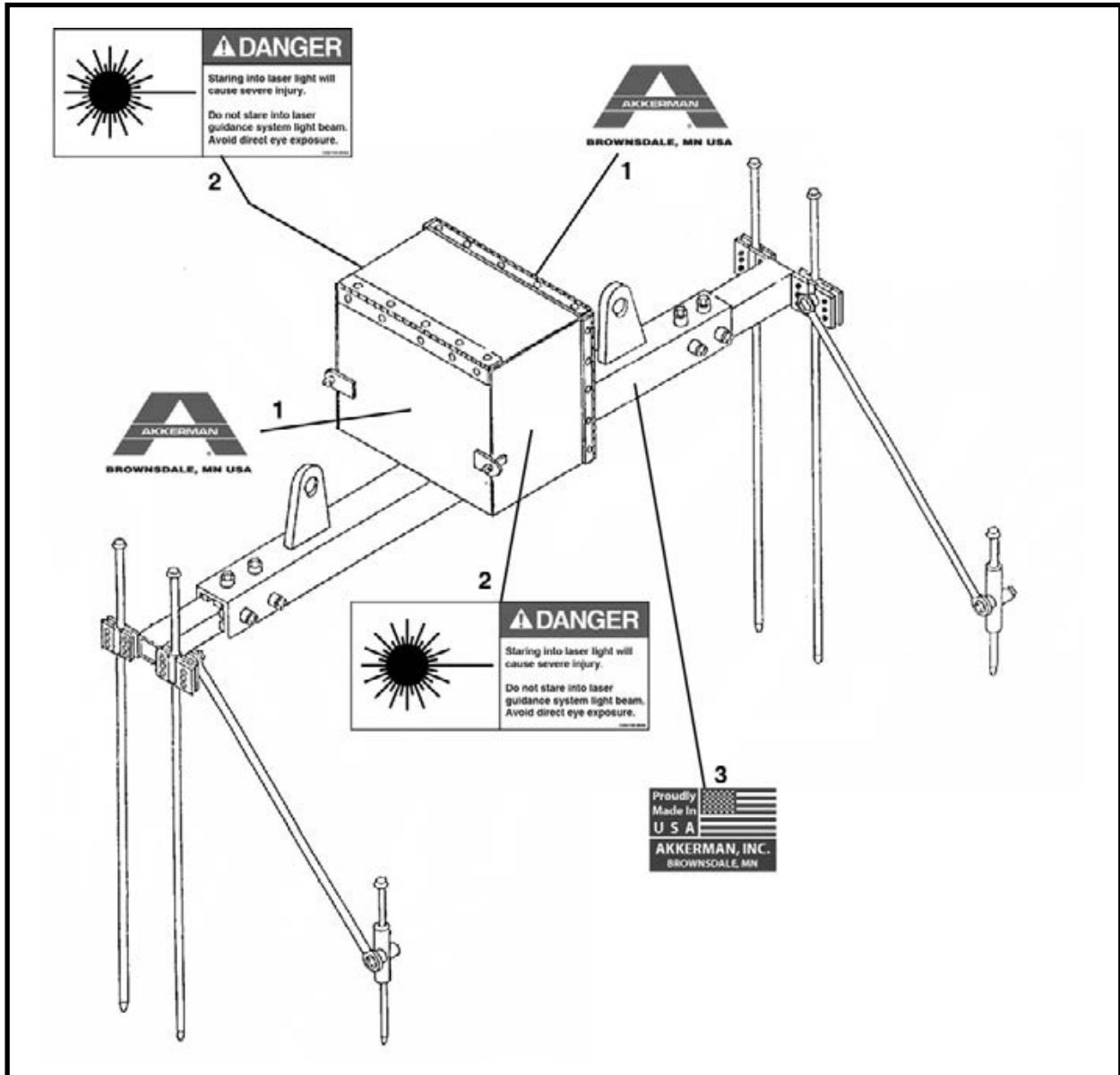
# SCREW CONVEYOR DECALS, 1255-009

## 120EX - 140EX - 160 SCREW CONVEYORS



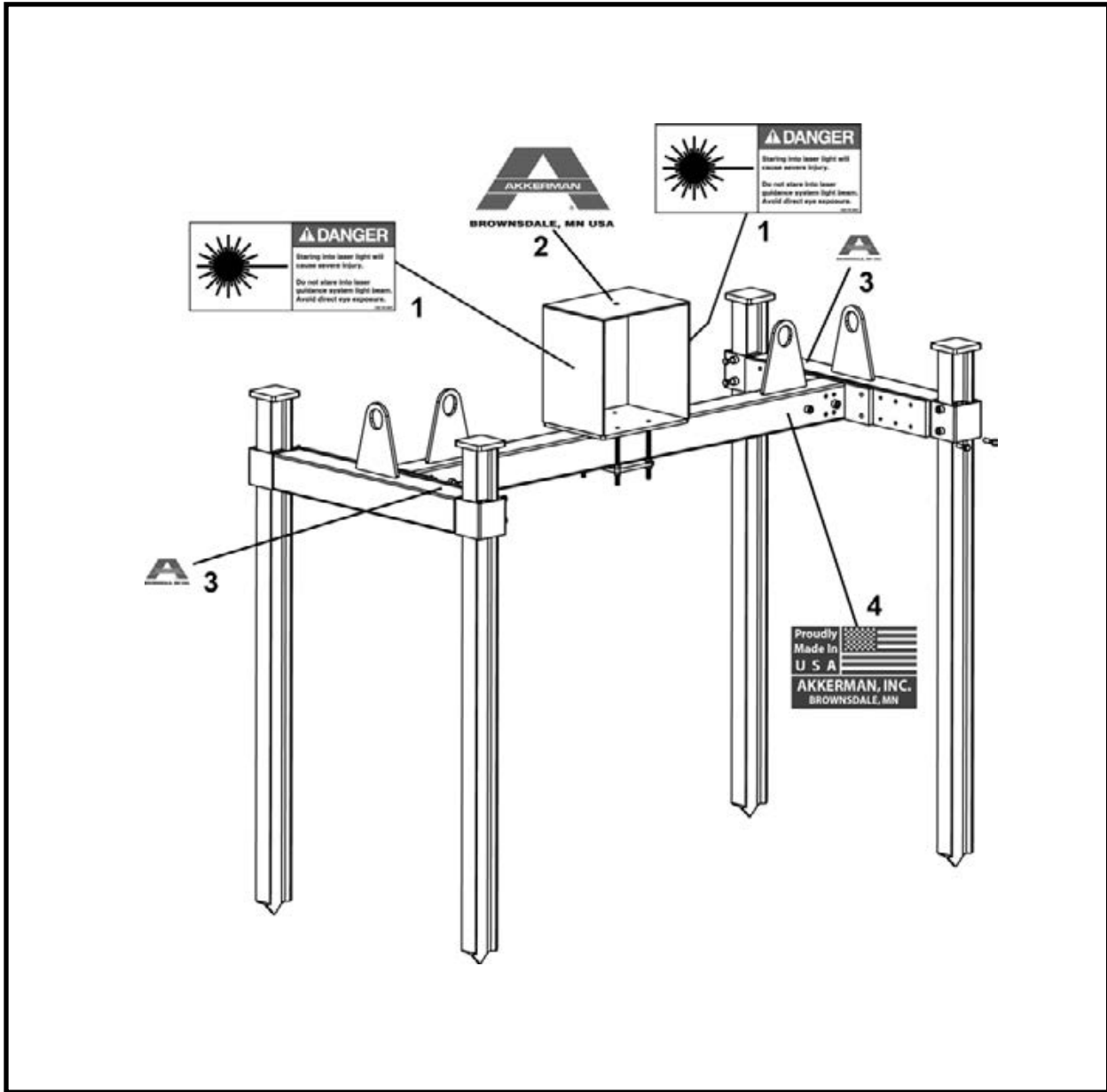
ITEM	QTY	PART NO.	DESCRIPTION
0	1	1255-009	KIT, Decal Screw Conveyor
1	2	1251-246	DECAL, Akkerman, Large
2	1	1250-004	DECAL, Warning, Guards Must Be In Place
3	1	1250-544	DECAL, Made In USA
4	1	REF	PLATE, Serial Number
5	1	1250-577A	DECAL, TBM Steering Controls - TBM Series II
6	1	1250-577	DECAL, TBM Steering Controls
7	5	1250-751	DECAL, Danger Rotating Auger Conveyor

## LASER LIGHT STAND DECALS, 1255-020



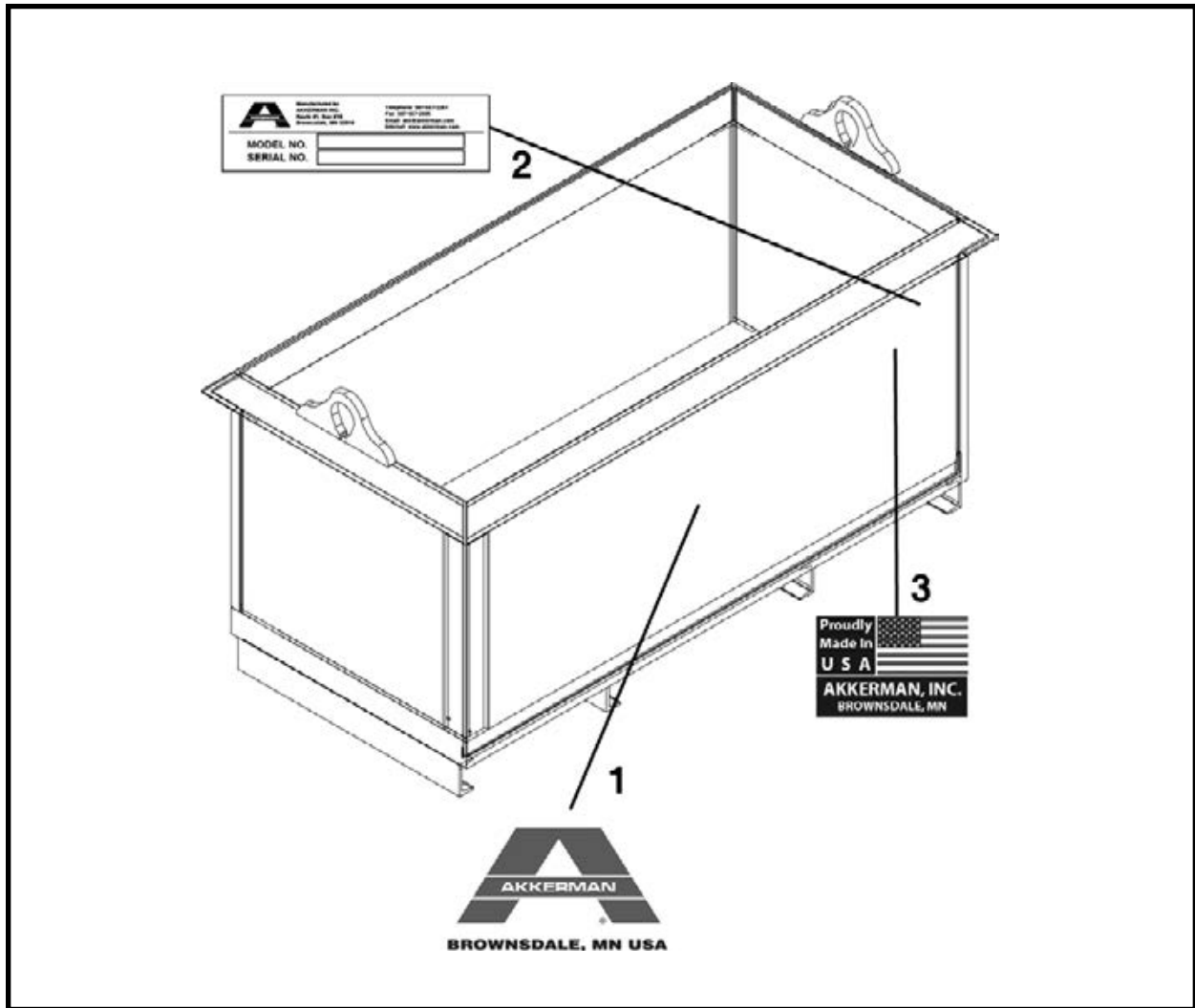
ITEM	QTY	PART NO.	DESCRIPTION
0	1	1255-020	KIT, Decal Laser Light Stand
1	2	1251-245	DECAL, Akkerman, X Large
2	2	1250-749	DECAL, Danger, Laser Light
3	1	1250-544	DECAL, Made In USA

## LASER LIGHT STAND DECALS, 1255-113



ITEM	QTY	PART NO.	DESCRIPTION
0	1	1255-113	KIT, Decal Laser Light Stand
1	2	1250-749	DECAL, Danger, Laser Light
2	1	1251-245	DECAL, Akkerman, X Large
3	2	1251-247	DECAL, Akkerman, Medium
4	1	1250-544	DECAL, Made In USA

## HEAD BOX DECALS, 1255-019



ITEM	QTY	PART NO.	DESCRIPTION
0	1	1255-019	KIT, Decal Head Box
1	2	1251-245	DECAL, Akkerman, X Large
2	1	REF	PLATE, Serial Number
3	1	1250-544	DECAL, Made In USA



# Structurals

## TBM Frame Assembly

Final Assembly	
48SC-D - 420D - 480D .....	3
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48SC-D, 032316A .....	6
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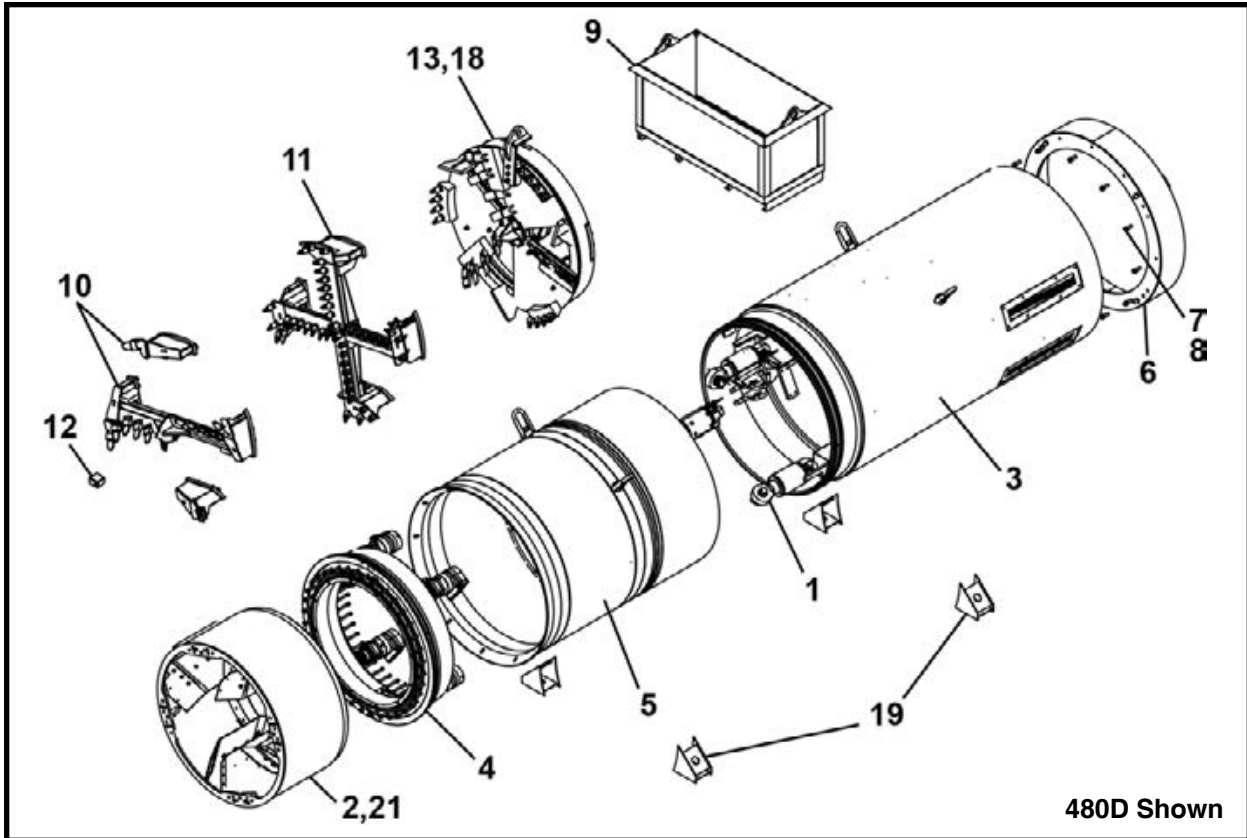
## Laser Light Stand

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**Conveyors** ..... See Section 11 Miscellaneous/Conveyors/IJS

**Intermediate Jacking Stations** ..... See Section 6 Hydraulics

**FINAL ASSEMBLY**  
**TBM 48SC-D - 420D - 480D**



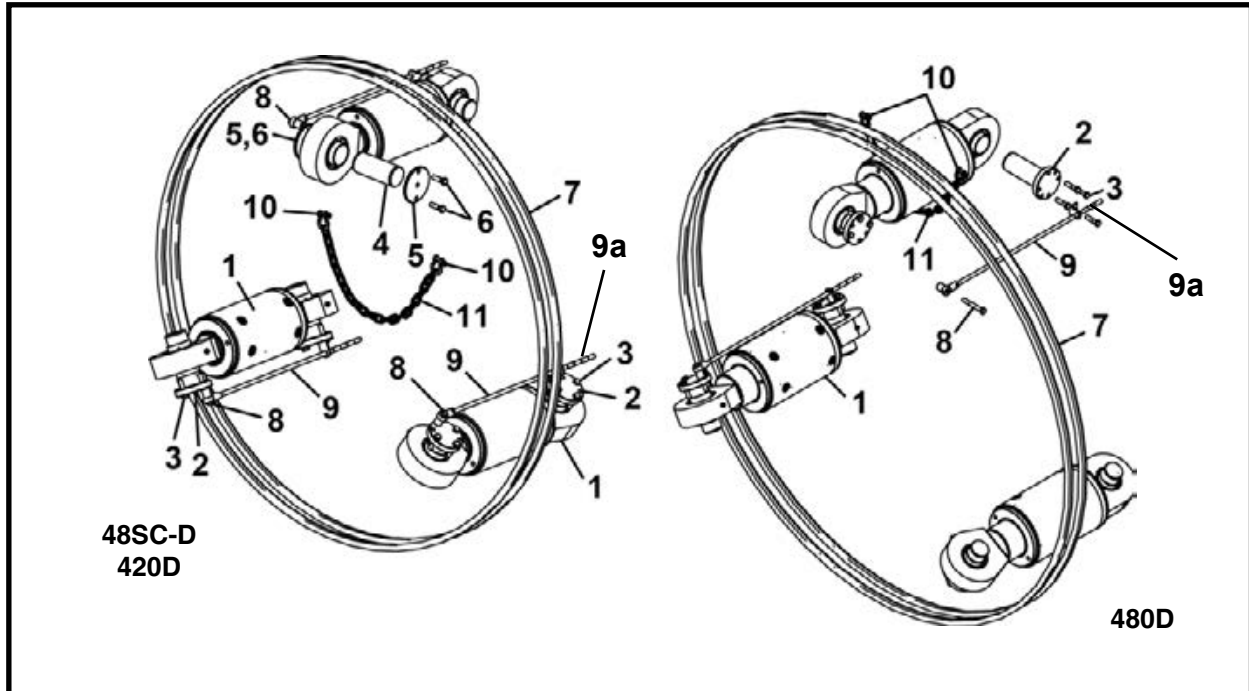
ITEM	QTY	48SC-D PART NO.	420D PART NO.	480D PART NO.	DESCRIPTION
0	1	F32300F	F32140F	F32348F	FINAL ASSEMBLY
1***	1	024602A	027902A	028502A	STEERING ASSEMBLY
2***	1	032316A	-	032364A	FRONT SECTION ASSEMBLY
2***	1	-	032157A	-	INNER DRUM
3***	1	031604A	031550A	032373A	BACK SECTION ASSEMBLY
4***	1	032301A	032167A	032349A	DRIVE ASSEMBLY
5	1	032303A	032145A	032351A	HOUSING, Drive (Includes 5a)
5a	2	P0098-067	P0098-067	-	RING, Hoist 7,000 lbs
5a	2	-	-	P0098-068	RING, Hoist 10,000 lbs
6***	1	-	023710A00	023810A00	RING, Bell End
6***	1	014000A01	-	-	ADAPTER, Steel Casing
7	12/13/13	P0040-012	P0040-012	P0040-012	WASHER, Hardened Flat 3/4
8	13	-	-	P0001-12-009	BOLT, Hex 3/4 UNC x 2 .25
8	12/13	P0001-12-008	P0001-12-008	-	BOLT, Hex 3/4 UNC x 2
9	1	F10350F00	F10350F00	F10350F00	BOX, Boring Head
10***	1	031619A	031517A	031717A	DIRT BAR ASSEMBLY
11***	1	031636A	031536A	031736A	QUAD BAR ASSEMBLY
12	1	P0091-031	P0091-031	P0091-031	LEVEL, Self Leveling Laser
13***	0	F24665F	F27965F	F28565F	CLOSED FACE ASSEMBLY
14*	60/70/75	P0126-050	P0126-050	P0126-050	OIL, Mobil Gear 600 XP 460
15***^	1	031631A	031631A	031631A	ELECTRICAL ASSEMBLY
16***^	1	032313A	032168A	032375A	HYDRAULICS ASSEMBLY
17***^	1	032169A	032169A	032169A	TBM GREASE ASSEMBLY
18***	0	031696A	031596A	031737A	MOUNT, Closed Face
19	4	032329A	032692A	032951A	STABILIZER, Launch
20***^^	1	1255-102	1255-102	1255-102	KIT, DECAL, TBM D Series
21	1	-	032159A	-	DOOR, Bulkhead

\* Quarts      \*\* Not Shown

\*\*\* Refer to this section for parts information.    ^ Refer to Section 6, Hydraulics for parts information.

^^ Refer to Section 5, Electrical for parts information.    ^^ Refer to Section 2, Decals for parts information.

**STEERING ASSEMBLY**  
**TBM 48SC-D - 420D - 480D**



ITEM	QTY	48SC-D PART NO.	420D PART NO.	480D PART NO.	DESCRIPTION
0	1	024602A	027902A	028502A	STEERING ASSEMBLY
1*	3/3/3	021175A	021175A	031075A	CYLINDER
1*	3/3/3	P0307-240	P0307-240	P0307-239	CYLINDER
2	5/5/6	023174P	023174P	023174P	PIN, Cylinder
3	18/18/21	P0001-06-006	P0001-06-006	P0001-06-006	BOLT, Hex 3/8 UNC x 1.5
4	1/1	032909P	032909P	-	PIN, Cylinder, Top Steering
5	2/2	032910P	032910P	-	RETAINER, Pin
6	3/3	P0001-06-005	P0001-06-005	-	BOLT, Hex 3/8 UNC x 1.25
7	2	P0088-260	P0088-028	P0088-029	ORING
8	3	P0001-06-011	P0001-06-011	P0001-06-011	BOLT, Hex 3/8 UNC x 2.75
9	3	028794A	028794A	028793A	GAGE, 3 PT Steer (Inc Item 9a)
9a	3	1251-785	1251-785	1251-785	DECAL, Cyl Stroke Ind. 4"
10	2/2/2	P0091-003	P0091-003	P0091-003	SHACKLE, Anchor 1/4
11	20/20/20 LI	P0094-004	P0094-004	P0094-004	CHAIN

\* Refer to section 10, Cylinders for parts information.

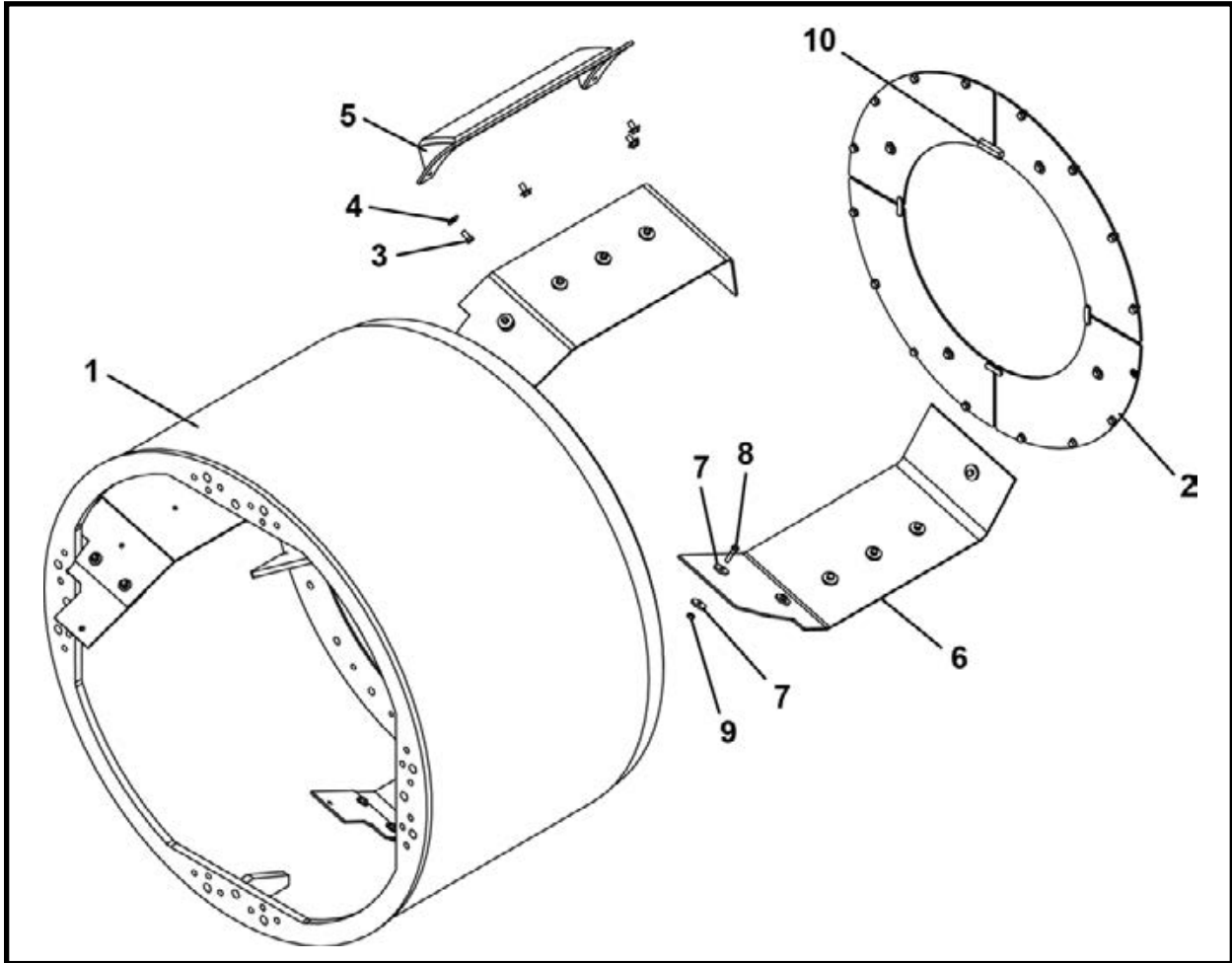
There are two styles of cylinders:

1. Cylinder welded in three parts (021175A and 031075A) - these cylinders are no longer available. If it is necessary to replace one of these cylinders, the cylinder must be replaced with the appropriate P0307-xxx cylinder.
2. Cylinders with one piece barrel (P0307-239 and P0307-240) The part number is stamped on the barrel. Current cylinders.

LI - Linear Inch

## **NOTES**

**FRONT SECTION ASSEMBLY, 032316A**  
**TBM 48SC-D**

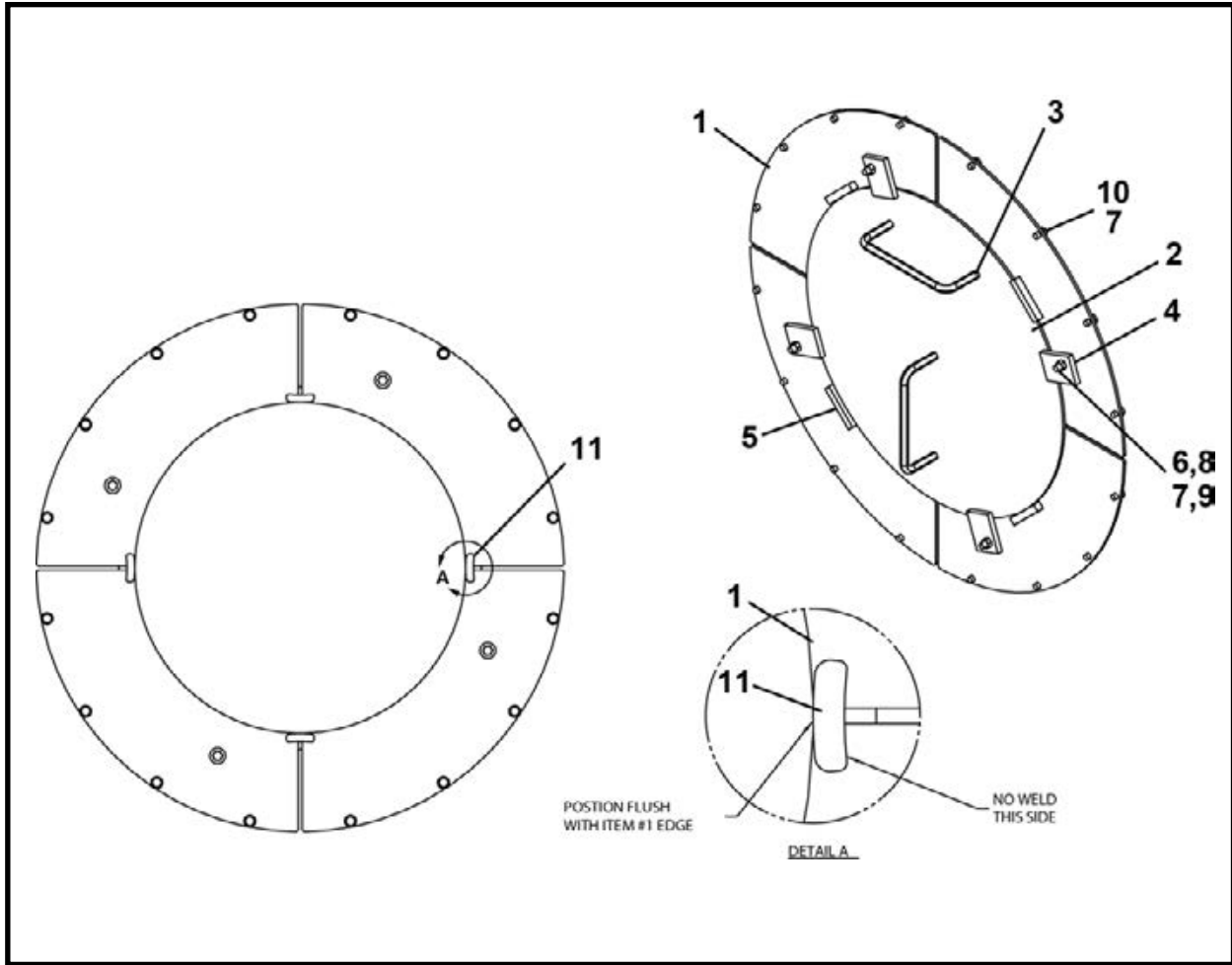


ITEM	QTY	PART NO.	DESCRIPTION
0	1	032316A	FRONT SECTION ASSEMBLY
1	1	032317A	INNER DRUM
2*	1	032319A	BULKHEAD DOOR ASSEMBLY
3	4	P0001-06-003	BOLT, Hex 3/8 UNC x .75
4	4	P0040-006	WASHER, Hardened Flat 3/8
5	1	031510A	DIRT SCOOP
6	70 LI	P0068-004	BELTING, Black 10 in.
7	24	002624P00	WASHER, Dirt Paddle
8	12	P0001-05-005	BOLT, Hex 5/16 UNC x 1.25
9	12	P0003-05-000	NUT, Hex 5/16 UNC
10	1	023468P	BAR

LI - Linear Inch

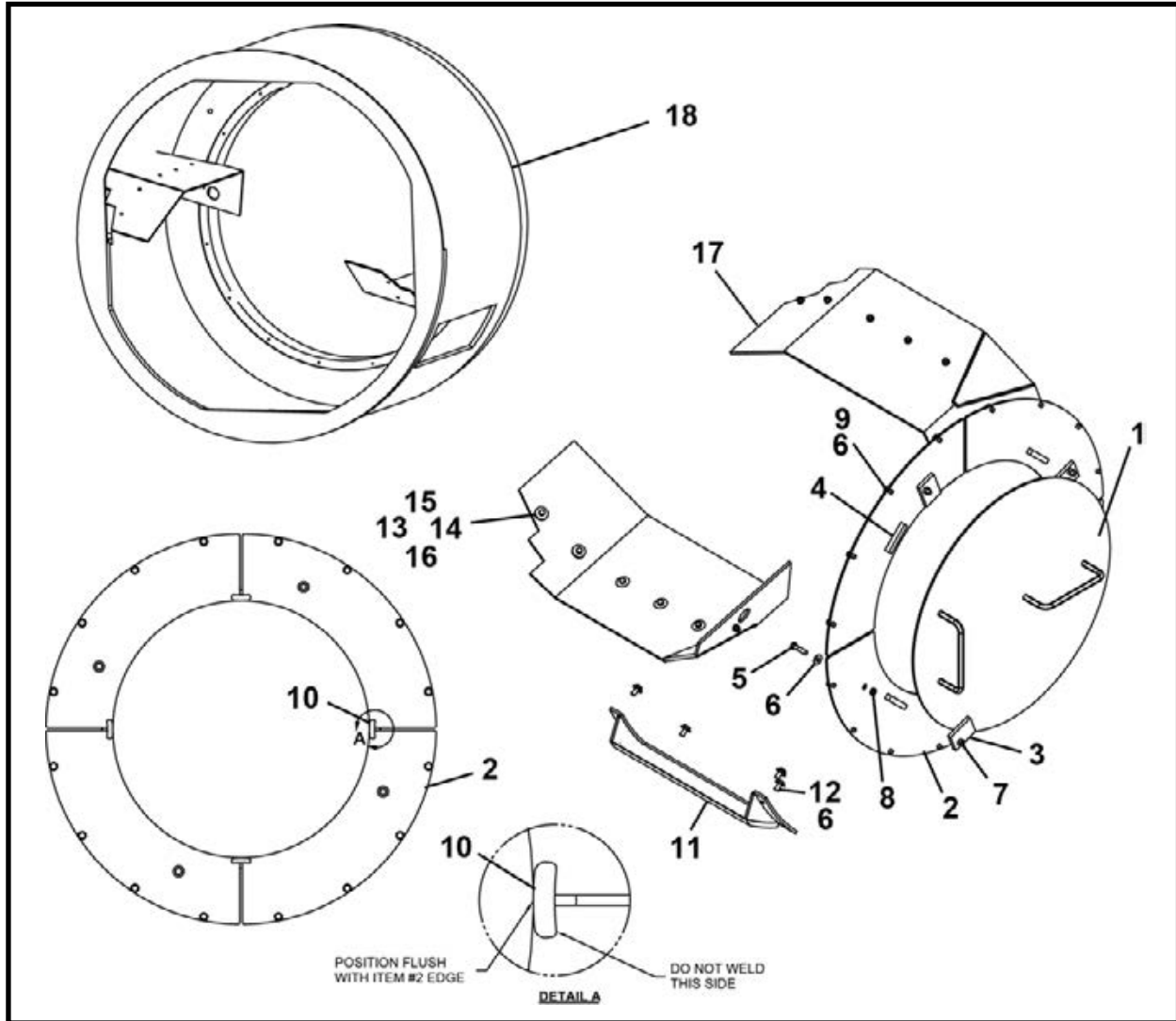
\* Refer to this section for parts information.

**BULKHEAD DOOR ASSEMBLY, 032319A**  
**TBM 48SC-D**



ITEM	QTY	PART NO.	DESCRIPTION
0	1	032319A	BULKHEAD DOOR ASSEMBLY
1	4	032320P	MOUNT, Bulkhead Door
2	1	028564P	PLT, ROUND 23.00X0.19
3	2	012875P00	HANDLE, Tank Door
4	4	009986P00	ENCLOSER
5	4	009987P00	BAR, Closed Inner Drum Assembly
6	4	P0001-06-006	BOLT, Hex 3/8 UNC x 1.5
7	20	P0040-006	WASHER, Hardened Flat 3/8
8	4	P0003-06-000	NUT, Hex 3/8 UNC
9	4	P0007-06-000	NUT, Jam 3/8 UNC
10	16	P0001-06-002	BOLT, Hex 3/8 UNC x .5
11	4	031609P	PLATE, Bulkhead Door Ramp

**FRONT SECTION ASSEMBLY (Inner Drum & Bulkhead Door)**  
TBM 420D

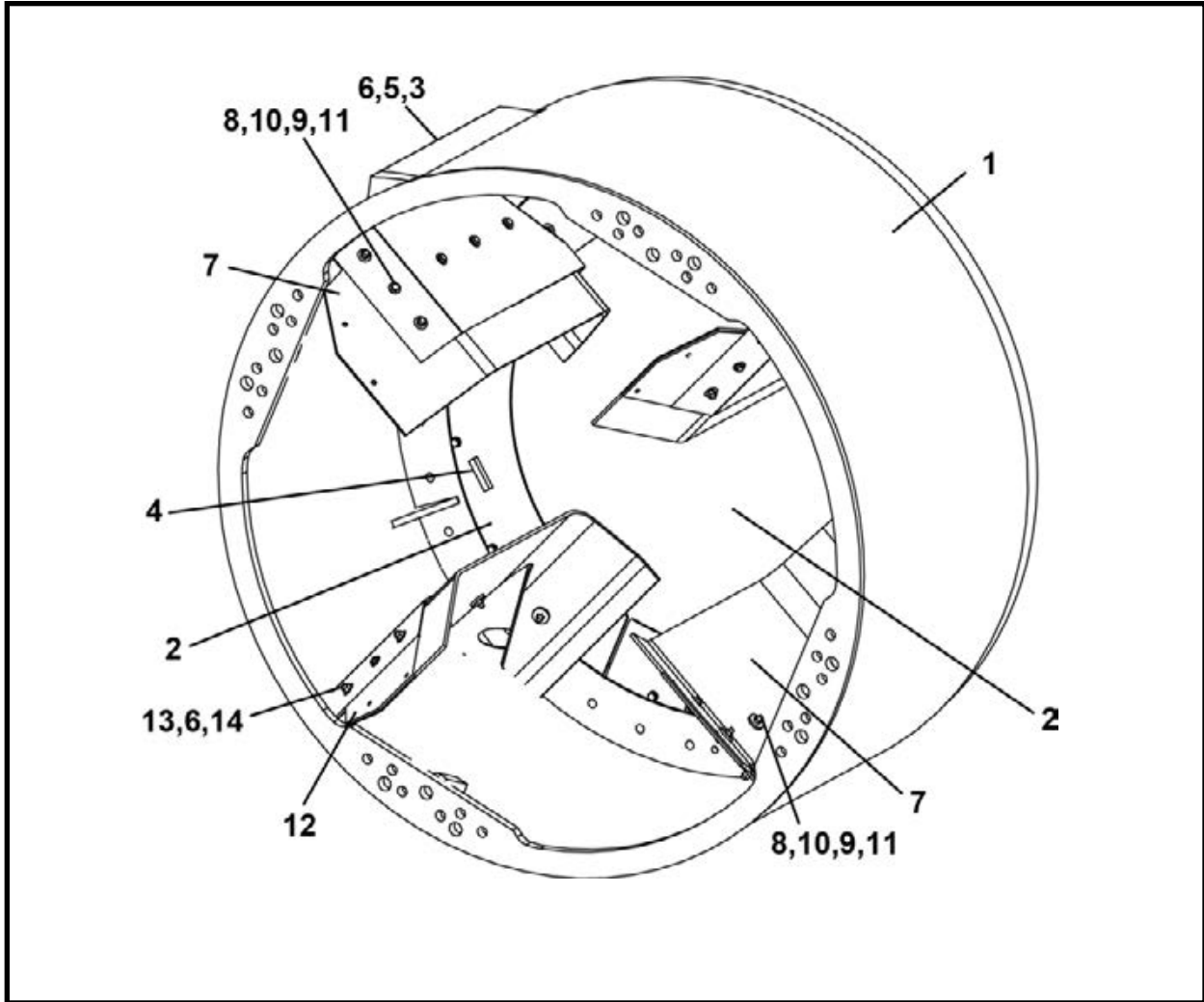


ITEM	QTY	PART NO.	DESCRIPTION
0	1	032159A	BULKHEAD DOOR ASSEMBLY
1	1	032166A	DOOR, Bulkhead
2	4	032160P	MOUNT, Bulkhead Door
3	4	009986P00	ENCLOSER
4	4	009987P00	BAR, Closed Inner Drum
5	4	P0001-06-006	BOLT, Hex 3/8 UNC x 1.5
6	24	P0040-006	WASHER, Hardened Flat 3/8
7	4	P0003-06-000	NUT, Hex 3/8 UNC
8	4	P0007-06-000	NUT, Jam 3/8 UNC
9	16	P0001-06-002	BOLT, Hex 3/8 UNC x .5
10	4	031609P	PLATE, Bulkhead Door Ramp
11	1	031510A	DIRT SCOOP
12	4	P0001-06-003	BOLT, Hex 3/8 UNC x .75
13	12	P0003-05-000	NUT, Hex 5/16 UNC
14	12	P0001-05-004	BOLT, Hex 5/16 UNC x 1
15	12	002624P00	WASHER, Dirt Paddle
16	12	P0040-005	WASHER, Hardened Flat 5/16
17	2	031555P	RUBBER, Dirt Paddle
18*	1	032157A	INNER DRUM

\* Not part of 032159A

## **NOTES**

**FRONT SECTION ASSEMBLY, 032364A**  
**TBM 480D**

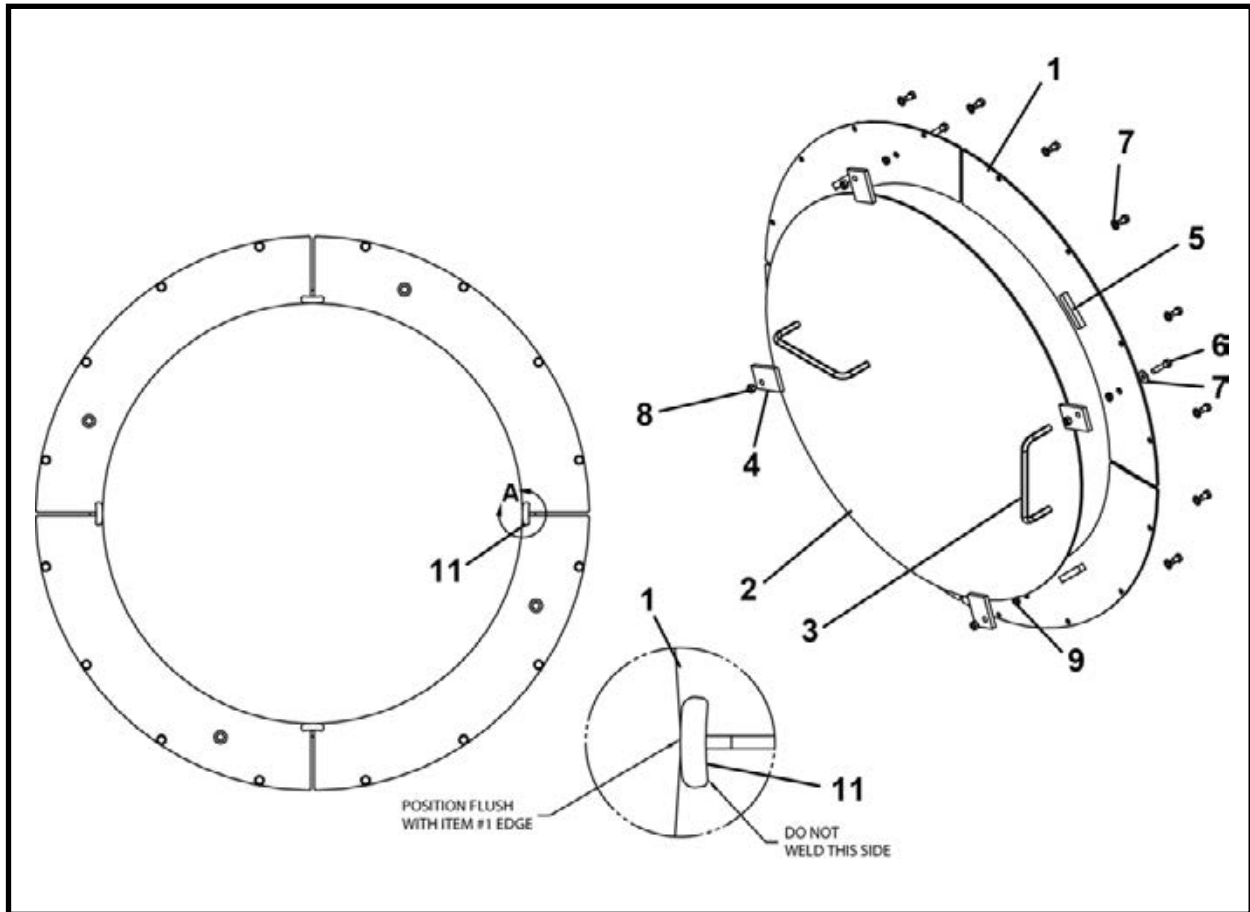


ITEM	QTY	PART NO.	DESCRIPTION
0	1	032364A	FRONT SECTION ASSEMBLY
1	1	032365A	INNER DRUM
2*	1	032367A	BULKHEAD DOOR ASSEMBLY
3	1	031510A	DIRT SCOOP
4	1	023468P	BAR
5	4	P0001-06-003	BOLT, Hex 3/8 UNC x .75
6	20	P0040-006	WASHER, Hardened Flat 3/8
7	4	P0068-008-036	BELTING, Black 15 in. x 36
8	28	P0001-05-009	BOLT, Hex 5/16 UNC x 2.25
9	28	P0040-005	WASHER, Hardened Flat 5/16
10	28	002624P00	WASHER, Dirt Paddle
11	28	P0003-05-000	NUT, Hex 5/16 UNC
12	4	031745P	PADDLE EXTENSION
13	8	P0003-06-000	NUT, Hex 3/8 UNC
14	8	P0001-06-004	BOLT, Hex 3/8 UNC x 1

LI - Linear Inch

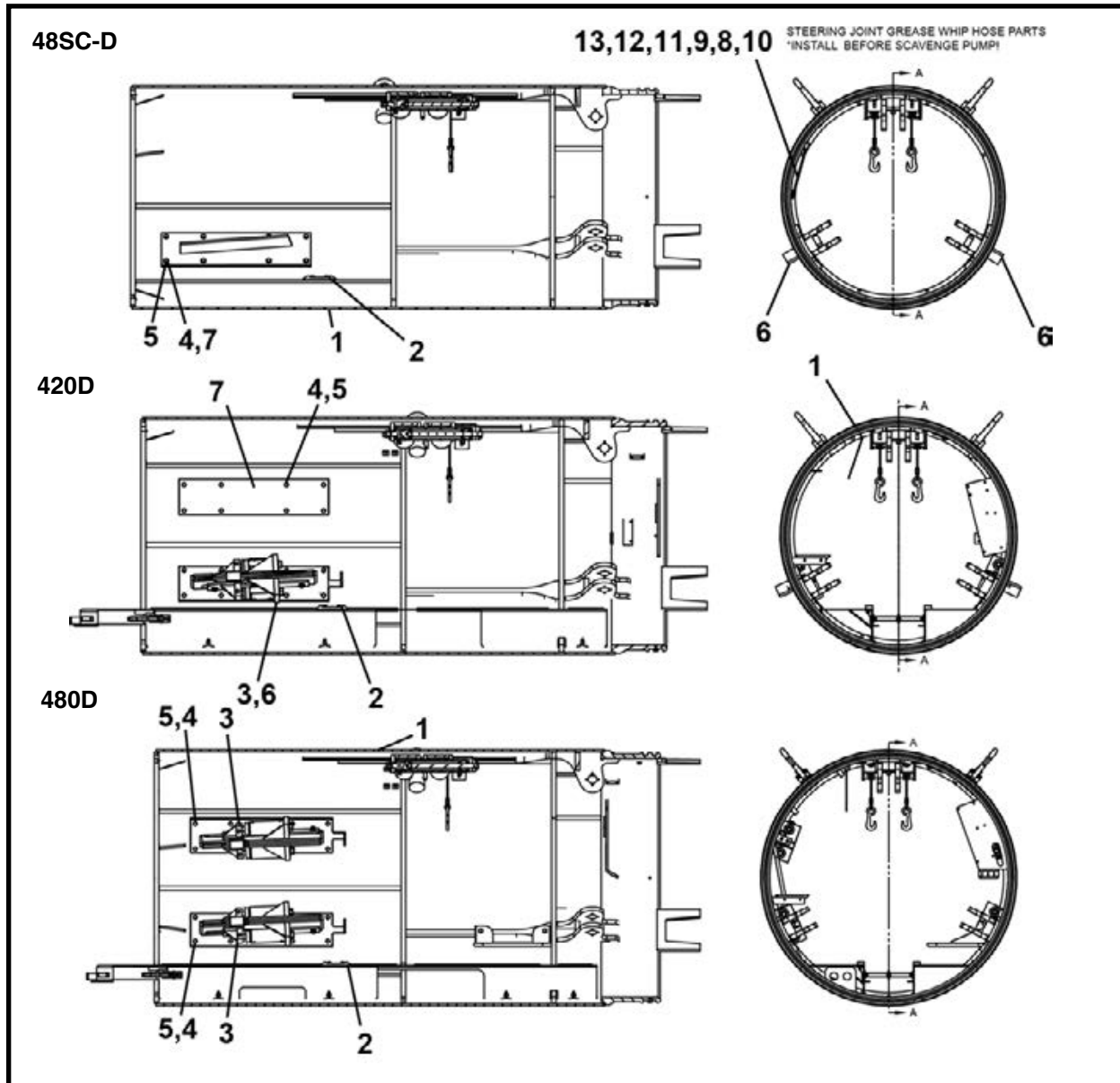
\* Refer to this section for parts information.

**BULKHEAD DOOR ASSEMBLY, 032367A**  
**TBM 480D**



ITEM	QTY	PART NO.	DESCRIPTION
0	1	032367A	BULKHEAD DOOR ASSEMBLY
1	4	032368P	MOUNT, Bulkhead Door
2	1	025964P	DOOR, Bulkhead
3	2	012875P00	HANDLE, Tank Door
4	4	009986P00	ENCLOSER
5	4	009987P00	BAR, Closed Inner Drum Assembly
6	4	P0001-06-006	BOLT, Hex 3/8 UNC x 1.5
7	20	P0040-006	WASHER, Hardened Flat 3/8
8	4	P0003-06-000	NUT, Hex 3/8 UNC
9	4	P0007-06-000	NUT, Jam 3/8 UNC
10	16	P0001-06-002	BOLT, Hex 3/8 UNC x .5
11	4	031609P	PLATE, Bulkhead Door Ramp

## BACK SECTION ASSEMBLY TBM 48SC-D - 420D - 480D



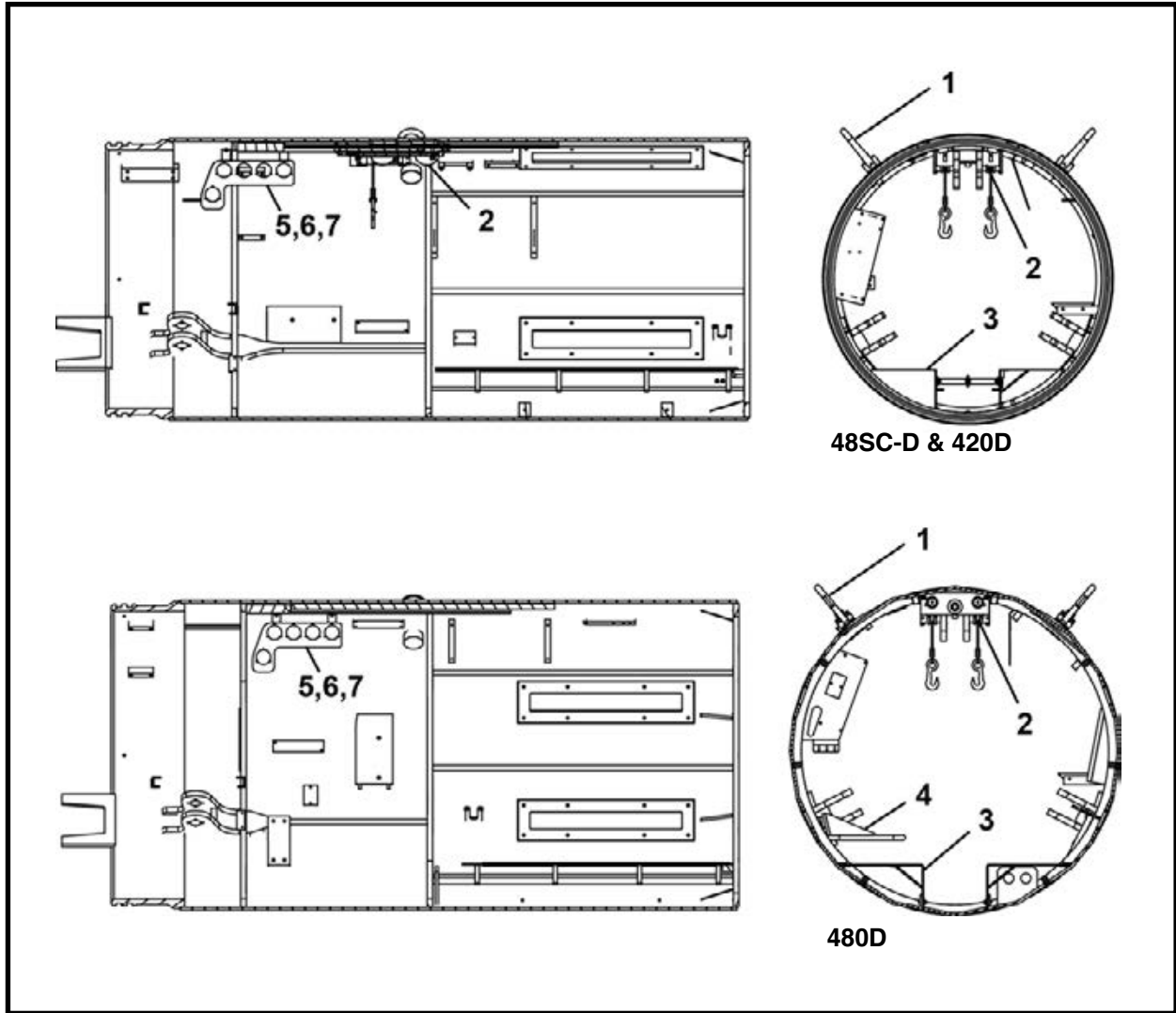
ITEM	QTY	48SC-D PART NO.	420D PART NO.	480D PART NO.	DESCRIPTION
0	1	031604A	031550A	032373A	BACK SECTION ASSEMBLY
1*	1	031608A	031551A	032374A	BACK DRUM ASSEMBLY
2*	2	023416A	023416A	023416A	STOP, 524 Haul Unit
3*	-2/4	-	014695A	019083A	DIRT WING, CW Hydraulic
4	16/32/32	P0001-08-004	P0001-08-004	P0001-08-004	BOLT, Hex 1/2 UNC x 1
5	16/32/32	P0040-008	P0040-008	P0040-008	WASHER, Hardened Flat 1/2
6	2/2	014650A00	014650A00	-	DIRT WING, Double Short
7	2/2	014619P00	014619P00	-	COVER, Blank
8	1	P0300-418	-	-	FITTING, 04MJ-02MP90-FGD
9	1	P0220-303	-	-	FITTING, 02PCTS-04FJSX
10	18 LI	P0201-290	-	-	HOSE, Thermo Plastic 1/8
11	1	P0220-302	-	-	FITTING, 02PCTS-02MP
12	1	P0400-000	-	-	COUPLING, Pipe 1/8
13	1	P0063-004	-	-	FITTING, Grease - Straight 1/8

LI - Linear Inch

\* Refer to this section for parts information.

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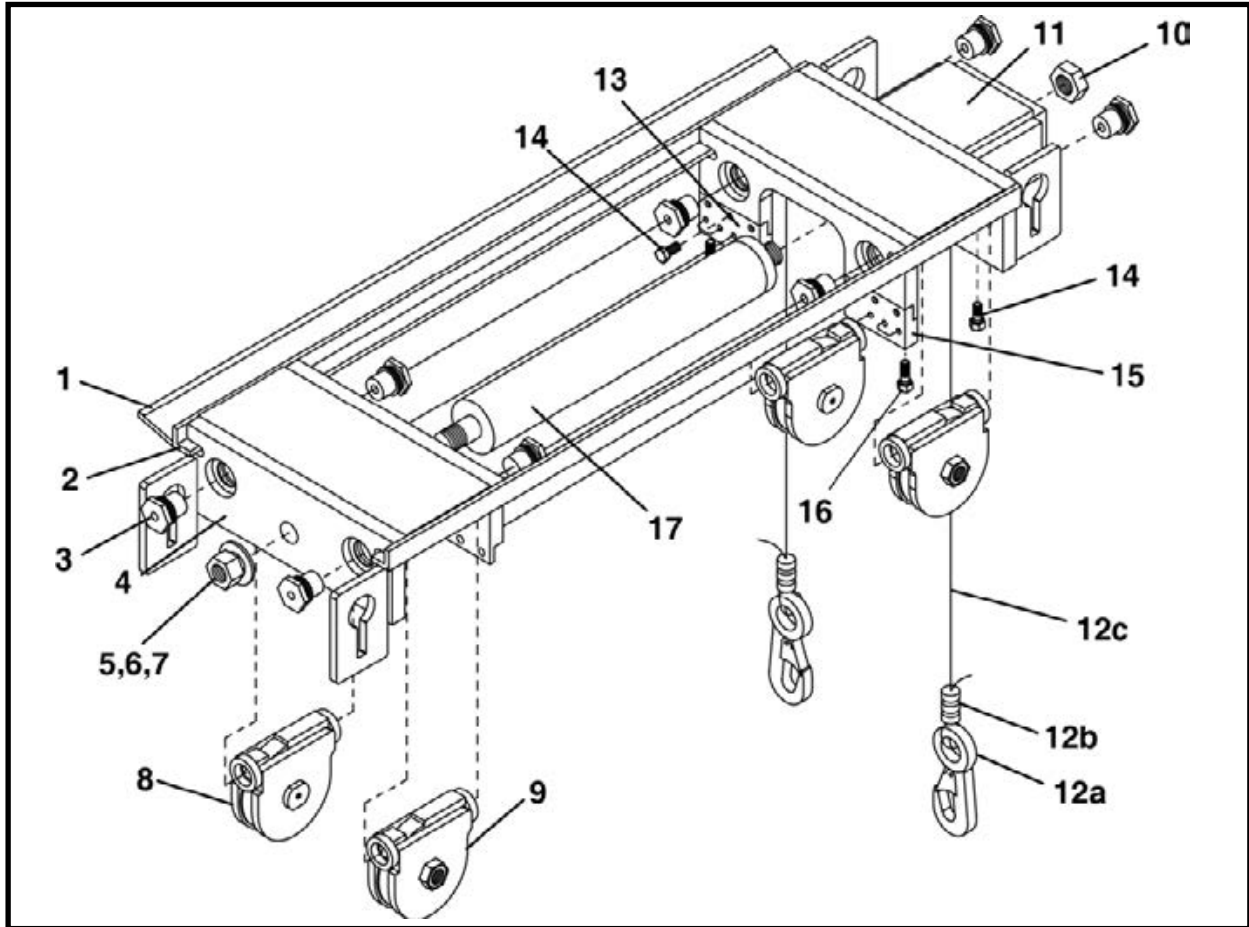
**BACK DRUM ASSEMBLY**  
TBM 48SC-D - 420D - 480D



ITEM	QTY	48SC-D PART NO.	420D PART NO.	480D PART NO.	DESCRIPTION
0	1	031608A	031551A	032374A	BACK DRUM ASSEMBLY
1	2	P0098-067	P0098-067	-	RING, Hoist 7,000 lbs
1	2	-	-	P0098-068	RING, Hoist 10,000 lbs
2*	1	025315A00	025315A00	025315A00	CONVEYOR LIFT ASSEMBLY
3*	1	024609A	027909A	028509A	FLOOR ASSEMBLY
4*	1	-	-	003695A00	SEAT ASSEMBLY
5	1	026169P	026169P	026169P	MOUNT, Gauge
6	2	P0001-04-002	P0001-04-002	P0001-04-002	BOLT, Hex 1/4 UNC x .5
7	2	P0040-004	P0040-004	P0040-004	WASHER, Hardened Flat 1/4

\* Refer to this section for parts information.

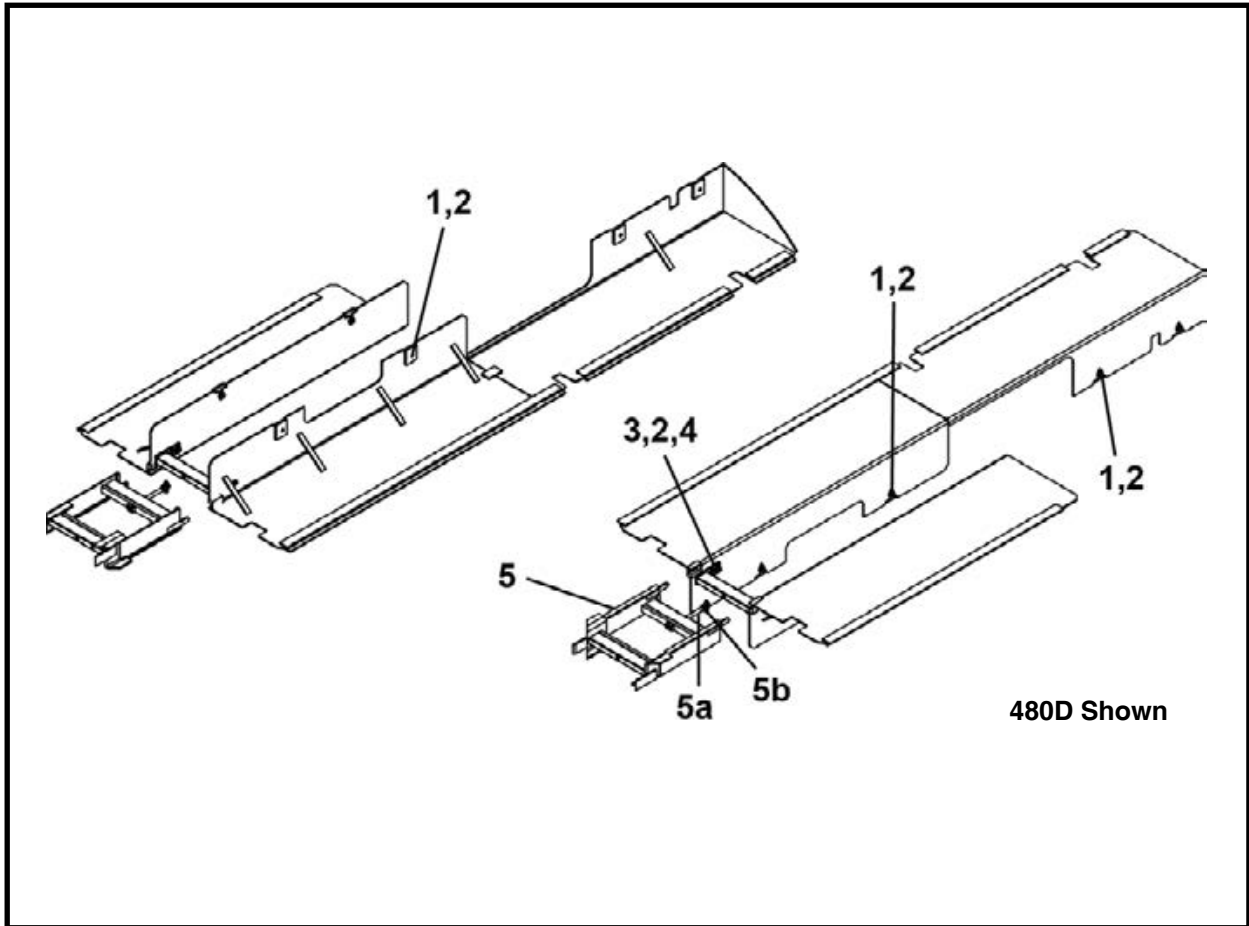
**CONVEYOR LIFT ASSEMBLY, 025315A00**  
**TBM 48SC-D - 420D - 480D**



ITEM	QTY	PART NO.	DESCRIPTION
0	1	025315A00	ASSEMBLY, Conveyor Lift
1	-	-	BAR (Used only for TBM Series I)
2	2	-	ANGLE
3	8	025398P00	ROD, Cylinder Lift
4	1	-	BRACKET, Slide
5*	1	P0004-14-000	NUT, 7/8 UNF
6	-	-	-
7	2	P0040-016	WASHER, Hardened Flat 1
8	2	025316A01	ASSEMBLY, L.H. Pulley (Includes items 8a & 8b)
8a**	1	P0063-001	FITTING, Grease
8b**	1	P0007-12-000	NUT, Jam 3/4 UNC
9	2	025318A01	ASSEMBLY, R.H. Pulley (Includes items 9a & 9b)
9a**	1	P0063-001	FITTING, Grease
9b**	1	P0007-12-000	NUT, Jam 3/4 UNC
10*	1	P0008-16-000	NUT, Jam 1 UNF
11	1	025319A00	BRACKET, Shaft End Slide
12	2	018368A-060	HOOK & CABLE ASSEMBLY (Includes items 12a - 12c)
12a	1	P0079-001	HOOK, Snap
12b	1	P0073-001	SLEEVE
12c1	60 LI	P0075-002-060	CABLE, 1/4 x 60 (48SC-420-480)
12c2	72 LI	P0075-002-072	CABLE, 1/4 x 72 (540)
13	-	-	BAR
14	12	P0001-06-003	BOLT, 3/8 UNC x .75
15	1	-	BAR
16	2	P0001-06-004	BOLT, 3/8 UNC x 1
17.1***	1	002691A00	CYLINDER, Conveyor Lift (With NPT Fittings)(Earlier Models)
17.2***	1	020300A	CYLINDER, Conveyor Lift (With ORB Fittings)

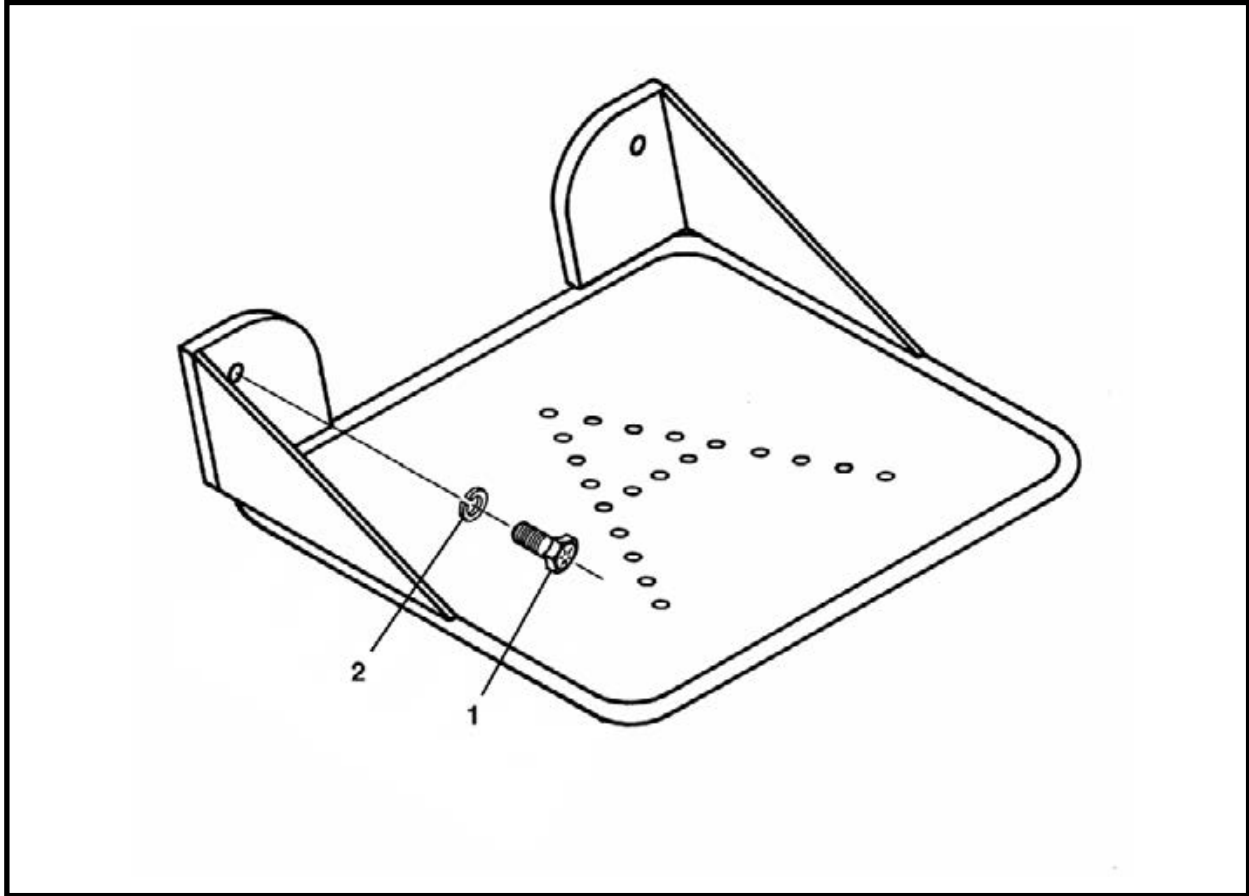
LI - Linear Inch      \* After assembly complete, tack weld nuts to conveyor lift.      \*\* Not Shown  
 \*\*\* Refer to section 10, Cylinders for parts information.

**FLOOR ASSEMBLY**  
**TBM 48SC-D - 420D - 480D**



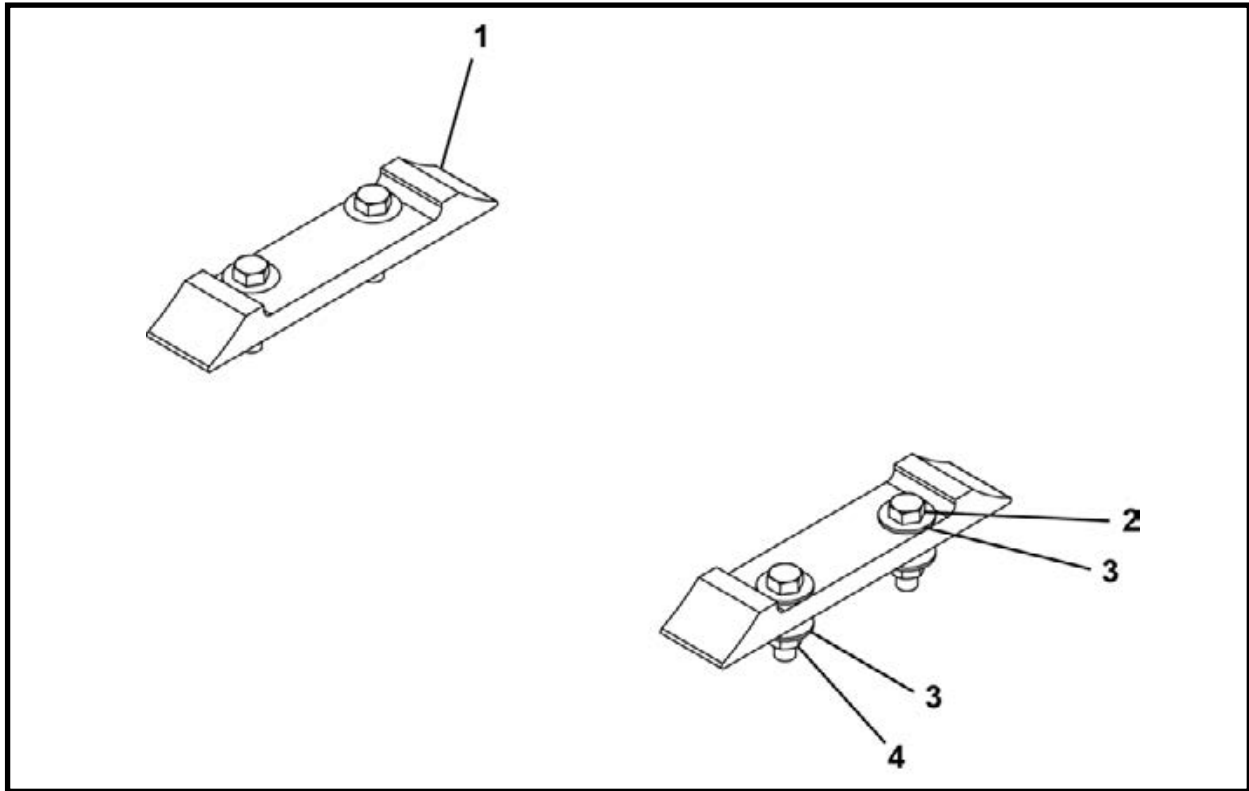
ITEM	QTY	48SC-D PART NO.	420D PART NO.	480D PART NO.	DESCRIPTION
0	1	024609A	027909A	028509A	FLOOR ASSEMBLY
1	5/5/6	P0001-06-004	P0001-06-004	P0001-06-004	BOLT, 3/8 UNC x 1
2	9/9/10	P0040-006	P0040-006	P0040-006	WASHER, Hardened Flat 3/8
3	4	P0001-06-003	P0001-06-003	P0001-06-003	BOLT, 3/8 UNC x .75
4	4	P0003-06-000	P0003-06-000	-	NUT, Hex 3/8 UNC
5	1	030560A	030560A	030560A	TRACK ADAPTER (Incl 5 a-b)
5a	1	007242A00	007242A00	007242A00	BOLT, Track
5b	1	P0012-08-000	P0012-08-000	P0012-08-000	NUT, Wing 1/2 UNC

**SEAT ASSEMBLY, 003695A00**  
**TBM 480D**



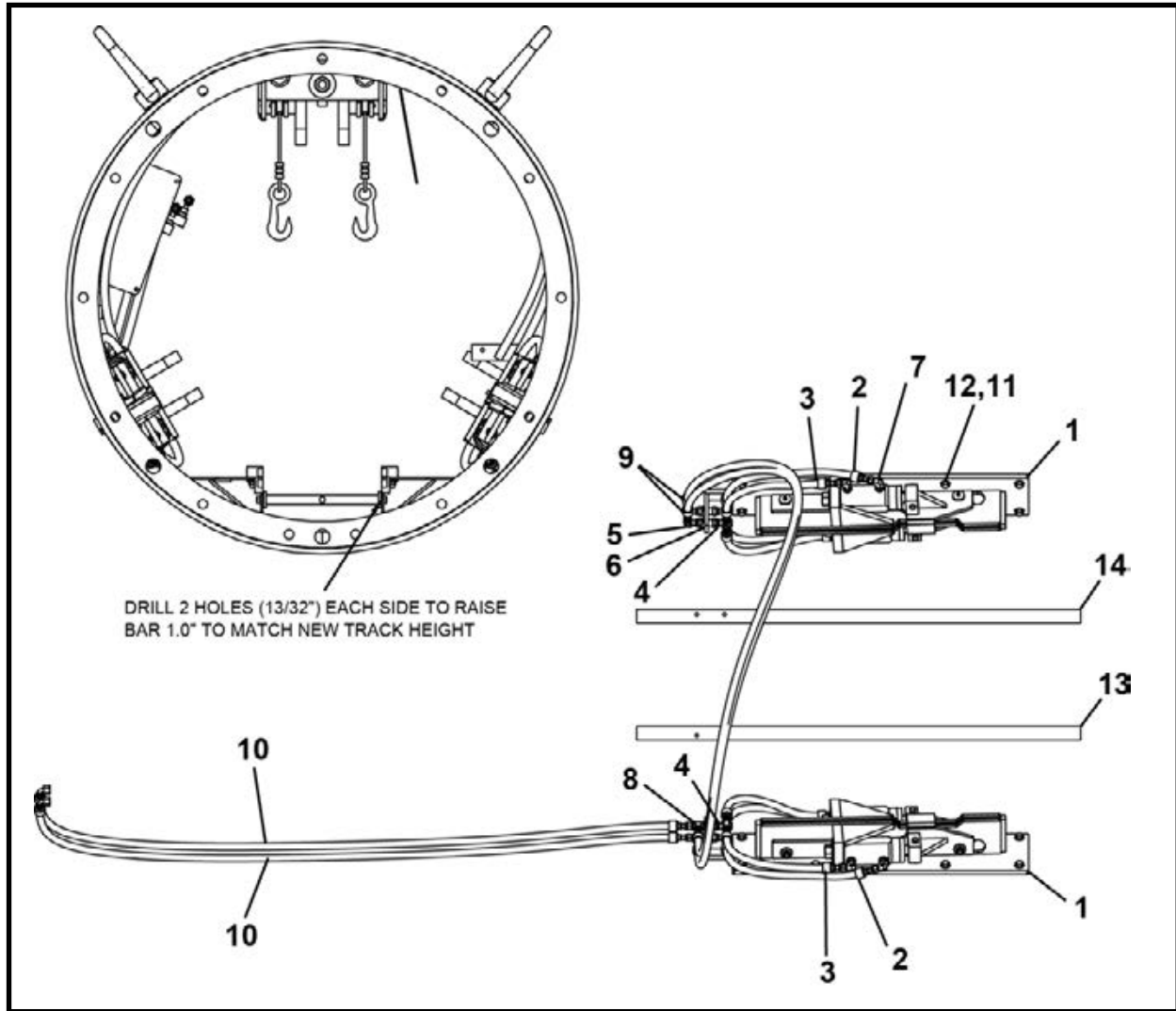
ITEM	QTY	PART NO.	DESCRIPTION
0	1	003695A00	SEAT ASSEMBLY
1	2	P0001-08-004	BOLT, Hex 1/2 UNC x 1
2	2	P0045-008	WASHER, Lock 1/2 UNC

**524 HAUL UNIT WHEEL STOP ASSEMBLY, 023416A**  
**TBM 48SC-D - 420D - 480D**



ITEM	QTY	PART NO.	DESCRIPTION
0	1	023416A	STOP, 524 Haul Unit Wheel
1	2	028619P	BLOCK, 524 HU WHEEL STOP
2	4	P0001-06-006	BOLT, Hex 3/8 UNC x 1.5
3	8	P0040-006	WASHER, Hardened Flat 3/8
4	4	P0003-06-000	NUT, Hex 3/8 UNC

**HYDRAULIC DIRT WING CONVERSION ASSEMBLY, 061404A**  
**TBM 48SC-D (Option)**

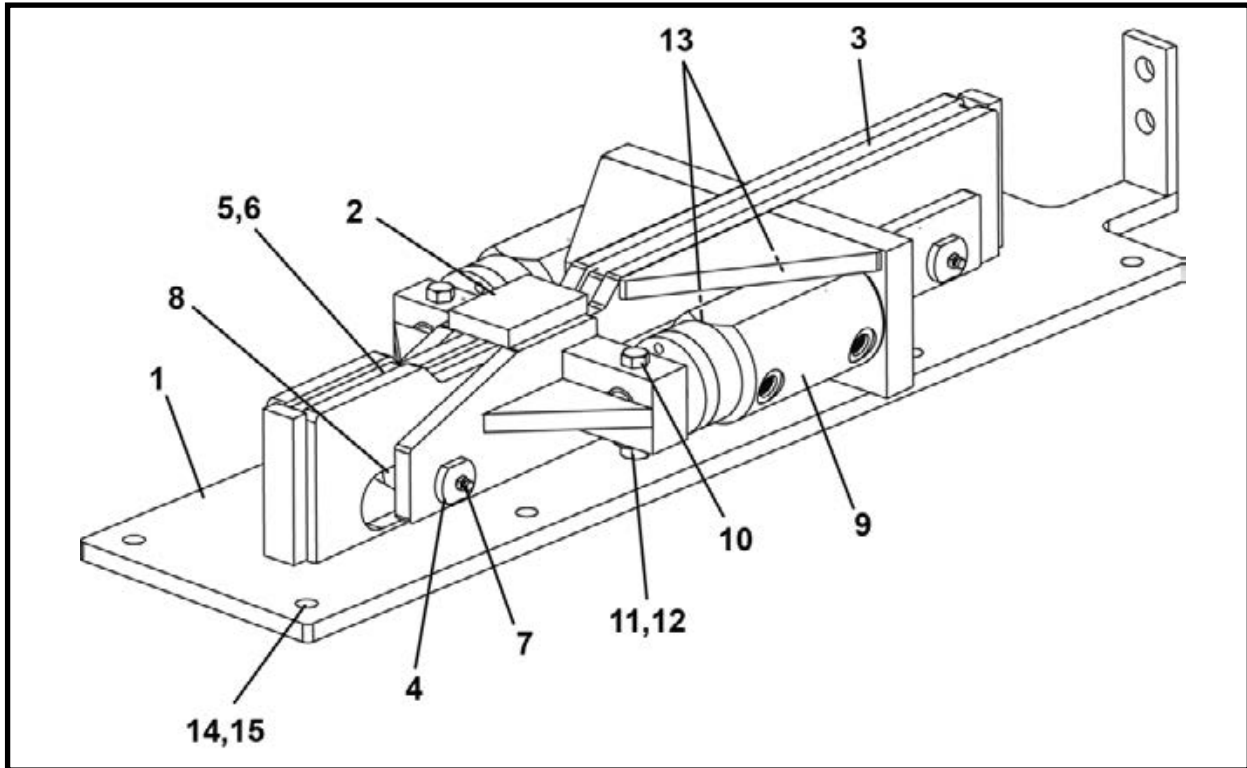


ITEM	QTY	PART NO.	DESCRIPTION
0		061404A	HYD DIRT WING CONVERSION, 48S
1*	2	014695A	DIRT WING ASSEMBLY, Short - CW
2	4	A10313A-022	HOSE ASSEMBLY, 3/8 x 22
3	4	A10313A-017	HOSE ASSEMBLY, 3/8 x 17
4	4	P0300-602	FITTING, 06MFOR-06MFOR-06FFORX
5	2	P0300-603	FITTING, 06MFOR-06FFORX90
6	2	P0300-581	FITTING, 6MFFOR-6MFFOR-BKHD
7	8	P0300-355	FITTING, 06MFOR-06MB90
8	2	P0300-791	FITTING, 06MFFOR-06MFFOR-BKHD-06MFFOR
9	2	A10313A-094	HOSE ASSEMBLY, 3/8 x 94
10	2	A10079A-104	HOSE ASSEMBLY, 3/8 x 104
11	16	P0001-08-004	BOLT, Hex 1/2 UNC x 1
12	16	P0040-008	WASHER, Hardened Flat 1/2
13	1	061406P	BAR, Track Riser Left 48S-D
14	1	061405P	BAR, Track Riser Right 48S-D

\* Refer to this section for parts information.

**IMPORTANT:** This option requires the use of a 360 dirt bucket:  
 360 Dirt Bucket F09604F00 or 360 Ext Dirt Bucket F19210F00.

**HYDRAULIC DIRT WING (Short - CW) ASSEMBLY, 014695A**  
**TBM 420D**

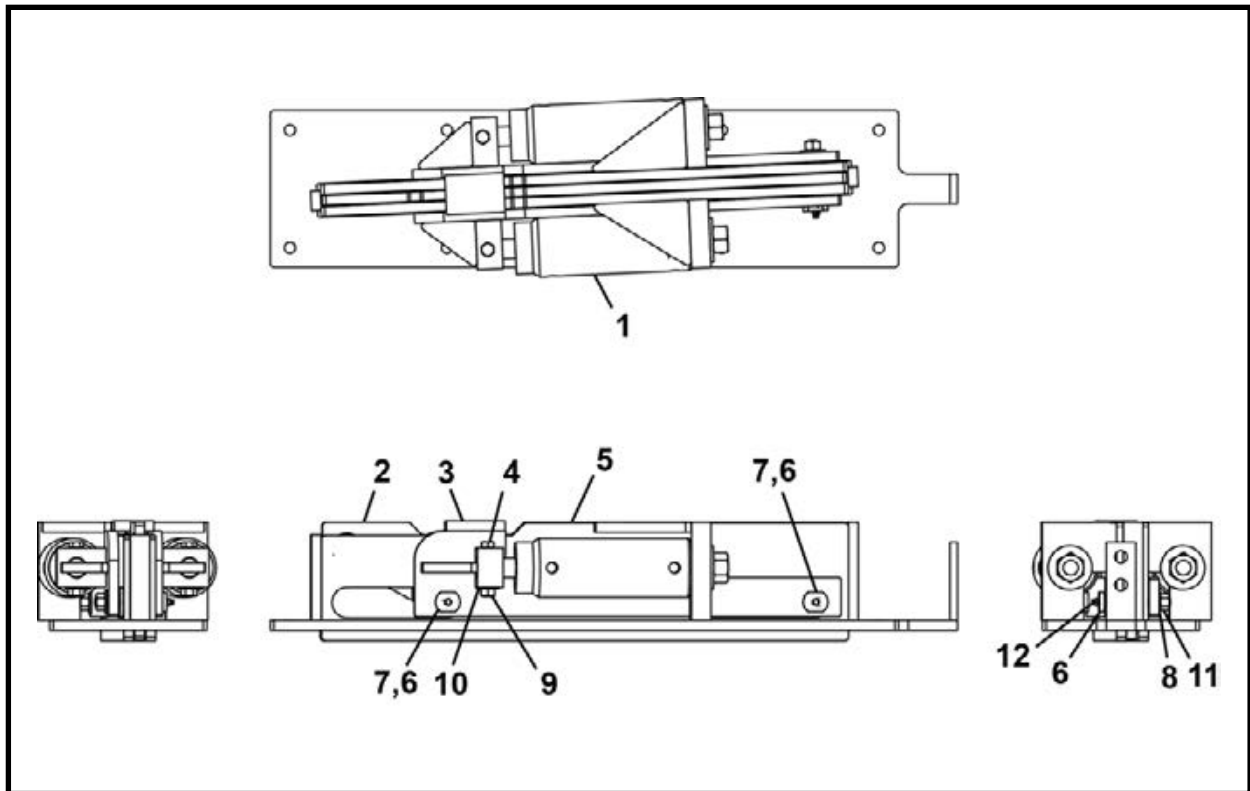


ITEM	QTY	PART NO.	DESCRIPTION
0	1	014695A	DIRT WING ASSEMBLY, Short - CW
1	1	014687A	BRACKET, Short CW
2	1	011561A01	THRUST BAR
3	1	011586P01	WING
4	2	007239P00	PIN, Axle
5	2	P0040-008	WASHER, Hardened Flat 1/2
6	2	P0015-08-000	NUT, Lock 1/2 UNC
7	2	P0063-001	FITTING, Grease Straight 1/4
8	6	007240P00	ROLLER
9*	2	010747A00	CYLINDER ASSEMBLY
10	2	P0001-07-010	SCREW, Hex Head Cap 7/16 UNC x 2.5
11	2	P0003-07-000	NUT, Hex 7/16 UNC
12	2	P0040-007	WASHER, Hardened Flat 7/16
13	4	P0300-027	PLUG, 06MB-PLUG
14**	8	P0001-08-004	BOLT, Hex 1/2 UNC x 1
15**	8	P0040-008	WASHER, Flat

\* Refer to section 10, Cylinders for parts information.

\*\* Not part of 014695A assembly.

**HYDRAULIC DIRT WING (Mid - CW) ASSEMBLY, 019083A  
TBM 480D**

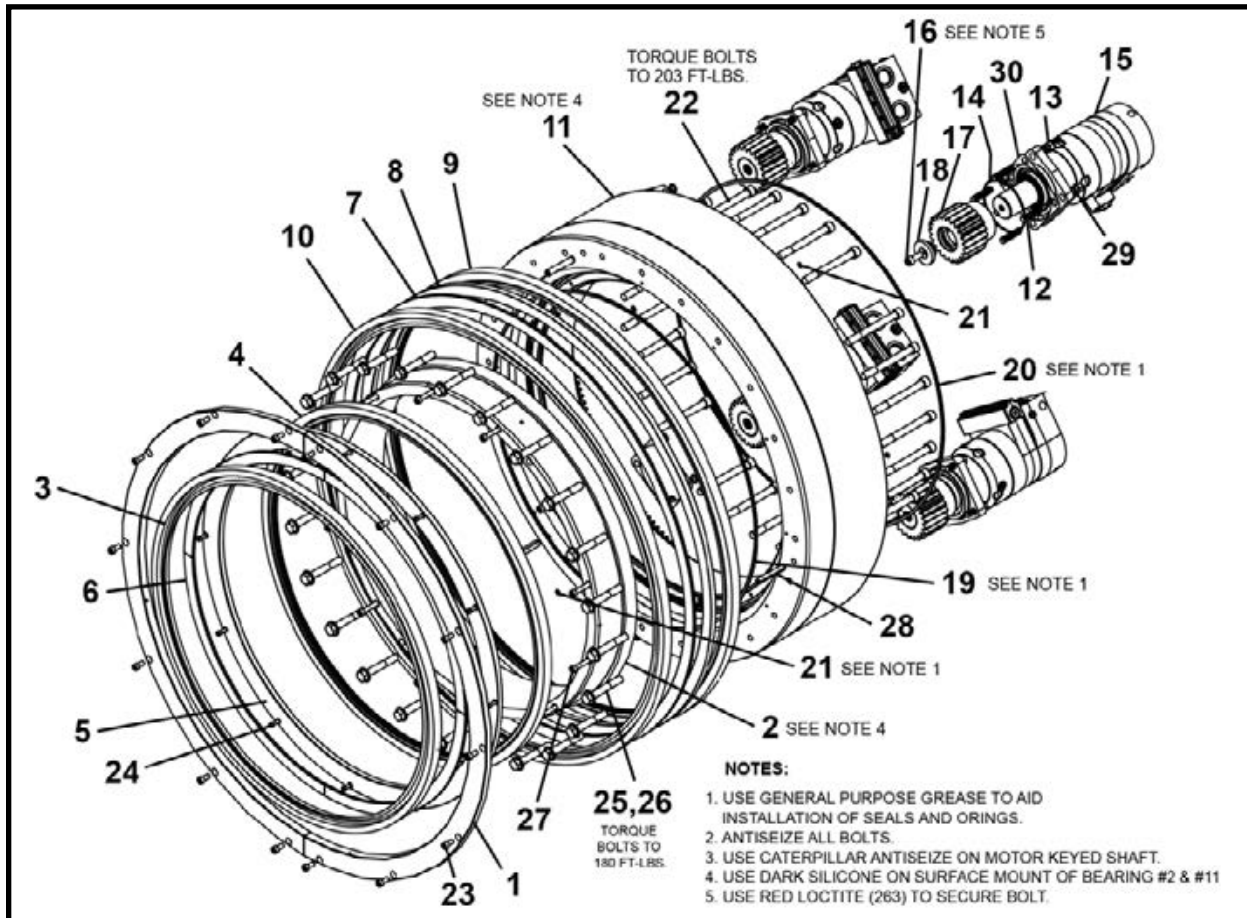


ITEM	QTY	PART NO.	DESCRIPTION
0	1	019083A	DIRT WING ASSEMBLY, Mid - CW
1*	2	014603A00	CYLINDER, Dirt Wing
2	1	014644P00	BLADE
3	1	014632A00	THRUST BAR
4	2	P0001-07-010	SCREW, Hex Head Cap 7/16 UNC x 2.5
5	1	019084A	BRACKET, Mid CW
6	2	007239P00	PIN, Axle
7	6	007240P00	ROLLER
8	2	P0040-008	WASHER, Hardened Flat 1/2
9	2	P0003-07-000	NUT, Hex 7/16 UNC
11	2	P0015-08-000	NUT, Lock 1/2 UNC
12	2	P0063-001	FITTING, Grease Straight 1/4

\* Refer to section 10, Cylinders for parts information.

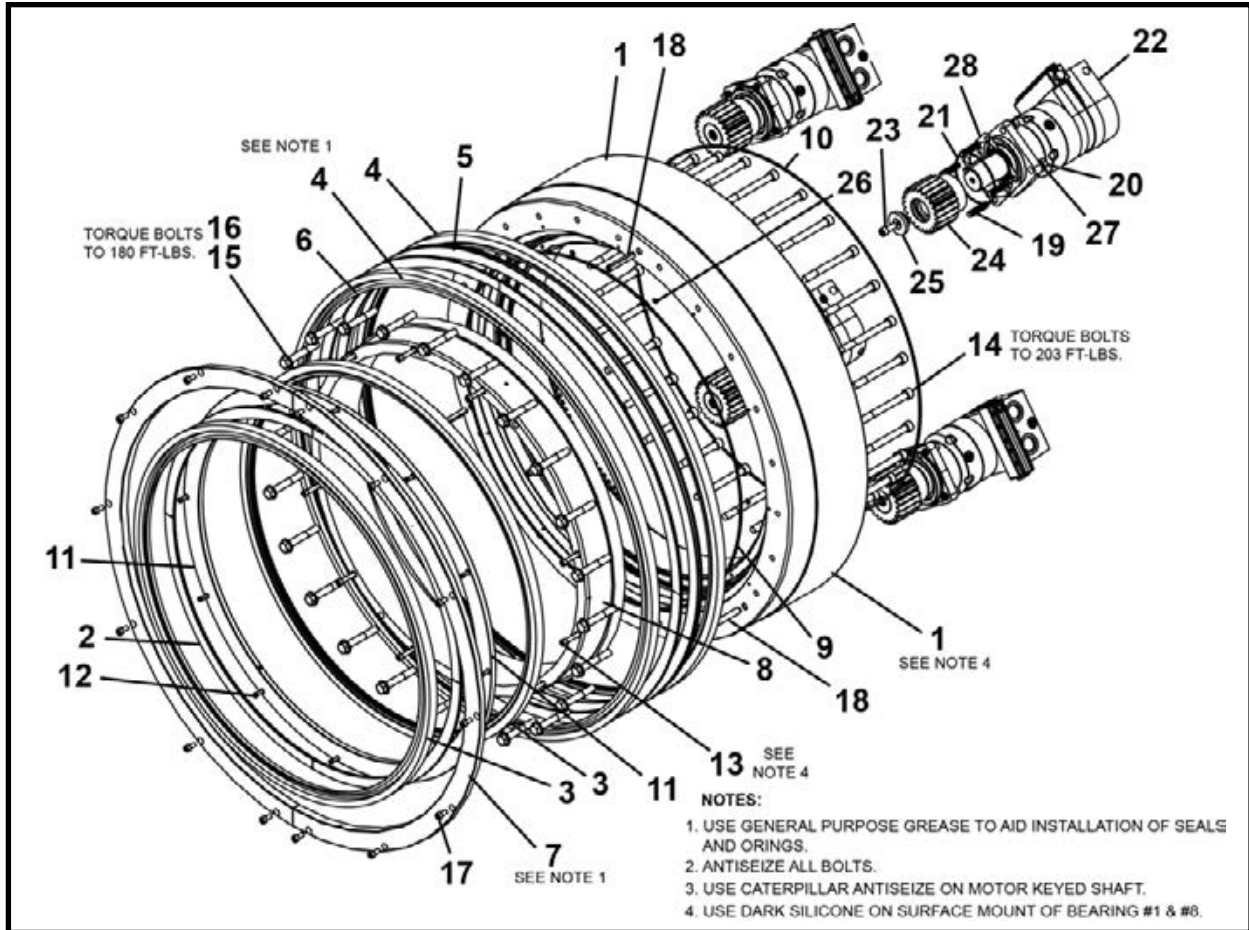
## **NOTES**

**DRIVE ASSEMBLY, 032301A  
TBM 48SC-D**



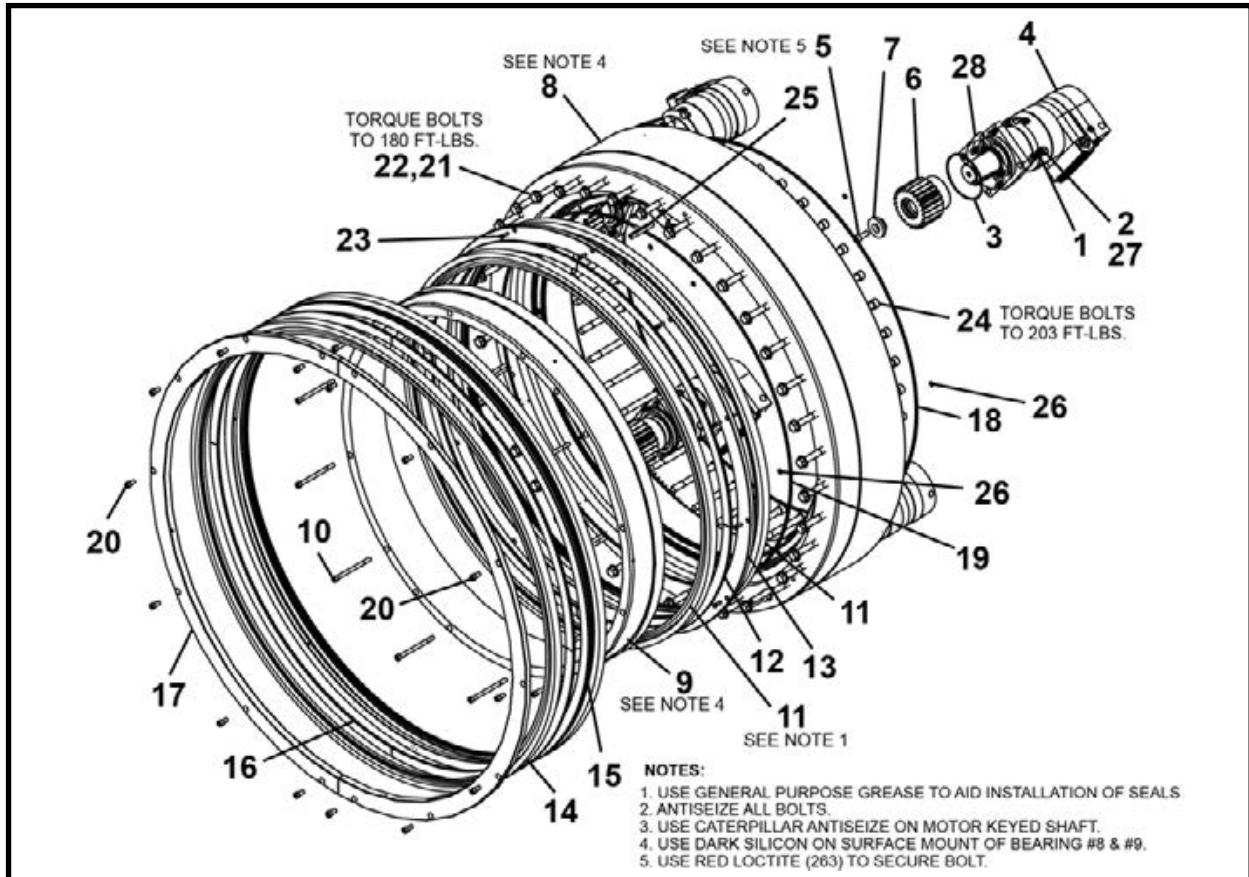
ITEM	QTY	PART NO.	DESCRIPTION
0	1	032301A	DRIVE ASSEMBLY -48S-D
1	1	032309P	PLATE, Seal Retainer
2	1	032311P	RING, Inner Seal
3	1	P0080-046A	SEAL, TBM
4	1	P0080-046B	SEAL, D7
5	1	032310P	PLATE, Seal Retain/Lantern Ring
6	4	032315P	SPACER, Inner Seal
7	4	A09670P	RING, ID Lantern Spacer
8	1	A09668P	RING, Lantern ID
9	1	P0080-061A	SEAL, D7
10	1	P0080-061B	SEAL, TBM
11	1	P0065-312-048SC	BEARING
12	16	P0025-005	STUD, 1/2 UNC x 2.25
13	16	P0003-08-000	NUT, Hex 1/2 UNC
14	4	P0085-249	ORING
15.1	4	P0304-360	MOTOR, 30HP (SN F32300F01 & 02) (See Section 8, Motors)
15.2	4	P0304-363	MOTOR, 30HP (SN F32300F03 & After) (See Section 8, Motors)
16	4	P0031-08-005A	SCREW, Socket Head Cap 1/2 UNF x 1.25
17	4	032162P	PINION
18	4	032163P	KEEPER, Pinion
19	1	P0088-274	ORING, .210 x 32.50 ID
20	1	P0088-275	ORING, .210 x 33.38 ID
21	12	P0085-012	ORING
22	22	P0031-10-024	SCREW, Socket Head Cap 5/8 UNC x 6
23	14	P0031-06-003	SCREW, Socket Head Cap 3/8 UNC x .75
24	12	P0031-04-003	SCREW, Socket Head Cap 1/4 UNC x .75
25	24	P0001-10-016	BOLT, Hex 5/8 UNC x 4
26	24	P0040-010	WASHER, Hardened Flat 5/8
27	12	P0031-06-020	SCREW, Socket Head Cap 3/8 UNC x 5
28	3	P0049-181	PIN, Spring Roll 1/2 x 3.25
29	16	P0043-003	WASHER, Nord-Lock 1/2
30	4	P0304-341A	SHIM, Motor

**DRIVE ASSEMBLY, 032167A  
TBM 420D**



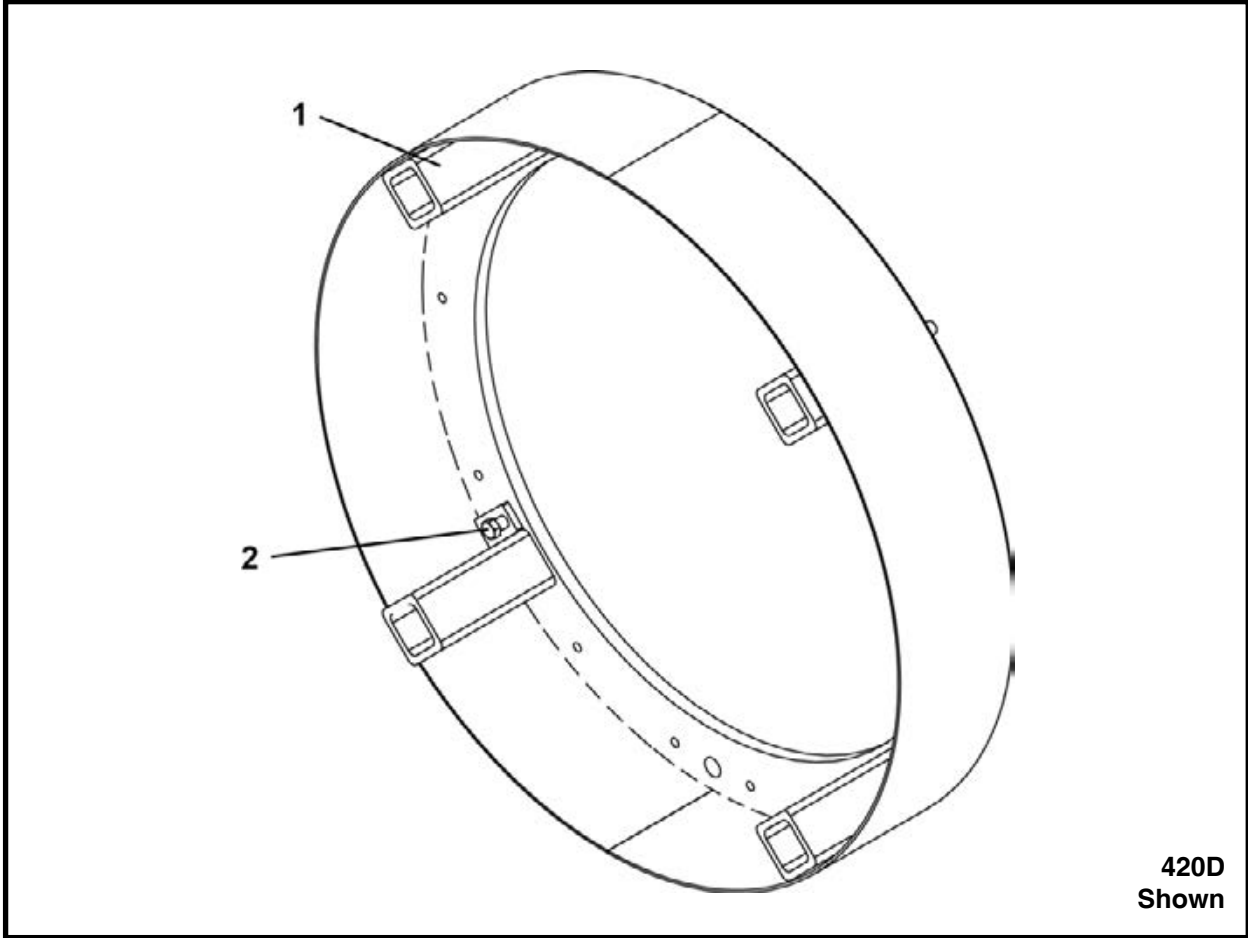
ITEM	QTY	PART NO.	DESCRIPTION
0	1	032167A	DRIVE ASSEMBLY -420D
1	1	P0065-312-0420	BEARING
2	4	032164P	SPACER, Inner Seal
3	1	P0080-067	KIT, Seal 915 mm
4	1	P0080-068	KIT, Seal 1135 mm
5	1	032155P	RING, Lantern OD
6	4	032165P	SPACER, Outer Seal
7	1	032153P	PLATE, Seal Retainer
8	1	032152P	RING, Inner Seal
9	1	P0088-268	ORING .210 x 35.63 ID
10	1	P0088-269	ORING .210 x 36.75 ID
11	1	032156P	PLATE, Seal Retain/Lantern Ring
12	12	P0031-04-003	SCREW, Socket Head Cap 1/4 UNC x .75
13	12	P0031-06-020	SCREW, Socket Head Cap 3/8 UNC x 5
14	26	P0031-10-024	SCREW, Socket Head Cap 5/8 UNC x 6
15	24	P0040-010	WASHER, Hardened Flat 5/8
16	24	P0001-10-016	BOLT, Hex 5/8 UNC x 4
17	14	P0031-06-003	SCREW, Socket Head Cap 3/8 UNC x .75
18	3	P0049-181	PIN, Spring Roll 1/2 x 3.25
19	16	P0025-005	STUD, 1/2 UNC x 2.25
20	16	P0003-08-000	NUT, Hex 1/2 UNC
21	4	P0085-249	ORING
22.1	4	P0304-360	MOTOR, 30HP (SN F32300F01) (See Section 8, Motors)
22.2	4	P0304-363	MOTOR, 30HP (SN F32300F02 & After) (See Section 8, Motors)
23	4	P0031-08-005A	SCREW, Socket Head Cap 1/2 UNF x 1.25
24	4	032162P	PINION
25	4	032163P	KEEPER, Pinion
26	12	P0085-012	ORING
27	16	P0043-003	WASHER, Nord-Lock 1/2
28	4	P0304-341A	SHIM, Motor

**DRIVE ASSEMBLY, 032349A  
TBM 480D**



ITEM	QTY	PART NO.	DESCRIPTION
0	1	032349A	ASSY, DRIVE-480D
1	20	P0025-005	BOLT, 1/2 UNC x 2.25
2	20	P0003-08-000	NUT, Hex 1/2 UNC
3	5	P0085-249	ORING
4.1	4	P0304-360	MOTOR, 30HP (SN F32348F01 & 02) (See Section 8, Motors)
4.2	4	P0304-363	MOTOR, 30HP (SN F32348F03 & After) (See Section 8, Motors)
5	5	P0031-08-005A	SCREW, Socket Head Cap 1/2 UNF x 1.25
6	5	032162P	PINION
7	5	032163P	KEEPER, Pinion
8	1	P0065-312-0480	BEARING
9	1	032359P	RING, Inner Seal
10	12	P0031-06-020	SCREW, Socket Head Cap 3/8 UNC x 5
11	1	P0080-069	KIT, Seal - TBM
12	4	032363P	SPACER, Inner Seal
13	1	032358P	PLATE, Seal Retain/Lantern Ring
14	1	P0080-070	KIT, Seal TBM
15	1	032361P	RING, OD Lantern
16	4	032362P	SPACER, Outer Seal
17	1	032357P	PLATE, Seal Retainer
18	1	P0088-271	ORING, .210 X 43.25 ID
19	1	P0088-272	ORING, .210 X 42.63 ID
20	14	P0031-06-003	SCREW, Socket Head Cap 3/8 UNC x .75
21	36	P0040-010	WASHER, Hardened Flat 5/8
22	36	P0001-10-016	BOLT, Hex 5/8 UNC x 4
23	12	P0031-04-003	SCREW, Socket Head Cap 1/4 UNC x .75
24	35	P0031-10-024	SCREW, Socket Head Cap 5/8 UNC x 6
25	3	P0049-181	PIN, Spring Roll 1/2 x 3.25
26	12	P0085-012	ORING
27	20	P0043-003	WASHER, Nord-Lock 1/2
28	5	P0304-341A	SHIM, Motor

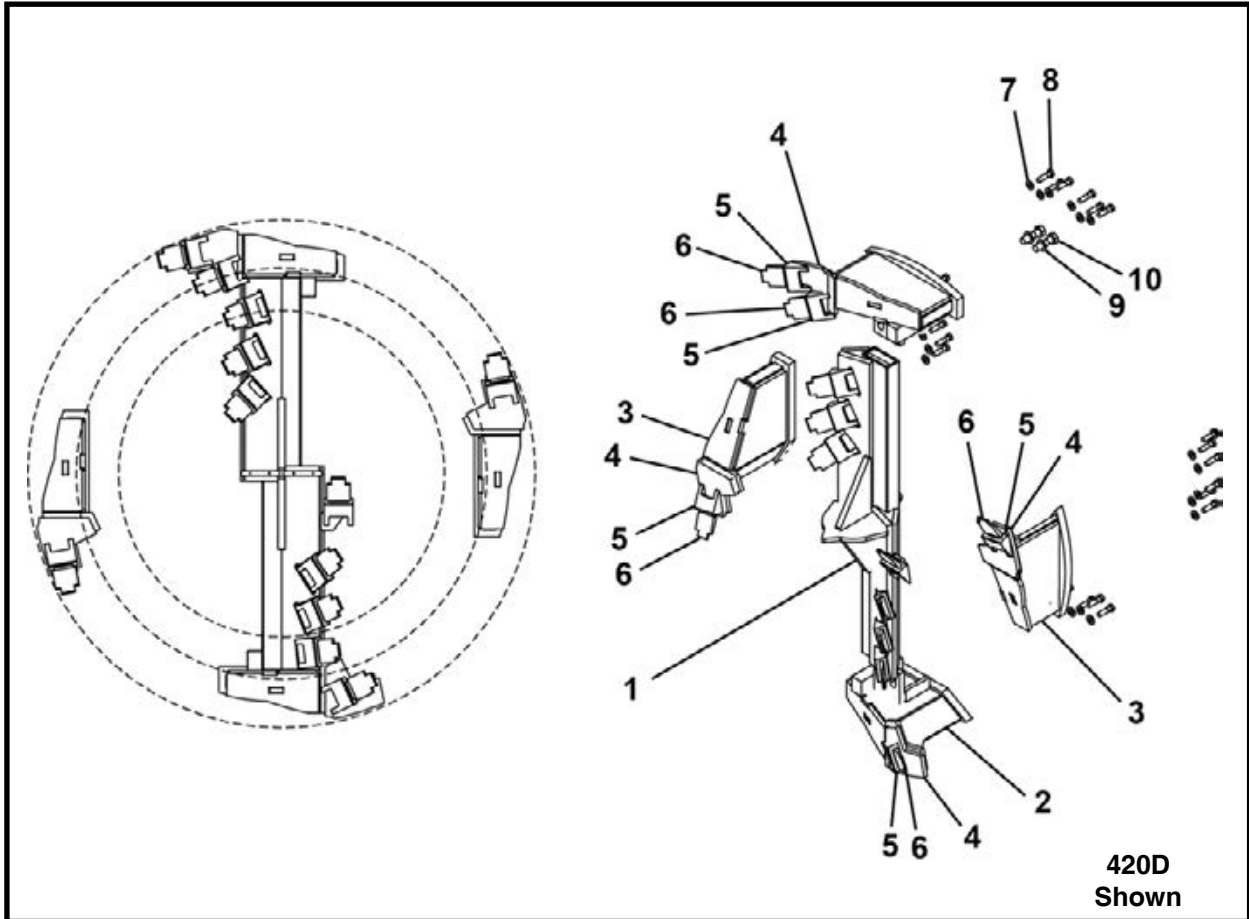
**BELL END RING**  
**TBM 48SC-D - 420D - 480D**



ITEM	QTY	PART NO.	DESCRIPTION
0.1	1	014000A01	STEEL CASING ADAPTER, 48SC-D
0.2	1	023710A00	BELL END RING, 420D
0.3	1	023810A00	BELL END RING, 480D
1*	4	019370A	BLOCK, Spacer
2*	4	P0001-12-006	BOLT, Hex 3/4 UNC x 1.5

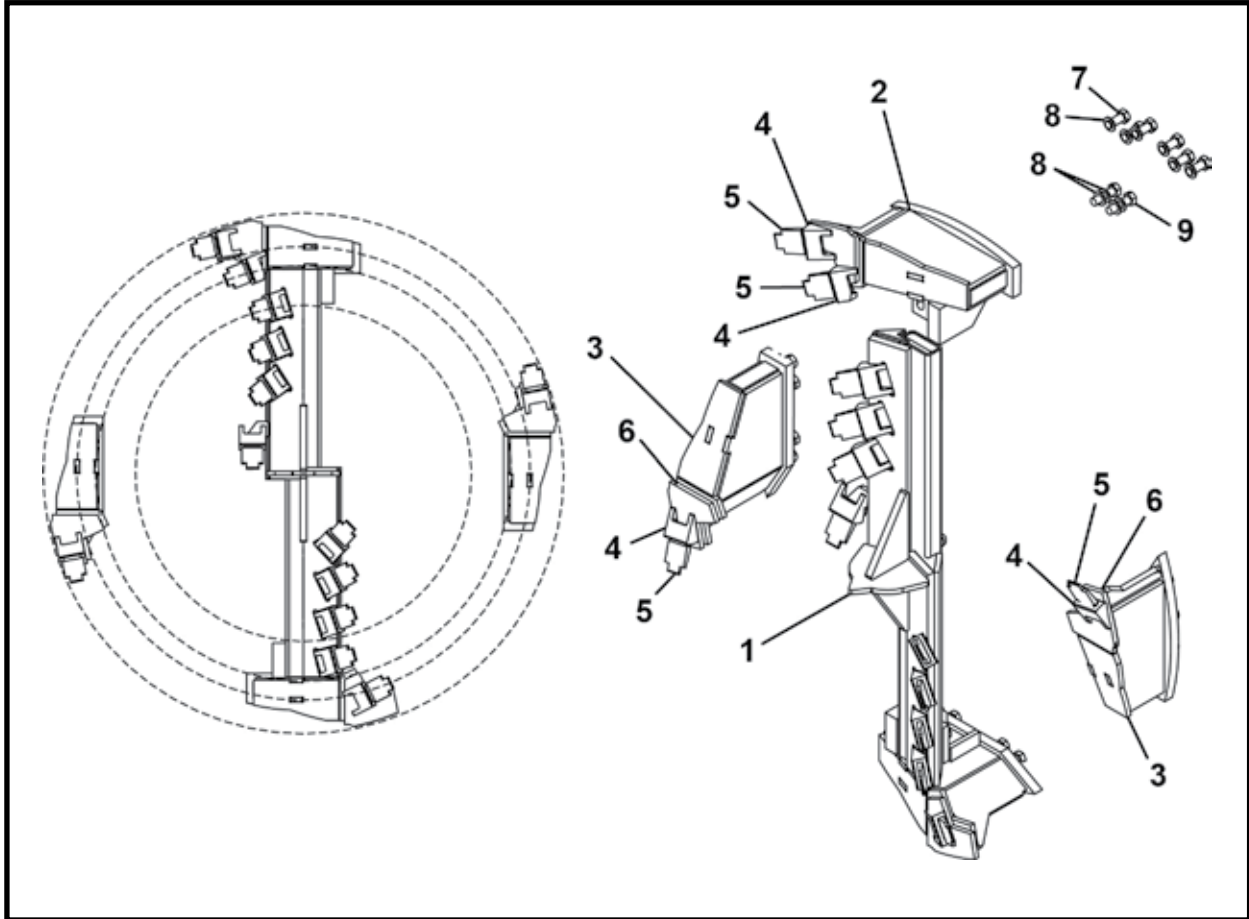
\* Used with 420D and 480D

**DIRT BAR ASSEMBLY**  
TBM 48SC-D - 420D



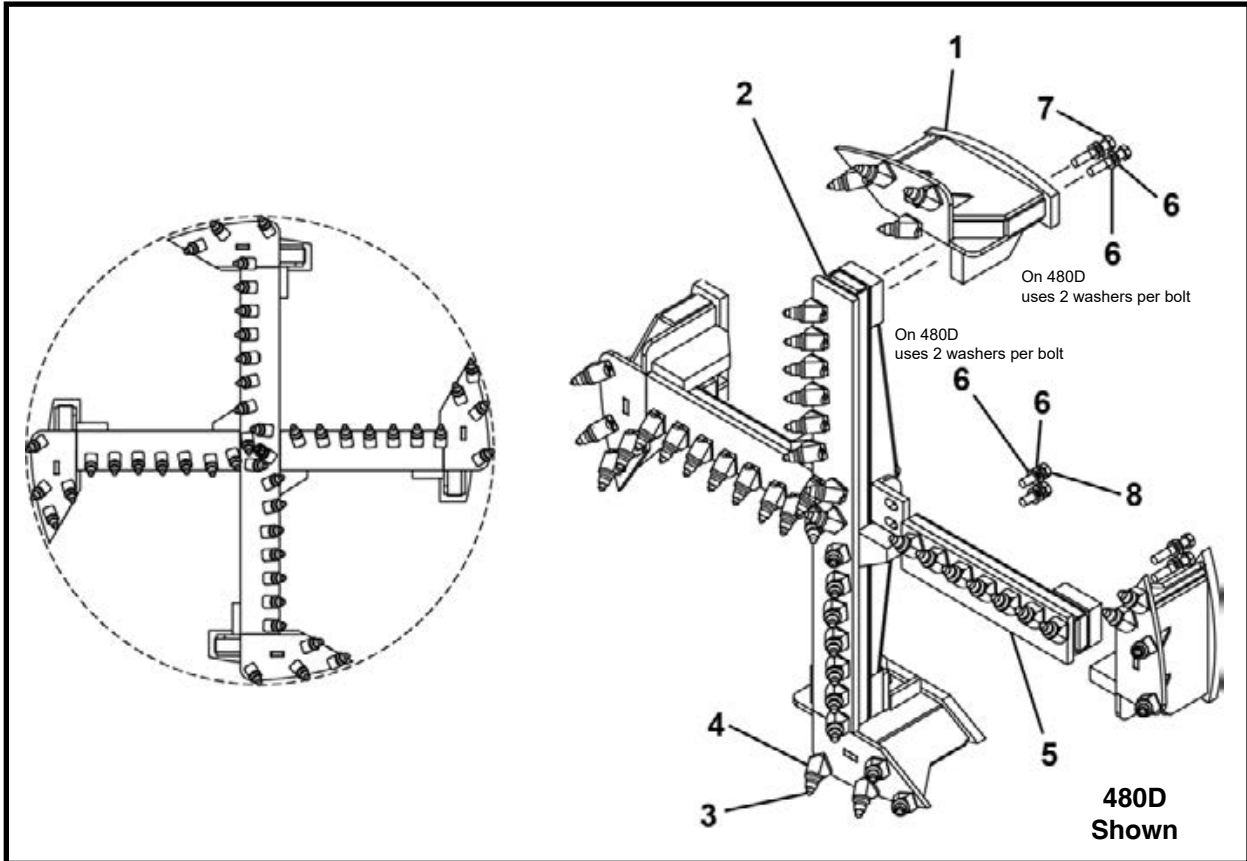
ITEM	QTY	48SC-D PART NO.	420D PART NO.	DESCRIPTION
0	1	031619A	031517A	DIRT BAR ASSEMBLY
1	1	006321A01	031515A	CUTTER BAR (Includes items 1a - 1c)
1a	6/7	P0050-001	P0050-001	TOOTH, Cutter
1b	6/7	P0051-001	P0051-001	POCKET, Tooth
1c	1	P0001-05-003	P0001-05-003	BOLT, Target 5/16 UNC x .75
2	2	031518A	031518A	MOUNT, Cutter Bar
3	2	031525A	031525A	MOUNT, Gauge Cutter
4	4	031524P	031524P	PLATE, Cutter Bar Mount
5	5	P0051-001	P0051-001	POCKET, Tooth
6	5	P0050-001	P0050-001	TOOTH, Cutter
7	24	P0040-008	P0040-008	WASHER, Hardened Flat 1/2
8	24	P0001-08-007	P0001-08-007	BOLT, Hex 1/2 UNC x 1.75
9	4	P0040-012	P0040-012	WASHER, Hardened Flat 3/4
10	4	P0001-12-010	P0001-12-010	BOLT, Hex 3/4 UNC x 2.5

**DIRT BAR ASSEMBLY, 031717A**  
**TBM 480D**



ITEM	QTY	PART NO.	DESCRIPTION
0	1	031717A	DIRT BAR ASSEMBLY
1	1	031716A	CUTTER BAR (Includes items 1a - 1c)
1a	8	P0050-001	TOOTH, Cutter
1b	8	P0051-001	POCKET, Tooth
1c	1	P0001-05-003	BOLT, Target 5/16 UNC x .75
2	2	031718A	MOUNT, Dirt Bar
3	2	031725A	MOUNT, Gauge Cutter
4	5	P0051-001	POCKET, Tooth
5	5	P0050-001	TOOTH, Cutter
6	4	031524P	PLATE, Cutter Bar Mount
7	24	P0001-12-007	BOLT, Hex 3/4 UNC x 1.75
8	32	P0040-012	WASHER, Hardened Flat 3/4
9	4	P0001-12-010	BOLT, Hex 3/4 UNC x 2.5

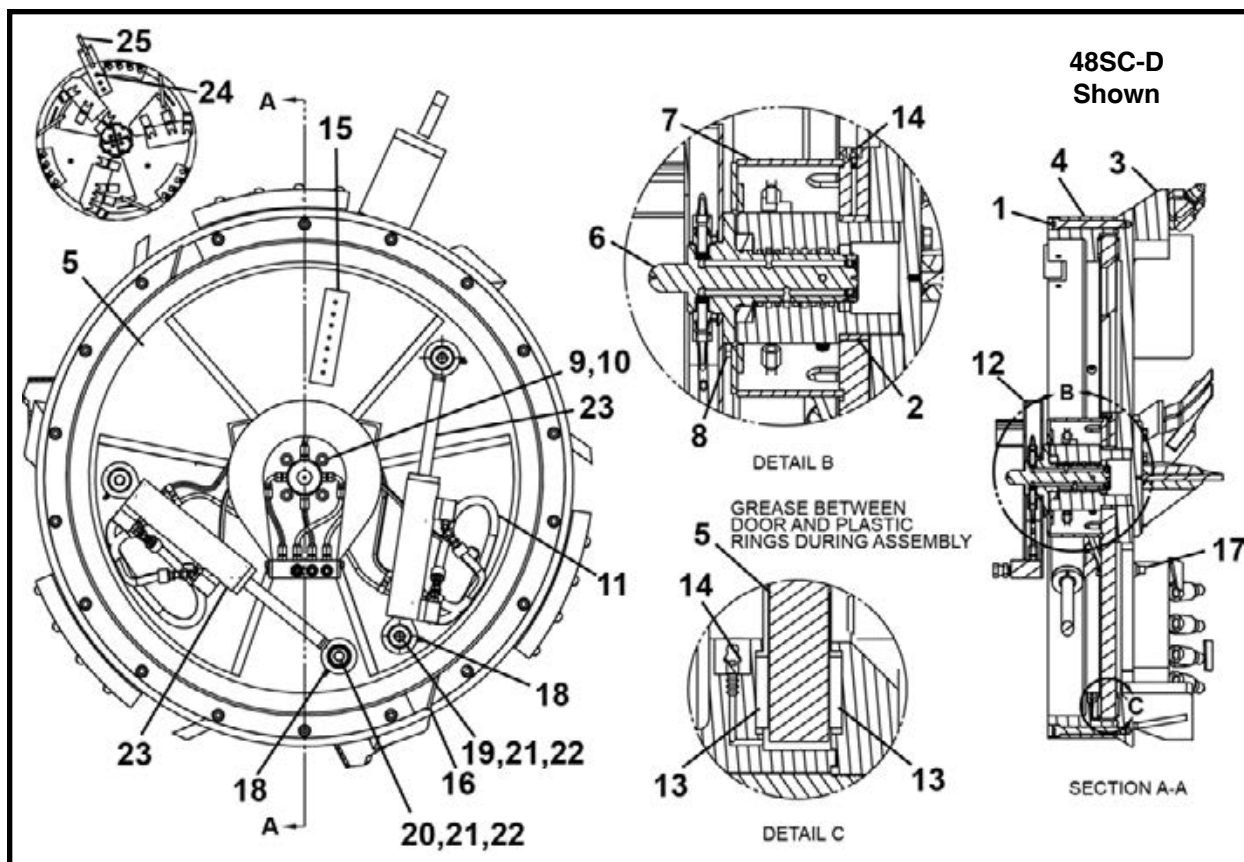
**QUAD BAR ASSEMBLY**  
**TBM 48SC-D - 420D - 480D**



ITEM	QTY	48SC-D PART NO.	420D PART NO.	480D PART NO.	DESCRIPTION
0	1	031636A	031536A	031736A	QUAD BAR ASSEMBLY
1	4	031535A	031535A	031662A	MOUNT, Quad Bar
2	1	031637A	031537A	031658A	CUTTER BAR, Carbide
3	47/50/55	P0050-011	P0050-011	P0050-011	CUTTER BIT, Conical
4	47/50/55	P0051-004	P0051-004	P0051-004	HOLDER, Tooth
5	2	031644A	031538A	031663A	QUAD BAR
6	12/12/24	P0040-012	P0040-012	P0040-012	WASHER, Hardened Flat 3/4
7	8	P0001-12-016	P0001-12-016	P0001-12-016	BOLT, Hex 3/4 UNC x 4
8	4/4/4	P0001-12-010	P0001-12-010	P0001-12-010	BOLT, Hex 3/4 UNC x 2.5

## **NOTES**

## CLOSED FACE ASSEMBLY TBM 48SC-D - 420D



ITEM	QTY	48SC-D PART NO.	420D PART NO.	DESCRIPTION
0	1	F24665F	F27965F	CLOSED FACE ASSEMBLY
1	18	P0031-10-022	P0031-10-024	SCREW, Socket Head Cap 5/8 UNC x 5.5 / 6
2	1	P0066-125	P0066-125	BUSHING
3*	1	024667A	027967A	FRONT FACE ASSEMBLY
4	1	024669P	027931P	RING, Rear
5	1	024666P	027966P	DOOR, Rotary
6*	1	028671A	028671A	ROTARY HUB ASSEMBLY
7	1	028676A	028676A	COVER, Swivel
8	4	P0001-06-002	P0001-06-002	BOLT, Hex 3/8 UNC x .5
9	4/8	P0040-006	P0040-006	WASHER, Hardened Flat 3/8
10	4/8	P0001-06-003	P0001-06-003	BOLT, Hex 3/8 UNC x .75
11**	1	023986A	023986A	HYDRAULIC ASSEMBLY
12	1	018670A00	018670A00	GUARD, Conveyor & Rotary
13	10/12	016620P	023994P	RING, Plastic Wear
14	6	P0063-001	P0063-001	FITTING, Grease - Straight
15	1	023763P00	023763P00	PLATE, Target Bar
16	2	027558P	027558P	SCRAPER, Outside
17	2	P0416-003	P0416-003	PLUG, Square Head 1/2
18	4	P0063-003	P0063-003	FITTING, Grease - 90 Degree
19	2	015098P	015098P	MOUNT, Cylinder Barrel
20	2	028678P	028678P	PIN, Cylinder Mounting
21	4	018718P00	018718P00	WASHER
22	4	P0001-08-006	P0001-08-006	BOLT, Hex 1/2 UNC x 1.5
23***	2	015090A	015085A	CYLINDER ASSEMBLY
24	3	P0031-12-008	P0031-12-008	SCREW, Cap 3/4 x 2
25	1	027509A	027509A	LIFT, Closed Face

\* Refer to this section for parts information. \*\* Refer to section 6, Hydraulics for parts information.

\*\*\* Refer to section 10, Cylinders for parts information.

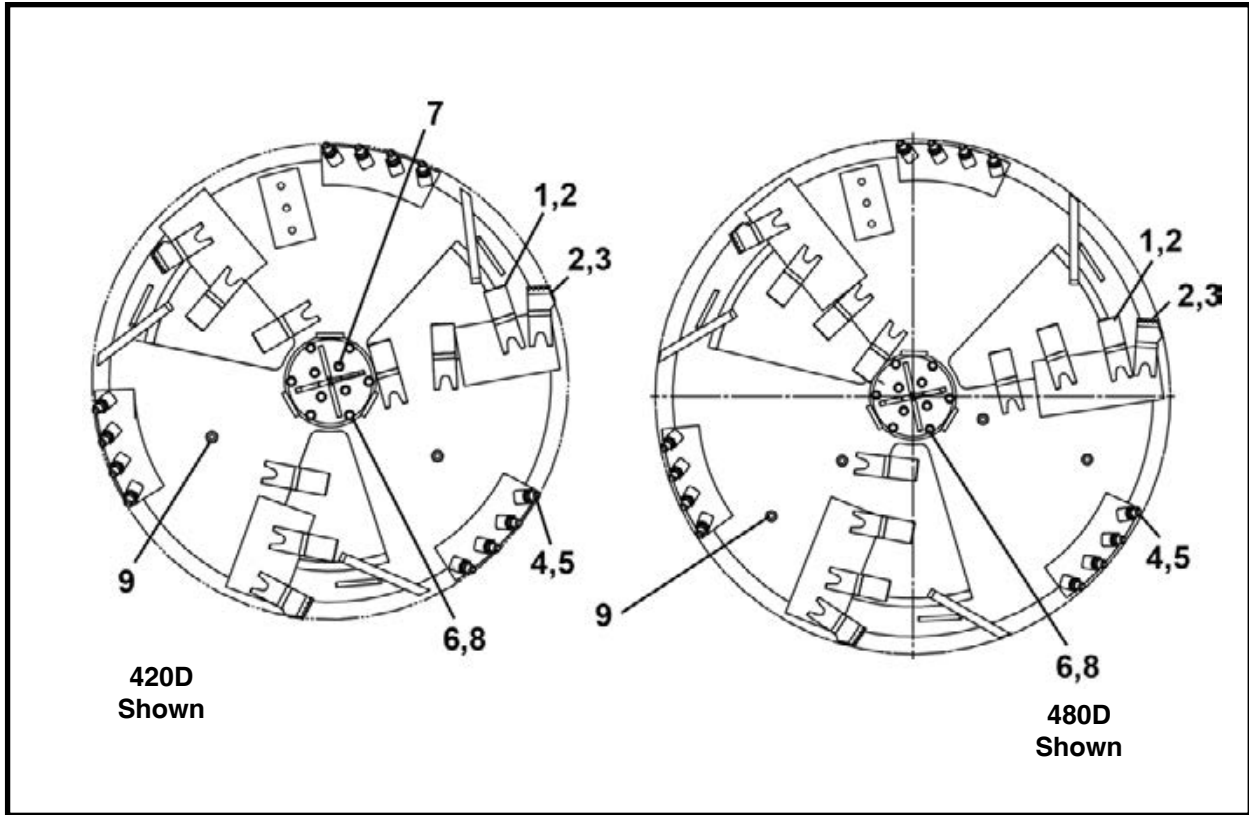
**CLOSED FACE ASSEMBLY, F28565F  
TBM 480D**



ITEM	QTY	PART NO.	DESCRIPTION
0	1	F28565F	CLOSED FACE ASSEMBLY
1	1	028537P	DOOR, Rotary
2	18	P0031-10-022	SCREW, Socket Head Cap 5/8 UNC x 5.5
3	1	023763P00	PLATE, Target Bar
4*	1	028552A	FRONT FACE ASSEMBLY
5	16	025647P	RING, Plastic Wear
6	8	P0063-001	FITTING, Grease - Straight
7**	1	023986A	HYDRAULIC ASSEMBLY
8*	1	028671A	ROTARY HUB ASSEMBLY
9	1	028676A	COVER, Swivel
10	1	018670A00	GUARD, Conveyor & Rotary
11	4	P0001-06-002	BOLT, Hex 3/8 UNC x .5
12	4	P0040-006	WASHER, Hardened Flat 3/8
13	4	P0001-06-003	BOLT, Hex 3/8 UNC x .75
14	1	P0066-125	BUSHING
15	4	P0416-003	PLUG, Square Head 1/2
16	1	028536P	RING, Rear
17	2	027558P	SCRAPER, Outside
18	4	018718P00	WASHER
19	2	028681P	PIN, Cylinder Mounting
20	2	P0063-003	FITTING, Grease - 90 Degree
21	4	P0001-08-006	BOLT, Hex 1/2 UNC x 1.5
22***	2	015065A	CYLINDER ASSEMBLY
23	2	028678P	PIN, Cylinder Mounting
24	3	P0031-12-008	SCREW, Cap 3/4 x 2
25	1	027509A	LIFT, Closed Face

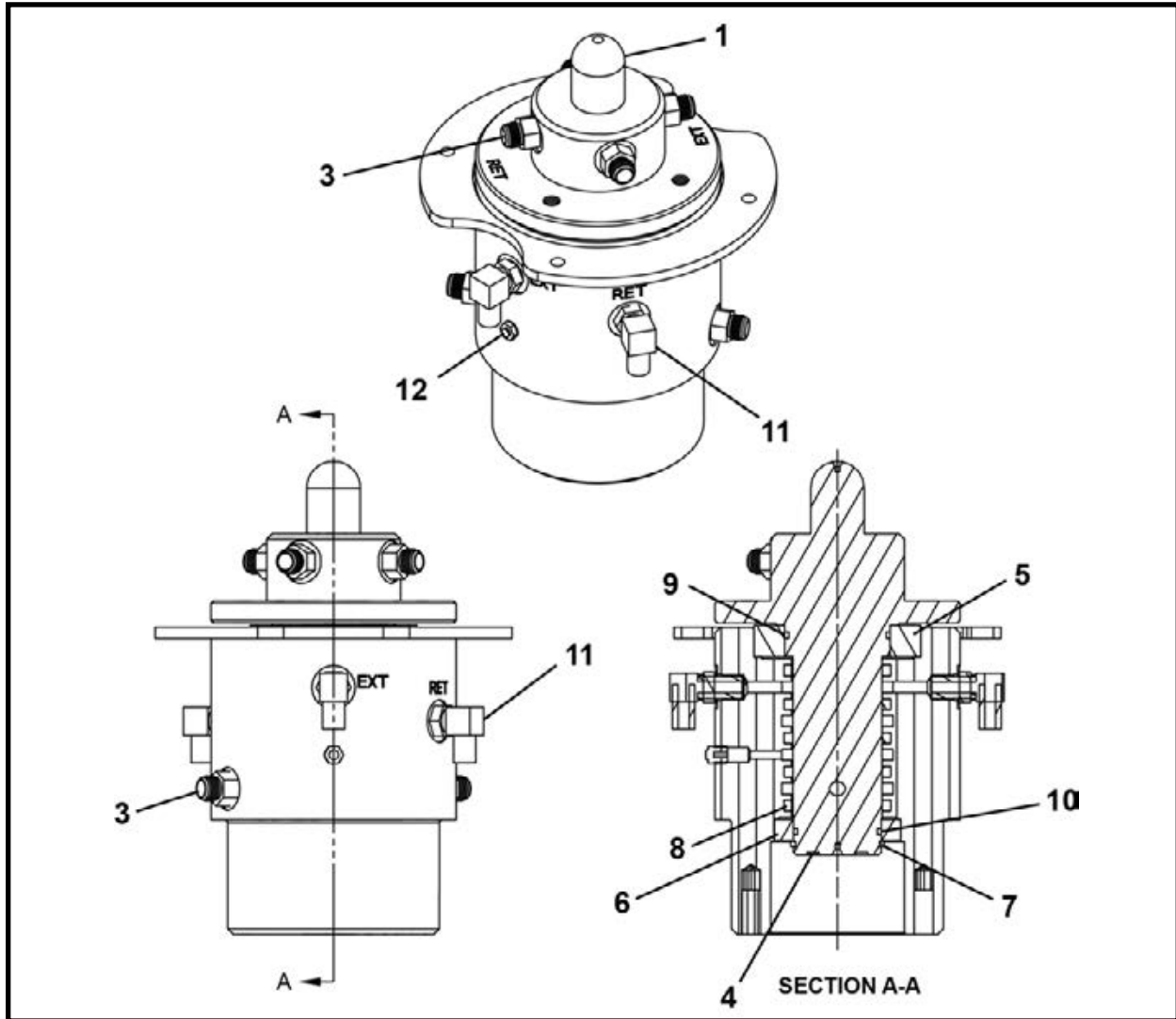
\* Refer to this section for parts information. \*\* Refer to section 6, Hydraulics for parts information.  
\*\*\* Refer to section 10, Cylinders for parts information.

**FRONT FACE ASSEMBLY**  
TBM 48SC-D - 420D - 480D



ITEM	QTY	48SC-D PART NO.	420D PART NO.	480D PART NO.	DESCRIPTION
0	1	024667A	027967A	028552A	FRONT FACE ASSEMBLY
1	7/7/9	P0050-026	P0050-026	P0050-026	TEETH, Cutter
2	10/10/12	P0051-011	P0051-011	P0051-011	POCKET, Tooth
3	3	P0050-030	P0050-030	P0050-030	TEETH, Carbide Cutter Bar
4	12	P0050-011	P0050-011	P0050-011	CUTTER BIT
5	12	P0051-004	P0051-004	P0051-004	HOLDER, Cutter Bit
6	6/10/10	P0001-08-008	P0001-08-008	P0001-08-008	BOLT, Hex 1/2 UNC x 2
7	4	P0001-08-007	-	-	BOLT, Hex 1/2 UNC x 1.75
8	10	P0040-008	P0040-008	P0040-008	WASHER, Hardened Flat 1/2
9	2/2/4	P0400-003	P0400-003	P0400-003	COUPLING, Pipe

**ROTARY HUB ASSEMBLY, 028671A**  
**TBM 48SC-D - 420D - 480D**

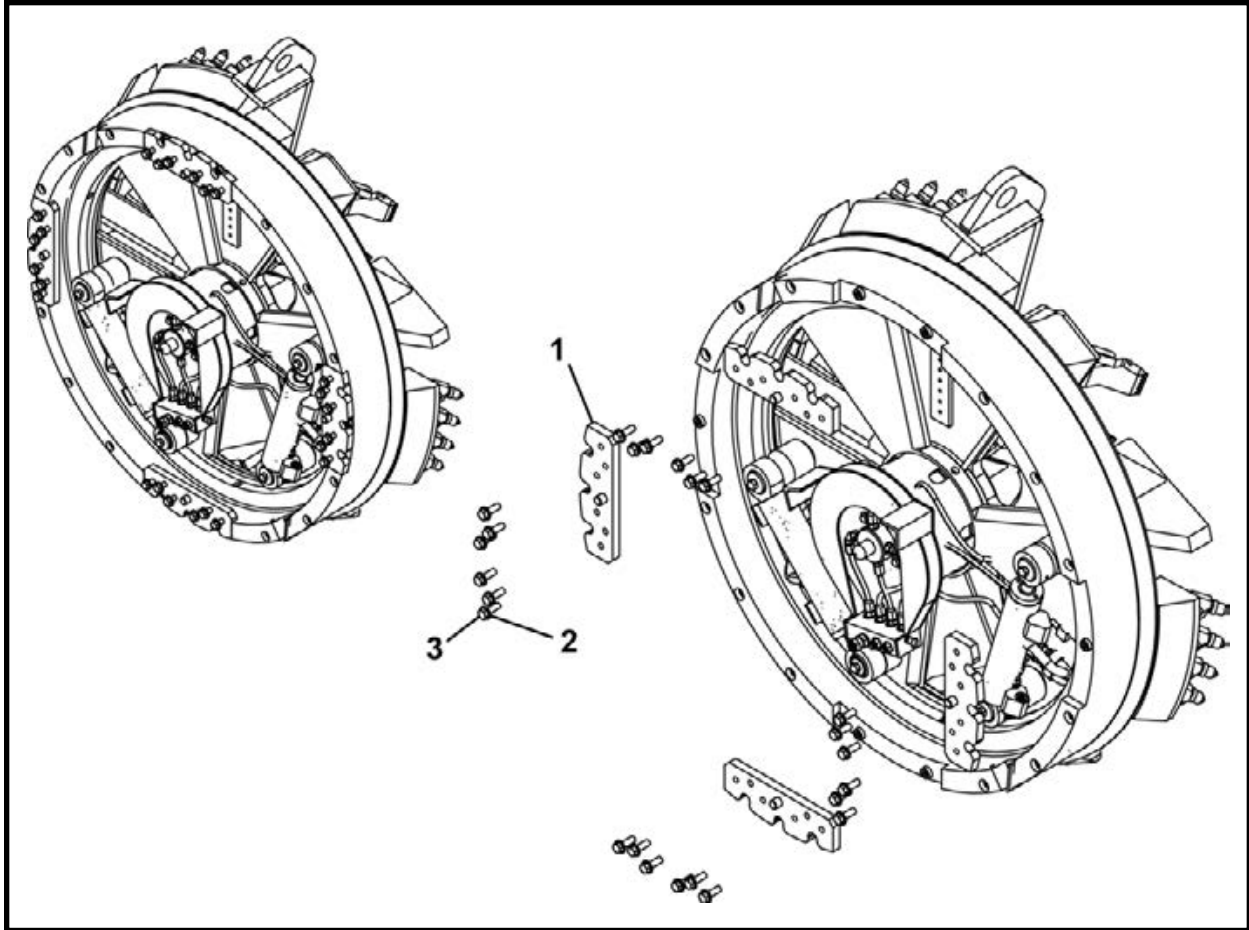


ITEM	QTY	PART NO.	DESCRIPTION
0	1	028671A	ROTARY HUB ASSEMBLY
1	1	028672P	SHAFT, Swivel
2	1	028673A	HUB, Swivel
3	6	P0300-041	FITTING, 06MJ-06MB
4	4	P0300-224	FITTING, 02MB-HHP
5	1	P0065-106	BEARING
6	1	P0065-013	BEARING
7	1	P0077-029	SNAP RING
8	5	P0080-019	SEAL, Quad
9	1	P0085-139	ORING
10	1	P0085-132	ORING
11	4	P0300-042	FITTING, 06MJ-06MB90
12	1	P0063-012	FITTING, Grease

NOTE: When replacing parts:

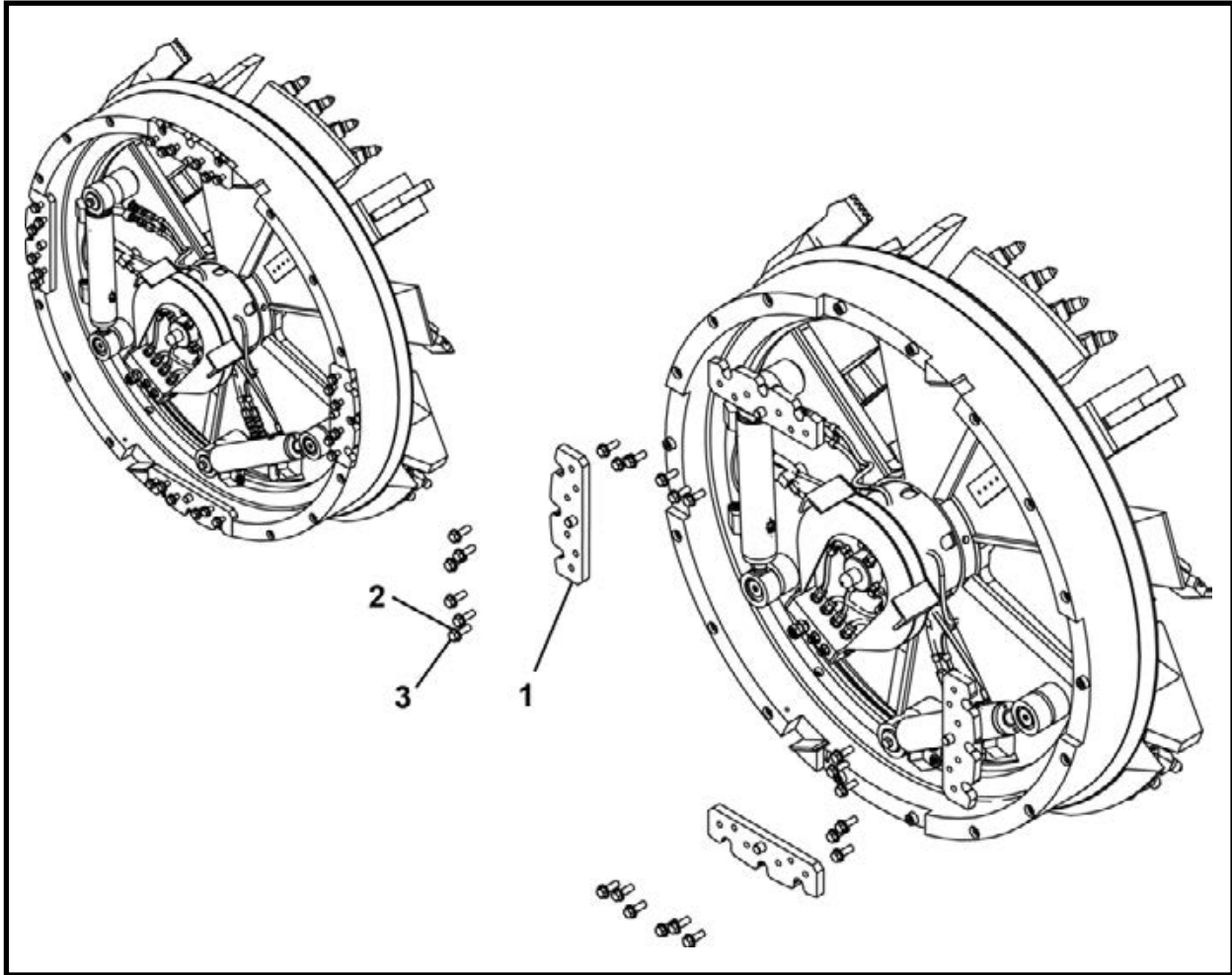
1. Pack bearings with grease before pressing into item 2.
2. Lubricate seals and shaft before assembly in item 2.
3. After shaft is in place, slide item 10 on shaft.
4. Press item 6 into housing after shaft is in place.
5. Pressure test all ports of hub to 3,000 psi.

**CLOSED FACE MOUNT ASSEMBLY, 031696A  
TBM 48SC-D**



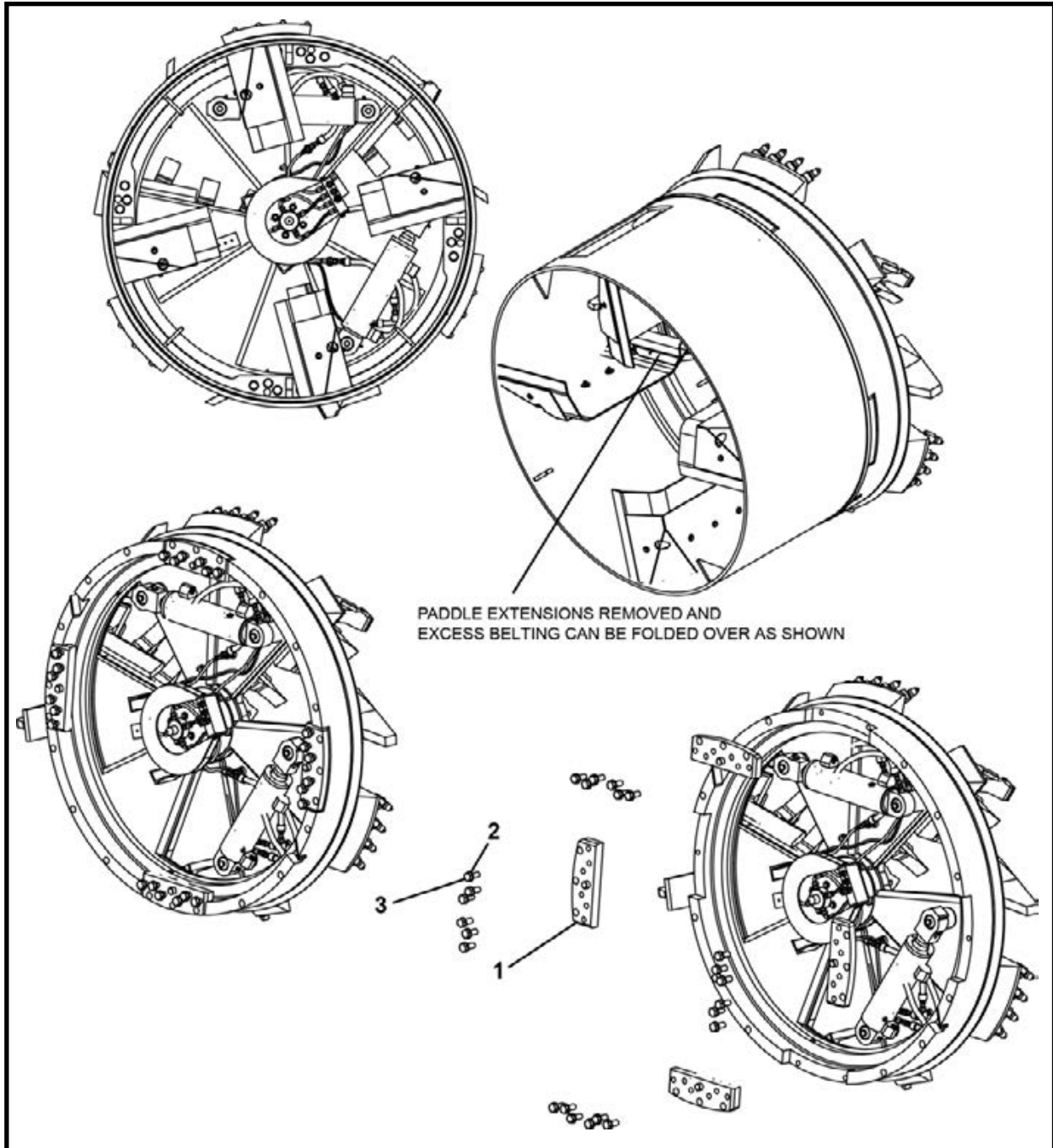
ITEM	QTY	PART NO.	DESCRIPTION
0	1	031696A	CLOSED FACE MOUNT ASSEMBLY
1	4	031695A	MOUNT, Closed Face
2	24	P0040-008	WASHER, Hardened Flat 1/2
3	24	P0001-08-006	BOLT, Hex 1/2 UNC x 1.5

**CLOSED FACE MOUNT ASSEMBLY, 031596A**  
**TBM 420D**



ITEM	QTY	PART NO.	DESCRIPTION
0	1	031596A	CLOSED FACE MOUNT ASSEMBLY
1	4	031595A	MOUNT, Closed Face
2	24	P0040-008	WASHER, Hardened Flat 1/2
3	24	P0001-08-006	BOLT, Hex 1/2 UNC x 1.5

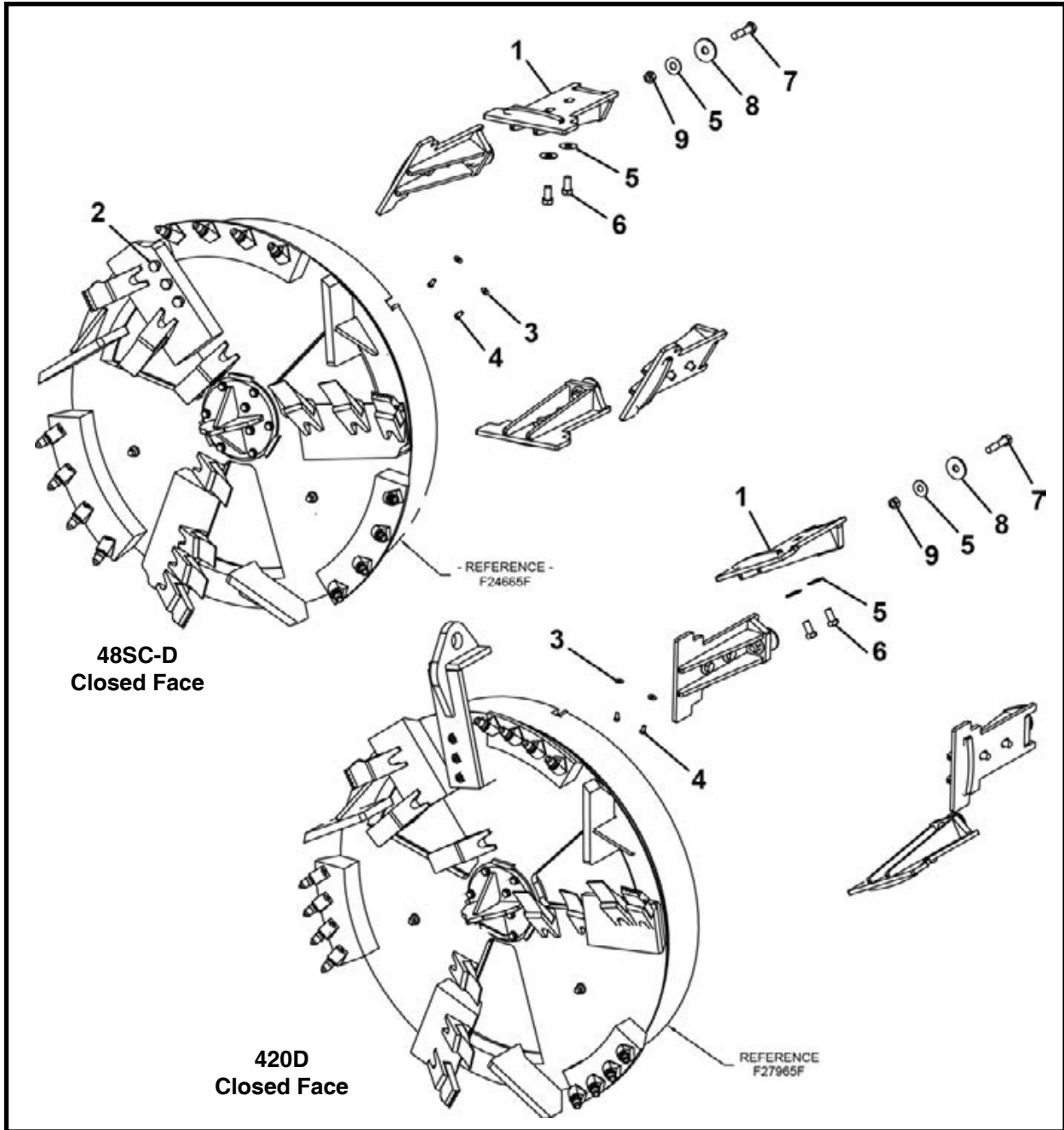
**CLOSED FACE MOUNT ASSEMBLY, 031737A**  
**TBM 480D**



ITEM	QTY	PART NO.	DESCRIPTION
0	1	031737A	CLOSED FACE MOUNT ASSEMBLY
1	4	031734A	MOUNT, Closed Face
2	24	P0040-012	WASHER, Hardened Flat 3/4
3	24	P0001-12-007	BOLT, Hex 3/4 UNC x 1.75

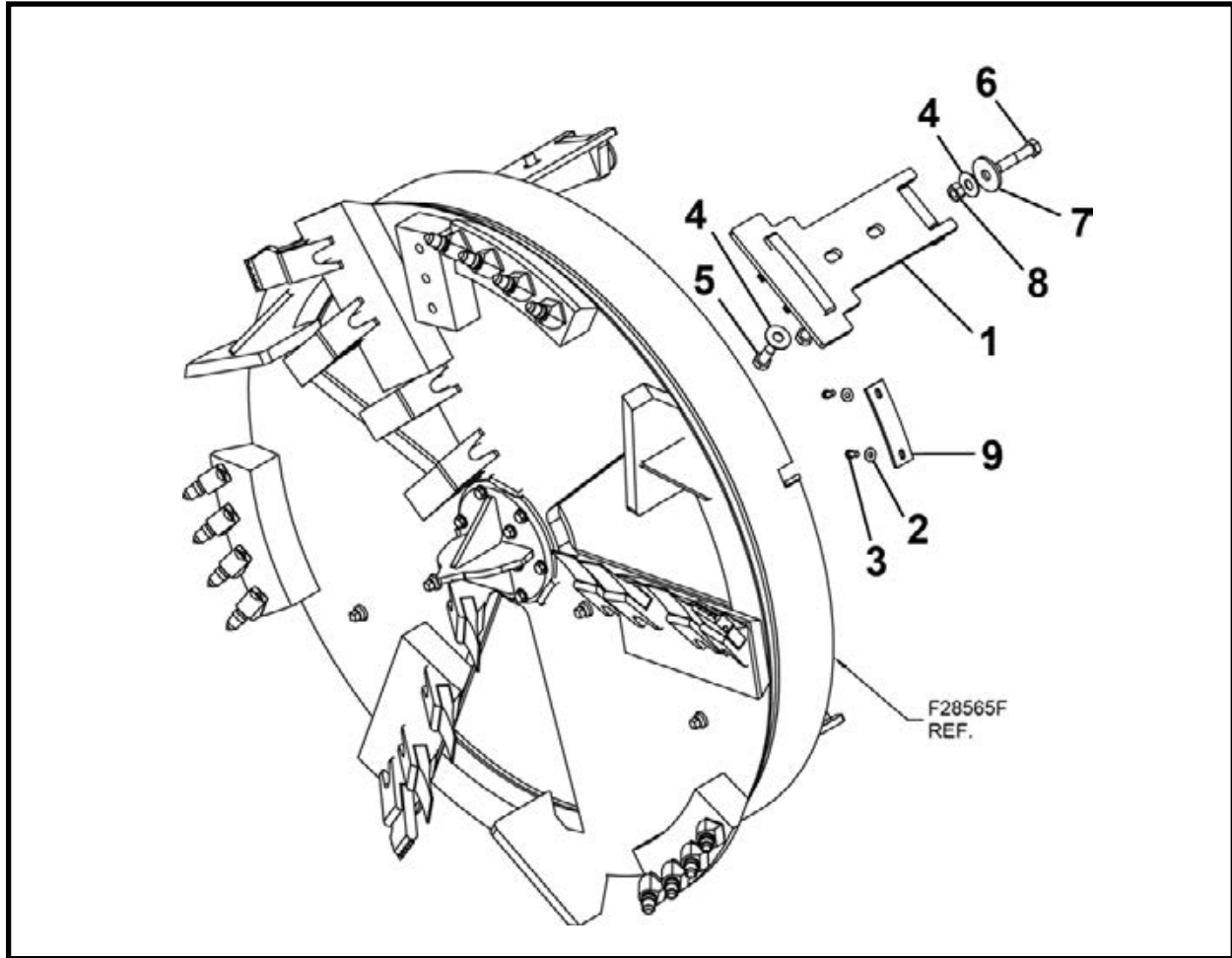
**NOTES**

**CLOSED FACE MOUNT ASSEMBLY TO SERIES I TBM**  
**48SC-D - 420D Closed Face To Series I TBM**



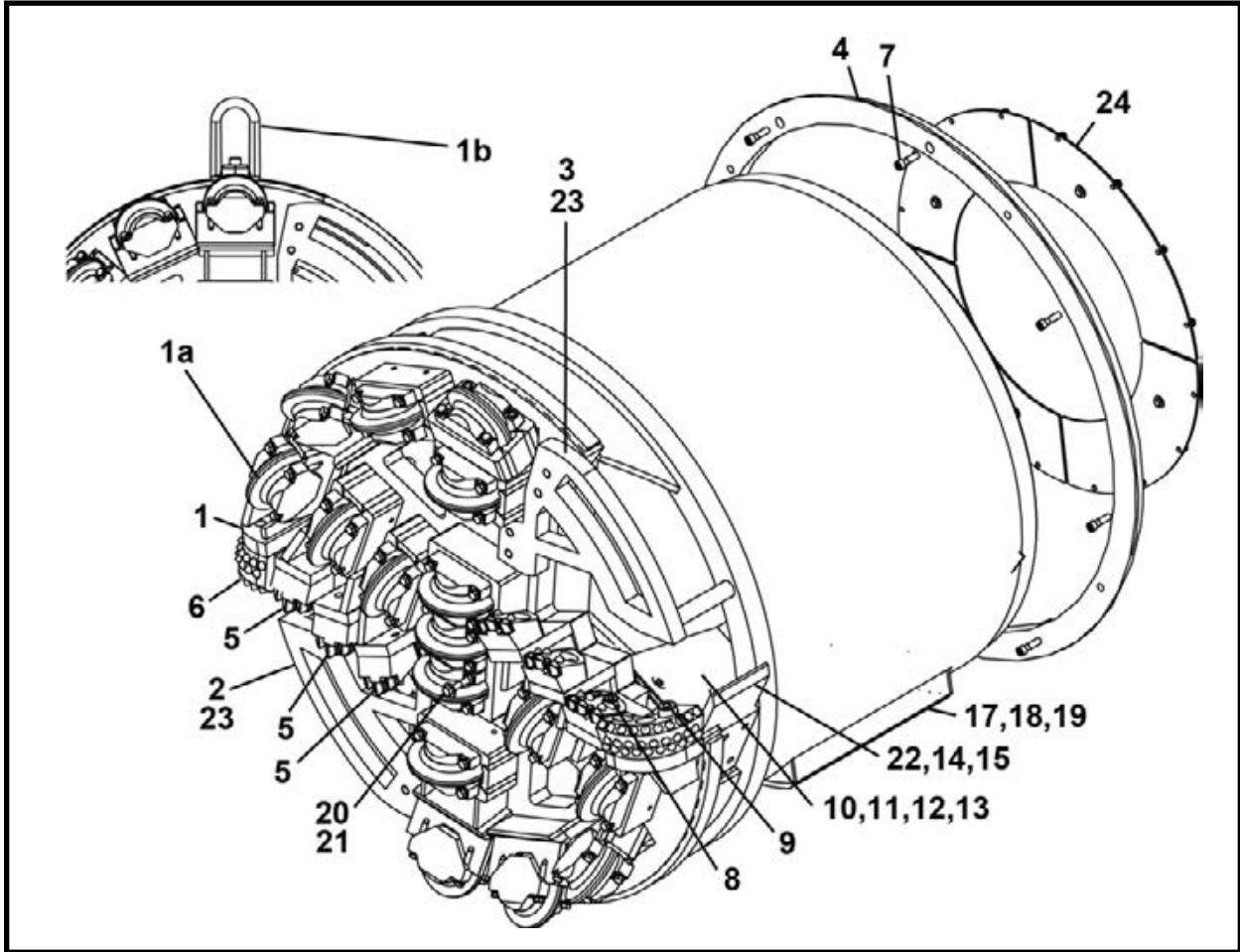
ITEM	QTY	48SC-D Mount PART NO.	420D Mount PART NO.	DESCRIPTION
0	1	024699A	031099A	CLOSED FACE MOUNT ASSEMBLY To Ser. I
1	4	024988A	024988A	MOUNT, Closed Face
2	3	P0001-12-005	-	SCREW, Hex 3/4 UNC x 1.25
3	4	P0040-006	P0040-006	WASHER, Hardened Flat 3/8
4	4	P0001-06-003	P0001-06-003	BOLT, Hex 3/8 UNC x .75
5	12	P0040-012	P0040-012	WASHER, Hardened Flat 3/4
6	8	P0001-12-006	P0001-12-006	BOLT, Hex 3/4 UNC x 1.5
7	4	P0001-12-014	P0001-12-014	BOLT, Hex 3/4 UNC x 3.5
8	4	004124P01	004124P01	WASHER
9	4	P0003-12-000	P0003-12-000	NUT, Hex 3/4 UNC

**CLOSED FACE MOUNT ASSEMBLY TO SERIES I TBM, 028599A**  
**480D Closed Face To Series I TBM**



ITEM	QTY	PART NO.	PART NO. DESCRIPTION
0	1	028599A	CLOSED FACE MOUNT ASSEMBLY To Ser. I
1	4	024904A	MOUNT, Closed Face
2	4	P0040-006	WASHER, Hardened Flat 3/8
3	4	P0001-06-003	BOLT, Hex 3/8 UNC x .75
4	12	P0040-012	WASHER, Hardened Flat 3/4
5	8	P0001-12-006	BOLT, Hex 3/4 UNC x 1.5
6	4	P0001-12-014	BOLT, Hex 3/4 UNC x 3.5
7	4	004124P01	WASHER
8	4	P0003-12-000	NUT, Hex 3/4 UNC
9	2	024445P	COVER, Closed Face Scraper

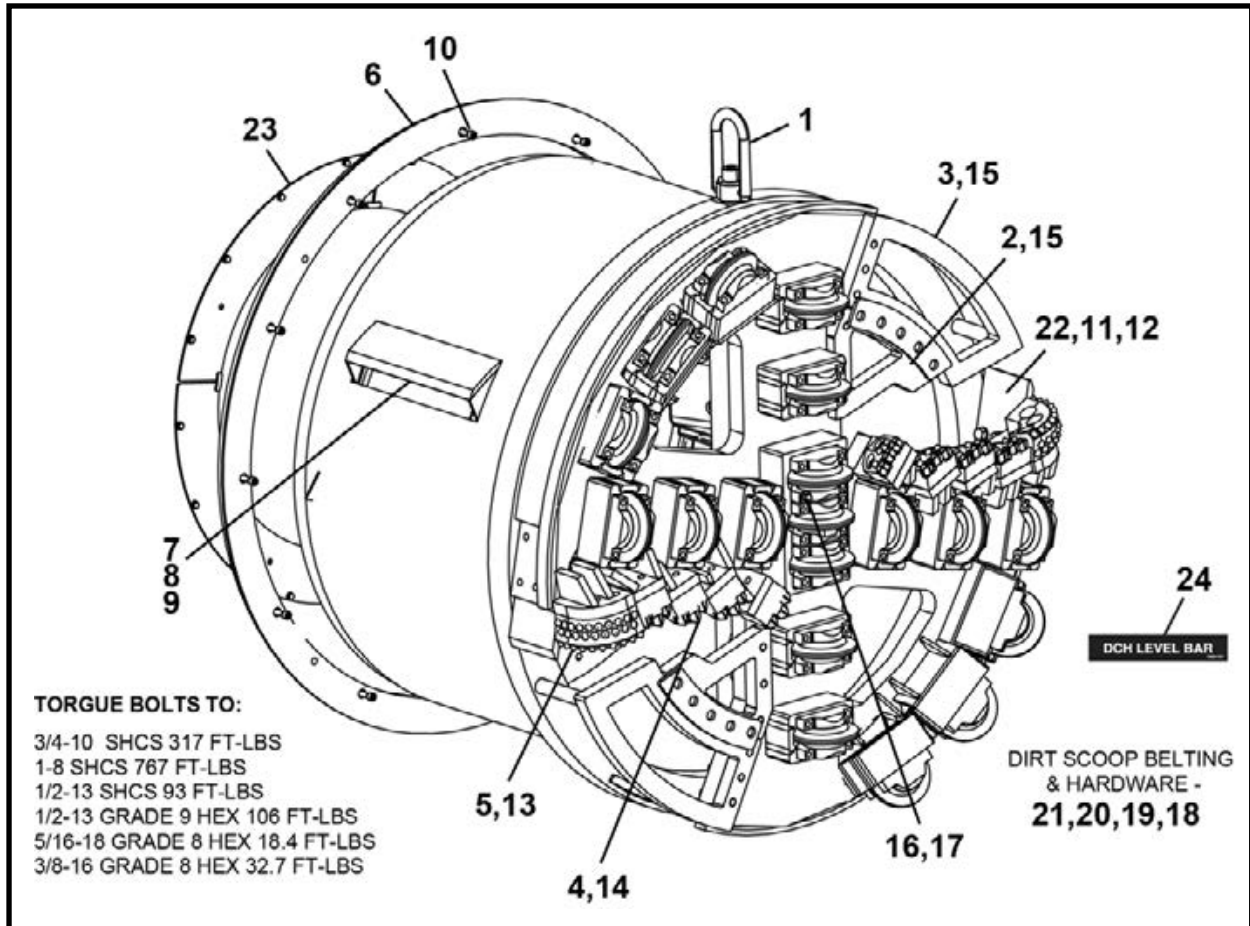
**DCH 48SC-D 50" GAGE ASSEMBLY, F32600F**  
**48SC-D UNI-DIRECTIONAL DCH**



ITEM	QTY	PART NO.	DESCRIPTION
0	1	F32600F	ASSEMBLY, DCH 48SC-D - 50 GA
1	1	032601A	WELD DCH 48SC-D - 50 GA (Includes items 1a-1b)
1a	16	P0050-171	DISC CUTTER, 170mm Single HD
1b	1	P0098-067	RING, Hoist - 7,000 lbs
2	1	061048A	BAR, Grizzly 3 Bolt
3	1	061050A	BAR, Grizzly 4 Bolt
4	1	031955P	RING, Sizing
5	6	P0050-192	SCRAPER, Face HD
6	2	P0050-191	SCRAPER, Bucket HD
7	8	P0031-08-007	SCREW, Socket Head Cap 1/2 UNC x 1.75
8	12	P0031-12-007	SCREW, Socket Head Cap 3/4 UNC x 1.75
9	6	P0031-16-008	SCREW, Socket Cap 1 x 2
10	80 LI	P0068-004	BELTING, Black 10
11	32	002624P00	WASHER, Dirt Paddle
12	16	P0001-05-005	BOLT, Hex 5/16 UNC x 1.25
13	16	P0003-05-000	NUT, Hex 5/16 UNC
14	8	P0040-012	WASHER, Hardened Flat 3/4
15	8	P0001-12-005	BOLT, Hex 3/4 UNC x 1.25
16	1	P0001-04-002	BOLT, Hex 1/4 UNC x .5 (Target Bolt) (Not Shown)
17	1	031510A	SCOOP, Dirt 18
18	4	P0001-06-003	BOLT, Hex 3/8 UNC x .75
19	4	P0040-006	WASHER, Hardened Flat 3/8
20	64	P0001-08-011B	SCREW, Hex Cap 1/2 UNC x 2.75
21	64	P0043-003	WASHER, Nord Lock 1/2
22	2	032619P	PLATE, Gage Scraper
23	7	P0031-12-015	SCREW, Socket Head Cap 3/4 UNC x 3.5
24	1	032319A	ASSEMBLY, Bulkhead Door

LI - Linear Inch

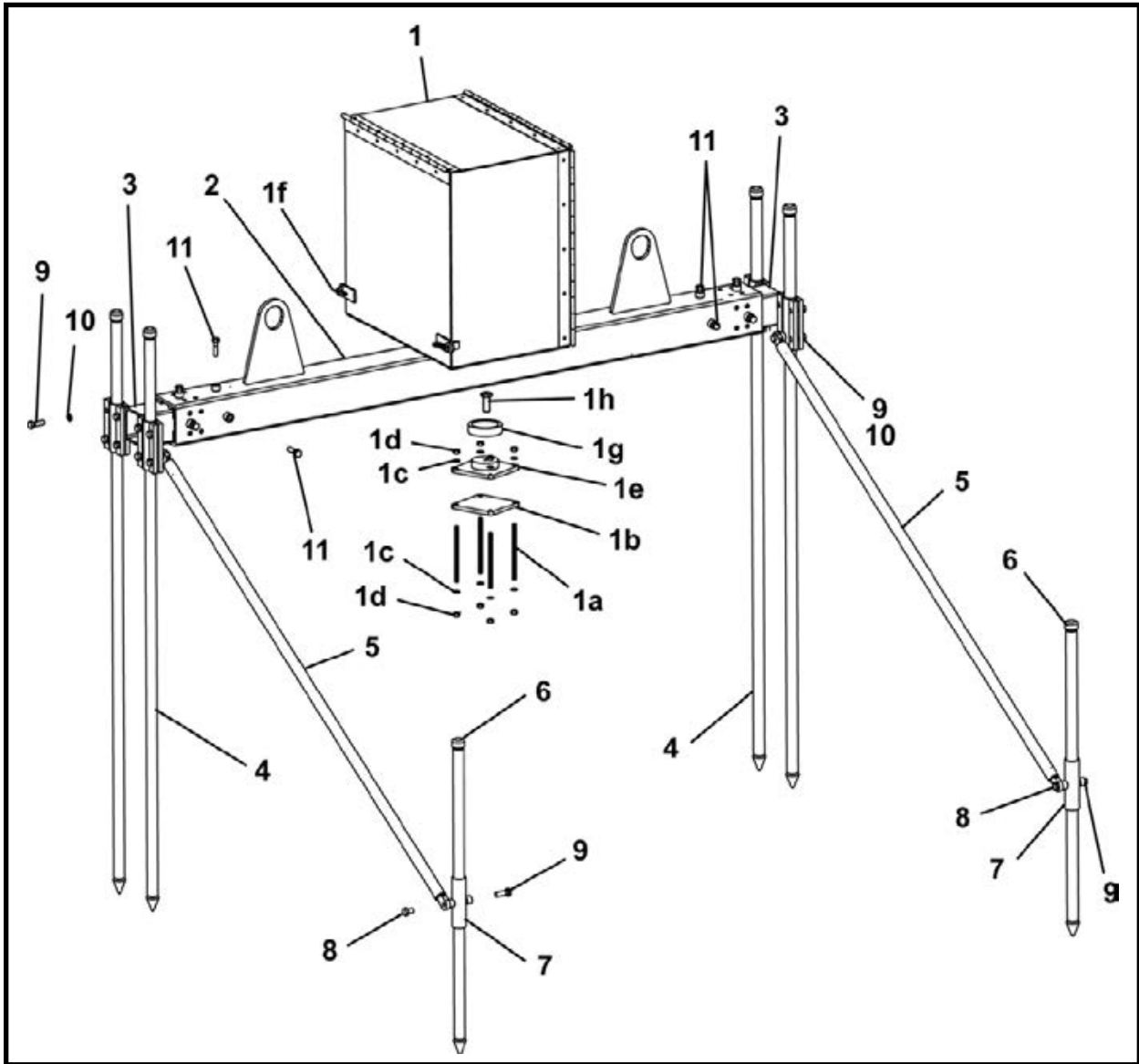
**DCH 480D 62" GAGE ASSEMBLY, F32648F**  
**480D UNI-DIRECTIONAL DCH**



ITEM	QTY	PART NO.	DESCRIPTION
0	1	F32648F	ASSEMBLY, DCH 480D - 62 GA
1	1	032647A	WELD, DCH 480D 62 GAGE (Includes items 1a-1b)
1a	19	P0050-171	DISC CUTTER, 170mm Single HD
1b	1	P0098-068	RING, Hoist - 10,000 lbs
2	1	061215A	BAR, Grizzly Inside
3	1	061216A	BAR, Grizzly Outside
4	8	P0050-192	SCRAPER, Face HD
5	2	P0050-191	SCRAPER, Bucket HD
6	1	031997P	RING, Sizing
7	1	031510A	SCOOP, Dirt 18
8	4	P0001-06-003	BOLT, Hex 3/8 UNC x .75
9	4	P0040-006	WASHER, Hardened Flat 3/8
10	12	P0031-08-006	SCREW, Socket head CAp 1/2 UNC x 1.5
11	8	P0001-12-005	BOLT, Hex 3/4 UNC x 1.25
12	8	P0040-012	WASHER, Hardened Flat 3/4
13	6	P0031-16-008	SCREW, Socket Cap 1 x 2
14	16	P0031-12-007	SCREW, Socket Head Cap 3/4 UNC x 1.75
15	12	P0031-12-015	SCREW, Socket Head Cap 3/4 UNC x 3.5
16	76	P0001-08-011B	SCREW, Hex Cap 1/2 UNC x 2.75
17	76	P0043-003	WASHER, Nord Lock 1/2
18	84 LI	P0068-004	BELTING, Black 10
19	32	002624P00	WASHER, Dirt Paddle
20	16	P0001-05-005	BOLT, Hex 5/16 UNC x 1.25
21	16	P0003-05-000	NUT, Hex 5/16 UNC
22	2	032619P	PLATE, Gage Scraper
23	1	061559A	DOOR, DCH
24	1	1252-151	DECAL, DCH LEVEL BAR

LI - Linear Inch

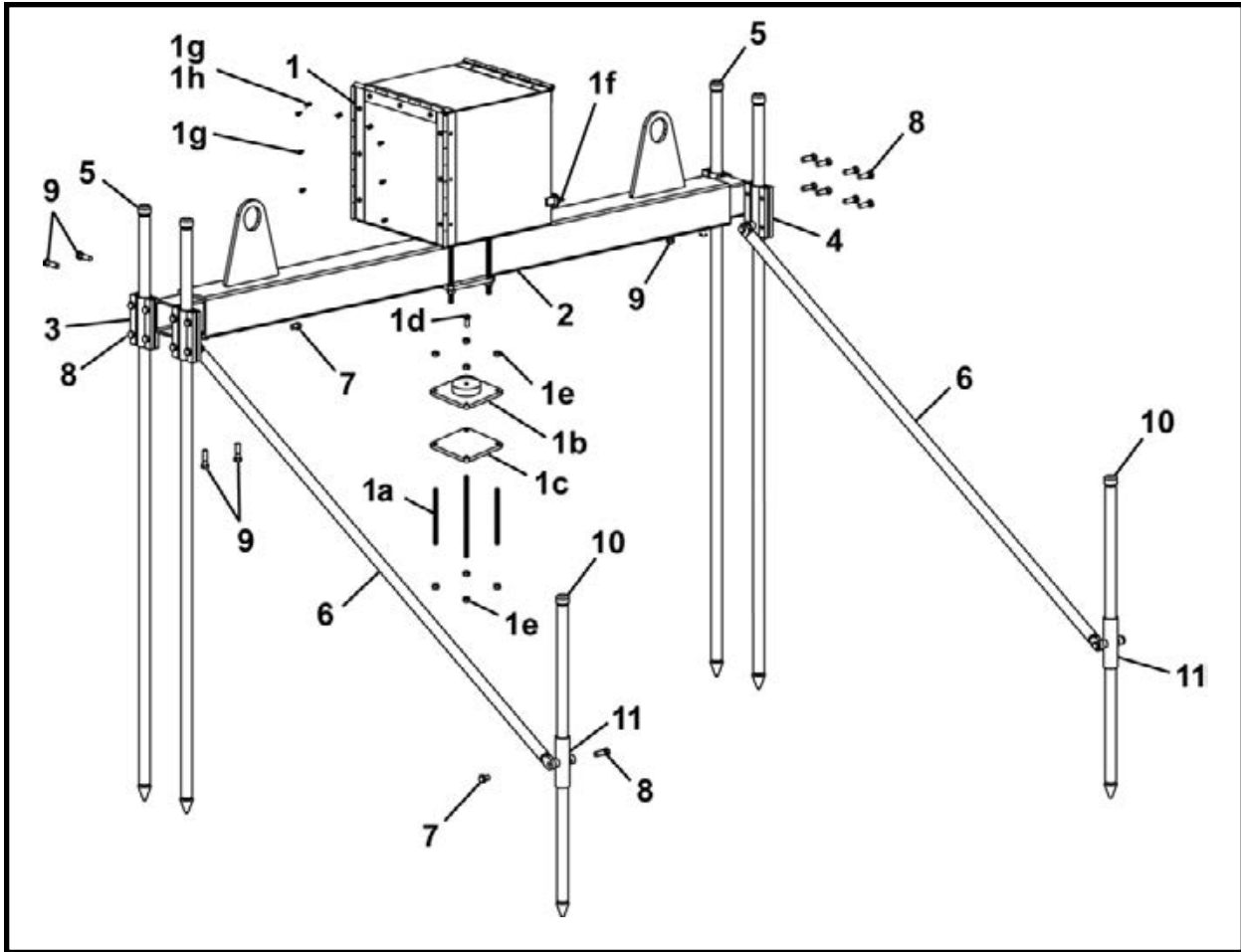
**LASER LIGHT STAND, F05866F00**  
Use With 5000 Pump Unit



ITEM	QTY	PART NO.	DESCRIPTION
0	1	F05866F00	LASER LIGHT STAND
1	1	006068A01	LASER BOX ASSEMBLY ( Includes items 1a - 1h)
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	1	006050A00	BASE, Swivel
1f	2	P0090-004	PIN, Hitch
1g	1	006055P01	BUSHING
1h*	1	006069P00	BOLT, Pivot
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, Hex 1/2 UNC x .75
9	26	P0001-08-005	BOLT, Hex 1/2 UNC x 1.25
10	24	P0045-008	WASHER, Lock 1/2
11	8	P0001-08-007	BOLT, Hex 1/2 UNC x 1.75
12	1	1255-020	KIT, Decal, Laser Light Stand (Not Shown - see Section 2 Decals)

\* Adjust pivot bolt and use blue thread lock to ensure bolt does not tighten or loosen while stand is adjusted.

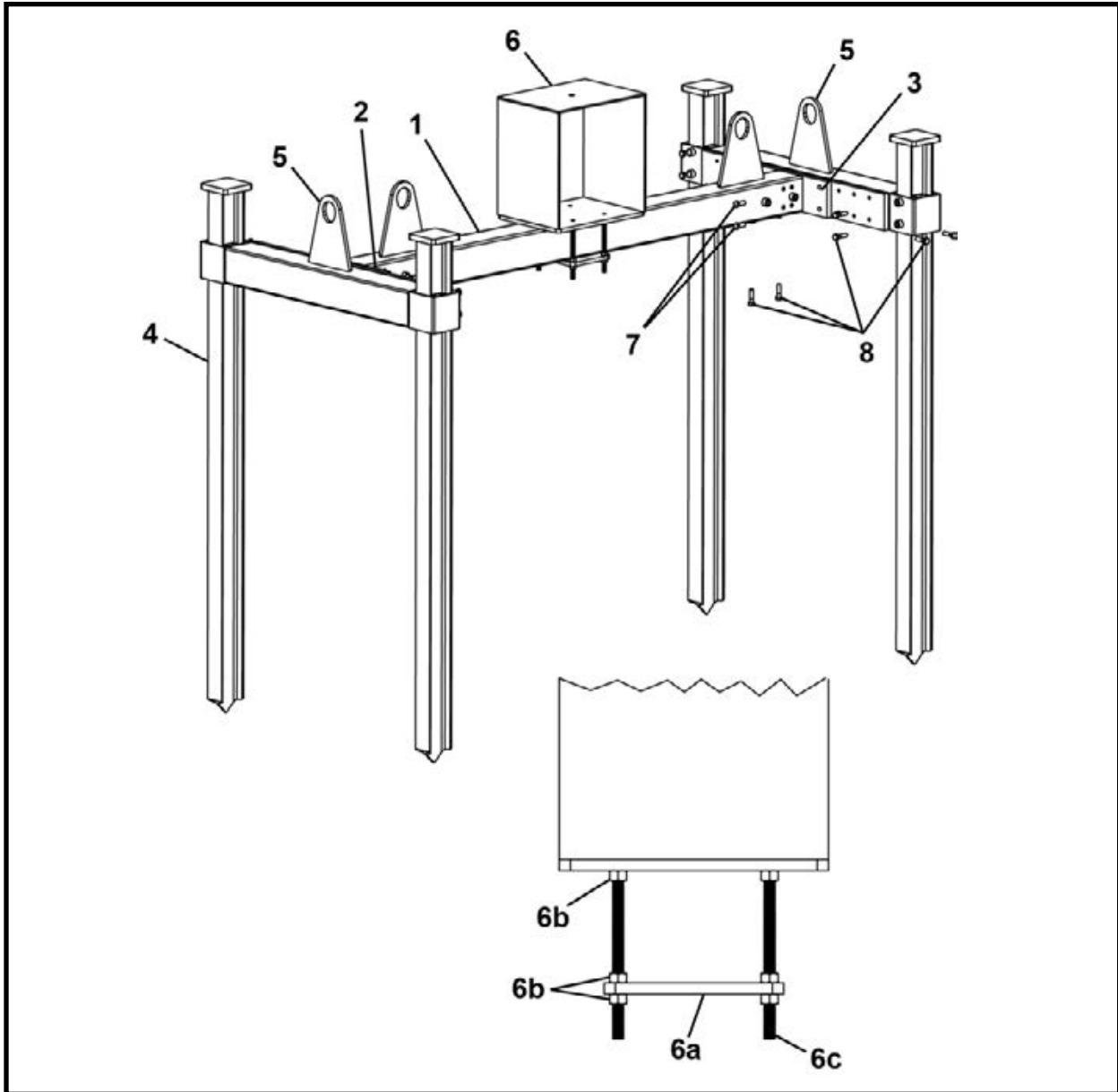
**LASER LIGHT STAND, F21675F**  
 Use With All Pump Units (5000, 5000 Series II & 5200)



ITEM	QTY	PART NO.	DESCRIPTION
0	1	F21675F	LASER LIGHT STAND
1	1	021681A	LASER BOX ASSEMBLY ( Includes items 1a - 1h)
1a	4	P0023-500A-008	ROD, Threaded
1b	1	006050A00	BASE. Swivel
1c	1	006051P00	PLATE, Laser Box
1d*	1	006069P00	BOLT, Pivot
1e	8	P0003-08-000	NUT, 1/2
1f	2	P0090-004	PIN, Hitch
1g	9	P0001-04-002	BOLT, Hex 1/4 UNC x .5
1h	3	P0003-04-000	NUT, 1/4
2	1	021682A	TUBE
3	1	021683A	TUBE, Slide - Right
4	1	021684A	TUBE, Slide - Left
5	4	006039A00	STAKE, Long
6	2	006044A00	TUBE, Support
7	4	P0001-08-003	BOLT, Hex 1/2 UNC x .75
8	18	P0001-08-006	BOLT, Hex 1/2 UNC x 1.5
9	8	P0001-08-007	BOLT, Hex 1/2 UNC x 1.75
10	2	006040A00	STAKE, Short
11	2	006025A00	TUBE, Swivel
12	1	1255-020	KIT, Decal, Laser Light Stand (Not Shown - see Section 2 Decals)

\* Adjust pivot bolt and use blue thread lock to ensure bolt does not tighten or loosen while stand is adjusted.

**LASER LIGHT STAND, F61087F**  
 Use With All Pump Units (5000, 5000 Series II & 5200)



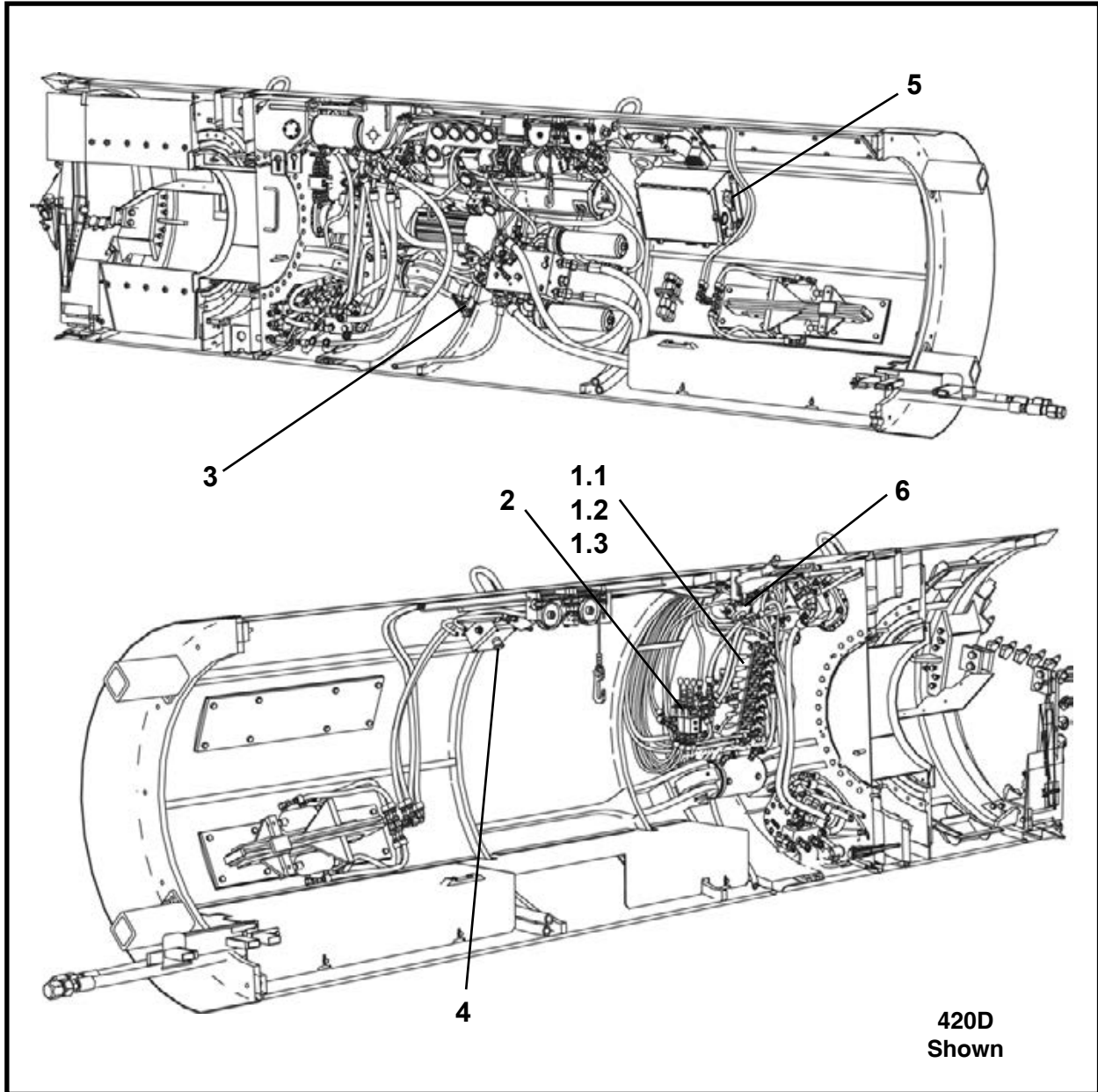
ITEM	QTY	PART NO.	DESCRIPTION
0	1	F61087F	LASER BOX ASSEMBLY
1	1	021682A	TUBE, Laser Stand
2	1	061071A	LASER STAND-RIGHT
3	1	061073A	LASER STAND-LEFT
4	4	061074A	LASER STAND LEG
5	2	061079A	SUPPORT, Side
6	1	061085A	BASE, Laser (Includes items 6a - 6c)
6a	1	061244P	PLATE, Mounting Bottom
6b	12	P0003-08-000	NUT, Hex 1/2 UNC
6c	4	061463P	ROD, Threaded
7	8	P0001-08-005	SCREW, Hex Cap 1/2 UNC x 1.25
8	16	P0001-08-007	BOLT, Hex 1/2 UNC x 1.75
9	1	1255-113	KIT, Decal, Laser Light Stand (Not Shown - see Section 2 Decals)



# Operator Controls

48SC-D - 420D - 480D ..... 2

**OPERATOR CONTROLS**  
**TBM Series II: 48SC - 420 - 480 - 540**



ITEM	QTY	PART NO.	DESCRIPTION
1.1*	1	P0302-815	VALVE, TBM 6 Section Control (420D, 480D)
1.2*	1	P0302-814	VALVE, TBM 5 Section Control (48SC-D)
2*	1	P0302-709	VALVE, Three Section Control
3**	1	024590A	SWITCH, Conveyor Safety Stop
4**	1	019023A	E-STOP ASSEMBLY
5a	1	P0251-482	MAIN BREAKER & HANDLE
5b	1	P0251-481	BREAKER
6*	1	P0302-784	VALVE, 2 Speed Motor

\* Refer to Section 7, Valves for parts information.

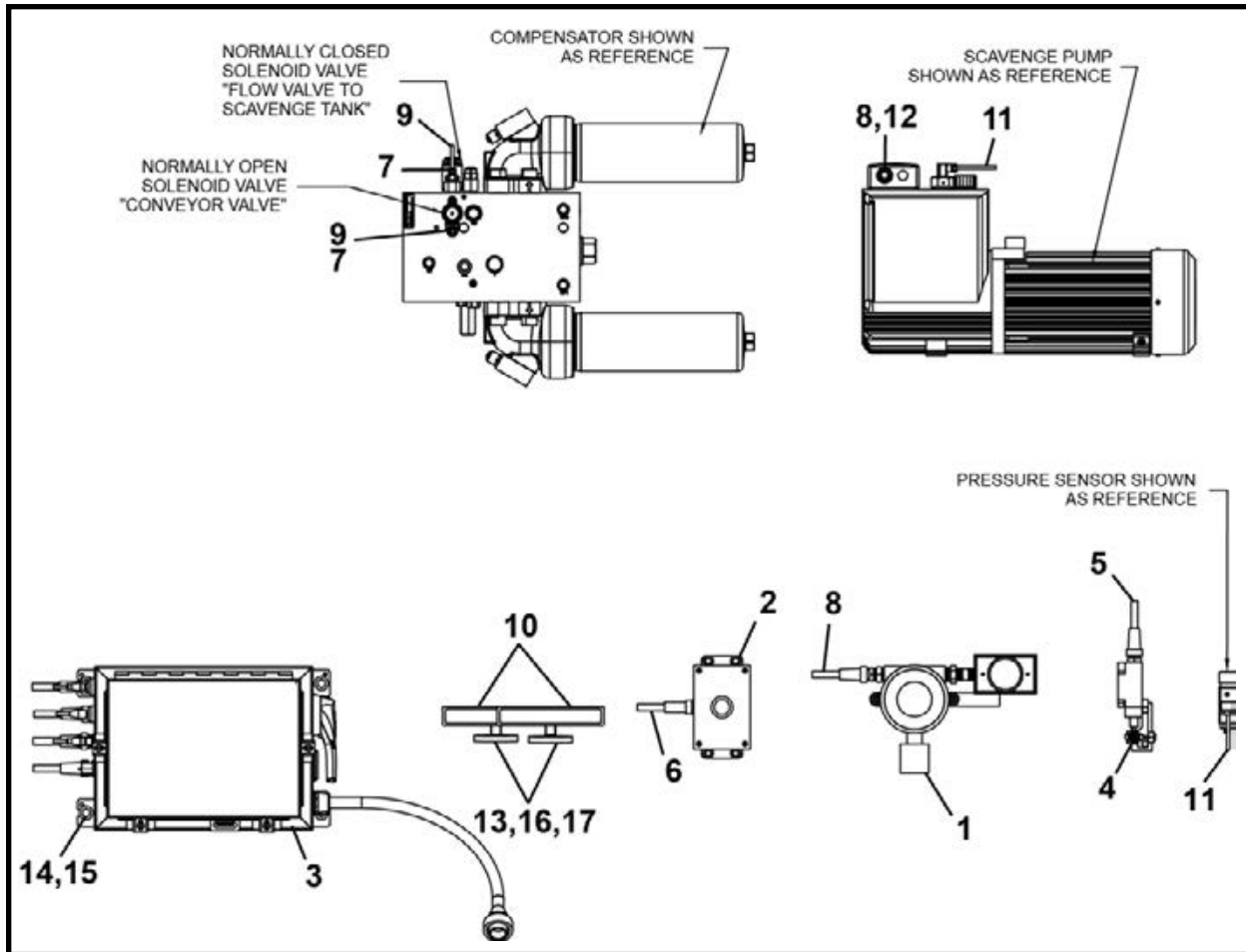
\*\* Refer to Section 5, Electrical for parts information.



# Electrical

Electrical Assembly,	
48SC-D, 420D, 480D, 031631A .....	2
Electrical System Schematic .....	3
Gas Detector With Alarm Assembly, 031499A .....	4
Gas Detector Schematic .....	5
Electrical Box E-Stop Assembly, 019023A .....	6
Small Electrical Box Assembly, 019060A .....	7
Electrical Panel Assembly, 019058A .....	8
Conveyor Safety Stop Switch Assembly, 024590A .....	9
Calibration (Gas Challenge) Kit, 016423A .....	10
Pit Power Box Assembly, F19051F .....	11
TBM Tunnel Power Cable - 100 FT, FA20511F0 .....	12

**ELECTRICAL SYSTEM ASSEMBLY, 031631A**  
**TBM 48SC-D - 420D - 480D**

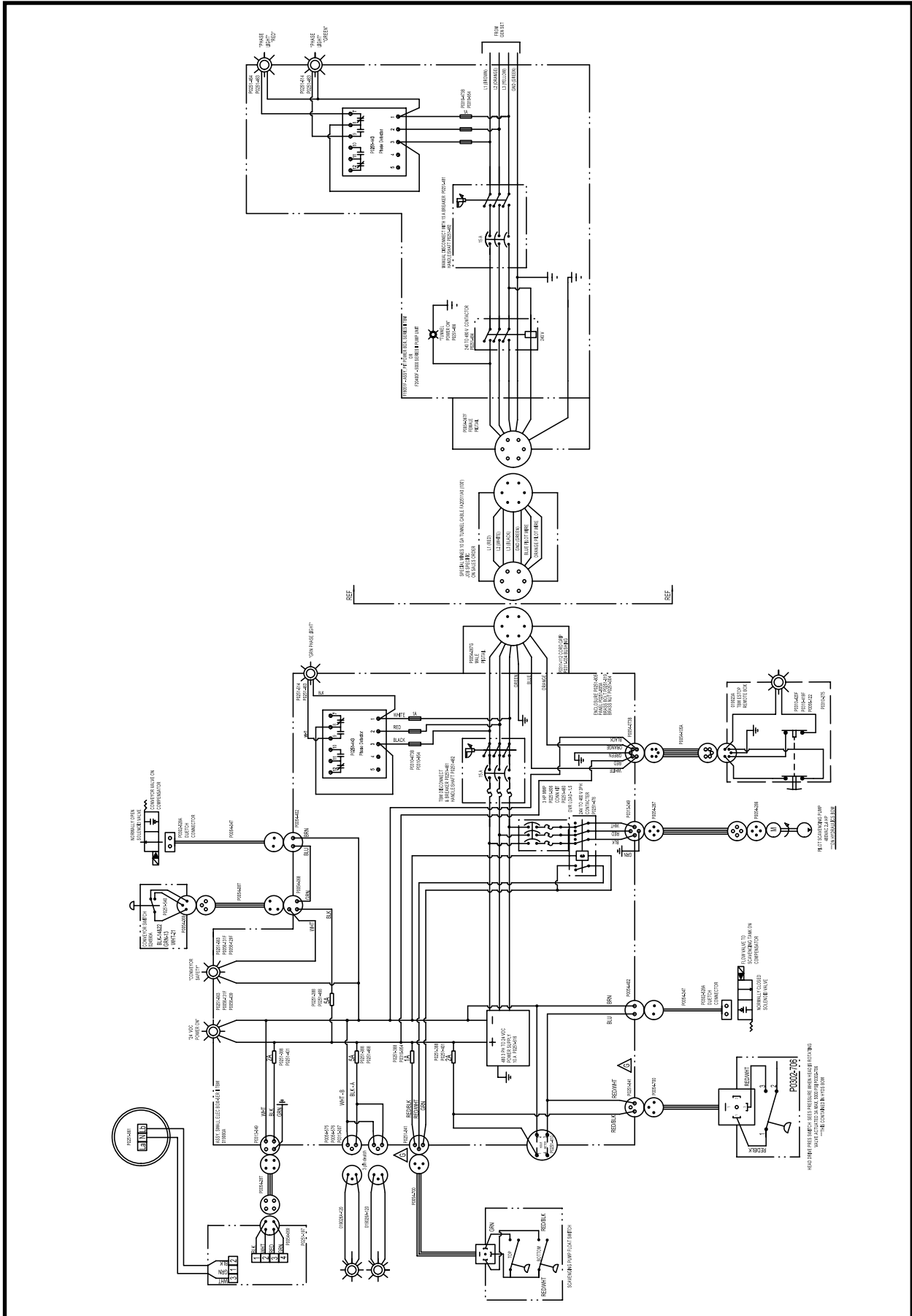


ITEM	QTY	PART NO.	DESCRIPTION
0	1	031631A	ELECTRICAL ASSEMBLY
1*	1	031499A	GAS DETECTOR ASSEMBLY
2*	1	019023A	ASSEMBLY, E-Stop Electrical Box
3*	1	019060A	ASSEMBLY, Small Electrical Box Series II
4*	1	024590A	SWITCH, Conveyor Safety Stop
5	1	P0054-087	CABLE
6	1	P0054-105A	CABLE
7	2	P0302-528A	ASSEMBLY, Connector
8	2	P0054-287	CABLE'
9	2	P0054-347	CABLE'
10	2	019026A-120	ASSEMBLY, Cable Light
11	1	P0054-700	CABLE
12	1	P0054-286	RECEPTACLE
13	2	P0091-019	MAGNET
14	4	P0040-006	WASHER, Hardened Flat 3/8
15	4	P0001-06-002	BOLT, Hex 3/8 UNC x .5
16	2	P0001-05-002	BOLT, Hex 5/16 UNC x .5
17	2	P0003-05-000	NUT, Hex 5/16 UNC

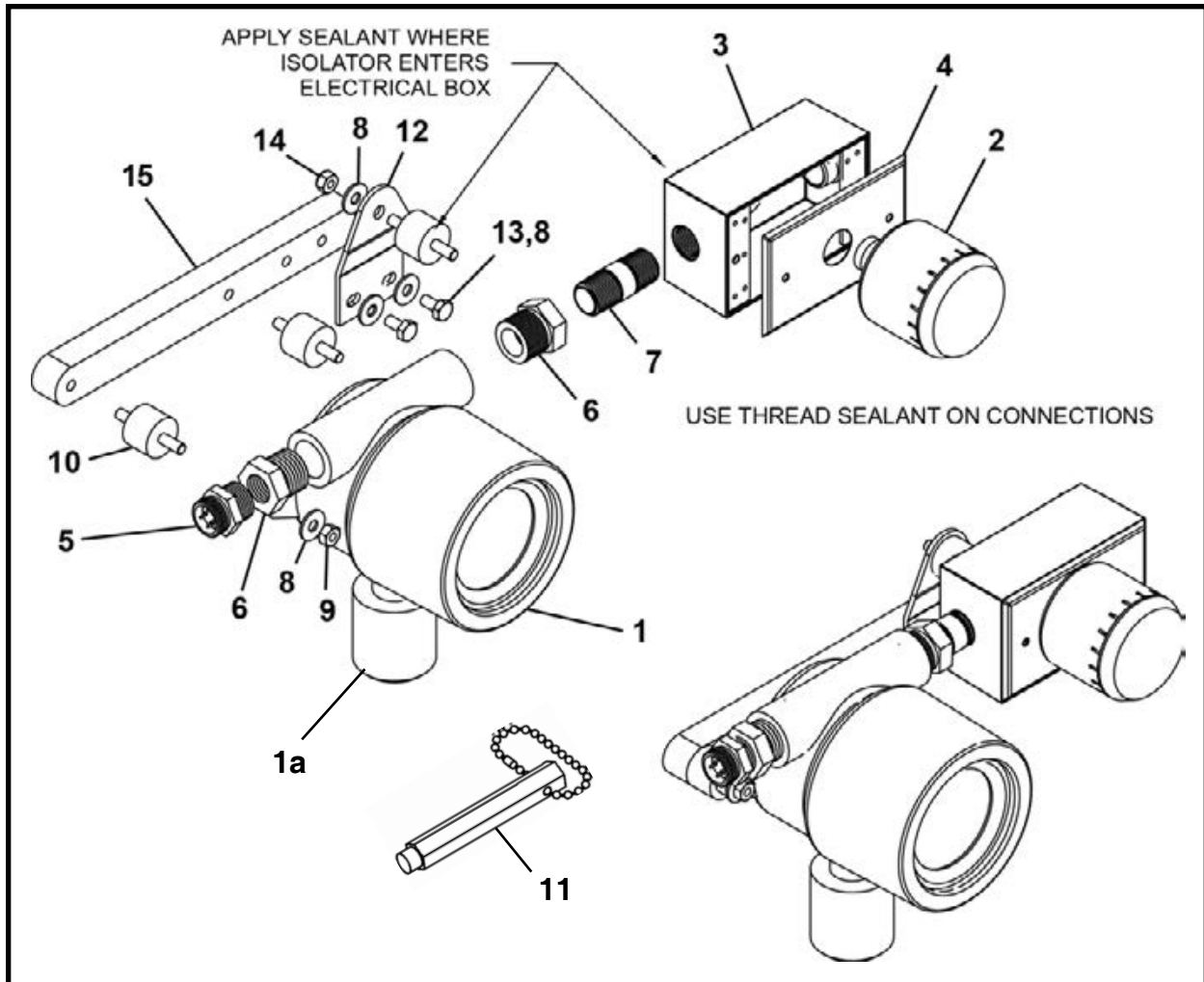
\* Refer to this section for parts information.

# ELECTRICAL SYSTEM SCHEMATIC, 031631A

## TBM Series II: 48SC - 540 - 600 - 720



**GAS DETECTOR WITH ALARM ASSEMBLY, 031499A**  
**TBM 48SC-D - 420D - 480D**



ITEM	QTY	PART NO.	DESCRIPTION
0	1	031499A	GAS DETECTOR WITH ALARM ASSEMBLY
1.1*	1	P0251-197	DETECTOR, GasMax II (Includes item 1.1a)
1.1a	1	P0251-197A	ELEMENT, Sensor
1.2	1	P0251-1003	DETECTOR, Buckeye (Includes item 1.2a)
1.2a	1	P0251-1003A	ELEMENT, Sensor
2	1	P0251-861	SOUNDER, Panel Mount, w/LED
3	1	P0310-105	BOX
4	1	P0310-154	COVER
5	1	P0054-286	RECEPTACLE, Mini
6	2	P0300-012	FITTING, 12MP-08FPS
7	1	P0405-002	NIPPLE
8	3	P0040-004	WASHER, Hardened Flat 1/4
9	3	P0003-04-000	NUT, Hex 1/4 UNC
10	3	P0070-065	MOUNT, Vibration Isolation
11	1	P0310-283B	MAGNETIC WAND
12	1	031645P	BRACKET, Beacon
13	2	P0001-04-002	BOLT, Hex 1/4 UNC x .5
14	1	P0013-04-000	NUT, Nylock 1/4
15	REF	031497P	BAR, Gas Detector Mount

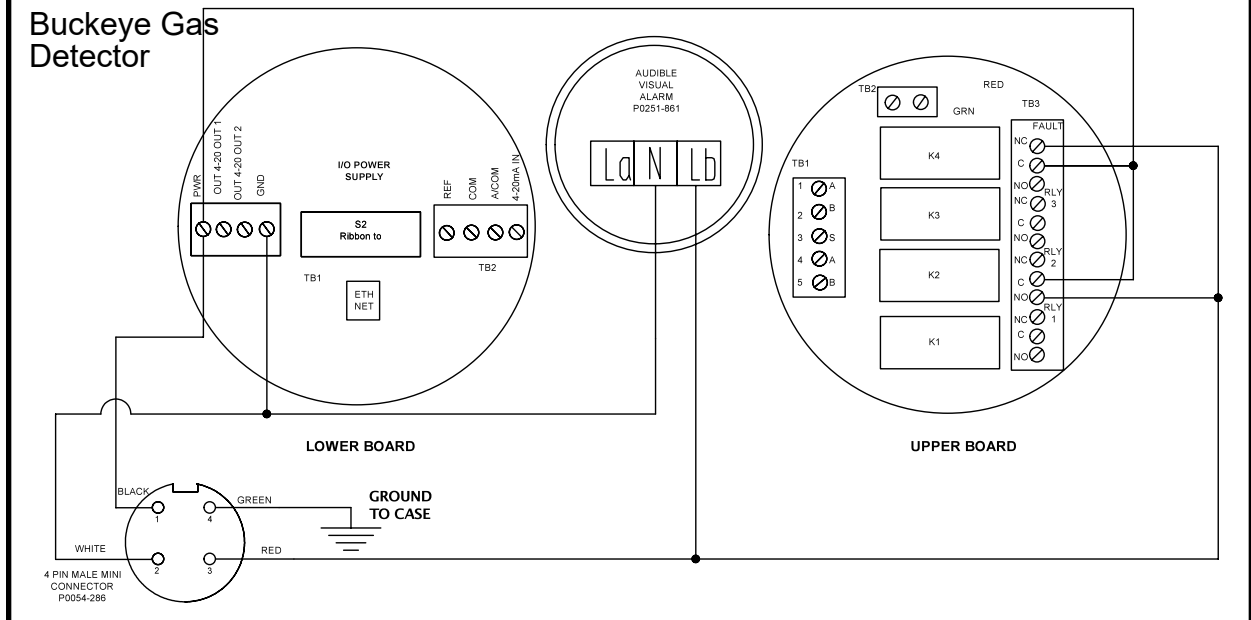
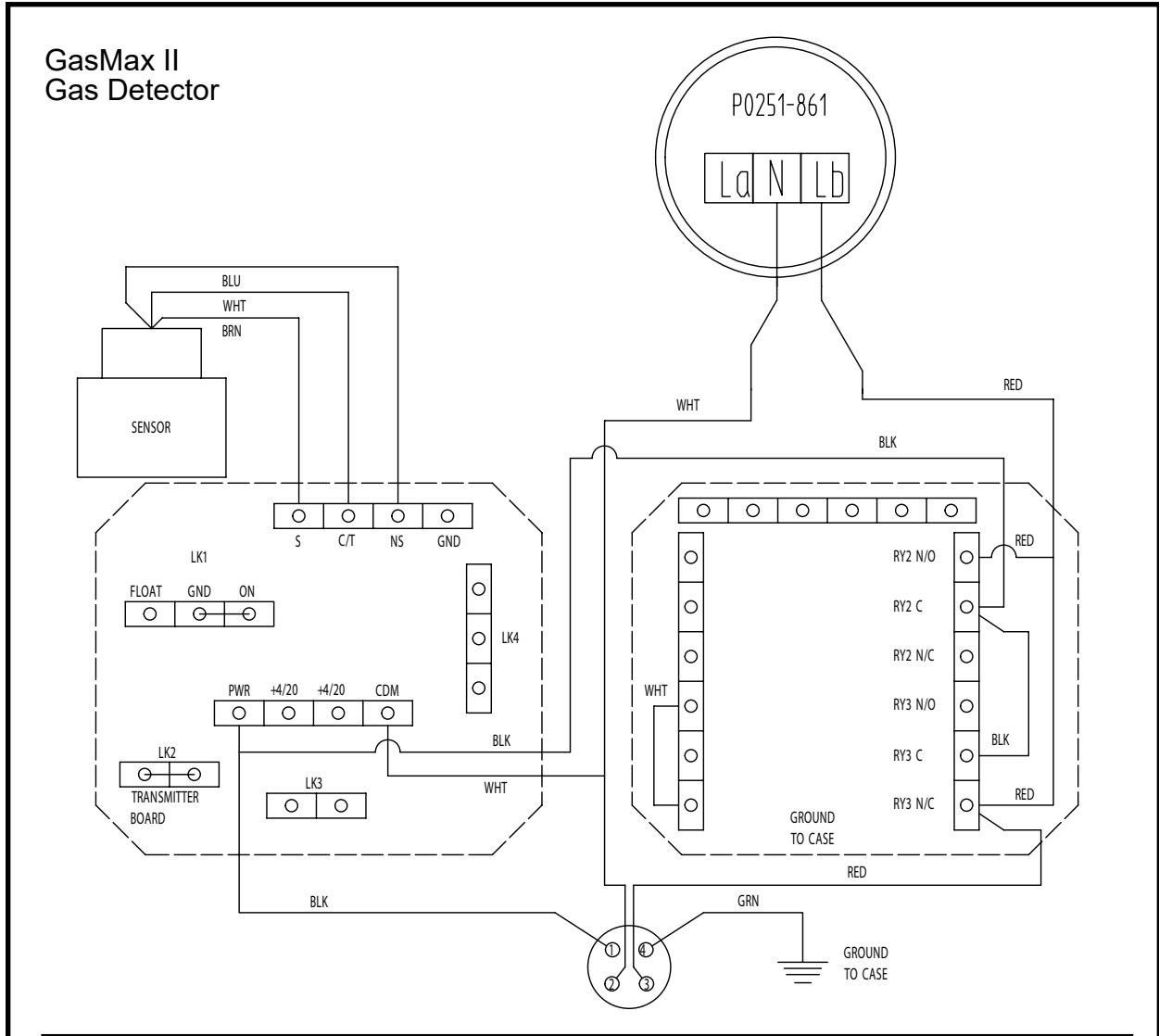
Note: Contact your Akkerman Aftermarket Support representative for proper set up and calibration of this gas detector assembly.

\* GasMax II Detector is no longer available.

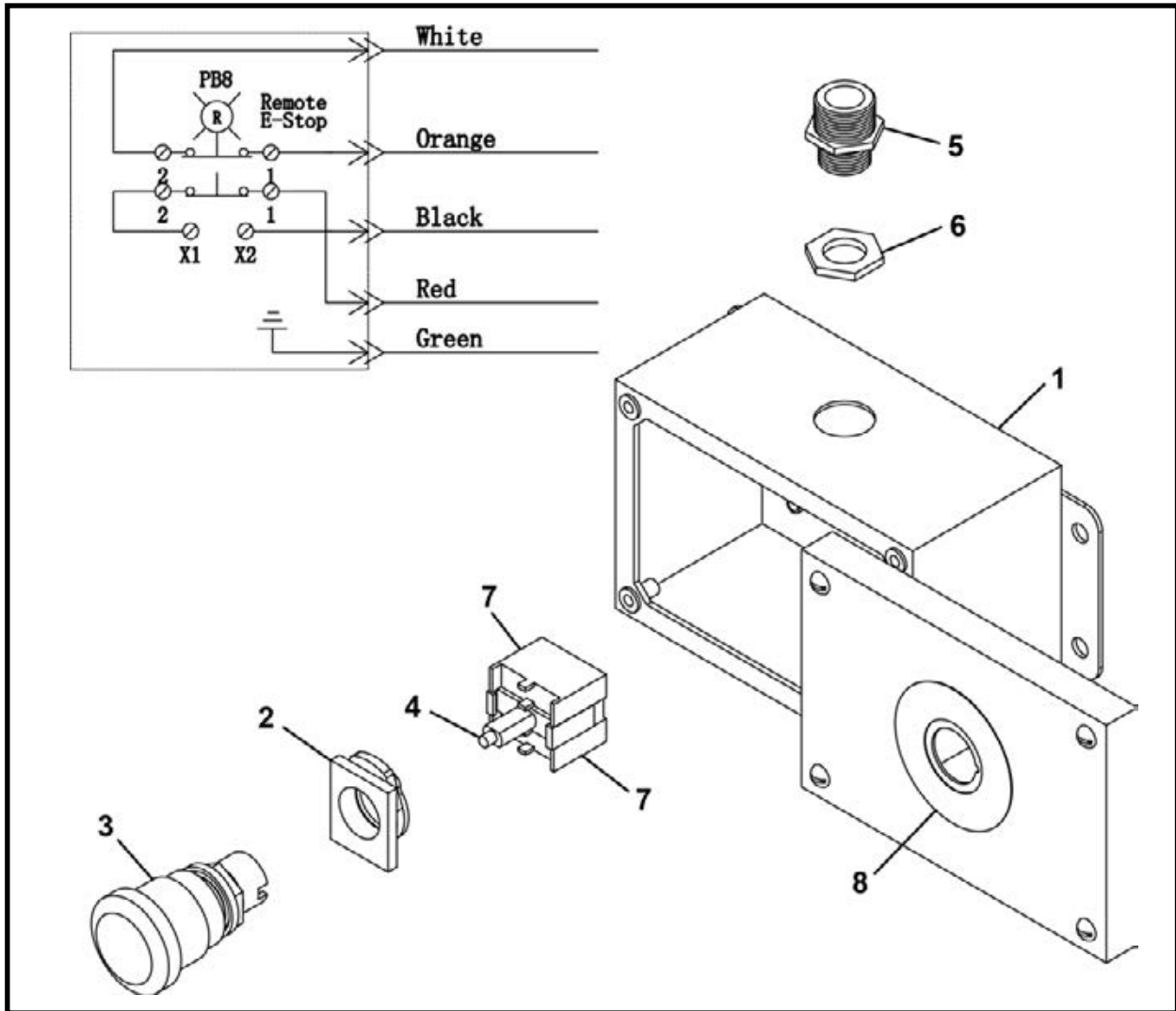
REF - Reference, not part of 031499A

# GAS DETECTOR SCHEMATIC, 031499A

## TBM 48SC-D - 420D - 480D

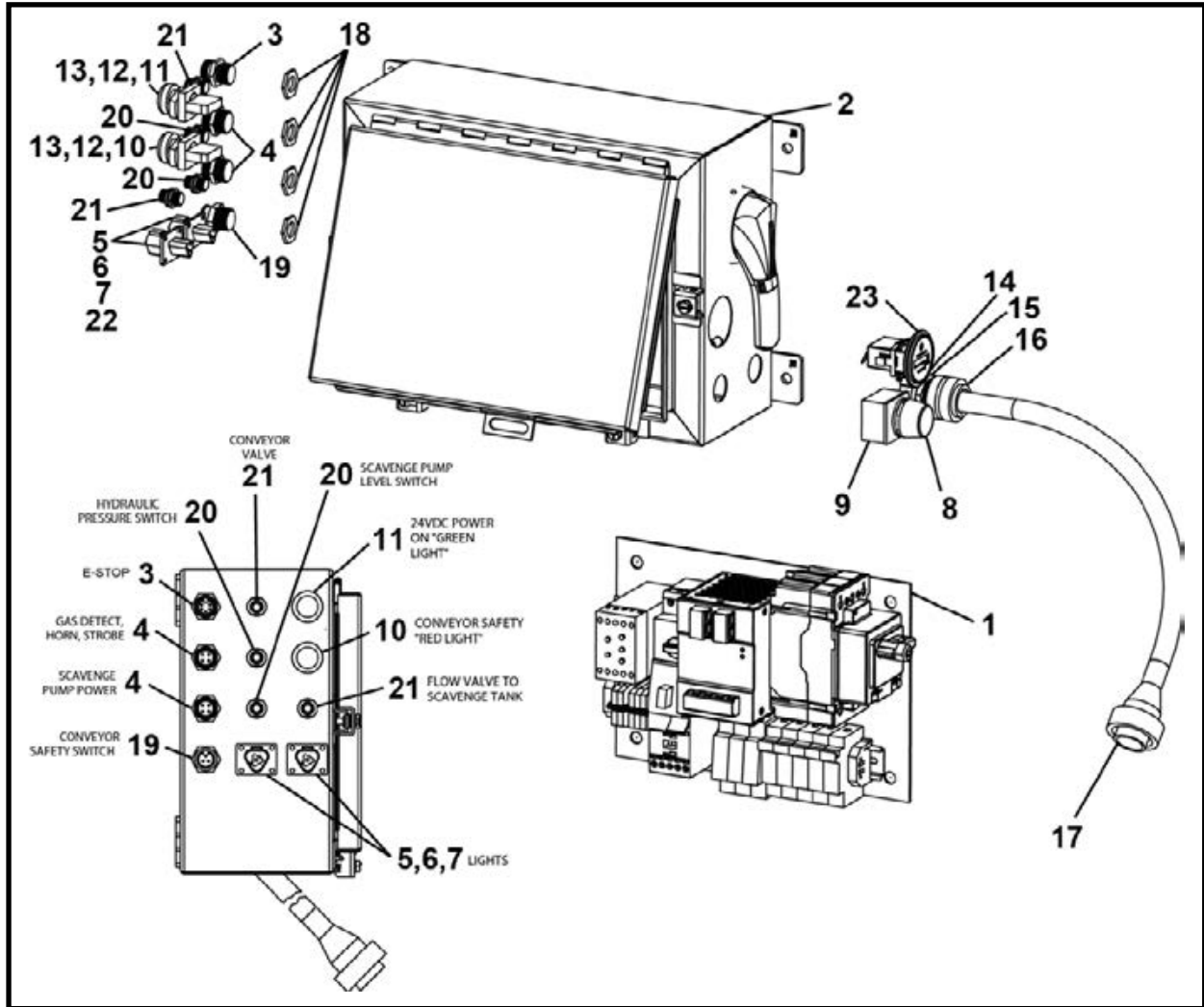


**ELECTRICAL BOX E-STOP ASSEMBLY, 019023A**  
**TBM 48SC-D - 420D - 480D**



ITEM	QTY	PART NO.	DESCRIPTION
0	1	019023A	ELECTRICAL BOX E-STOP ASSEMBLY
1	1	019024P	BOX, Electrical
2	1	P0310-419F	LATCH, Mounting
3	1	P0310-420F	PUSHBUTTON, Illuminated
4	1	P0251-171	MODULE, LED
5	1	P0054-073A	RECEPTACLE
6	1	P0311-018	NUT, Lock 1/2
7	2	P0056-122F	BLOCK, Contact
8	1	P0310-474F	DECAL, Emergency Stop

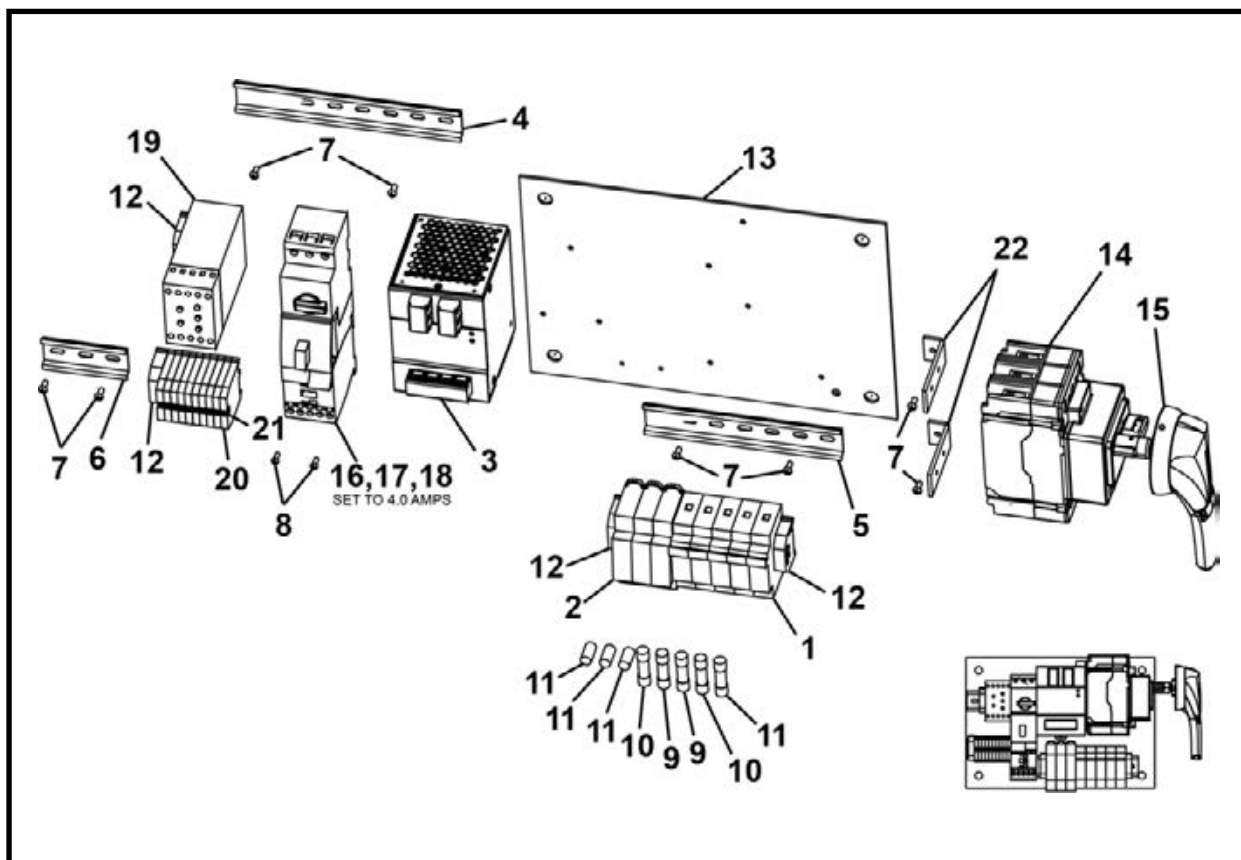
**SMALL ELECTRICAL BOX ASSEMBLY, 019060A**  
**TBM 48SC-D - 420D - 480D**



ITEM	QTY	PART NO.	DESCRIPTION
0	1	019060A	SMALL ELECTRIC BOX ASSEMBLY
1*	1	019058A	ASSEMBLY, Electric Panel
2	1	019059P	BOX, Small Electric
3	1	P0054-073B	RECEPTACLE
4	2	P0313-049	RECEPTACLE
5	2	P0054-575	CONNECTOR
6	2	P0054-576	WEDGE
7	4	P0313-007	PINS
8	1	P0251-514	LENS, Green Plastic
9	1	P0251-463	RED 480V PILOT LIGHT
10	1	P0056-129F	LIGHT, Red Pilot
11	1	P0251-439	LIGHT, Green Indicator
12	2	P0056-131F	LATCH, Mounting
13	2	P0251-563	LIGHT, White Pilot LED
14	1	P0311-034	BUSHING, Insulating
15	1	P0311-020	NUT, Lock 1
16	1	P0311-112	CORD GRIP
17	1	P0054-067G	CABLE
18	4	P0311-018	NUT, Lock 1/2
19	1	P0054-068	RECEPTACLE
20	2	P0251-841	RECEPTACLE
21	2	P0054-402	RECEPTACLE
22	2	P0313-016	PLUG, Sealing
23	1	P0251-1009	HOURMETER

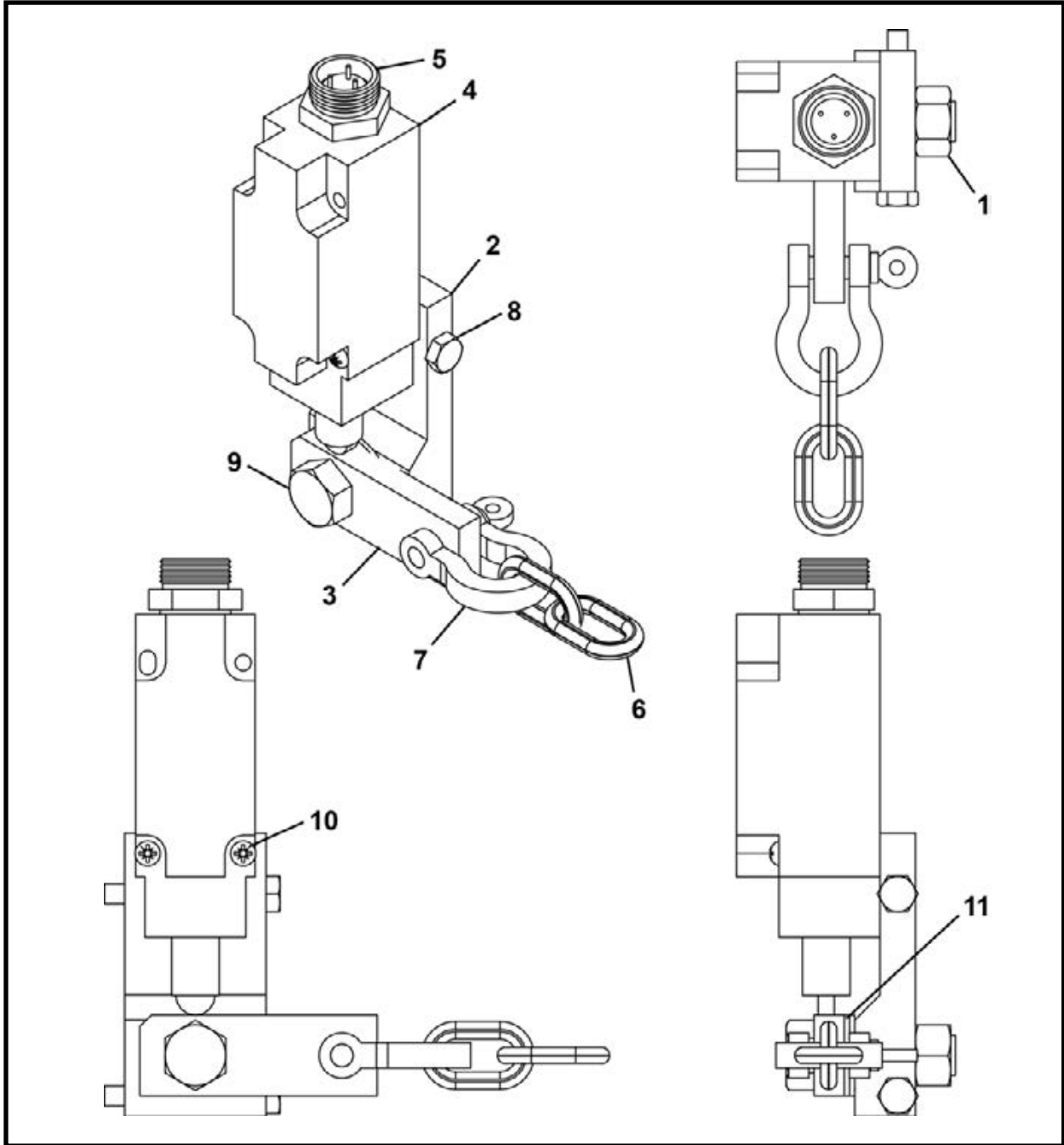
\* Refer to this section for parts information.

**ELECTRIC PANEL ASSEMBLY, 019058A**  
**TBM 48SC-D - 420D - 480D**



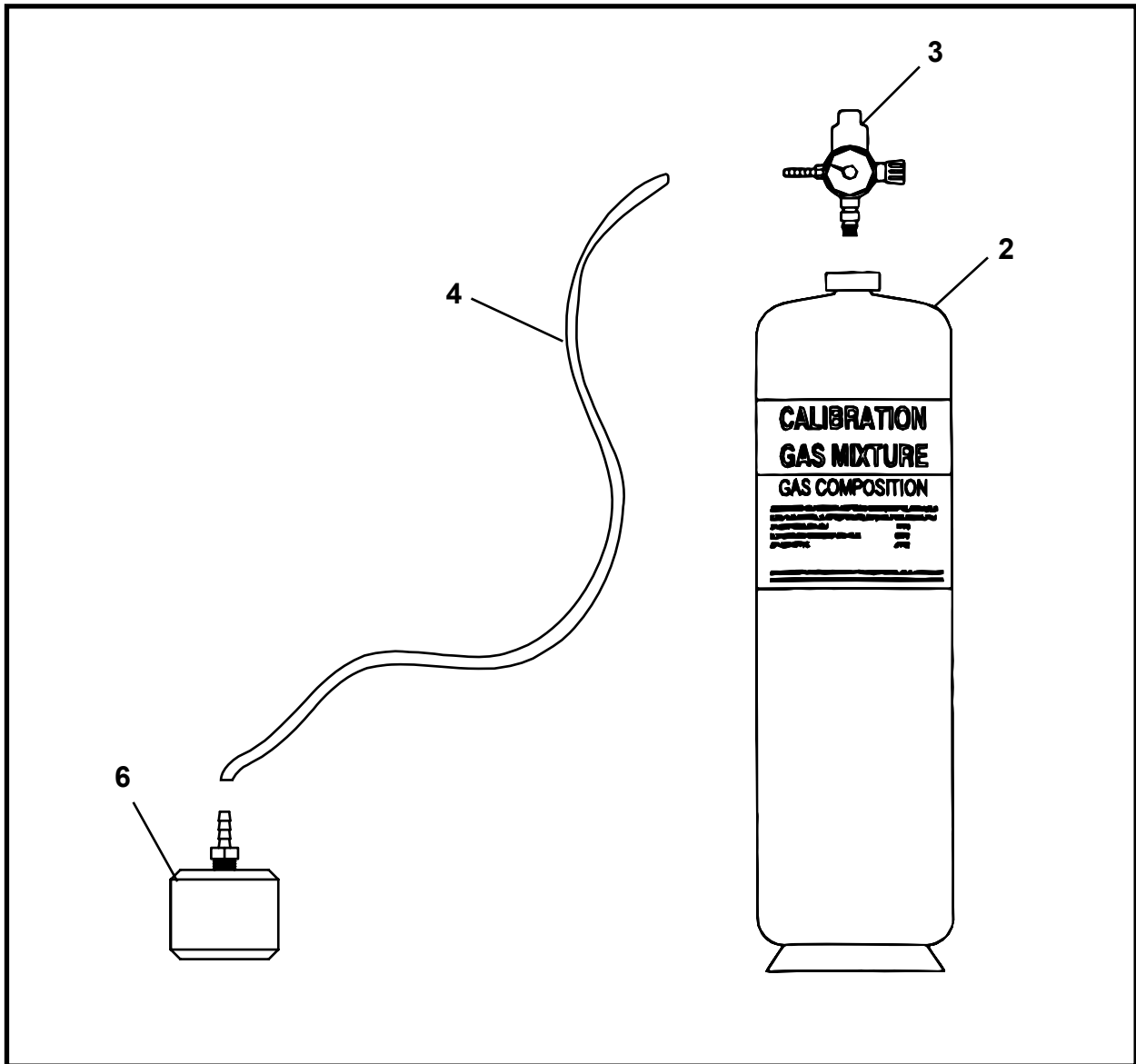
ITEM	QTY	PART NO.	DESCRIPTION
0	1	019058A	ELECTRICAL PANEL ASSEMBLY
1	5	P0251-388	HOLDER, Fuse
2	3	P0310-473B	HOLDER, Fuse
3	1	P0251-616	POWER SUPPLY, 24V, 10 AMP
4	1	P0310-503-008	RAIL, Din 8
5	2	P0310-503-007	RAIL, Din 7
6	2	P0310-503-003	RAIL, Din 3
7	8	P0020-83-022	SCREW, Truss Head 8-32 x .375
8	2	P0020-63-022	SCREW, Truss Head 6-32 x .375
9	2	P0251-401	FUSE
10	2	P0251-468	FUSE
11	4	P0310-954	FUSE, TIME DELAY
12	4	P0310-571	END, Fuse Holder
13	1	019057P	PANEL, Electrical
14	1	P0251-481	BREAKER 480V 3PH 15/3 W/Lugs
15	1	P0251-482	HANDLE & BREAKER SHAFT
16	1	P0251-478	CONTACTOR, 3/4 HP 480V 3PH 24VDC
17	1	P0251-806	PROTECTOR, Motor 3 HP, 480v, 3 PH
18	1	P0251-480	KIT, Connector
19	1	P0251-443	PHASE DETECTOR 480V
20	10	P0310-500	BLOCK, Terminal
21	10	P0310-573	JUMPER, Terminal Strip
22	2	026181P	MOUNT, Side Breaker

**CONVEYOR SAFETY STOP SWITCH ASSEMBLY, 024590A**  
**TBM 48SC-D - 420D - 480D**



ITEM	QTY	PART NO.	DESCRIPTION
0	1	024590A	SAFETY STOP SWITCH ASSEMBLY
1	1	P0003-08-000	NUT, Hex 1/2 UNC
2	1	024588P	HOUSING
3	1	024589P	INSERT
4	1	P0251-540	SWITCH
5	1	P0054-069	RECEPTACLE
6	1	P0094-004-072	CHAIN, 3/16 x 72
7	1	P0091-003	SHACKLE, Anchor
8	2	P0001-04-008	BOLT, Hex 1/4 UNC x 2
9	1	P0001-08-007	BOLT, Hex 1/2 UNC x 1.75
10	2	P0017-08-524	SCREW, Round Head Machine 8-32 UNC x 1.5
11	2	P0028-001	WASHER, 70 Duro 1/2

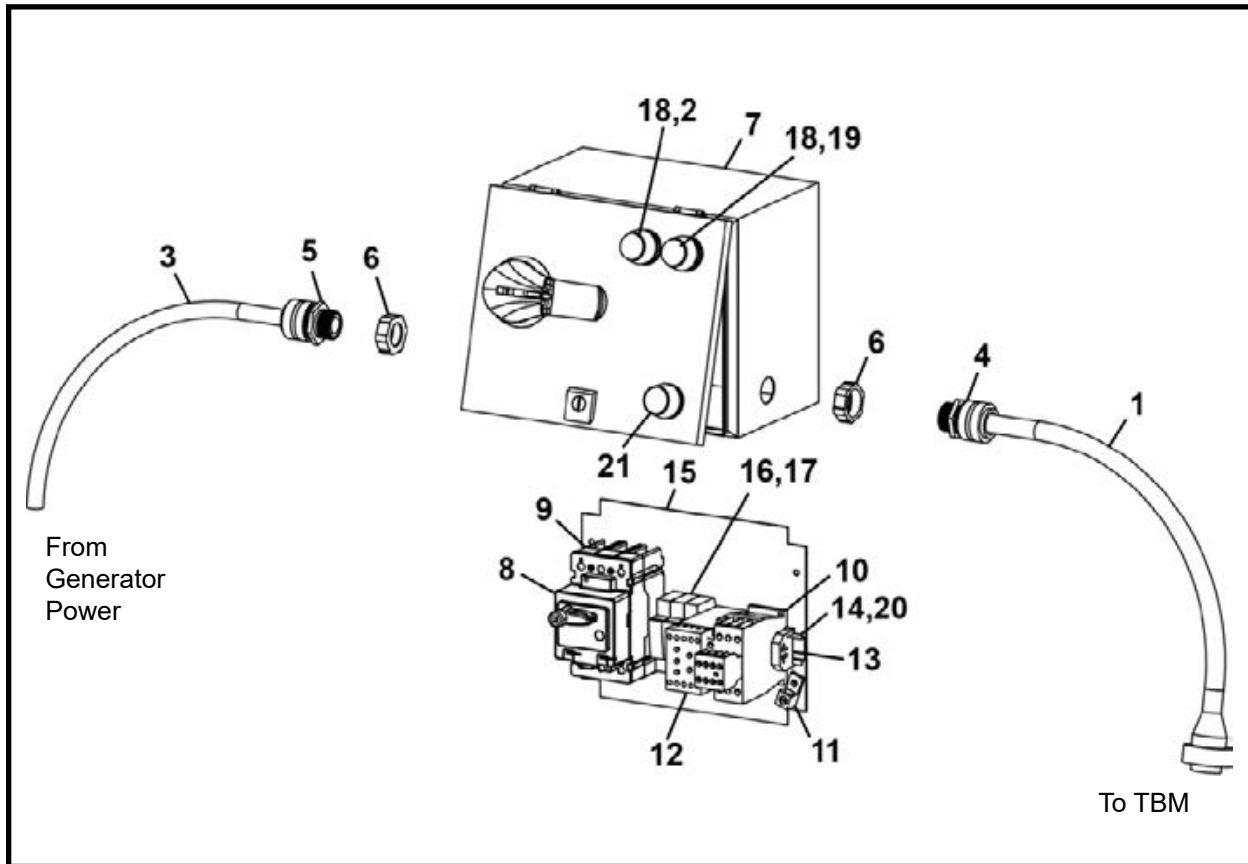
## CALIBRATION (GAS CHALLENGE) KIT, 016423A



ITEM	QTY	PART NO.	DESCRIPTION
0	1	016423A	KIT, Calibration
1	1	P0310-266	GAS CHALLENGE KIT (Includes items 2 - 5)
2	2	-	CYLINDER, 50% LEL Methane Gas Concentration
3	1	-	REGULATOR VALVE & GAUGE
4	1	-	TUBE, Plastic
5*	1	-	PROTECTIVE CASE
6	1	016422A	NOZZLE, Calibration (Buckeye & GasMax)

\* Not Shown

**PIT POWER BOX ASSEMBLY, F19051F**  
**5000 Pump Unit With TBM D Series**



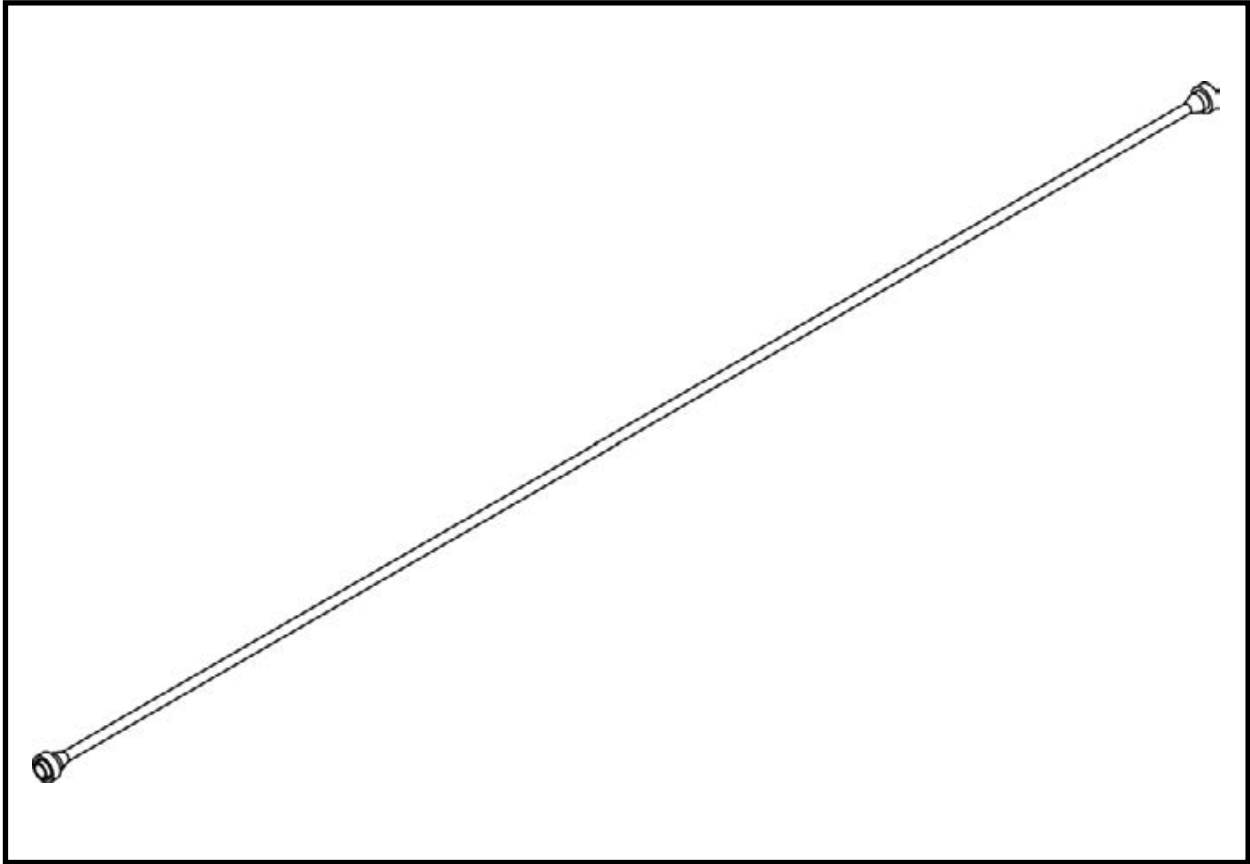
ITEM	QTY	PART NO.	DESCRIPTION
0	1	F19051F	PIT POWER BOX ASSEMBLY
1	1	P0054-067F	CABLE
2	1	P0251-514	LENS, Green Plastic
3	120 LI	P0054-036	CORD, 4C 10GA
4	1	P0311-112	CORD GRIP, 1 NPT, .875-1.0 ID
5	1	P0311-111	CORD GRIP,, 1 NPT, 0.625-.75 ID
6	2	P0311-034	BUSHING, Insulating 1
7	1	019053P	BOX, Pit Power
8	1	P0251-482	MAIN BREAKER & HANDLE
9	1	P0251-481	BREAKER, 480V 3PH 15/3 W/Lugs
10	1	P0251-484	CONTACTOR, 480V 3PH 240 Coil
11	1	P0055-157	LUGS, 1 GA
12	1	P0251-443	PHASE DETECTOR, 480V
13	2	P0310-571	FUSE HOLDER END STOP
14	1	P0310-503-007	DIN RAIL - 7.0"
15	1	019052P	PANEL, Pit Power
16	3	P0310-473B	DIN RAIL MIDGET FUSE HOLDER
17	3	P0310-954	FUSE, Time Delay 1.4 AMP
18	2	P0251-463	LIGHT, Red Pilot 480V
19	1	P0251-464	LENS, Red Plastic
20	2	P0020-83-022	SCREW, Truss Head 8-32 x .375
21	1	P0251-486	INDICATOR LIGHT, Red 240V
22*	1	1251-533	KIT, Decal Pit Box

\* Not Shown - refer to Section 2, Decals for parts information.

LI - Linear Inch

**IMPORTANT:** If using a 5000 Pump Unit with a TBM Series II, you must use this pit power box for TBM electric power and for TBM E-Stop to function.

# TBM TUNNEL POWER CABLE - 100 FT, FA20511F0



ITEM	QTY	PART NO.	DESCRIPTION
0	1	FA20511F0	TBM TUNNEL POWER CABLE- 100 FT



# Hydraulics

## Hydraulic Assembly

TBM 48SC-D, 032313A .....	2
Hydraulic Parts Assembly, 032314A .....	4
Hose Kit, 031620A .....	6
Fitting Kit, 031621A .....	10
TBM 420D, 032168A .....	14
Hydraulic Parts Assembly, 032269A .....	16
Hose Kit, 032271A .....	18
Fitting Kit, 032270A .....	22
TBM 480D, 032375A .....	24
Hydraulic Parts Assembly, 032378A .....	26
Hose Kit, 032376A .....	28
Fitting Kit, 032377A .....	32

## Grease Assembly

TBM Grease Assembly, TBM 48SC-D - 420D - 480D, 032169A .....	36
Grease Assembly, TBM 48SC-D - 420D - 480D, 032272A .....	38

## Closed Face Hydraulic Assembly

TBM 48SC-D - 420D - 480D, 023986A .....	40
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## TBM Hydraulic Tunnel Hoses & Lines .....

Hydraulic Starter Hose Assembly (3,000 psi), F13597F00 .....	42
Hydraulic Starter Hose Assembly (5,000 psi), F27691F .....	43
TBM Hydraulic Lines LP Assembly (3,000 psi), F13326F00 .....	44
TBM Hydraulic Lines HP Assembly (5,000 psi), F27674F .....	45
Adapter Kit - 5000 Pump Unit (3,000 psi) To TBM Series II (HP), 027698A .....	46
Adapter Kit - 5200 Pump Unit (3,000 psi) To TBM Series I, 027699A .....	47

## Intermediate Jacking Station .....

Starter Hose, High Pressure 30 Ft, F09802F01 .....	49
Starter Hose, Low Pressure 30 Ft, F09803F01 .....	50
IJS Tunnel Line 10 Ft 6 In., F09800F00 .....	51
IJS Tee Connector, F09804F00 .....	52
IJS Valve (With Cable), F04908F01 .....	54
IJS Starter Connection, F09805F00 .....	56
IJS Coupler Assembly, 005133A02 .....	57
IJS Segment Assembly .....	58
IJS Cylinder, F03531F02 .....	59
IJS Hydraulic Schematic .....	60

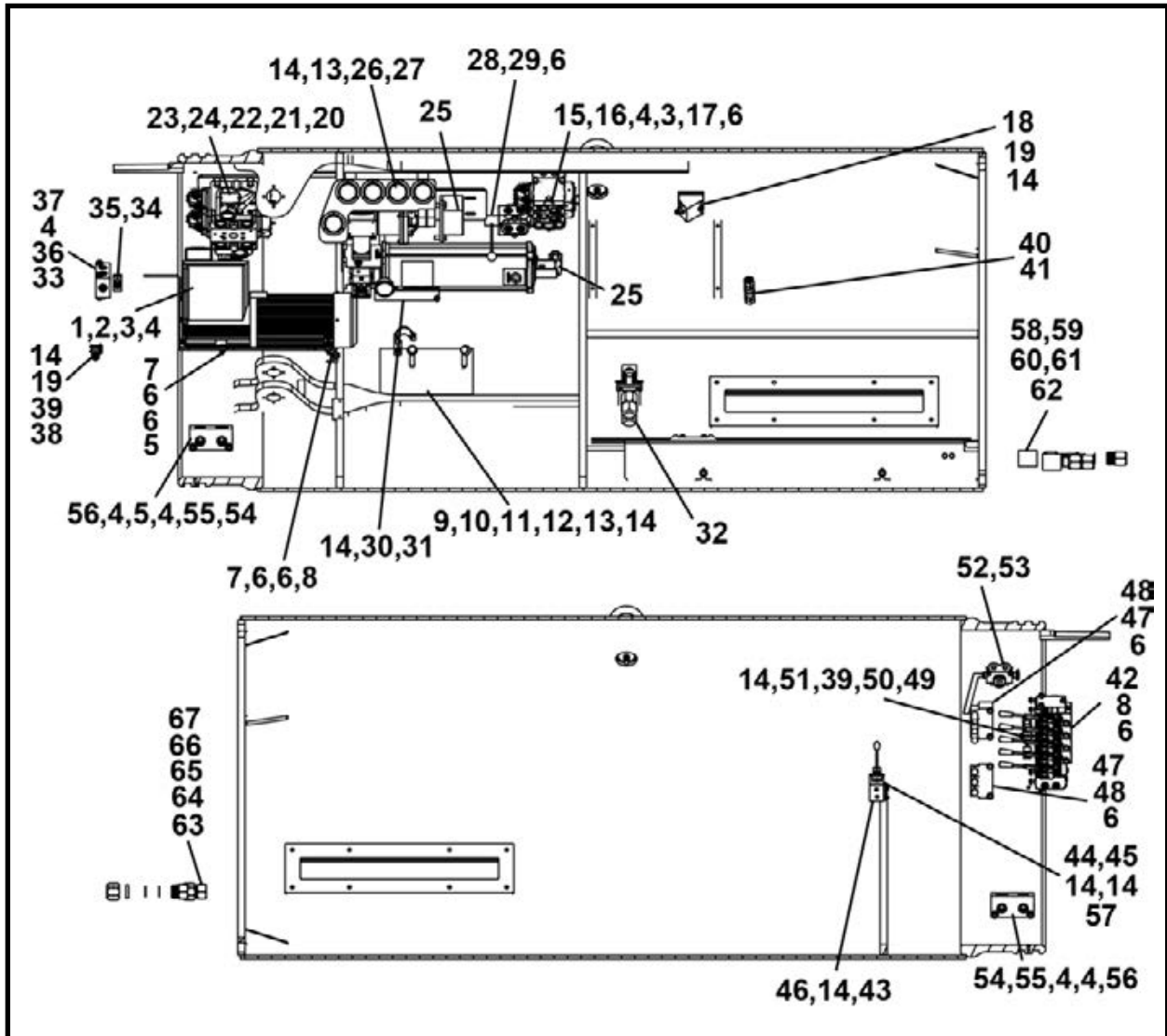


**HYDRAULIC ASSEMBLY, 032313A**  
**TBM 48SC-D**

ITEM	QTY	PART NO.	DESCRIPTION
0	1	032313A	HYDRAULIC ASSEMBLY - TBM 48SC-D
1*	1	032314A	HYDRAULIC PARTS ASSEMBLY
2*	1	031620A	KIT, Hose
3*	1	031621A	KIT, Fitting

\* Refer to this section for parts information.

**HYDRAULIC MAIN PARTS ASSEMBLY, 032314A**  
TBM 48SC-D



ITEM	QTY	PART NO.	DESCRIPTION
0	1	032314A	HYDRAULIC PARTS ASSEMBLY
1***	1	031705A	ASSEMBLY, Scavenge Pump
2	1	031614A	SHELF, Scavenge Pump
3	7	P0001-06-003	BOLT, Hex 3/8 UNC x .75
4	19	P0040-006	WASHER, Hardened Flat 3/8
5	4	P0001-05-009	BOLT, Hex 5\16 UNC x 2.25
6	26	P0040-005	WASHER, Hardened Flat 5/16
7	6	P0003-05-000	NUT, Hex 5/16 UNC
8	6	P0001-05-004	BOLT, Hex 5/16 UNC x 1.25
9	1	P0302-808	MANIFOLD
9a	2	P0309-208A	ELEMENT, Filter
10	2	P0040-010	WASHER, Hardened Flat 5/8
11	2	P0001-10-032	BOLT, Hex 5/8 UNC x 8
12	1	031009A	GUARD, Solenoid
13	4	P0001-04-002	BOLT, Hex 1/4 UNC x .5
14	22	P0040-004	WASHER, Hardened Flat 1/4
15**	1	P0302-806	VALVE, Two Section
16	4	031365P	MOUNT, Two Section
17	4	P0001-05-003	BOLT, Hex 5/16 UNC x .75

(Continued On Next Page)

**HYDRAULIC PARTS ASSEMBLY, 032314A**  
**TBM 48SC-D**

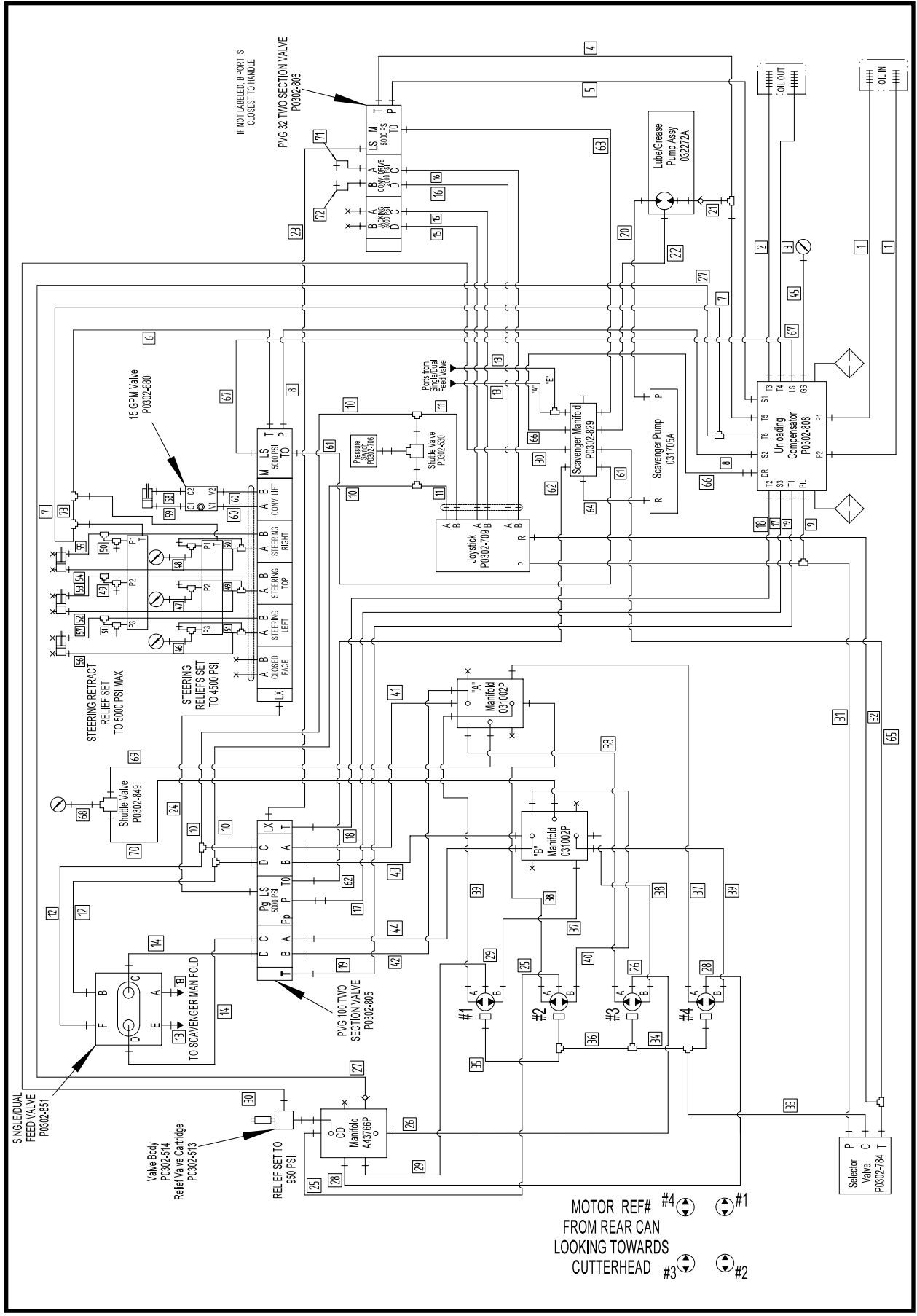
ITEM	QTY	PART NO.	DESCRIPTION
18**	1	P0302-680	VALVE, 15 GPM
19	4	P0001-04-006	BOLT, Hex 1/4 UNC x 1.5
20**	1	P0302-805	VALVE, Two Section
21	1	031617P	MOUNT, Drive Valve
22	4	PM12A-1.75-030	SCREW, Socket Head Cap M12-1.75 x 30 10.9
23	4	P0040-008	WASHER, Hardened Flat 1/2
24	4	P0001-08-005	SCREW, Hex Cap 1/2 UNC x 1.25
25	1	032272A	GREASE ASSEMBLY
26	1	026169P	MOUNT, Gauge
27	5	P0301-146	GAUGE, 6000 PSI
28**	1	P0302-851	VALVE, 6 Way 2 Position
29	2	P0001-05-012	BOLT, Hex 5/16 UNC x 3
30	2	P0001-04-010	BOLT, Hex 1/4 UNC x 2.5
31	1	P0302-829	MANIFOLD, 4 Station
32*	1	027698A	KIT, Adapter LP To Series II
33	1	A43766P	MANIFOLD
34	1	P0302-514	BODY, Port 3/8
35	1	P0302-513	CARTRIDGE
36	4	P0001-06-002	BOLT, Hex 3/8 UNC x .5
37	1	P0302-701	CHECK VALVE
38	1	P0302-849	VALVE, Shuttle
39	2	024545P	PLATE, Pressure Switch
40	1	P0100-004A	COUPLER, Female
41	1	P0100-004B	COUPLER, Male
42**	1	P0302-814	VALVE, Five Section
43**	1	P0302-709	JOYSTICK
44	1	026168P	MOUNT, Joystick
45	2	P0001-04-003	BOLT, Hex 1/4 UNC x .75
46	6	PM6A-16-1.00	BOLT, Hex M6 x 1 x 16 10.9
47	2	P0302-731	LIMITER, Steering Pressure
48	4	P0001-05-010	BOLT, Hex 5/16 UNC x 2.5
49	1	P0302-706	SWITCH, Pressure 5000 PSI
50	1	P0302-530	VALVE, Shuttle
51	2	P0001-04-007	SCREW, Hex Head 1/4 UNC x 1.75
52**	1	P0302-784	VALVE, Selector
53	2	P0001-05-007	BOLT, Hex 5/16 UNC x 1.75
54	2	031002P	MANIFOLD,
55	4	P0001-06-014	BOLT, Hex 3/8 UNC x 3.5
56	4	P0003-06-000	NUT, Hex 3/8 UNC
57	2	P0003-04-000	NUT, Hex 1/4 UNC
58	2	P0421-012	COUPLER, Reducer 1-1/4 x 1
59	2	004901P01	COUPLER
60	2	004899P00	COUPLER UNION
61	2	008146P00	CAP, Pressure Line
62	2	P0084-123	BACK-UP RING
63	2	027673P	FITTING, Threaded TBM HP
64	2	P0084-124	RING, Backup 1-1/4 ID 3/32
65	2	P0085-124A	ORING
66	2	027651P	INSERT, Rubber 1.88 x 0.38
67	2	027671P	CAP, Storage, TBM HP

\* Refer to this section for parts information.

\*\* Refer to Section 7, Valves for parts information.

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

# HOSE KIT, 031620A TBM 48SC-D

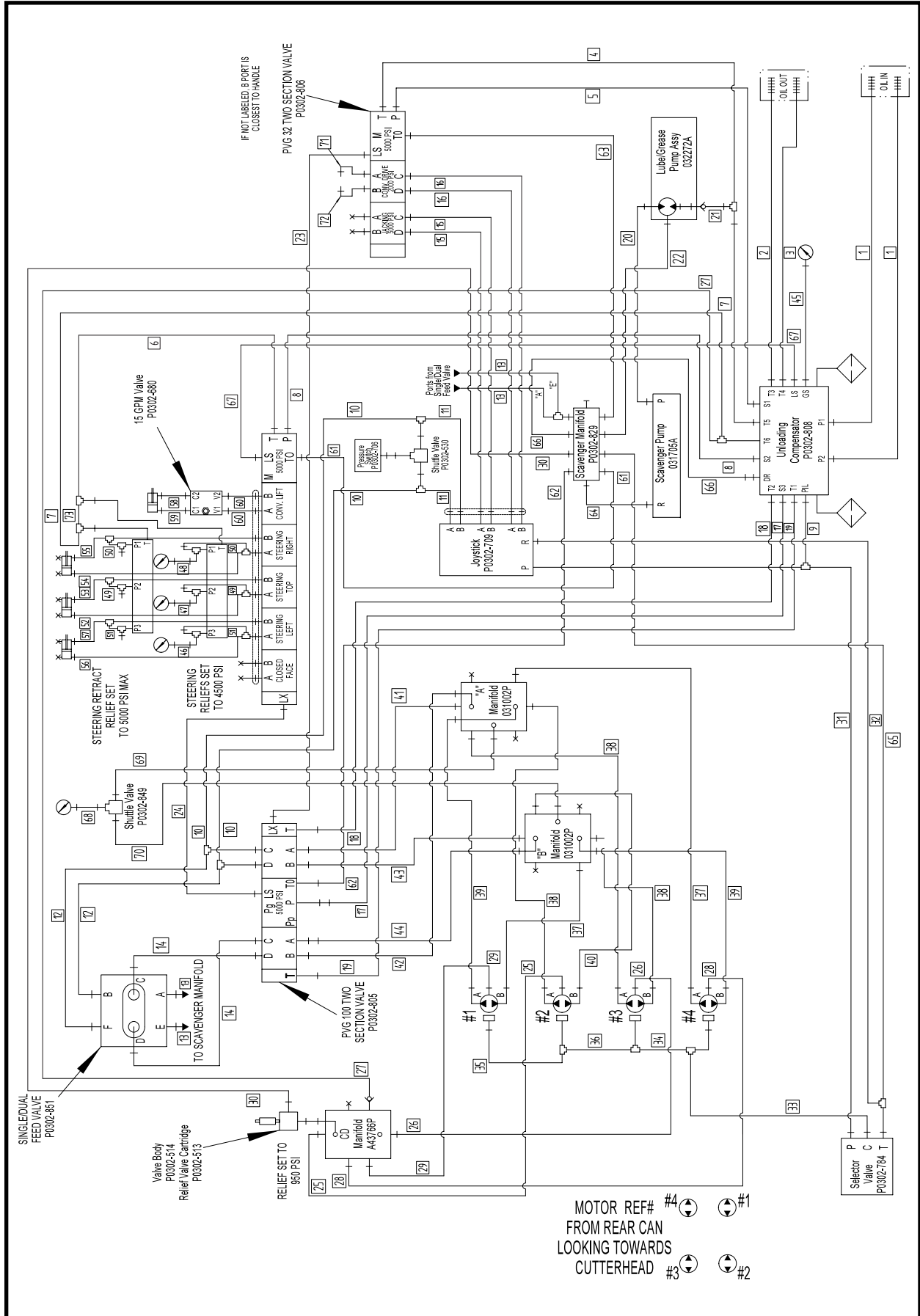


**HOSE KIT, 031620A  
TBM 48SC-D**

ITEM	QTY	PART NO.	DESCRIPTION
0	1	031620A	HOSE KIT - TBM 48SC-D
1	2	A09972A-129	HOSE ASSEMBLY, 1 x 129
2	1	A09886A-124	HOSE ASSEMBLY, 1 x 124
3	1	A09885A-128	HOSE ASSEMBLY, 1 x 128
4	1	A09859A-034	HOSE ASSEMBLY, 3/4 x 34
5	1	A09815A-048	HOSE ASSEMBLY, 3/4 x 48
6	1	A09912A-013	HOSE ASSEMBLY, 1/2 x 13
7	1	A10491A-094	HOSE ASSEMBLY, 1/2 x 94
8	1	A09888A-070	HOSE ASSEMBLY, 1/2 x 70
9	1	A09889A-108	HOSE ASSEMBLY, 1/4 x 108
10	2	A09889A-073	HOSE ASSEMBLY, 1/4 x 73
11	2	A09891A-038	HOSE ASSEMBLY, 1/4 x 38
12	2	A09890A-041	HOSE ASSEMBLY, 1/4 x 41
13	2	A09892A-028	HOSE ASSEMBLY, 1/4 x 28
14	2	A09894A-038	HOSE ASSEMBLY, 1/4 x 38
15	2	A09889A-105	HOSE ASSEMBLY, 1/4 x 105
16	2	A09891A-105	HOSE ASSEMBLY, 1/4 x 105
17	1	A09863A-033	HOSE ASSEMBLY, 1 x 33
18	1	A10342A-025	HOSE ASSEMBLY, 1 x 25
19	1	A10369A-051	HOSE ASSEMBLY, 1 x 51
20	1	A10471A-026	HOSE ASSEMBLY, 3/8 x 26
21	1	A10312A-019	HOSE ASSEMBLY, 3/8 x 19
22	1	A09889A-020	HOSE ASSEMBLY, 1/4 x 20
23	1	A09920A-060	HOSE ASSEMBLY, 1 x 60
24	1	A10325A-038	HOSE ASSEMBLY, 1/4 x 38
25	1	A10079A-040	HOSE ASSEMBLY, 3/8 x 40
26	1	A10079A-070	HOSE ASSEMBLY, 3/8 x 70
27	1	A10362A-047	HOSE ASSEMBLY, 1/2 x 47
28	1	A10082A-029	HOSE ASSEMBLY, 3/8 x 29
29	1	A10079A-017	HOSE ASSEMBLY, 3/8 x 17
30	1	A10313A-060	HOSE ASSEMBLY, 3/8 x 60
31	1	A09890A-043	HOSE ASSEMBLY, 1/4 x 43
32	1	A09890A-055	HOSE ASSEMBLY, 1/4 x 55
33	1	A09899A-028	HOSE ASSEMBLY, 1/4 x 28
34	1	A09893A-044	HOSE ASSEMBLY, 1/4 x 44
35	1	A09893A-028	HOSE ASSEMBLY, 1/4 x 28
36	1	A09899A-016	HOSE ASSEMBLY, 1/4 x 16
37	2	A09877A-033	HOSE ASSEMBLY, 5/8 x 33
38	3	A09877A-024	HOSE ASSEMBLY, 5/8 x 24
39	2	A09877A-040	HOSE ASSEMBLY, 5/8 x 40
40	1	A09877A-025	HOSE ASSEMBLY, 5/8 x 25
41	1	A10467A-044	HOSE ASSEMBLY, 3/4 x 44
42	1	A10468A-042	HOSE ASSEMBLY, 3/4 x 42
43	1	A09898A-030	HOSE ASSEMBLY, 3/4 x 30
44	1	A10467A-033	HOSE ASSEMBLY, 3/4 x 33
45	1	A10338A-041	HOSE ASSEMBLY, 1/4 x 41
46	1	A10338A-066	HOSE ASSEMBLY, 1/4 x 66
47	1	A10338A-058	HOSE ASSEMBLY, 1/4 x 58
48	1	A10338A-073	HOSE ASSEMBLY, 1/4 x 73
49	2	A10082A-026	HOSE ASSEMBLY, 3/8 x 26
50	2	A10082A-020	HOSE ASSEMBLY, 3/8 x 20
51	2	A10082A-017	HOSE ASSEMBLY, 3/8 x 17
52	1	A10079A-087	HOSE ASSEMBLY, 3/8 x 87

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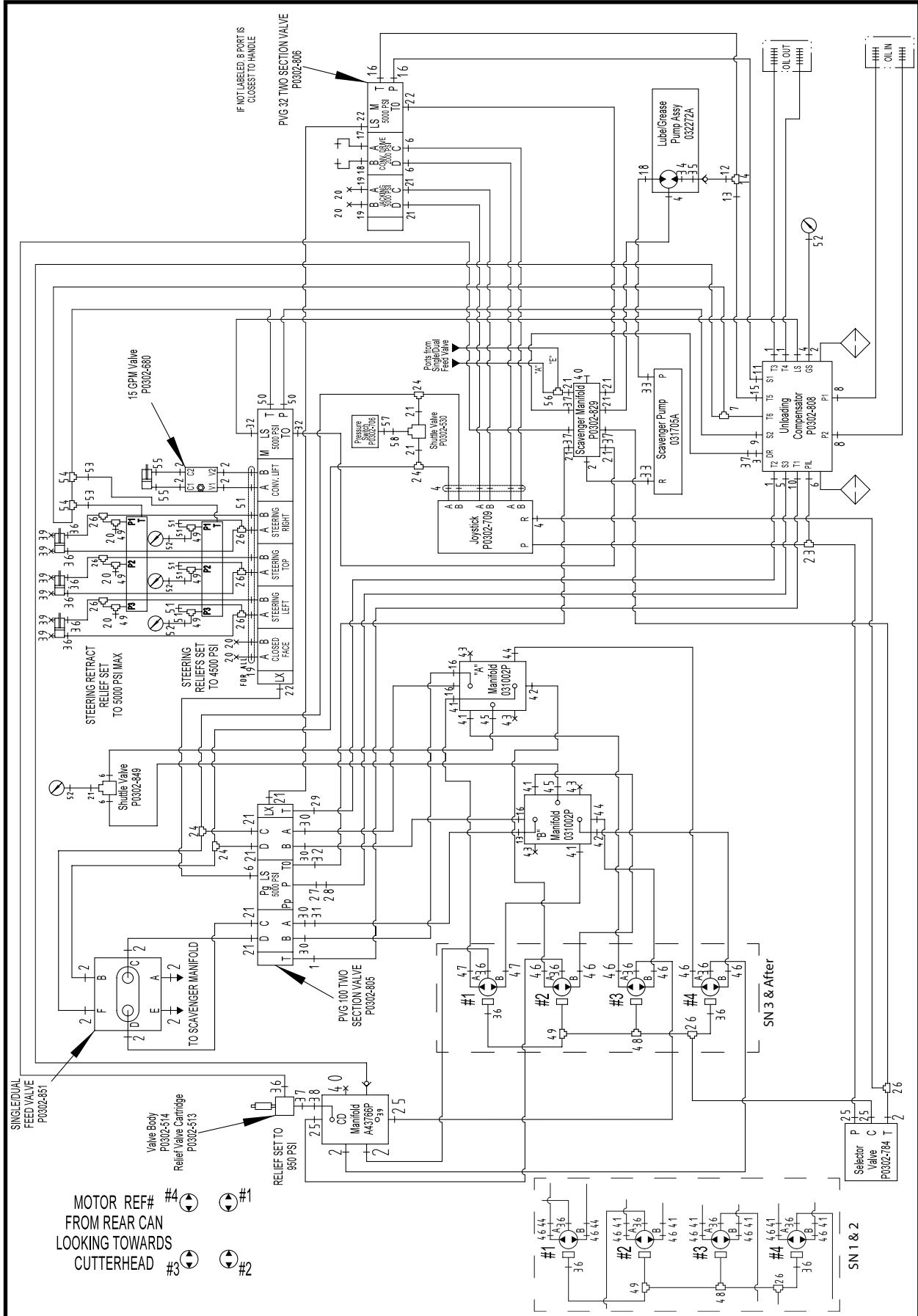
# HOSE KIT, 031620A TBM 48SC-D



**HOSE KIT, 031620A  
TBM 48SC-D**

ITEM	QTY	PART NO.	DESCRIPTION
53	1	A10079A-090	HOSE ASSEMBLY, 3/8 x 90
54	1	A10082A-113	HOSE ASSEMBLY, 3/8 x 113
55	1	A10082A-111	HOSE ASSEMBLY, 3/8 x 111
56	1	A10079A-025	HOSE ASSEMBLY, 3/8 x 25
57	1	A10079A-016	HOSE ASSEMBLY, 3/8 x 16
58	1	A10363A-066	HOSE ASSEMBLY, 1/4 x 66
59	1	A10363A-053	HOSE ASSEMBLY, 1/4 x 53
60	2	A10327A-125	HOSE ASSEMBLY, 1/4 x 125
61	1	A09892A-098	HOSE ASSEMBLY, 1/4 x 98
62	1	A09892A-048	HOSE ASSEMBLY, 1/4 x 48
63	1	A09887A-023	HOSE ASSEMBLY, 1/4 x 23
64	1	A10079A-019	HOSE ASSEMBLY, 3/8 x 19
65	1	A10079A-072	HOSE ASSEMBLY, 3/8 x 72
66	1	A10079A-014	HOSE ASSEMBLY, 3/8 x 14
67	1	A10059A-105	HOSE ASSEMBLY, 1/4 x 105
68	1	A10325A-068	HOSE ASSEMBLY, 1/4 x 68
69	1	A10326A-047	HOSE ASSEMBLY, 1/4 x 47
70	1	A10326A-051	HOSE ASSEMBLY, 1/4 x 51
71	1	A09974A-039	HOSE ASSEMBLY, 1/2 x 39
72	1	A10080A-035	HOSE ASSEMBLY, 1/2 x 35
73	1	A09912A-024	HOSE ASSEMBLY, 1/2 x 24

# FITTING KIT, 031621A TBM 48SC-D

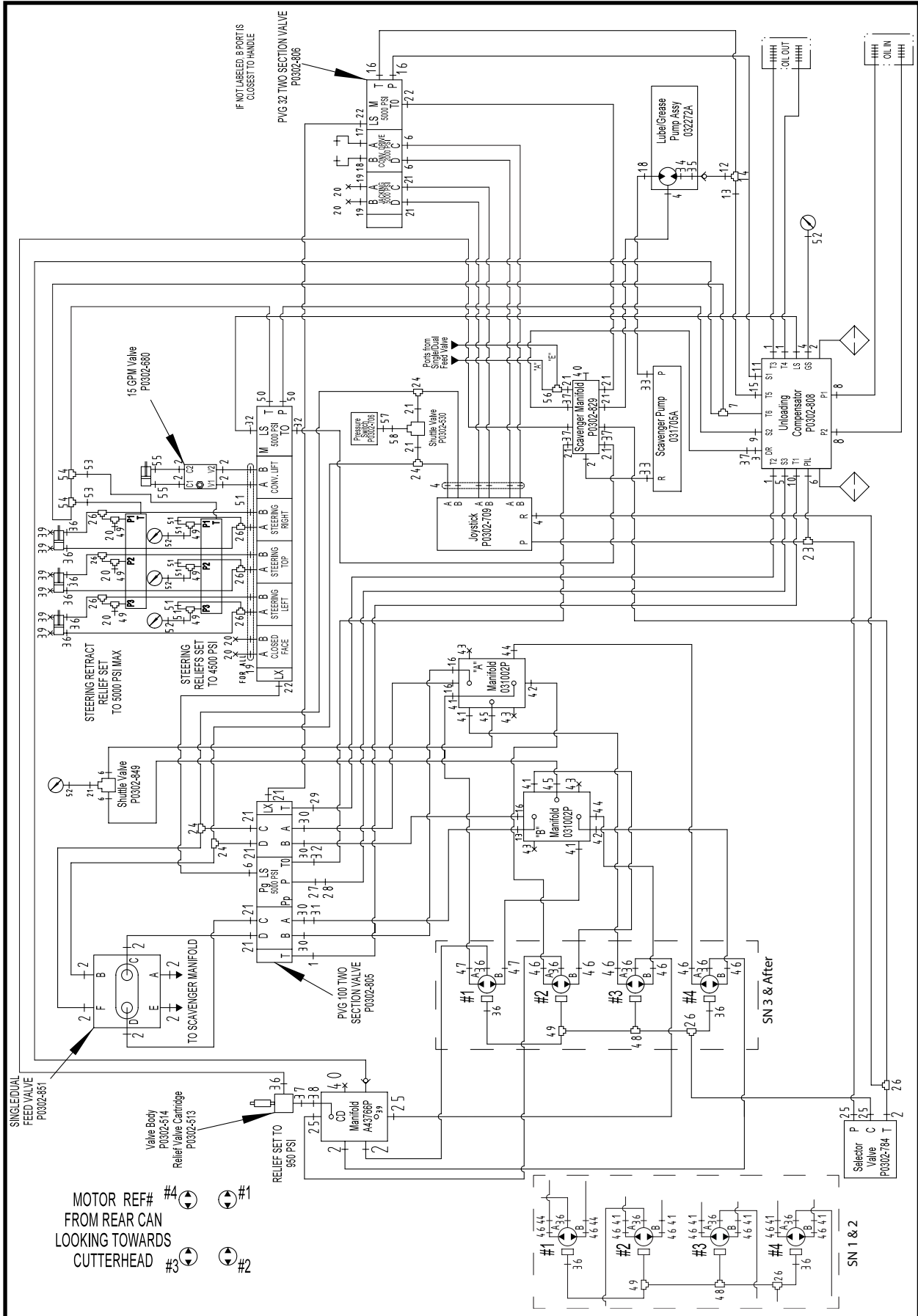


**FITTING KIT, 031621A  
TBM 48SC-D**

ITEM	QTY	PART NO.	DESCRIPTION
0	1	031621A	FITTING KIT - TBM 48SC-D
1	4	P0300-450	FITTING, 16MFFOR-20MB90
2	15	P0300-430	FITTING, 06MFFOR-08MB
3	1	P0300-743	FITTING, 08MB-06FB
4	9	P0300-362	FITTING, 04MFFOR-04MB
5	1	P0300-371	FITTING, 16MFFOR-16MB90
6	6	P0300-311	FITTING, 04MFFOR-06MB90
7	1	P0300-535	FITTING, 08MFFOR-08MB-08MFFOR
8	2	P0300-434	FITTING, 16MFFOR-16MB45
9	1	P0300-782	FITTING, 10MFFOR-16MB
10	1	P0300-374	FITTING, 16MFFOR-20MB
11	1	P0300-378	FITTING, 12MFS-16MORB STRAIGHT
12	1	P0300-610	FITTING, 12FFOR-06MFOR
13	2	P0300-359	12MFFOR-12MB45
14	1	P0300-588	FITTING, FS6602-12-12-12
15	1	P0300-658	FITTING, 20MB-12FB
16	5	P0300-372	FITTING, 12MFFOR-12MB90
17	1	P0300-300	FITTING, 08MFFOR-10MB
18	2	P0300-302	FITTING, 08MFFOR-10MB90
19	12	P0300-634	FITTING, 06MFFOR-10MB
20	7	P0300-390	CAP, 06FFOR-CAP
21	15	P0300-310	FITTING, 04MFFOR-06MB
22	3	P0300-314	FITTING, 04MFFOR-05MB
23	1	P0300-821	FITTING, 4MFFOR-4MB-4MFFOR
24	4	P0300-313	FITTING, 04MFFOR-04MFFOR-04FFORX
25	4	P0300-717	FITTING, 06MFFOR-08MB90
26	8	P0300-613	FITTING, 06MFFOR-06FFORX-06MFFOR
27	1	P0300-949	FLANGE, Split 20SF XO-M12
28	1	P0300-929	FITTING, 16MFFOR-20FLH90
29	1	P0300-687	FITTING, 16MFFOR-20MB45
30	4	P0300-899	FITTING, 12MFFOR-14MB
31	1	P0300-424	FITTING, 12MFFOR-12FFORX90
32	3	P0300-429	FITTING, 6MFFOR-5MB90
33	2	P0300-724	FITTING, 06MFFOR-06MBSPP
34	1	P0300-902	FITTING, 10MB-10FB90
35	1	P0300-788	FITTING, 10MB-08FB
36	13	P0300-355	FITTING, 6MFS-6MAORB-90 DEGREE
37	5	P0300-356	FITTING, 6MFS-6MORB-STR
38	1	P0300-618	FITTING, 06FFORX-06MB90
39	7	P0300-027	FITTING, 6MB-PLUG
40	2	P0300-193	PLUG, 3/4"-16 ORING HEX HEAD PLUG
41.1	10	P0300-383	FITTING, 10MFFOR-10MB90 (SN 32300F01 & 02)
41.2	4	P0300-383	FITTING, 10MFFOR-10MB90 (SN 32300F03 & After)
42	2	P0300-385	FITTING, 10MFFOR-10MB
43	4	P0300-060	FITTING, 10MB-PLUG
44.1	4	P0300-384	FITTING, 10MFFOR-10MB45 (SN 32300F01 & 02)
44.2	2	P0300-384	FITTING, 10MFFOR-10MB45
45	2	P0300-427	FITTING, 04MFOR-04MB90

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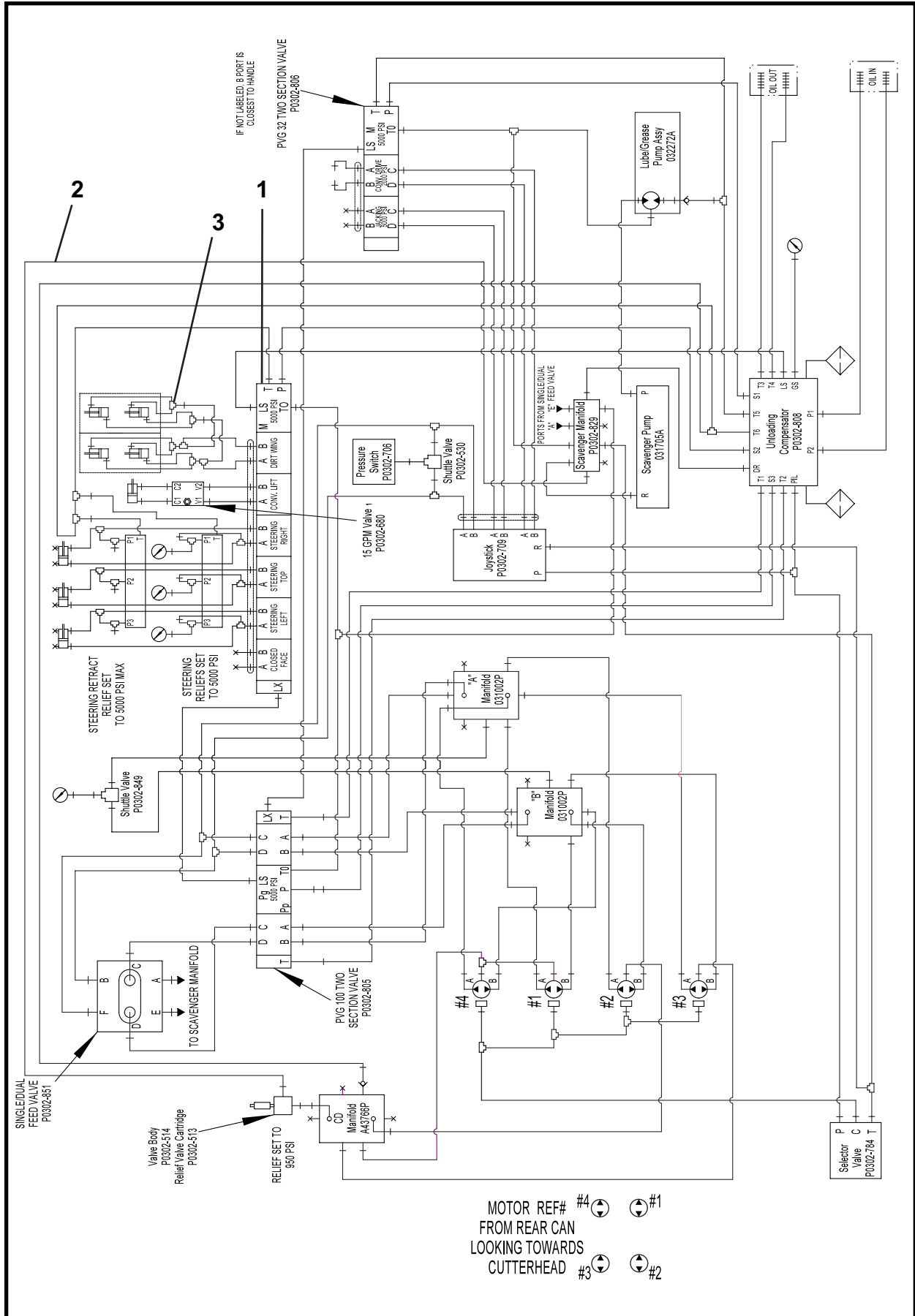
# FITTING KIT, 031621A TBM 48SC-D



**FITTING KIT, 031621A**  
**TBM 48SC-D**

ITEM	QTY	PART NO.	DESCRIPTION
46.1	8	P0300-396	FITTING, 116MB-10FB (SN 32300F01 & 02)
46.2	6	P0300-633	FITTING, 10MFFOR-12MB90 (SN 32300F03 & After)
47	2	P0300-806	FITTING, 10MFFOR-12MB45 (SN 32300F03 & After)
48	1	P0300-376	FITTING, 06MFOR-06MFOR-06MB
49	7	P0300-386	FITTING, 6MFS-6MAORB-6MFS
50	2	P0300-373	FITTING, 08MFFOR-12MB90
51	10	P0300-603	FITTING, 06MFOR-06FFORX 90
52	5	P0300-594	FITTING, 04FB-04MFFOR
53	2	P0300-750	FITTING, 08MFFOR-06MB
54	2	P0300-428	FITTING, 08MFFOR-08MFFOR-08FFORX
55	2	P0300-042	FITTING, 06MJ-06MB90
56	1	P0300-312	FITTING, 4MFFOR-4FFORX-4MFFOR
57	1	P0300-575	FITTING, 06MB-04FB
58	1	P0300-541	ORING, 04OR

# HYDRAULIC ASSEMBLY, 032168A TBM 420D

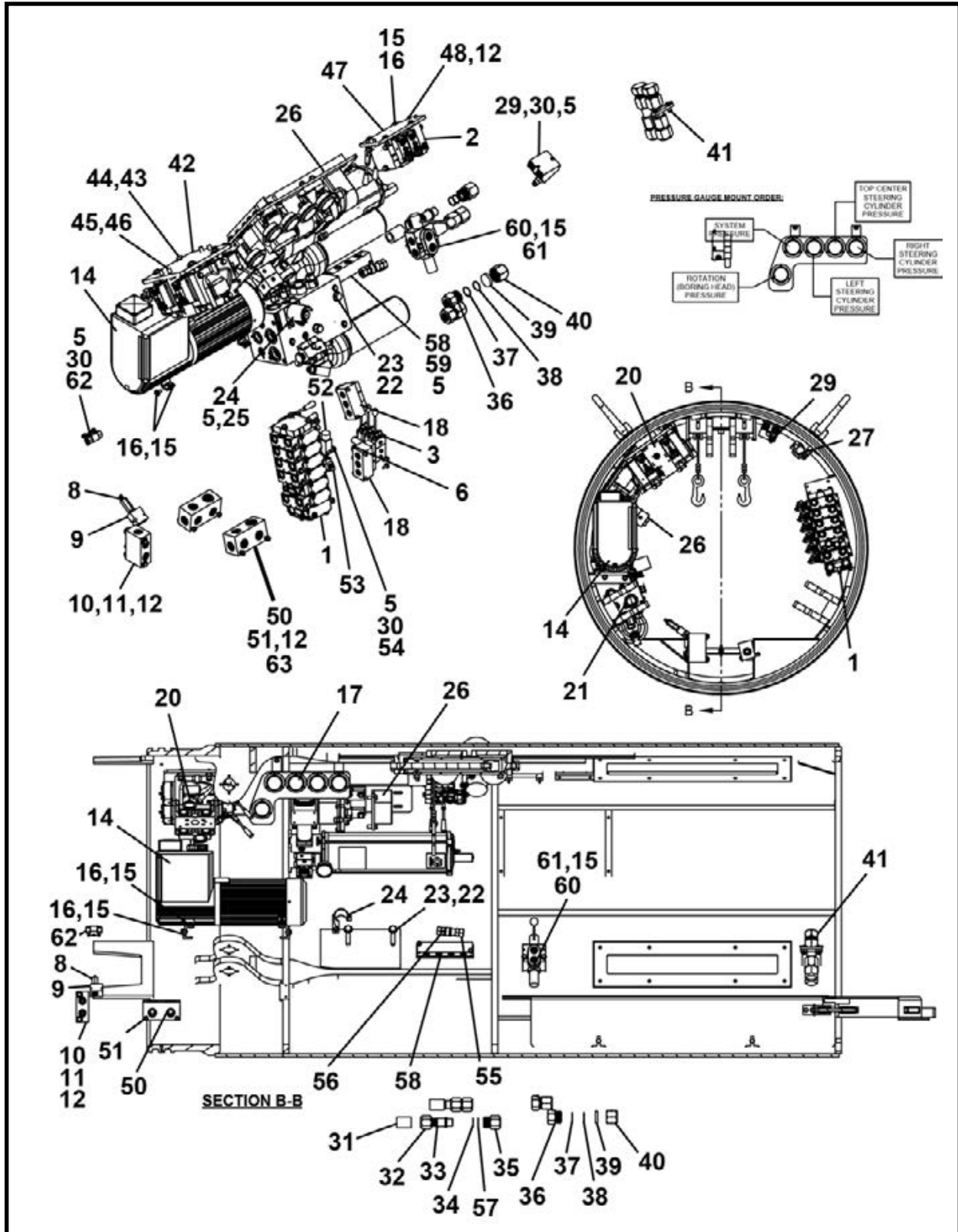


**HYDRAULIC ASSEMBLY, 032168A**  
**TBM 420D**

ITEM	QTY	PART NO.	DESCRIPTION
0	1	032168A	HYDRAULIC ASSEMBLY - TBM 420D
1	1	032269A	HYDRAULIC PARTS ASSEMBLY
2	1	032271A	KIT, Hose
3	1	032270A	KIT, Fitting

\* Refer to this section for parts information.

**HYDRAULIC PARTS ASSEMBLY, 032269A**  
TBM 420D



ITEM	QTY	PART NO.	DESCRIPTION
0	1	032269A	HYDRAULIC PARTS ASSEMBLY - 420D
1**	1	P0302-815	VALVE, Six Section
2**	1	P0302-806	VALVE, Two Section
3**	1	P0302-709	JOYSTICK
4	2	P0001-04-003	BOLT, Hex 1/4 UNC x .75

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**HYDRAULIC PARTS ASSEMBLY, 032269A**  
**TBM 420D**

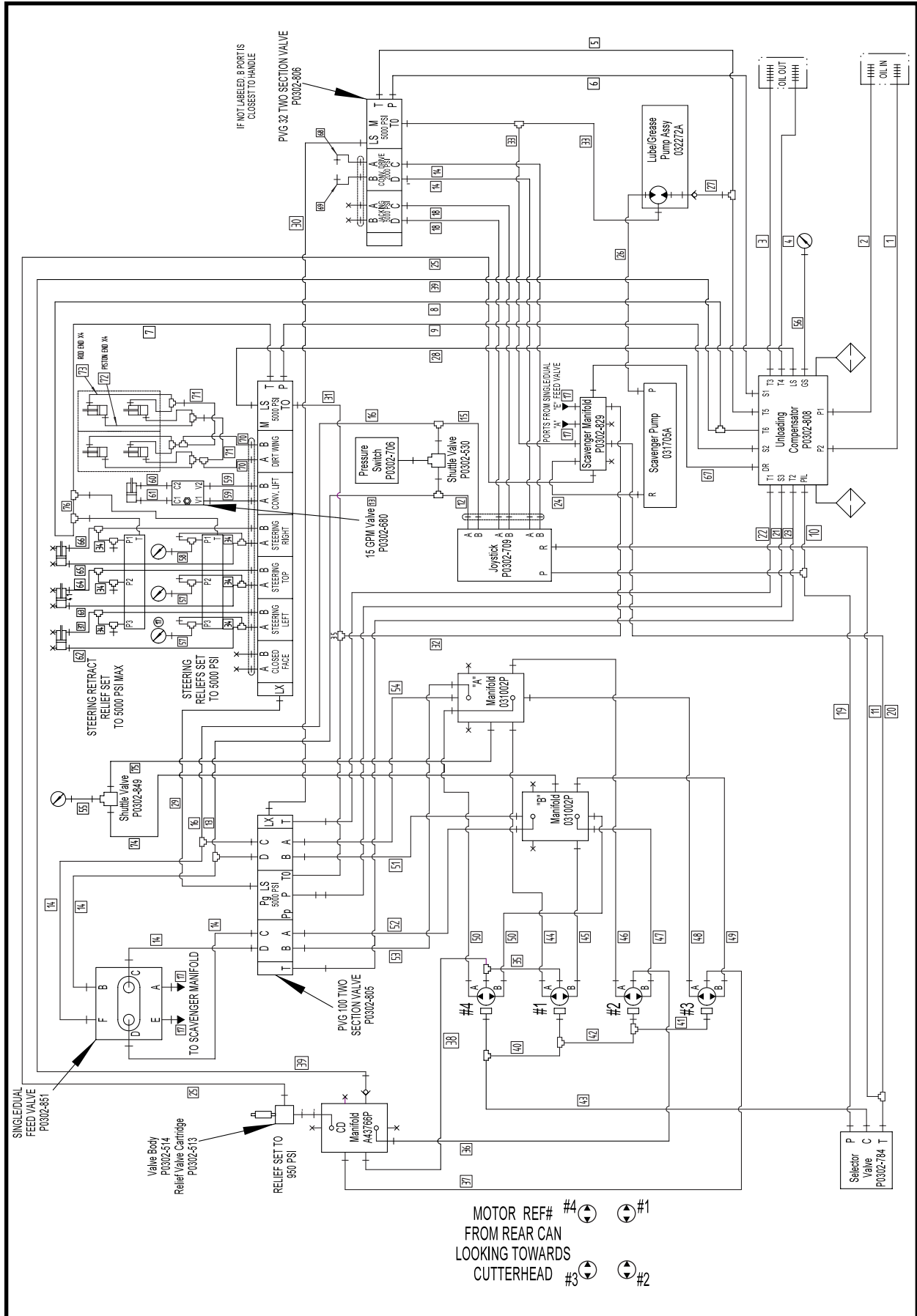
ITEM	QTY	PART NO.	DESCRIPTION
5	12	P0040-004	WASHER, Hardened Flat 1/4
6	4	PM6B-1-12	SCREW, Socket Head Cap M6 x 12
7	4	PM40-6	WASHER, Flat 6MM
8	1	P0302-513	CARTRIDGE
9	1	P0302-514	BODY, Port 3/8
10	1	A43766P	MANIFOLD, Case Drain
11	4	P0001-06-002	BOLT, Hex 3/8 UNC x .5
12	16	P0040-006	WASHER, Hardened Flat 3/8
13	2	P0302-701	CHECK VALVE
14 <sup>^</sup>	1	031705A	ASSEMBLY, Scavenge Pump
15	22	P0040-005	WASHER, Hardened Flat 5/16
16	12	P0001-05-003	BOLT, Hex 5/16 UNC x .75
17	5	P0301-146	GAUGE, 6000 PSI
18	2	P0302-731	LIMITER, Steering Pressure
19	4	P0001-05-010	BOLT, Hex 5/16 UNC x 2.5
20 <sup>**</sup>	1	P0302-805	VALVE, Two Section
21	1	P0302-808	MANIFOLD
21a	2	P0309-208A	ELEMENT, Filte
22	2	P0040-010	WASHER, Hardened Flat 5/8
23	2	P0001-10-032	BOLT, Hex 5/8 UNC x 8
24	1	031009A	GUARD, Solenoid
25	2	P0001-04-002	BOLT, Hex 1/4 UNC x .5
26 <sup>*</sup>	1	032272A	ASSEMBLY, Grease
27 <sup>**</sup>	1	P0302-784	VALVE, Selector
28	2	P0001-05-007	BOLT, Hex 5/16 UNC x 1.75
29 <sup>**</sup>	1	P0302-680	VALVE, 15 GPM
30	6	P0001-04-006	BOLT, Hex 1/4 UNC 1.5
31	2	P0400-005	COUPLING, Pipe 1
32	2	004901P01	COUPLER
33	2	004899P00	UNION, Coupler
34	2	P0084-123	RING, Back-Up
35	2	008146P00	CAP, Pressure Line
36	2	027673P	FITTING, Threaded HP
37	2	P0084-124	RING, Back-Up 1-1/4 ID 3/32
38	2	P0085-124A	ORING, 90 Durometer
39	2	027651P	INSERT, Rubber
40	2	027671P	CAP, Storage High Pressure
41 <sup>*</sup>	1	027698A	KIT, Adapter LP To Series II
42	1	031039P	MOUNT, Two Section
43	4	PM12A-1.75-030	BOLT, Hex PM12-1.75x30-10.9
44	4	P0040-007	WASHER, Hardened Flat 7/16
45	4	P0040-008	WASHER, Hardened Flat 1/2
46	4	P0001-08-005	SCREW, Hex Cap 1/2 UNC x 1.25
47	1	031365P	MOUNT, Two Section
48	4	P0001-06-003	BOLT, Hex 3/8 UNC x .75
49	4	P0001-05-004	BOLT, Hex 5/16 UNC x 1
50	2	031002P	MANIFOLD, Drive Motor
51	4	P0001-06-013	BOLT, Hex 3/8 UNC x 3.25
52	1	P0302-706	SWITCH, Pressure 5000 PSI
53	1	P0302-530	VALVE, Shuttle
54	2	024545P	PLATE, Pressure Switch
55	1	P0100-004A	COUPLER, Female
56	1	P0100-004B	COUPLER, Male
57	2	P0085-123	ORING
58	1	P0302-829	MANIFOLD, 4 Station
59	2	P0001-04-010	BOLT, Hex 1/4 UNC x 2.5
60 <sup>**</sup>	1	P0302-851	VALVE, 6 Way 2 Position
61	2	P0001-05-012	BOLT, Hex 5/16 UNC x 3
62	1	P0302-849	VALVE, Shuttle High Pressure
63	4	P0003-06-000	NUT, Hex 3/8 UNC

\* Refer to this section for parts information

\*\* Refer to Section 7, Valves for parts information.

<sup>^</sup> Refer to Section 9, Pumps for parts information.

# HOSE KIT, 032271A TBM 420D

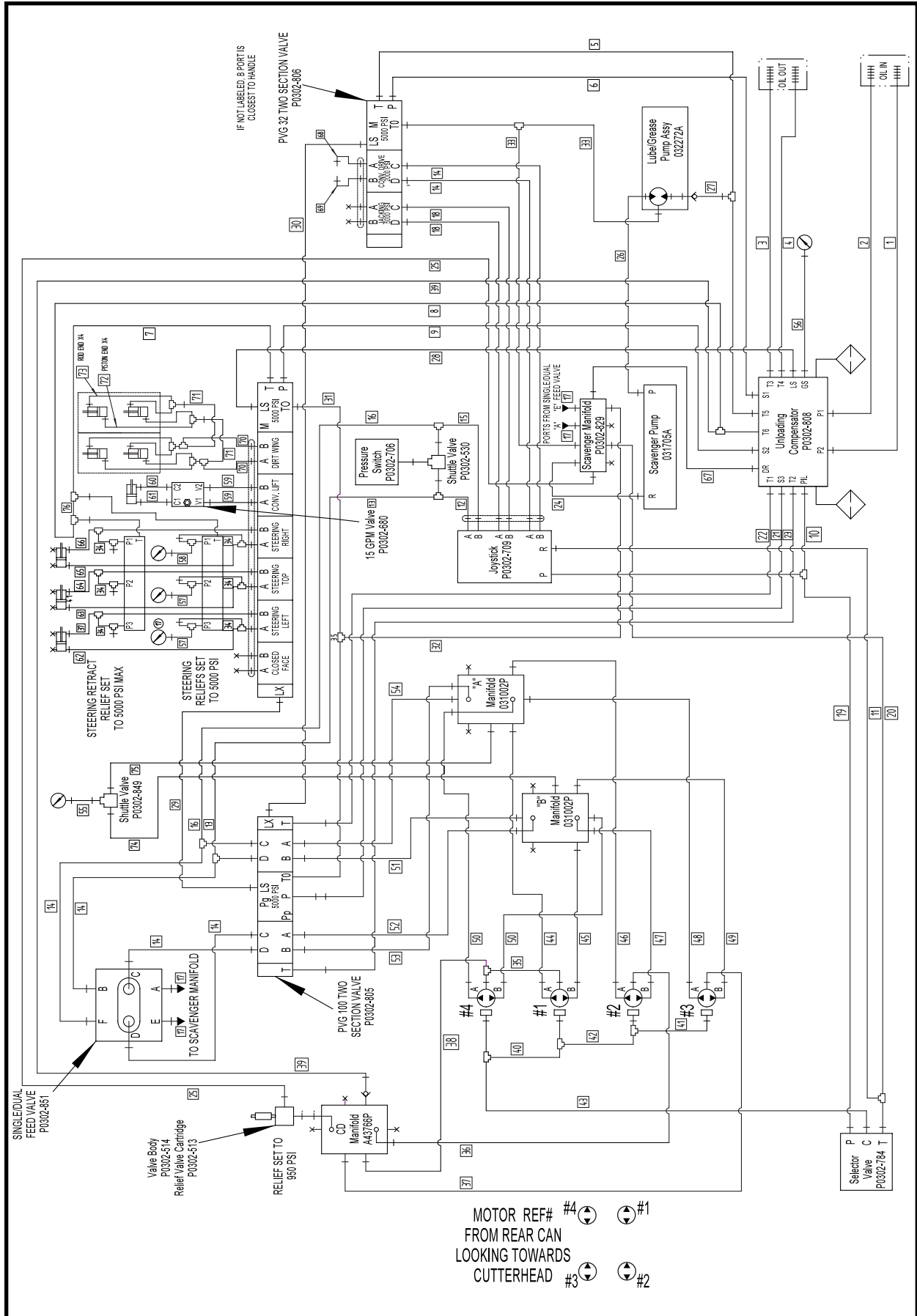


**HOSE KIT, 032271A  
TBM 420D**

ITEM	QTY	PART NO.	DESCRIPTION
0	1	032271A	HOSE KIT - TBM 420D
1	1	A09972A-129	HOSE ASSEMBLY, 1 x 129
2	1	A09972A-125	HOSE ASSEMBLY, 1 x 125
3	1	A09886A-124	HOSE ASSEMBLY, 1 x 124
4	1	A09885A-128	HOSE ASSEMBLY, 1 x 128
5	1	A09859A-036	HOSE ASSEMBLY, 3/4 x 36
6	1	A10467A-065	HOSE ASSEMBLY, 3/4 x 65
7	1	A09912A-013	HOSE ASSEMBLY, 1/2 x 13
8	1	A10491A-097	HOSE ASSEMBLY, 1/2 x 97
9	1	A09888A-070	HOSE ASSEMBLY, 1/2 x 70
10	1	A09889A-105	HOSE ASSEMBLY, 1/4 x 105
11	1	A09890A-036	HOSE ASSEMBLY, 1/4 x 36
12	1	A09891A-023	HOSE ASSEMBLY, 1/4 x 23
13	1	A09891A-045	HOSE ASSEMBLY, 1/4 x 45
14	6	A09889A-093	HOSE ASSEMBLY, 1/4 x 93
15	1	A09887A-022	HOSE ASSEMBLY, 1/4 x 22
16	1	A09891A-046	HOSE ASSEMBLY, 1/4 x 46
17	2	A09889A-026	HOSE ASSEMBLY, 1/4 x 26
18	2	A09891A-093	HOSE ASSEMBLY, 1/4 x 93
19	1	A09892A-032	HOSE ASSEMBLY, 1/4 x 32
20	1	A09894A-100	HOSE ASSEMBLY, 1/4 x 100
21	1	A09896A-033	HOSE ASSEMBLY, 1 x 33
22	1	A10369A-057	HOSE ASSEMBLY, 1 x 57
23	1	A10342A-027	HOSE ASSEMBLY, 1 x 27
24	1	A10079A-044	HOSE ASSEMBLY, 3/8 x 44
25	1	A10313A-094	HOSE ASSEMBLY, 3/8 x 94
26	1	A10471A-025	HOSE ASSEMBLY, 3/8 x 25
27	1	A10312A-025	HOSE ASSEMBLY, 3/8 x 25
28	1	A10059A-105	HOSE ASSEMBLY, 1/4 x 105
29	1	A10325A-040	HOSE ASSEMBLY, 1/4 x 40
30	1	A09920A-049	HOSE ASSEMBLY, 1/4 x 49
31	1	A09893A-085	HOSE ASSEMBLY, 1/4 x 85
32	1	A09890A-063	HOSE ASSEMBLY, 1/4 x 63
33	2	A09889A-028	HOSE ASSEMBLY, 1/4 x 28
34	6	A10079A-030	HOSE ASSEMBLY, 3/8 x 30
35	1	A10079A-032	HOSE ASSEMBLY, 3/8 x 32
36	1	A10313A-013	HOSE ASSEMBLY, 3/8 x 13
37	2	A10079A-017	HOSE ASSEMBLY, 3/8 x 17
38	1	A10079A-078	HOSE ASSEMBLY, 3/8 x 78
39	1	A09911A-055	HOSE ASSEMBLY, 1/2 x 55
40	1	A09889A-024	HOSE ASSEMBLY, 1/4 x 24
41	1	A09894A-046	HOSE ASSEMBLY, 1/4 x 46
42	1	A09894A-063	HOSE ASSEMBLY, 1/4 x 63
43	1	A09890A-020	HOSE ASSEMBLY, 1/4 x 20
44	1	A09877A-061	HOSE ASSEMBLY, 5/8 x 61
45	1	A09877A-046	HOSE ASSEMBLY, 5/8 x 46
46	1	A09881A-024	HOSE ASSEMBLY, 5/8 x 24
47	1	A09877A-020	HOSE ASSEMBLY, 5/8 x 20
48	1	A09877A-019	HOSE ASSEMBLY, 5/8 x 19
49	1	A09881A-017	HOSE ASSEMBLY, 5/8 x 17
50	2	A09877A-050	HOSE ASSEMBLY, 5/8 x 50
51	1	A10468A-034	HOSE ASSEMBLY, 3/4 x 34
52	1	A10467A-031	HOSE ASSEMBLY, 3/4 x 31

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# HOSE KIT, 032271A TBM 420D



**HOSE KIT, 032271A**  
**TBM 420D**

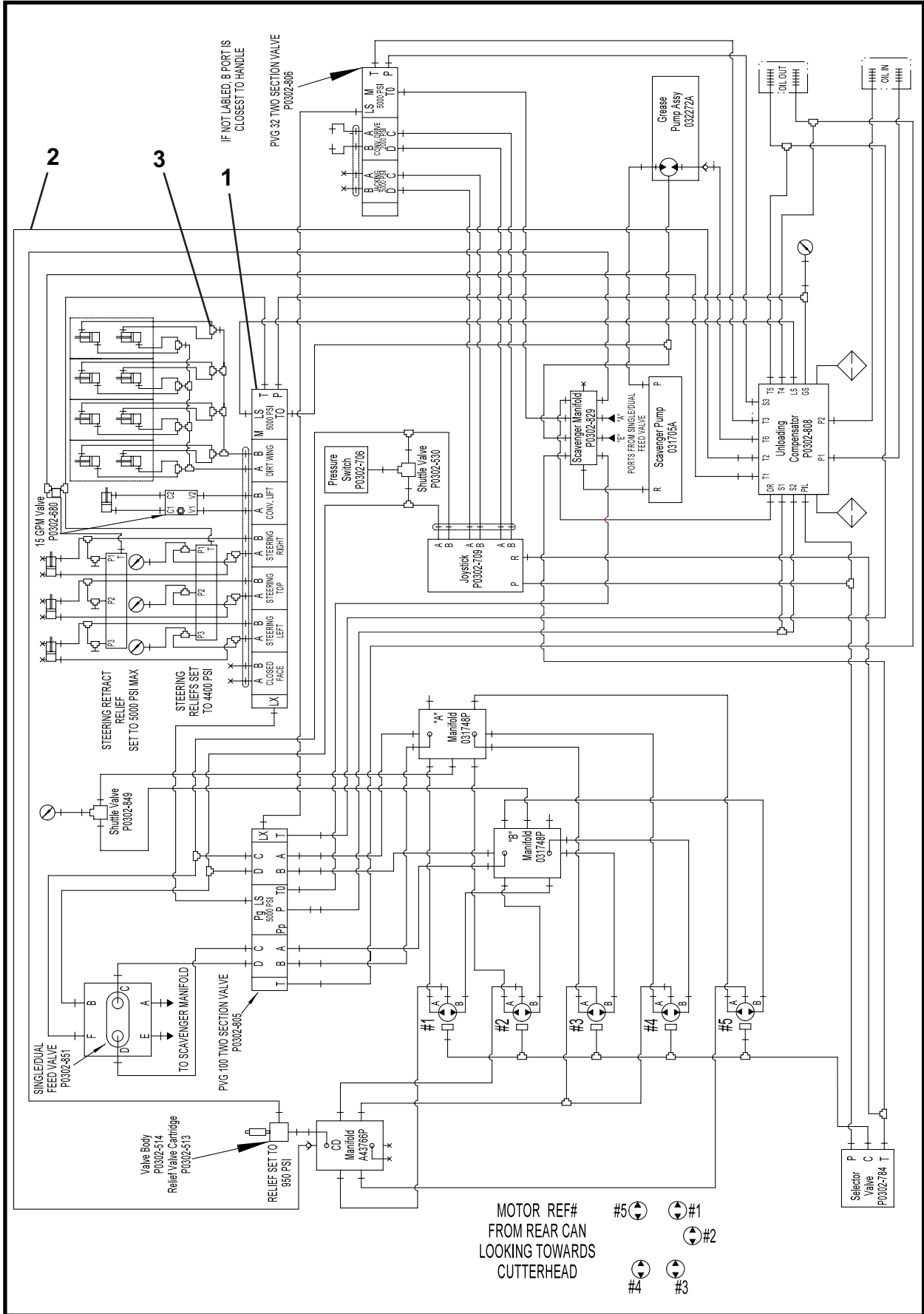
ITEM	QTY	PART NO.	DESCRIPTION
53	1	A10467A-038	HOSE ASSEMBLY, 3/4 x 38
54	1	A10468A-058	HOSE ASSEMBLY, 3/4 x 58
55	1	A10325A-068	HOSE ASSEMBLY, 1/4 x 68
56	1	A10338A-043	HOSE ASSEMBLY, 1/4 x 43
57	2	A10338A-087	HOSE ASSEMBLY, 1/4 x 87
58	1	A10338A-090	HOSE ASSEMBLY, 1/4 x 90
59	2	A10327A-079	HOSE ASSEMBLY, 1/4 x 79
60	1	A10363A-048	HOSE ASSEMBLY, 1/4 x 48
61	1	A10363A-038	HOSE ASSEMBLY, 1/4 x 38
62	1	A10079A-026	HOSE ASSEMBLY, 3/8 x 26
63	1	A10079A-033	HOSE ASSEMBLY, 3/8 x 33
64	1	A10079A-028	HOSE ASSEMBLY, 3/8 x 28
65	1	A10079A-093	HOSE ASSEMBLY, 3/8 x 93
66	1	A10079A-088	HOSE ASSEMBLY, 3/8 x 88
67	1	A10313A-038	HOSE ASSEMBLY, 3/8 x 38
68	1	A09974A-039	HOSE ASSEMBLY, 1/2 x 39
69	1	A10080A-035	HOSE ASSEMBLY, 1/2 x 35
70	2	A10079A-132	HOSE ASSEMBLY, 3/8 x 132
71	2	A10079A-106	HOSE ASSEMBLY, 3/8 x 106
72	4	A10313A-019	HOSE ASSEMBLY, 3/8 x 19
73	4	A10313A-021	HOSE ASSEMBLY, 3/8 x 21
74	1	A10326A-047	HOSE ASSEMBLY, 1/4 x 47
75	1	A10326A-051	HOSE ASSEMBLY, 1/4 x 51
76	1	A09912A-024	HOSE ASSEMBLY, 1/2 x 24



**FITTING KIT, 032270A  
TBM 420D**

ITEM	QTY	PART NO.	DESCRIPTION
0	1	032270A	FITTING KIT - TBM 420D
1	2	P0300-434	FITTING, 16MFFOR-16MB45
2	4	P0300-450	FITTING, 16MFFOR-20MB90
3	1	P0300-765	FITTING, 12MFFOR-20MB
4	1	P0300-588	FITTING, 12MFFOR-12FFORX-12MFFOR
5	1	P0300-610	FITTING, 12FFOR-06MFFOR
6	1	P0300-561	FITTING, 12MFFOR-16MB45
7	1	P0300-535	FITTING, 08MFFOR-08MB-08MFFOR
8	1	P0300-782	FITTING, 10MFFOR-16MB
9	10	P0300-311	FITTING, 04MFFOR-06MB90
10	1	P0300-371	FITTING, 16MFFOR-16MB90
11	2	P0300-687	FITTING, 16MFFOR-20MB45
12	8	P0300-362	FITTING, 04MFFOR-04MB
13	15	P0300-430	FITTING, 06MFFOR-08MB
14	5	P0300-372	FITTING, 12MFFOR-12MB90
15	1	P0300-300	FITTING, 08MFFOR-10MB
16	2	P0300-302	FITTING, 08MFFOR-10MB90
17	14	P0300-634	FITTING, 06MFFOR-10MB
18	7	P0300-390	CAP, 06FFOR-CAP
19	2	P0300-373	FITTING, 08MFFOR-12MB90
20	8	P0300-613	FITTING, 06MFFOR-06FFORX-06MFFOR
21	1	P0300-730	FITTING, 04MFFOR-04MFFOR-04MB
22	4	P0300-575	FITTING, 06MB-04FB
23	1	P0300-541	ORING, 04OR
24	12	P0300-310	FITTING, 04MFFOR-06MB
25	4	P0300-313	FITTING, 04MFFOR-04MFFOR-04FFORX
26	4	P0300-717	FITTING, 06MFFOR-08MB90
27	1	P0300-778	FITTING, 20MFFOR-20FLH90
28	1	P0300-949	FLANGE, Split 20SF XO-M12
29	4	P0300-899	FITTING, 12MFFOR-14MB
30	2	P0300-724	FITTING, 06MFFOR-06MBSPP
31	1	P0300-902	FITTING, 10MB-10FB90
32	1	P0300-788	FITTING, 10MB-08FB
33	2	P0300-429	FITTING, 06MFFOR-05MB90
34	3	P0300-314	FITTING, 04MFFOR-05MB
35	7	P0300-386	FITTING, 06MFFOR-06MB-06MFFOR
36	1	P0300-618	FITTING, 06FFORX-06MB90
37	6	P0300-356	FITTING, 06MFFOR-06MB
38	1	P0300-312	FITTING, 04MFFOR-04FFORX-04MFFOR
39	3	P0300-193	PLUG, 08MB-PLUG
40	1	P0300-317	FITTING, 08MFFOR-08FFORX90
41	16	P0300-355	FITTING, 06MFFOR-06MB90
42	3	P0300-821	FITTING, 04MFFOR-04MB-04MFFOR
43.1	6	P0300-383	FITTING, 10MFFOR-10MB90 (SN 1)
43.2	6	P0300-633	FITTING, 10MFFOR-12MB90 (SN 2 & After)
44.1	2	P0300-384	FITTING, 10MFFOR-10MB45 (SN 1)
44.2	2	P0300-580	FITTING, 10MFFOR-12MB (SN 2 & After)
45	2	P0300-384	FITTING, 10MFFOR-10MB45
46.1	8	P0300-396	FITTING, 16MB-10FB (SN 1)
46.2	5	P0300-383	FITTING, 10MFFOR-10MB90 (SN 2 & After)
47	1	P0300-385	FITTING, 10MFFOR-10MB
48	4	P0300-060	PLUG, 10MB-PLUG
49	1	P0300-359	FITTING, 12MFFOR-12MB45
50	5	P0300-594	FITTING, 04FB-04MFFOR
51	2	P0300-750	FITTING, 08MFFOR-06MB
52	2	P0300-428	FITTING, 08MFFOR-08MFFOR-08FFORX
53	6	P0300-603	FITTING, 06MFFOR-06FFORX90
54	2	P0300-042	FITTING, 06MJ-06MB90
55	8	P0300-027	PLUG, 06MB-PLUG
56	2	P0300-791	FITTING, 06MFFOR-06MFFOR-BKHD-06MFFOR
57	4	P0300-602	FITTING, 06MFFOR-06MFFOR-06FFORX
58	2	P0300-766	FITTING, 06MFFOR-06MFFOR-BKHD90
59	3	P0300-427	FITTING, 04MFFOR-04MB90

# HYDRAULIC ASSEMBLY, 032375A TBM 480D

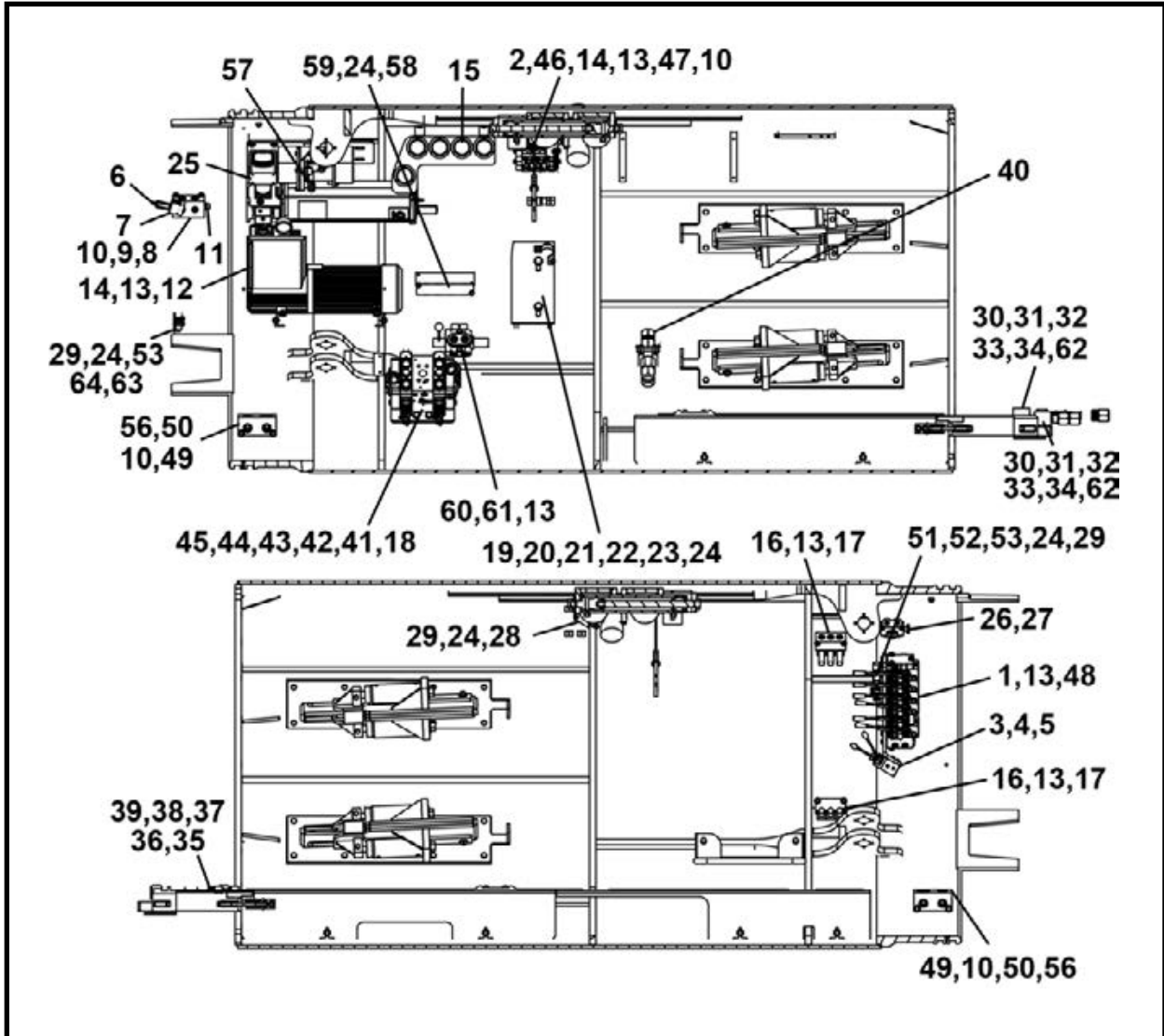


**HYDRAULIC ASSEMBLY, 032375A**  
**TBM 480D**

ITEM	QTY	PART NO.	DESCRIPTION
0	1	032375A	HYDRAULIC ASSEMBLY - TBM 480D
1*	1	032378A	HYDRAULIC PARTS ASSEMBLY
2*	1	032376A	KIT, Hose
3*	1	032377A	KIT, Fitting

\* Refer to this section for parts information.

**HYDRAULIC PARTS ASSEMBLY, 032378A**  
**TBM 480D**



ITEM	QTY	PART NO.	DESCRIPTION
0	1	032378A	HYDRAULIC PARTS ASSEMBLY-480 Series II
1**	1	P0302-815	VALVE, Six Section
2**	1	P0302-806	VALVE, Two Section
3**	1	P0302-709	JOYSTICK
4	4	PM6A-20-1.00	SCREW, Hex Cap M6-1.0 X 20MM 10.9
5	4	PM40-6	WASHER, Flat 6MM
6	1	P0302-513	CARTRIDGE
7	1	P0302-514	BODY, Port 3/8
8	1	A43766P	MANIFOLD, Case Drain
9	4	P0001-06-002	BOLT, Hex 3/8 UNC x .5
10	12	P0040-006	WASHER, Hardened Flat 3/8
11	1	P0302-701	CHECK VALVE
12^	1	031705A	ASSEMBLY, Scavenge Pump
13	22	P0040-005	WASHER, Hardened Flat 5/16
14	12	P0001-05-003	BOLT, Hex 5/16 UNC x .75
15	5	P0301-146	GAUGE, 6000 PSI
16	2	P0302-731	LIMITER, Steering Pressure
17	4	P0001-05-010	BOLT, Hex 5/16 UNC x 2.5

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**HYDRAULIC PARTS ASSEMBLY, 032378A  
TBM 480D**

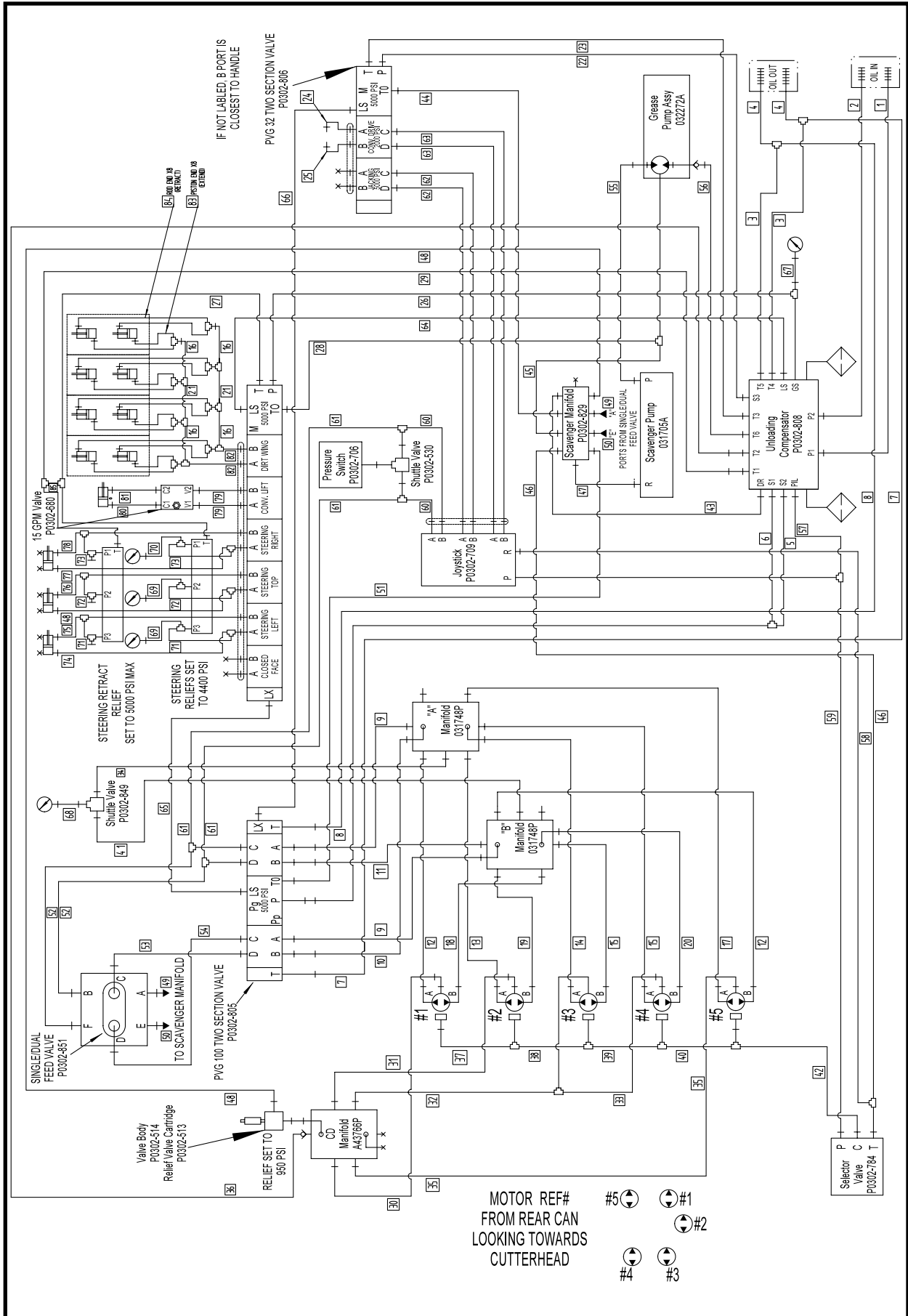
ITEM	QTY	PART NO.	DESCRIPTION
18**	1	P0302-805	VALVE, Two Section
19	1	P0302-808	MANIFOLD
19a	2	P0309-208A	ELEMENT, Filter
20	2	P0040-010	WASHER, Hardened Flat 5/8
21	2	P0001-10-032	BOLT, Hex 5/8 UNC x 8
22	1	031009A	GUARD, Solenoid
23	2	P0001-04-002	BOLT, Hex 1/4 UNC x .5
24	10	P0040-004	WASHER, Hardened Flat 1/4
25*	1	032272A	ASSEMBLY, Grease
26*	1	P0302-784	VALVE, Selector
27	2	P0001-05-007	BOLT, Hex 5/16 UNC x 1.75
28**	1	P0302-680	VALVE, 15 GPM
29	6	P0001-04-006	BOLT, Hex 1/4 UNC x 1.5
30	2	P0421-012	REDUCER, 1-1/4 x 1 3K PSI
31	2	004901P01	COUPLER
32	2	004899P00	UNION, Coupler
33	2	008146P00	CAP, Pressure Line
34	2	P0084-123	RING, Back-Up
35	2	027673P	FITTING, Threaded
36	2	P0084-124	RING, Back-Up
37	2	P0085-124A	ORING, 90 Durometer
38	2	027651P	INSERT, Rubber
39	2	027671P	CAP, Storage High Pressure
40*	1	027698A	KIT, Adapter , LP to Series II
41	1	031039P	MOUNT, Valve, Two Section
42	4	PM12A-1.75-030	BOLT, Hex PM12-1.75 x 30-10.9
43	4	P0040-007	WASHER, Hardened Flat 7/16
44	4	P0040-008	WASHER, Hardened Flat 1/2
45	4	P0001-08-005	SCREW, Hex Cap 1/2 UNC x 1.25
46	1	031365P	MOUNT, Valve, Two Section
47	4	P0001-06-003	BOLT, Hex 3/8 UNC x .75
48	4	P0001-05-004	BOLT, Hex 5/16 UNC x 1
49	2	031748P	MANIFOLD, Drive Motor
50	4	P0001-06-013	BOLT, Hex 3/8 UNC x 3.25
51	1	P0302-706	SWITCH, Pressure 5000 PSI
52	1	P0302-530	VALVE, Shuttle
53	2	024545P	PLATE, Pressure Switch
54	1	P0100-004A	COUPLER, Female
55	1	P0100-004B	COUPLER, Male
56	4	P0003-06-000	NUT, Hex 3/8 UNC
57	1	P0302-810	CHECK VALVE
58	1	P0302-829	MANIFOLD, 4 Station
59	2	P0001-04-010	BOLT, Hex 1/4 UNC x 2.5
60	1	P0302-851	VALVE, Six Way Two Position
61	2	P0001-05-012	BOLT, Hex 5/16 UNC x 3
62	2	P0085-123	ORING
63	1	P0302-849	VALVE, Shuttle Hi Pressure
64	1	032149P	MOUNT, Shuttle Valve

\* Refer to this section for parts information

\*\* Refer to Section 7, Valves for parts information.

^ Refer to Section 9, Pumps for parts information.

# HOSE KIT, 032376A TBM 480D

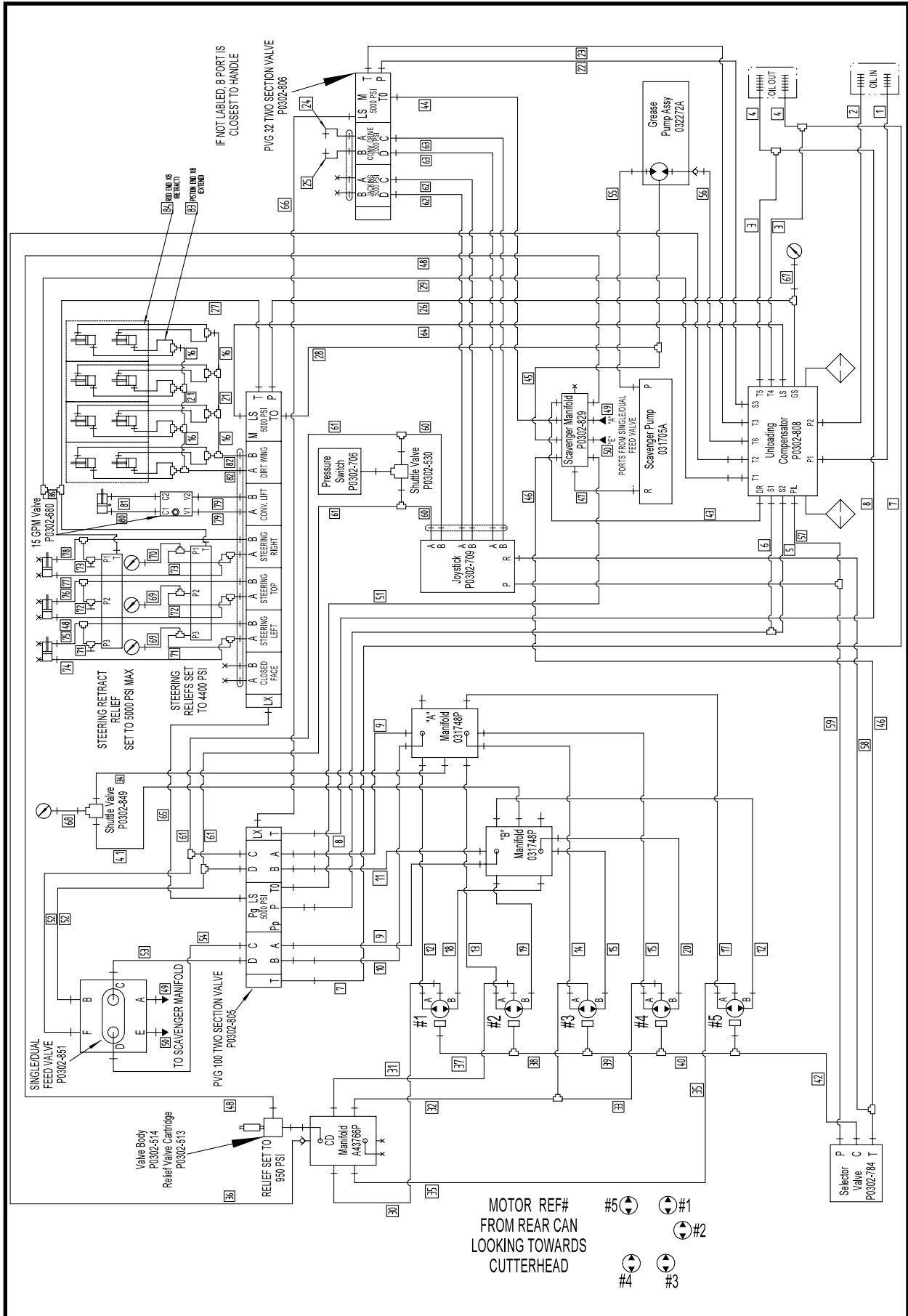


**HOSE KIT, 032376A  
TBM 480D**

ITEM	QTY	PART NO.	DESCRIPTION
0	1	032376A	HOSE KIT-480 Series II
1	1	A08536A-166	HOSE ASSEMBLY, 1 x 166
2	1	A08536A-159	HOSE ASSEMBLY, 1 x 159
3	2	A09984A-042	HOSE ASSEMBLY, 1 x 42
4	2	A10093A-120	HOSE ASSEMBLY, 1-1/4 x 120
5	1	A09897A-026	HOSE ASSEMBLY, 1 x 26
6	1	A08534A-027	HOSE ASSEMBLY, 1 x 27
7	1	A09984A-041	HOSE ASSEMBLY, 1 x 41
8	1	A09984A-031	HOSE ASSEMBLY, 1 x 31
9	2	A09865A-045	HOSE ASSEMBLY, 1 x 45
10	1	A09865A-043	HOSE ASSEMBLY, 1 x 43
11	1	A09865A-049	HOSE ASSEMBLY, 1 x 49
12	2	A09877A-088	HOSE ASSEMBLY, 5/8 x 88
13	1	A09877A-066	HOSE ASSEMBLY, 5/8 x 66
14	1	A09882A-043	HOSE ASSEMBLY, 5/8 x 43
15	2	A09877A-041	HOSE ASSEMBLY, 5/8 x 41
16	4	A10313A-021	HOSE ASSEMBLY, 3/8 x 21
17	1	A09877A-077	HOSE ASSEMBLY, 5/8 x 77
18	1	A09877A-076	HOSE ASSEMBLY, 5/8 x 76
19	1	A09877A-060	HOSE ASSEMBLY, 5/8 x 60
20	1	A09877A-048	HOSE ASSEMBLY, 5/8 x 48
21	2	A10313A-080	HOSE ASSEMBLY, 3/8 x 80
22	1	A09898A-022	HOSE ASSEMBLY, 3/4 x 22
23	1	A09859A-052	HOSE ASSEMBLY, 3/4 x 52
24	1	A09974A-052	HOSE ASSEMBLY, 1/2 x 52
25	1	A10080A-052	HOSE ASSEMBLY, 1/2 x 52
26	1	A10372A-109	HOSE ASSEMBLY, 1/2 x 109
27	1	A10491A-018	HOSE ASSEMBLY, 1/2 x 18
28	1	A09890A-081	HOSE ASSEMBLY, 1/4 x 81
29	1	A10491A-106	HOSE ASSEMBLY, 1/2 x 106
30	1	A10079A-018	HOSE ASSEMBLY, 3/8 x 18
31	1	A10079A-036	HOSE ASSEMBLY, 3/8 x 36
32	1	A10079A-046	HOSE ASSEMBLY, 3/8 x 46
33	1	A10079A-034	HOSE ASSEMBLY, 3/8 x 34
34	1	A10326A-058	HOSE ASSEMBLY, 1/4 x 58
35	1	A10079A-047	HOSE ASSEMBLY, 3/8 x 47
36	1	A09912A-059	HOSE ASSEMBLY, 1/2 x 59
37	1	A09893A-036	HOSE ASSEMBLY, 1/4 x 36
38	1	A09893A-045	HOSE ASSEMBLY, 1/4 x 45
39	1	A09893A-035	HOSE ASSEMBLY, 1/4 x 35
40	1	A09893A-078	HOSE ASSEMBLY, 1/4 x 78
41	1	A10325A-054	HOSE ASSEMBLY, 1/4 x 54
42	1	A09893A-024	HOSE ASSEMBLY, 1/4 x 24
43	1	A10313A-055	HOSE ASSEMBLY, 3/8 x 55
44	1	A09891A-040	HOSE ASSEMBLY, 1/4 x 40
45	1	A09889A-043	HOSE ASSEMBLY, 1/4 x 43
46	1	A09894A-084	HOSE ASSEMBLY, 1/4 x 84
47	1	A10079A-019	HOSE ASSEMBLY, 3/8 x 19
48	2	A10079A-059	HOSE ASSEMBLY, 3/8 x 59
49	1	A09894A-027	HOSE ASSEMBLY, 1/4 x 27
50	1	A09894A-022	HOSE ASSEMBLY, 1/4 x 22
51	1	A09887A-036	HOSE ASSEMBLY, 1/4 x 36
52	2	A09893A-023	HOSE ASSEMBLY, 1/4 x 23

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# HOSE KIT, 032376A TBM 480D



**HOSE KIT, 032376A  
TBM 480D**

ITEM	QTY	PART NO.	DESCRIPTION
53	1	A09893A-017	HOSE ASSEMBLY, 1/4 x 17
54	1	A09893A-013	HOSE ASSEMBLY, 1/4 x 13
55	1	A10082A-024	HOSE ASSEMBLY, 3/8 x 24
56	1	A10082A-048	HOSE ASSEMBLY, 3/8 x 48
57	1	A09889A-119	HOSE ASSEMBLY, 1/4 x 119
58	1	A09892A-057	HOSE ASSEMBLY, 1/4 x 57
59	1	A09890A-044	HOSE ASSEMBLY, 1/4 x 44
60	2	A09889A-027	HOSE ASSEMBLY, 1/4 x 27
61	2	A09892A-094	HOSE ASSEMBLY, 1/4 x 94
62	2	A09891A-095	HOSE ASSEMBLY, 1/4 x 95
63	2	A09889A-096	HOSE ASSEMBLY, 1/4 x 96
64	1	A10314A-135	HOSE ASSEMBLY, 1/4 x 135
65	1	A10325A-118	HOSE ASSEMBLY, 1/4 x 118
66	1	A10325A-058	HOSE ASSEMBLY, 1/4 x 58
67	1	A10325A-032	HOSE ASSEMBLY, 1/4 x 32
68	1	A10326A-054	HOSE ASSEMBLY, 1/4 x 54
69	2	A10314A-084	HOSE ASSEMBLY, 1/4 x 84
70	1	A10314A-088	HOSE ASSEMBLY, 1/4 x 88
71	2	A10079A-052	HOSE ASSEMBLY, 3/8 x 52
72	2	A10079A-048	HOSE ASSEMBLY, 3/8 x 48
73	2	A10079A-044	HOSE ASSEMBLY, 3/8 x 44
74	1	A10079A-033	HOSE ASSEMBLY, 3/8 x 33
75	1	A10079A-030	HOSE ASSEMBLY, 3/8 x 30
76	1	A10079A-085	HOSE ASSEMBLY, 3/8 x 85
77	1	A10079A-104	HOSE ASSEMBLY, 3/8 x 104
78	1	A10079A-118	HOSE ASSEMBLY, 3/8 x 118
79	2	A10327A-110	HOSE ASSEMBLY, 1/4 x 110
80	1	A10059A-073	HOSE ASSEMBLY, 1/4 x 73
81	1	A10059A-085	HOSE ASSEMBLY, 1/4 x 85
82	2	A10079A-088	HOSE ASSEMBLY, 3/8 x 88
83	8	A10313A-019	HOSE ASSEMBLY, 3/8 x 19
84	8	A10313A-025	HOSE ASSEMBLY, 3/8 x 25
85	1	A10491A-055	HOSE ASSEMBLY, 1/2 x 55

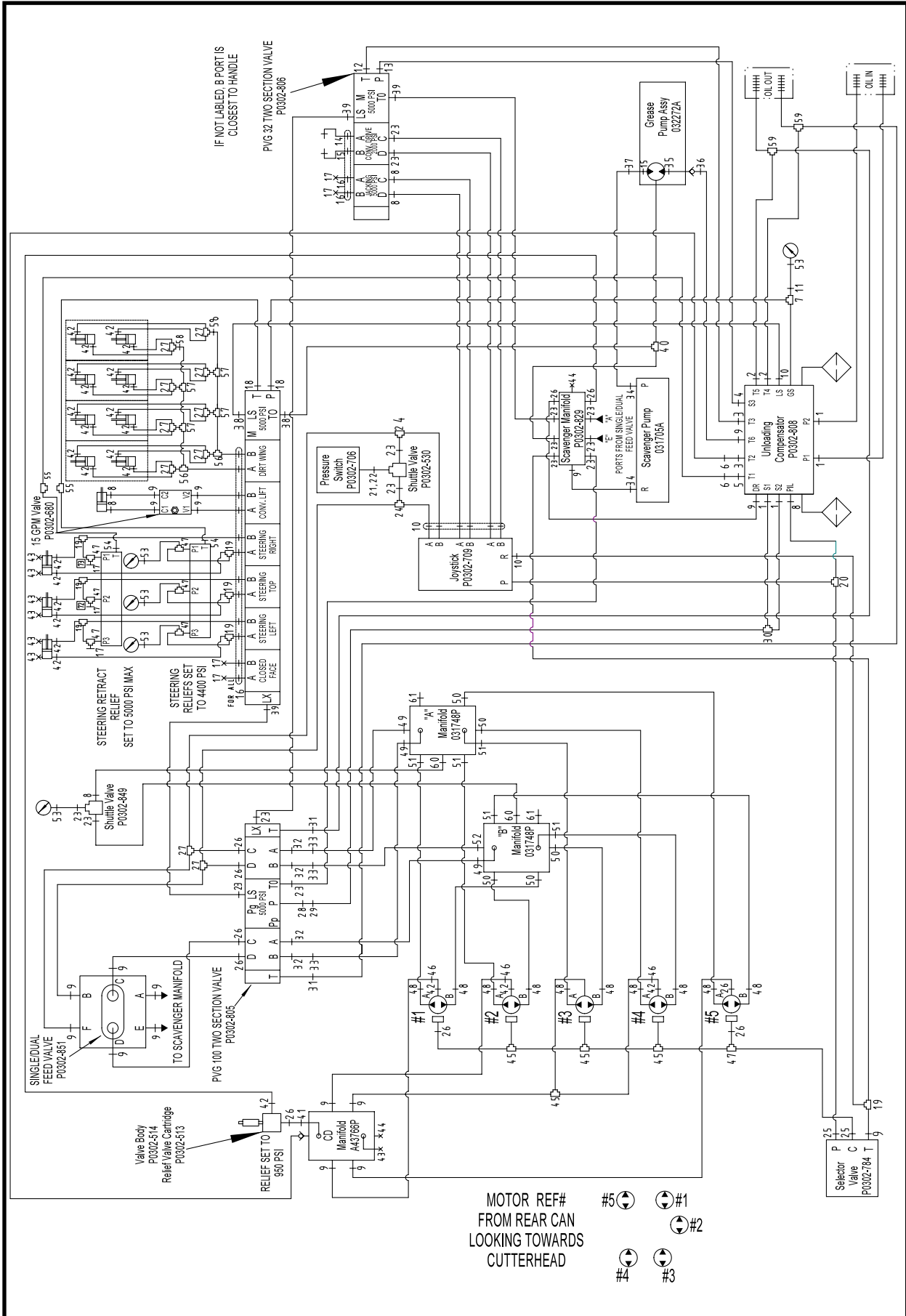


**FITTING KIT, 032377A  
TBM 480D**

ITEM	QTY	PART NO.	DESCRIPTION
0	1	032377A	FITTING KIT - TBM 480D
1	4	P0300-319	FITTING, 16MFFOR-16MB
2	2	P0300-374	FITTING, 16MFFOR-20MB
3	2	P0300-765	FITTING, 12MFFOR-20MB
4	1	P0300-561	FITTING, 12MFFOR-16MB45
5	1	P0300-608	FITTING, 12MFFOR-20MB90
6	2	P0300-622	FITTING, 12FFOR-08MFFOR
7	1	P0300-535	FITTING, 08MFFOR-08MB-08MFFOR
8	6	P0300-311	FITTING, 04MFFOR-06MB90
9	18	P0300-430	FITTING, 06MFFOR-08MB
10	8	P0300-362	FITTING, 04MFFOR-04MB
11	1	P0300-395	FITTING, 08FFOR-04MFFOR
12	1	P0300-329	FITTING, 12MFFOR-12MB
13	1	P0300-372	FITTING, 12MFFOR-12MB90
14	1	P0300-300	FITTING, 08MFFOR-10MB
15	2	P0300-302	FITTING, 08MFFOR-10MB90
16	14	P0300-634	FITTING, 06MFFOR-10MB
17	7	P0300-390	CAP, 06FFOR-CAP
18	2	P0300-373	FITTING, 08MFFOR-12MB90
19	7	P0300-613	FITTING, 06MFFOR-06FFORX-06MFFOR
20	1	P0300-730	FITTING, 04MFFOR-04MFFOR-04MB
21	1	P0300-575	FITTING, 06MB-04FB
22	1	P0300-541	ORING, 04OR
23	15	P0300-310	FITTING, 04MFFOR-06MB
24	2	P0300-313	FITTING, 04MFFOR-04MFFOR-04FFORX
25	2	P0300-717	FITTING, 06MFFOR-08MB90
26	9	P0300-356	FITTING, 06MFFOR-06MB
27	10	P0300-602	FITTING, 06MFFOR-06MFFOR-06FFORX
28	1	P0300-949	FLANGE, Split 20SF XO-M12
29	1	P0300-778	FITTING, 20MFFOR-20FLH90
30	1	P0300-551	FITTING, 20MFFOR-20FFORX-20MFFOR
31	2	P0300-450	FITTING, 16MFFOR-20MB90
32	4	P0300-921	FITTING, 16MFFOR-14MB
33	3	P0300-668	FITTING, 16MFFOR-16FFORX90
34	2	P0300-724	FITTING, 06MFFOR-06MBSPP
35	1	P0300-902	FITTING, 10MB-10FB90
36	1	P0300-619	FITTING, 10FFOR-06MFFOR
37	1	P0300-600	FITTING, 08FFOR-06MFFOR
38	2	P0300-429	FITTING, 06MFFOR-05MB90
39	3	P0300-314	FITTING, 04MFFOR-05MB
40	1	P0300-821	FITTING, 04MFFOR-04MB-04MFFOR
41	1	P0300-618	FITTING, 06FFORX-06MB90
42	26	P0300-355	FITTING, 06MFFOR-6MB90
43	7	P0300-027	PLUG, 06MB-PLUG
44	2	P0300-193	PLUG, 08MB-PLUG
45	4	P0300-376	FITTING, 06MFFOR-06MFFOR-06MB
46	3	P0300-603	FITTING, 06MFFOR-06FFORX90
47	7	P0300-386	FITTING, 06MFFOR-06MB-06MFFOR
48.1	10	P0300-782	FITTING, 10MFFOR-16MB (SN 1 & 2)
48.2	10	P0300-580	FITTING, 10MFFOR-12MB (SN 3 & After)

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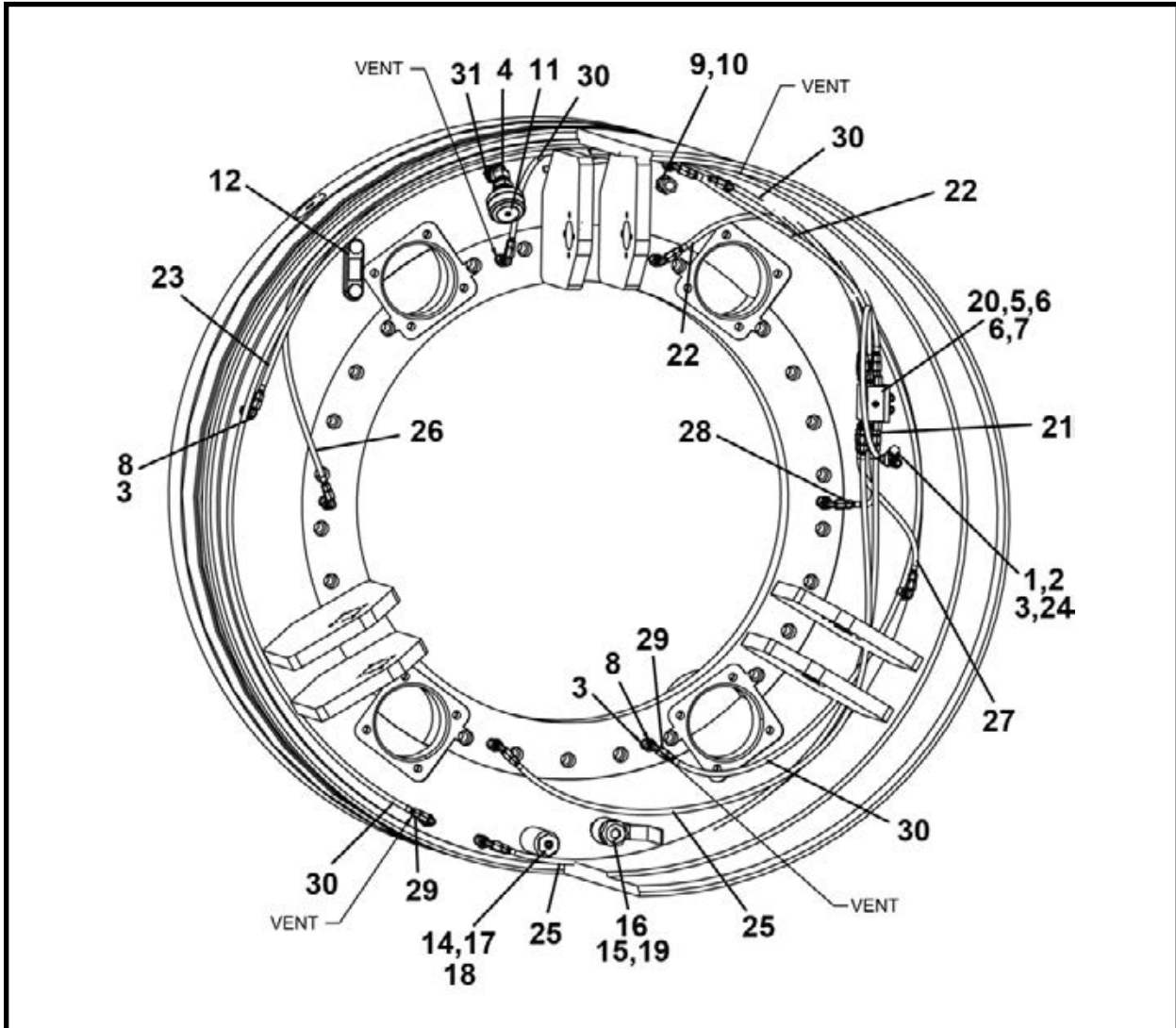
# FITTING KIT, 032377A TBM 480D



**FITTING KIT, 032377A**  
**TBM 480D**

ITEM	QTY	PART NO.	DESCRIPTION
49	3	P0300-371	FITTING, 16MFFOR-16MB90
50	5	P0300-385	FITTING, 10MFFOR-10MB
51	5	P0300-383	FITTING, 10MFFOR-10MB90
52	1	P0300-434	FITTING, 16MFFOR-16MB45
53	5	P0300-594	FITTING, 04FB-04MFFOR
54	2	P0300-750	FITTING, 08MFFOR-06MB
55	2	P0300-318	FITTING, 08MFFOR-08FFORX-08MFFOR
56	2	P0300-791	FITTING, 06MFFOR-06MFFOR-BKHD-06MFFOR
57	4	P0300-814	FITTING, 06MFFOR-06MFFOR-06MFFOR-BKHD
58	2	P0300-766	FITTING, 06MFFOR-06MFFOR-BKHD90
59	2	P0300-928	FITTING, 20MFFOR-20MFFOR-BKHD-20MFFOR
60	2	P0300-427	FITTING, 04MFFOR-04MB90
61	2	P0300-060	PLUG, 10MB-PLUG

**TBM GREASE ASSEMBLY, 032169A**  
**TBM 48SC-D - 420D - 480D**



ITEM	QTY	PART NO.	DESCRIPTION
0	1	032169A	TBM GREASE ASSEMBLY
1	1	P0309-210	FILTER, Grease
2	1	P0300-113	FITTING, 04MP-04MP
3	13	P0300-268	FITTING, 04MJ-04FP
4	1	P0302-744	INDICATOR, Grease Flow
5	4	P0001-04-010	BOLT, Hex 1/4 UNC x 2.5
6	8	P0040-004	WASHER, Hardened Flat 1/4
7	4	P0003-04-000	NUT, Hex 1/4 UNC
8	12	P0300-271	FITTING, 04MJ-04FJX90
9	1	P0300-636	FITTING, 08MFOR-12MP
10	1	P0300-408	CAP, 08FFOR-CAP
11	1	P0308-110	BREATHER
12	1	P0303-364	GAUGE, Sight
13*	35 LB	P0126-049	GREASE, Mobil SHC 101 EAL
14	1	024449P	FITTING, Tank Magnet Plug
15	1	P0302-231	VALVE, Valve
16	1	P0300-104	FITTING, 16MP-HHP
17	1	P0300-026	FITTING, 04MP-HHP
18	1	P0091-022	MAGNET, Tank

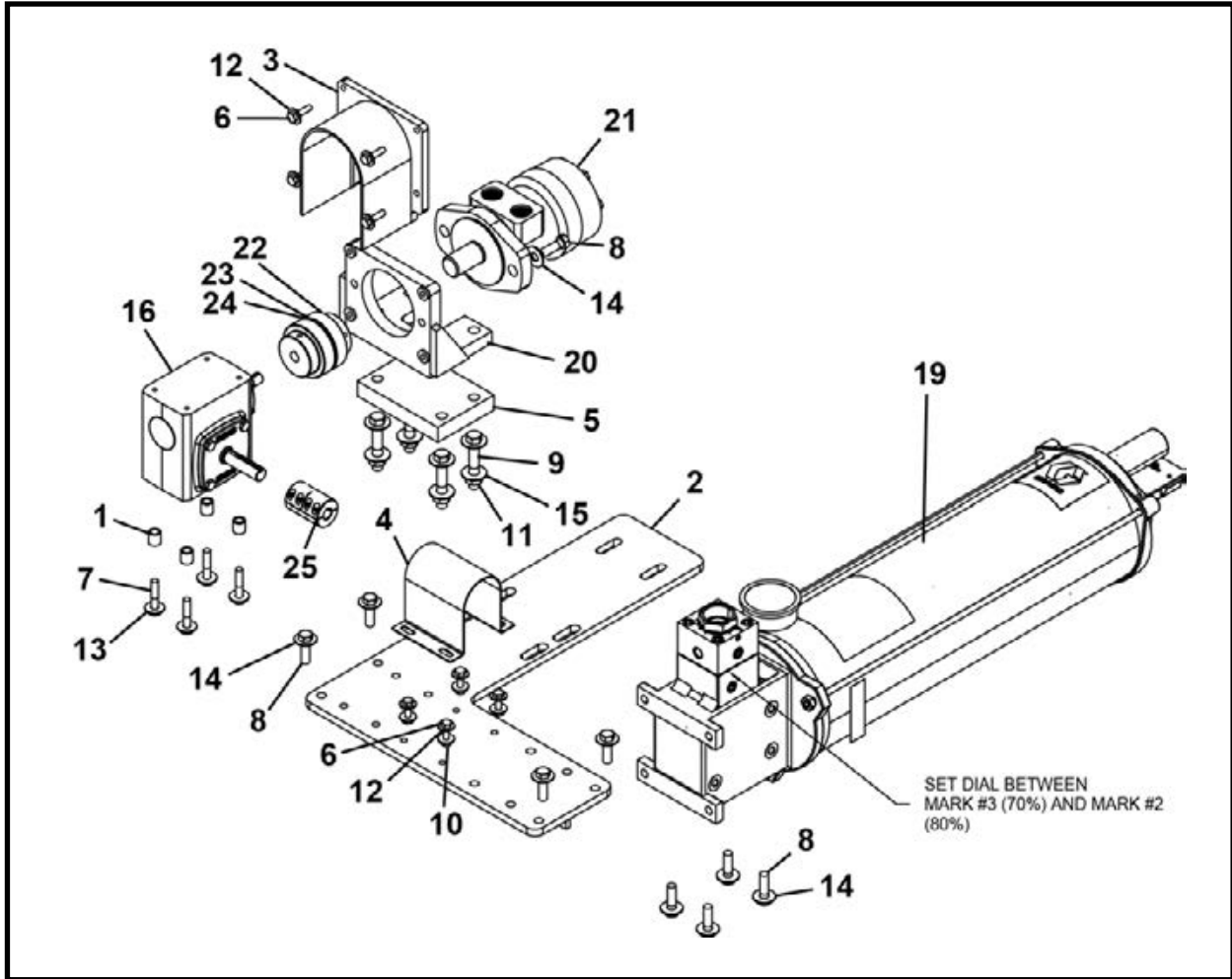
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**TBM GREASE ASSEMBLY, 032169A**  
**TBM 48SC-D - 420D - 480D**

ITEM	QTY	PART NO.	DESCRIPTION
19	1	P0300-013	FITTING, 16MP-16MP
20	1	P0302-811	VALVE, Grease Divider-8 Port
21	9	P0300-363	FITTING, 04MJ-02MP
22	2	A09970A-022	HOSE ASSEMBLY, 1/8 x 22
23	1	A09970A-060	HOSE ASSEMBLY, 1/8 x 60
24	1	A09970A-038	HOSE ASSEMBLY, 1/8 x 38
25	2	A09970A-052	HOSE ASSEMBLY, 1/8 x 52
26	1	A09970A-066	HOSE ASSEMBLY, 1/8 x 66
27	1	A09970A-012	HOSE ASSEMBLY, 1/8 x 12
28	1	A09970A-010	HOSE ASSEMBLY, 1/8 x 10
29	4	P0220-303	FITTING, 02PCTS-04FJX
30	160 LI	P0201-290	HOSE, Plastic 1/8

\* - Not Shown  
 LB - Pound (Grease)  
 LI - Linear Inch

**GREASE ASSEMBLY, 032272A**  
**TBM 48SC-D - 420D - 480D**



ITEM	QTY	PART NO.	DESCRIPTION
0	1	032272A	GREASE ASSEMBLY
1	4	030299P	STAND OFF, Grease Pump
2	1	031083A	MOUNT, Grease/Lube
3	1	031089A	GUARD, Gear Box
4	1	031090P	FORMING, Grease
5	1	031091P	MOUNT, Motor
6	8	P0001-04-004	BOLT, Hex 1/4 UNC x 1
7	4	P0001-05-006	BOLT, 5/16 UNC x 1.5
8	10	P0001-06-005	BOLT, 3/8 UNC x 1.25
9	4	P0001-07-010	SCREW, Hex Cap 7/16 UNC x 2.5
10	4	P0003-04-000	NUT, Hex 1/4 UNC
11	4	P0003-07-000	NUT, Hex 7/16 UNC
12	12	P0040-004	WASHER, Hardened Flat 1/4
13	4	P0040-005	WASHER, Hardened Flat 5/16
14	10	P0040-006	WASHER, Hardened Flat 3/8
15	8	P0040-007	WASHER, Hardened Flat 7/16
16	1	P0097-042	REDUCER, Gear Right Angle
17*	1	P0303-375A	DISK, Blowout 1/4
18*	1	P0303-375B	KIT, B/O Disk
19	1	P0303-404	RESERVOIR, Grease Pump 20 LB
20	1	P0304-142	BRACKET

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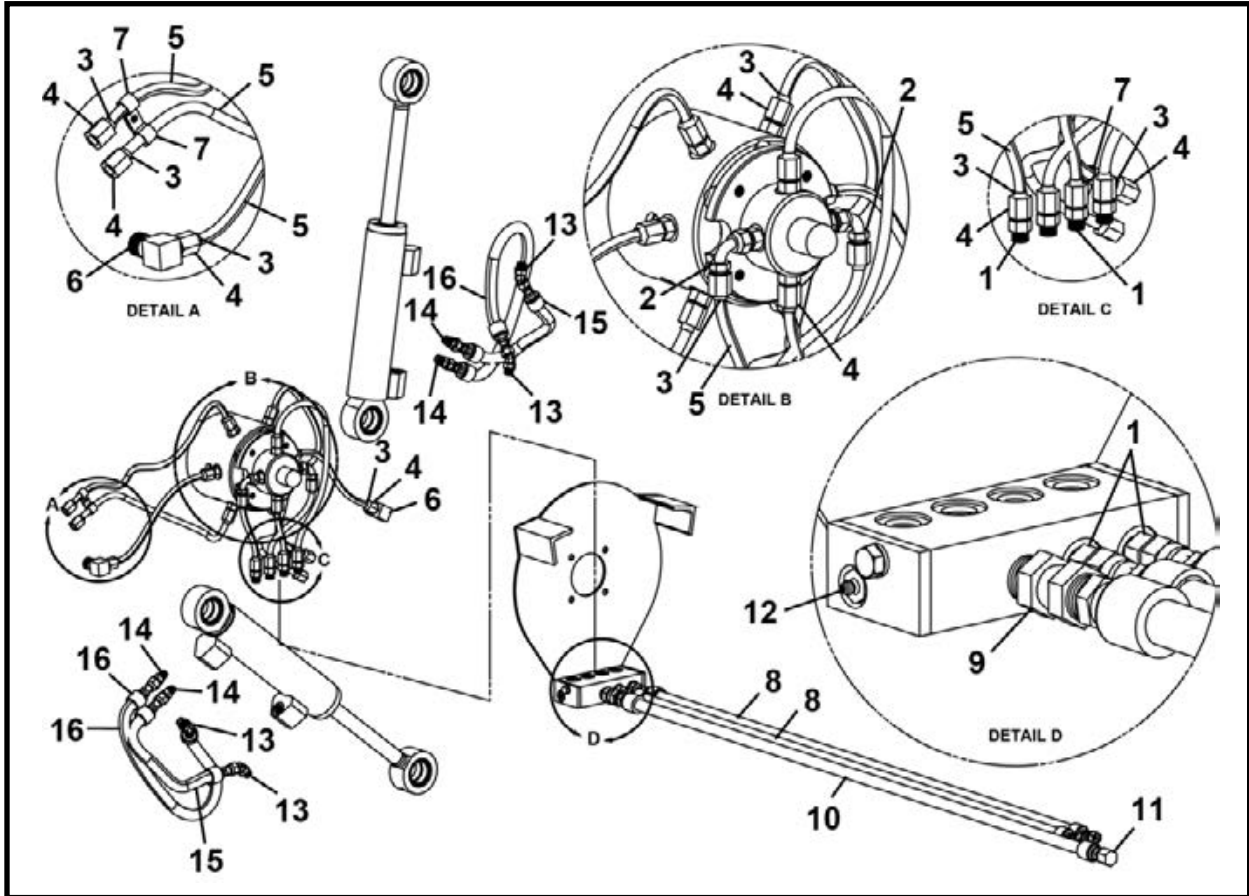
**GREASE ASSEMBLY, 032272A**  
**TBM 48SC-D - 420D - 480D**

ITEM	QTY	PART NO.	DESCRIPTION
21**	1	P0304-372	MOTOR, Hydraulic
22	1	P0305-139D	COUPLER
23	1	P0305-139E	INSERT
24	1	P0305-253	COUPLING
25	1	P0305-254	COUPLING, Rigid Shaft Two Piece

\* Not Shown

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

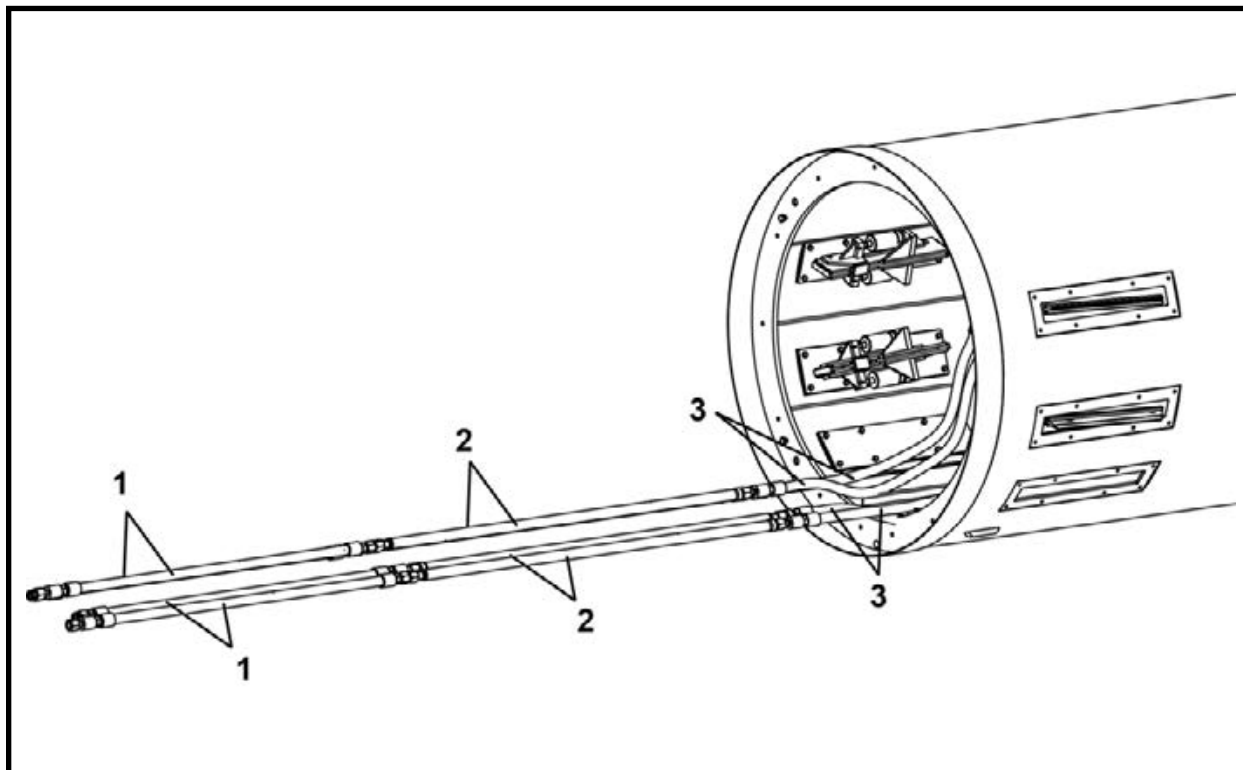
**CLOSED FACE HYDRAULIC ASSEMBLY, 023986A**  
**TBM 48SC-D - 420D - 480D**



ITEM	QTY	PART NO.	DESCRIPTION
0	1	023986A	HYDRAULIC ASSEMBLY, 48SC-D - 420D - 480D
1	6	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 x 190
6	2	P0300-014	FITTING, 06MJ-08MP90
7	4	P0055-126	CLAMP, Insulated Tube
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-NPT Straight
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

## TBM HYDRAULIC TUNNEL HOSES & LINES



ITEM	QTY	PART NO.	DESCRIPTION
1.1 <sup>^</sup>	AR	F13597F00	HOSE ASSEMBLY, Hydraulic Starter 1-1/4 x 35' (3,000 psi)
1.2 <sup>^</sup>	AR	F27691F	HOSE ASSEMBLY, Hydraulic Starter 1-1/4 x 35' (5,000 psi)
2.1 <sup>^</sup>	AR	F13326F00	HYDRAULIC LINE, TBM 1.5 x 21' (1-1/4 Ends) (3,000 psi)
2.2 <sup>^</sup>	AR	F27674F	HYDRAULIC LINE, TBM 1.5 x 21' (1-1/4 Ends) (5,000 psi)
3.1 <sup>^</sup>	4	A09850A-100	HOSE ASSEMBLY 1-1/4 x 100 (5,000 psi)
3.2 <sup>^</sup>	4	A10094A-100	HOSE ASSEMBLY 1-1/4 x 100 (3,000 psi)

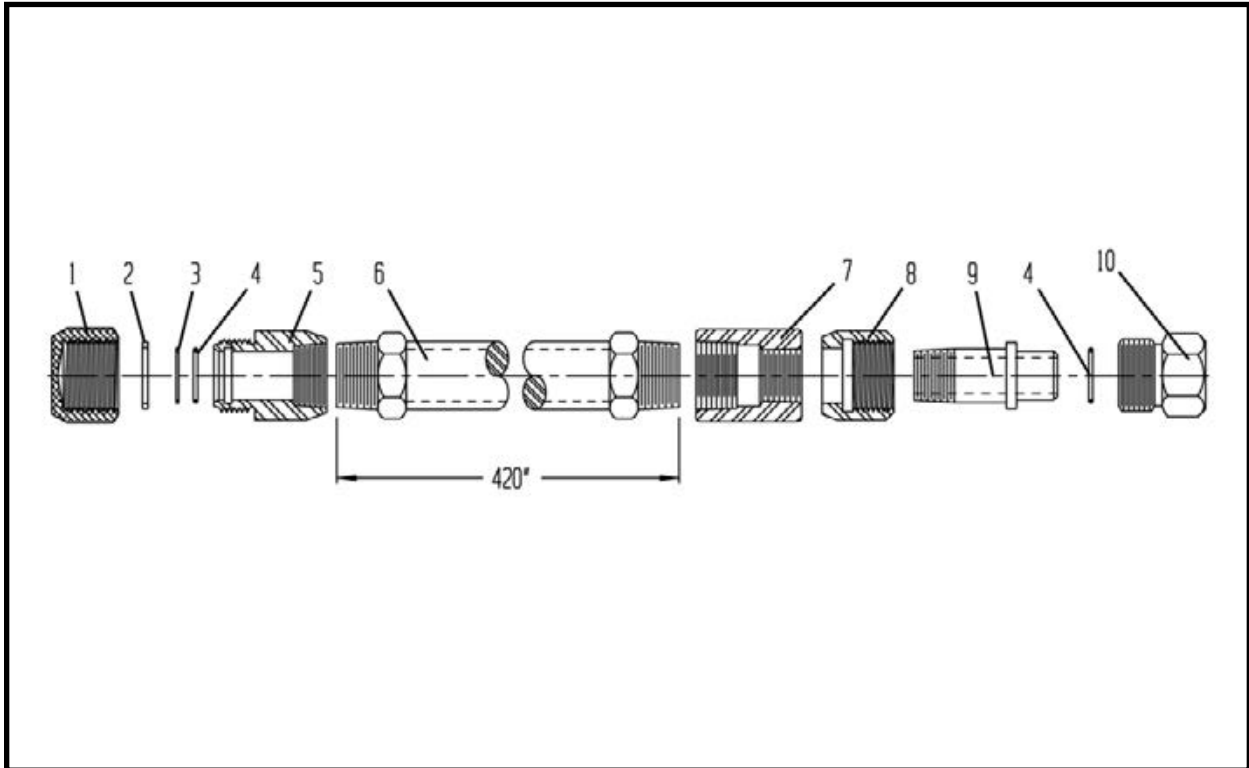
**<sup>^</sup> IMPORTANT: If using 5,000 psi supply hydraulic oil to the Series II TBM, the supply hoses/lines MUST be rated at a minimum of 5,000 psi.**

\* Refer to this section for parts information.

AR - As Required (Per Job)

NOTE: Use 027698A Adapter Kit (included in D Series TBM) to adapt the TBM to low and high pressure lines. Refer to this section for parts information.

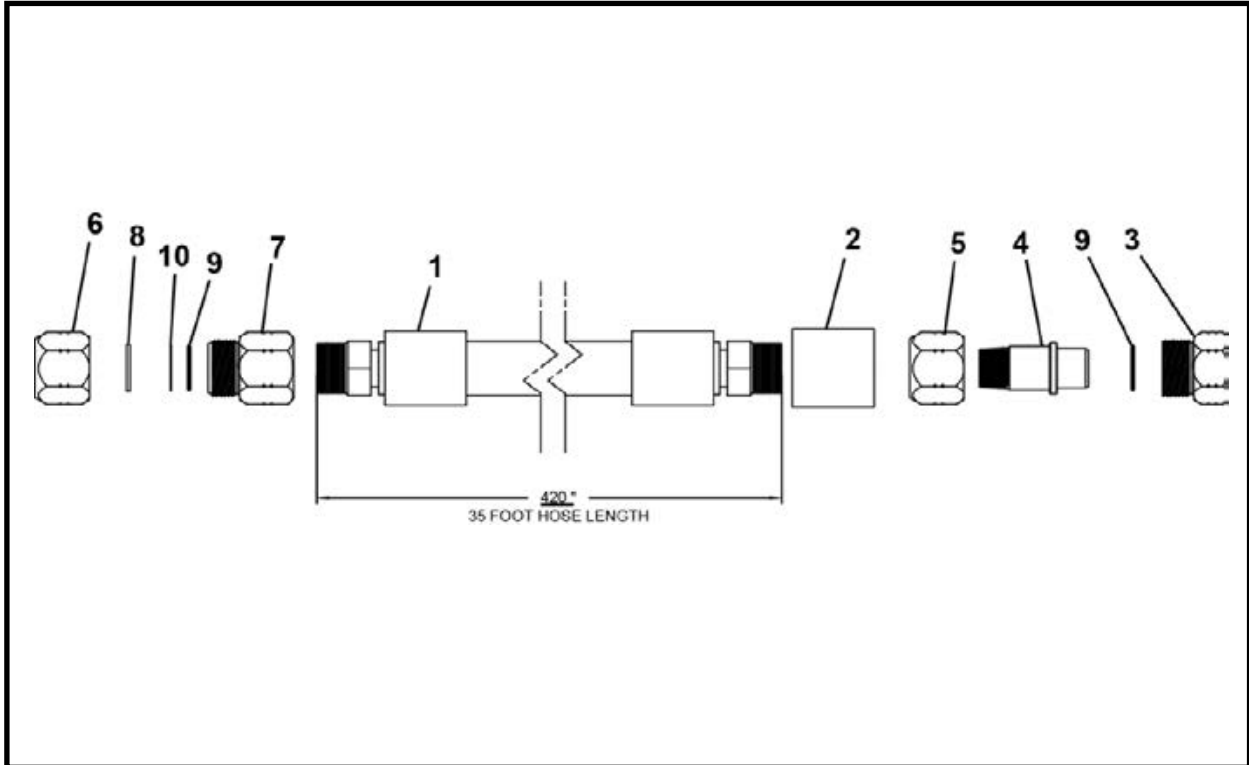
## HYDRAULIC STARTER HOSE ASSEMBLY (3,000 PSI), F13597F00



ITEM	QTY	PART NO.	DESCRIPTION
0	AR	F13597F00	HOSE ASSEMBLY 1-1/4 x 35'
1	1	007002P02	CAP, Coupler 1-1/4
2	1	P0085-927	ORING
3	1	P0084-123	RING, Back-Up
4	2	P0085-123	ORING
5	1	005348P00	COUPLER, Female 1-1/4
6	1	A10350A-420	HOSE ASSEMBLY, 1-1/4 x 420
7	1	P0421-012	COUPLER, Reducer
8	1	004901P01	COUPLER
9	1	004899P00	UNION, Coupler
10	1	005350P03	CAP, Coupler 1-1/4

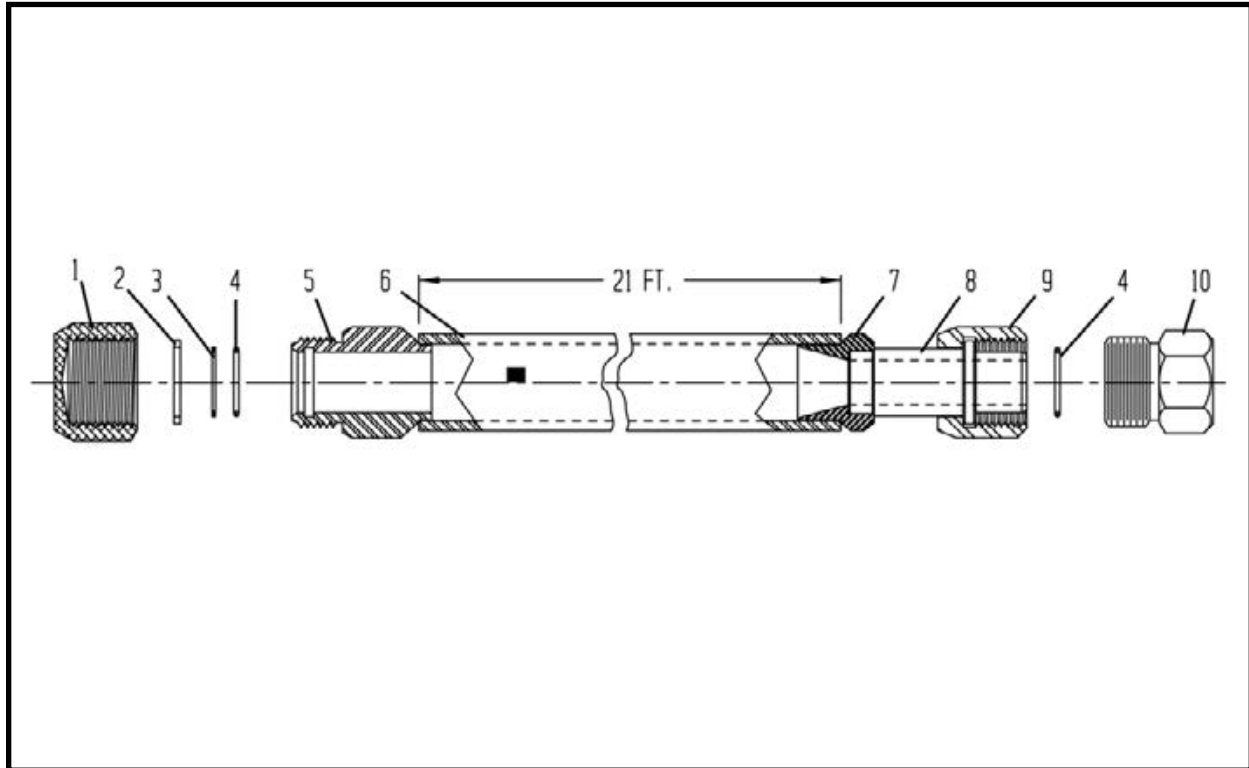
AR - As Required

## HYDRAULIC STARTER HOSE ASSEMBLY (5,000 PSI), F27691F



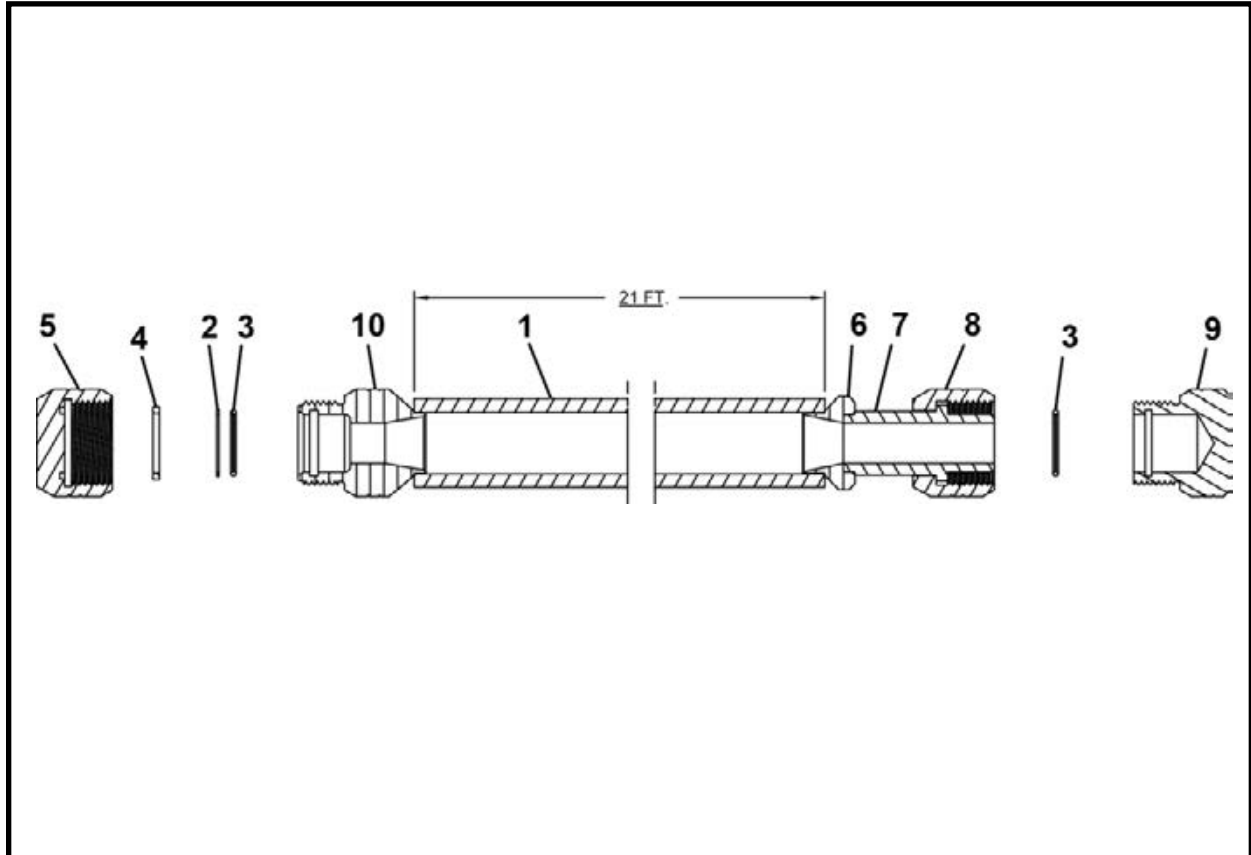
ITEM	QTY	PART NO.	DESCRIPTION
0	1	F27691F	STARTER HOSE ASSEMBLY, 35'
1	1	A09851A-420	HOSE ASSEMBLY, 1-1/4 x 420
2	1	P0421-022	REDUCER, Threaded 1-1/4 x 1
3	1	027672P	PLUG, Storage HP
4	1	027669P	NIPPLE, Threaded -HP
5	1	027667P	NUT, Coupler - HP
6	1	027671P	CAP. Storage - HP
7	1	027687P	FITTING, Threaded 1-1/4 -HP
8	1	P0085-927	ORING
9	2	P0085-124A	ORING
10	1	P0084-124	RING, Back-Up

## TBM HYDRAULIC LINES LP (3,000 PSI) ASSEMBLY, F13326F00



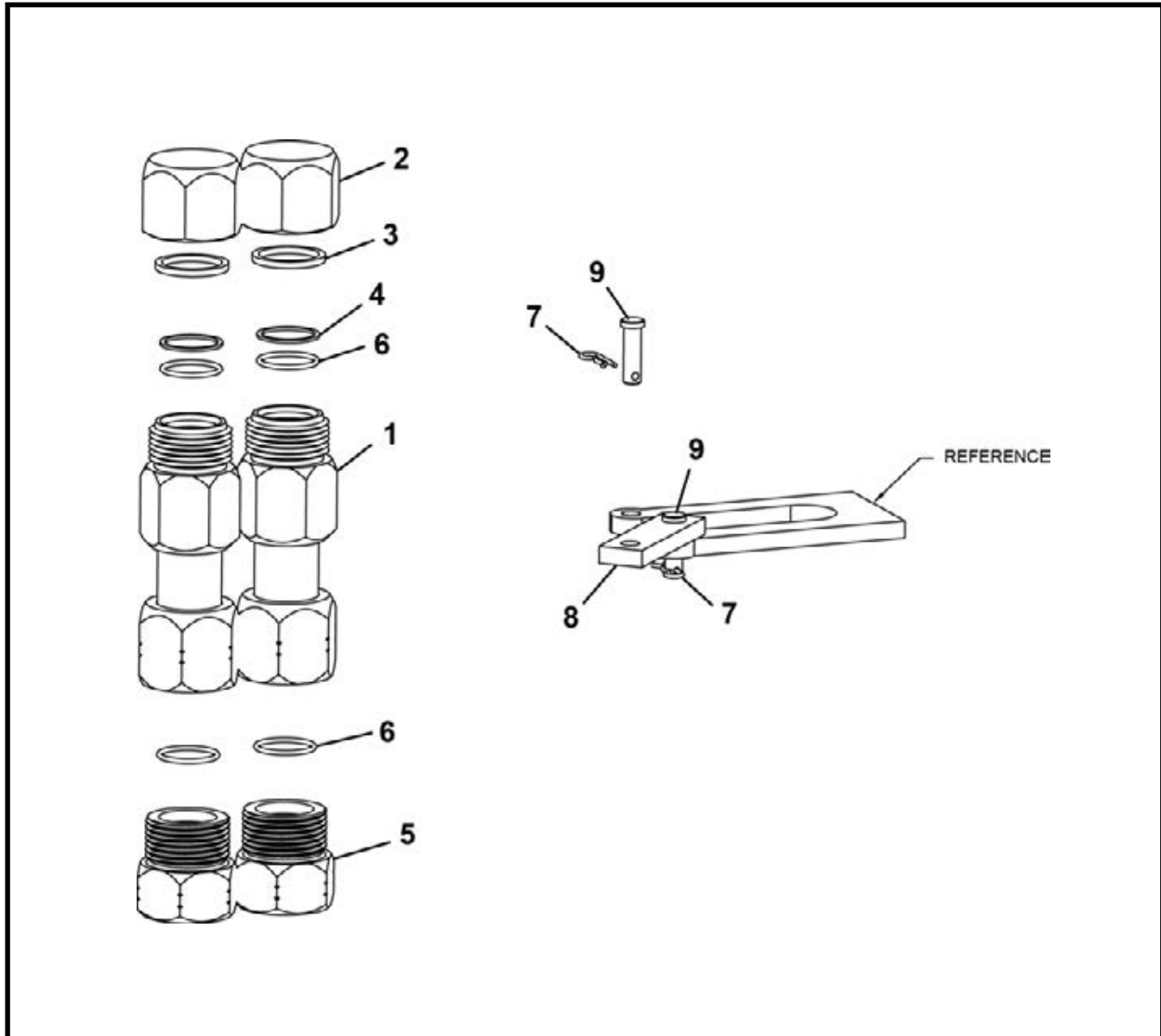
ITEM	QTY	PART NO.	DESCRIPTION
0	1	F13326F00	HYDRAULIC LINE 1.5 x 21' (1-1/4 Ends)
1	1	007002P02	CAP, Coupler 1-1/4
2	1	P0085-927	ORING
3	1	P0084-123	RING, Back-Up
4	2	P0085-123	ORING
5	1	013322P01	COUPLER, Female 1-1/4
6	1	013316P00	PIPE, Supply Line
7	1	013323P00	ADAPTER
8	1	007324P00	FITTING, 1-1/4 Oil Line (Male)
9	1	004901P01	COUPLER
10	1	005350P03	CAP, Coupler 1-1/4

## TBM HYDRAULIC LINES HP (5,000 PSI) ASSEMBLY, F27674F



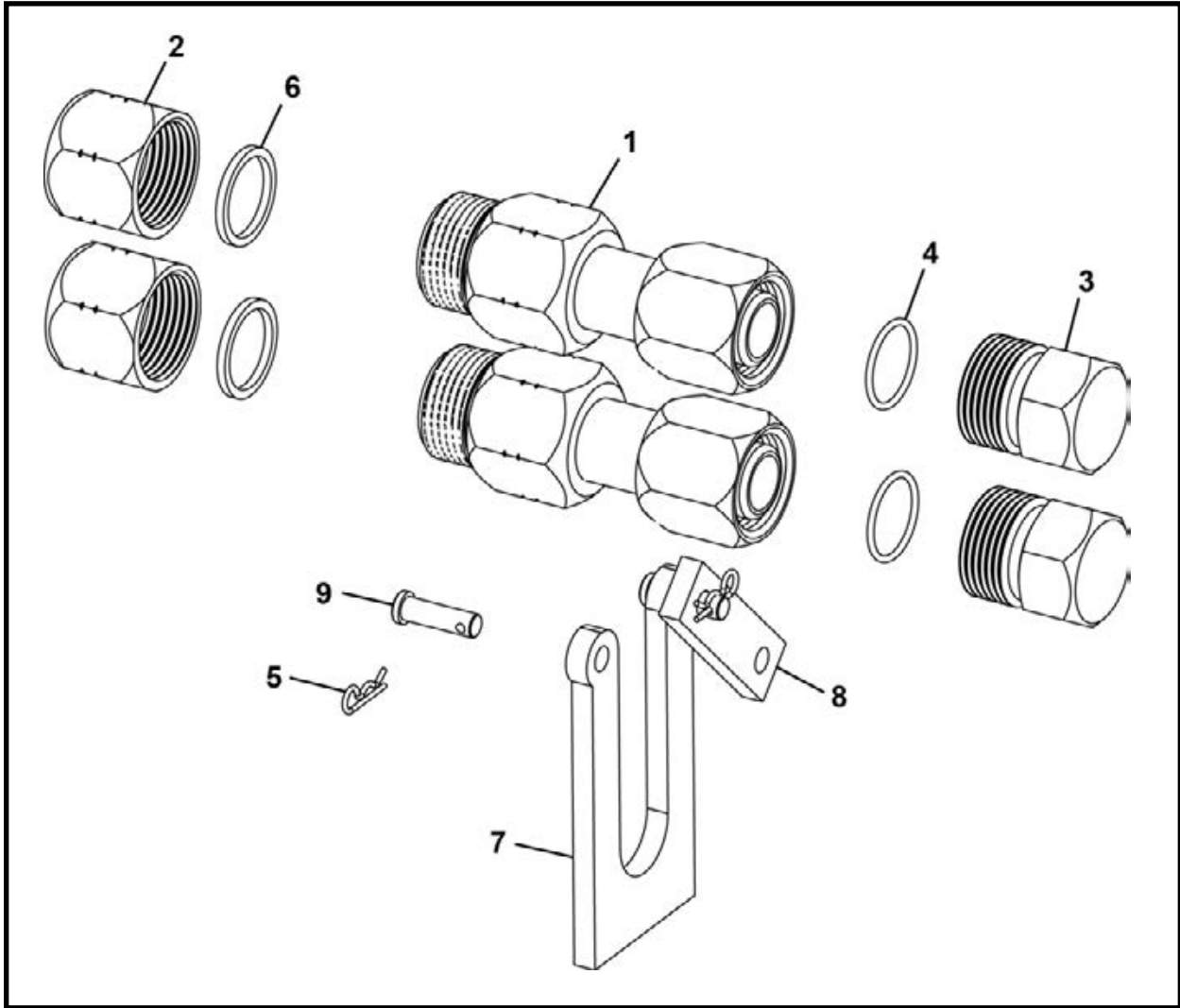
ITEM	QTY	PART NO.	DESCRIPTION
0	1	F27674F	ASSEMBLY, Hydraulic Line HP (5,000 psi)
1	1	R1010-037	PIPE, 1-1/2 x 21 FT'
2	1	P0084-124	RING, Back-Up
3	2	P0085-124A	ORING
4	1	P0085-927	ORING
5	1	027671P	CAP, Storage -HP
6	1	027668P	ADAPTER -HP
7	1	027665P	NIPPLE, HP
8	1	027667P	NUT, Coupler -HP
9	1	027672P	PLUG, Storage -HP
10	1	027666P	FITTING, HP

**ADAPTER KIT - 5000 PUMP UNIT (3,000 PSI) TO TBM SERIES II (HP), 027698A**  
**5000 PUMP UNIT / TBM Series II**



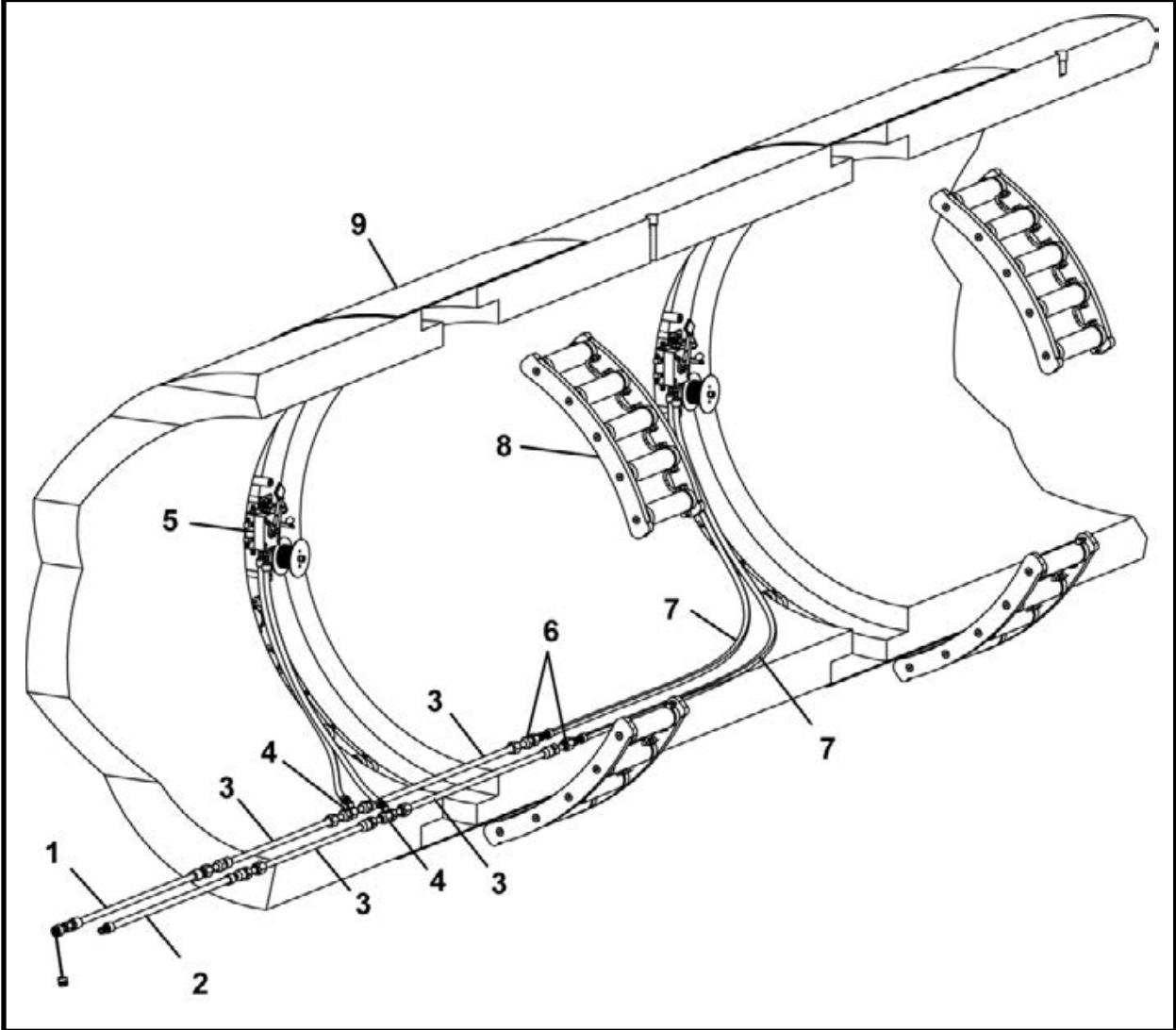
ITEM	QTY	PART NO.	DESCRIPTION
0	1	027698A	KIT, Adapter, LP to Series II
1	2	027694A	FITTING, Adapter, Low Pressure To TBM Series II
2	2	007002P02	CAP, Coupler 1-1/4
3	2	P0085-927	ORING
4	2	P0084-123	RING, Back-Up
5	2	027672P	PLUG, Storage, TBM High Pressure
6	2	P0085-123	ORING
7	2	P0090-001	CLIP, Hitch Pin
8	1	027696P	RETAINER
9	2	P0024-006	PIN, Clevis 3/8 x 1.25

**ADAPTER KIT - 5200 PUMP UNIT (3,000 PSI) TO TBM Series I, 027699A**  
**5200 PUMP UNIT/TBM Series I**



ITEM	QTY	PART NO.	DESCRIPTION
0	1	027699A	KIT, Adapter, 5200 Pump Unit To TBM Series I
1	2	027695A	FITTING, Adapter, 5200 To TBM Series I
2	2	027671P	CAP, Storage, TBM High Pressure
3	2	005350P03	CAP, Coupler 1-1/4
4	2	P0085-124A	ORING
5	2	P0090-001	CLIP, Hitch Pin
6	2	P0085-927	ORING
7	1	027697P	MOUNT
8	1	027696P	BAR, Retainer
9	2	P0024-006	PIN, Clevis 3/8 x 1-1/4

# INTERMEDIATE JACKING STATION



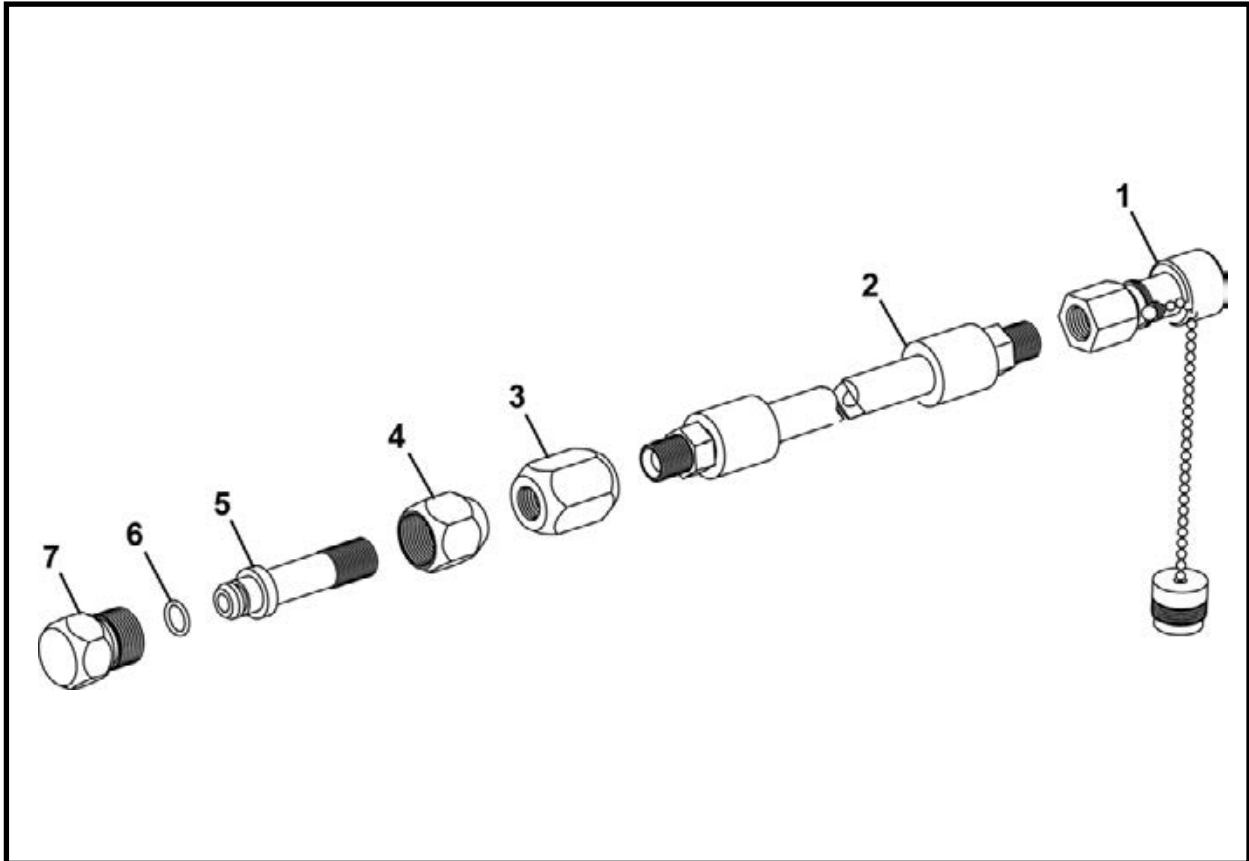
ITEM	QTY	PART NO.	DESCRIPTION
1*	1	F09802F01	STARTER HOSE, High Pressure 30'
2*	1	F09803F01	STARTER HOSE, Low Pressure 30'
3*	AR	F09800F00	TUNNEL LINE
4*	AR	F09804F00	TEE CONNECT
5*	AR	F04908F01	VALVE, IJS (With Cable)
6*	1	F09805F00	STARTER CONNECTION
7	2	A10311A-xxx	HOSE ASSEMBLY, 3/8 JIC x length
8.1*	4	007299A00	IJS SEGMENT ASSEMBLY - 48SC/420
8.2*	4	007300A00	IJS SEGMENT ASSEMBLY - 480
8.3*	5	007301A00	IJS SEGMENT ASSEMBLY - 540
8.4*	6	007302A00	IJS SEGMENT ASSEMBLY - 600
8.5*	7	007304A00	IJS SEGMENT ASSEMBLY - 720
9**	AR	-	IJS HOUSING

AR - As Required (Per Job)

\* Refer to this section for parts information.

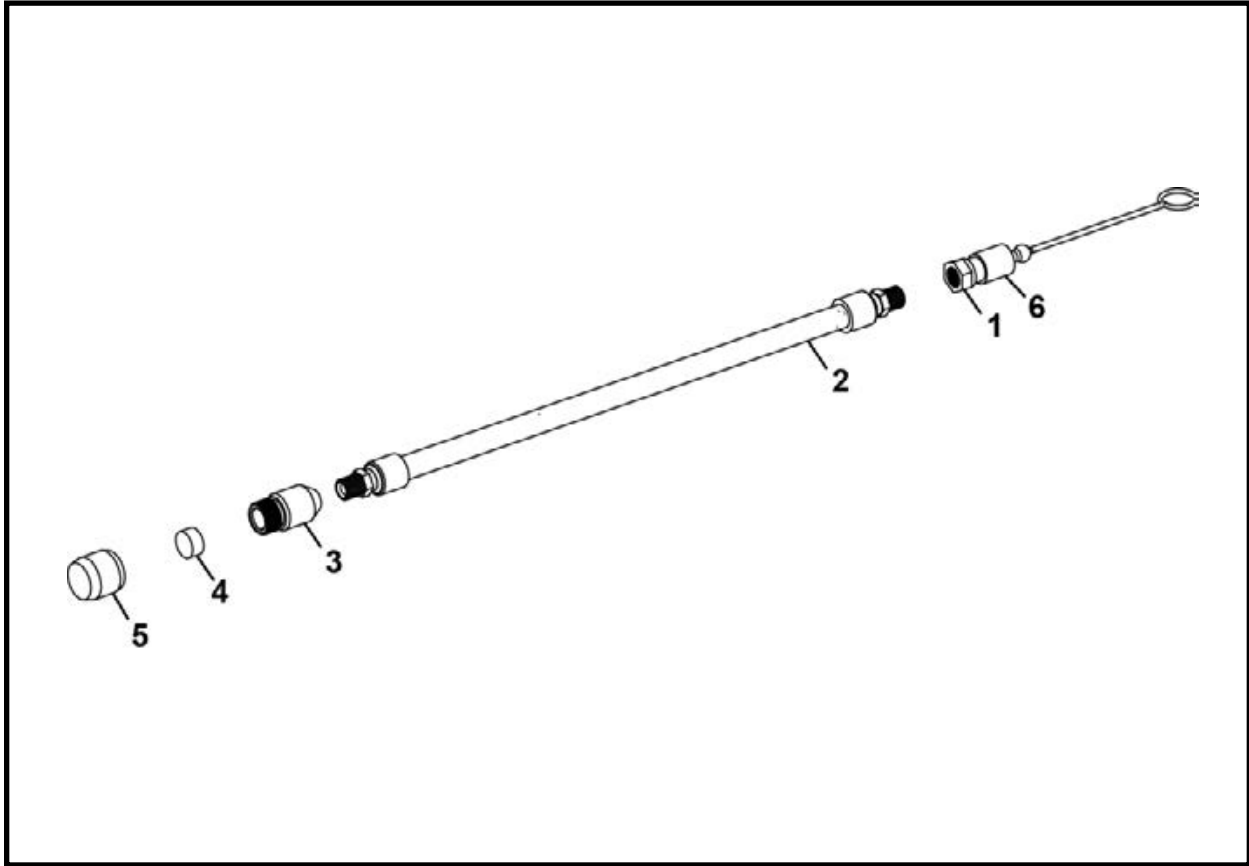
\*\* Contact your Akkerman Sales Representative for information regarding IJS housings.

## IJS STARTER HOSE 30 FT (HIGH PRESSURE) ASSEMBLY, F09802F01



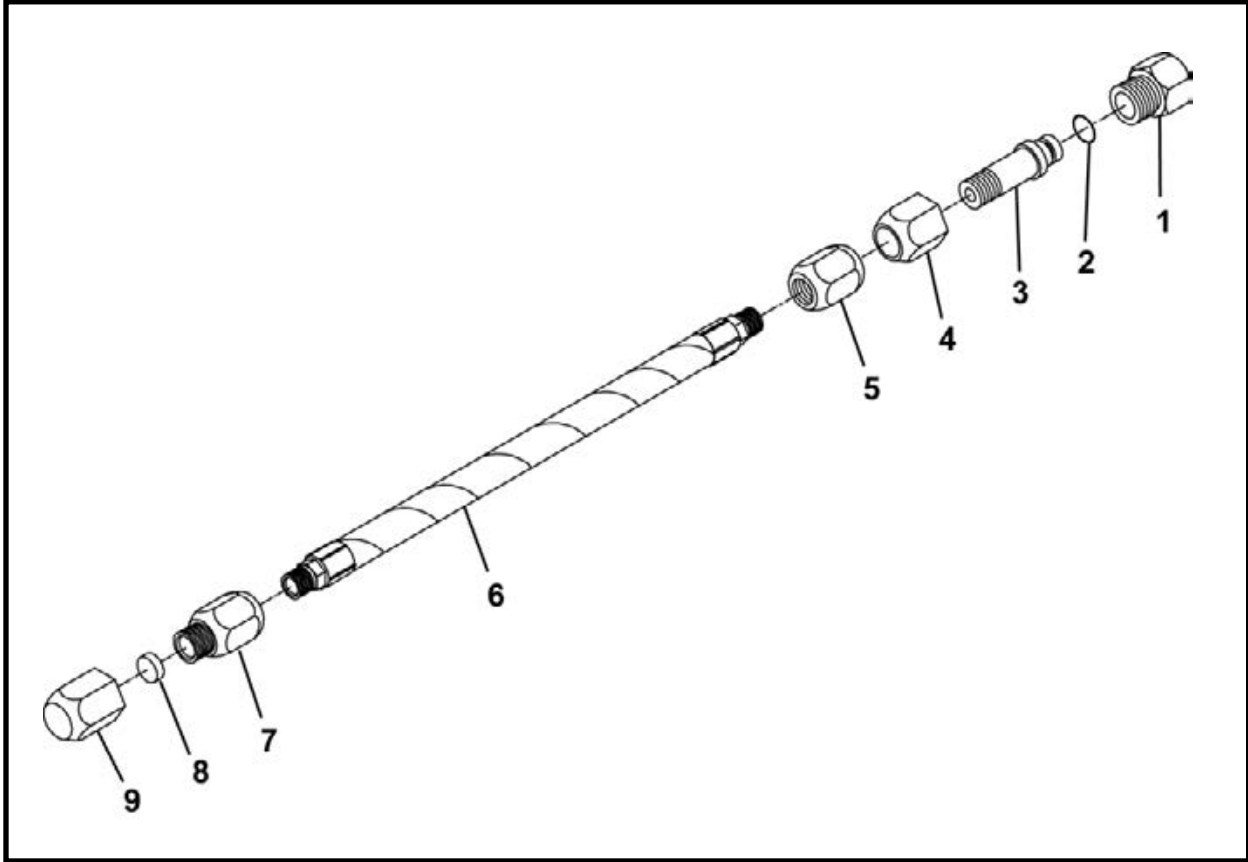
ITEM	QTY	PART NO.	DESCRIPTION
0	1	F09802F01	HOSE, High Pressure Starter 30'
1	1	P0100-001B	COUPLER, Male
2	1	A10420A-360	HOSE ASSEMBLY, 1/2 x 360
3	1	009812P01	COUPLER, Hi-Pressure 1/2 NPT
4	1	005135P00	COUPLER, 1/2
5	1	005134P00	COUPLER, Male 1/2
6	1	P0085-113	ORING
7	1	009808P00	CAP, Female

## IJS STARTER HOSE 30 FT (LOW PRESSURE) ASSEMBLY, F09803F01



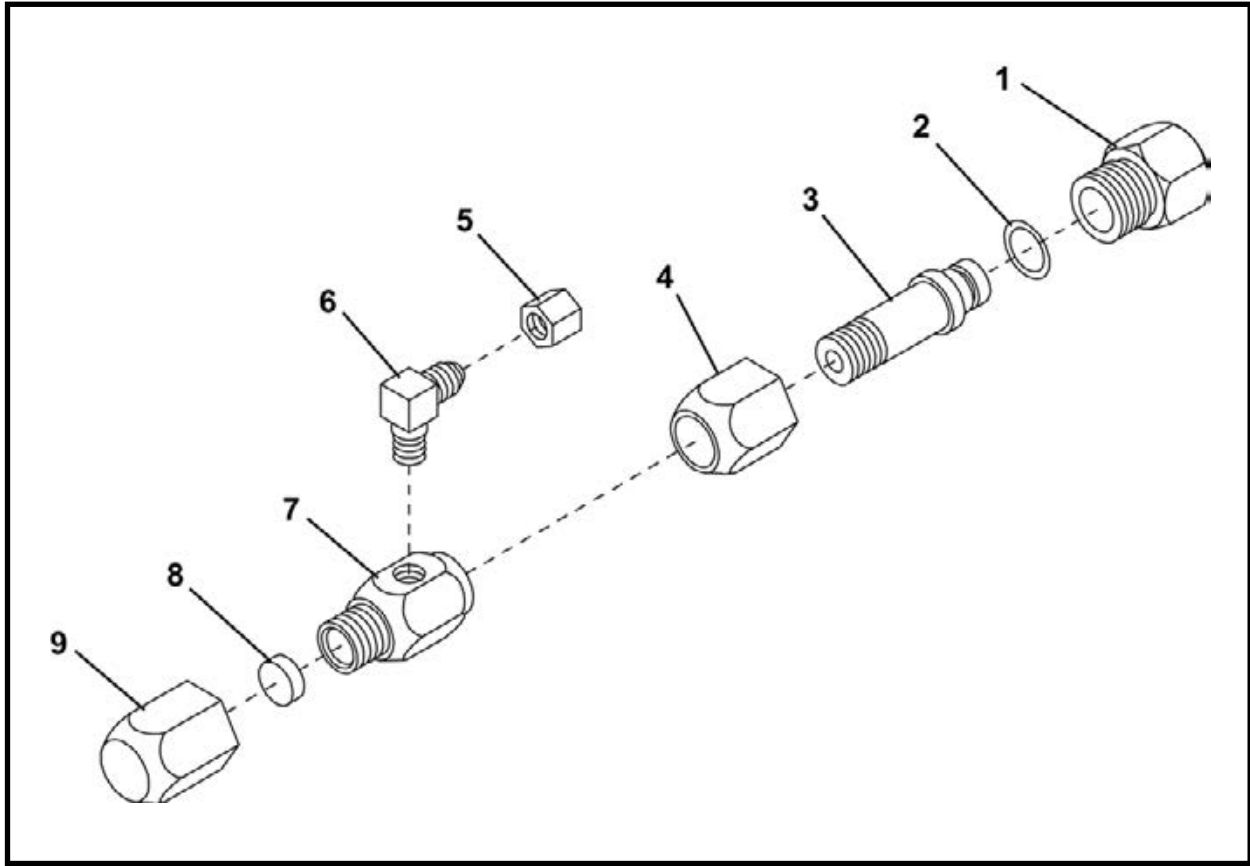
ITEM	QTY	PART NO.	DESCRIPTION
0	1	F09803F01	IJS STARTER HOSE ASSEMBLY, Low Pressure
1	1	P0100-013B	NIPPLE, Female 1/2 NPT
2	1	A10320A-360	HOSE ASSEMBLY 1/2 x 360
3	1	009809P00	COUPLER, Female 1/2
4	1	007085P00	PLUG, Coupler Cap
5	1	009811P01	CAP, Male
6	1	P0100-013D	PLUG, Dust

## 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

## IJS TEE CONNECTOR, F09804F00

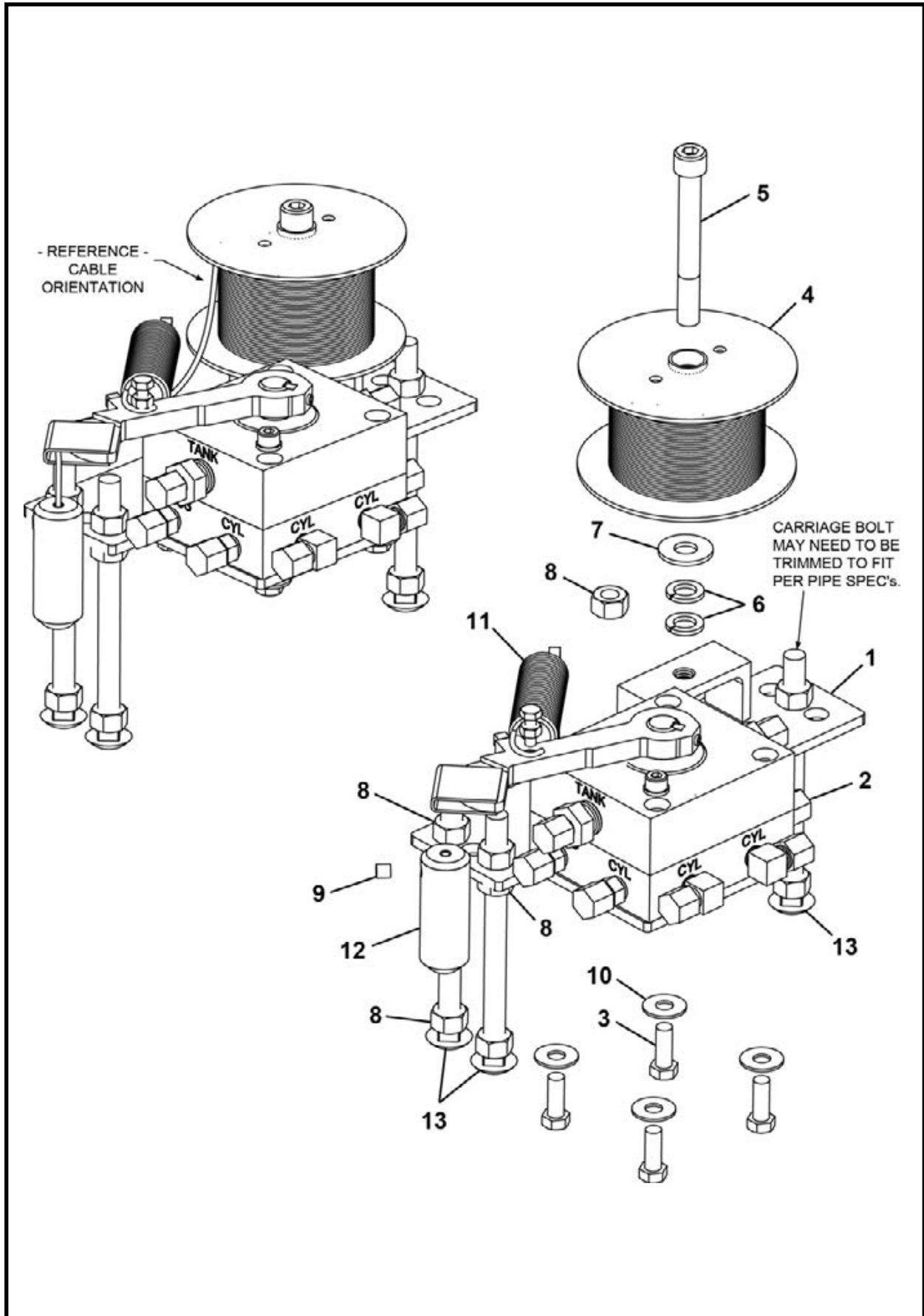


ITEM	QTY	PART NO.	DESCRIPTION
0	1	F09804F00	TEE CONNECTOR, IJS
1	1	009808P00	CAP, Female
2	1	P0085-113	ORING
3	1	005134P00	COUPLER, Male
4	1	005135P00	COUPLER, 1/2
5	1	P0300-126	CAP, 06FJ
6	1	P0300-125	FITTING, 06MJ-04MP90
7	1	009810P00	COUPLER, Female
8	1	007085P00	PLUG, Coupler Cap
9	1	009811P01	CAP,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

NOTE: Two connectors required per jack station.

**NOTES**

# IJS VALVE (With Cable), F04908F01



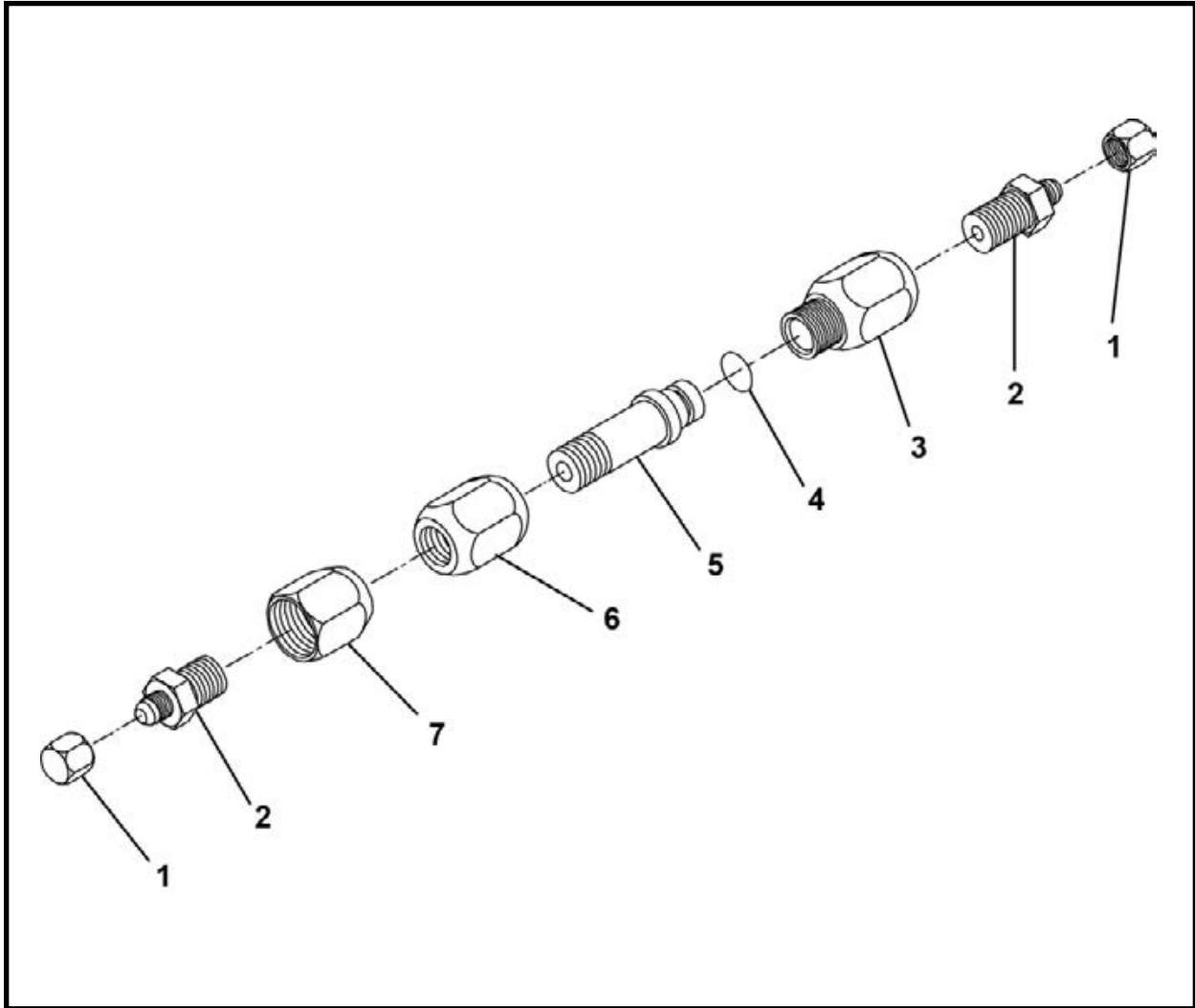
## IJS VALVE (With Cable), F04908F01

ITEM	QTY	PART NO.	DESCRIPTION
0	1	F04908F01	IJS VALVE (With Cable)
1	1	005764A00	PLATE ASSEMBLY
2*	1	004725A00	VALVE
3	4	P0001-06-004	BOLT, Hex 3/8 UNC x 1
4	1	002323A	ASSEMBLY, Cable & Spool (Includes items 4a - 4b)
4a	1	002373A00	SPOOL ASSEMBLY
4b	7200 LI	P0075-001	CABLE
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	10	P0003-08-000	NUT, 1/2 UNC
9	1	P0033-05-004	SCREW, Socket Set 5/16 x .25
10	4	P0040-006	WASHER, Hardened Flat 3/8
11	1	P0070-031	SPRING
12	1	001335P00	WEIGHT, Valve
13	3	P0026-011	BOLT, Carriage 1/2 x 6.5

\* Refer to Section 7, Valves for parts information.

LI - Linear Inch

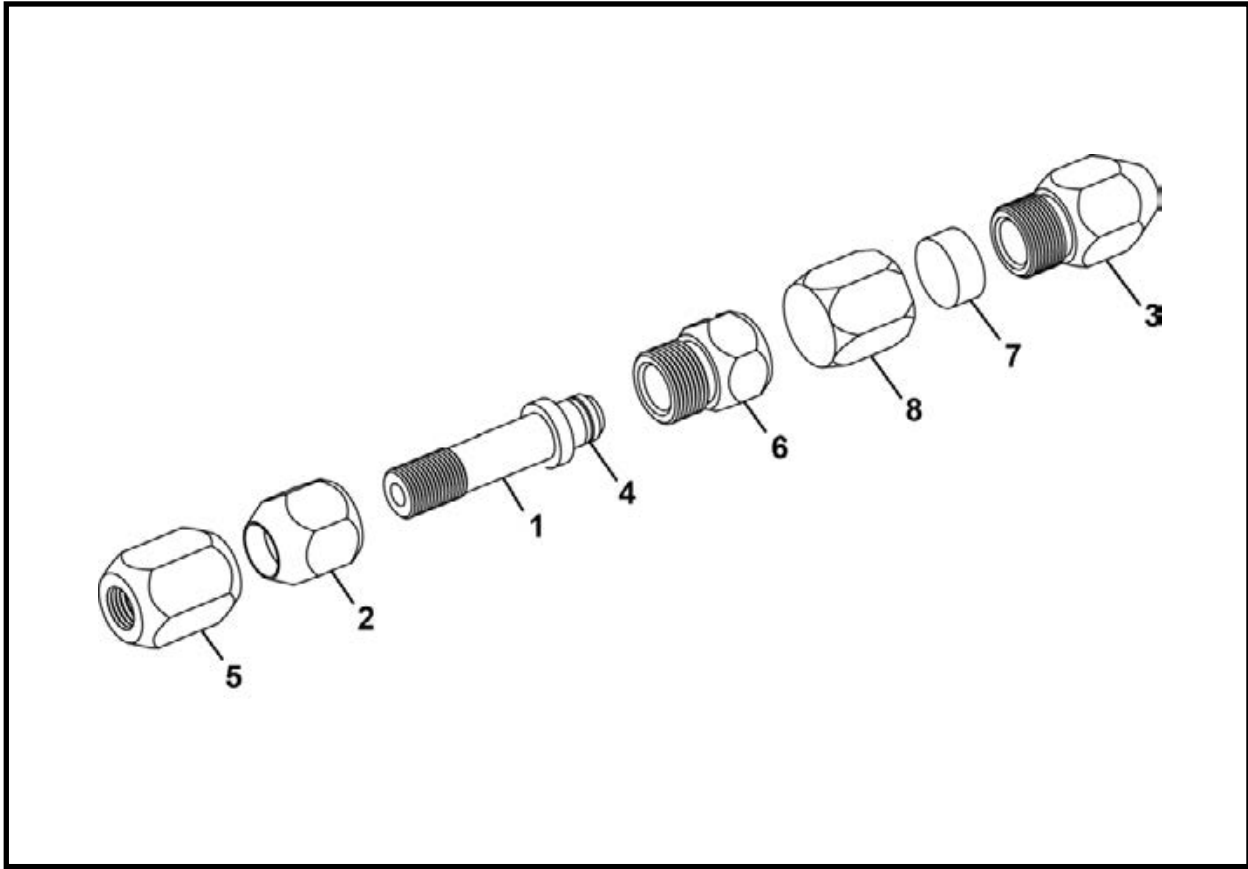
## IJS STARTER CONNECTION, F09805F00



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

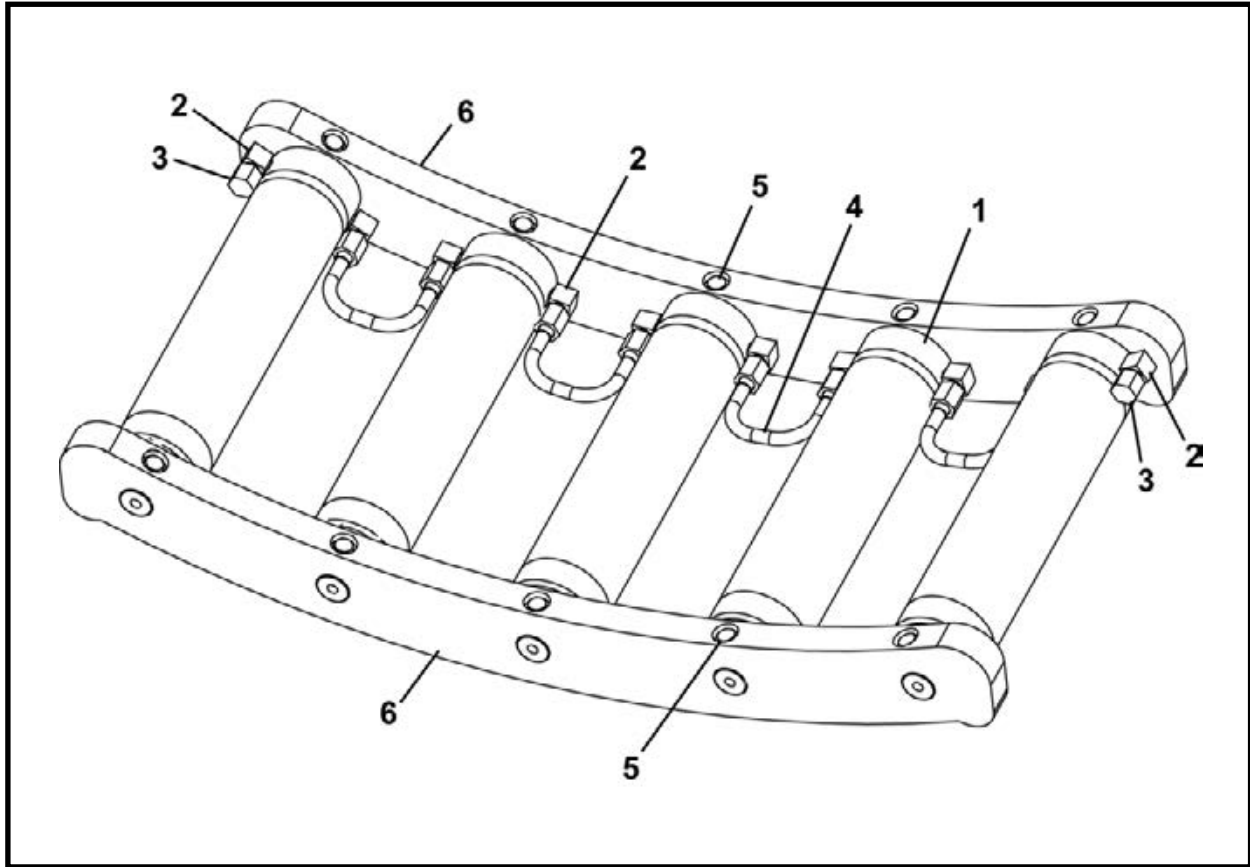
\* Included in IJS Coupler Assembly, 005133A02. Refer to this section for parts information.

## 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

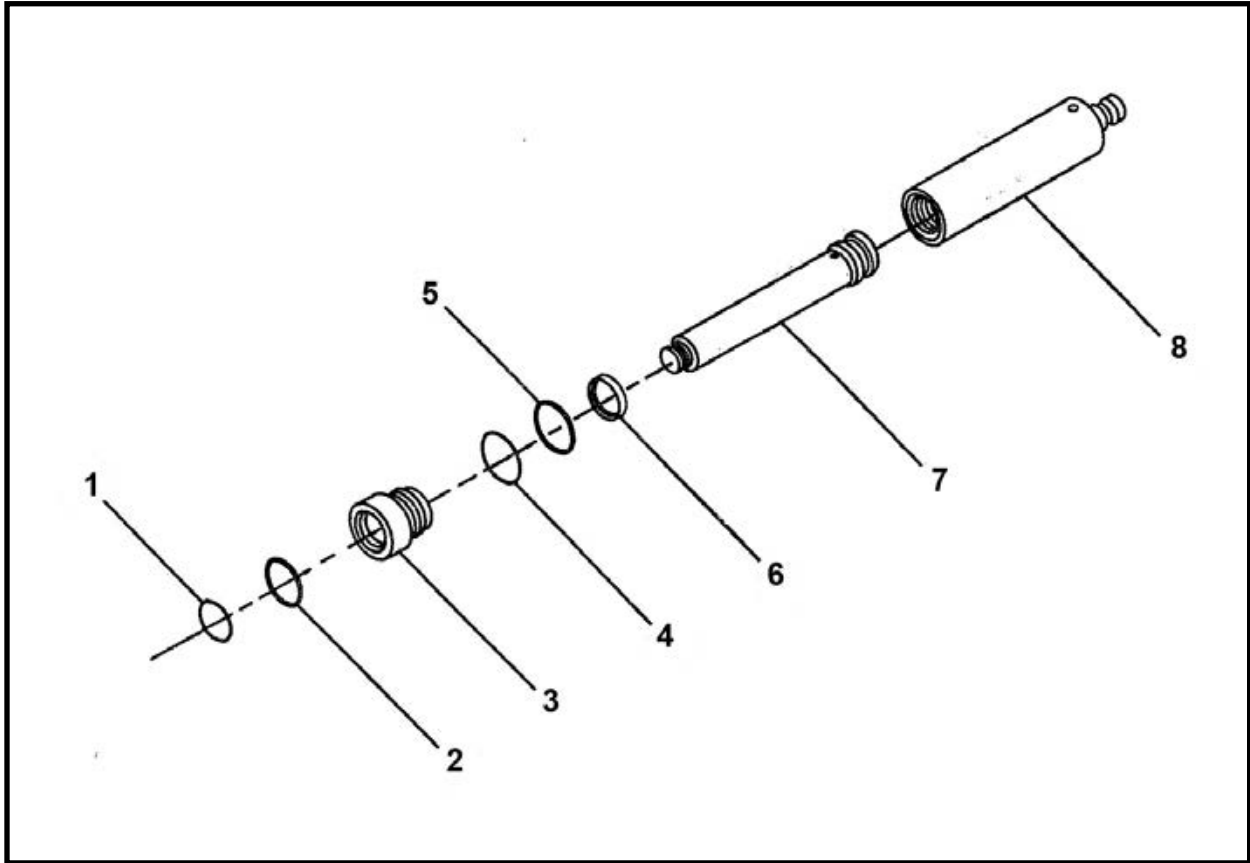
## IJS SEGMENT ASSEMBLY



ITEM	QTY	PART NO.	DESCRIPTION
0.1	1	007299A00	IJS SEGMENT ASSEMBLY - 48SC /420
0.2	1	007300A00	IJS SEGMENT ASSEMBLY - 480
0.3	1	007301A00	IJS SEGMENT ASSEMBLY - 540
0.4	1	007302A00	IJS SEGMENT ASSEMBLY - 600
0.5	1	007304A00	IJS SEGMENT ASSEMBLY - 720
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	F01480F00	END IRONS, Plate - 48SC /420
6.2	2	F01390F00	END IRONS, Plate - 480
6.3	2	F07297F00	END IRONS, Plate - 540
6.4	2	F03834F00	END IRONS, Plate - 600
6.5	2	F07296F00	END IRONS, Plate - 720

\* Refer to this section for parts information.

## IJS CYLINDER, F03531F02

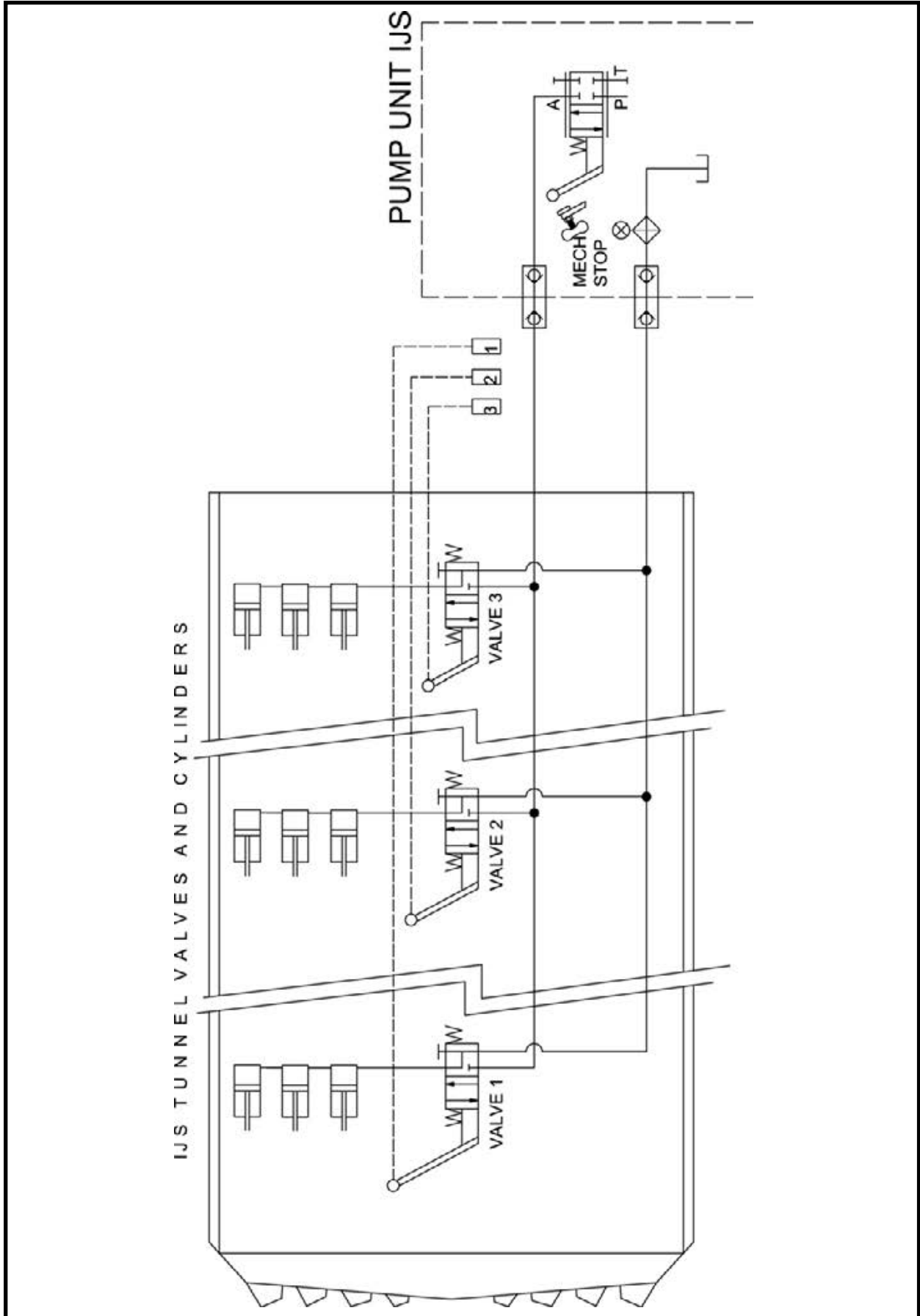


ITEM	QTY	PART NO.	DESCRIPTION
0	1	F03531F02	CYLINDER, IJS
1*	1	P0087-001	WIPER
2*	1	P0086-003	POLYSEAL
3	1	003095P02	CAP, End
4*	1	P0084-139	RING, Back-Up
5*	1	P0085-139	ORING
6*	1	P0088-002	RING, Wear
7	1	003348P02	SHAFT
8	1	003364A01	BARREL
9	REF	007344A00	KIT, Seal

\* Included in item 9, 007344A00 Seal Kit.

NOTE: Apply anti-sieze to barrel/gland threads.

# INTERMEDIATE JACKING STATION SCHEMATIC



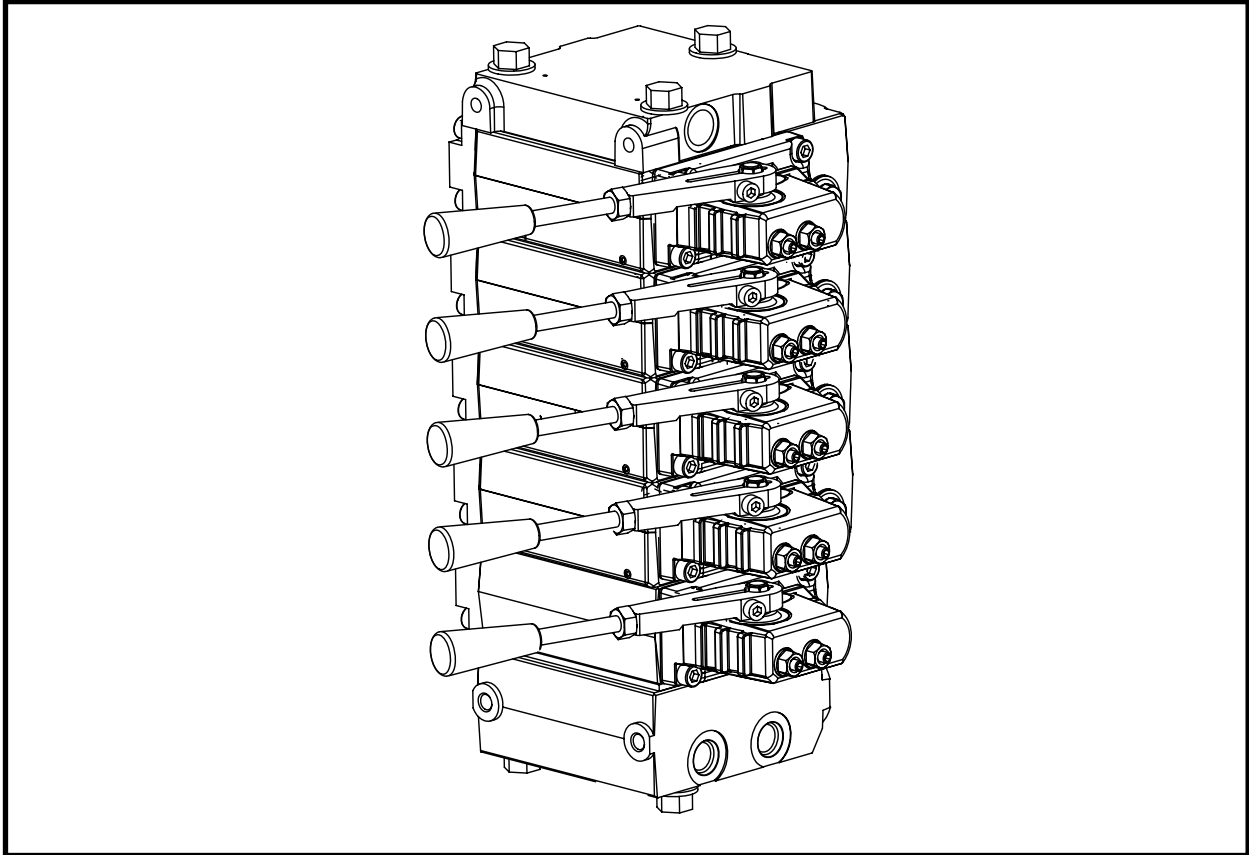


# Valves

## Tunnel Boring Machine

TBM Five Section Valve, P0302-814 (48SC-D).....	2
TBM Six Section Valve, P0302-815 (420D, 480D) .....	3
TBM Three Section Valve, P0302-709 .....	4
Two Speed Motor Valve, P0302-784 .....	5
Two Section Valve, P0302-805 .....	6
Two Section Valve, P0302-806 .....	7
Six Way, Two Position Valve, P0302-851 .....	8
Conveyor Lift Valve, P0302-680 (48SC, 420, 480 & 540) .....	9
<b>Intermediate Jacking Station</b>	
IJS Valve, 004725A00 .....	10

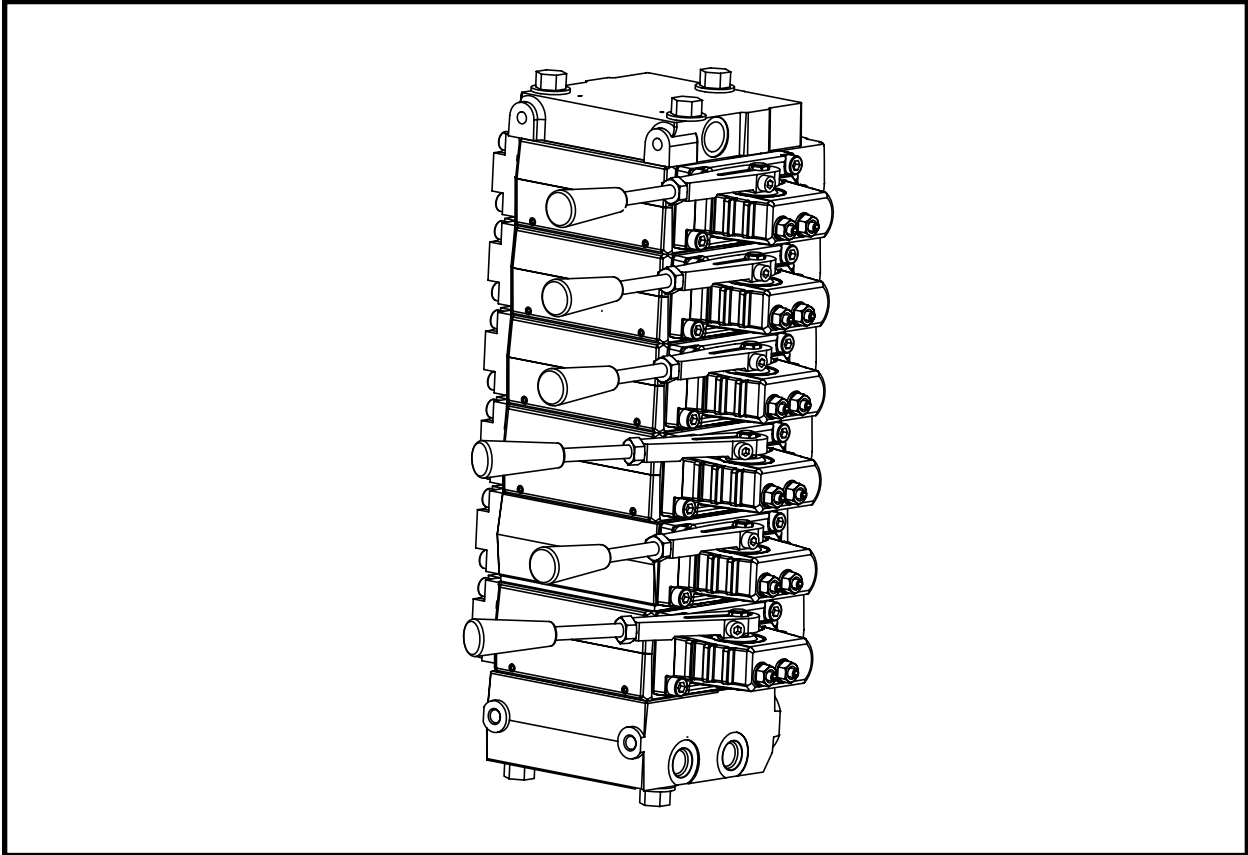
**TBM FIVE SECTION VALVE, P0302-814**  
**TBM 48SC-D**



ITEM	QTY	PART NO.	DESCRIPTION
0	1	P0302-814	VALVE, Five Section

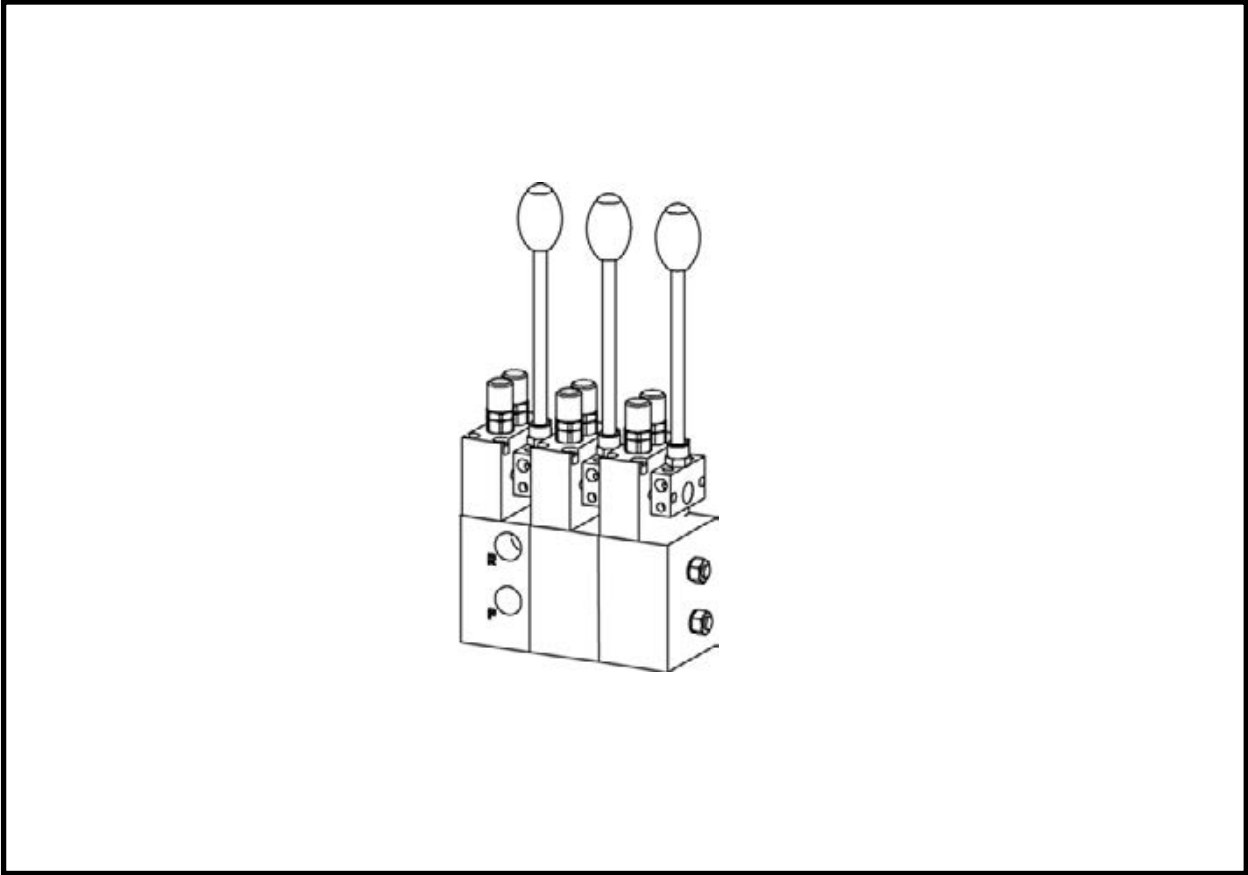
# TBM SIX SECTION VALVE, P0302-815

TBM 420D - 480D



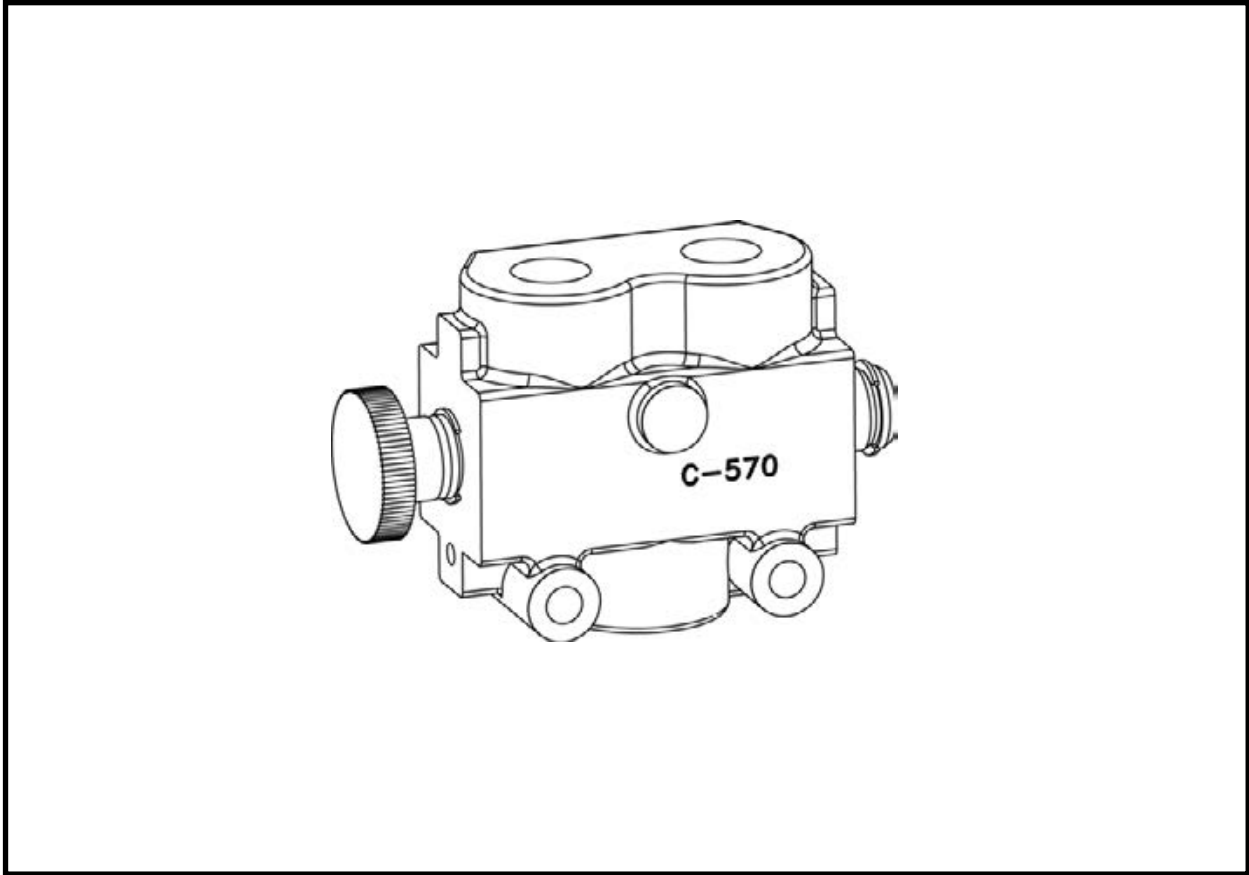
ITEM	QTY	PART NO.	DESCRIPTION
0	1	P0302-815	VALVE, Six Section
1	1	P0302-815A	SECTION, Valve

# TBM THREE SECTION CONTROL VALVE, P0302-709



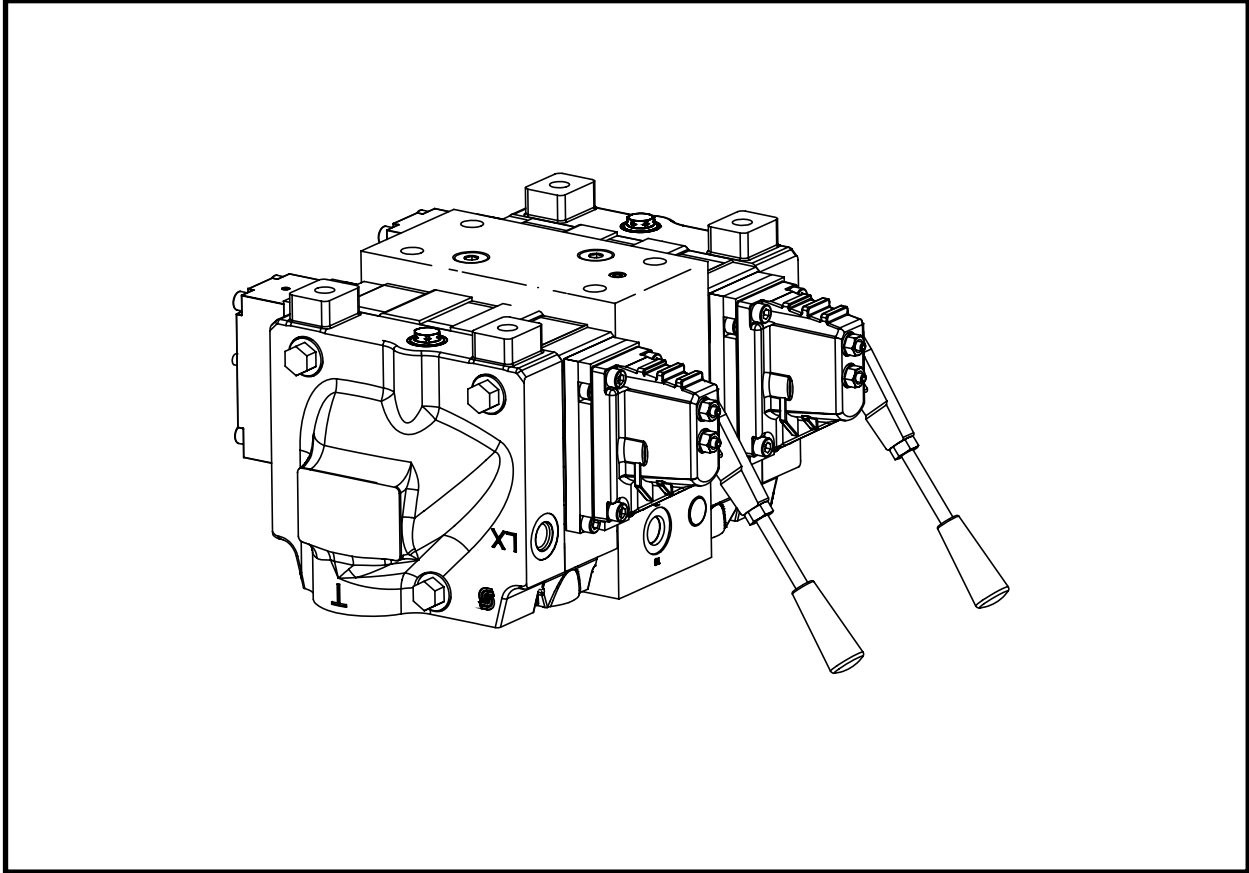
ITEM	QTY	PART NO.	DESCRIPTION
0	1	P0302-709	VALVE, TBM Three Section Control
1	1	P0302-709A	HANDLE

# TWO SPEED MOTOR VALVE, P0302-784



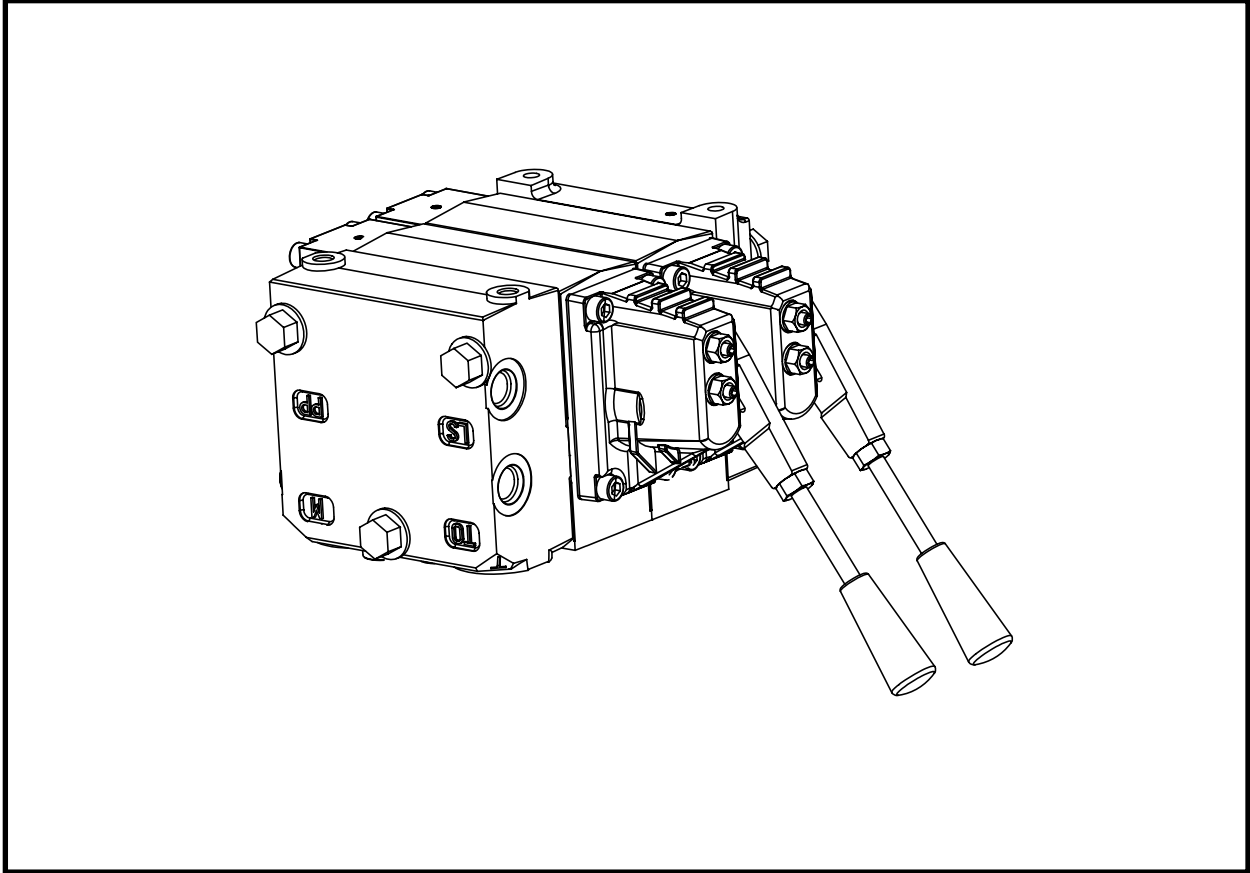
ITEM	QTY	PART NO.	DESCRIPTION
0	1	P0302-784	VALVE, Two Speed Motor

## TWO SECTION VALVE, P0302-805



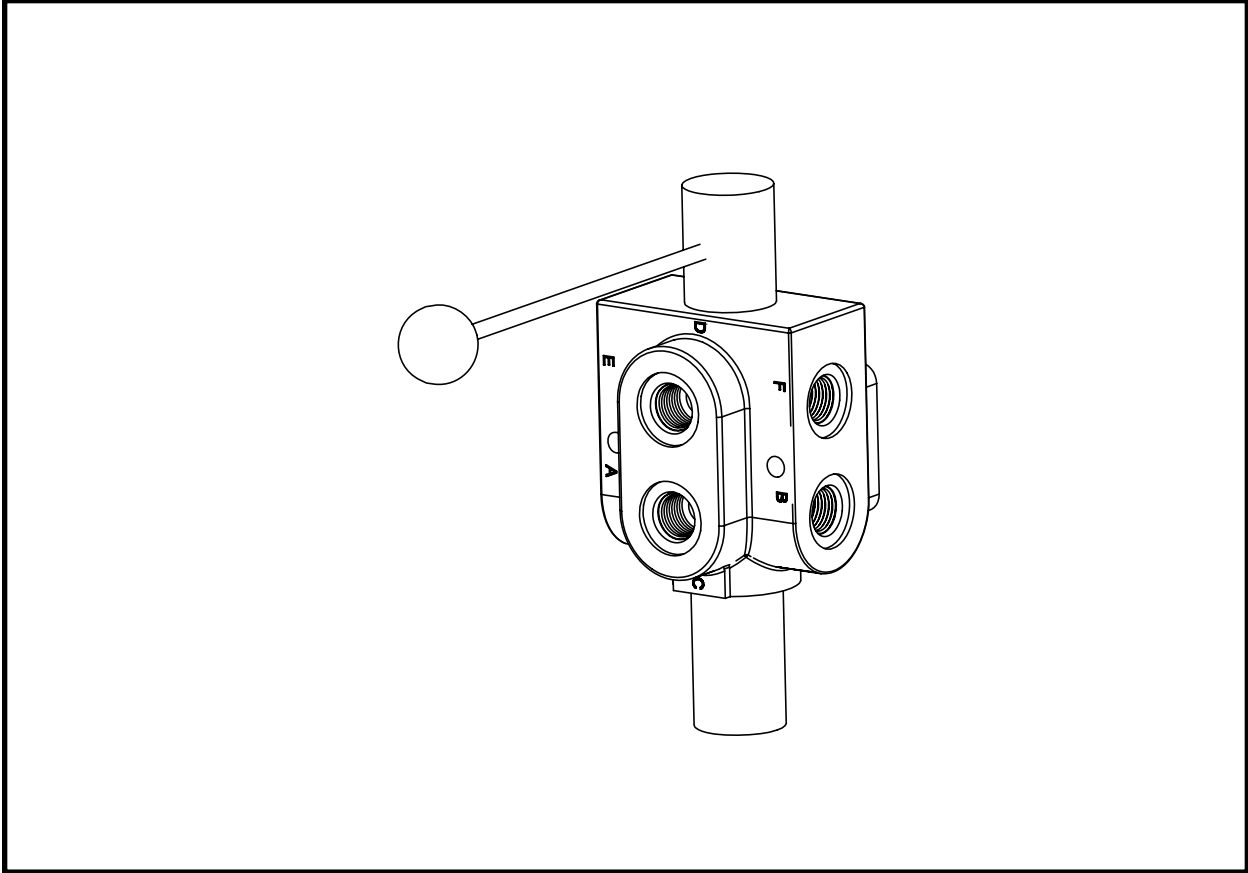
ITEM	QTY	PART NO.	DESCRIPTION
0	1	P0302-805	VALVE, Two Section
1	1	P0302-805A	ASSEMBLY, Spool Valve

## TWO SECTION VALVE, P0302-806



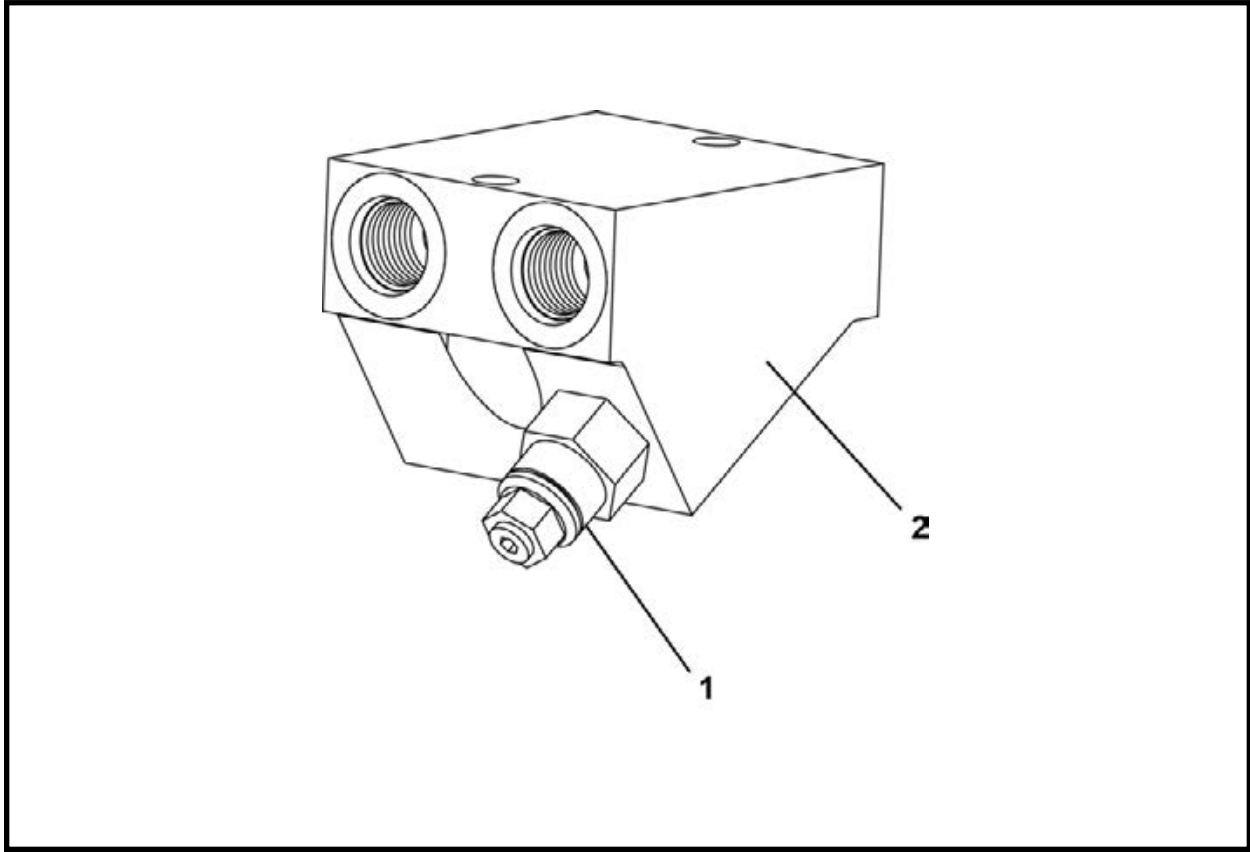
ITEM	QTY	PART NO.	DESCRIPTION
0	1	P0302-806	VALVE, Two Section
1	1	P0302-806A	CAP, End
1	1	P0302-806B	SPOOL, Cylinder
1	1	P0302-806C	SPOOL, Motor

# SIX WAY TWO POSITION VALVE, P0302-851



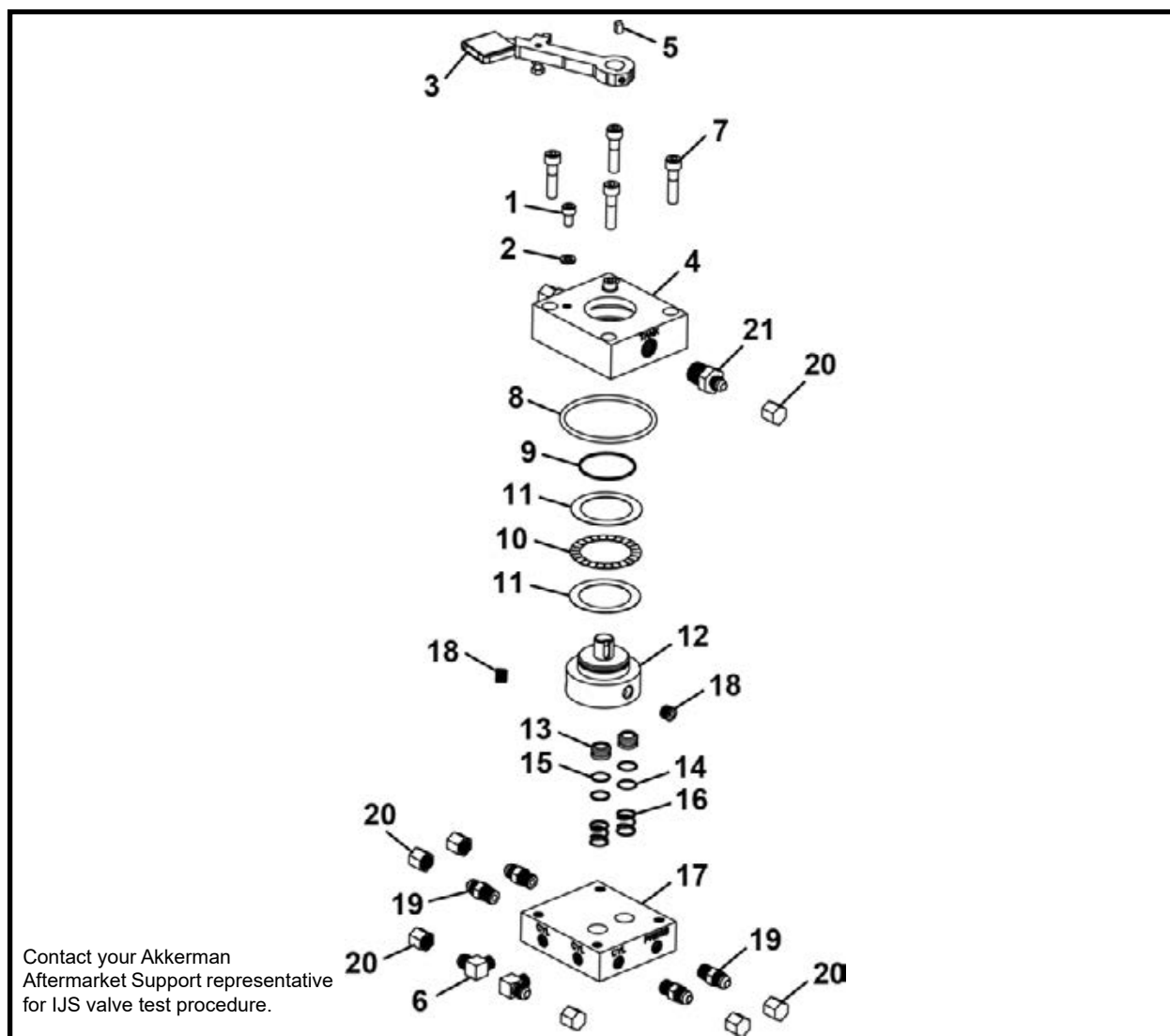
ITEM	QTY	PART NO.	DESCRIPTION
0	1	P0302-851	VALVE, Six Way Two Position

## CONVEYOR LIFT VALVE, P0302-680



ITEM	QTY	PART NO.	DESCRIPTION
0	1	P0302-680	VALVE, Conveyor Lift
1	1	P0302-680A	CARTRIDGE
2	1	P0302-680B	BODY, Valve

## IJS VALVE, 004725A00



ITEM	QTY	PART NO.	DESCRIPTION
0	1	004725A00	VALVE, IJS
1	2	P0031-05-002	SCREW, Socket Head Cap 5/16 UNC x .5
2	2	P0046-005	WASHER, Lock Hi-Collar 5/16
3	1	002188A00	HANDLE
4	1	004722P00	VALVE, Top
5	0.38	P0047-003	KEY
6	2	P0300-125	FITTING, 06MJ-04MP90
7	4	P0031-06-006	SCREW, Socket Head Cap 3/8 UNC x 1.5
8*	1	P0085-340	ORING
9*	1	P0085-032	ORING
10	1	P0065-030	BEARING
11	2	P0065-031	BEARING
12	1	004724P00	SPOOL
13	2	003842P01	SPOOL
14*	2	P0085-016	ORING
15*	2	P0084-016	RING, Back-Up
16*	2	P0070-020	SPRING
17	1	004723P01	VALVE, Base
18	2	P0300-026	FITTING, 04MP-HHP
19	4	P0300-121	FITTING, 06MJ-04MP
20	8	P0300-126	CAP, 06FJ-CAP
21	2	P0300-120	FITTING, 06MJ-08MP
22**	1	005763A00	KIT, Seal

\* Item included in item 22, Seal Kit

\*\* Not Shown



# Motors

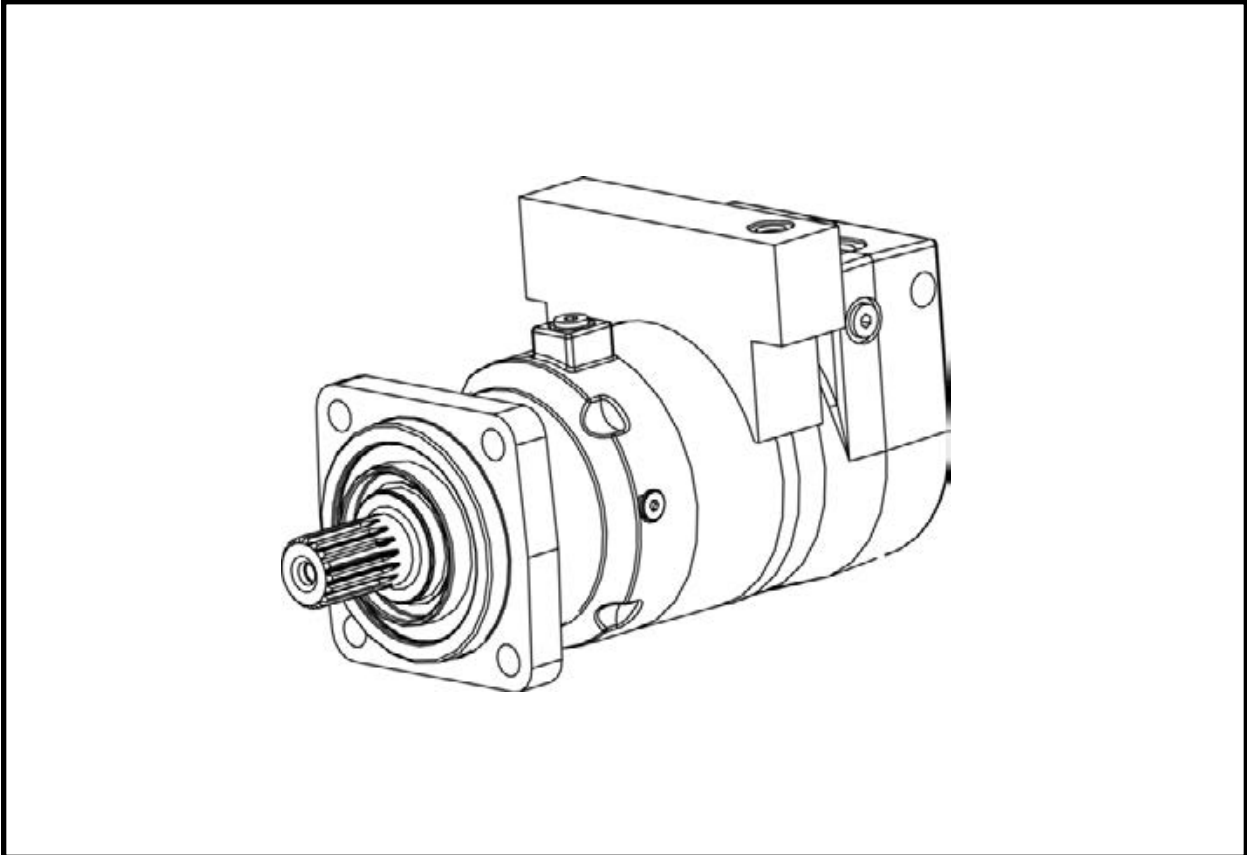
## Tunnel Boring Machine

TBM Drive Motor, P0304-360 48SC-D (SN F32300F01 & 02), 420D (SN F32300F01), 480D (SN F32348F01 & 02) ...	2
TBM Drive Motor, P0304-363 48SC-D (SN F32300F03 & After), 420D (SN F32300F02 & After), 480D (SN F32348F02 & After) .....	3
Grease Hydraulic Motor, P0304-372 .....	4

## Conveyors

Conveyor Drive Motor	
1015/1215/1615 Belt Conveyor, P0304-157 (w/4 bolt mounting flange).....	6
1015/1215/1615 Belt Conveyor, P0304-371 (w/2 bolt mounting flange).....	7
120EX Screw Conveyor, P0304-109 .....	8
140EX Screw Conveyor/160 Screw Conveyor (SN F09885F04 & Before), P0304-145 ...	9
160 Screw Conveyor (SN F09885F05 & After), P0304-338 .....	10

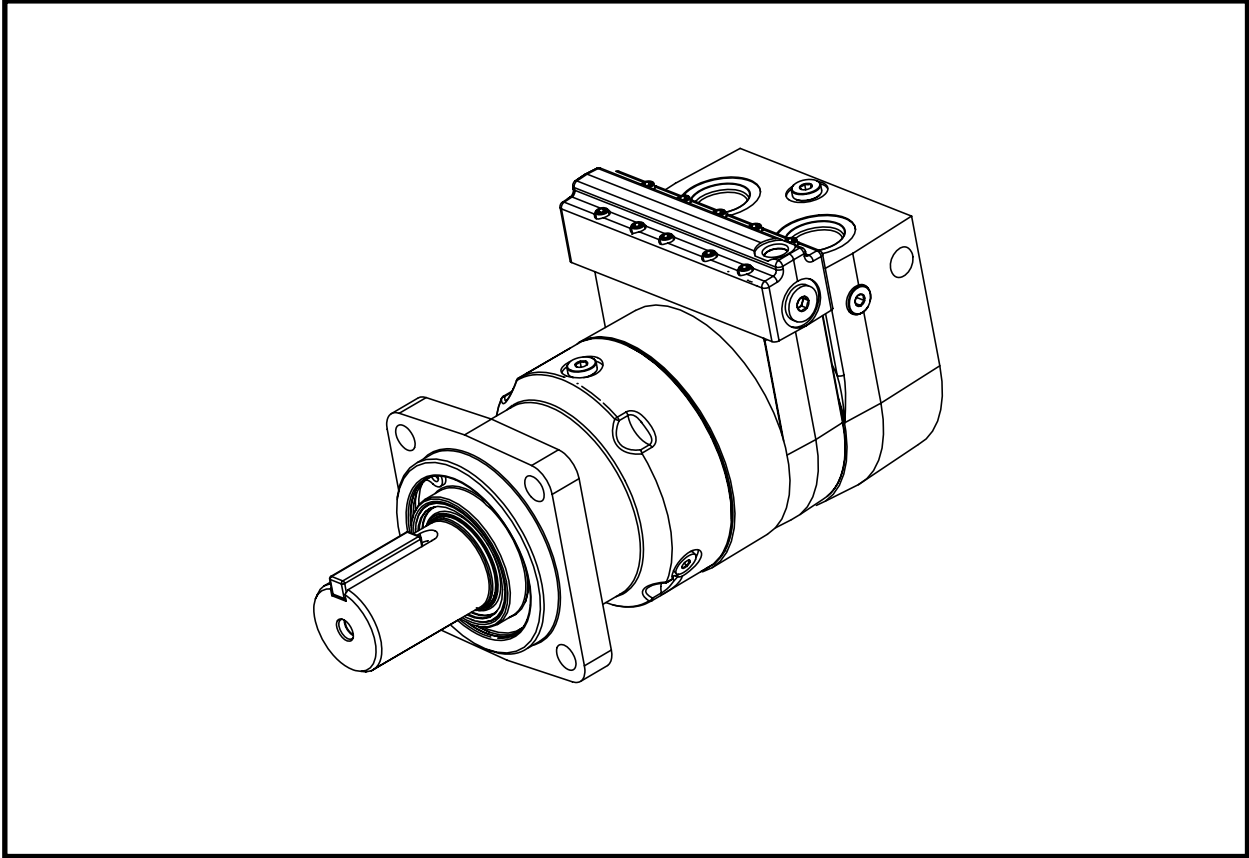
**TBM TWO SPEED DRIVE MOTOR, P0304-360**  
TBM 48SC-D (SN F32300F01 & 02), 420D (SN F32300F01), 480D (SN F32348F01 & 02)



ITEM	QTY	PART NO.	DESCRIPTION
0	1	P0304-360	MOTOR, TBM Two Speed Drive

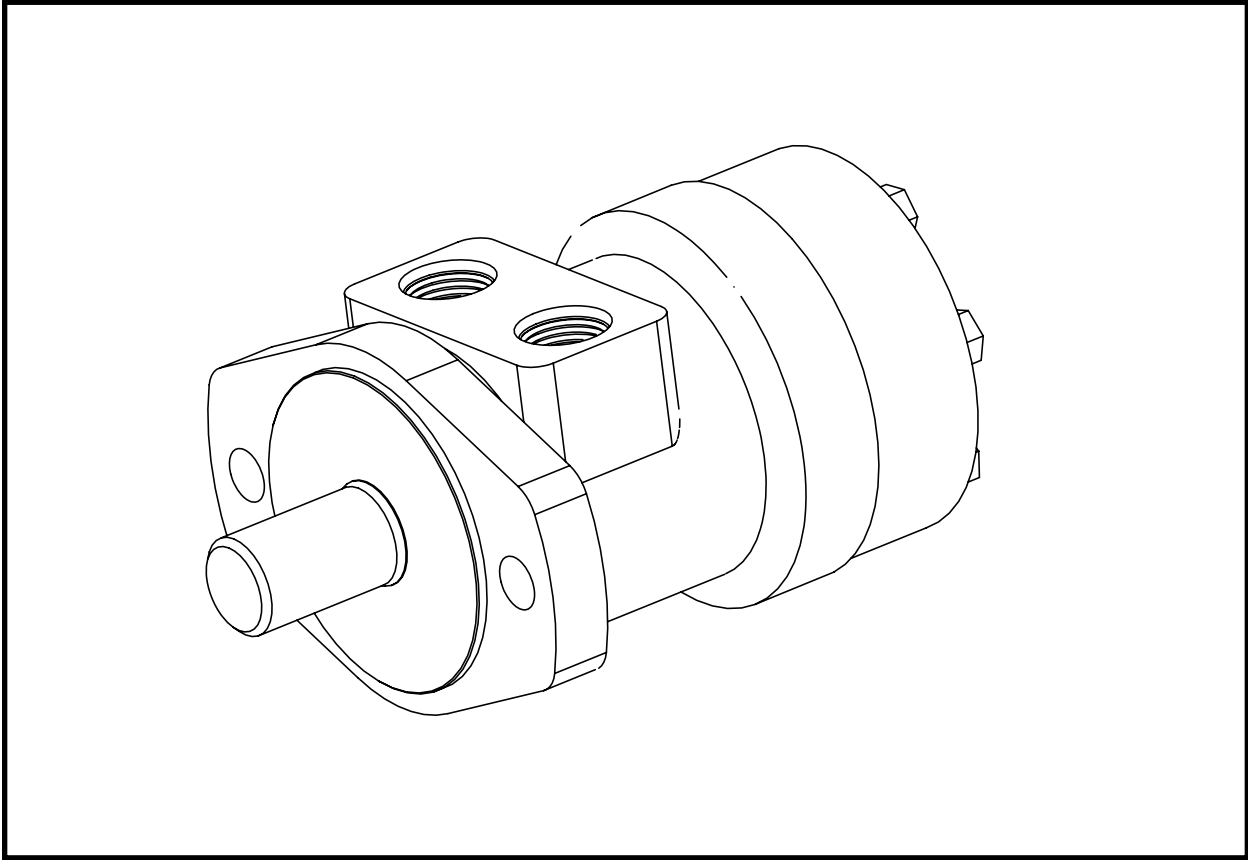
### TBM TWO SPEED DRIVE MOTOR, P0304-363

TBM 48SC-D (SN F32300F03 & After), 420D (SN F32300F02 & After), 480D (SN F32348F03 & After)



ITEM	QTY	PART NO.	DESCRIPTION
0	1	P0304-363	MOTOR, TBM Two Speed Drive

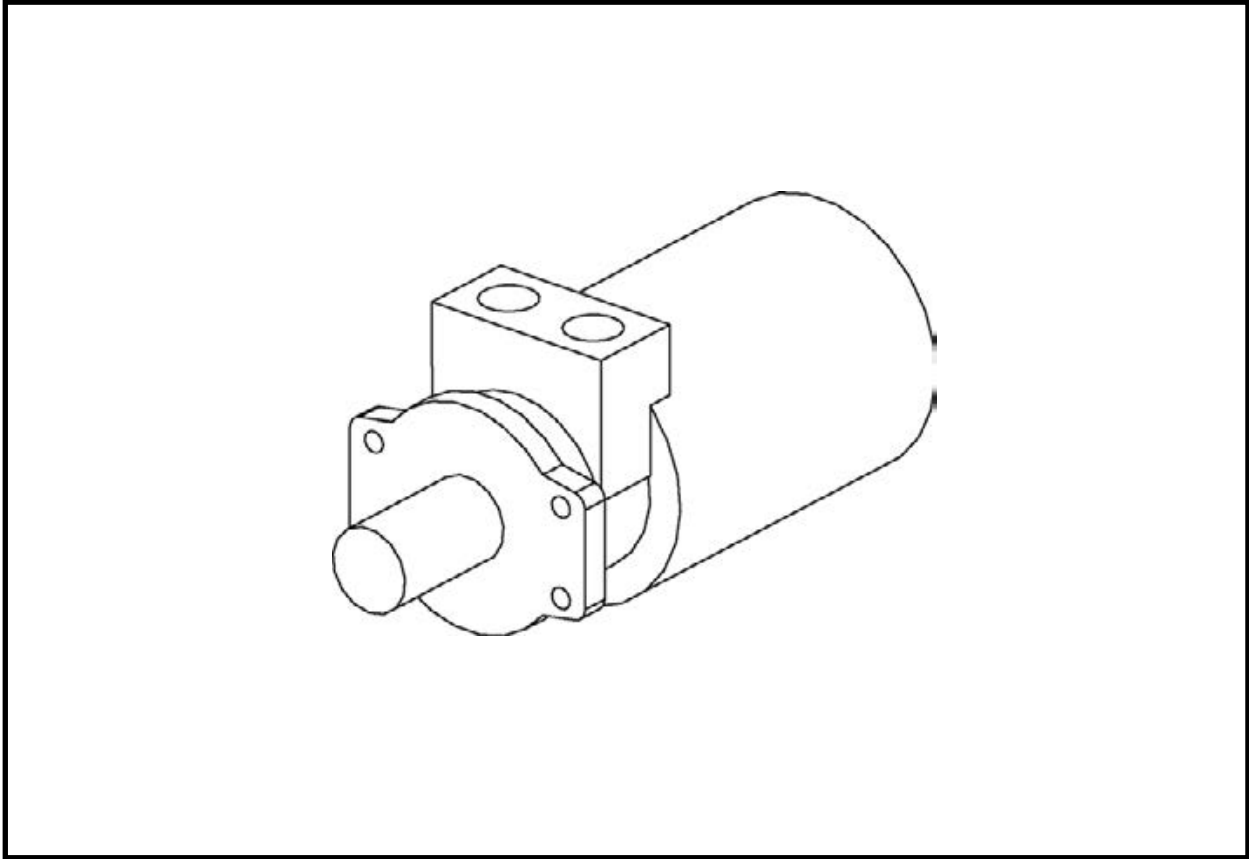
**HYDRAULIC MOTOR, P0304-372**  
**GREASE MOTOR**



ITEM	QTY	PART NO.	DESCRIPTION
0	1	P0304-372	MOTOR, Hydraulic

**NOTES**

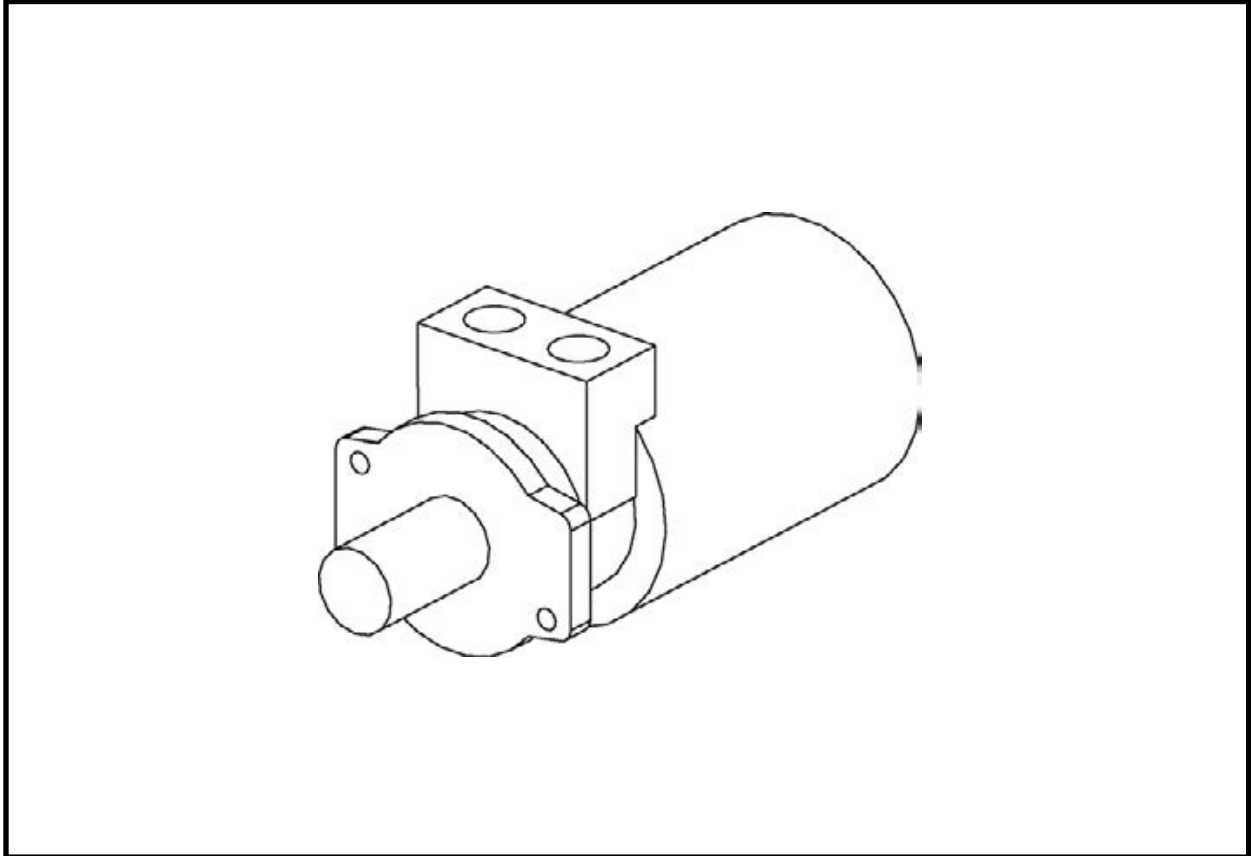
**CONVEYOR DRIVE MOTOR, P0304-157**  
**1015/1215/1615 BELT CONVEYOR**



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

Note: Motor with four bolt mounting flange.

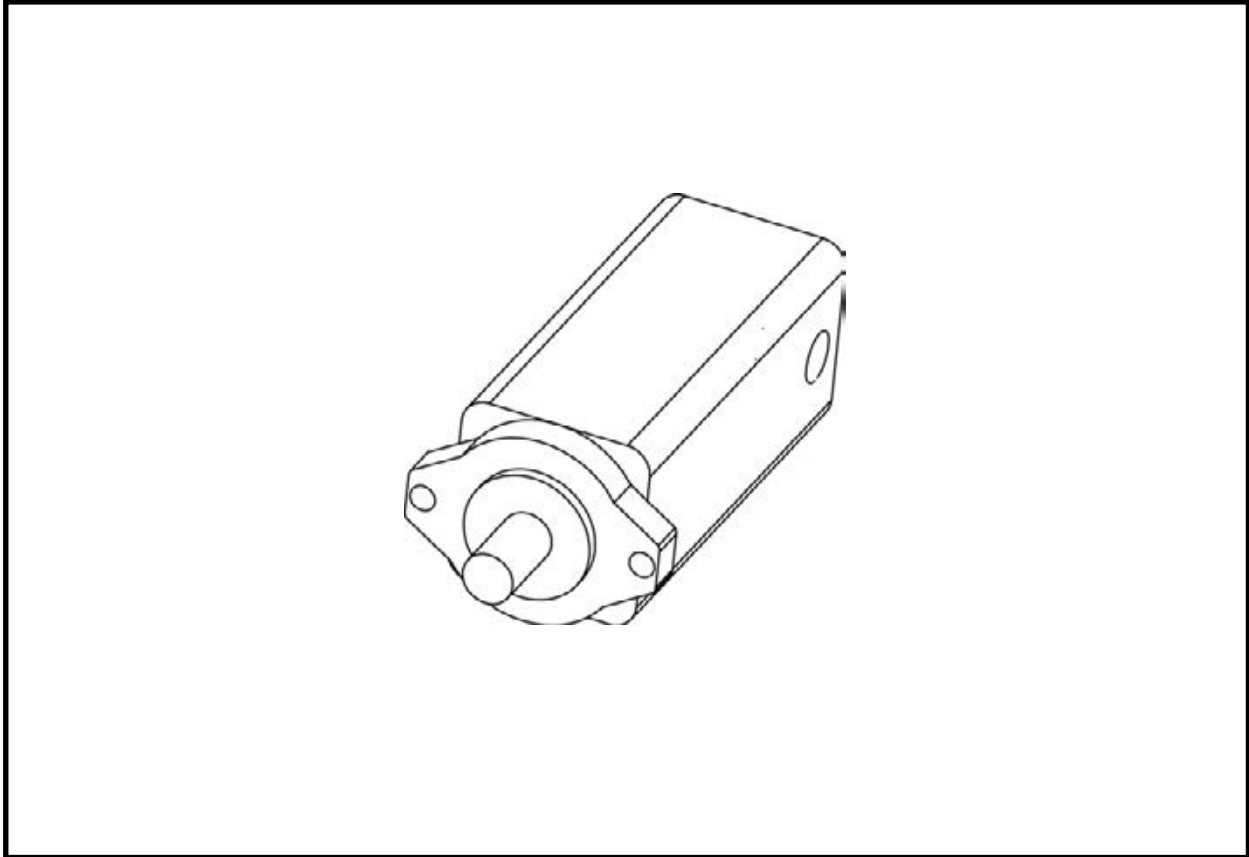
**CONVEYOR DRIVE MOTOR, P0304-371**  
**1015/1215/1615 BELT CONVEYOR**



ITEM	QTY	PART NO.	DESCRIPTION
0	1	P0304-371	MOTOR, Conveyor Drive

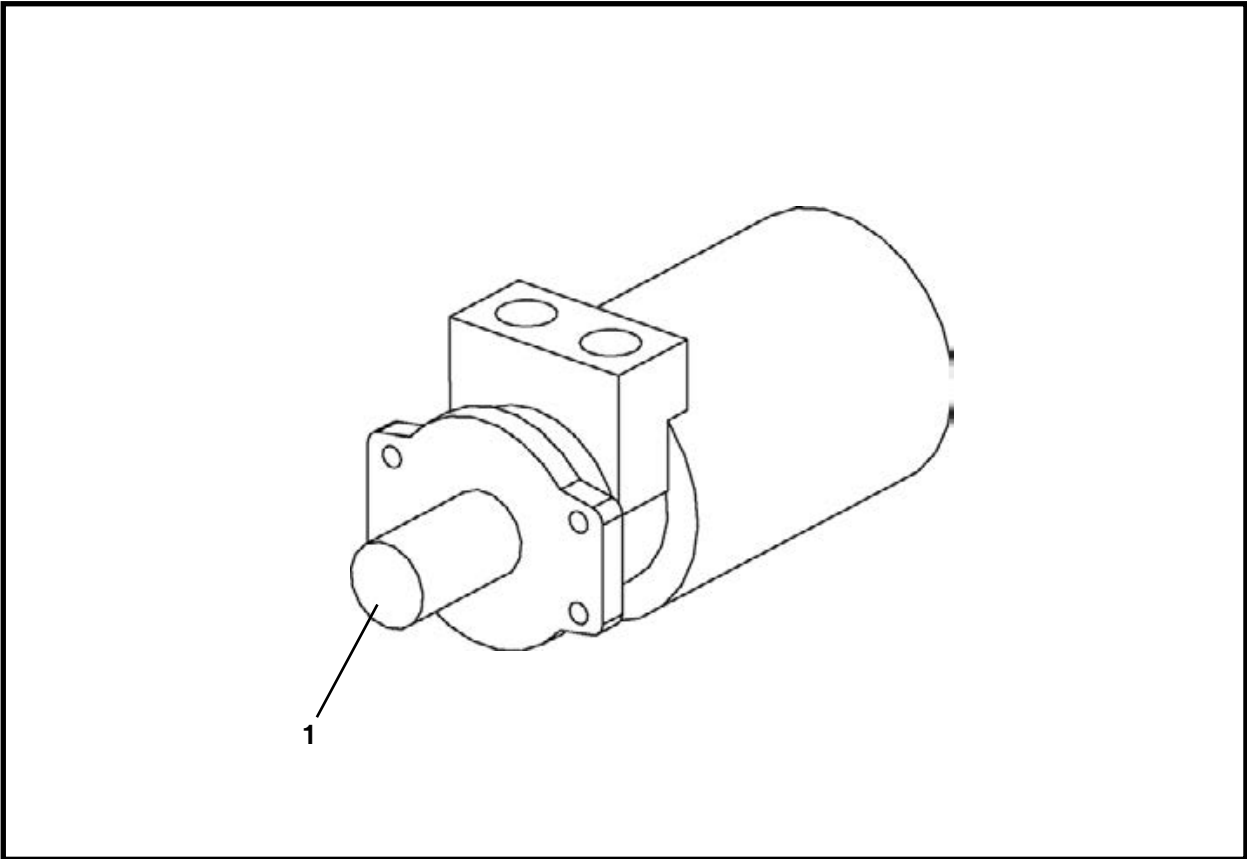
Note: Motor with two bolt mounting flange.

**120 SCREW CONVEYOR DRIVE MOTOR, P0304-109**  
**120EX SCREW CONVEYOR**



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

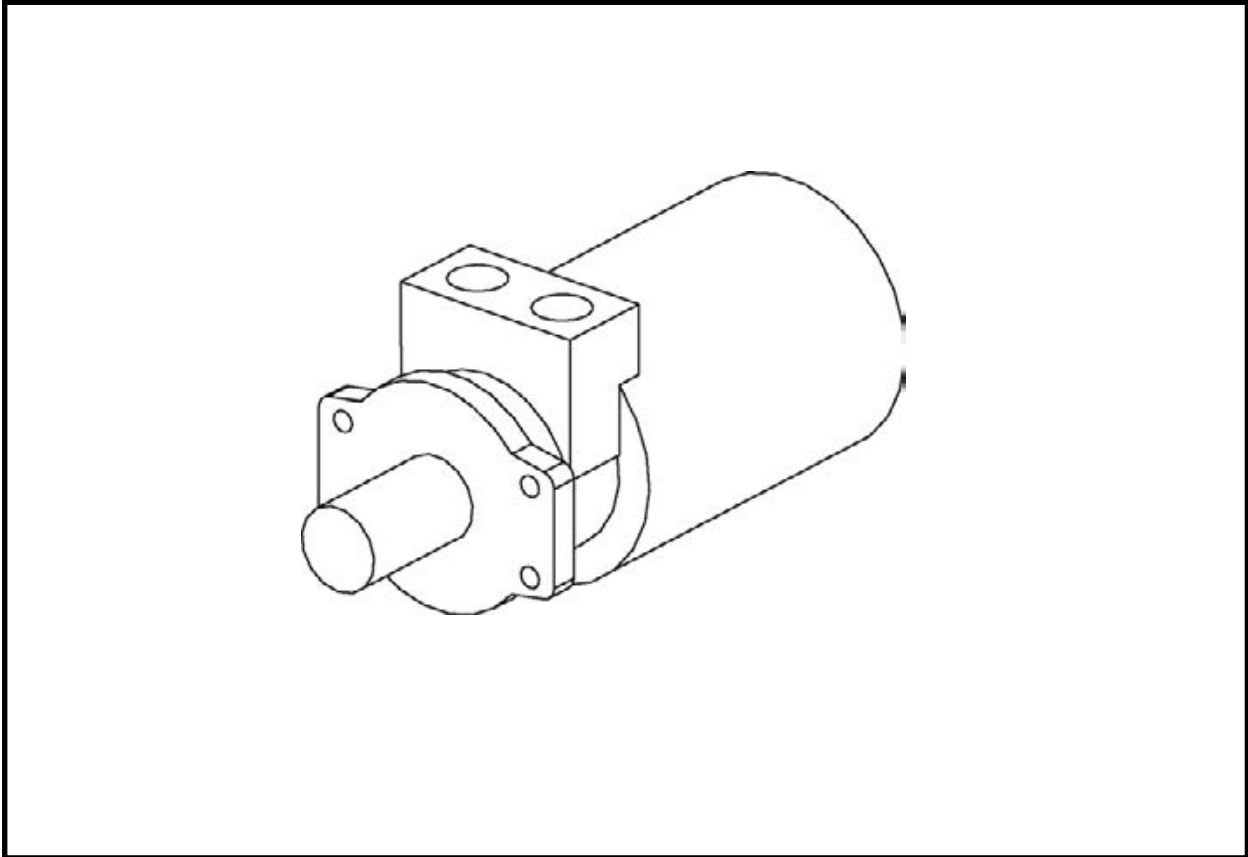
**140 / 160 SCREW CONVEYOR DRIVE MOTOR, P0304-145**  
**140EX / 160 (SN F09885F04 & Before) SCREW CONVEYOR**



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

**160 SCREW CONVEYOR DRIVE MOTOR, P0304-338**  
**160 (SN F09885F05 & After) SCREW CONVEYOR**



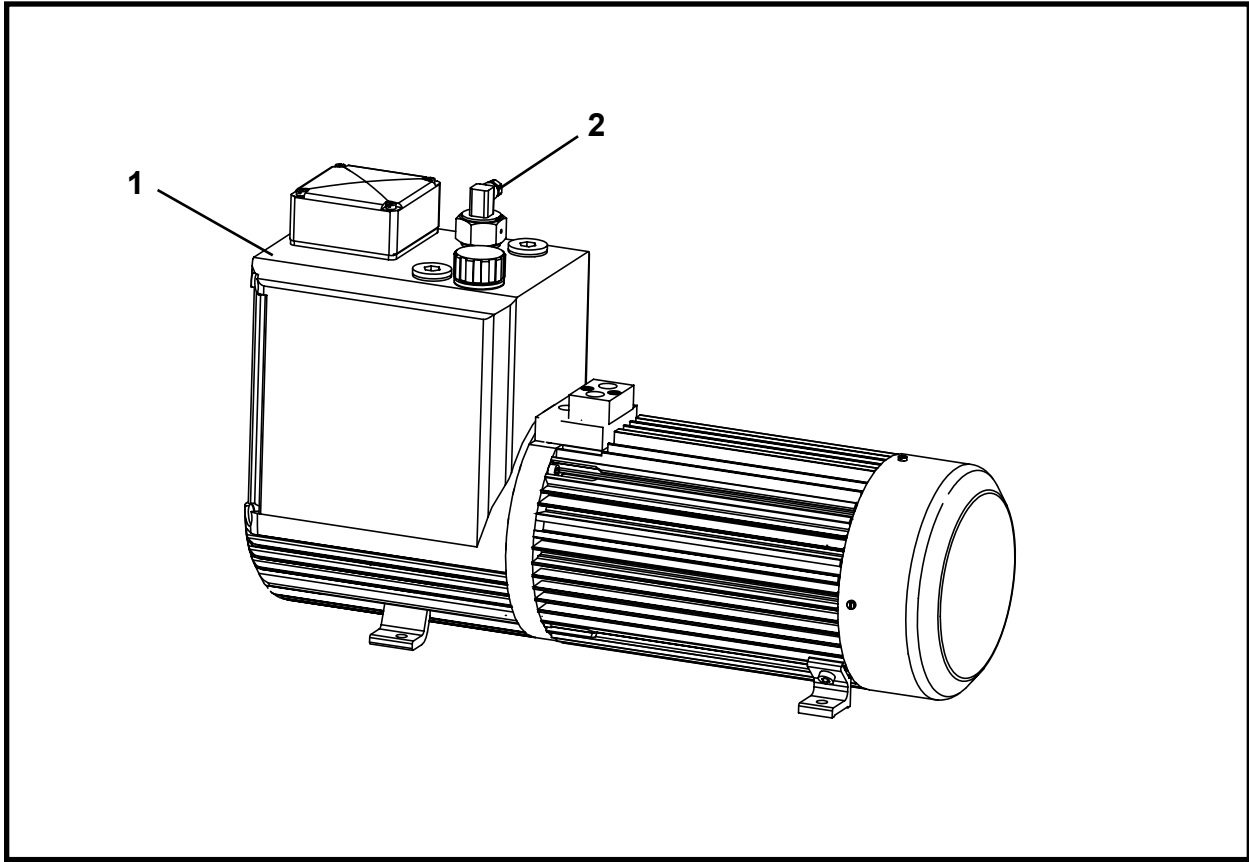
ITEM	QTY	PART NO.	DESCRIPTION
0	1	P0304-338	MOTOR, Screw Conveyor Drive



# Pumps

Scavenging Pump Assembly, 031705A ..... 2

## SCAVENGING PUMP ASSEMBLY, 031705A



ITEM	QTY	PART NO.	DESCRIPTION
0	1	031705A	SCAVENGING PUMP ASSEMBLY
1	1	P0303-367A	PUMP, Scavenging
2	1	P0303-367G	SWITCH, Float



# Cylinders

## **TBM**

### Steering Cylinder

Steering Cylinder Assembly (48SC-D, 420D), 021175A .....	2
Steering Cylinder Assembly (48SC-D, 420D), P0307-240 .....	3
Steering Cylinder Assembly (480D), 031075A .....	4
Steering Cylinder Assembly (480D), P0307-239 .....	5

### Conveyor Lift Cylinder

With NPT Fittings (48SC, 420, 480, 540 Series II), 002691A00 .....	6
With ORB Fittings (48SC, 420, 480, 540 Series II), 020300A .....	7

### Hydraulic Dirt Wing Cylinder

Hydraulic Dirt Wing Cylinder Assembly (420D), 010747A00 .....	8
Hydraulic Dirt Wing Cylinder Assembly (480D), 014603A00 .....	9

## **Attachments**

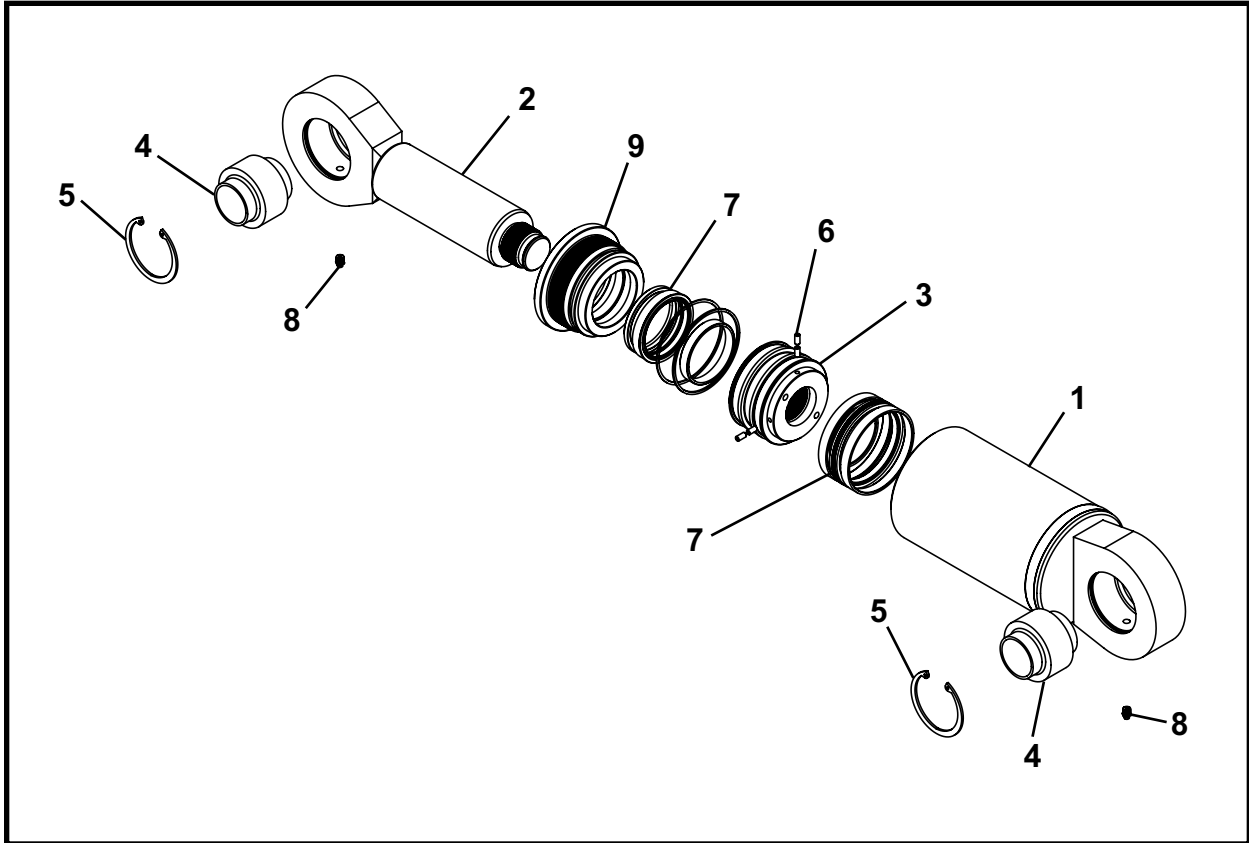
### Closed Face

Closed Face Cylinder Assembly (48SC-D), 015090A .....	10
Closed Face Cylinder Assembly (420D), 015085A .....	11
Closed Face Cylinder Assembly (480D), 015065A .....	12

## **Intermediate Jacking Station**

Intermediate Jacking Station Cylinder, F03531F02 .....	13
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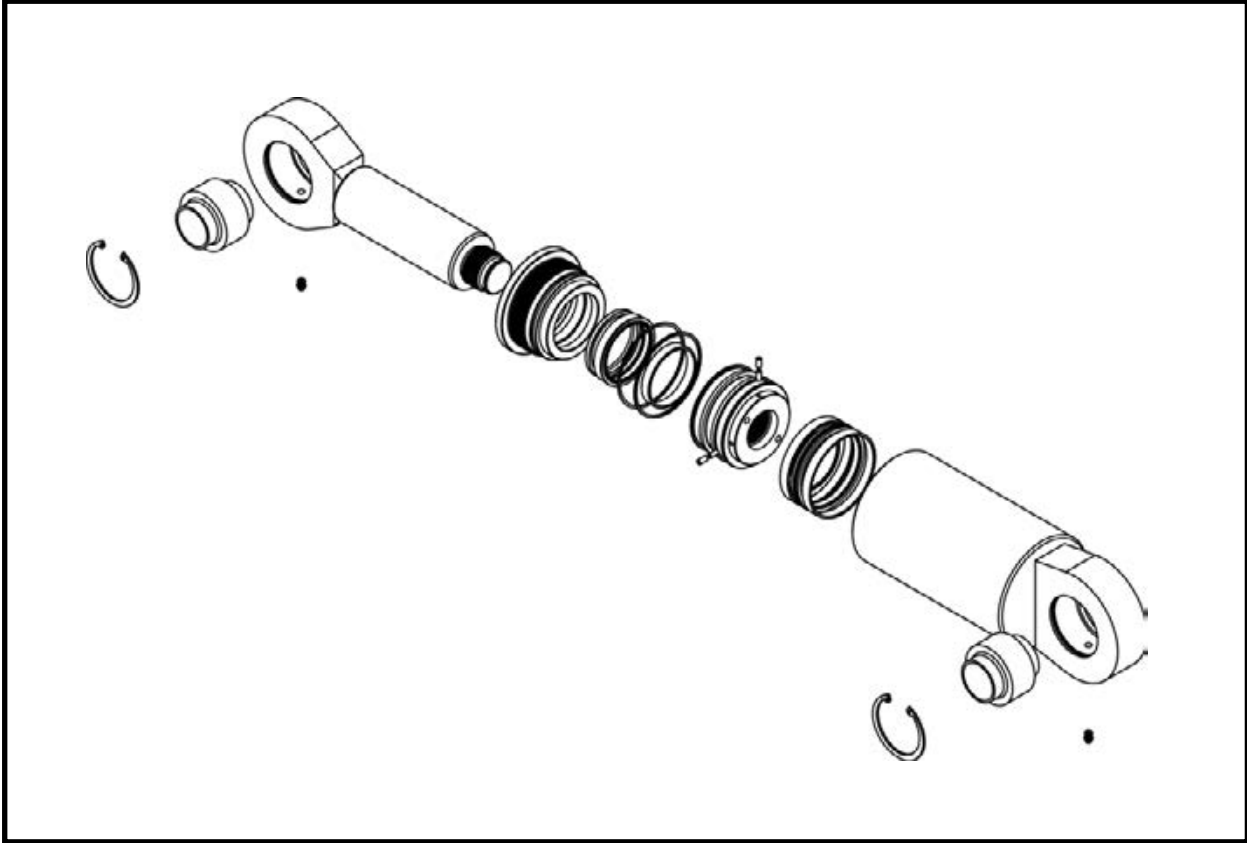
**STEERING CYLINDER ASSEMBLY, 021175A**  
**TBM 48SC-D - 420D**



ITEM	QTY	PART NO.	DESCRIPTION
0	1	021175A	ASSEMBLY, Steering Cylinder
1	1	021176A	BARREL
2	1	021177A	ROD
3	1	021179P	PISTON
4	2	P0065-269	BEARING, Spherical
5	2	P0077-059	RING, Retaining
6	4	P0033-04-008	SCREW, Socket Set Hex 1/4 UNC x .5
7	1	P0307-225	KIT, Seal
8	2	P0063-004	FITTING, Grease 1/8-NPT Straight
9	1	021178P	GLAND

Note: Cylinder 021175A (welded in three parts) is no longer available. If it is necessary to replace this cylinder, the cylinder must be replaced with P0307-240.

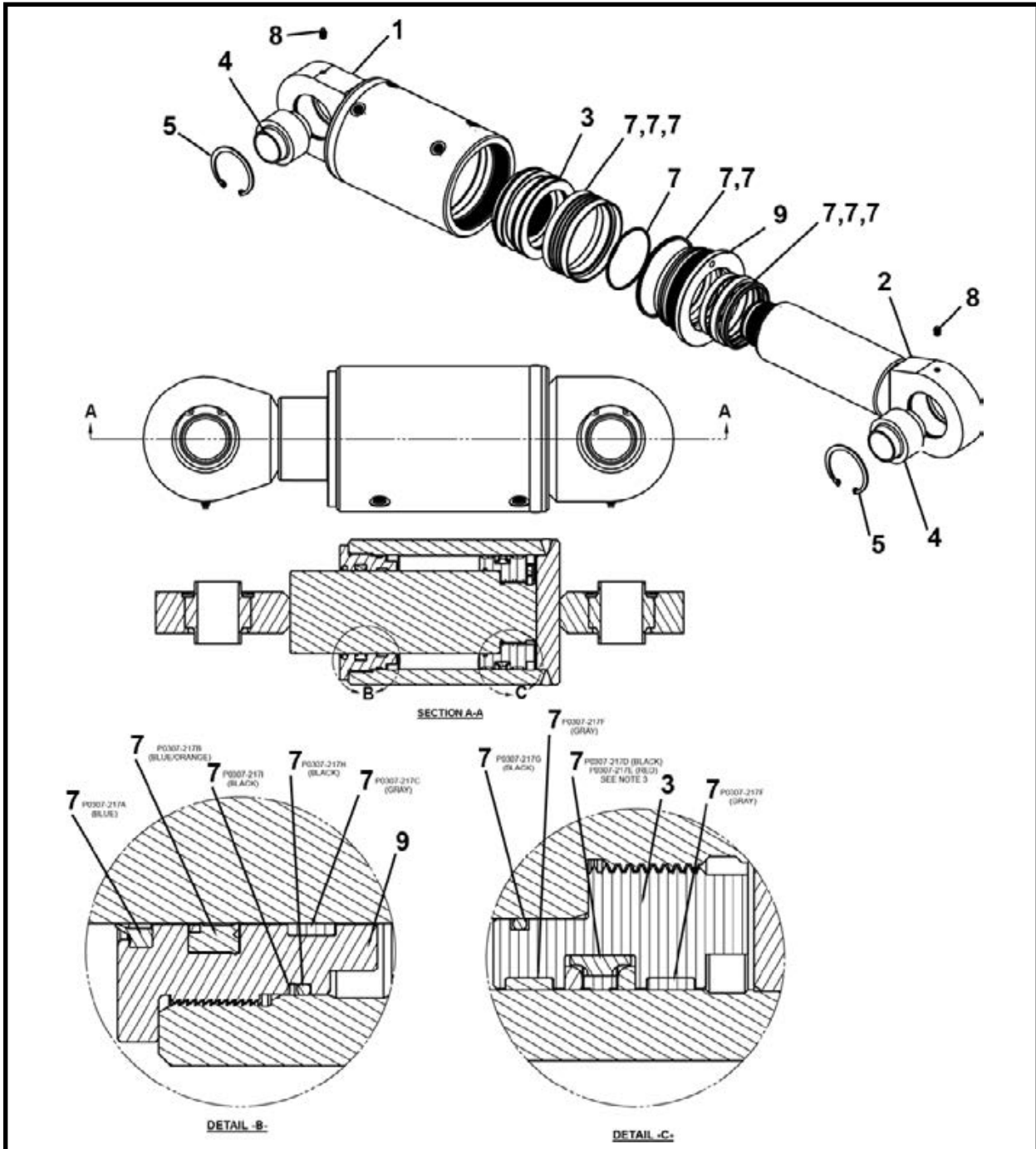
**STEERING CYLINDER ASSEMBLY, P0307-240**  
**TBM 48SC-D - 420D**



ITEM	QTY	PART NO.	DESCRIPTION
0	1	P0307-240	ASSEMBLY, Steering Cylinder
1	1	P0307-240A	KIT, Seal

Note: Cylinder with one piece barrel. The part number is stamped on the barrel. Current cylinder.

**STEERING CYLINDER ASSEMBLY, 031075A**  
TBM 480D



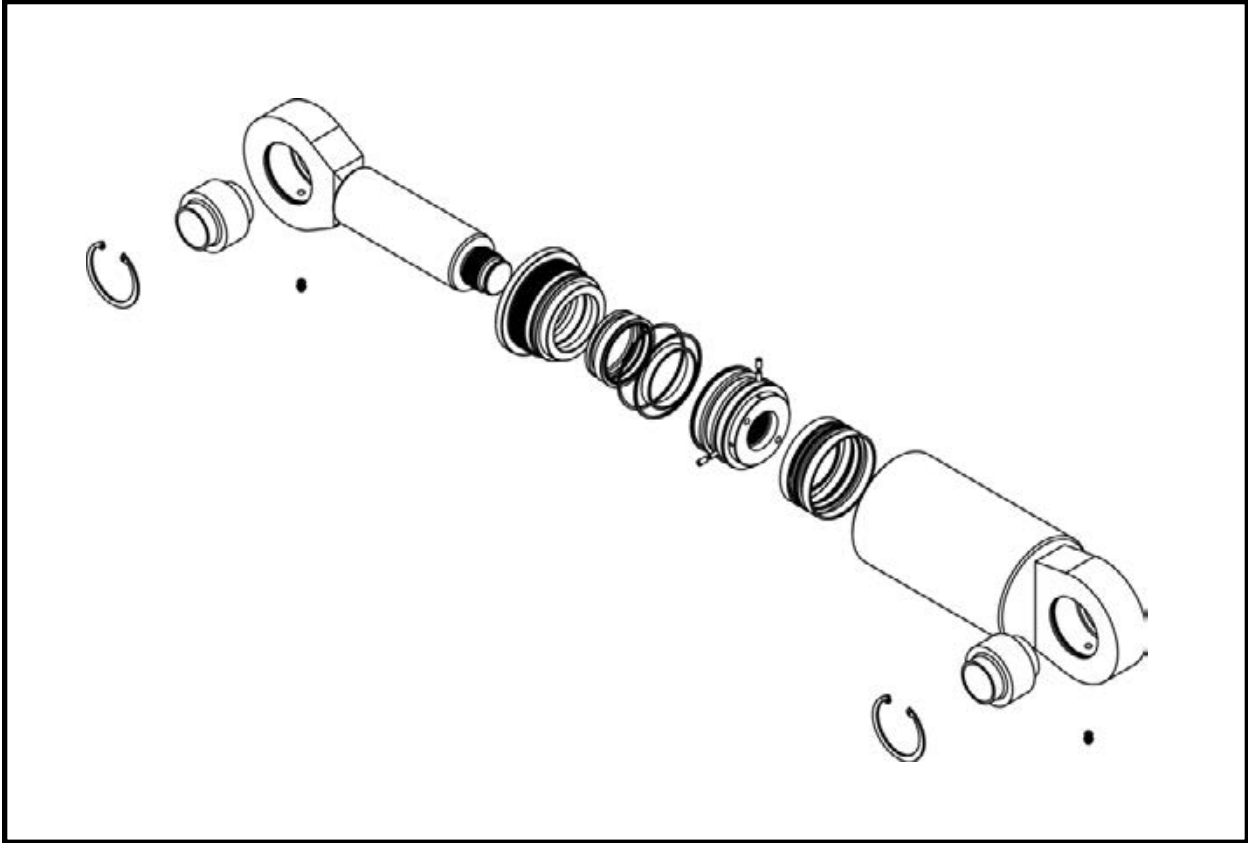
ITEM	QTY	PART NO.	DESCRIPTION
0	1	031075A	ASSEMBLY, Steering Cylinder
1	1	031076A	BARREL
2	1	023177A	ROD
3	1	023179P	PISTON
4	2	P0065-269	BEARING, Spherical
5	2	P0077-059	RING, Retaining
6	4	P0033-04-008	SCREW, Socket Set Hex 1/4 UNC x .5
7	1	P0307-217	KIT, Seal
8	2	P0063-004	FITTING, Grease 1/8-NPT Straight
9	1	023178P	GLAND

NOTES: 1. Torque and loc-tight item 6 (stack set screws)      2. Item 7 is contents of kit # P0307-217.

3. Discard tan seal and replace with red seal in kit.

Note: Cylinder 031075A (welded in three parts) is no longer available. If it is necessary to replace this cylinder, the cylinder must be replaced with P0307-239.

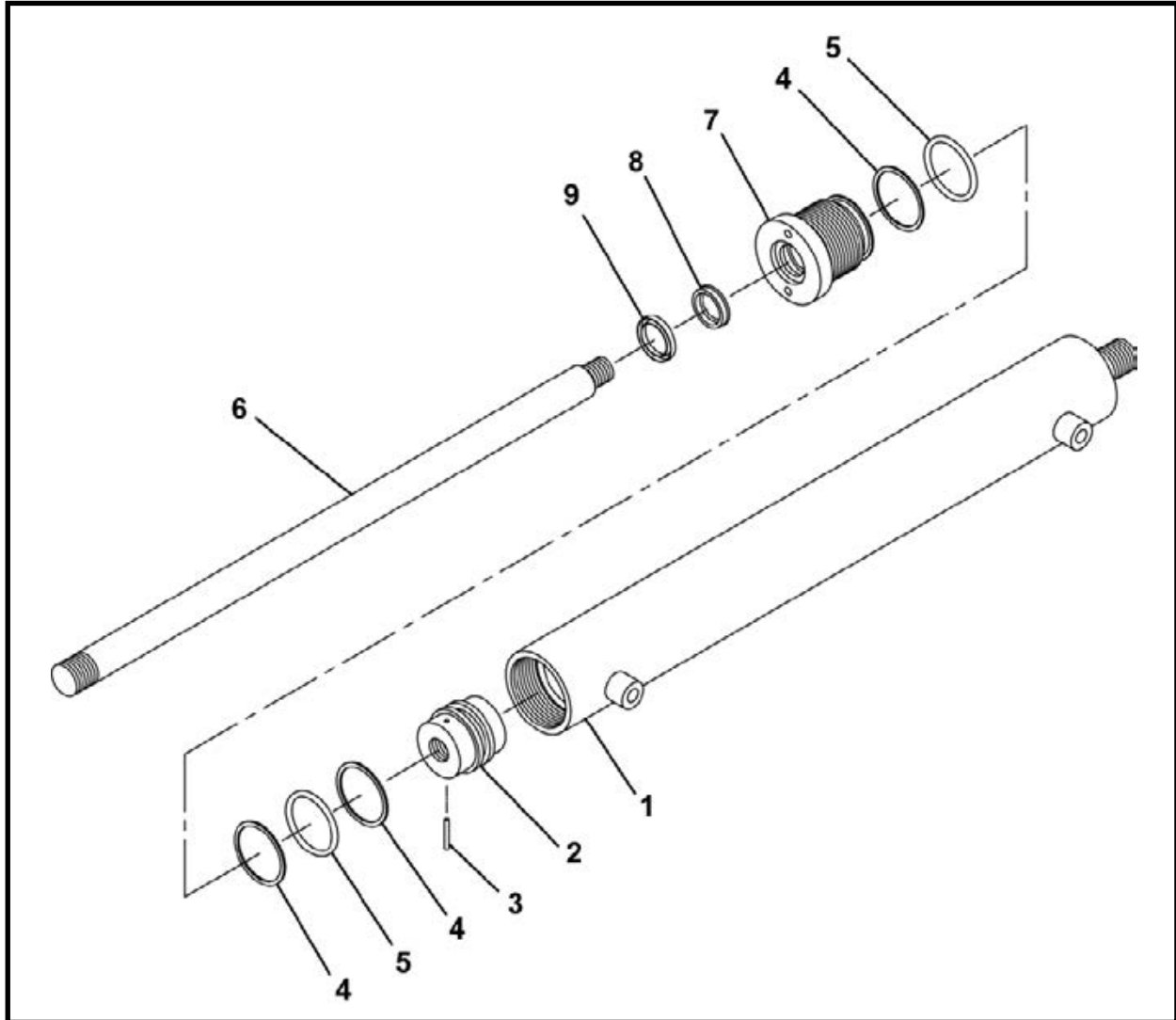
**STEERING CYLINDER ASSEMBLY, P0307-239  
TBM 480D**



ITEM	QTY	PART NO.	DESCRIPTION
0	1	P0307-239	ASSEMBLY, Steering Cylinder
1	1	P0307-239A	KIT, Seal

Note: Cylinder with one piece barrel. The part number is stamped on the barrel. Current cylinder.

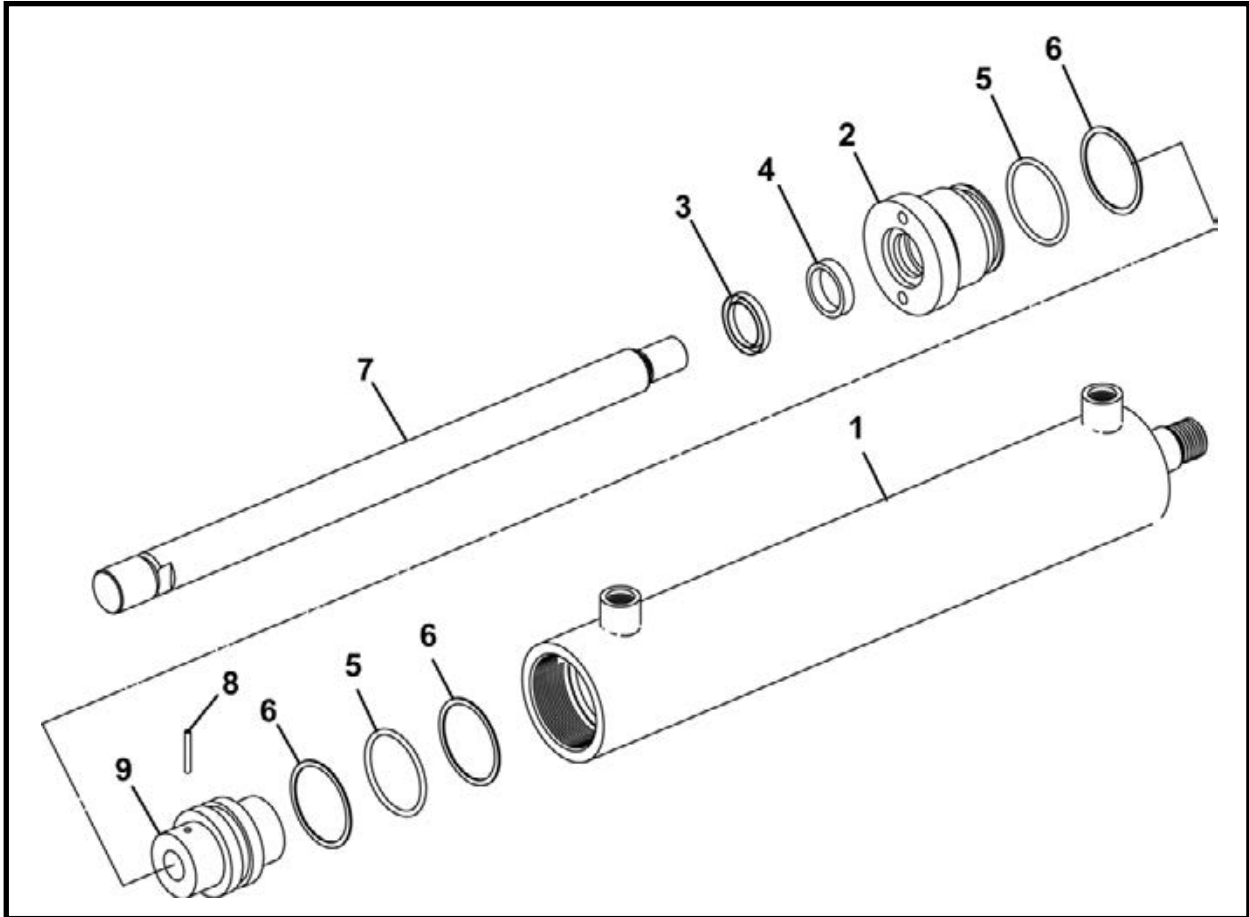
**CONVEYOR LIFT CYLINDER WITH NPT FITTINGS, 002691A00**  
**TBM 48SC-D - 420D - 480D**



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

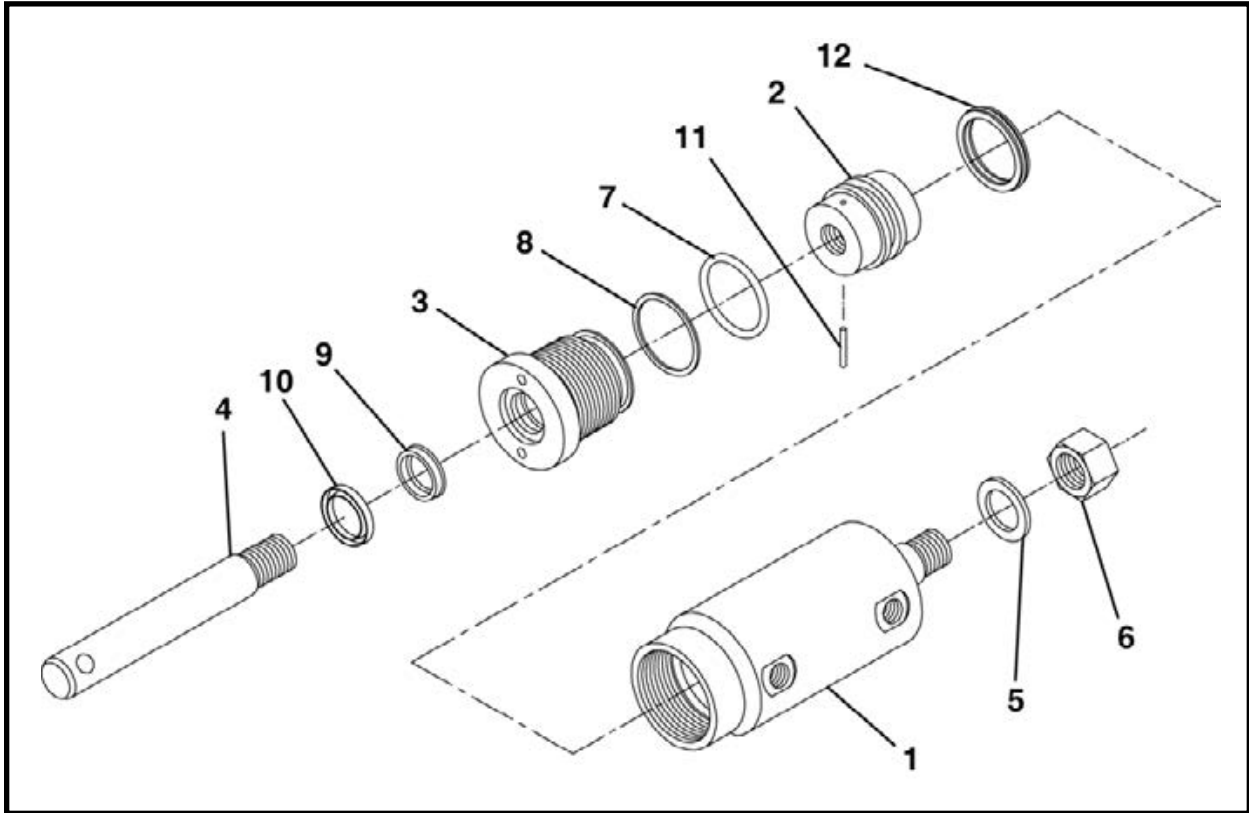
NOTE: Gland must be put on rod from piston end only.

**CONVEYOR LIFT CYLINDER WITH ORB FITTINGS, 020300A**  
**TBM 48SC-D - 420D - 480D**



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

**DIRT WING CYLINDER ASSEMBLY, 010747A00**  
**HYDRAULIC DIRT WING CYLINDERS**  
**TBM 420D**

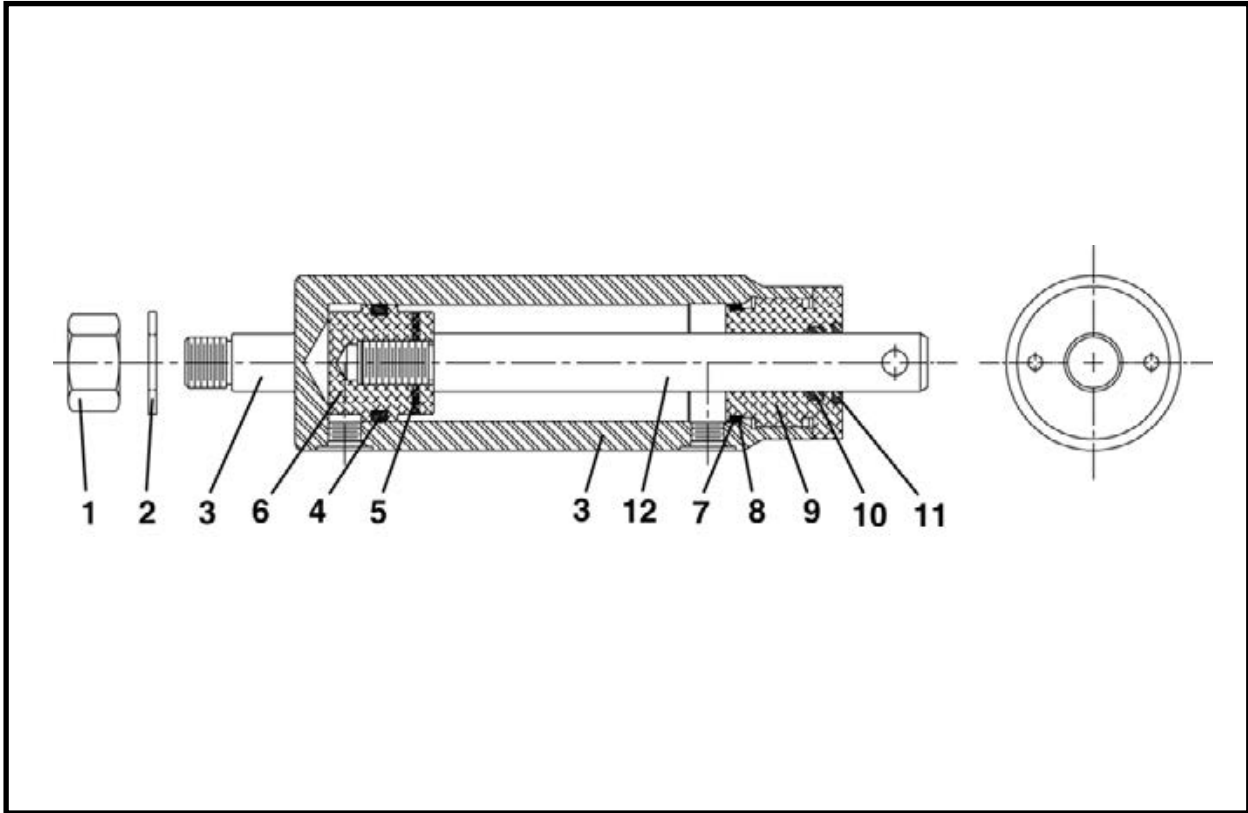


ITEM	QTY	PART NO.	DESCRIPTION
0	1	010747A00	ASSEMBLY, Advance/Dirt Wing Cylinder
1	1	010865P00	BARREL, Cylinder
2	1	010864P00	PISTON
3	1	001245P00	GLAND
4	1	001243P01	SHAFT
5	1	P0040-014	WASHER, 7/8
6	1	P0004-14-000	NUT, 7/8 UNF
7*	1	P0085-224	ORING
8*	1	P0084-224	RING, Back Up
9*	1	P0086-001	POLYSEAL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

\* Included in item 13, 010748A00 Seal Kit.

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

**DIRT WING CYLINDER ASSEMBLY, 014603A00**  
**HYDRAULIC DIRT WING CYLINDERS**  
**TBM 480D**



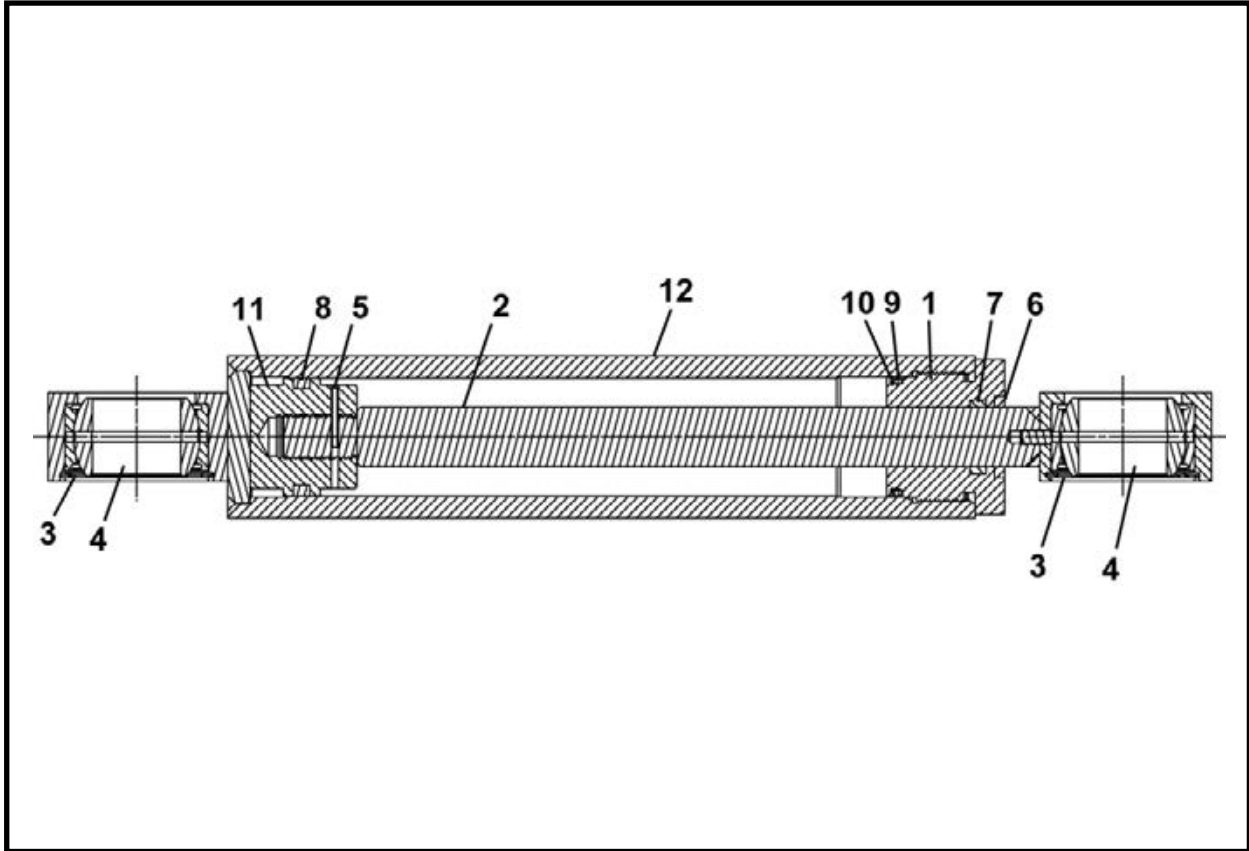
ITEM	QTY	PART NO.	DESCRIPTION
0	1	014603A00	ASSEMBLY, Hydraulic Dirt Wing Cylinder
1	1	P0004-14-000	NUT, 7/8 UNF
2	1	P0040-014	WASHER, 7/8
3	1	014605P00	BARREL, Cylinder
4*	1	P0085-C2	SEAL
5	1	P0049-042	PIN, Roll
6	1	010864P00	PISTON
7*	1	P0085-224	ORING
8*	1	P0084-224	RING, Back Up
9	1	001245P00	GLAND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

\* Included in item 13, 010748A00 Seal Kit.

# CLOSED FACE CYLINDER ASSEMBLY, 015090A

CLOSED FACE

TBM 48SC-D



ITEM	QTY	PART NO.	DESCRIPTION
0	1	015090A	ASSEMBLY, Cylinder
1	1	001245P00	GLAND
2	1	015093A	SHAFT
3	2	P0076-050	RING, Snap
4	2	P0065-086	BEARING
5	1	P0049-042	PIN, Spring
6*	1	**P0080-001	RETAINER, Seal
7*	1	P0086-001	POLYSEAL
8*	1	P0085-C2	RING, Seal
9*	1	P0085-224	ORING
10*	1	P0084-224	RING, Back Up
11	1	010864P00	PISTON
12	1	015091A	BARREL

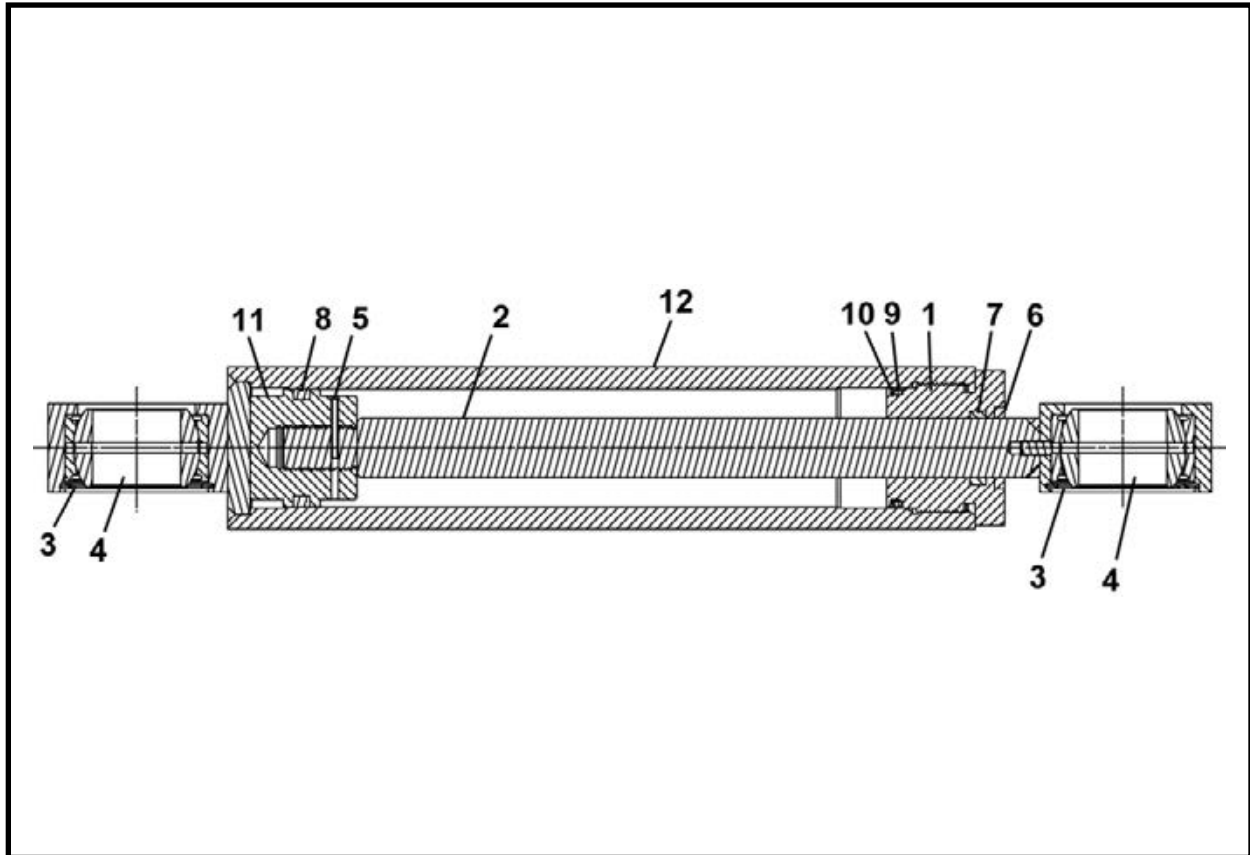
\* Included in 010748A00, Seal Kit

\*\* Installed with "cupped" side pointing toward rod end.

# CLOSED FACE CYLINDER ASSEMBLY, 015085A

CLOSED FACE

TBM 420D



ITEM	QTY	PART NO.	DESCRIPTION
0	1	015085A	ASSEMBLY, Cylinder
1	1	001245P00	GLAND
2	1	015088A	SHAFT
3	2	P0076-050	RING, Snap
4	2	P0065-086	BEARING
5	1	P0049-042	PIN, Spring
6*	1	**P0080-001	RETAINER, Seal
7*	1	P0086-001	POLYSEAL
8*	1	P0085-C2	RING, Seal
9*	1	P0085-224	ORING
10*	1	P0084-224	RING, Back Up
11	1	010864P00	PISTON
12	1	015086A	BARREL

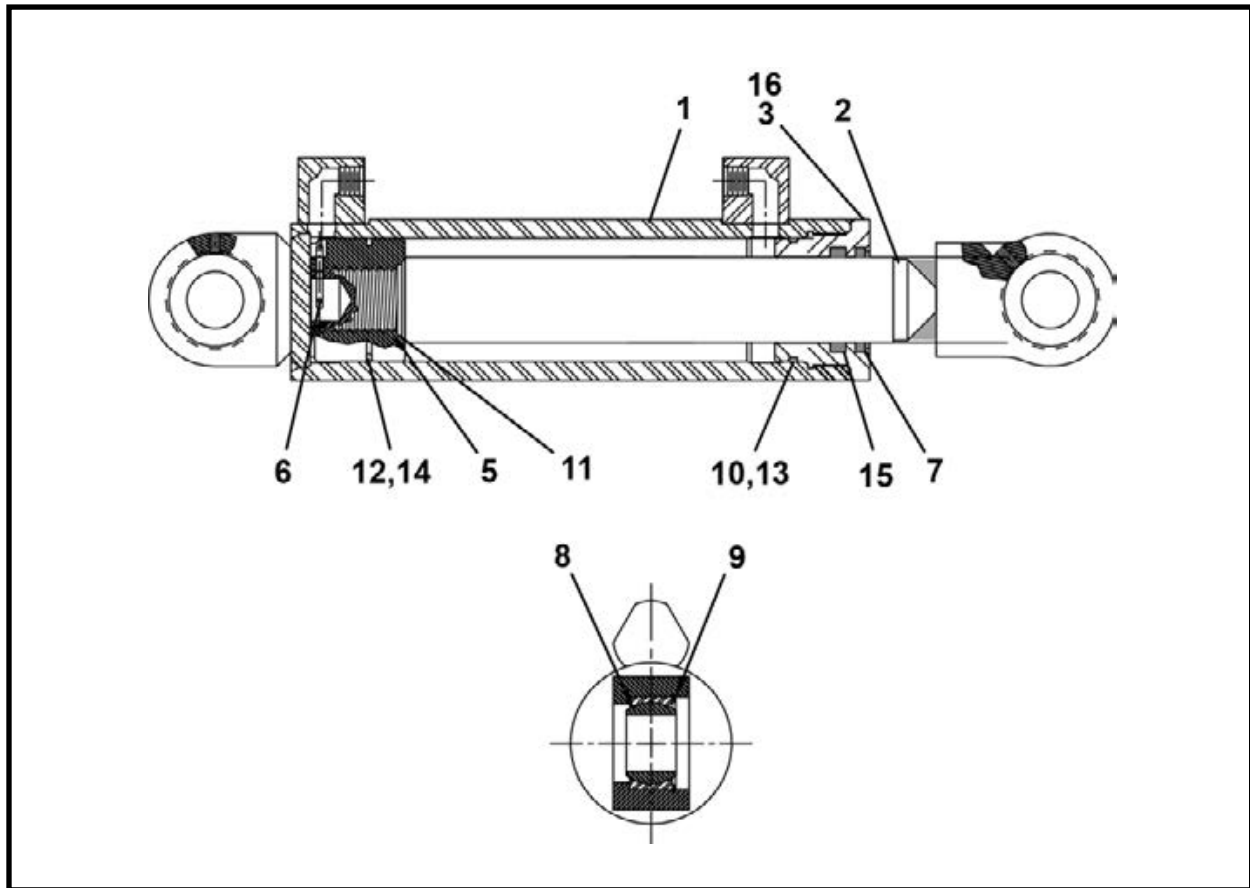
\* Included in 010748A00, Seal Kit

\*\* Installed with "cupped" side pointing toward rod end.

# CLOSED FACE CYLINDER ASSEMBLY, 015065A

CLOSED FACE

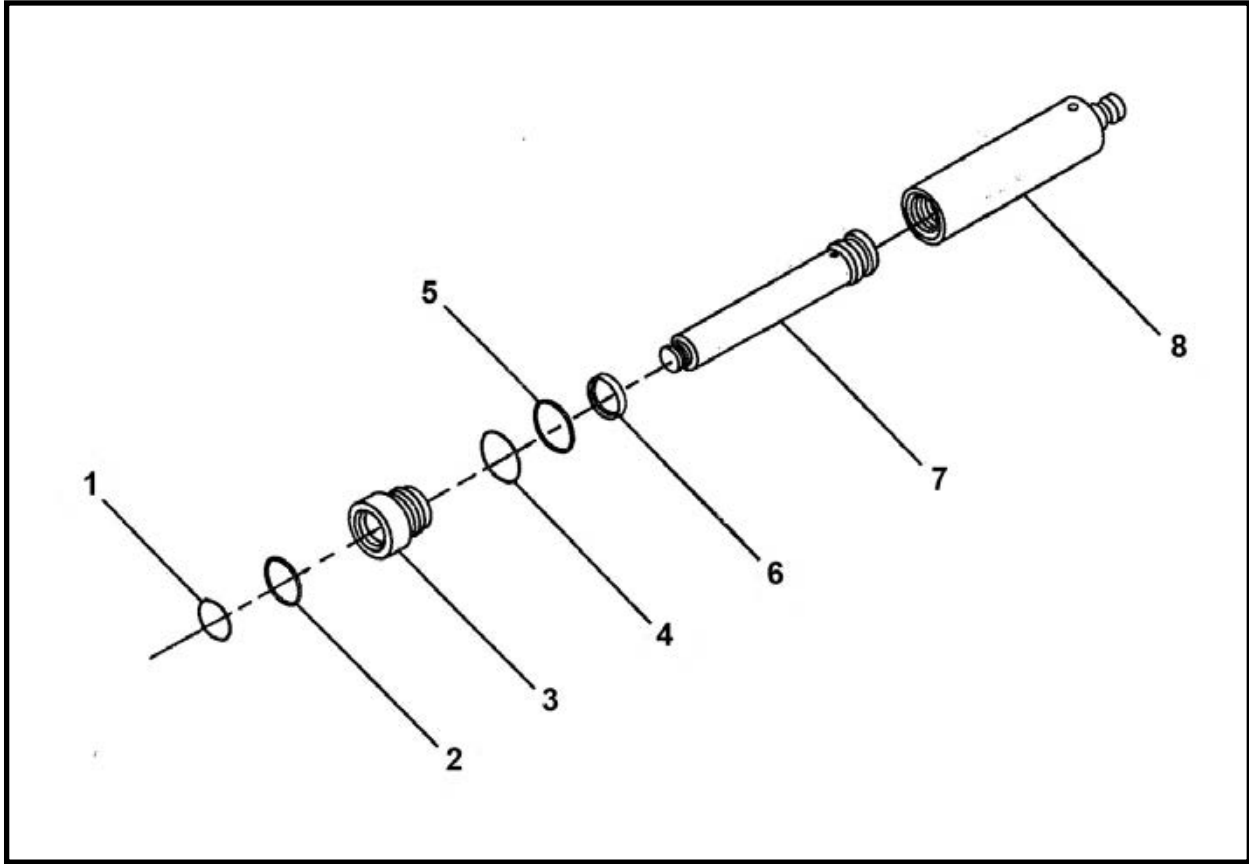
TBM 480D



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
16	2	P033-04-008	SCREW, Socket Set 1/4 UNC x .5

\* Included in item 4, 009918A00, Seal Kit

## IJS CYLINDER ASSEMBLY, F03531F02



ITEM	QTY	PART NO.	DESCRIPTION
0	1	F03531F02	CYLINDER ASSEMBLY, 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.

**NOTES**



# Miscellaneous / Conveyors

## Belt Conveyors

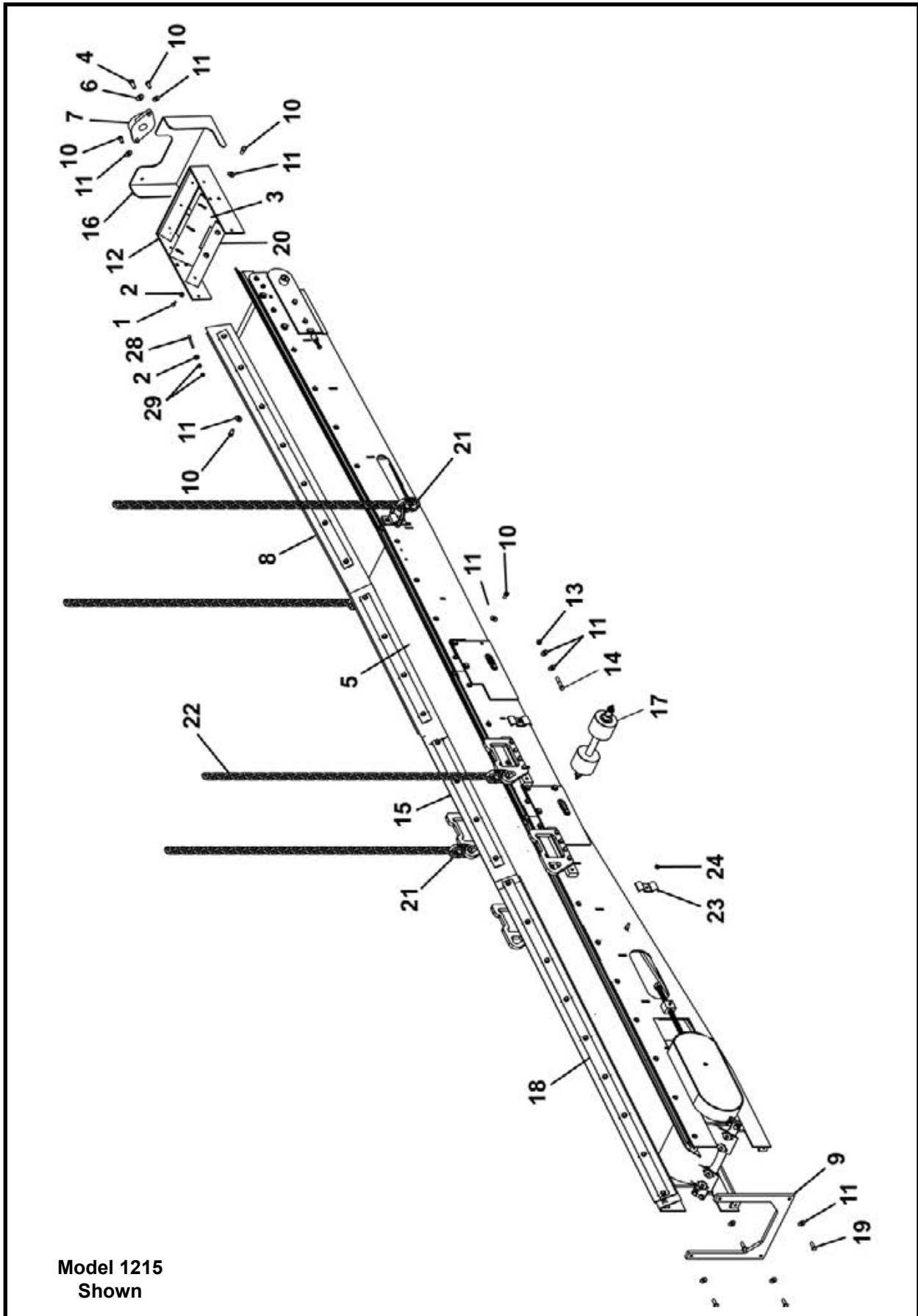
Belt Conveyor, 1015, 1215, 1615 .....	2
Feed Frame Assembly .....	5
Feed Frame Spoils Guide Assembly - Left Front, 027137A00 .....	6
Feed Frame Spoils Guide Assembly - Right Front, 027221A00 .....	7
Front Roller Assembly.....	8
Feed Frame Spoils Guide Assembly - Left Rear, 027265A00 .....	9
Feed Frame Spoils Guide Assembly - Right Rear, 027266A00 .....	10
Extension Frame Assembly .....	11
Short Spoils Guide Assembly - Front, 027134A00 .....	12
Short Spoils Guide Assembly - Rear, 027267A00 .....	13
Idler Roller Assembly .....	14
Drive Frame Assembly .....	15
Drive Frame Spoils Guide Assembly - Front, 027131A00 .....	16
Drive Frame Spoils Guide Assembly - Rear, 027219A00 .....	17
Drive Motor & Roller Assembly	
1015 SN 01-07, 1215 SN 01 - 28, 1615 SN 01 - 38 .....	18
1015 SN 08 & After, 1215 SN 29 & After, 1615 SN 39 & After .....	20

## Screw Conveyors

Screw Conveyor 120EX, F32070F .....	22
Motor Mount Assembly, 023543A .....	23
Screw Conveyor 140EX, F20645F00 .....	24
Screw Conveyor 160, F09885F00	
SN F09885F04 & Before .....	26
SN F09885F05 & After .....	28

<b>Intermediate Jacking Station</b> .....	31
Starter Hose, High Pressure 30 Ft, F09802F01 .....	32
Starter Hose, Low Pressure 30 Ft, F09803F01 .....	33
IJS Tunnel Line 10 Ft 6 In., F09800F00 .....	34
IJS Tee Connector, F09804F00 .....	35
IJS Valve (With Cable), F04908F01 .....	36
IJS Starter Connection, F09805F00 .....	38
IJS Coupler Assembly, 005133A02 .....	39
IJS Segment Assembly .....	40
IJS Cylinder, F03531F02 .....	41
IJS Hydraulic Schematic .....	42

**BELT CONVEYOR**  
1015 - 1215 - 1615 CONVEYORS



**BELT CONVEYOR**  
**1015 - 1215 - 1615 CONVEYORS**

ITEM	QTY	1015 PART NO.	1215 PART NO.	1615 PART NO.	DESCRIPTION
0	1	F27200F00	F27350F00	F27250F00	CONVEYOR, Belt
1	3	P0001-04-003	P0001-04-003	P0001-04-003	BOLT, Hex 1/4 UNC x .75
2	5	P0040-004	P0040-004	P0040-004	WASHER, Hardened Flat 1/4
3	1	027239P00	027389P00	027289P00	SCRAPER, External Belt
4	2	P0001-07-004	P0001-07-004	P0001-07-004	BOLT, Hex 7/16 UNC x 1
5	1	P0067-044	-	-	BELTING, 10" x 29' 8"
5	1	-	P0067-048	-	BELTING, 12" X 29' 8"
5	1	-	-	P0067-041	BELTING, 16" X 29' 8"
6	2	P0040-007	P0040-007	P0040-007	WASHER, Hardened Flat 7/16
7	1	P0065-017	P0065-017	P0065-017	BEARING
8*	1	027213A00	027363A00	027263A00	FEED FRAME ASSEMBLY
9	1	027236P00	027386A00	027286P00	SUPPORT, Drive Frame Free End
10	24	P0001-06-003	P0001-06-003	P0001-06-003	BOLT, Hex 3/8-16 UNC x .75
11	36	P0040-006	P0040-006	P0040-006	WASHER, Lock 3/8
12	1	027209A00	027359A00	027259A00	MOUNT, Nose Bearing
13	4	P0003-06-000	P0003-06-000	P0003-06-000	NUT, Hex 3/8 UNC
14	4	P0001-06-008	P0001-06-008	P0001-06-008	BOLT, Hex 3/8 UNC x 2
15*	1	027214A00	027364A00	027264A00	EXTENSION FRAME ASSEMBLY
16	1	027208A00	027358A00	027258A00	GUARD, Dirt
17*	2	027211A00	027361A00	027261A00	ASSEMBLY, Idler Roller
18*	1	027212A00	027362A00	027262A00	ASSEMBLY, Drive Frame
19	4	P0001-06-004	P0001-06-004	P0001-06-004	BOLT, Hex 3/8 UNC x 1
20	1	027142P	027143P	027144P	PLATE, Feed Belt Retainer
21	4	P0098-009	-	-	LINK, 9/32 Hammerloc
21	4	-	P0098-010	P0098-010	LINK, 3/8 Hammerloc
22	4	P0094-009-030	-	-	CHAIN, 5/16 x 30
22	4	-	P0094-003-030	P0094-003-030	CHAIN, 3/8 x 30
23	2	002269P01	002269P01	002269P01	CLAMP, Line
24	2	P0003-05-000	P0003-05-000	P0003-05-000	NUT, Hex 5/16
25**	2	A10320A-132	A10320A-132	A10320A-132	HOSE ASSEMBLY 1/2 x 132
26**	1	P0100-004A	P0100-004A	P0100-004A	COUPLER, Female
27**	1	P0100-004B	P0100-004B	P0100-004B	COUPLER, Male
28	2	P0001-04-010	P0001-04-010	P0001-04-010	BOLT, Hex 1/4 UNC x 2.5
29	4	P0003-04-000	P0003-04-000	P0003-04-000	NUT, 1/4
30	1	1255-018	1255-018	1255-018	KIT, Decal Belt Conveyor

\* Refer to this section for parts information.

\*\* Not Shown

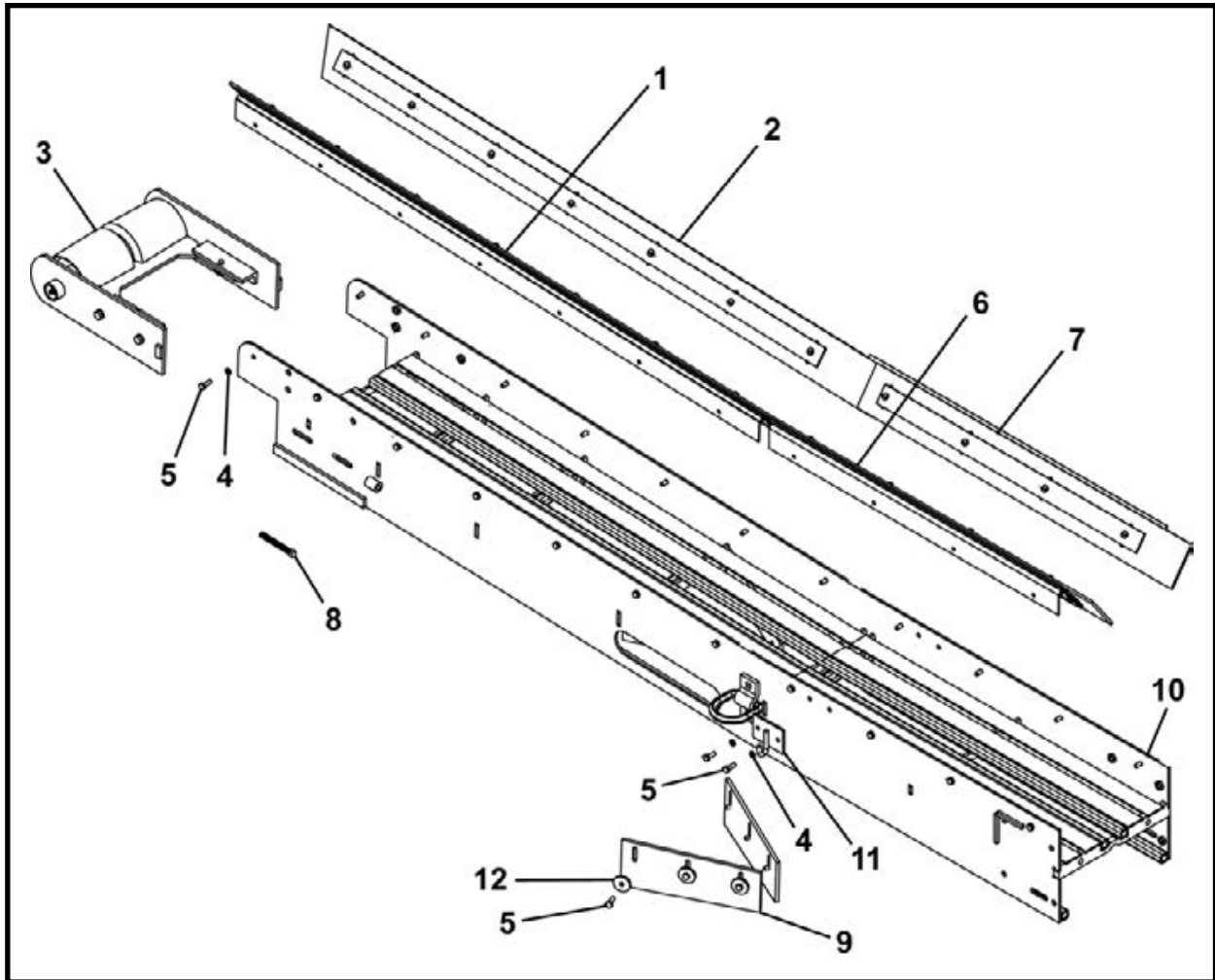
**NOTE:**

1. For 1013 Belt Conveyor (027220A00), the parts are the same as the 1015 conveyor with the two following exceptions: item 6, Belting is P0067-003 (10" x 24'8") with no extension frame assembly item 15.

2. For 1213 Belt Conveyor (027370A00), the parts are the same as the 1215 conveyor with the two following exceptions: item 6, Belting is P0067-009 (12" x 24'8") with no extension frame assembly item 15.

## **NOTES**

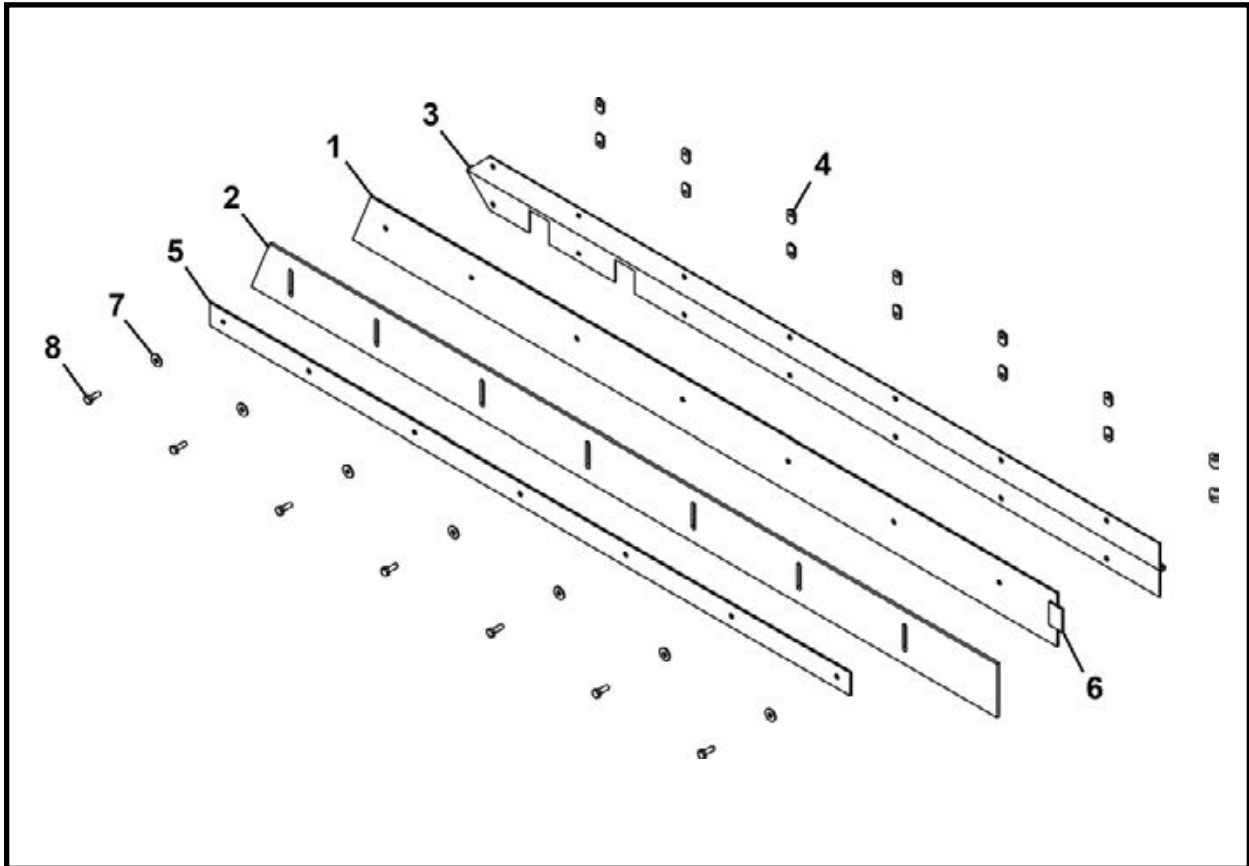
**FEED FRAME ASSEMBLY**  
**1015 - 1215 - 1615 BELT CONVEYORS**



ITEM	QTY	1015 PART NO.	1215 PART NO.	1615 PART NO.	DESCRIPTION
0	1	027213A00	027363A00	027263A00	ASSEMBLY, Feed Frame
1*	1	027137A00	027137A00	027137A00	GUIDE, Feed Frame Spoils - Left Front
2*	1	027221A00	027221A00	027221A00	GUIDE, Feed Frame Spoils - Right Front
3*	1	027207A00	027357A00	027257A00	FRONT ROLLER ASSEMBLY
4	24	P0040-004	P0040-004	P0040-004	WASHER, Hardened Flat 1/4
5	30	P0001-04-003	P0001-04-003	P0001-04-003	BOLT, Hex 1/4 UNC x .75
6*	1	027265A00	027265A00	027265A00	GUIDE, Feed Frame Spoils - Left Rear
7*	1	027266A00	027266A00	027266A00	GUIDE, Feed Frame Spoils - Right Rear
8	2	P0034-06-012	P0034-06-012	P0034-06-012	SCREW, Square Head Set 3/8 UNC x 3
9	2	027246P00	027396P00	027296P00	BELTING, Inner Belt Scraper
10	1	027202A00	027352A00	027252A00	FRAME, Feed (Includes items 10a-10c)
10a	2	001496P00	001496P00	001496P00	ROD, Adjustment
10b	14	P0007-06-000	P0007-06-000	P0011-006C	NUT, Jam/Weld 3/8 UNC
10c	2	P0079-003	P0079-003	P0079-003	D-RING, 1/2
11	1	005436A00	005436A00	005436A00	PLATE, Hook
12	6	002624P00	002624P00	002624P00	WASHER, Dirt Paddle

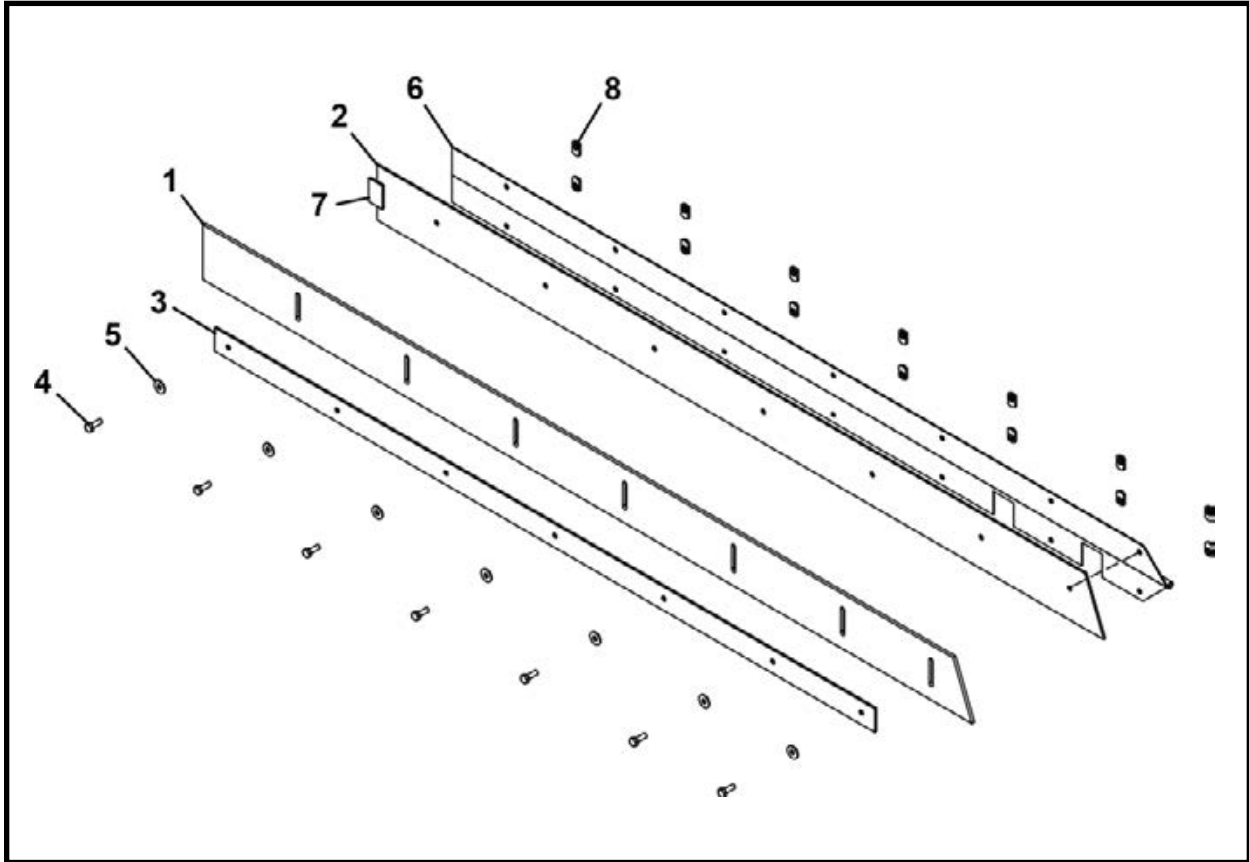
\* Refer to this section for parts information.

**FEED FRAME SPOILS GUIDE ASSEMBLY - LEFT FRONT, 027137A00**  
**1015 - 1215 - 1615 BELT CONVEYORS**



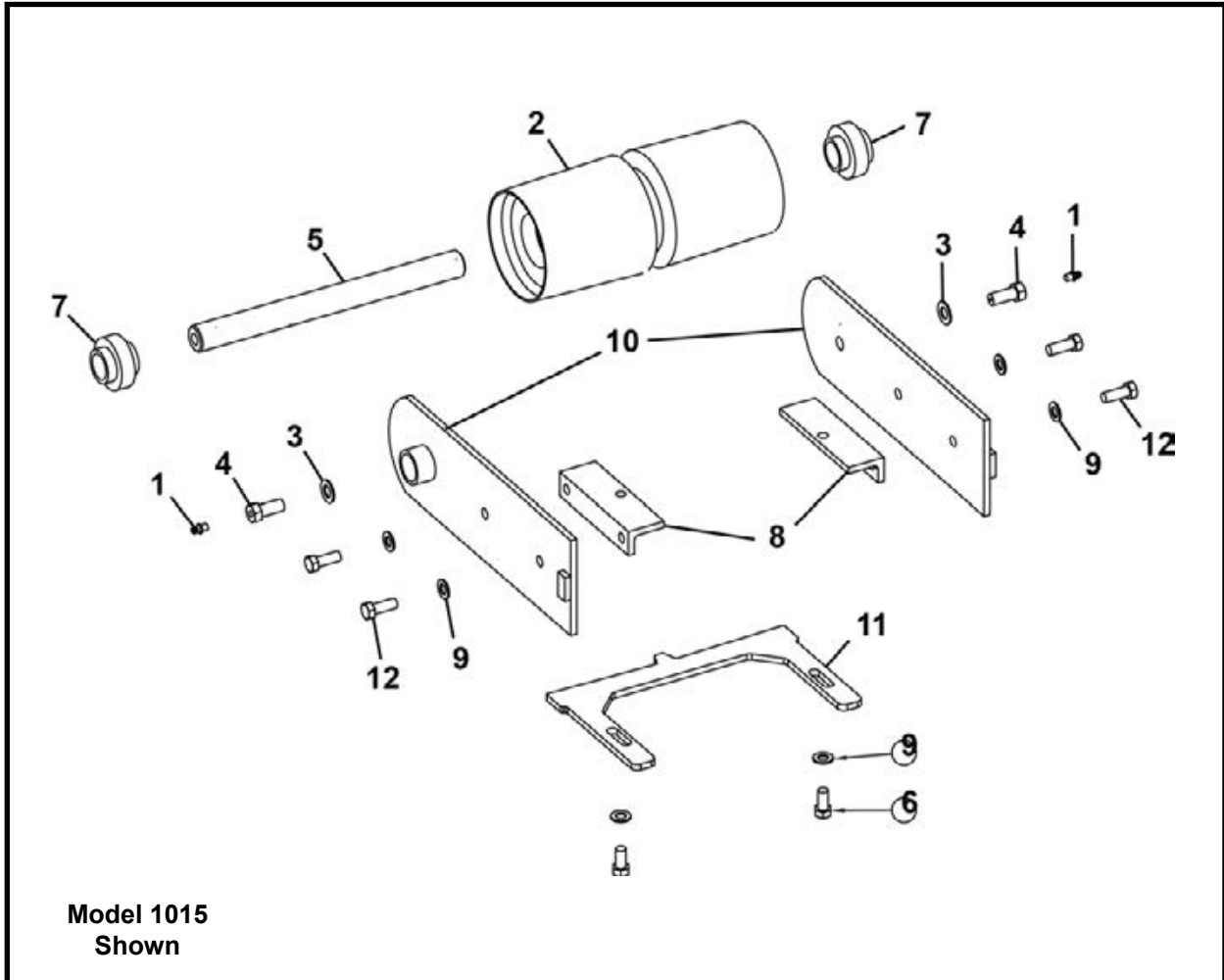
ITEM	QTY	PART NO.	DESCRIPTION
0	1	027137A00	ASSEMBLY, Feed Frame Spoils Guide - Left Front
1	1	027139P00	SUPPORT BAR, Feed Frame Spoils
2	1	027140P00	STRIP, Wear, Feed Frame Spoils
3	1	027138P00	HINGE, Feed Frame Spoils
4	14	P0011-004B	NUT, Weld 1/4 UNC
5	1	027248P00	BRACKET, Feed Frame Wear Strip
6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

**FEED FRAME SPOILS GUIDE ASSEMBLY - RIGHT FRONT, 027221A00**  
**1015 - 1215 - 1615 BELT CONVEYORS**



ITEM	QTY	PART NO.	DESCRIPTION
0	1	027221A00	ASSEMBLY, Feed Frame Spoils Guide - 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, Hex 1/4 UNC x .75
5	7	P0040-004	WASHER, Lock 1/4
6	1	027156P	HINGE, Feed Frame Spoils
7	1	027216P00	TAB, Feed Frame Support Bar
8	14	P0011-004B	NUT, Weld 1/4 UNC

**FRONT ROLLER ASSEMBLY**  
**1015 - 1215 - 1615 BELT CONVEYORS**

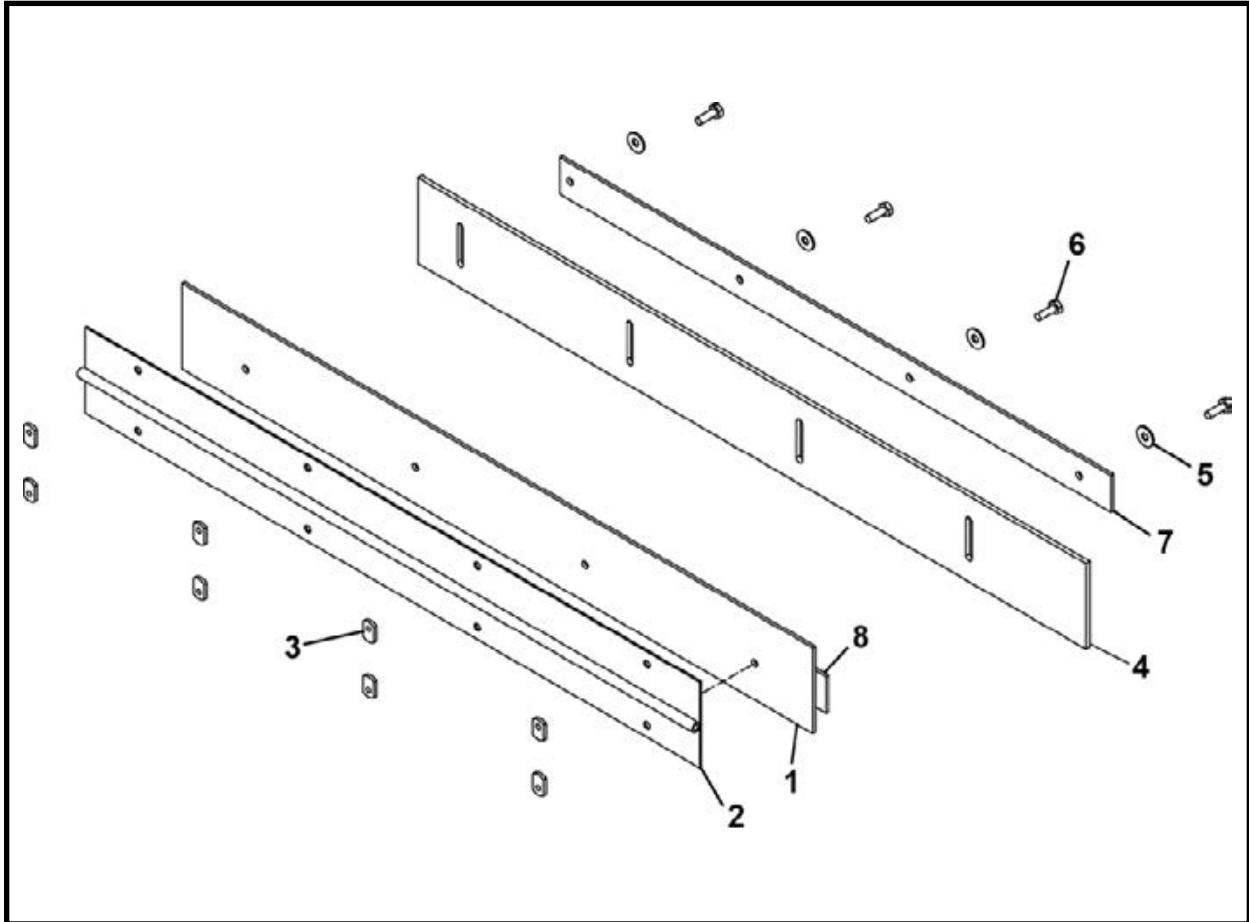


ITEM	QTY	1015 PART NO.	1215 PART NO.	1615 PART NO.	DESCRIPTION
0	1	027207A00	027357A00	027257A00	FRONT ROLLER ASSEMBLY
1	2	P0063-001	P0063-001	P0063-001	FITTING, Grease Straight
2	1	002941P00	002940A00	002256A00	ROLLER, Front
3	2	P0040-007	P0040-007	P0040-007	WASHER, Hardened Flat 7/16
4	2	002386P01	002386P01	002386P01	BOLT, Grease
5	1	027243P00	027393P00	027293P00	SHAFT, Front Roller
6	2	P0001-06-003	P0001-06-003	P0001-06-003	BOLT, Hex 3/8 UNC x .75
7	2	P0065-006	P0065-006	P0065-006	BEARING
8	2	027130P00	027130P00	027130P00	MOUNT, Front Roller Scraper
9	6	P0040-006	P0040-006	P0040-006	WASHER, Hardened Flat 3/8
10	2	027109A00	027109A00	027109A00	BRACKET, Front Roller Mounting
11	1	027240P00	027390P00	027290P00	SCRAPER, Front Roller
12	4	P0001-06-004	P0001-06-004	P0001-06-004	BOLT, 3/8 UNC x 1

**NOTE:**

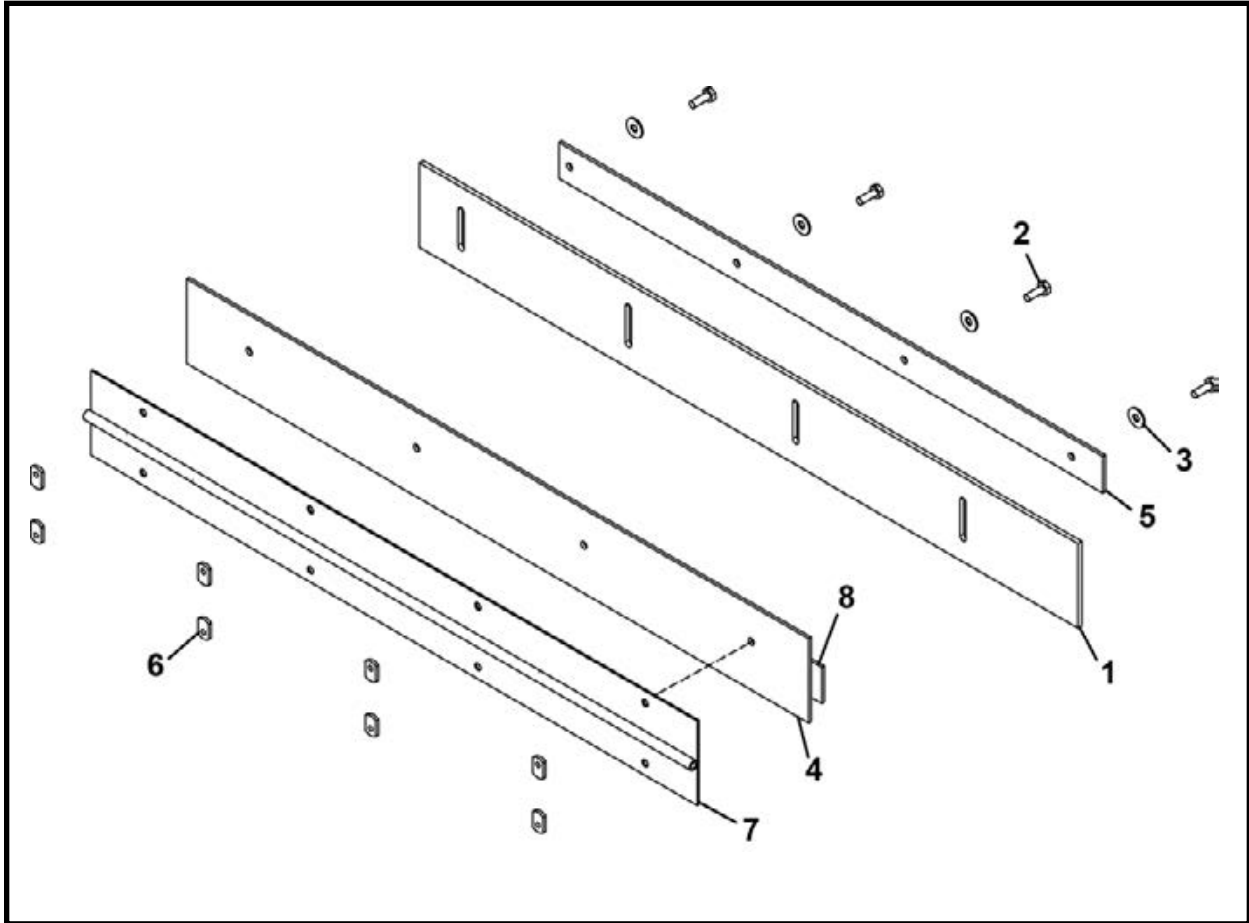
1. Remove seal on inside half of bearings (item 7).
2. 3/16" Feed Frame mounts between items 8 and 10.

**FEED FRAME SPOILS GUIDE ASSEMBLY - LEFT REAR, 027265A00**  
**1015 - 1215 - 1615 BELT CONVEYORS**



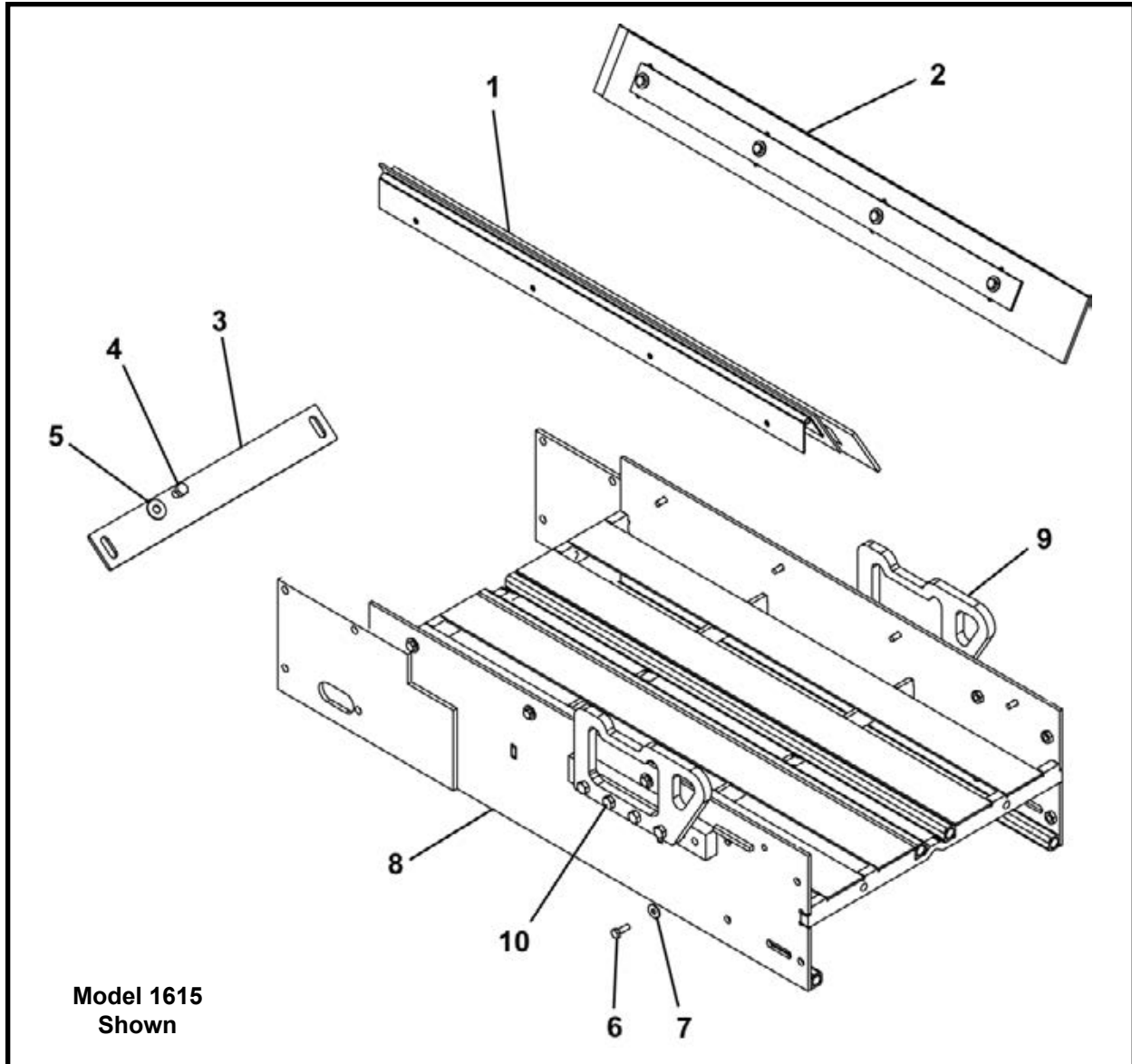
ITEM	QTY	PART NO.	DESCRIPTION
0	1	027265A00	ASSEMBLY, Feed Frame Spoils Guide - Left Rear
1	1	027217P00	SUPPORT BAR, Feed Frame Spoils - Left
2	1	027135P00	HINGE, Short Spoils Guide
3	8	P0011-004B	NUT, Weld 1/4 UNC
4	1	027136P00	STRIP, Short Spoils Guide Wear
5	4	P0040-004	WASHER, Hardened Flat 1/4
6	4	P0001-04-003	BOLT, Hex 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**  
**1015 - 1215 - 1615 BELT CONVEYORS**



ITEM	QTY	PART NO.	DESCRIPTION
0	1	027266A00	ASSEMBLY, Feed Frame Spoils Guide - Right Rear
1	1	027136P00	STRIP, Short Spoils Guide Wear
2	4	P0001-04-003	BOLT, Hex 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

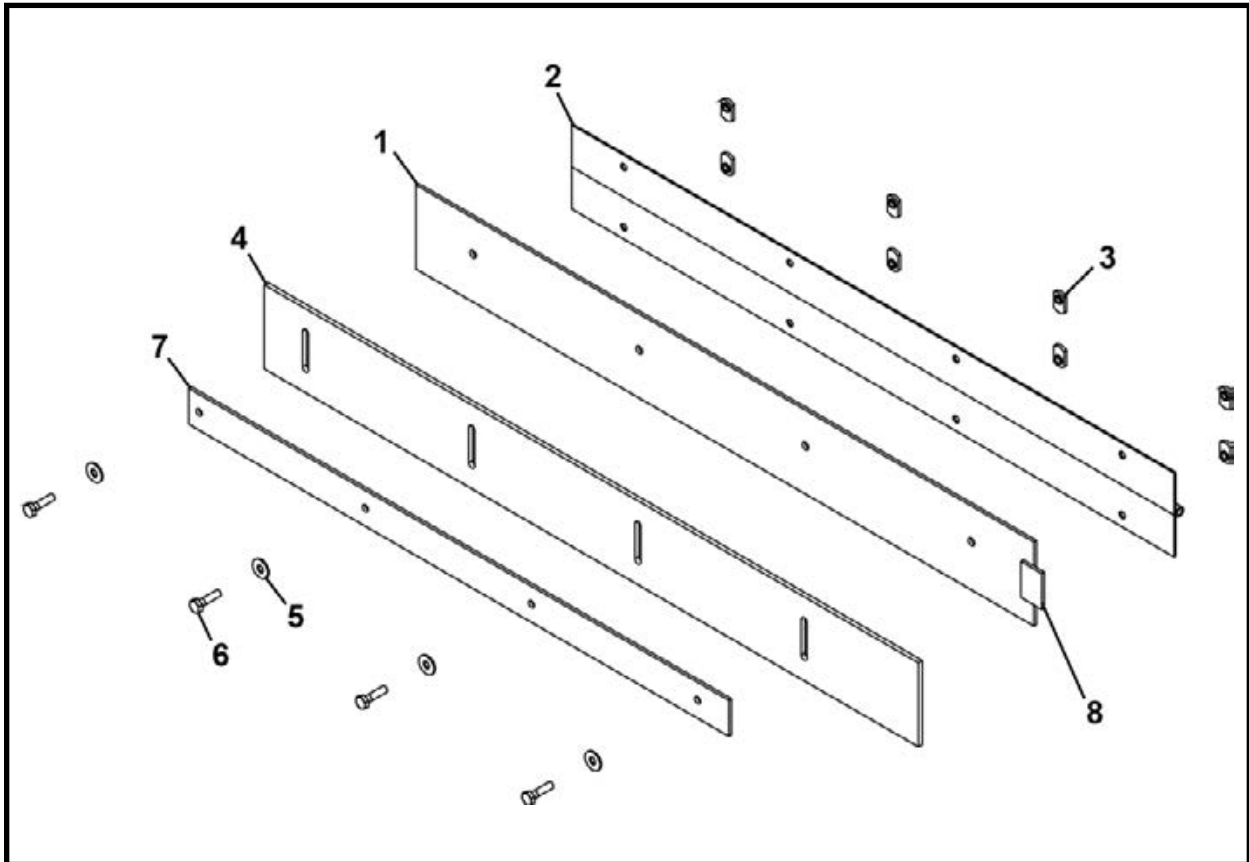
**EXTENSION FRAME ASSEMBLY**  
**1015 - 1215 - 1615 BELT CONVEYORS**



ITEM	QTY	1015 PART NO.	1215 PART NO.	1615 PART NO.	DESCRIPTION
0	1	027214A00	027364A00	027264A00	EXTENSION FRAME ASSEMBLY
1*	1	027134A00	027134A00	027134A00	GUIDE, Short Spoils - Left
2*	1	027267A00	027267A00	027267A00	GUIDE, Short Spoils - Right
3	1	027245P00	027395P00	027295P00	SCRAPER, Idler Roller
4	2	P0001-06-002	P0001-06-002	P0001-06-002	BOLT, Hex 3/8 UNC x .5
5	2	P0040-006	P0040-006	P0040-006	WASHER, Hardened Flat 3/8
6	8	P0001-04-003	P0001-04-003	P0001-04-003	BOLT, Hex 1/4 UNC x .75
7	8	P0040-004	P0040-004	P0040-004	WASHER, Hardened Flat 1/4
8	1	027203A00	027353A00	027253A00	FRAME, Extension (Includes items 8a-8c)
8a	2	P0011-006A	P0011-006A	P0011-006A	NUT, Strut Square 3/8
8b	8	P0011-006C	P0011-006C	P0011-006C	NUT, Weld 3/8 UNC
8c	1	P0001-05-003	P0001-05-003	P0001-05-003	BOLT, Hex 5/16 UNC x .75
9	2	025344P	025344P	025344P	LIFT EYE
10	8	P0001-06-005	P0001-06-005	P0001-06-005	BOLT, Hex 3/8 UNC x 1.25

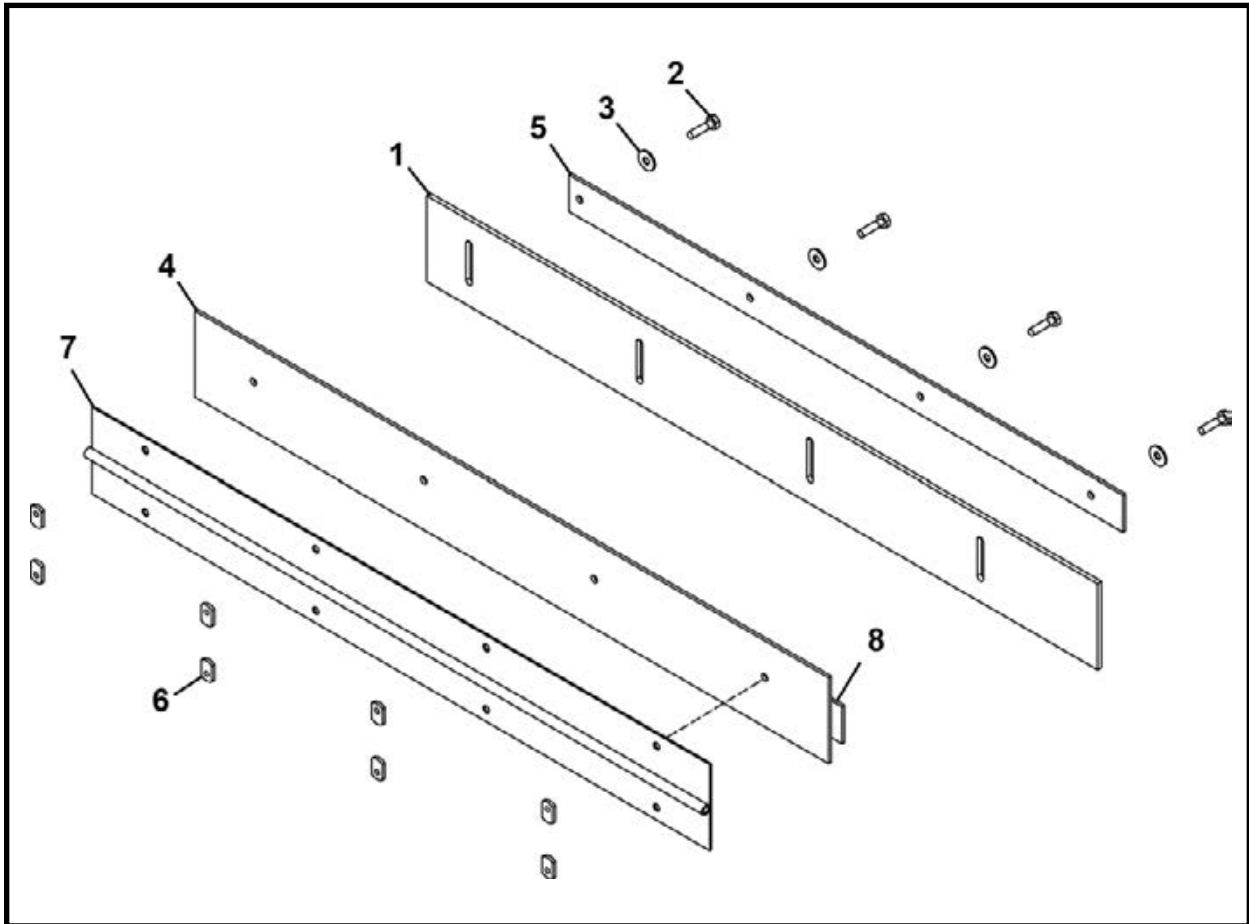
\* Refer to this section for parts information.

**SHORT SPOILS GUIDE ASSEMBLY - FRONT, 027134A00**  
**1015 - 1215 - 1615 BELT CONVEYOR - EXTENSION**



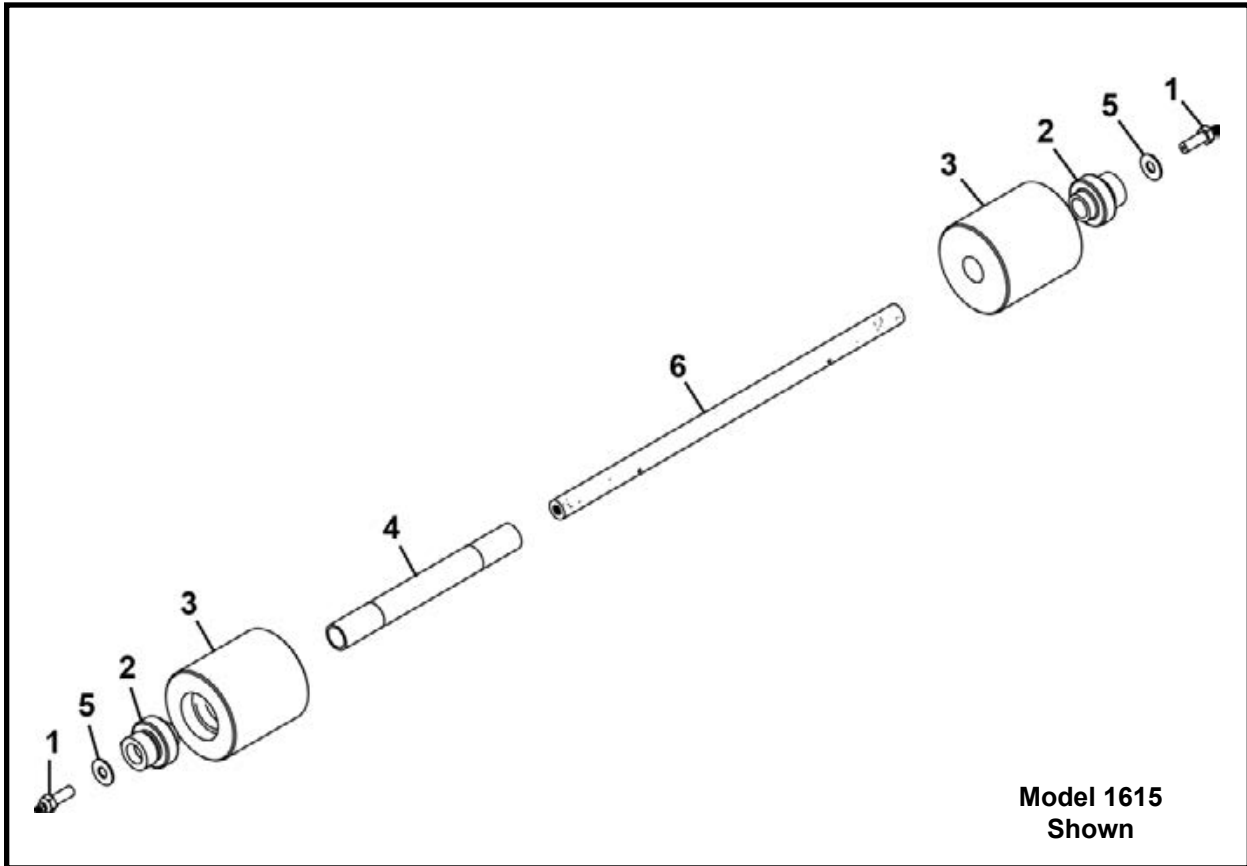
ITEM	QTY	PART NO.	DESCRIPTION
0	1	027134A00	ASSEMBLY, Short Spoils Guide - Front
1	1	027217P00	SUPPORT BAR, Feed Frame Spoils - Left
2	1	027135P00	HINGE, Short Spoils Guide
3	8	P0011-004B	NUT, Weld 1/4 UNC
4	1	027136P00	STRIP, Short Spoils Guide Wear
5	4	P0040-004	WASHER, Hardened Flat 1/4
6	4	P0001-04-003	BOLT, Hex 1/4 UNC x .75
7	1	027249P00	BRACKET, Short Spoils Wear Strip
8	1	027216P00	TAB, Feed Frame Support Bar

**SHORT SPOILS GUIDE ASSEMBLY - REAR, 027267A00**  
**1015 - 1215 - 1615 BELT CONVEYOR - EXTENSION**



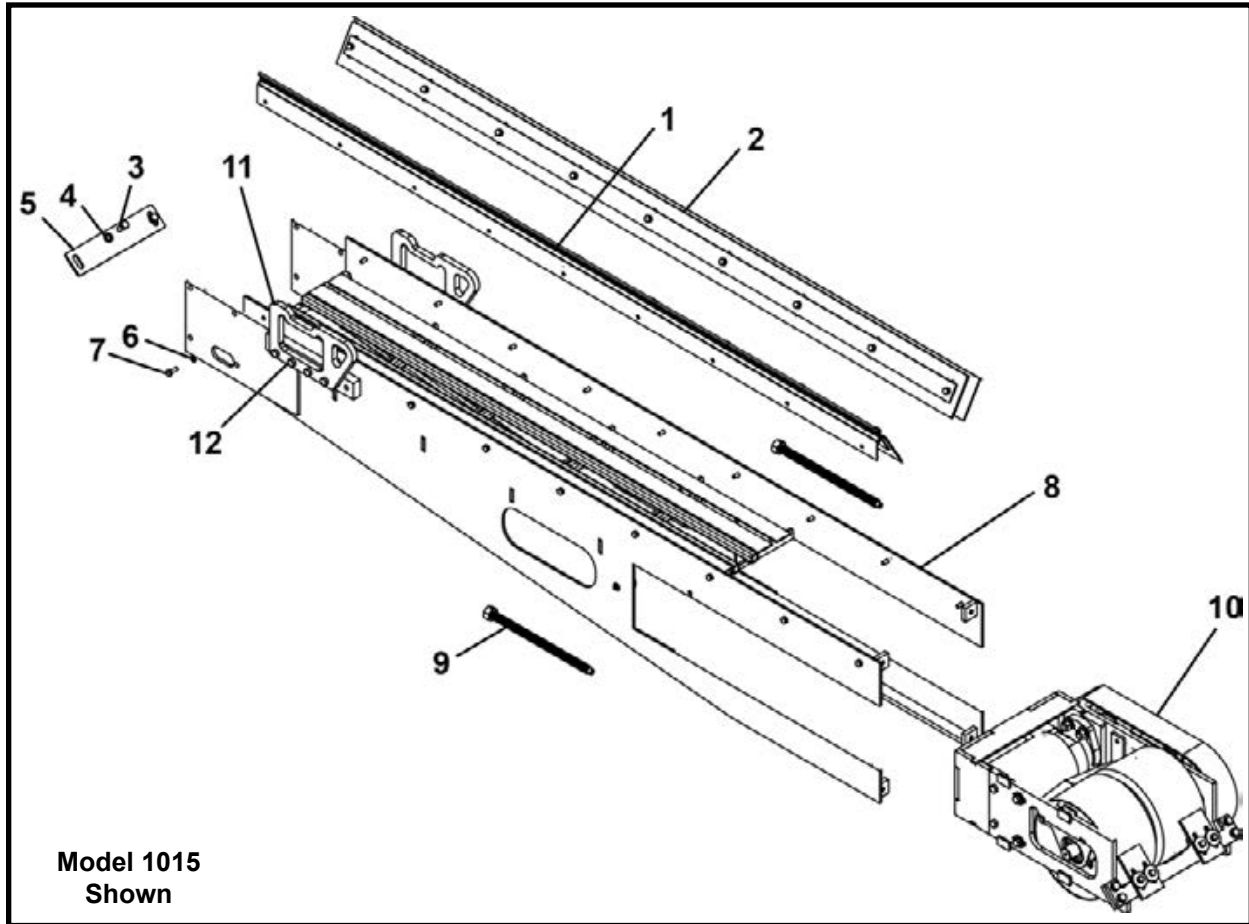
ITEM	QTY	PART NO.	DESCRIPTION
0	1	027267A00	ASSEMBLY, Short Spoils Guide - Rear
1	1	027136P00	STRIP, Short Spoils Guide Wear
2	4	P0001-04-003	BOLT, Hex 1/4 UNC x 3/4
3	4	P0040-004	WASHER, Hardened Flat 1/4
4	1	027217P00	SUPPORT BAR, Feed Frame Spoils - Right
5	1	027249P00	BRACKET, Short Spoils Wear Strip
6	8	P0011-004B	NUT, Weld 1/4 UNC
7	1	027135P00	HINGE, Short Spoils Guide
8	1	027216P00	TAB, Feed Frame Support Bar

**IDLER ROLLER ASSEMBLY**  
**1015 - 1215 - 1615 BELT CONVEYORS**



ITEM	QTY	1015 PART NO.	1215 PART NO.	1615 PART NO.	DESCRIPTION
0	1	027211A00	027361A00	027261A00	IDLER ROLLER ASSEMBLY
1	2	001341A00	001341A00	001341A00	BOLT, 3/8 UNC x 1.25 W/Fitting (Includes item 1a)
1a	2	P0063-001	P0063-001	P0063-001	FITTING, Grease
2	2	027397P	027397P	027397P	BEARING
3	2	001086P00	001087P00	02306P00	ROLLER, Idler
4	1	001083P00	001084P00	001085P00	TUBE, Idler
5	2	P0040-006	P0040-006	P0040-006	WASHER, Hardened Flat 3/8
6	1	001082P00	001081P00	002416P00	SHAFT, Idler

**DRIVE FRAME ASSEMBLY**  
**1015 - 1215 - 1615 BELT CONVEYORS**



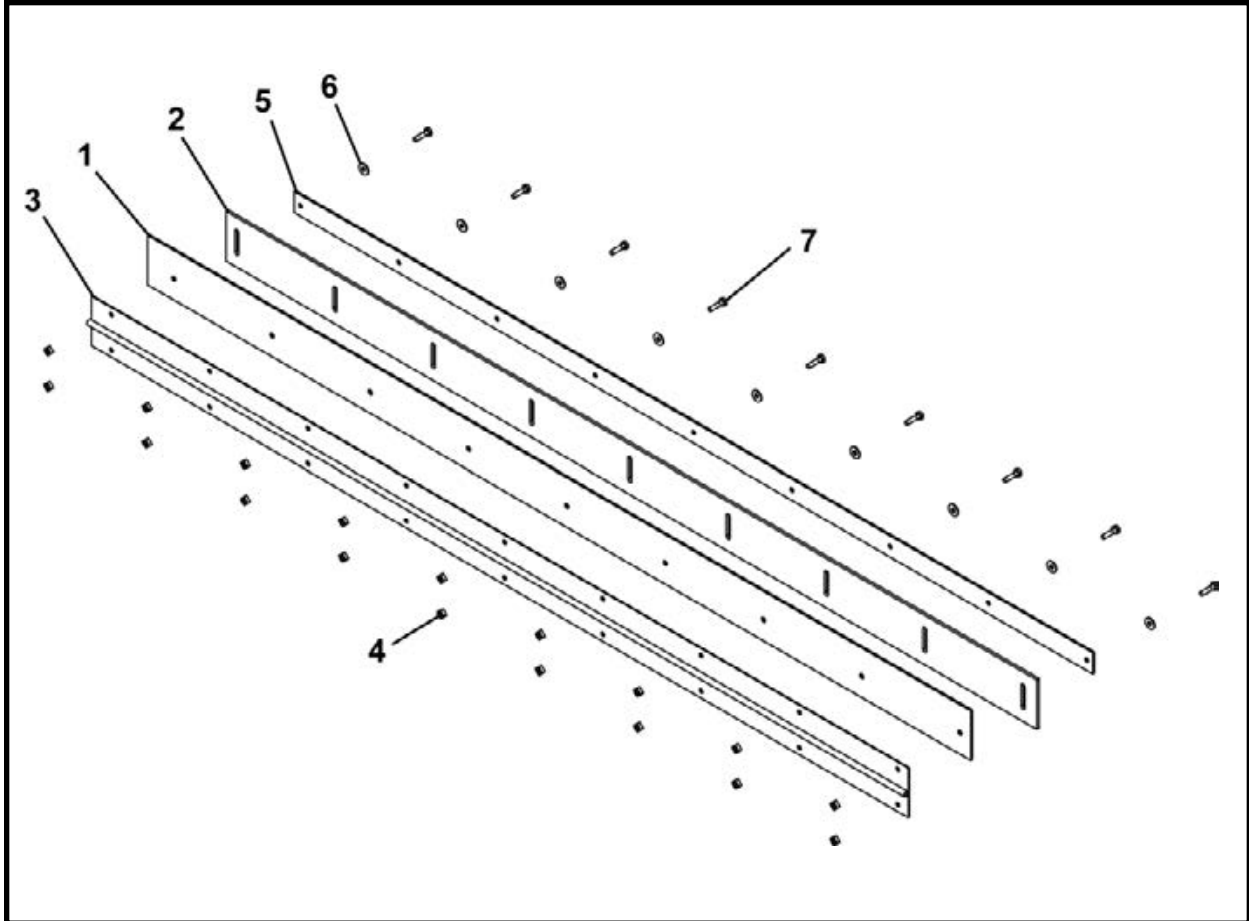
ITEM	QTY	1015 PART NO.	1215 PART NO.	1615 PART NO.	DESCRIPTION
0	1	027212A00	027362A00	027262A00	DRIVE FRAME ASSEMBLY
1*	1	027131A00	027131A00	027131A00	GUIDE, Drive Frame Spoils - Left
2*	1	027219A00	027219A00	027219A00	GUIDE, Drive Frame Spoils - Right
3	2	P0001-06-003	P0001-06-003	P0001-06-003	BOLT, Hex 3/8 UNC x .75
4	2	P0040-006	P0040-006	P0040-006	WASHER, Hardened Flat 3/8
5	1	027245P00	027395P00	027295P00	SCRAPER, Idler Roller
6	18	P0040-004	P0040-004	P0040-004	WASHER, Hardened Flat 1/4
7	18	P0001-04-003	P0001-04-003	P0001-04-003	BOLT, Hex 1/4 UNC x .75
8	1	027201A00	027351A00	027251A00	FRAME, Drive (Includes items 8a-8b)
8a	6	P0011-006A	P0011-006A	P0011-006A	NUT, Strut Square 3/8
8b	2	P0063-001	P0063-001	P0063-001	FITTING, Grease 1/4
9	2	002824A01	002824A01	002824A01	SCREW, Adjusting
10*	1	027204A00	027354A00	027254A00	ASSEMBLY, Drive Motor & Roller (See <b>Note</b> )
10*	1	031867A	031864A	031857A	ASSEMBLY, Drive Motor & Roller (See <b>Note</b> )
11	2	025344P	025344P	025344P	LIFT EYE
12	8	P0001-06-005	P0001-06-005	P0001-06-005	BOLT, Hex 3/8 UNC x 1.25

\* Refer to this section for parts information.

**NOTE:** Item 10 Serial Number Breaks

- 1015 F27200F00: SN 1 - 7 027204A00; SN 8 & After - 031867A
- 1215 F27350F00: SN 1 - 28 027354A00; SN 29 & After - 031864A
- 1615 F27250F00: SN 1 - 38 027254A00; SN 39 & After - 031857A

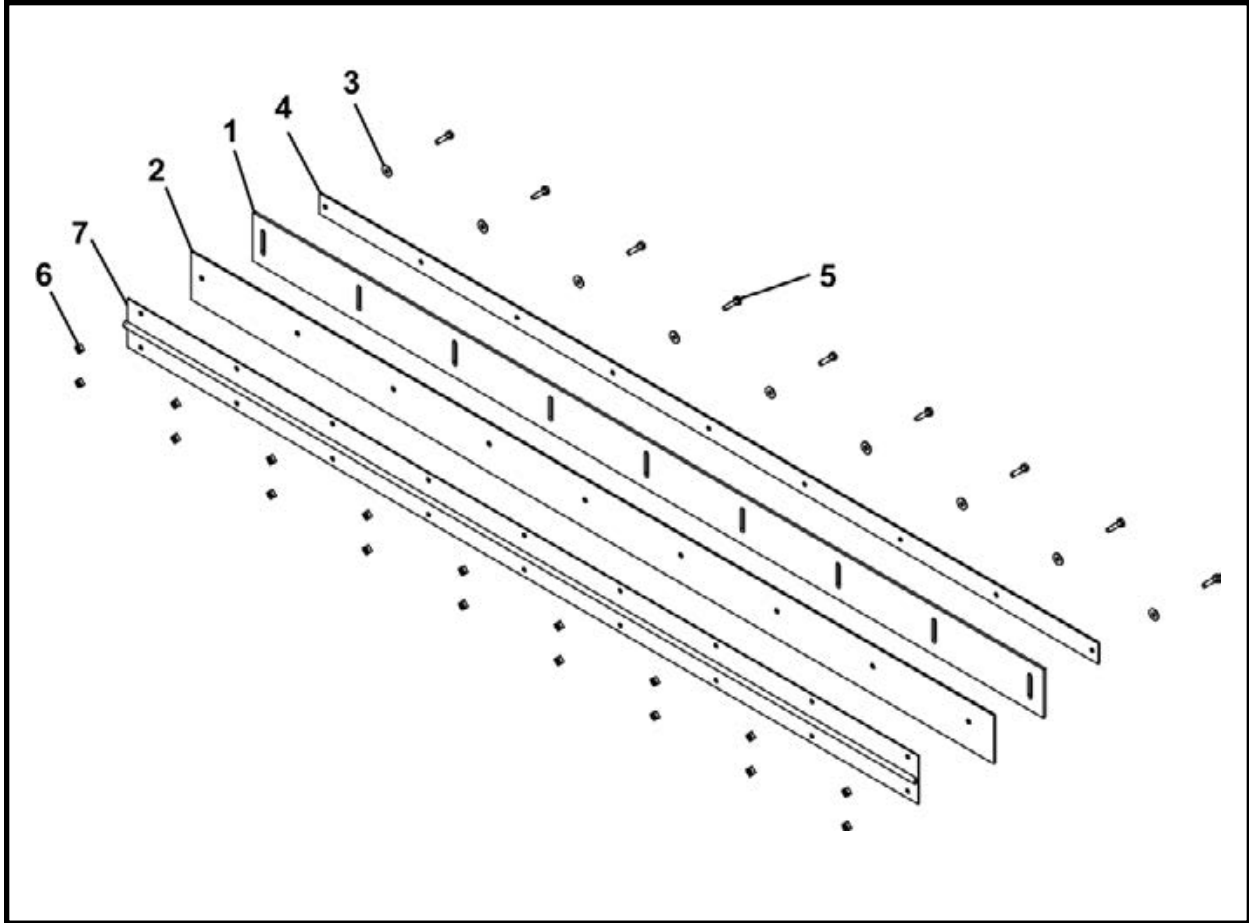
**DRIVE FRAME SPOILS GUIDE ASSEMBLY - FRONT, 027131A00**  
**1015 - 1215 - 1615 BELT CONVEYORS**



ITEM	QTY	PART NO.	DESCRIPTION
0	1	027131A00	GUIDE, Drive Frame Spoils - Front
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 - REAR, 027219A00

1015 - 1215 - 1615 BELT CONVEYORS

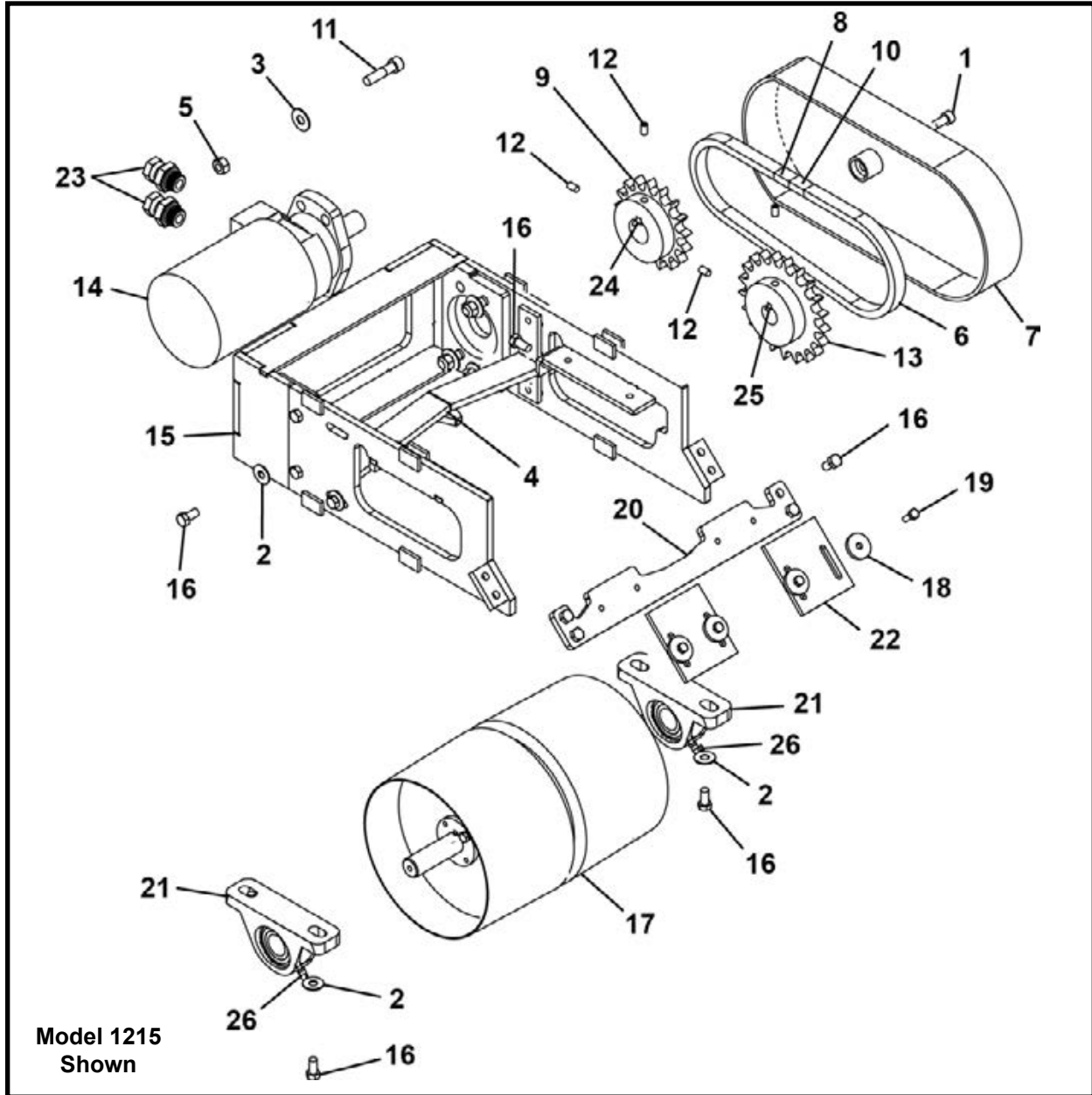


ITEM	QTY	PART NO.	DESCRIPTION
0	1	027219A00	GUIDE, Drive Frame Spoils - Rear
1	1	027133P00	STRIP, Drive Frame Spoils Wear
2	1	027218P00	SUPPORT BAR, Drive Frame Spoils
3	9	P0040-004	WASHER, Hardened Flat 1/4
4	1	027247P00	BRACKET, Drive Frame Wear Strip
5	9	P0001-04-003	BOLT, Hex 1/4 UNC x .75
6	18	P0011-004B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

# DRIVE MOTOR & ROLLER ASSEMBLY

1015 - 1215 - 1615 BELT CONVEYORS

1015 SN F27200F00-01-07; 1215 SN F27350F00-01-28; 1615 SN F27250F00-01-38



ITEM	QTY	1015 PART NO.	1215 PART NO.	1615 PART NO.	DESCRIPTION
0	1	027204A00	027354A00	027254A00	ASSEMBLY, Drive Motor & Roller
1	1	P0031-06-003	P0031-06-003	P0031-06-003	SCREW, Socket Head Cap 3/8 UNC x .75
2	8	P0040-006	P0040-006	P0040-006	WASHER, Hardened Flat 3/8
3	4	P0040-007	P0040-007	P0040-007	WASHER, Hardened Flat 7/16
4	1	027206A00	027356A00	027256A00	SCRAPER, Internal Drive Roller
5	4	P0003-07-000	P0003-07-000	P0003-07-000	NUT, 7/16 UNC
6	36	P0078-002	P0078-002	P0078-002	CHAIN, Roller #60 x 35
7	1	001429A00	001429A00	001429A00	COVER, Conveyor Chain
8	1	P0078-008	P0078-008	P0078-008	LINK, Connect #60
9	1	001399P00	001399P00	001399P00	SPROCKET, Drive 17 Teeth
10	1	P0078-005	P0078-005	P0078-005	LINK, Half #60
11	4	P0031-07-007	P0031-07-007	P0031-07-007	SCREW, Socket Head Cap 7/16 UNC x 1.75

(Continued On Next Page)

## DRIVE MOTOR & ROLLER ASSEMBLY

1015 - 1215 - 1615 BELT CONVEYORS

1015 SN F27200F00-01-07; 1215 SN F27350F00-01-28; 1615 SN F27250F00-01-38

ITEM	QTY	1015	1215	1615	DESCRIPTION
		PART NO.	PART NO.	PART NO.	
12	4	P0033-05-005	-	-	SCREW, Socket Head Set 5/16 UNC x .3125
12	4	-	P0033-05-008	P0033-05-008	SCREW, Socket Head Set 5/16 UNC x .5
13	1	001398P00	001398P00	001398P00	SPROCKET
14*	1	P0304-157	P0304-157	P0304-157	MOTOR
15	1	027205A00	027355A00	027255A00	FRAME, Drive Motor
16	14	P0001-06-003	P0001-06-003	P0001-06-003	BOLT, Hex 3/8 UNC x .75
17	1	001233A00	001232A00	001969A00	ROLLER, Drive
18	4	002624P00	002624P00	002624P00	WASHER
19	4	P0001-04-005	-	-	BOLT, Hex 1/4 UNC x 1.25
19	4	-	P0001-04-003	P0001-04-003	BOLT, Hex 1/4 UNC x .75
20	1	027233P00	027383P00	027283P00	SCRAPER, External
21	2	P0065-014	P0065-014	P0065-014	BEARING
22	2	027235P00	027385P00	027285P00	SCRAPER, External Belt
23	2	P0300-094	P0300-094	P0300-094	FITTING, 10MB-08FPX
24	1.25 LI	P0047-004	P0047-004	P0047-004	KEY, 5/16
25	1.25 LI	P0047-003	P0047-003	P0047-003	KEY, 1/4
26	2	P0063-003	P0063-003	P0063-003	FITTING, Grease 1/4 90 Deg.

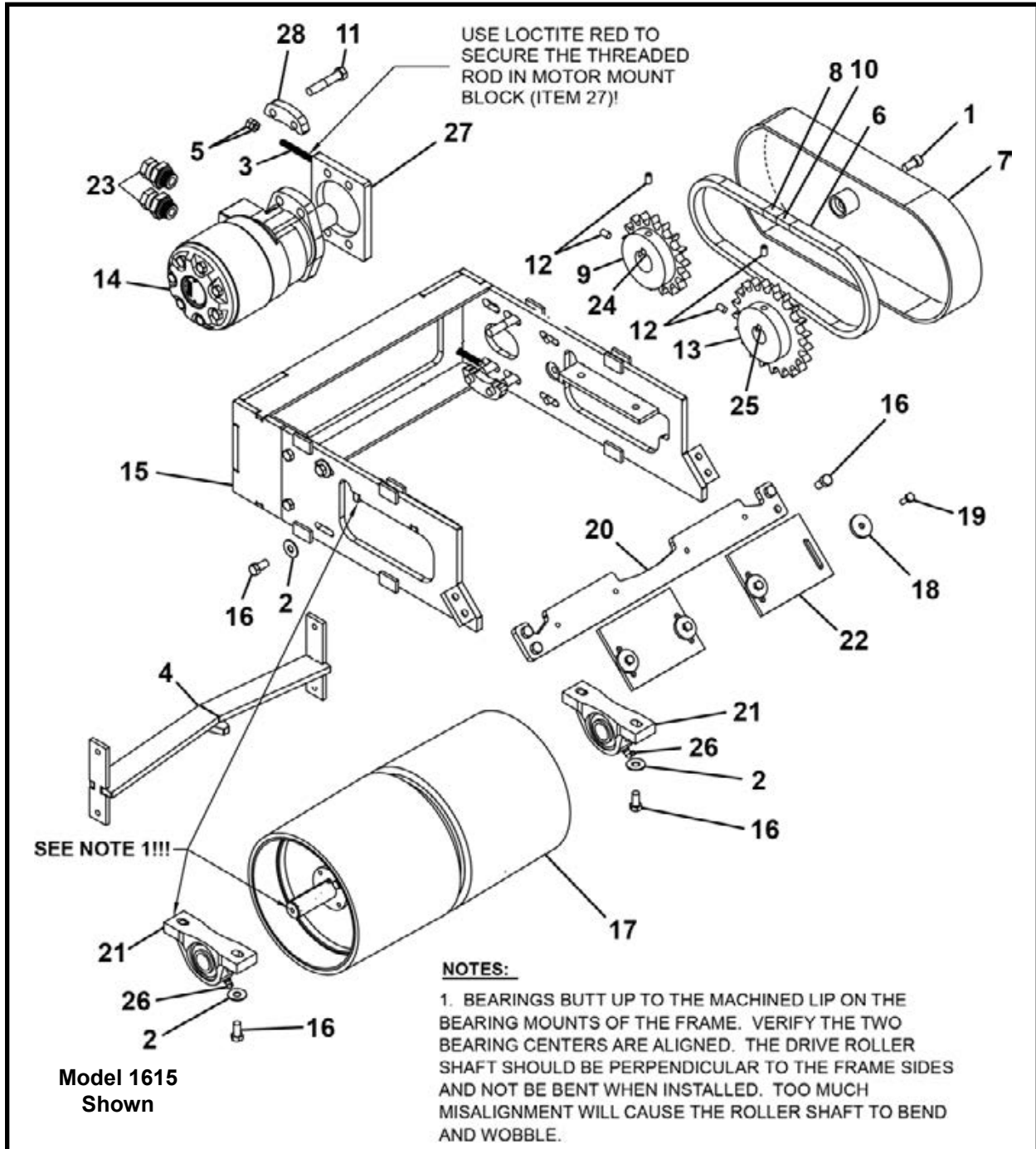
LI - Linear Inch

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

# DRIVE MOTOR & ROLLER ASSEMBLY

1015 - 1215 - 1615 BELT CONVEYORS

1015 SN F27200F00-08 & After; 1215 SN F27350F00-029 & After; 1615 SN F27250F00-39 & After



ITEM	QTY	1015 PART NO.	1215 PART NO.	1615 PART NO.	DESCRIPTION
0	1	031867A	031864A	031857A	ASSEMBLY, Drive Motor & Roller
1	1	P0031-06-003	P0031-06-003	P0031-06-003	SCREW, Socket Head Cap 3/8 UNC x .75
2	8	P0040-006	P0040-006	P0040-006	WASHER, Hardened Flat 3/8
3	2	P0033-05-048	P0033-05-048	P0033-05-048	SCREW, Set 5/16 UNC x 3
4	1	027206A00	027356A00	027256A00	SCRAPER, Internal Drive Roller
5	4	P0003-05-000	P0003-05-000	P0003-05-000	NUT, 5/16 UNC
6	36	P0078-002	P0078-002	P0078-002	CHAIN, Roller #60 x 35
7	1	001429A00	001429A00	001429A00	COVER, Conveyor Chain

(Continued On Next Page)

## DRIVE MOTOR & ROLLER ASSEMBLY

### 1015 - 1215 - 1615 BELT CONVEYORS

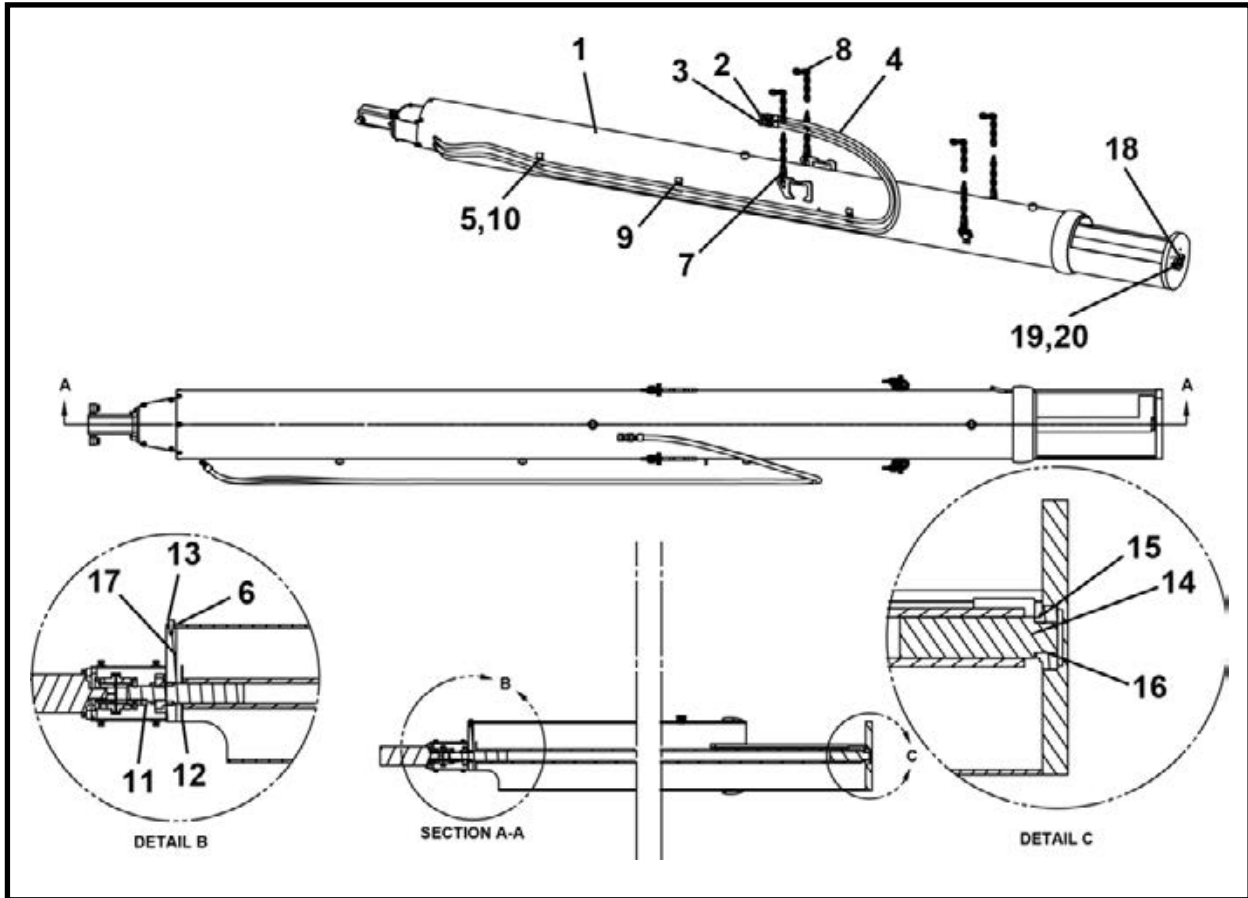
1015 SN F27200F00-08 & After; 1215 SN F27350F00-029 & After; 1615 SN F27250F00-39 & After

ITEM	QTY	1015			1215			1615			DESCRIPTION
		PART NO.	PART NO.	PART NO.	PART NO.	PART NO.	PART NO.	PART NO.	PART NO.		
8	1	P0078-008	P0078-008	P0078-008	P0078-008	P0078-008	P0078-008	P0078-008	P0078-008	LINK, Connect #60	
9	1	001399P00	001399P00	001399P00	001399P00	001399P00	001399P00	001399P00	001399P00	SPROCKET, Drive 17 Teeth	
10	1	P0078-005	P0078-005	P0078-005	P0078-005	P0078-005	P0078-005	P0078-005	P0078-005	LINK, Half #60	
11	4	P0031-07-009	P0031-07-009	P0031-07-009	P0031-07-009	P0031-07-009	P0031-07-009	P0031-07-009	P0031-07-009	SCREW, Socket Head Cap 7/16 UNC x 2.25	
12	4	P0033-05-008	P0033-05-008	P0033-05-008	P0033-05-008	P0033-05-008	P0033-05-008	P0033-05-008	P0033-05-008	SCREW, Socket Head Set 5/16 UNC x .5	
13	1	001398P00	001398P00	001398P00	001398P00	001398P00	001398P00	001398P00	001398P00	SPROCKET	
14.1*	1	P0304-157	P0304-157	P0304-157	P0304-157	P0304-157	P0304-157	P0304-157	P0304-157	MOTOR (with four bolt mounting flange)	
14.2*	1	P0304-371	P0304-371	P0304-371	P0304-371	P0304-371	P0304-371	P0304-371	P0304-371	MOTOR (with two bolt mounting flange)	
15	1	031868A	031865A	031865A	031860A	031860A	031860A	031860A	031860A	FRAME, Drive Motor	
16	12	P0001-06-003	P0001-06-003	P0001-06-003	P0001-06-003	P0001-06-003	P0001-06-003	P0001-06-003	P0001-06-003	BOLT, Hex 3/8 UNC x .75	
17	1	031885A	031883A	031883A	031880A	031880A	031880A	031880A	031880A	ROLLER, Drive	
18	4	002624P00	002624P00	002624P00	002624P00	002624P00	002624P00	002624P00	002624P00	WASHER	
19	4	P0001-04-003	P0001-04-003	P0001-04-003	P0001-04-003	P0001-04-003	P0001-04-003	P0001-04-003	P0001-04-003	BOLT, Hex 1/4 UNC x .75	
20	1	027233P00	027383P00	027383P00	027283P00	027283P00	027283P00	027283P00	027283P00	SCRAPER, External	
21	2	P0065-014	P0065-014	P0065-014	P0065-014	P0065-014	P0065-014	P0065-014	P0065-014	BEARING	
22	2	027235P00	027385P00	027385P00	027285P00	027285P00	027285P00	027285P00	027285P00	SCRAPER, External Belt	
23.1	2	P0300-094	P0300-094	P0300-094	P0300-094	P0300-094	P0300-094	P0300-094	P0300-094	FITTING, 10MB-08FPX (for 4 bolt flange motor)	
23.2	2	P0300-165	P0300-165	P0300-165	P0300-165	P0300-165	P0300-165	P0300-165	P0300-165	FITTING, 10MB-08FPX45 (for 2 bolt flange motor)	
24	1.25 LI	P0047-004	P0047-004	P0047-004	P0047-004	P0047-004	P0047-004	P0047-004	P0047-004	KEY, 5/16	
25	1.25 LI	P0047-003	P0047-003	P0047-003	P0047-003	P0047-003	P0047-003	P0047-003	P0047-003	KEY, 1/4	
26	2	P0063-003	P0063-003	P0063-003	P0063-003	P0063-003	P0063-003	P0063-003	P0063-003	FITTING, Grease 1/4 90 Deg.	
27	1	031858P	031858P	031858P	031858P	031858P	031858P	031858P	031858P	MOUNT, Motor	
28	2	031859P	031859P	031859P	031859P	031859P	031859P	031859P	031859P	PAD, Motor Bolt	

LI - Linear Inch

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

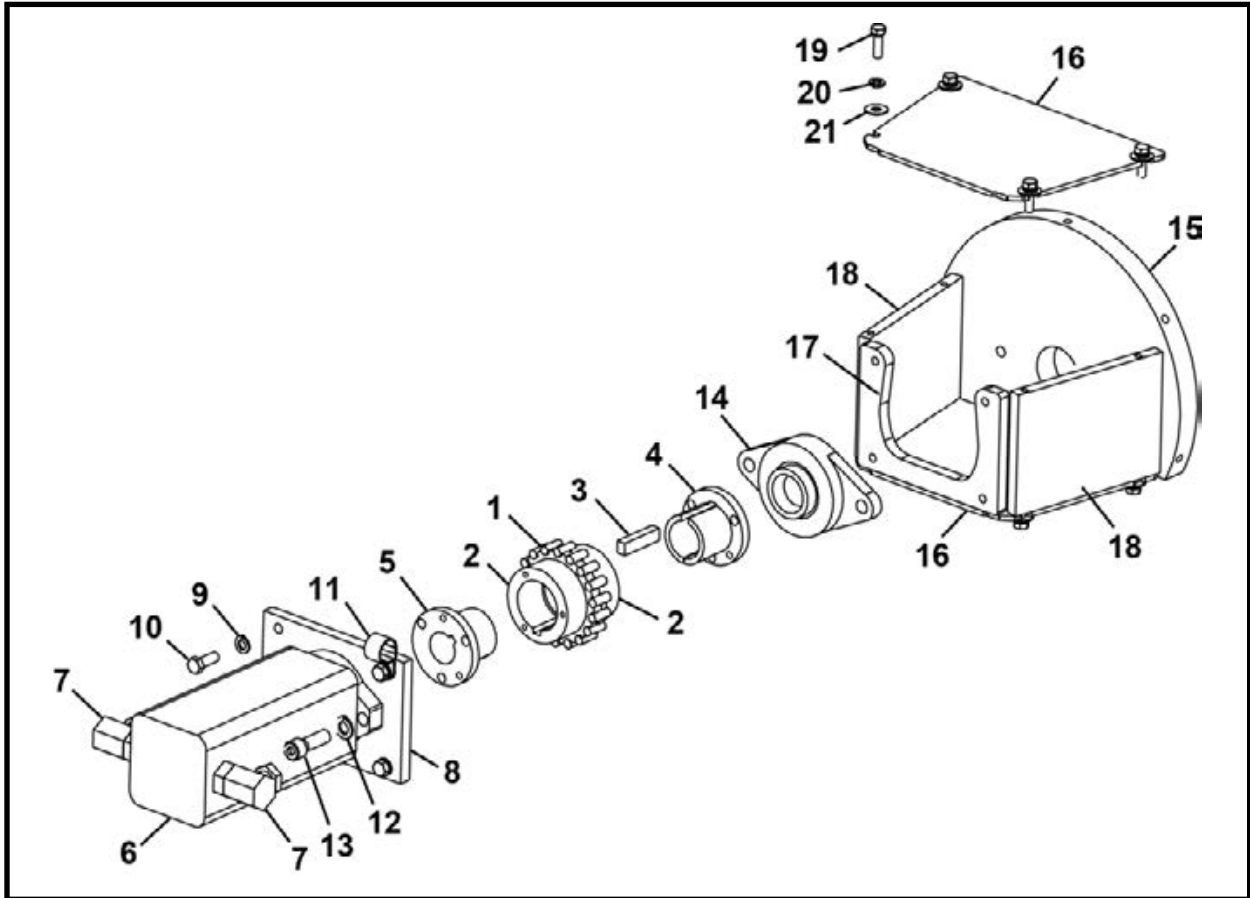
**120EX SCREW CONVEYOR, F32070F**  
**120EX SCREW CONVEYOR**



ITEM	QTY	PART NO.	DESCRIPTION
0	1	F32070F	CONVEYOR, Screw 120EX
1	1	032066A	TUBE 12
2	1	P0100-004B	COUPLER, Male
3	1	P0100-004A	COUPLER, Female
4	2	A10320A-200	HOSE ASSEMBLY, 1/2 x 200
5	3	P0040-005	WASHER, Hardened Flat 5/16
6	5	P0040-006	WASHER, Hardened Flat 3/8
7	4	P0098-010	LINK, Hammerlock 3/8
8	4	P0094-003-030	CHAIN, 3/8
9	3	002269P01	CLAMP, Line
10	3	P0003-05-000	NUT, Hex 5/16 UNC
11	1	P0047-010	KEY
12	1	023522P00	SHIELD, Conveyor Shaft
13	5	P0001-06-004	BOLT, hex 3/8 UNC x 1
14	1	031892A	ASSEMBLY, Auger Ext 12
15	1	P0065-004	BEARING
16	1	P0085-028	ORING
17*	1	023543A	ASSEMBLY, Motor Mount
18	1	P0065-017	BEARING, Pivot
19	2	P0040-008	WASHER, Hardened Flat 1/2
20	2	P0001-06-007	BOLT, Hex 3/8 UNC x 1.75
21	1	1255-009	KIT, Decal Screw Conveyor

\* Refer to this section for parts information.

**MOTOR MOUNT ASSEMBLY, 023543A**  
**120EX SCREW CONVEYOR**

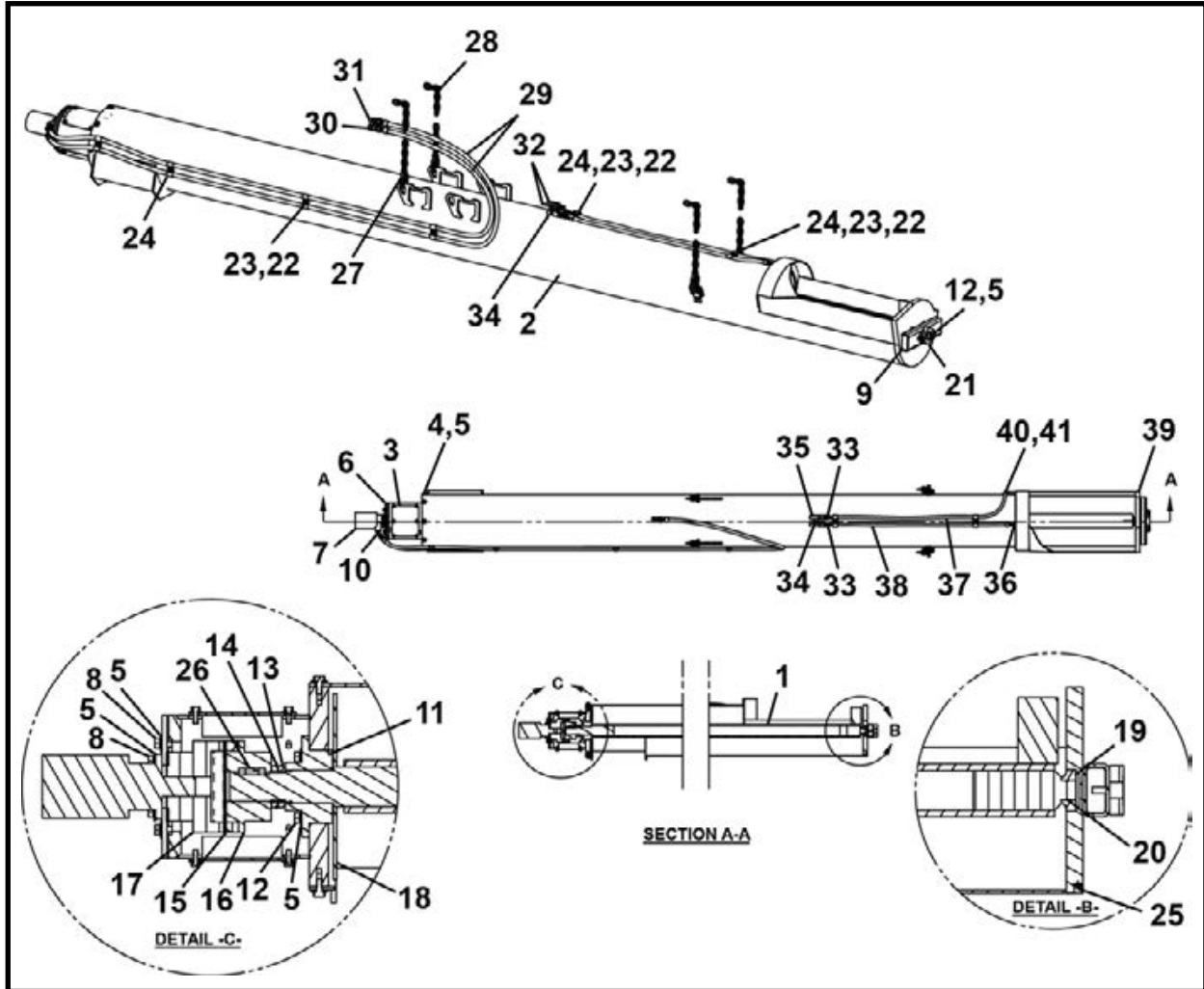


ITEM	QTY	PART NO.	DESCRIPTION
0	1	023543A	MOTOR MOUNT ASSEMBLY
1	1	P0305-114A	CHAIN
2	2	P0305-114C	SPROCKET
3	1	P0047-010	KEY
4	1	P0066-028	BUSHING 1-1/2
5	1	004544P00	BUSHING, Power Drive
6*	1	P0304-109	MOTOR
7	2	P0300-198	FITTING, 12MB-08FPX90
8	1	007142P00	PLATE, Conveyor
9	0	P0045-006	WASHER, Lock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

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

NSS - Not Sold Separately

**140EX SCREW CONVEYOR, F20645F00**  
**140EX SCREW CONVEYOR**



ITEM	QTY	PART NO.	DESCRIPTION
0	1	F20645F00	CONVEYOR, Screw, 140EX
1	1	020644A	SCREW, Extended
2	1	020646A	PIPE, Extended
3	1	024502A00	ADAPTER, Motor
4	8	P0001-08-004	BOLT, Hex 1/2 UNC x 1
5	22	P0040-008	WASHER, Hardened Flat 1/2
6	1	009893P00	PLATE, Mounting
7*	1	P0304-145	MOTOR
8	8	P0001-08-006	BOLT, Hex 1/2 UNC x 1.5
9	2	023544A	SPACER
10	2	P0300-165	FITTING, 10MB-08FPX45
11	1	P0065-107	BEARING
12	6	P0001-08-008	BOLT, Hex 1/2 UNC x 2
13	2	P0065-108	NUT, Lock N-12
14	1	P0065-109	WASHER, Lock W-12
15	1	P0305-134C	INSERT
16	1	P0305-134A	COUPLER
17	1	P0305-134B	SPLINE, Coupler
18	1	024559P	WASHER, Conveyor Flighting
19	1	P0065-004	BEARING

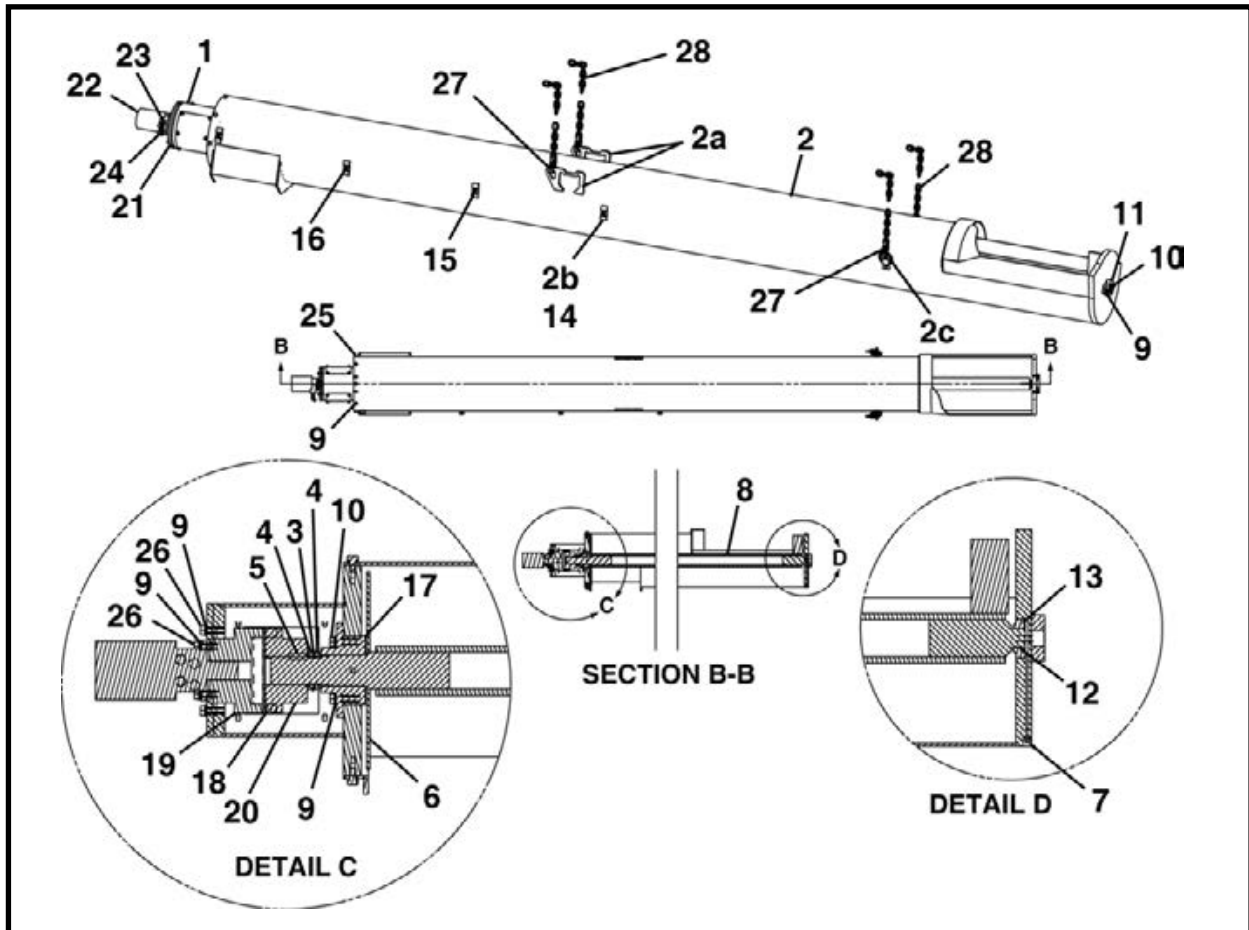
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**140EX SCREW CONVEYOR, F20645F00**  
**140EX SCREW CONVEYOR**

ITEM	QTY	PART NO.	DESCRIPTION
20	1	P0085-028	ORING
21	1	P0065-017	BEARING, Conveyor End Pivot
22	6	P0003-05-000	NUT, Hex 5/16
23	6	P0040-005	WASHER, Hardened Flat 5/16
24	6	002269P01	CLAMP, Line
25	1	P0063-001	FITTING, Grease Straight
26	1	P0047-007	KEY
27	4	P0098-010	LINK, Hammerlock 3/8
28	4	P0094-003-030	CHAIN, 3/8
29	2	A10320A-200	HOSE ASSEMBLY, 1/2 x 200
30	1	P0100-004A	COUPLER, Female
31	1	P0100-004B	COUPLER, Male
32	2	P0302-185	VALVE 1/2" BALL
33	2	P0300-120	FITTING, 06MJ-08MP
34	1	P0300-025	FITTING, 08MP-08MP90
35	1	P0300-049	FITTING, 08MP-08FP-08FP
36	1	P0300-331	FITTING, 06MJ-06MJBKHD
37	1	A10311A-060	HOSE ASSEMBLY, 3/8 x 60
38	1	A10311A-056	HOSE ASSEMBLY, 3/8 x 56
39	1	P0417-002	CAP, Pipe 3/8
40	1	P0300-130	FITTING, 06MJ-06MP
41	1	P0400-002	COUPLING, Pipe 3/8
42	1	1255-009	KIT, Decal Screw Conveyor

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

**160 SCREW CONVEYOR, F09885F00**  
**160 SCREW CONVEYOR (SN F09885F04 & Before)**



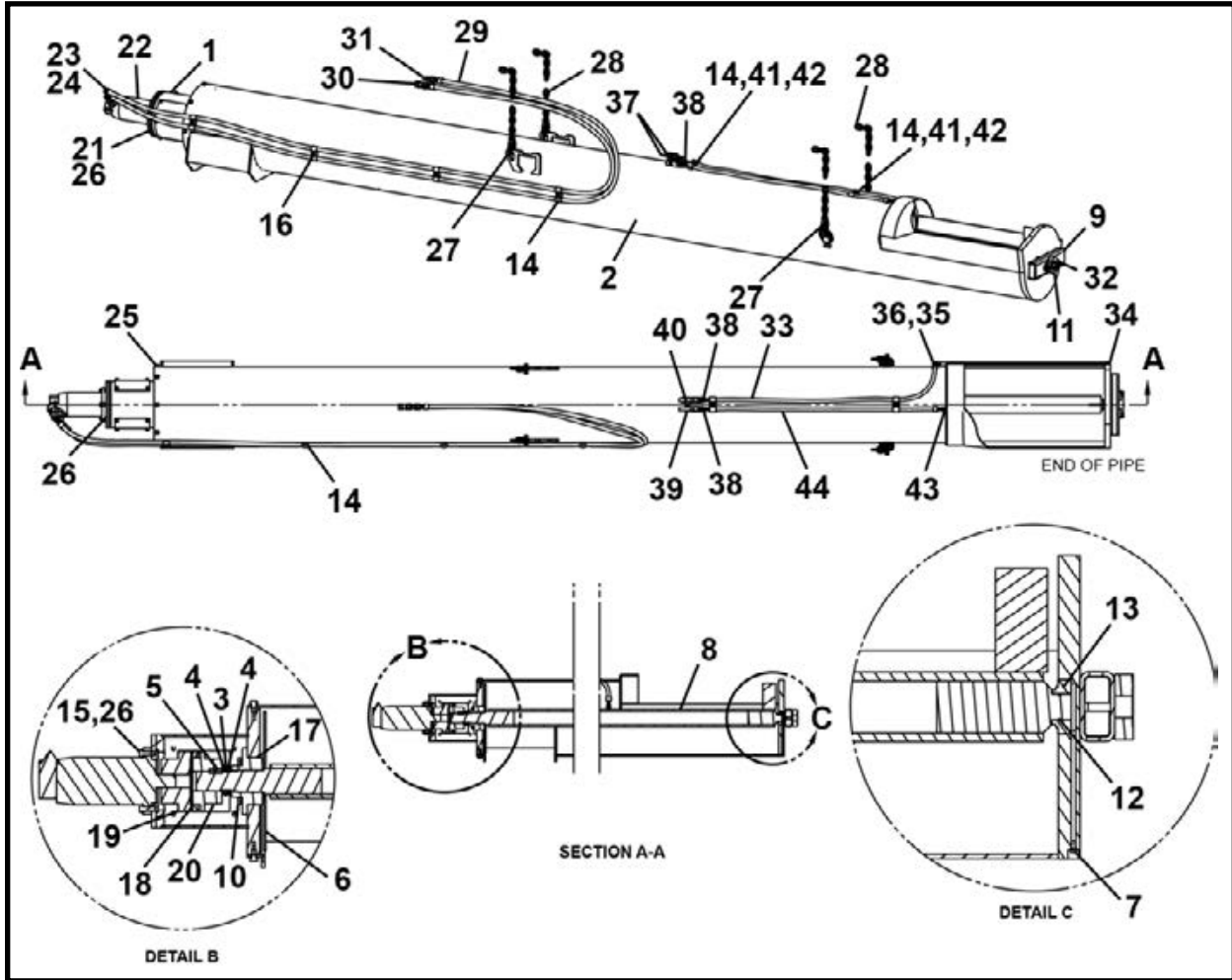
ITEM	QTY	PART NO.	DESCRIPTION
0	1	F09885F00	CONVEYOR, Screw, 160
1	1	009883A00	WELDMENT, Motor Adaptor
2	1	009881A00	WELDMENT, 16" Pipe (Includes items 2a-2c)
2a	2	023524P00	BRACKET, Conveyor
2b	4	P0001-05-003	BOLT, Hex 5/16 UNC x .75
2c	2	P0079-003	D-RING 1/2
3	1	P0065-109	WASHER, Lock
4	2	P0065-108	NUT, Lock
5	1	P0047-007	KEY
6	1	009874P	WASHER, Conveyor Flighting
7	1	P0063-001	FITTING, Grease 1/4
8	1	009882A00	WELDMENT, 16" Screw
9	22	P0045-008	WASHER, Lock 1/2
10	6	P0001-08-008	BOLT, Hex 1/2-13 x 2
11	1	P0065-017	BEARING, Pivot End
12	1	P0085-028	O-RING
13	1	P0065-004	BEARING
14	4	002269P01	CLAMP, Line
15	4	P0045-005	WASHER, Lock 5/16
16	4	P0004-05-000	NUT, 5/16
17	1	P0065-107	BEARING
18	1	P0305-134C	INSERT, Coupler

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**160 SCREW CONVEYOR, F09885F00**  
**160 SCREW CONVEYOR (SN F09885F04 & Before)**

ITEM	QTY	PART NO.	DESCRIPTION
19	1	P0305-134B	COUPLER, Spline
20	1	P0305-134A	COUPLER, Keyway
21	1	009893P00	PLATE, Mounting
22	1	P0304-145	MOTOR, Hydraulic
23	2	P0300-167	FITTING, 10MB-08FP
24	2	P0300-173	SWIVEL, 1/2 Male, 45 Degree
25	8	P0001-08-004	BOLT, 1/2 UNC x 1
26	8	P0001-08-006	BOLT, 1/2 UNC x 1.5
27	4	P0098-010	LINK, 3/8
28	4	P0094-003-030	CHAIN, 3/8 x 30
29	2	A10320A0-200	HOSE ASSEMBLY, 1/2 x 200
30	1	P0100-004A	COUPLER, Quick 1/2 Female
31	1	P0100-004B	COUPLER, Quick 1/2 Male

**160 SCREW CONVEYOR, F09885F00**  
**160 SCREW CONVEYOR (SN F09885F05 & After)**



ITEM	QTY	PART NO.	DESCRIPTION
0	1	F09885F00	CONVEYOR, Screw, 160
1	1	009883A00	WELDMENT, Motor Adaptor
2	1	009881A00	WELDMENT, 16" 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	P0065-109	WASHER, Lock
4	2	P0065-108	NUT, Lock
5	1	P0047-007	KEY
6	1	009874P	WASHER, Conveyor Flighting
7	1	P0063-001	FITTING, Grease 1/4
8	1	009882A00	WELDMENT, 16" Screw
9	1	023544A	SPACER, Tube
10	4	P0001-08-008	BOLT, Hex 1/2-13 x 2
11	1	P0065-017	BEARING, Pivot End
12	1	P0085-028	O-RING
13	1	P0065-004	BEARING
14	4	002269P01	CLAMP, Line
15	4	P0040-008	WASHER, Hardened Flat 1/2
16	4	P0004-05-000	NUT, 5/16
17	1	P0065-107	BEARING

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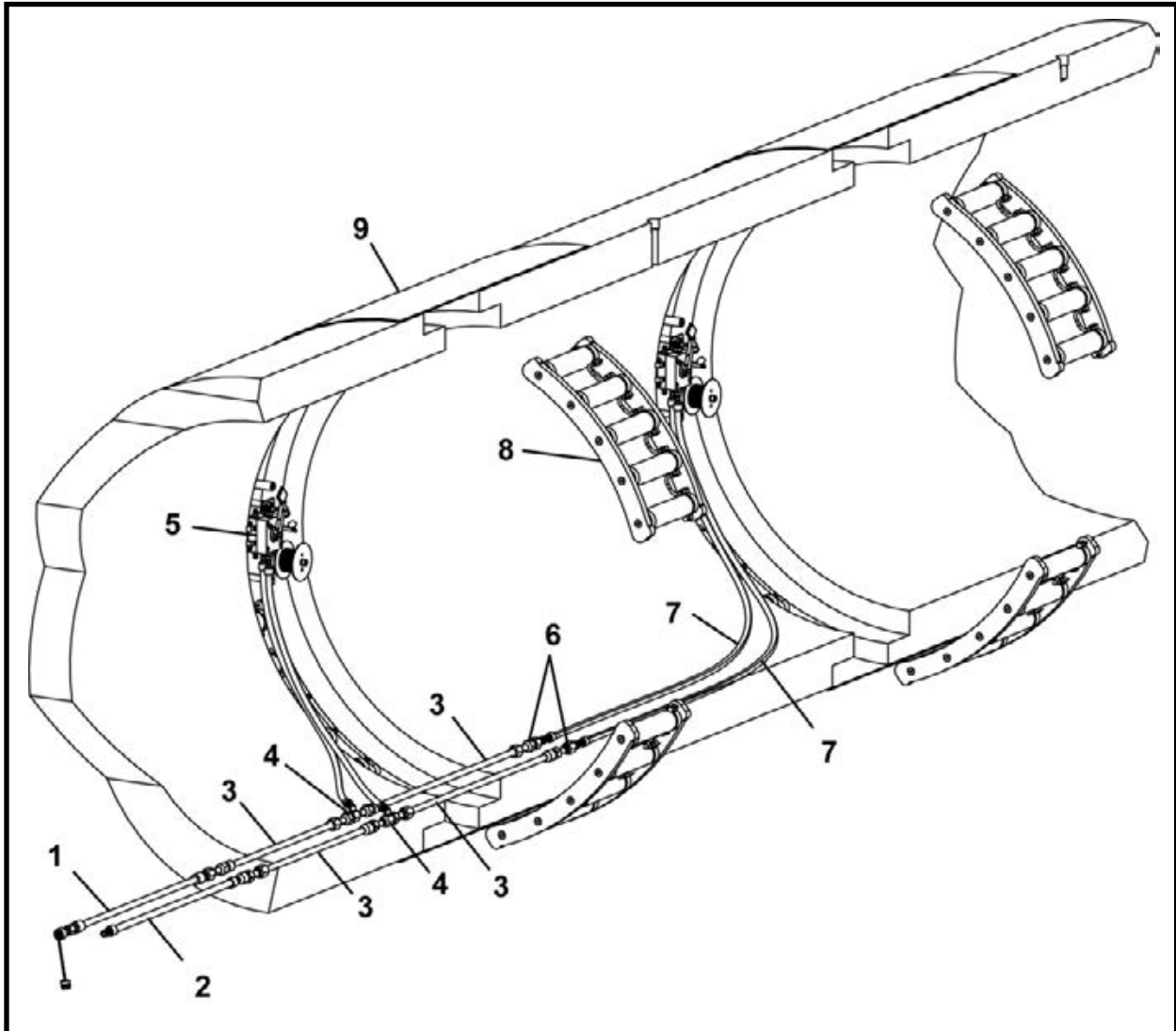
**160 SCREW CONVEYOR, F09885F00**  
**160 SCREW CONVEYOR (SN F09885F05 & After)**

ITEM	QTY	PART NO.	DESCRIPTION
18	1	P0305-165	INSERT
19	1	P0305-230	COUPLER
20	1	P0305-134A	COUPLER, Keyway
21	1	009876P	ADAPTER, Motor
22*	1	P0304-338	MOTOR, Hydraulic
23	2	P0300-068	FITTING, 16MB-12FP
24	2	P0300-024	FITTING, 12MP-08FPX45
25	8	P0001-08-004	BOLT, Hex 1/2 UNC x 1
26	8	P0001-08-006	BOLT, Hex 1/2 UNC x 1.5
27	4	P0098-010	LINK, 3/8
28	4	P0094-003-030	CHAIN, 3/8 x 30
29	2	A10320A0-200	HOSE ASSEMBLY, 1/2 x 200
30	1	P0100-004A	COUPLER, Quick 1/2 Female
31	1	P0100-004B	COUPLER, Quick 1/2 Male
32	2	P0001-08-014	BOLT, Hex 1/2 UNC x 3.5

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

## **NOTES**

## INTERMEDIATE JACKING STATION



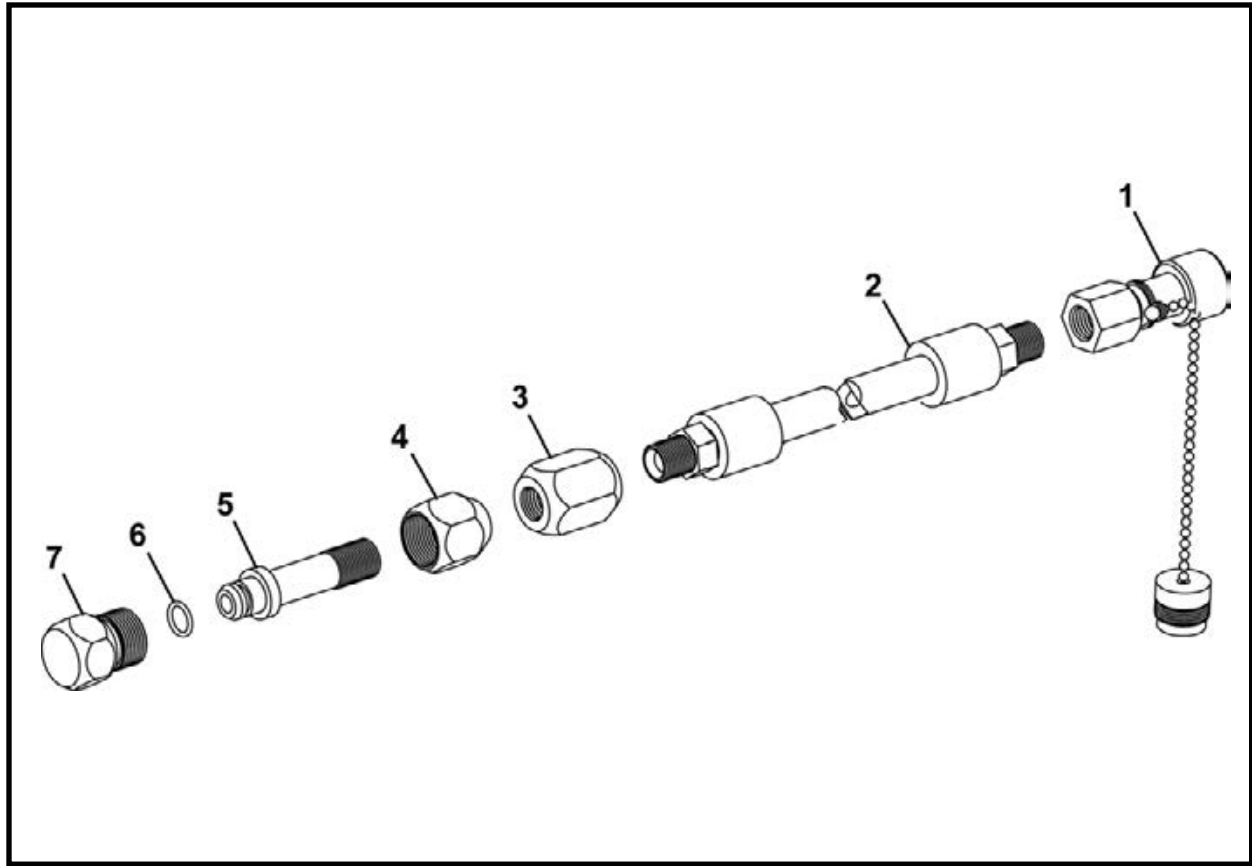
ITEM	QTY	PART NO.	DESCRIPTION
1*	1	F09802F01	STARTER HOSE, High Pressure 30'
2*	1	F27868F	STARTER HOSE, Low Pressure 30'
3*	AR	F09800F00	TUNNEL LINE
4*	AR	F09804F00	TEE CONNECT
5*	AR	F04908F01	VALVE, IJS (With Cable)
6*	1	F09805F00	STARTER CONNECTION
7	2	A10311A-xxx	HOSE ASSEMBLY, 3/8 JIC x length
8.1*	4	007299A00	IJS SEGMENT ASSEMBLY - 48SC/420
8.2*	4	007300A00	IJS SEGMENT ASSEMBLY - 480
8.3*	5	007301A00	IJS SEGMENT ASSEMBLY - 540
9**	AR	-	IJS HOUSING

AR - As Required (Per Job)

\* Refer to this section for parts information.

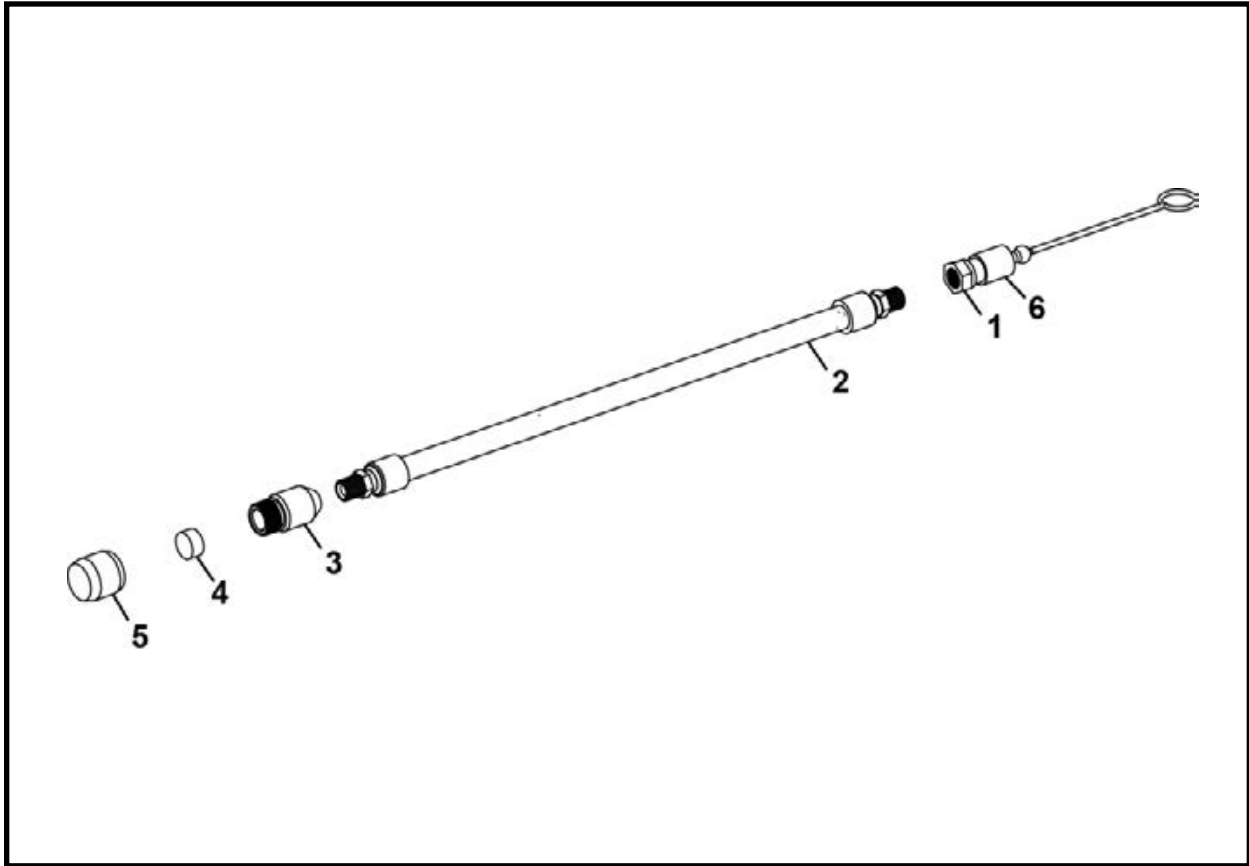
\*\* Contact your Akkerman Sales Representative for information regarding IJS housings.

## IJS STARTER HOSE 30 FT (HIGH PRESSURE) ASSEMBLY, F09802F01



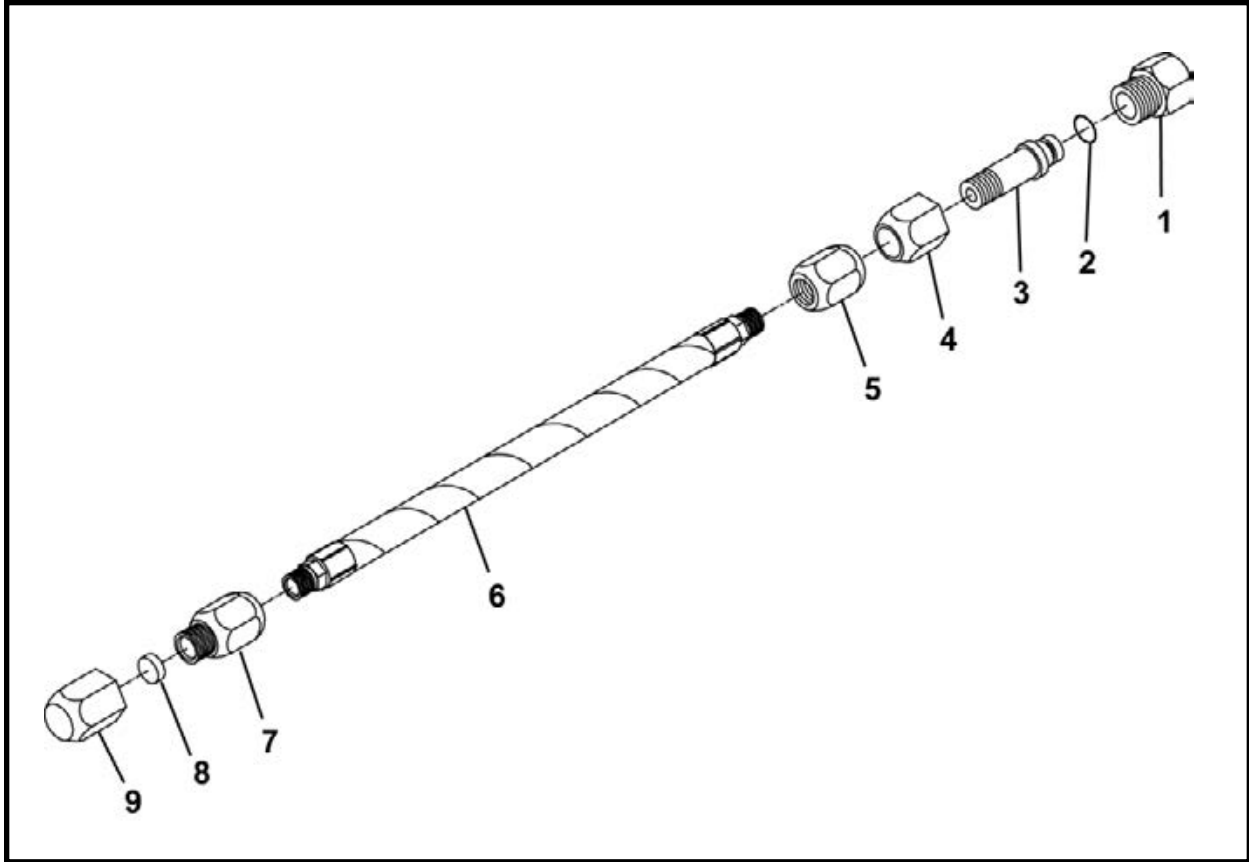
ITEM	QTY	PART NO.	DESCRIPTION
0	1	F09802F01	HOSE, High Pressure Starter 30'
1	1	P0100-001B	COUPLER, Male
2	1	A10420A-360	HOSE ASSEMBLY, 1/2 x 360
3	1	009812P01	COUPLER, Hi-Pressure 1/2 NPT
4	1	005135P00	COUPLER, 1/2
5	1	005134P00	COUPLER, Male 1/2
6	1	P0085-113	ORING
7	1	009808P00	CAP, Female

## IJS STARTER HOSE 30 FT (LOW PRESSURE) ASSEMBLY, F09803F01



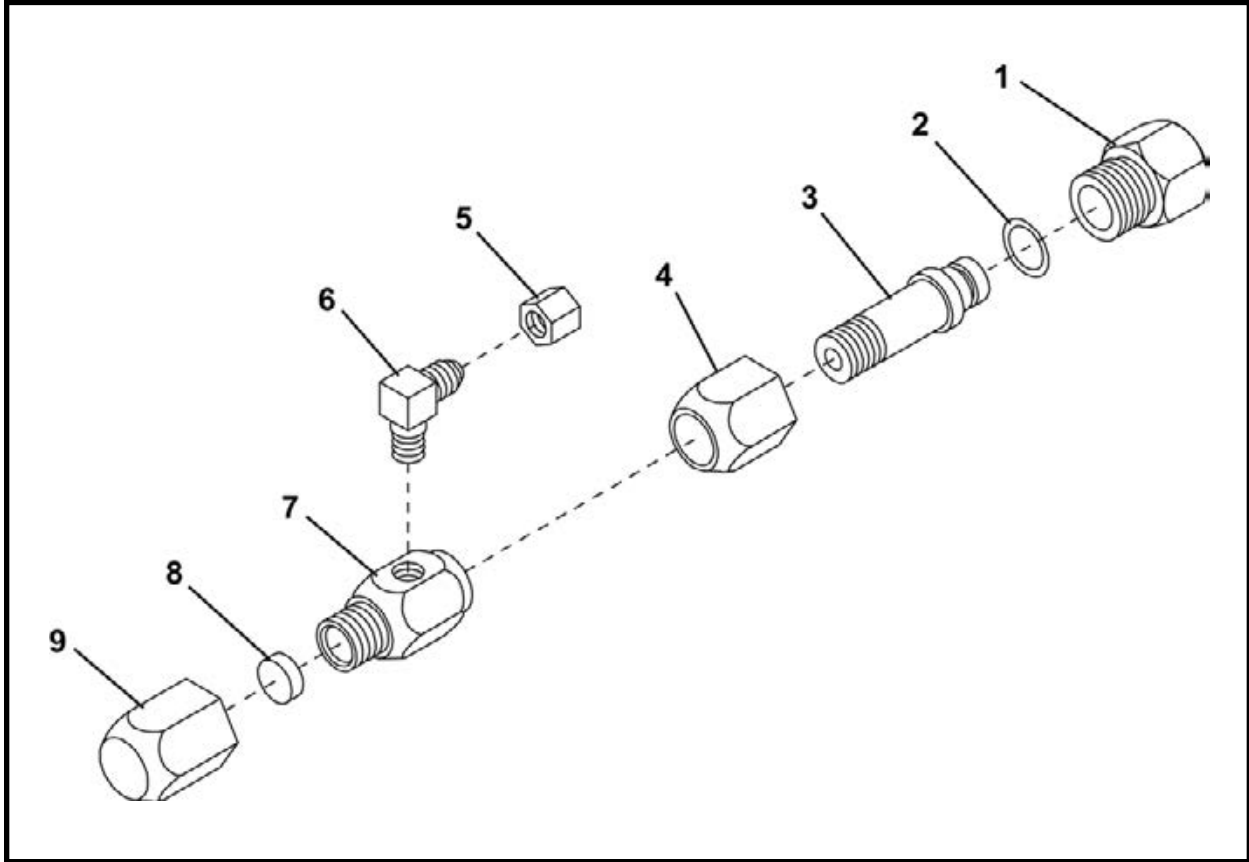
ITEM	QTY	PART NO.	DESCRIPTION
0	1	F09803F01	IJS STARTER HOSE ASSEMBLY, Low Pressure
1	1	P0100-013B	NIPPLE, Female 1/2 NPT
2	1	A10320A-360	HOSE ASSEMBLY 1/2 x 360
3	1	009809P00	COUPLER, Female 1/2
4	1	007085P00	PLUG, Coupler Cap
5	1	009811P01	CAP, Male
6	1	P0100-013D	PLUG, Dust

## 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

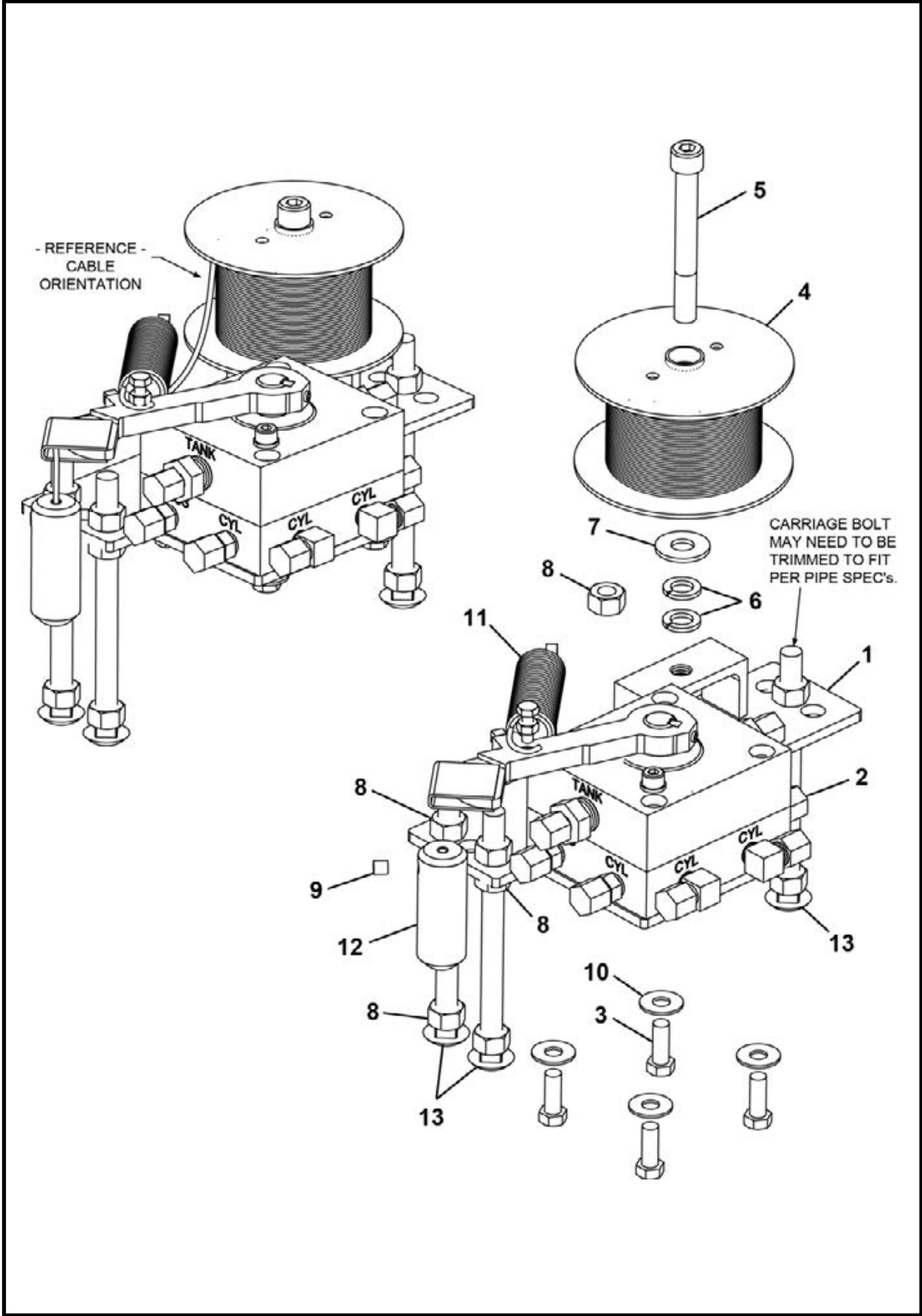
## IJS TEE CONNECTOR, F09804F00



ITEM	QTY	PART NO.	DESCRIPTION
0	1	F09804F00	TEE CONNECTOR, IJS
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.

IJS VALVE (With Cable), F04908F01



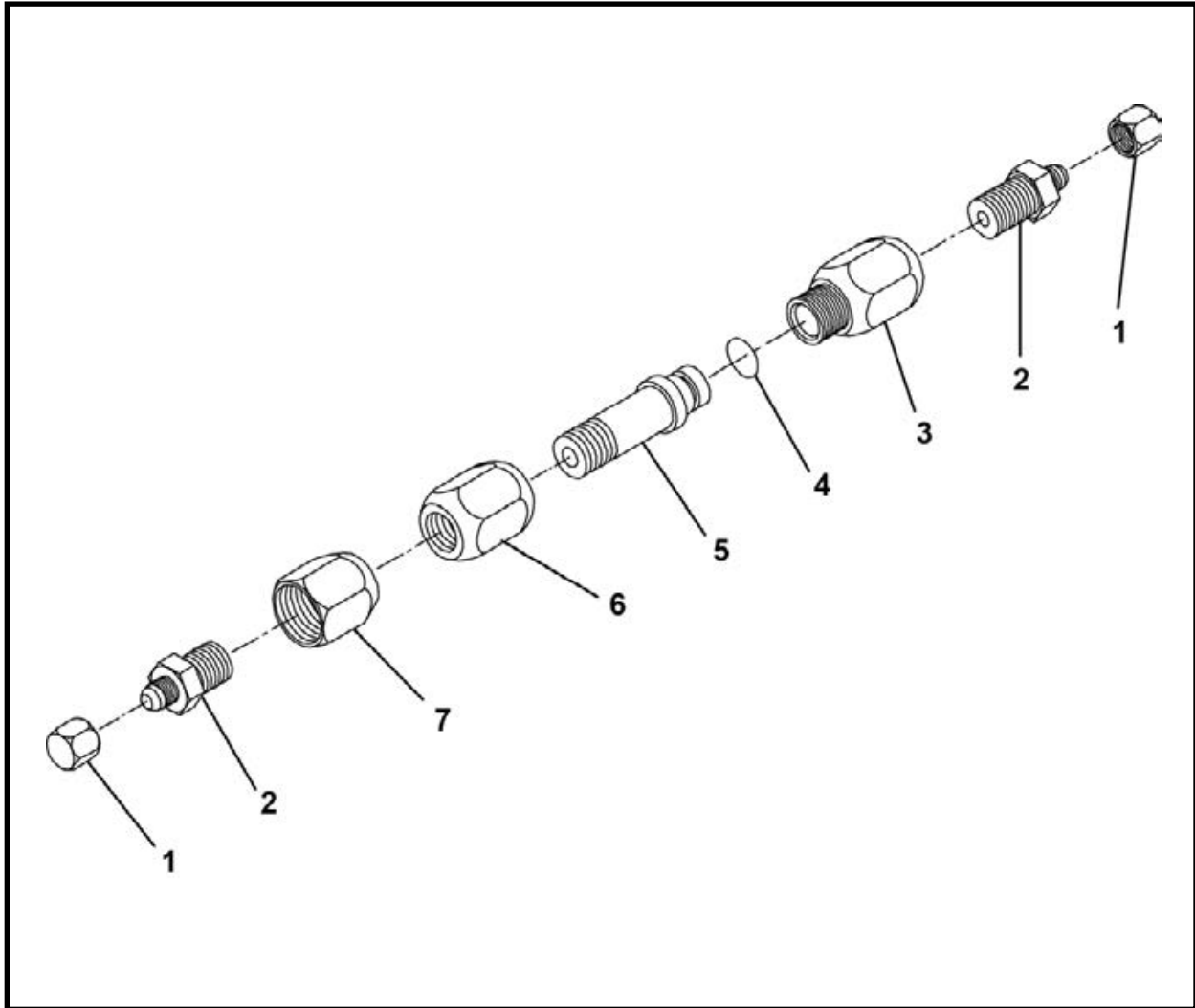
## IJS VALVE (With Cable), F04908F01

ITEM	QTY	PART NO.	DESCRIPTION
0	1	F04908F01	IJS VALVE (With Cable)
1	1	005764A00	PLATE ASSEMBLY
2*	1	004725A00	VALVE
3	4	P0001-06-004	BOLT, Hex 3/8 UNC x 1
4	1	002323A	ASSEMBLY, Cable & Spool (Includes items 4a - 4b)
4a	1	002373A00	SPOOL ASSEMBLY
4b	7200 LI	P0075-001	CABLE
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	10	P0003-08-000	NUT, 1/2 UNC
9	1	P0033-05-004	SCREW, Socket Set 5/16 x .25
10	4	P0040-006	WASHER, Hardened Flat 3/8
11	1	P0070-031	SPRING
12	1	001335P00	WEIGHT, Valve
13	3	P0026-011	BOLT, Carriage 1/2 x 6.5

\* Refer to Section 7, Valves for parts information.

LI - Linear Inch

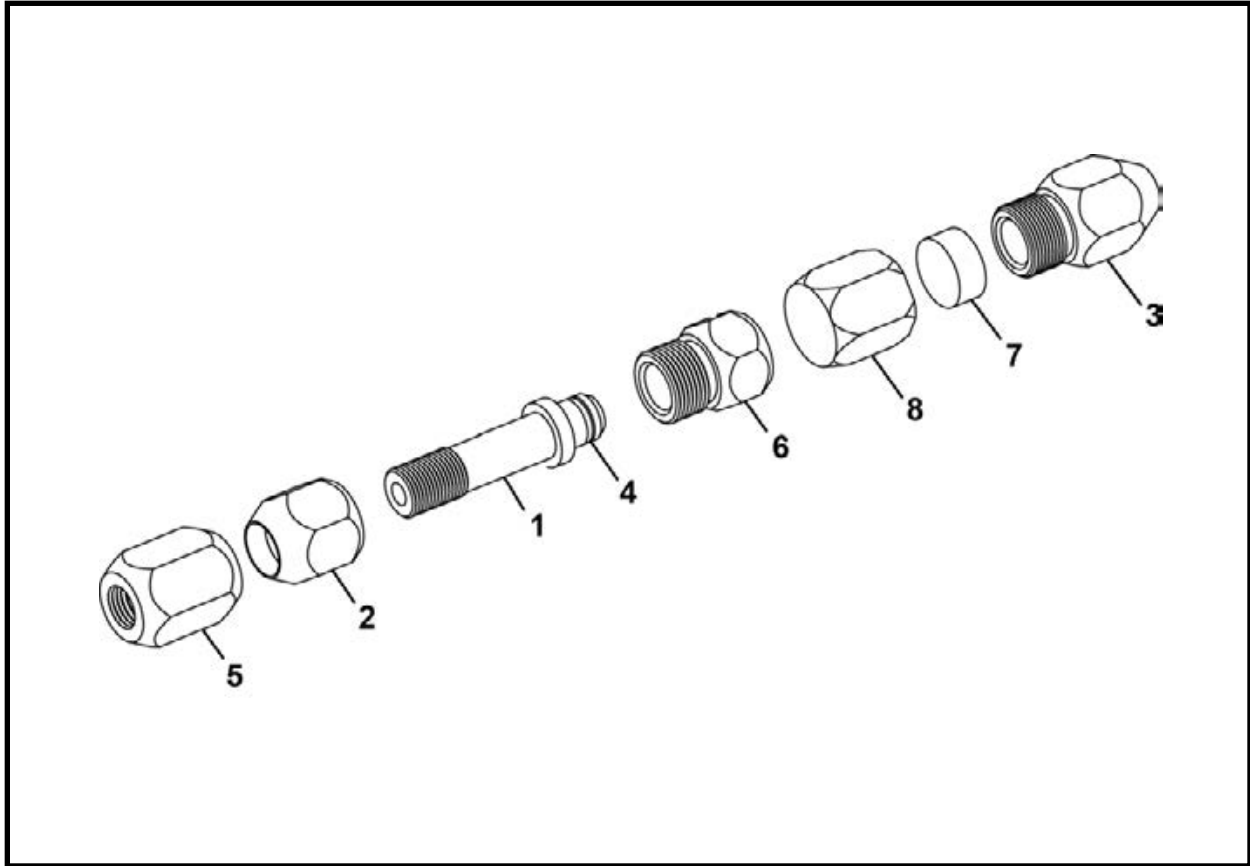
## IJS STARTER CONNECTION, F09805F00



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

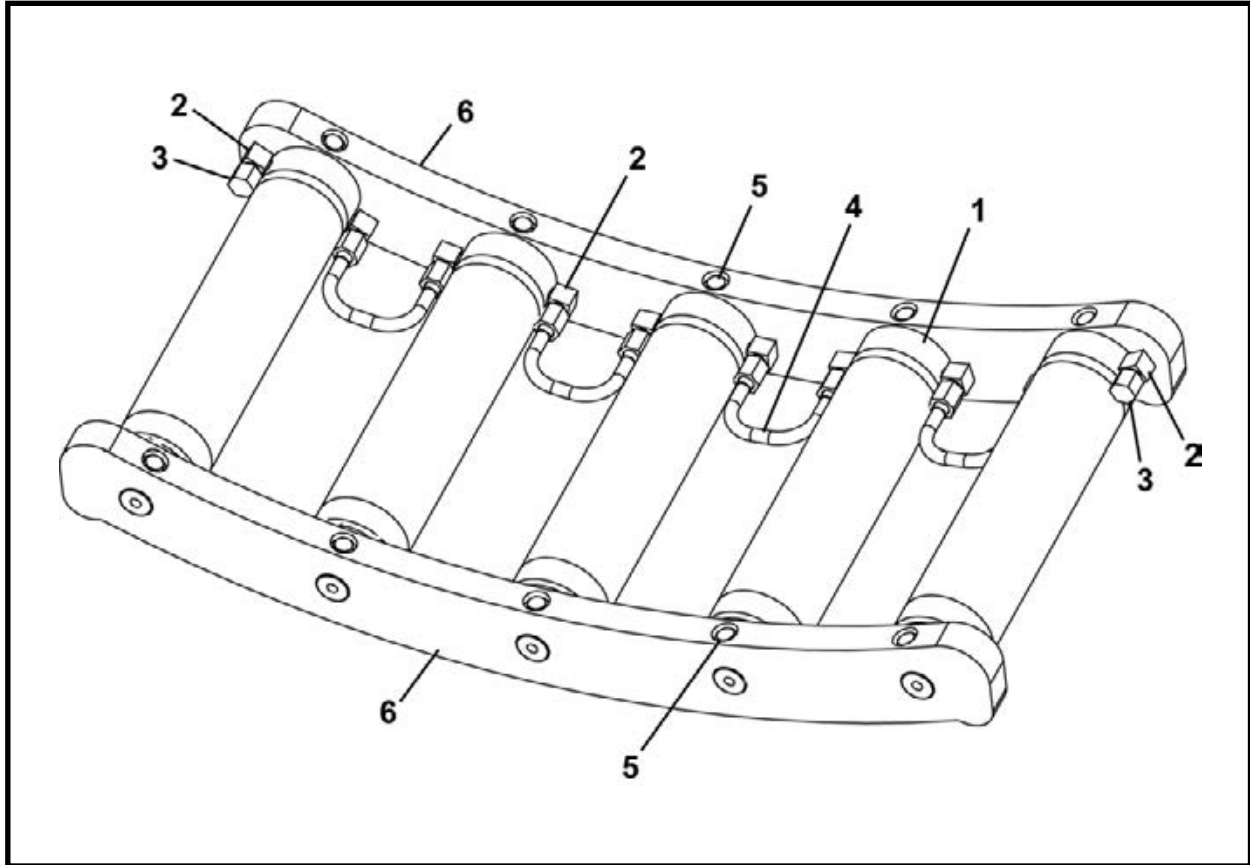
\* Included in IJS Coupler Assembly, 005133A02. Refer to this section for parts information.

## 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

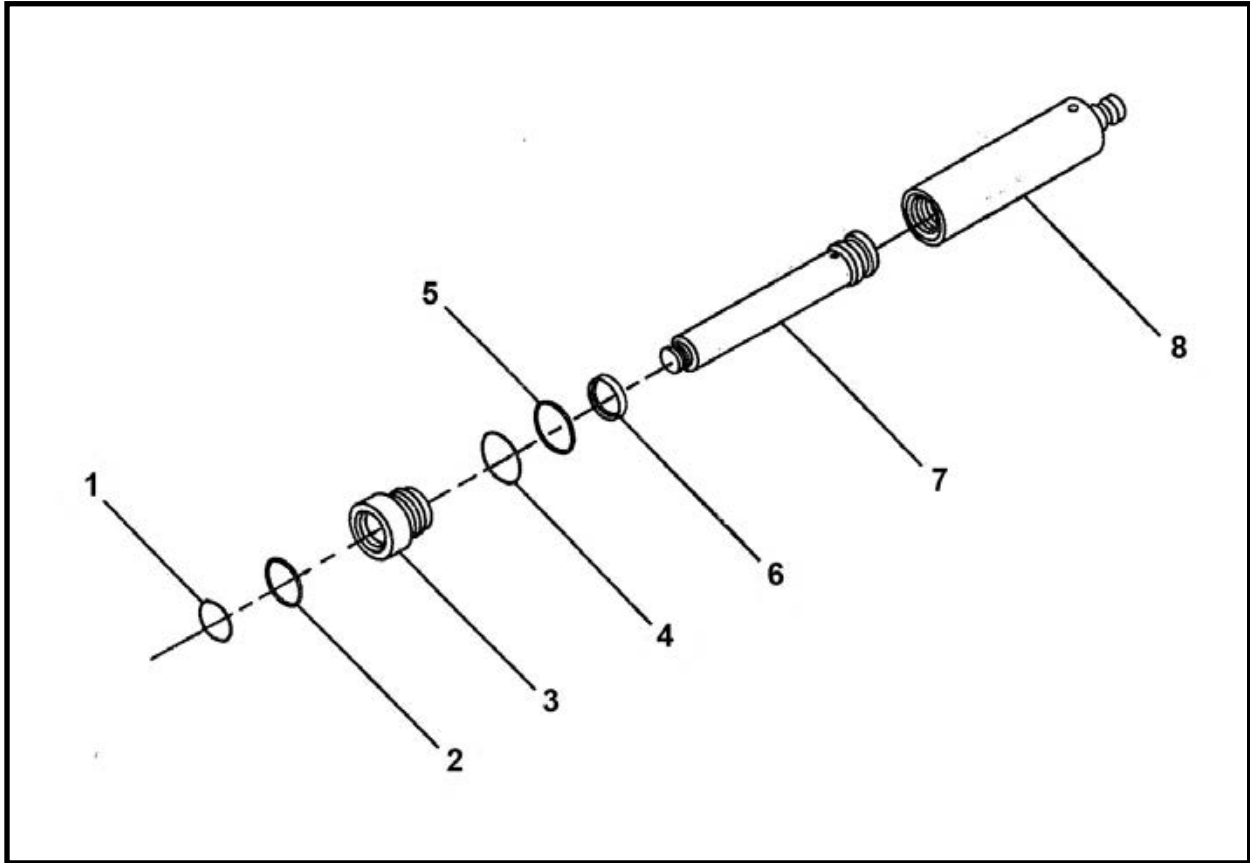
## IJS SEGMENT ASSEMBLY



ITEM	QTY	PART NO.	DESCRIPTION
0.1	1	007299A00	IJS SEGMENT ASSEMBLY - 48SC /420
0.2	1	007300A00	IJS SEGMENT ASSEMBLY - 480
0.3	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	F01480F00	END IRONS, Plate - 48SC /420
6.2	2	F01390F00	END IRONS, Plate - 480
6.3	2	F07297F00	END IRONS, Plate - 540

\* Refer to this section for parts information.

## IJS CYLINDER ASSEMBLY, F03531F02

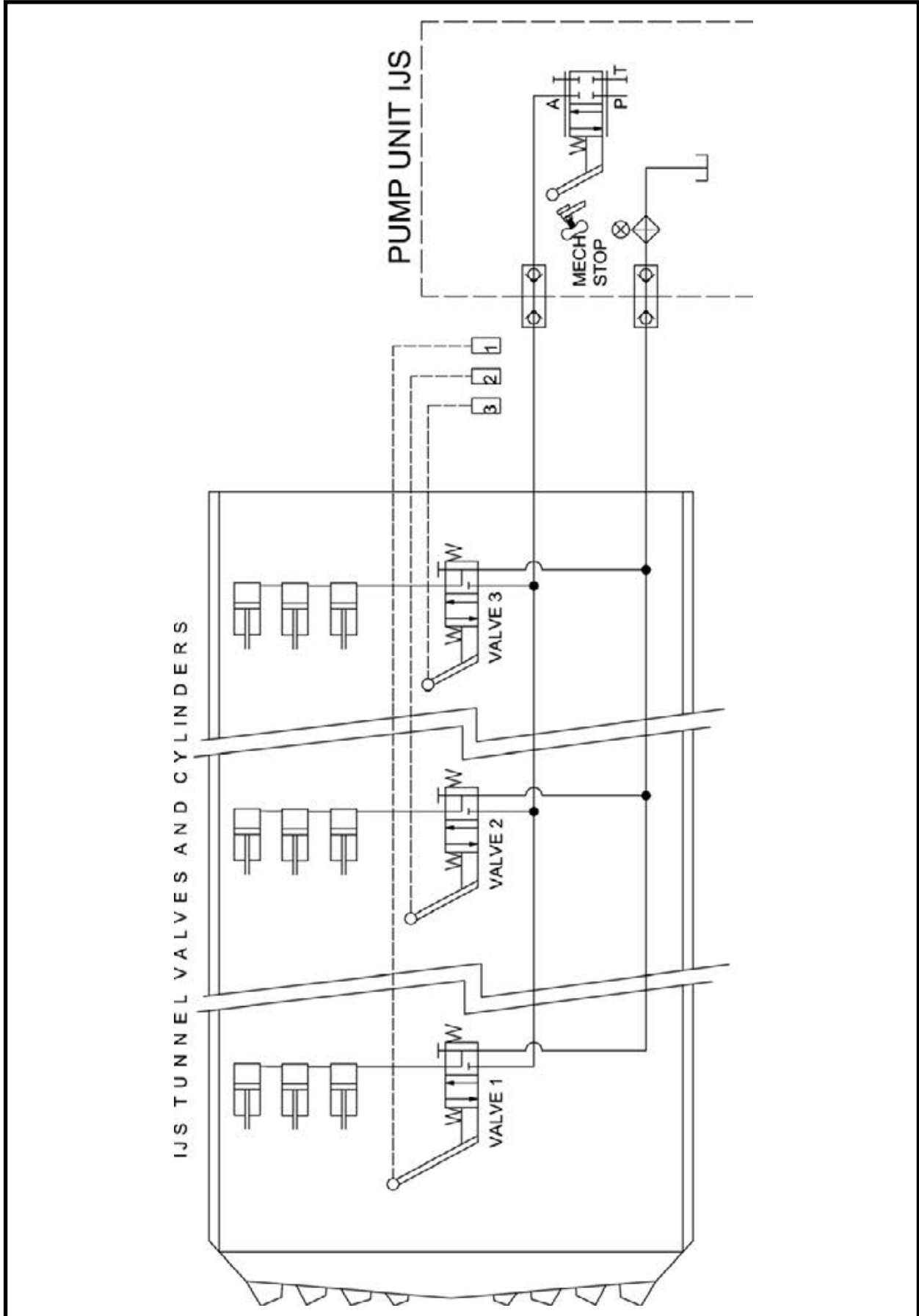


ITEM	QTY	PART NO.	DESCRIPTION
0	1	F03531F02	CYLINDER ASSEMBLY, IJS
1*	1	P0087-001	WIPER
2*	1	P0086-003	POLYSEAL
3	1	003095P02	CAP, End
4*	1	P0084-139	RING, Back-Up
5*	1	P0085-139	ORING
6*	1	P0088-002	RING, Wear
7	1	003348P02	SHAFT
8	1	003364A01	BARREL
9	REF	007344A00	KIT, Seal

\* Included in item 9, 007344A00 Seal Kit.

NOTE: Apply anti-sieze to barrel/gland threads.

# INTERMEDIATE JACKING STATION HYDRAULIC SCHEMATIC





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