

SKID-STEER ROTARY HEAD

72"(1829MM) ROTARY HEAD

SERIAL #27200+

WARRANTY + SERVICE 888.960.0364

PARTS 888.960.0361



DIAMONDMOWERS.COM

TABLE OF CONTENTS

ROTARY HEADS

DECK ASSEMBLY -HIGH FLOW OPTION.....	4
DECK ASSEMBLY - LOW FLOW OPTION.....	5
DRIVE ASSEMBLY - GEAR MOTOR, 17-20GPM(65-76LPM).....	6
DRIVE ASSEMBLY - GEAR MOTOR, 21-28GPM(79-106LPM).....	7
DRIVE ASSEMBLY - GEAR MOTOR, 29-34GPM(110-129LPM).....	8
DRIVE ASSEMBLY - GEAR MOTOR, 35-41GPM(132-155LPM).....	9
DECK ASSEMBLY - PISTON MOTOR.....	10
DRIVE ASSEMBLY - PISTON MOTOR, 21-28GPM(79-106LPM).....	11
DRIVE ASSEMBLY - PISTON MOTOR, 29-34GPM(110-129LPM).....	12
DRIVE ASSEMBLY - PISTON MOTOR, 35-41GPM(132-155LPM).....	13
CHAIN CURTAIN ATTACHMENT ASSEMBLY.....	14
DECAL ASSEMBLY.....	15

DECK ASSEMBLIES

MOTOR ASSEMBLY - 30-0518.....	17
MOTOR ASSEMBLY - 30-0520.....	18
MOTOR ASSEMBLY - 30-0524.....	19
MOTOR ASSEMBLY - 30-0528.....	20
MOTOR ASSEMBLY - 30-0529.....	21
SPINDLE ASSEMBLY - 35-0107.....	22
SPINDLE ASSEMBLY - 35-0204.....	23

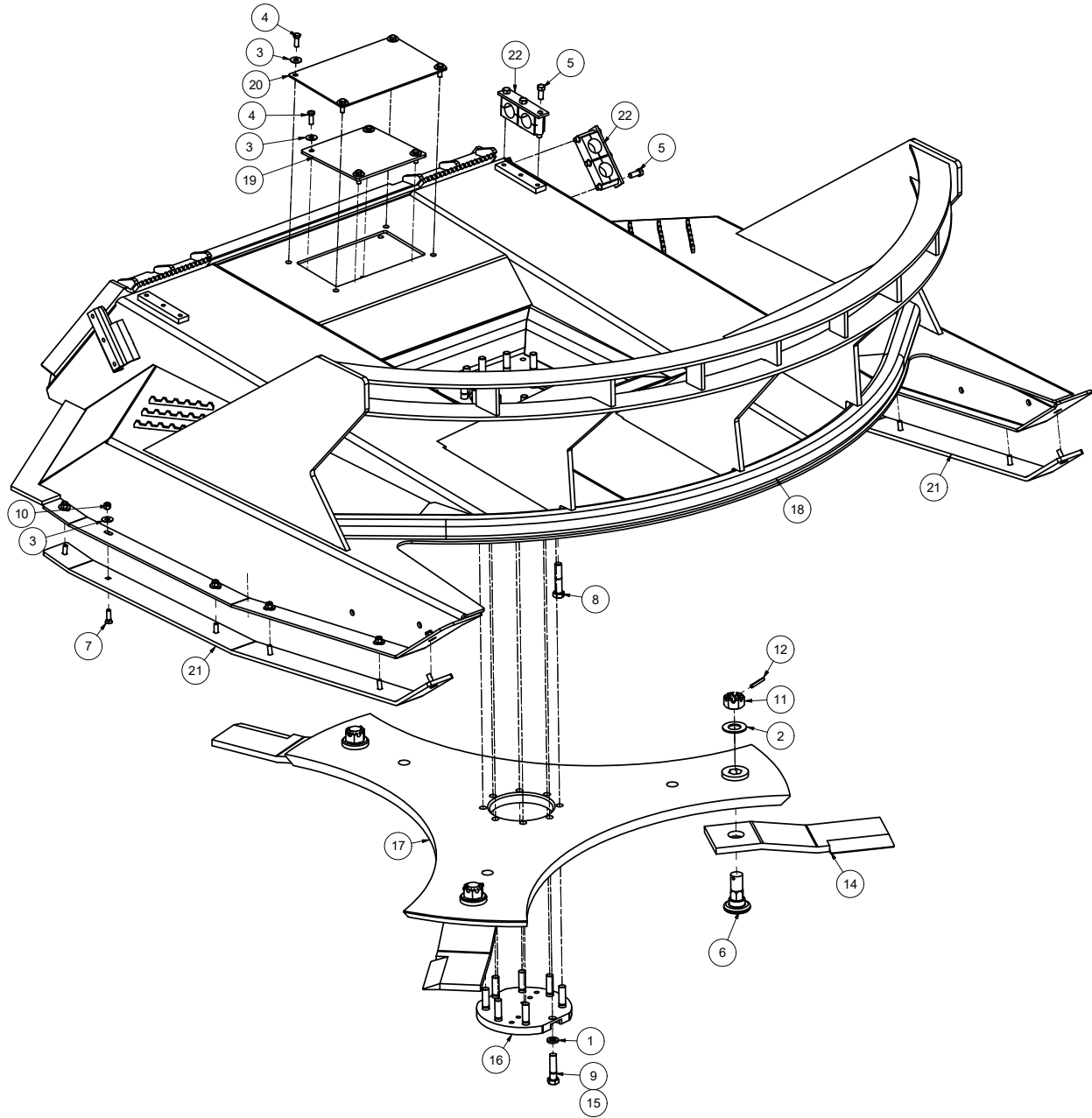
APPENDIX

S.A.E. TORQUE SPECIFICATIONS.....	25
METRIC TORQUE SPECIFICATIONS.....	26

ROTARY HEADS

ROTARY HEAD

DECK ASSEMBLY - LOW FLOW OPTION



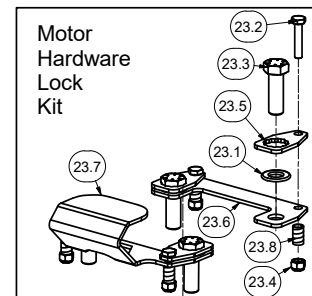
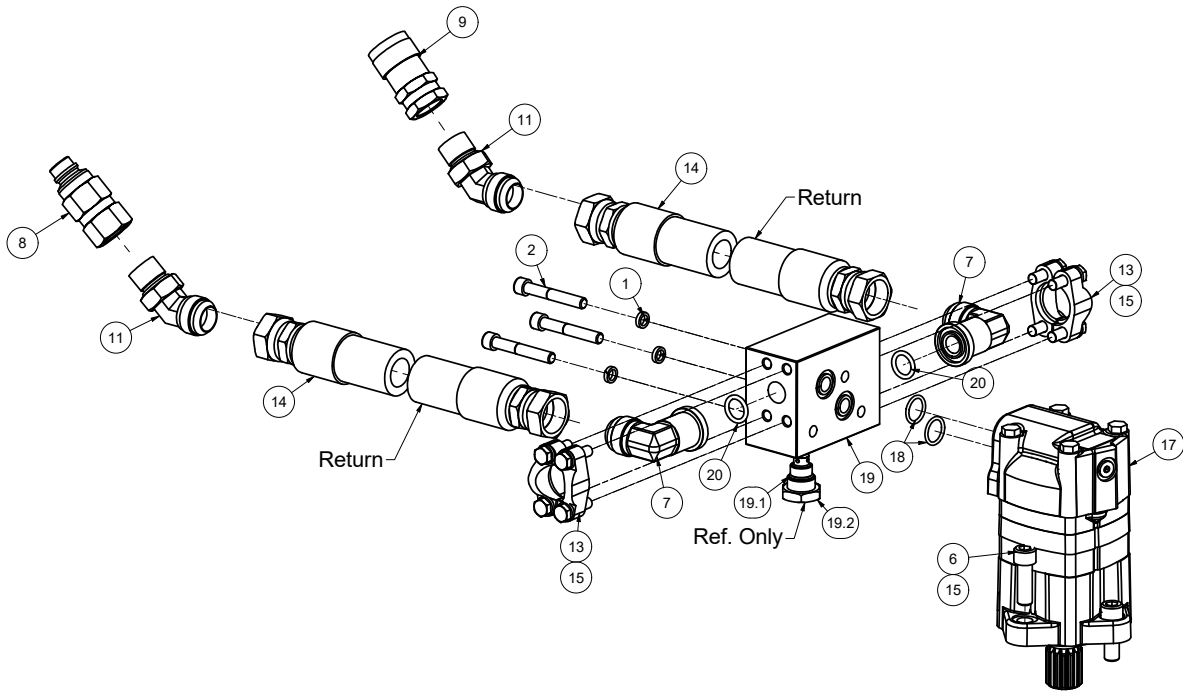
REF#	PARTS DESCRIPTION	REQ	PART#	TORQUE lubricated ft-lbs	TORQUE lubricated Nm	REF#	PARTS DESCRIPTION	REQ	PART#	TORQUE lubricated ft-lbs	TORQUE lubricated Nm
1	5/8 HIGH ALLOY LOCK WASHER, YELLOW ZINC	8	11-0043			12	ROLL PIN, 1/4" X 2"	3	11-2005		
2	1-1/8 X 2.25 THRU-HARDENED SAE FLAT WASHER, YZ	3	11-0057			**13	DECAL KIT, DLR W-D3 SPINDLE	1	15-5064		
3	3/8 THRU-HARDENED FLAT WASHER, YELLOW ZINC	20	11-0092			14	BRUSH BLADE - 5/8"	3	22-0006		
4	3/8-16 X 1 GR 5 HEX CAP, ZINC	8	11-0532	23	31	15	LOCTITE 262 RED, .017 OZ	1	24-0193		
5	7/16-14 X 1 GR 5, HEX CAP SCREW, ZINC	6	11-0584	50	67	16	BOLT PROTECTOR, FBS, D3 SPINDLE	1	24-0224		
6	1 1/8" -12 NF HEX BASE D3 BLADE BOLT	3	11-0759			17	D3 72" DLR DISC	1	24-0285		
7	3/8-16 X 1-1/4 GR 5 FLAT HEAD PLOW BOLT, PLAIN	12	11-0804			18	D3 72" DLR	1	25-0220		
8	5/8-11 X 3 GR 8 HEX CAP, YELLOW ZINC	12	11-0901	159	215	19	60 SKID FBC ACCESS PORT COVER	1	31-0455		
9	5/8-11 X 2-1/2 GR 8 HEX CAP, YELLOW ZINC	8	11-0971	**159	**215	20	UPPER DECK COVER, FBS060, D3	1	31-0537		
10	3/8" NC NYLOCK NUT	12	11-1024	23	31	21	SKID SHOE, 72" SKID STEER - PUSH BAR	2	42-0032		
11	1-1/8"-12 NF SLOTTED HEX NUT GR 8	3	11-1050	400	543	22	1" HOSE CLAMP KIT	2	44-0259		

* NOT SHOWN
 ** CRITICAL TORQUE VALUES **MUST** BE FOLLOWED.

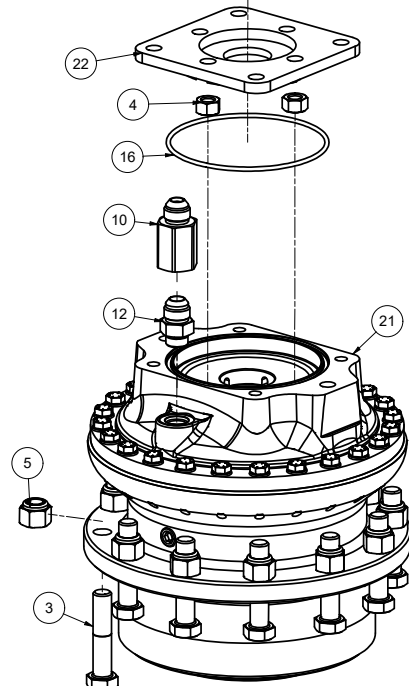
25-1810 Rev 000

ROTARY HEAD

DRIVE ASSEMBLY - GEAR MOTOR, 17-20GPM(65-76LPM)



REF#	PARTS DESCRIPTION	REQ	PART#	TORQUE lubricated ft-lbs	TORQUE lubricated Nm
1	3/8 HIGH COLLAR LOCK WASHER	3	11-0054		
2	3/8-16 X 2-1/2 ASTM A574 SKT CAP, BLACK OXIDE	3	11-0701	38	52
3	5/8-11 X 3 GR 8 HEX CAP, YELLOW ZINC	12	11-0901	159	215
4	1/2-13 GR 8 HEX NUT, YELLOW ZINC	4	11-1040		
5	5/8-11 GR 8 NYLOCK NUT, YELLOW ZINC	12	11-1073		
6	1/2-13 X 1 1/2 ASTM A574, SOCKET CAP SCREW, BLACK OXIDE ALLOY FINISH	4	11-1164	**93	**126
7	ELBOW #12 FLG X 1MJIC	2	21-1302		
8	1/2" MALE QUICK COUPLER X 3/4" SAE, FLAT FACE, NO SPILL	1	21-1559		
9	1/2" FEMALE QUICK COUPLER X 3/4" SAE, FLAT FACE, NO SPILL	1	21-1560		
10	JEMTEC D3 SPINDLE RELIEF VALVE	1	21-1653		
11	1MJIC-45DEG X 3/4M-OR, FITTING	2	21-1654		
12	-10 MJIC X -08 MORB	1	21-1706		
13	#12 FLANGE KIT	2	21-2186	20	25
14	HOSE 1 X 103 (1FJIC X 1FJIC)	2	21-4345		
15	LOCTITE 263, .017 OZ (RED)	1	24-0193		
16	O-RING, D3 SPINDLE	1	24-0305		
17	4.9CU 2000 SERIES LOW SPEED HIGH TORQUE MOTOR	1	30-0528		
18	O-RING, ALUMINUM BLOCK 2000 SERIES	2	30-1205		
19	PRESSURE & RETURN BLOCK, 2000 SERIES	1	30-1206		
19.1	CHECK VALVE O-RING	1	33-0084		
19.2	CHECK VALVE, 5 PSI, 30-1206 VALVE BODY	1	30-1338		
20	#12 FLANGE O-RING	2	33-0062		
21	SPINDLE-D3 DIRECT DRIVE SAE C	1	35-0204		
22	LOW FLOW MOTOR PLATE WITH LOCK BASE	1	41-1835		
23	MOTOR HARDWARE LOCK KIT	1	44-0916		
23.1	1/2 SAE FLAT WASHER GR 8, YELLOW ZINC	4	11-0042		
23.2	1/4 X 1-1/4 NC HEX CAP	4	11-0702	6	9
23.3	1/2-13 X 1-1/2 GR 8 HEX CAP SCREW, YELLOW ZINC	4	11-0972	**80	**108
23.4	Nylock Nut 0.25" non colored	4	11-1022		
23.5	MOTOR BOLT LOCK TAB	4	31-0503		
23.6	V3LOCK BOTTOM	1	31-0504		
23.7	MOTOR LOCKING BASE WITH PRV PROTECTION	1	31-0824		
23.8	BOLT LOCKING TAB SPRING	4	36-0013		
OPTIONAL QUICK COUPLERS					
	5/8 MALE QUICK COUPLER, FLAT FACE		21-1574		
	5/8 FEMALE QUICK COUPLER, FLAT FACE		21-1575		
	3/4 MALE QUICK COUPLER, FLAT FACE		21-1576		
	3/4 FEMALE QUICK COUPLER, FLAT FACE		21-1577		

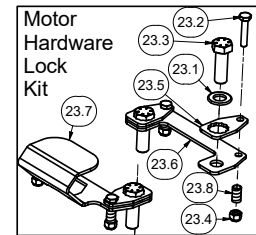
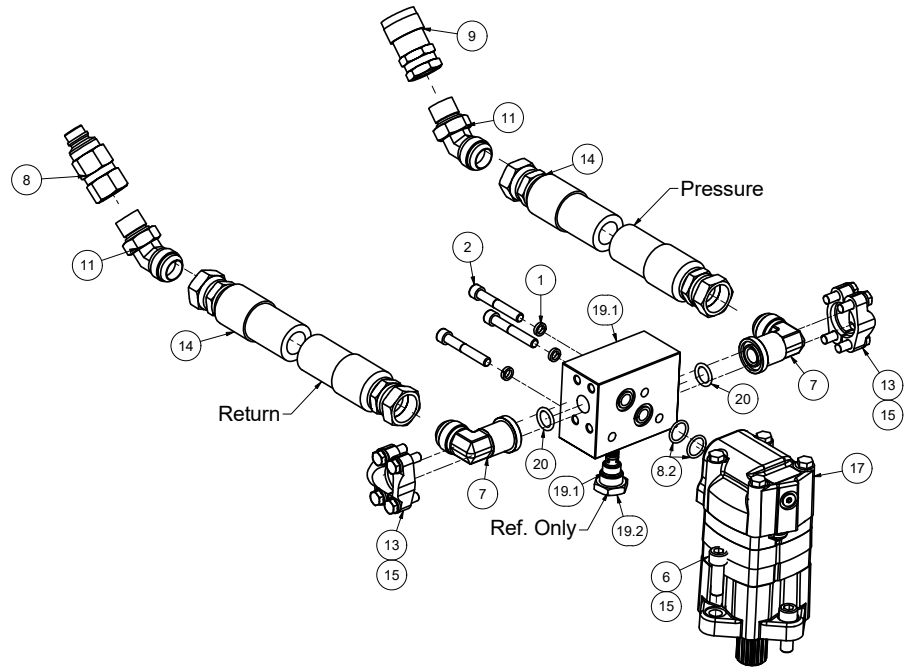


** CRITICAL TORQUE VALUES MUST BE FOLLOWED.

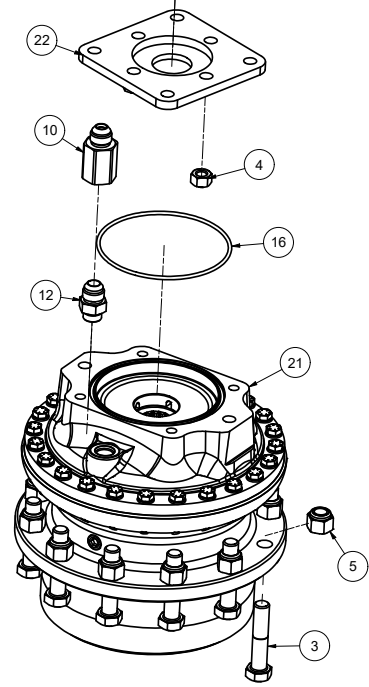
30-0528-1

ROTARY HEAD

DRIVE ASSEMBLY - GEAR MOTOR, 21-28GPM(79-106LPM)



REF#	PARTS DESCRIPTION	REQ	PART#	TORQUE lubricated ft-lbs	TORQUE lubricated Nm
1	3/8 HIGH COLLAR LOCK WASHER	3	11-0054		
2	3/8-16 X 2-1/2 ASTM A574 SKT CAP, BLACK OXIDE	3	11-0701	38	52
3	5/8-11 X 3 GR 8 HEX CAP, YELLOW ZINC	12	11-0901	159	215
4	1/2-13 GR 8 HEX NUT, YELLOW ZINC	4	11-1040		
5	5/8-11 GR 8 NYLOCK NUT, YELLOW ZINC	12	11-1073		
6	1/2-13 X 1 1/2 ASTM A574, SOCKET CAP SCREW, BLACK OXIDE ALLOY FINISH	4	11-1164	**93	**126
7	Elbow, #12 FLG X 1MJIC	2	21-1302		
8	1/2" MALE QUICK COUPLER X 3/4" SAE, FLAT FACE, NO SPILL	1	21-1559		
9	1/2" FEMALE QUICK COUPLER X 3/4" SAE, FLAT FACE, NO SPILL	1	21-1560		
10	JEMTEC D3 SPINDLE RELIEF VALVE	1	21-1653		
11	1MJIC-45DEG X 3/4M-OR, FITTING	2	21-1654		
12	-10 MJIC X -08 MORB	1	21-1706		
13	#12 FLANGE KIT	2	21-2186	20	25
14	HOSE 1 X 103 (1FJIC X 1FJIC)	2	21-4345		
15	LOCTITE 263, .017 OZ (RED)	2	24-0193		
16	O-RING, D3 SPINDLE	1	24-0305		
17	6.2CU 2000 SERIES LOW SPEED HIGH TORQUE	1	30-0529		
18	O-RING, ALUMINUM BLOCK, 2000 SERIES	2	30-1205		
19	PRESSURE & RETURN BLOCK, 2000 SERIES	1	30-1206		
19.1	CHECK VALVE O-RING	1	33-0084		
19.2	CHECK VALVE, 5 PSI, 30-1206 VALVE BODY	1	30-1338		
20	#12 FLANGE O-RING	2	33-0062		
21	SPINDLE-D3 DIRECT DRIVE SAE C	1	35-0204		
22	LOW FLOW MOTOR PLATE WITH LOCK BASE	1	41-1835		
23	MOTOR HARDWARE LOCK KIT	1	44-0916		
23.1	1/2 SAE FLAT WASHER GR 8, YELLOW ZINC	4	11-0042		
23.2	1/4 X 1-1/4 NC HEX CAP	4	11-0702	6	9
23.3	1/2-13 X 1-1/2 GR 8 HEX CAP SCREW, YELLOW ZINC	4	11-0972	**80	**108
23.4	Nylock Nut 0.25" non colored	4	11-1022		
23.5	MOTOR BOLT LOCK TAB	4	31-0503		
23.6	V3LOCK BOTTOM	1	31-0504		
23.7	MOTOR LOCKING BASE WITH PRV PROTECTION	1	31-0824		
23.8	BOLT LOCKING TAB SPRING	4	36-0013		
	OPTIONAL QUICK COUPLERS				
	5/8 MALE QUICK COUPLER, FLAT FACE		21-1574		
	5/8 FEMALE QUICK COUPLER, FLAT FACE		21-1575		
	3/4 MALE QUICK COUPLER, FLAT FACE		21-1576		
	3/4 FEMALE QUICK COUPLER, FLAT FACE		21-1577		

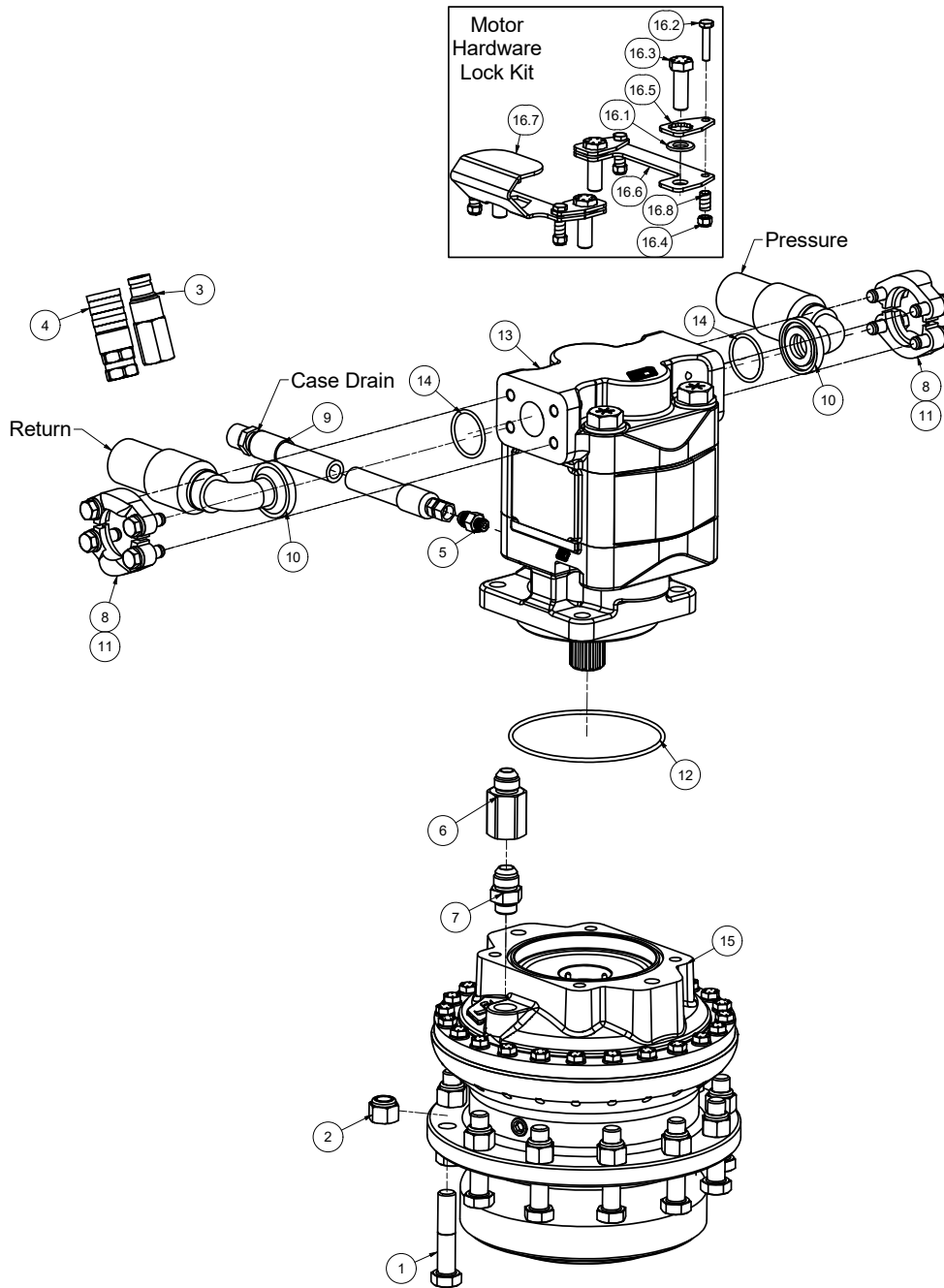


**** CRITICAL TORQUE VALUES MUST BE FOLLOWED.**

30-0529-1 Rev 000

ROTARY HEAD

DRIVE ASSEMBLY - GEAR MOTOR, 29-34GPM(110-129LPM)



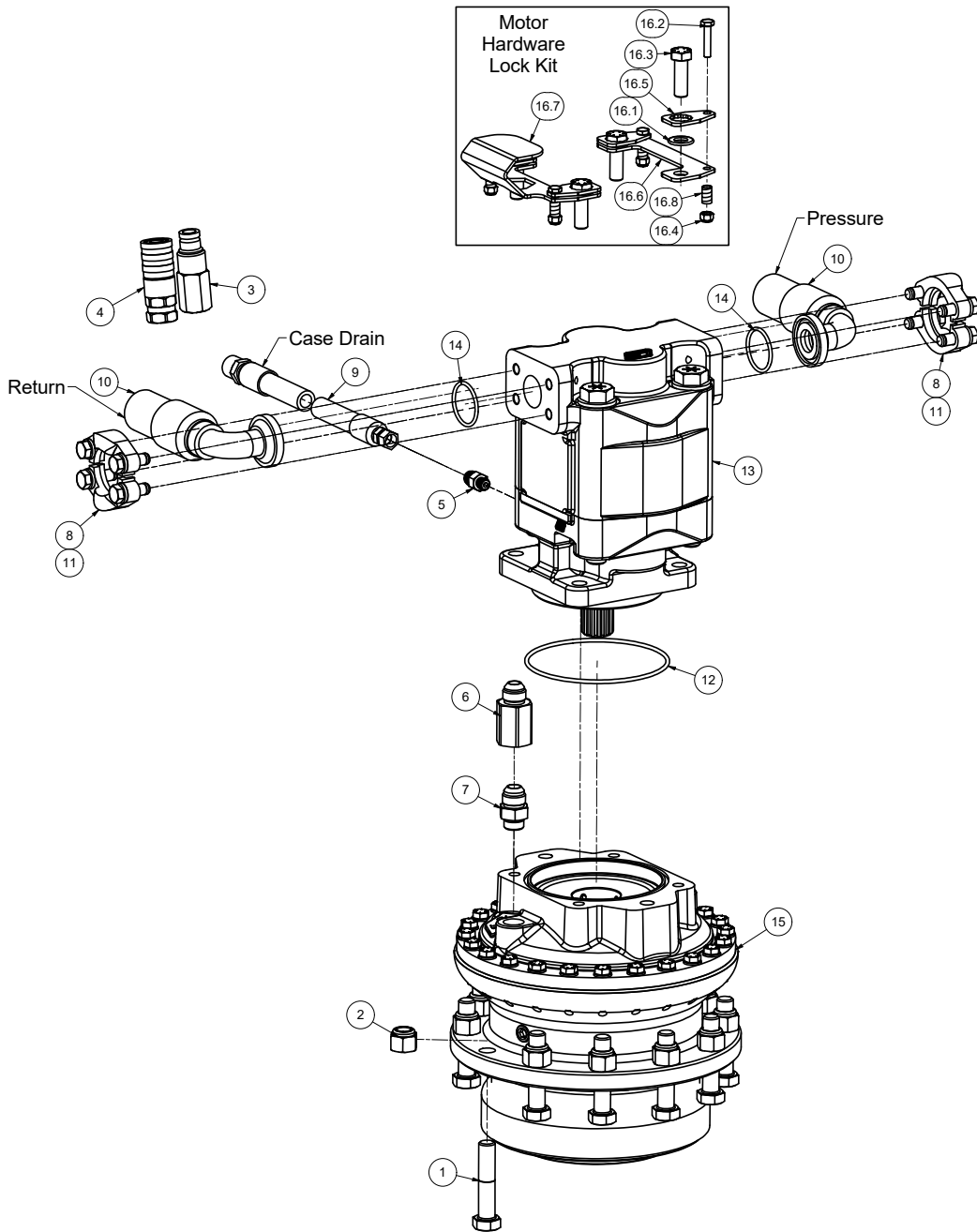
REF#	PARTS DESCRIPTION	REQ	PART#	TORQUE (ft-lbs)	TORQUE (Nm)	REF#	PARTS DESCRIPTION	REQ	PART#	TORQUE (ft-lbs)	TORQUE (Nm)
1	5/8-11 X 3 GR 8 HEX CAP, YELLOW ZINC	12	11-0901	159	215	16	MOTOR HARDWARE LOCK KIT	1	44-0803		
2	5/8-11 GR 8 NYLOCK NUT, YELLOW ZINC	12	11-1073			16.1	1/2 SAE FLAT WASHER GR 8, YELLOW ZINC	4	11-0042		
3	3/8" MALE QUICK COUPLER, FLAT FACE,	1	21-1561			16.2	1/4 X 1-1/4 NC HEX CAP	4	11-0702	6	9
4	3/8" FEMALE QUICK COUPLER, FLAT FACE	1	21-1562			16.3	1/2-13 X 1-1/2 GR 8 HEX CAP SCREW, YZ	4	11-0972	**80	**108
5	ADAPER.25MOR X .375MJIC	1	21-1597			16.4	1/4-20 GR 5 NYLOCK NUT, ZINC	4	11-1022		
6	JEMTEC D3 SPINDLE RELIEF VALVE	1	21-1653			16.5	MOTOR BOLT LOCK TAB	4	31-0503		
7	-10 MJIC X -08 MORB	1	21-1706			16.6	V3LOCK BOTTOM	1	31-0504		
8	#20 FLANGE KIT	2	21-2105	37	50	16.7	MOTOR LOCKING BASE WITH PRV PROTECTION	1	31-0824		
9	HOSE .375 X 106 (.375FJIC X .5MP)	1	21-4613			16.8	BOLT LOCKING TAB SPRING	4	36-0013		
10	HOSE 1 X 29 (#20FLG-90 X 1FJIC)	2	21-4646								
11	LOCTITE 263 RED, .017 OZ	1	24-0193								
12	O-RING, D3 SPINDLE	1	24-0305								
13	MOTOR 365 2-1/4" GEAR, 1-1/4 14 SPLINE SHAFT	1	30-0524								
14	#20 O-RING	2	33-0013								
15	SPINDLE-D3 DIRECT DRIVE SAE C	1	35-0204								
							OPTIONAL QUICK COUPLERS				
							5/8 MALE QUICK COUPLER, FLAT FACE		21-1574		
							5/8 FEMALE QUICK COUPLER, FLAT FACE		21-1575		
							3/4 MALE QUICK COUPLER, FLAT FACE		21-1576		
							3/4 FEMALE QUICK COUPLER, FLAT FACE		21-1577		

** CRITICAL TORQUE VALUES MUST BE FOLLOWED.

30-0524-1

ROTARY HEAD

DRIVE ASSEMBLY - GEAR MOTOR, 35-41GPM(132-155LPM)



REF#	PARTS DESCRIPTION	REQ	PART#	TORQUE lubricated ft-lbs	TORQUE lubricated Nm	REF#	PARTS DESCRIPTION	REQ	PART#	TORQUE lubricated ft-lbs	TORQUE lubricated Nm
1	5/8-11 X 3 GR 8 HEX CAP, YELLOW ZINC	12	11-0901	159	215	16	MOTOR HARDWARE LOCK KIT	1	44-0916		
2	5/8-11 GR 8 NYLOCK NUT, YELLOW ZINC	12	11-1073			16.1	1/2 SAE FLAT WASHER GR 8, YELLOW ZINC	4	11-0042		
3	3/8" MALE QUICK COUPLER, FLAT FACE	1	21-1561			16.2	1/4 X 1-1/4 NC HEX CAP	4	11-0702	6	9
4	3/8" FEMALE QUICK COUPLER, FLAT FACE	1	21-1562			16.3	1/2-13 X 1-1/2 GR 8 HEX CAP SCREW, YELLOW ZINC	4	11-0972	**80	**108
5	ADAPER.25MOR X .375MJIC	1	21-1597			16.4	1/4-20 GR 5 NYLOCK NUT, ZINC	4	11-1022		
6	JEMTEC D3 SPINDLE RELIEF VALVE	1	21-1653			16.5	MOTOR BOLT LOCK TAB	4	31-0503		
7	-10 MJIC X -.08 MORB	1	21-1706			16.6	V3LOCK BOTTOM	1	31-0504		
8	#20 FLANGE KIT	2	21-2105	37	50	16.7	MOTOR LOCKING BASE WITH PRV PROTECTION	1	31-0824		
9	HOSE .375 X 106 (.375FJIC X .5MP)	1	21-4613			16.8	BOLT LOCKING TAB SPRING	4	36-0013		
10	HOSE 1 X 29 (#20FLG-90 X 1FJIC)	2	21-4646								
11	LOCTITE 262 RED, .017 OZ	1	24-0193								
12	O-RING, D3 SPINDLE	1	24-0305								
13	M365 MOTOR 2.5 GEAR SET SP	1	30-0518								
14	#20 O-RING	2	33-0013								
15	SPINDLE-D3 DIRECT DRIVE SAE C	1	35-0204								
							OPTIONAL QUICK COUPLERS				
							5/8 MALE QUICK COUPLER, FLAT FACE		21-1574		
							5/8 FEMALE QUICK COUPLER, FLAT FACE		21-1575		
							3/4 MALE QUICK COUPLER, FLAT FACE		21-1576		
							3/4 FEMALE QUICK COUPLER, FLAT FACE		21-1577		

25-0518-1 Rev 000

** CRITICAL TORQUE VALUES MUST BE FOLLOWED.

ROTARY HEAD

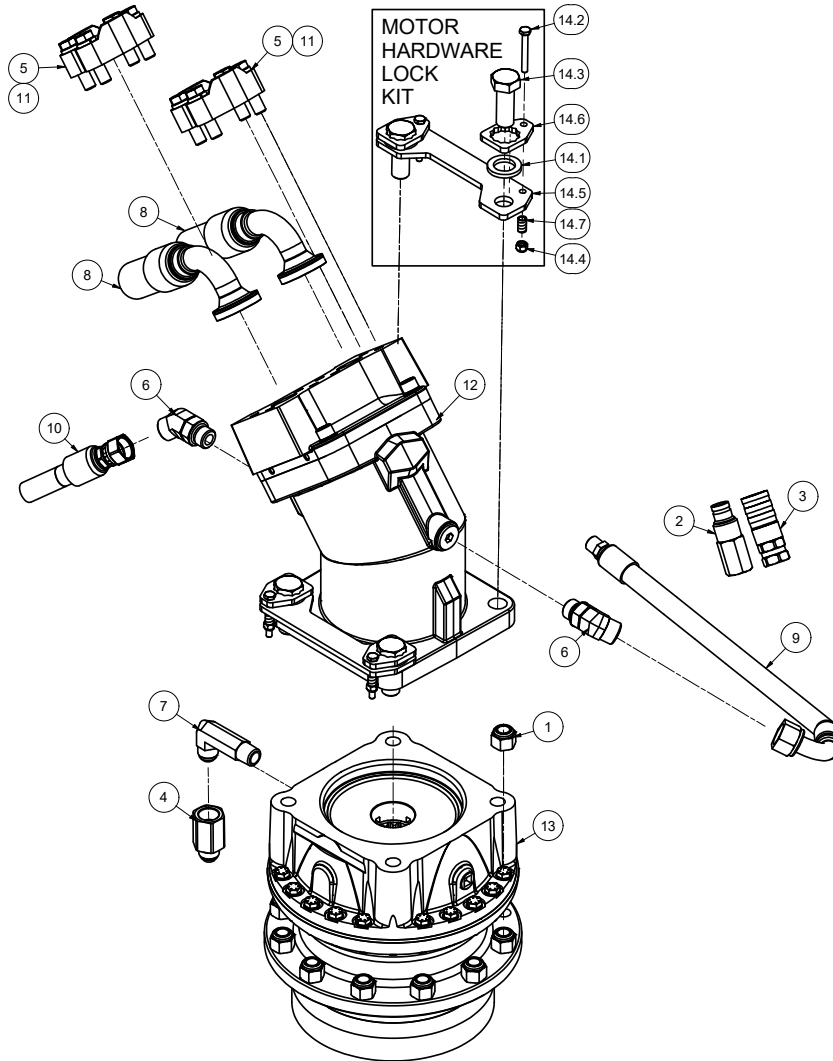
DECK ASSEMBLY - PISTON MOTOR

ROTARY HEAD

DRIVE ASSEMBLY - PISTON MOTOR, 21-28GPM(79-106LPM)

ROTARY HEAD

DRIVE ASSEMBLY - PISTON MOTOR, 29-34GPM(110-129LPM)



REF#	PARTS DESCRIPTION	REQ	PART#	TORQUE lubricated Nm	TORQUE lubricated ft-lbs
1	5/8" NC NYLOCK NUT, GR. 8	12	11-1073	**160	**217
2	3/8" MALE QUICK COUPLER, FLAT FACE, NO SPILL	1	21-1561		
3	3/8" FEMALE QUICK COUPLER, FLAT FACE, NO SPILL	1	21-1562		
4	JEMTEC D3 SPINDLE RELIEF VALVE	1	21-1653		
5	#20 FLANGE KIT	2	21-1678		
6	ELBOW, -10 ADJ MOR X -10MFS, 45 DEG	2	21-1688		
7	ELBOW, DOUBLE LONG, -8 MP X -10 MJIC, 90 DEG	1	21-1690		
8	HOSE, 1 X 34, 4000 PSI (-20 CD 62 FLG 90 DEG X -16 FFS)	2	21-4615		
9	HOSE, 5-8 X 118 (-10 FFS 90 DEG X -8 MP)	1	21-4618		
10	HOSE, 5-8 X 25 (-10 FFS 90 DEG X -10 FFS)	1	21-4636		
11	LOCTITE 263 RED, .017 OZ	1	24-0193		
12	MA125 FIXED DISPL. BENT AXIS PISTON MOTOR	1	30-0553		
13	D3 SPINDLE, DIRECT DRIVE, SAE	1	35-0107		
14	MOTOR LOCKING HARDWARE KIT	1	44-0865		
14.1	3/4 SAE FLAT WASHER GR 8 YELLOW	4	11-0039		
14.2	1/4 X 2 NC HEX CAP, GR 5 ZINC	4	11-0590	6	9
14.3	3/4 X 2 H.S. NC HEX CAP	4	11-0751	**282	**382
14.4	1/4 NC NYLOCK NUT	4	11-1022		
14.5	MOTOR LOCK TAB BASE, SAE D	2	31-0759		
14.6	MOTOR BOLT LOCK TAB, SAE D	4	31-0760		
14.7	BOLT LOCKING TAB SPRING	4	36-0013		
52	OPTIONAL QUICK COUPLERS				
53	5/8 MALE QUICK COUPLER, FLAT FACE		21-1574		
55	5/8 FEMALE QUICK COUPLER, FLAT FACE		21-1575		
54	3/4 MALE QUICK COUPLER, FLAT FACE		21-1576		
56	3/4 FEMALE QUICK COUPLER, FLAT FACE		21-1577		

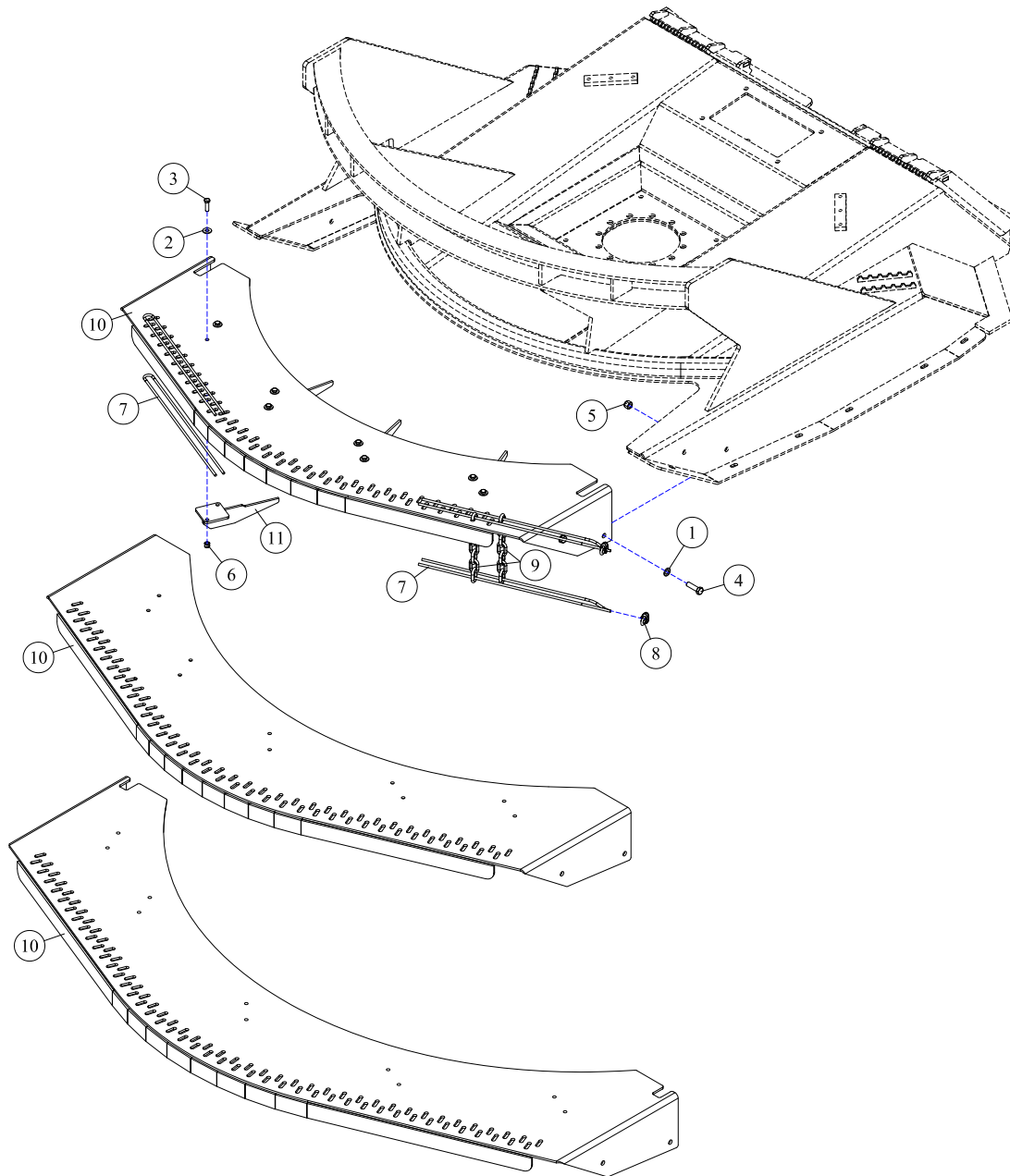
** CRITICAL TORQUE VALUES MUST BE FOLLOWED.

30-0553-2

ROTARY HEAD

DRIVE ASSEMBLY - PISTON MOTOR, 35-41GPM(132-155LPM)

CHAIN CURTAIN ATTACHMENT ASSEMBLY



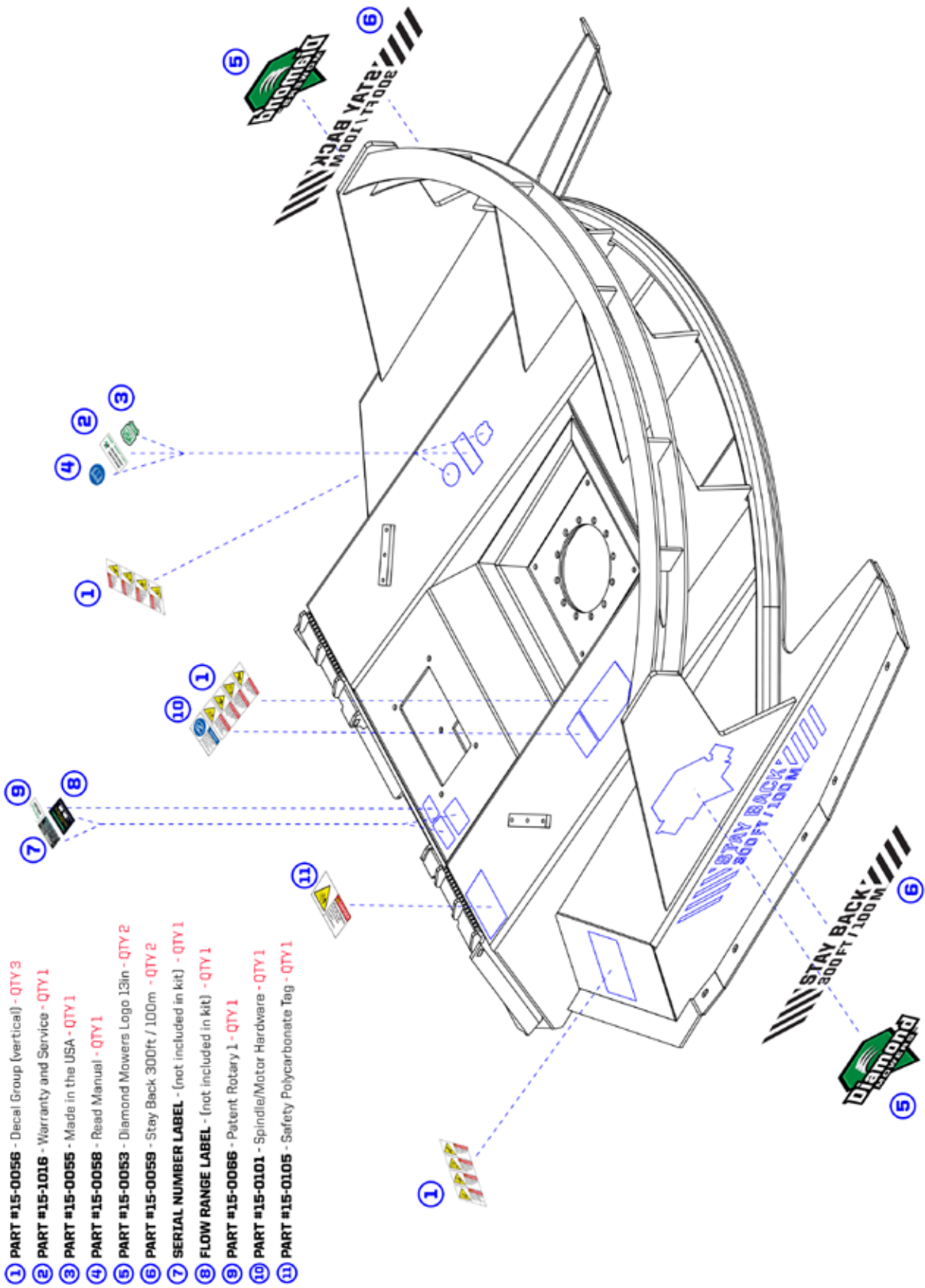
REF#	PARTS DESCRIPTION	REQ	PART #
1	1/2 SAE FLAT WASHER GR8	4	11-0042
2	3/8 SAE FLAT WASHER GR8		11-0090
	On 60" DLR	8	
	On 72" DLR	10	
	On 84" DLR	10	
3	3/8 X 1-1/4 NC HEX CAPSCREW		11-0533
	On 60" DLR	8	
	On 72" DLR	10	
	On 84" DLR	10	
4	1/2 X 1-3/4 NC HEX CAPSCREW	4	11-0535
5	1/2 NC NYLOCK NUT	4	11-1018
6	3/8 NC NYLOCK NUT		11-1024
	On 60" DLR	8	
	On 72" DLR	10	
	On 84" DLR	10	

REF#	PARTS DESCRIPTION	REQ	PART #
7	1/4 GALVANIZED CABLE (SOLD PER FOOT)		12-0032
	On 60" DLR	22	
	On 72" DLR	26	
	On 84" DLR	30	
8	1/4 WIRE ROPE CLAMP	2	12-0033
9	5/16 ZINC CHAIN - 7 LINKS GRADE 30		12-0036
	On 60" DLR	59	
	On 72" DLR	73	
	On 84" DLR	85	
10	CHAIN GUARD		
	D3 DLR CHAIN GUARD 60"	1	41-1636
	D3 DLR CHAIN GUARD 72"	1	41-1635
	D3 DLR CHAIN GUARD 84"	1	41-1637
11	BOLT ON CHAIN GUARD RIB		41-1653
	On 60" DLR	4	
	On 72" DLR	5	
	On 84" DLR	5	

ROTARY HEAD

DECAL ASSEMBLY

062719

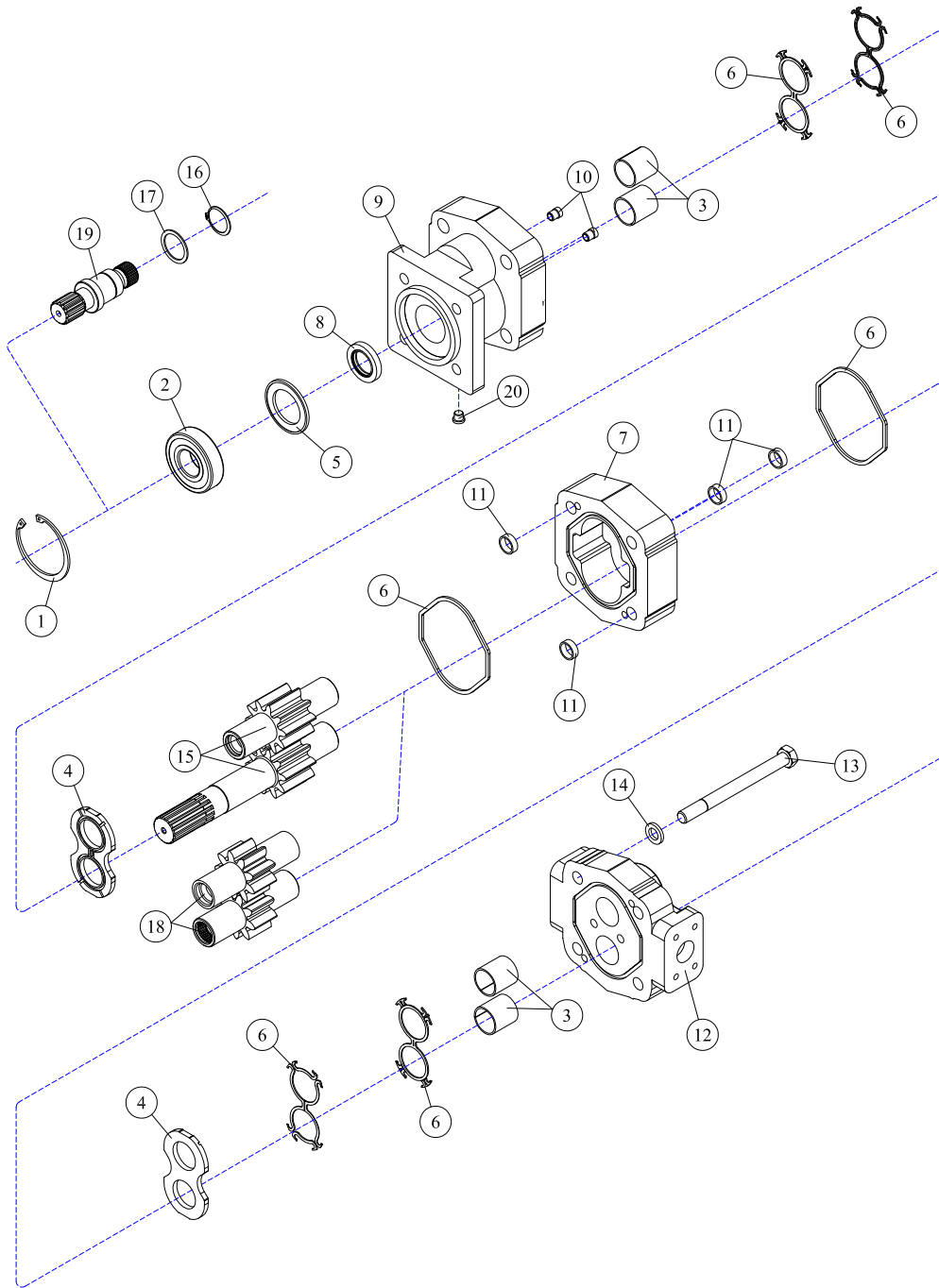


- 1 PART #15-0056 - Decal Group (vertical) - QTY 3
- 2 PART #15-1018 - Warranty and Service - QTY 1
- 3 PART #15-0055 - Made in the USA - QTY 1
- 4 PART #15-0058 - Read Manual - QTY 1
- 5 PART #15-0053 - Diamond Mowers Logo 13in - QTY 2
- 6 PART #15-0059 - Stay Back 300ft / 100m - QTY 2
- 7 SERIAL NUMBER LABEL - (not included in kit) - QTY 1
- 8 FLOW RANGE LABEL - (not included in kit) - QTY 1
- 9 PART #15-0066 - Patent Rotary 1 - QTY 1
- 10 PART #15-0101 - Spindle/Motor Hardware - QTY 1
- 11 PART #15-0105 - Safety Polycarbonate Tag - QTY 1

DECK ASSEMBLIES

DECK ASSEMBLIES

MOTOR ASSEMBLY - 30-0518

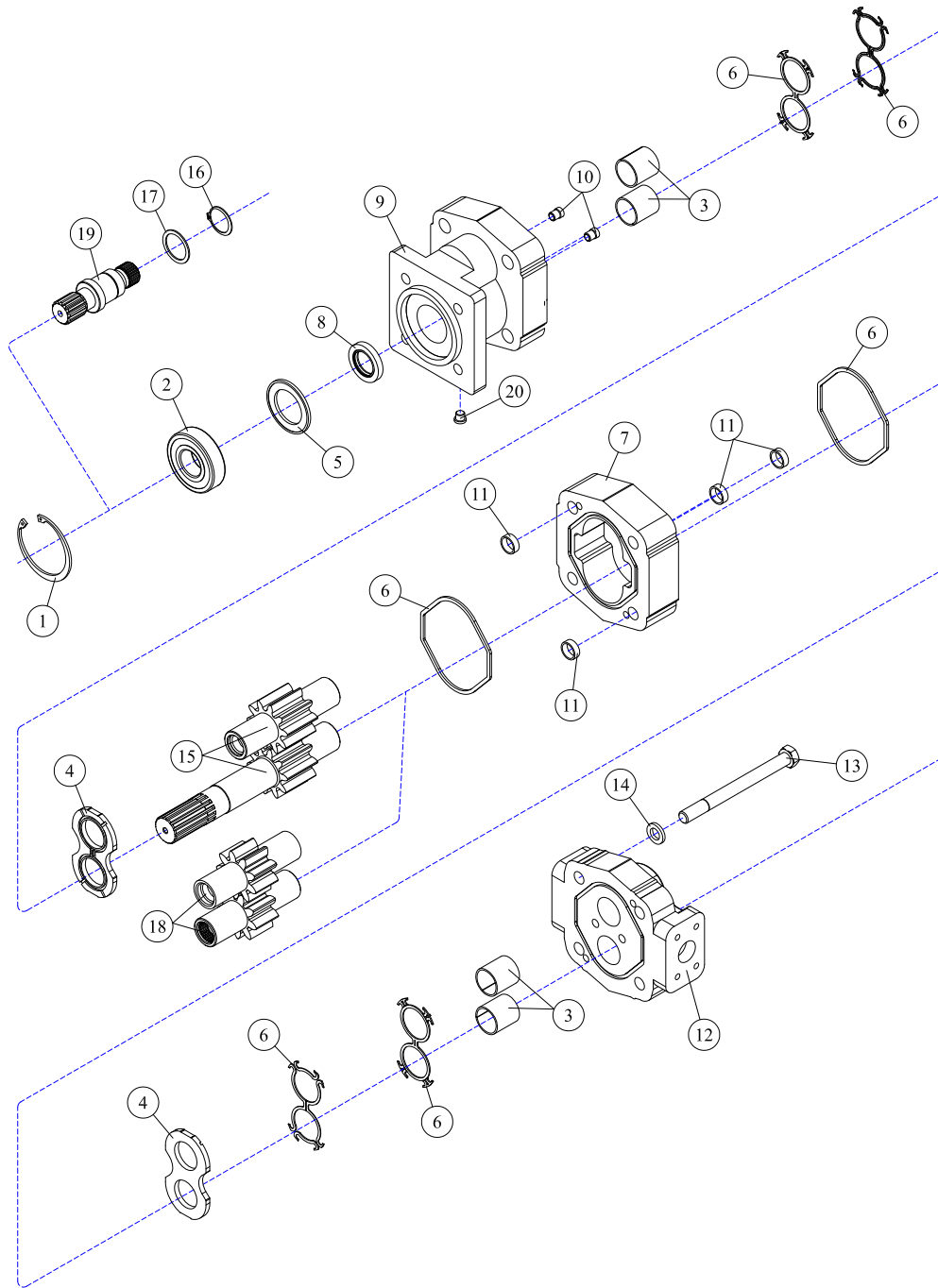


REF#	PARTS DESCRIPTION	REQ	PART #
1	SNAP RING	1	30-1009
2	OUTBOARD BEARING	1	30-1010
3	BUSHING	4	30-1011
4	THRUST PLATE	2	30-1012
5	SEAL RETAINER	1	30-1017
6	M365 SEAL KIT	Avail	30-1021
7	2-1/2" M365 GEAR HOUSING	1	30-1137
8	SHAFT SEAL		
	150 PSI (included in M365 seal kit)	1	30-1210
	500 PSI	1	30-1156
9	SHAFT END COVER	1	30-1086
10	CHECK ASSEMBLY	2	30-1087
11	ALIGNMENT BUSHING	4	30-1090

REF#	PARTS DESCRIPTION	REQ	PART #
12	PORT END COVER	1	30-1091
13	STUD	4	30-1334
14	WASHER	4	30-1093
	GEAR SET OPTION A:		
15	2-1/2" GEAR SET	1	30-1170
	GEAR SET OPTION B:		
16	RETAINING RING	1	30-1019
17	WASHER	1	30-1020
18	2-1/2" GEAR SET	1	30-1136
19	CONTINENTAL SHAFT, SPLINED	1	30-1144
20	PLUG	1	30-1096
*	SEAL APPLICATOR TOOL (not shown)	Avail	30-1048

DECK ASSEMBLIES

MOTOR ASSEMBLY - 30-0520

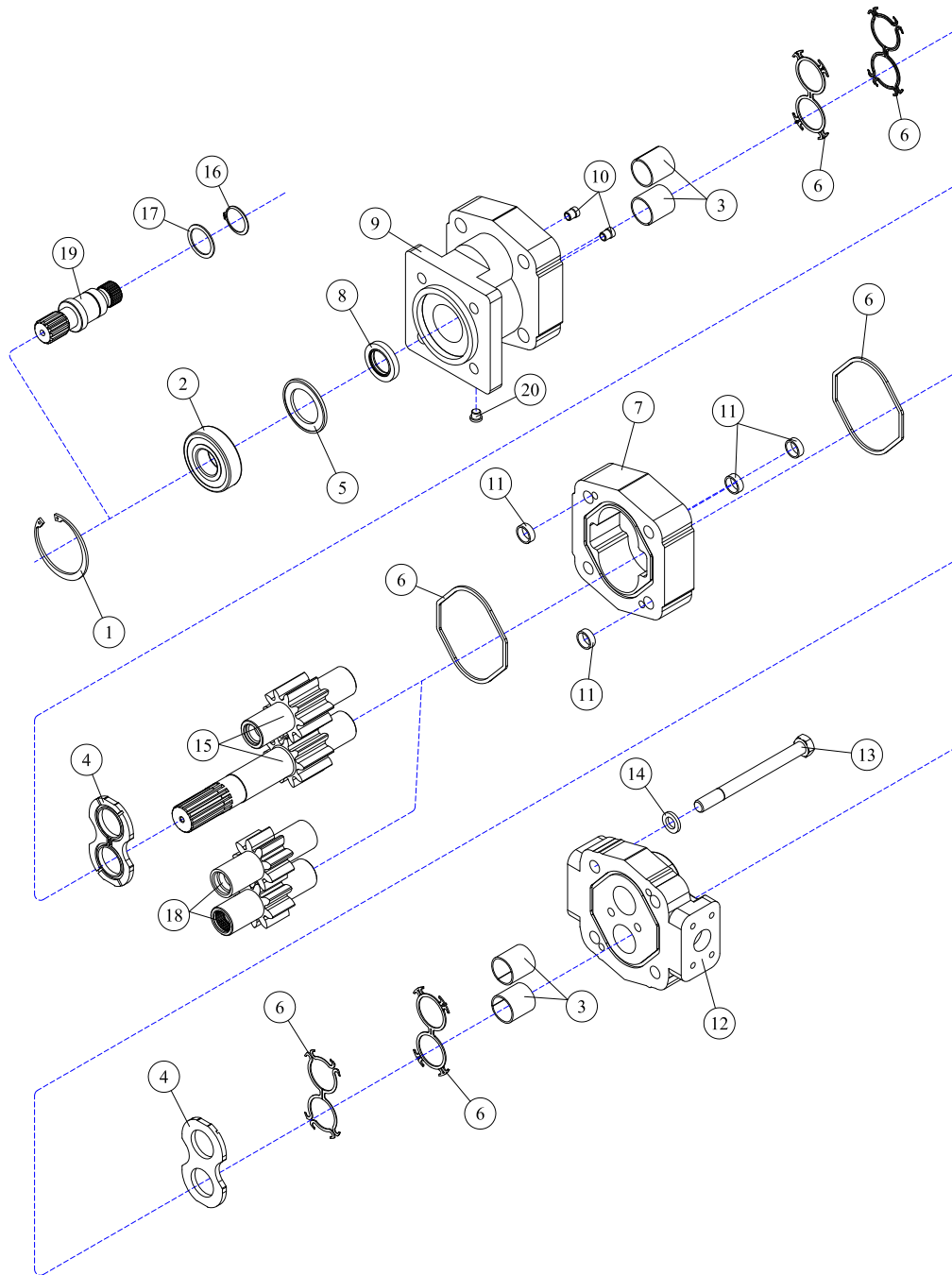


REF#	PARTS DESCRIPTION	REQ	PART #
1	SNAP RING	1	30-1009
2	OUTBOARD BEARING	1	30-1010
3	BUSHING	4	30-1011
4	THRUST PLATE	2	30-1012
5	SEAL RETAINER	1	30-1017
6	M365 SEAL KIT	Avail	30-1021
7	GEAR HOUSING	1	30-1015
8	SHAFT SEAL		
	150 PSI (included in M365 seal kit)	1	30-1210
	500 PSI	1	30-1156
9	SHAFT END COVER	1	30-1086
10	CHECK ASSEMBLY	2	30-1087
11	ALIGNMENT BUSHING	4	30-1090

REF#	PARTS DESCRIPTION	REQ	PART #
12	PORT END COVER	1	30-1091
13	STUD	4	30-1092
14	WASHER	4	30-1093
	GEAR SET OPTION A:		
15	1-3/4" GEAR SET	1	30-1166
	GEAR SET OPTION B:		
16	RETAINING RING	1	30-1019
17	WASHER	1	30-1020
18	1-3/4" GEAR SET	1	30-1013
19	CONTINENTAL SHAFT, SPLINED	1	30-1144
20	PLUG	1	30-1096
*	SEAL APPLICATOR TOOL (not shown)	Avail	30-1048

DECK ASSEMBLIES

MOTOR ASSEMBLY - 30-0524

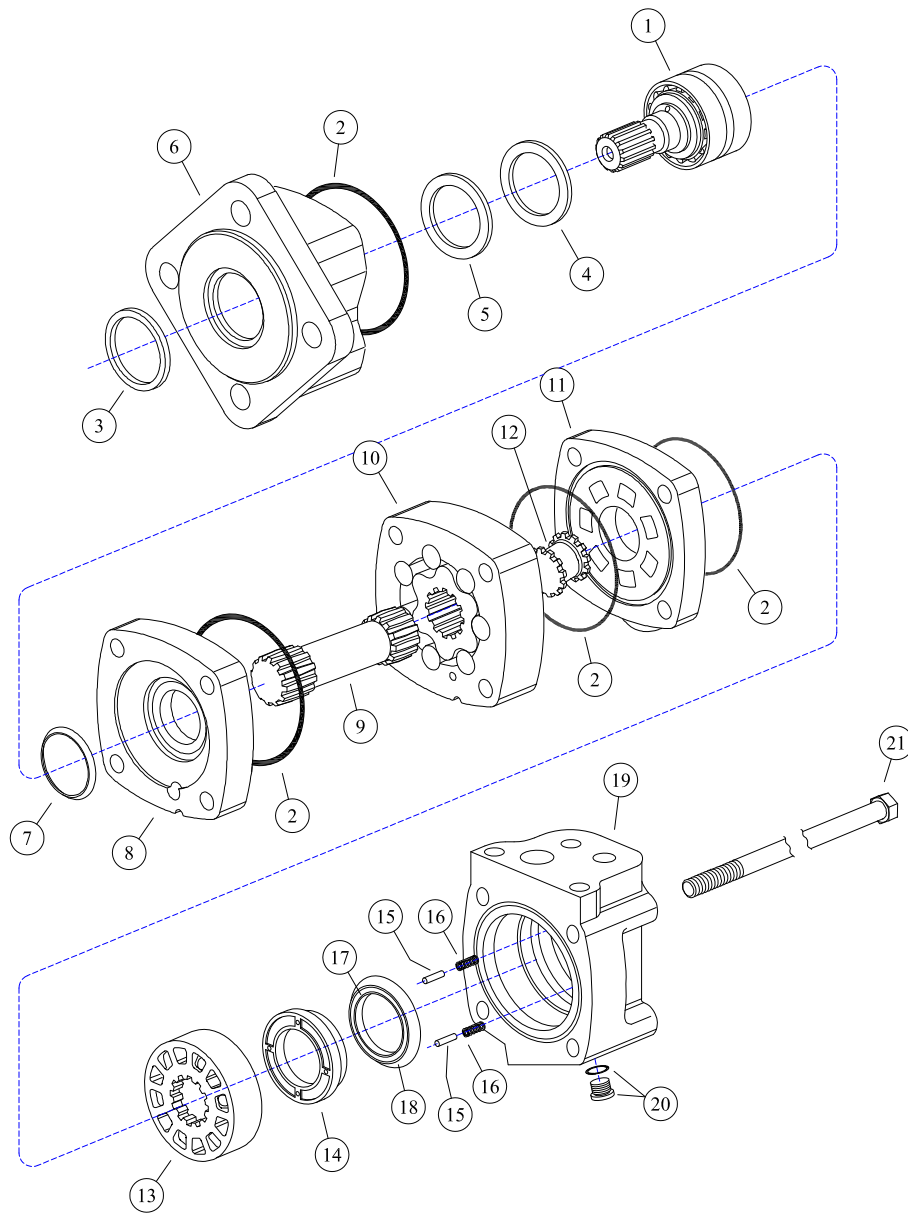


REF#	PARTS DESCRIPTION	REQ	PART #
1	SNAP RING	1	30-1009
2	OUTBOARD BEARING	1	30-1010
3	BUSHING	4	30-1011
4	THRUST PLATE	2	30-1012
5	SEAL RETAINER	1	30-1017
6	M365 SEAL KIT	Avail	30-1021
7	2-1/4" M365 GEAR HOUSING	1	30-1026
8	SHAFT SEAL		
	150 PSI (included in M365 seal kit)	1	30-1210
	500 PSI	1	30-1156
9	SHAFT END COVER	1	30-1086
10	CHECK ASSEMBLY	2	30-1087
11	ALIGNMENT BUSHING	4	30-1090

REF#	PARTS DESCRIPTION	REQ	PART #
12	PORT END COVER	1	30-1091
13	STUD	4	Call
14	WASHER	4	30-1093
	GEAR SET OPTION A:		
15	2-1/4" GEAR SET	1	30-1165
	GEAR SET OPTION B:		
16	RETAINING RING	1	30-1019
17	WASHER	1	30-1020
18	2-1/4" GEAR SET	1	30-1025
19	CONTINENTAL SHAFT, SPLINED	1	30-1144
20	PLUG	1	30-1096
*	SEAL APPLICATOR TOOL (not shown)	Avail	30-1048

DECK ASSEMBLIES

MOTOR ASSEMBLY - 30-0528



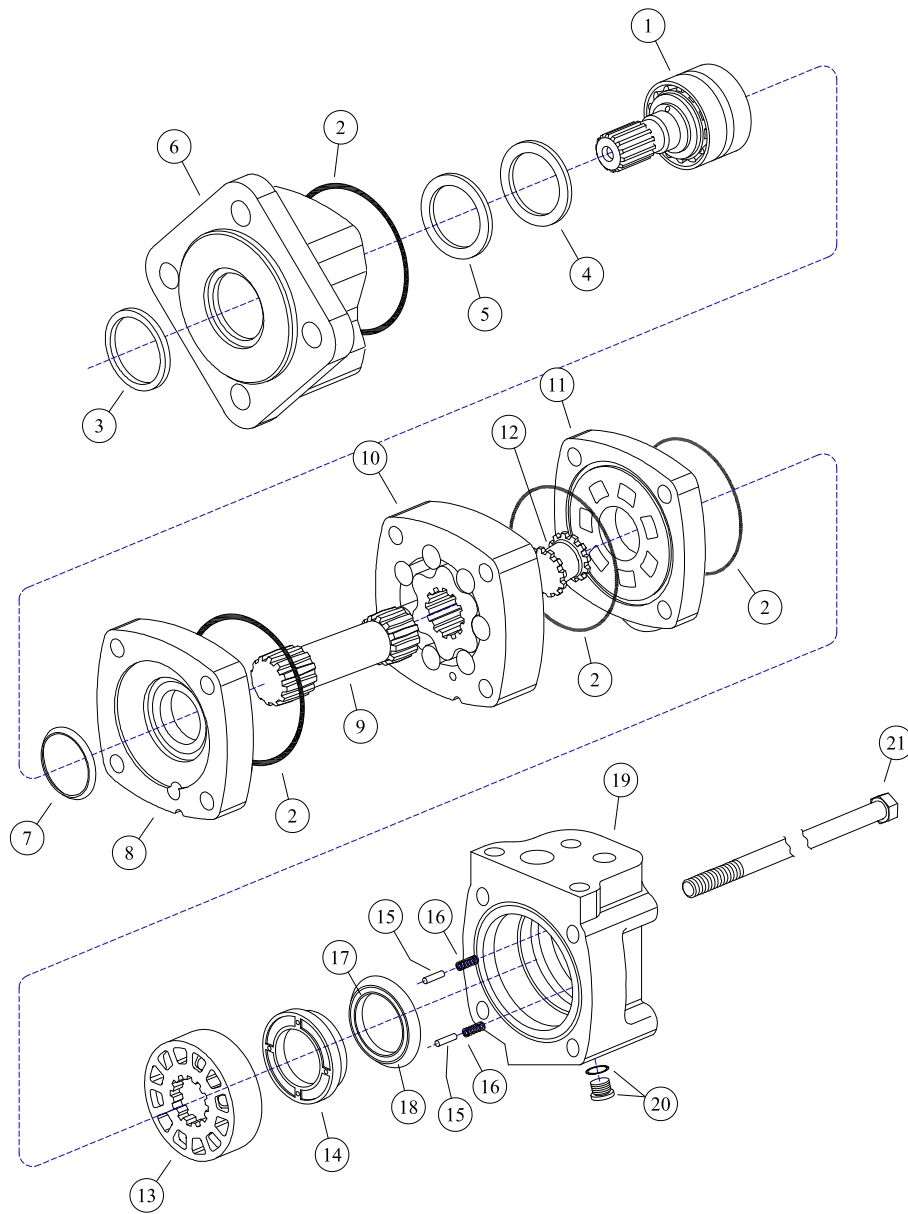
* Part included with item # 22 seal kit

REF#	PARTS DESCRIPTION	REQ	PART #
1	SHAFT & BEARING KIT (1-1/4" SPLINED 14T)	1	30-1311
2	SEAL	4	30-1312
3	SEAL, EXCLUSION	1	30-1313
4	SEAL, SHAFT	1	30-1314
5	RING, BACK-UP	1	30-1315
6	HOUSING, BEARING, DIAGONAL (FOUR BOLT)	1	30-1316
7	SEAL, SHAFT FACE	1	30-1317
8	PLATE, WEAR	1	30-1318
9	DRIVE, MAIN	1	30-1319
10	GEROLER	1	30-1320
11	PLATE, VALVE	1	30-1321
12	DRIVE, VALVE	1	30-1322

REF#	PARTS DESCRIPTION	REQ	PART #
13	VALVE	1	30-1323
14	BALANCE RING	1	30-1324
15	PIN, BALANCE RING	2	30-1325
16	SPRING, COMPRESSION	2	30-1326
17	SEAL, FACE, INNER	1	30-1327
18	SEAL, FACE, OUTER	1	30-1328
19	HOUSING, VALVE	1	30-1329
20	PLUG ASSEMBLY W/ O-RING	1	30-1309
	O-RING	1	30-1330
21	SCREW, CAP	4	30-1331
22	SEAL KIT	1	33-0064

DECK ASSEMBLIES

MOTOR ASSEMBLY - 30-0529



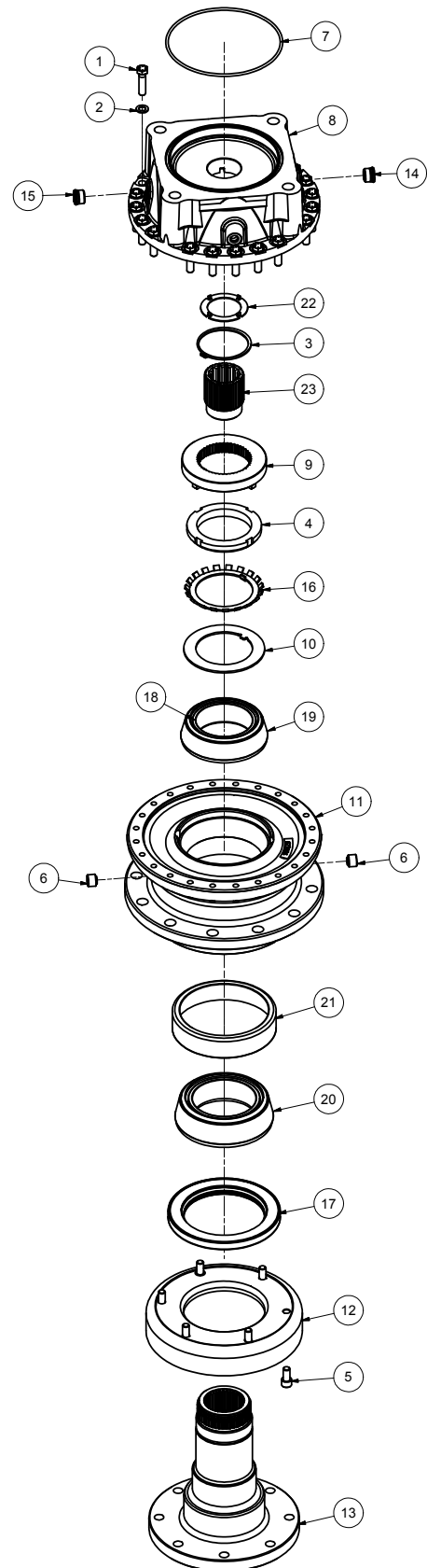
* Part included with item # 22 seal kit

REF#	PARTS DESCRIPTION	REQ	PART #
1	SHAFT & BEARING KIT (1-1/4" SPLINED 14T)	1	30-1311
2	SEAL	4	30-1312
3	SEAL, EXCLUSION	1	30-1313
4	SEAL, SHAFT	1	30-1314
5	RING, BACK-UP	1	30-1315
6	HOUSING, BEARING, DIAGONAL (FOUR BOLT)	1	30-1316
7	SEAL, SHAFT FACE	1	30-1317
8	PLATE, WEAR	1	30-1318
9	DRIVE, MAIN	1	30-1319
10	GEROLER	1	30-1320
11	PLATE, VALVE	1	30-1321
12	DRIVE, VALVE	1	30-1322

REF#	PARTS DESCRIPTION	REQ	PART #
13	VALVE	1	30-1323
14	BALANCE RING	1	30-1324
15	PIN, BALANCE RING	2	30-1325
16	SPRING, COMPRESSION	2	30-1326
17	SEAL, FACE, INNER	1	30-1327
18	SEAL, FACE, OUTER	1	30-1328
19	HOUSING, VALVE	1	30-1329
20	PLUG ASSEMBLY W/ O-RING	1	30-1309
	O-RING	1	30-1330
21	SCREW, CAP	4	30-1331
22	SEAL KIT	1	33-0064

DECK ASSEMBLIES

SPINDLE ASSEMBLY - 35-0107



REF#	PARTS DESCRIPTION	REQ	PART#	TORQUE (ft-lbs)	TORQUE (Nm)
1	BOLT-HEX HEAD, FOR D3 SPINDLE	20	11-1611	45	60
2	FLAT WASHER, FOR D3 SPINDLE	20	11-1612		
3	RETAINING RING, FOR D3 SPINDLE	1	11-1613		
4	LOCKNUT, FOR D3 SPINDLE	1	11-1614		
5	SOCKET HEAD CAPSCREW, FOR D3 SPINDLE	6	11-1616		
6	PIPE PLUG TO HUB MAGNETIC	2	21-1611		
7	O-RING SAE D	1	33-0098		
8	D3 SPINDLE CAP.D BASE	1	35-0095		
9	KEEPER PLATE, D3 SPINDLE	1	35-0098		
10	BOTTOM THRUST WASHER, D3 SPINDLE	1	35-0099		
11	HUB	1	35-0100		
12	GUARD	1	35-0102		
13	OUTPUT SHAFT, D3 SPINDLE	1	35-0103		
14	D3 SPINDLE SAE C TOP PORT PLUGS	1	35-0200		
15	PORT PLUG-.75 -16 UNF-2A	1	35-0202		
	SEAL KIT		33-0078		
16	LOCK-WASHER, FOR D3 SPINDLE	1			
17	OIL-SEAL, D3 SPINDLE	1			
*	SEALANT	1			
	BEARING AND SEAL KIT		33-0079		
16	LOCK-WASHER, FOR D3 SPINDLE	1			
17	OIL-SEAL, D3 SPINDLE	1			
18	TOP BEARING-CONE, FOR D3 SPINDLE	1			
19	TOP BEARING-CUP, FOR D3 SPINDLE	1			
20	BOTTOM BEARING-CONE, FOR D3 SPINDLE	1			
21	BOTTOM BEARING-CUP, FOR D3 SPINDLE	1			
*	SEALANT	1			
	D3 SPINDLE REPLACEMENT INSERT KIT		33-0080		
22	TOP THRUST WASHER, D3 SPINDLE	1			
23	COUPLING, D3 SPINDLE, SAE D SPLINE	1			

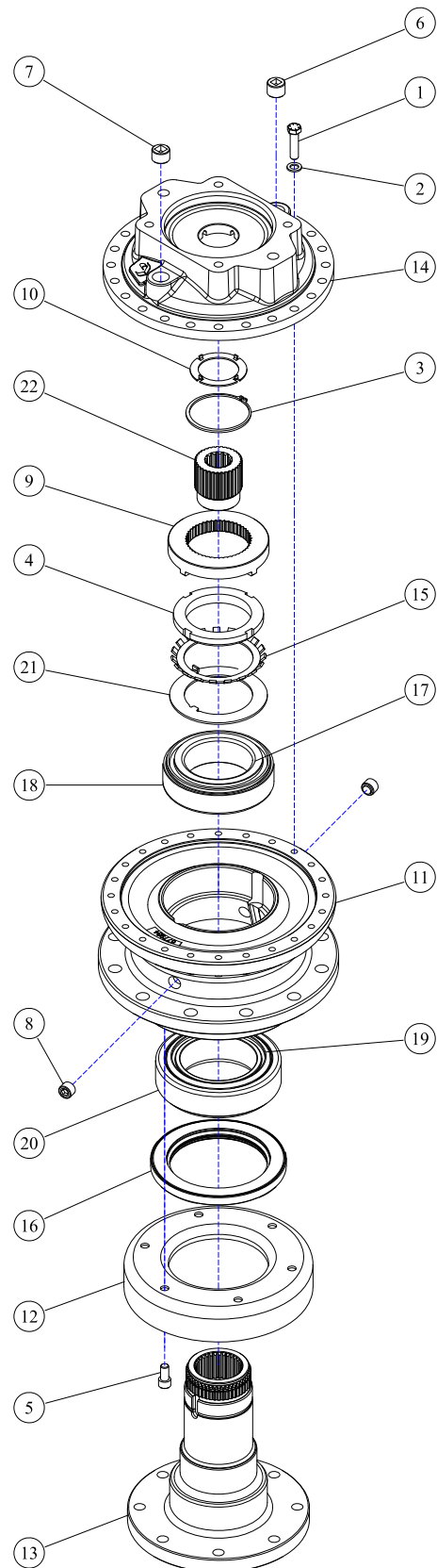
* NOT SHOWN

35-0107 Rev 000

DECK ASSEMBLIES

SPINDLE ASSEMBLY - 35-0204

REF#	PARTS DESCRIPTION	REQ	PART #
1	BOLT-HEX HEAD	24	11-1611
2	WASHER-FLAT	24	11-1612
3	RING-RETAINING	1	11-1613
4	NUT-LOCK	1	11-1614
5	SCREW-SKT HD CAP	6	11-1616
6	PIPE PLUG (TO COVER) (MAGNETIC)	1	21-1609
7	PIPE PLUG (TO COVER) (NON-MAGNETIC)	1	21-1610
8	PIPE PLUG (TO HUB) (MAGNETIC)	2	21-1611
9	PLATE-KEEPER	1	35-0098
10	WASHER-THRUST (BOTTOM)	1	35-0099
11	HUB	1	35-0100
12	GUARD	1	35-0102
13	SHAFT-OUTPUT	1	35-0103
14	COVER		
	C BASE (STANDARD)	1	35-0199
	SEAL KIT		33-0078
15	WASHER-LOCK	1	
16	SEAL-OIL SEALANT	1	
	BEARING AND SEAL KIT		33-0079
17	BEARING-CONE (TOP)	1	
18	BEARING-CUP (TOP)	1	
19	BEARING-CONE (BOTTOM)	1	
20	BEARING-CUP (BOTTOM)	1	
15	WASHER-LOCK	1	
16	OIL SEAL SEALANT	1	
	D3 SPINDLE REPLACEMENT INSERT KIT		33-0080
21	WASHER-THRUST (TOP)	1	
22	COUPLING SEALANT	1	



Assy: 35-0204 Date: 09/10/19

APPENDIX

S.A.E. TORQUE SPECIFICATIONS



Torque-Tension Relationship for A307A, Grade 5, 8 & 9 Bolts

Nominal Dia. (in.)	threads per inch	Tensile Stress Area (sq. in.)	ASTM A307 Grade A				SAE J429 Grade 5			SAE J429 Grade 8			FNL Grade 9					
			Clamp Load (Lbs.)	Tightening Torque			Clamp Load (Lbs.)	Tightening Torque		Clamp Load (Lbs.)	Tightening Torque		Clamp Load (Lbs.)	Tightening Torque				
				K = 0.15	K = 0.17	K = 0.20		K = 0.15	K = 0.17		K = 0.20	K = 0.15		K = 0.17	K = 0.20	K = 0.15	K = 0.17	K = 0.20
Unified Coarse Thread Series																		
1/4	20	0.0318	859	32 in-lbs	37 in-lbs	43 in-lbs	2029	76 in-lbs	86 in-lbs	101 in-lbs	2864	107 in-lbs	122 in-lbs	143 in-lbs	3357	126 in-lbs	143 in-lbs	168 in-lbs
5/16	18	0.0524	1416	66	75	88	3342	157	178	209	4719	221	251	295	5531	259	294	346
3/8	16	0.0775	2092	10 ft-lbs	11 ft-lbs	13 ft-lbs	4940	23 ft-lbs	26 ft-lbs	31 ft-lbs	6974	33 ft-lbs	37 ft-lbs	44 ft-lbs	8174	38 ft-lbs	43 ft-lbs	51 ft-lbs
7/16	14	0.1063	2870	16	18	21	6777	37	42	49	9568	52	59	70	11214	61	70	82
1/2	13	0.1419	3831	24	27	32	9046	57	64	75	12771	80	90	106	14969	94	106	125
9/16	12	0.1819	4912	35	39	46	11599	82	92	109	16375	115	130	154	19193	135	153	180
5/8	11	0.2260	6102	48	54	64	14408	113	128	150	20340	159	180	212	23840	186	211	248
3/4	10	0.3345	9030	85	96	113	21322	200	227	267	30101	282	320	376	35281	331	375	441
7/8	9	0.4617	12467	136	155	182	29436	322	365	429	41556	455	515	606	48707	533	604	710
1	8	0.6057	16355	204	232	273	38616	483	547	644	54517	681	772	909	63899	799	905	1065
1 1/4	7	0.9691	26166	409	463	545	53786	840	952	1121	87220	1363	1545	1817	102229	1597	1810	2130
1 1/2	6	1.4053	37942	711	806	949	77991	1462	1657	1950	126473	2371	2688	3162	148237	2779	3150	3706
Fine Thread Series																		
1/4	28	0.0364	982	37 in-lbs	42 in-lbs	49 in-lbs	2319	87 in-lbs	99 in-lbs	116 in-lbs	3274	123 in-lbs	139 in-lbs	164 in-lbs	3837	144 in-lbs	163 in-lbs	192 in-lbs
5/16	24	0.0581	1568	73	83	98	3702	174	197	231	5226	245	278	327	6125	287	325	383
3/8	24	0.0878	2371	11 ft-lbs	13 ft-lbs	15 ft-lbs	5599	26 ft-lbs	30 ft-lbs	35 ft-lbs	7905	37 ft-lbs	42 ft-lbs	49 ft-lbs	9265	43 ft-lbs	49 ft-lbs	58 ft-lbs
7/16	20	0.1187	3205	18	20	23	7568	41	47	55	10684	58	66	78	12523	68	78	91
1/2	20	0.1600	4319	27	31	36	10197	64	72	85	14396	90	102	120	16873	105	120	141
9/16	18	0.2030	5480	39	44	51	12940	91	103	121	18268	128	146	171	21412	151	171	201
5/8	18	0.2560	6911	54	61	72	16317	127	144	170	23036	180	204	240	27000	211	239	281
3/4	16	0.3730	10070	94	107	126	23776	223	253	297	33566	315	357	420	39343	369	418	492
7/8	14	0.5095	13756	150	171	201	32479	355	403	474	45853	502	568	669	53743	588	666	784
1	14	0.6799	18357	229	260	306	43343	542	614	722	61190	765	867	1020	71720	896	1016	1195
1 1/4	12	1.0729	28970	453	513	604	59548	930	1055	1241	96565	1509	1710	2012	113182	1768	2004	2358
1 1/2	12	1.5810	42688	800	907	1067	87747	1645	1865	2194	142292	2668	3024	3557	166778	3127	3544	4169

The torque values can only be achieved if nut (or tapped hole) has a proof load greater than or equal to the bolt's minimum ultimate tensile strength. Clamp load calculated as 75% of the proof load when specified by the standard. ASTM A307 utilized 75% of 36,000 PSI.

Torque values for 1/4 and 5/16-in series are in inch-pounds. All other torque values are in foot-pounds.

Torque values calculated from formula $T = KDF$, where

K = 0.15 for "lubricated" conditions

K = 0.17 for zinc plated and dry conditions; we have also found various forms of customer applied thread lockers to have a similar K value.

K = 0.20 for plain and dry conditions

D = Nominal Diameter

F = Clamp Load

Note: When using Zinc Plated (lubricated with wax) Top Lock Nuts, the K value can vary between 0.12-0.16

Caution: All material included in this chart is advisory only, and its use by anyone is voluntary. In developing this information, Fastenal has made a determined effort to present its contents accurately. Extreme caution should be used when using a formula for torque/tension relationships. Torque is only an indirect indication of tension. Under/over tightening of fasteners can result in costly equipment failure or personal injury.

METRIC TORQUE SPECIFICATIONS



Torque-Tension Relationship for Metric Fasteners

Nominal Dia. (mm)	Pitch	4.6 Class 4.6				8.8 Class 8.8				10.9 Class 10.9				12.9 Class 12.9			
		Clamp Load (lbs)	Tightening Torque			Clamp Load (lbs)	Tightening Torque			Clamp Load (lbs)	Tightening Torque			Clamp Load (lbs)	Tightening Torque		
			Lubricated (ft-lbs)	Zinc Plated (ft-lbs)	Plain&Dry (ft-lbs)		Lubricated (ft-lbs)	Zinc Plated (ft-lbs)	Plain&Dry (ft-lbs)		Lubricated (ft-lbs)	Zinc Plated (ft-lbs)	Plain&Dry (ft-lbs)		Lubricated (ft-lbs)	As-Received (ft-lbs)	Plain&Dry (ft-lbs)
4	0.7	333	0.7	0.7	0.9	858	1.7	1.9	2.3	1228	2.4	2.7	3.2	1436	2.8	3.2	3.8
5	0.8	538	1.3	1.5	1.8	1387	3.4	3.9	4.5	1985	4.9	5.5	6.5	2319	5.7	6.5	7.6
6	1	763	2.3	2.6	3.0	1968	5.8	6.6	7.7	2816	8.3	9.4	11.1	3291	9.7	11.0	13.0
7	1	1095	3.8	4.3	5.0	2822	9.7	11.0	13.0	4039	13.9	15.8	18.5	4720	16.3	18.4	21.7
8	1.25	1389	5.5	6.2	7.3	3580	14.1	16.0	18.8	5123	20.2	22.9	26.9	5987	23.6	26.7	31.4
10	1.5	2200	10.8	12.3	14.4	5671	27.9	31.6	37.2	8115	39.9	45.2	53.2	9484	46.7	52.9	62.2
12	1.75	3197	18.9	21.4	25.2	8240	48.7	55.1	64.9	11792	69.6	78.9	92.8	13781	81.4	92.2	108.5
14	2	4379	30.2	34.2	40.2	11289	77.8	88.1	103.7	16154	111.3	126.1	148.4	18879	130.0	147.4	173.4
16	2	5943	47	53	62	15320	121	137	161	21924	173	196	230	25622	202	229	269
18	2.5	7301	65	73	86	18822	167	189	222	26934	239	270	318	31477	279	316	372
20	2.5	9286	91	104	122	23938	236	267	314	34256	337	382	449	40034	394	446	525
22	2.5	11509	125	141	166	29669	321	364	428	42457	460	521	613	49619	537	609	716
24	3	13372	158	179	211	34471	407	461	543	49329	582	660	777	57649	681	771	908
27	3	17428	232	262	309	44924	597	676	796	64288	854	968	1139	75132	998	1131	1331
30	3.5	21266	314	356	419	54819	809	917	1079	78448	1158	1312	1544	91680	1353	1534	1804
33	3.5	26310	427	484	570	67821	1101	1248	1468	97055	1576	1786	2101	113425	1842	2087	2455
36	4	30982	549	622	732	79866	1415	1603	1886	114291	2024	2294	2699	133569	2366	2681	3154

The torque values can only be achieved if nut (or tapped hole) has a proof load greater than or equal to the bolt's minimum ultimate tensile strength.

Clamp loads estimated as 75% of proof load for specified bolts.

Torque values listed in foot-pounds.

Torque values calculated from formula $T = KDF$ where; $K = 0.15$ for "lubricated" condition, $K = 0.17$ for zinc plated and dry condition (or as-received for the 12.9), $K = 0.20$ for plain and dry condition

Caution: All material included in this chart is advisory only, and its use by anyone is voluntary. In developing this information, Fastenal has made a determined effort to present its contents accurately. Extreme caution should be used when using a formula for torque/tension relationships. Torque is only an indirect indication of tension. Under/over tightening of fasteners can result in costly equipment failure or personal injury.



Rev 3-4-09

(This Page Is Intentionally Left Blank)

**DEMAND
BRILLIANCE**