

EXCAVATOR ROTARY HEAD

40" (1016MM) ROTARY HEAD

SERIAL #25181+

WARRANTY + SERVICE 888.960.0364
PARTS 888.960.0361



DIAMONDMOWERS.COM

TABLE OF CONTENTS

ROTARY HEADS

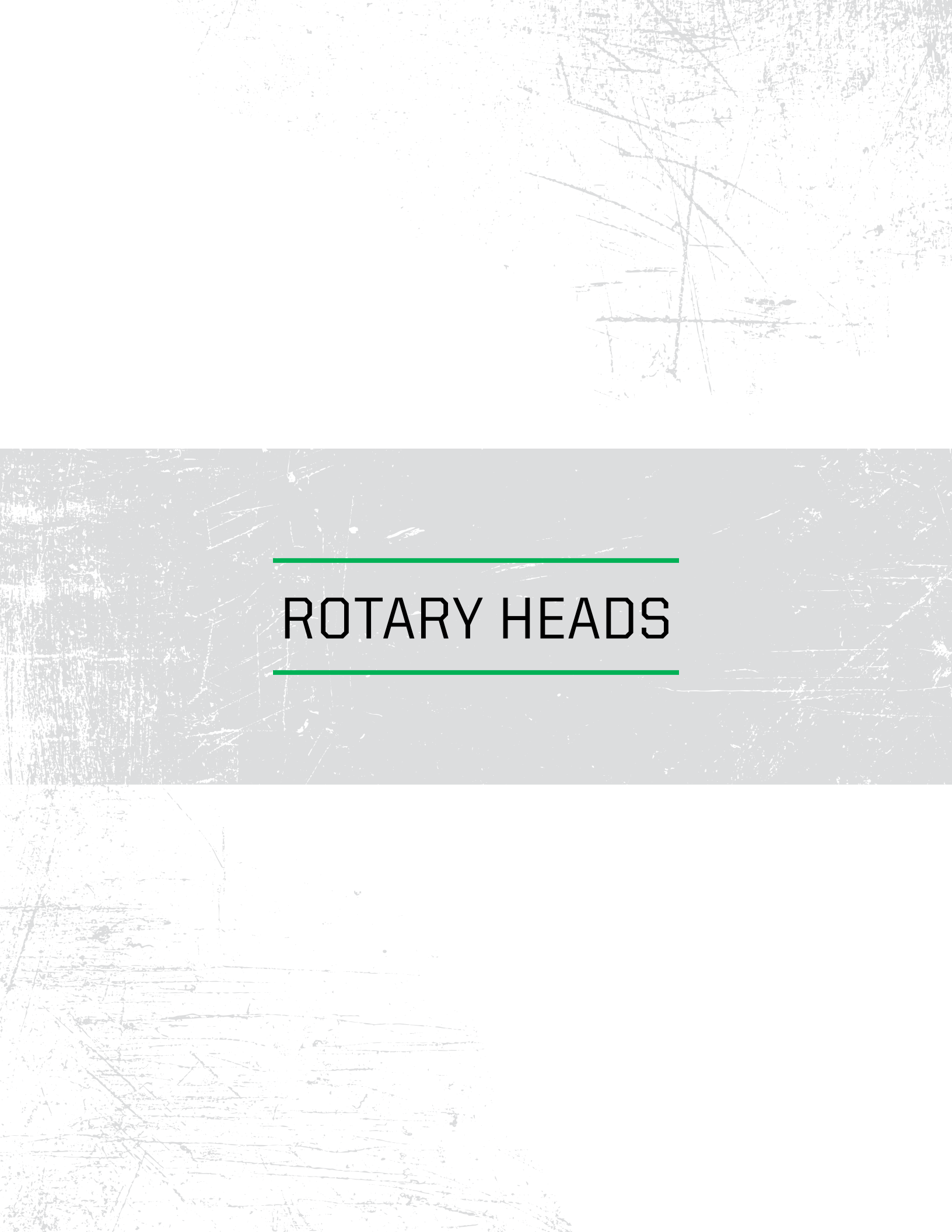
DECK ASSEMBLY - 40"(1016MM).....	4
DRIVE ASSEMBLY - 40"(1016MM).....	5
DECAL ASSEMBLY.....	6

DECK ASSEMBLIES

MOTOR ASSEMBLY - 30-0525.....	8
MOTOR ASSEMBLY - 30-0526.....	9
MOTOR ASSEMBLY - 30-0530.....	10
MOTOR ASSEMBLY - 30-0531.....	11
SPINDLE ASSEMBLY - 35-0010.....	12

APPENDIX

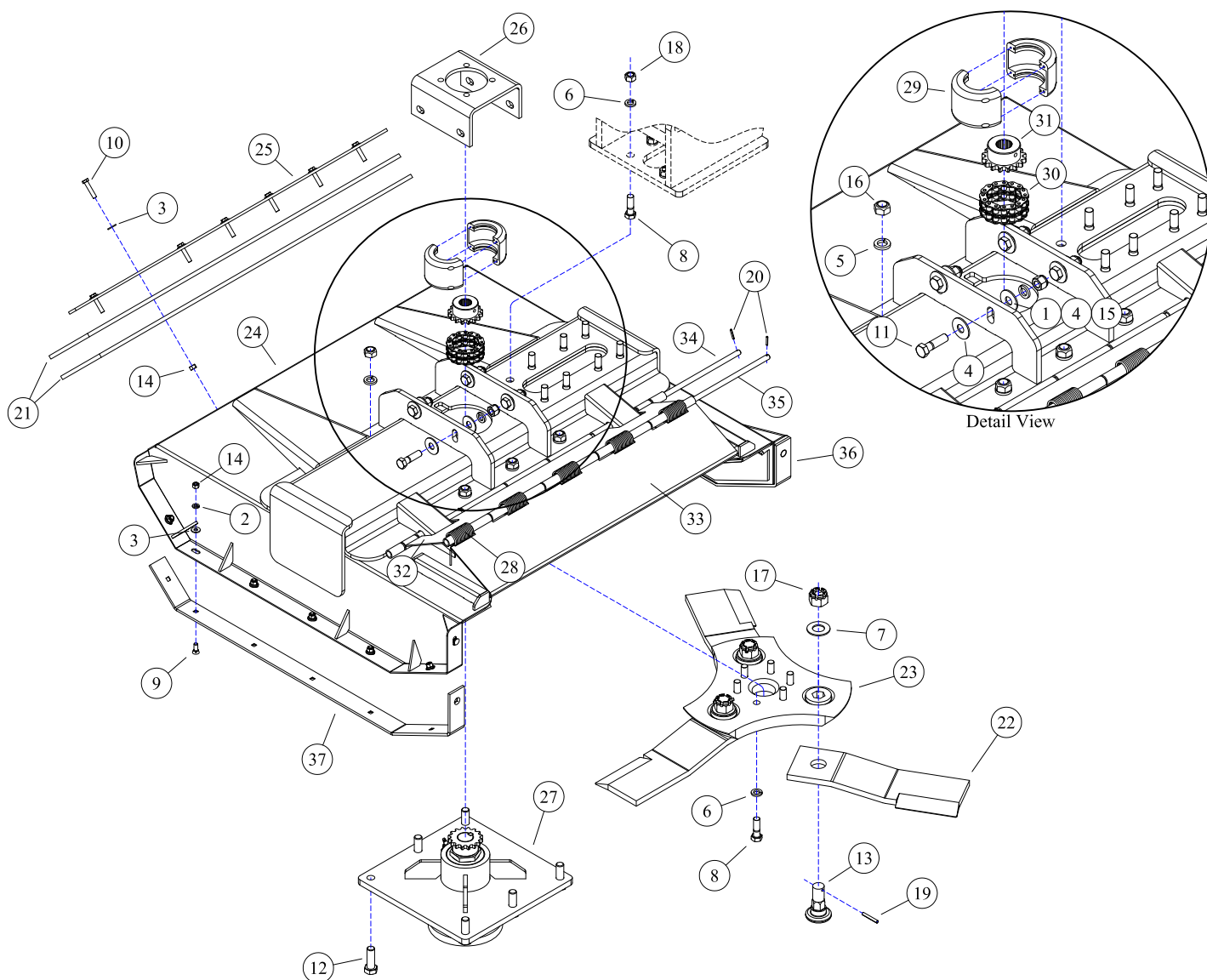
O-RINGS - S.A.E.....	14
S.A.E. TORQUE SPECIFICATIONS.....	15
METRIC TORQUE SPECIFICATIONS.....	15



ROTARY HEADS

ROTARY HEAD

DECK ASSEMBLY - 40" (1016MM)

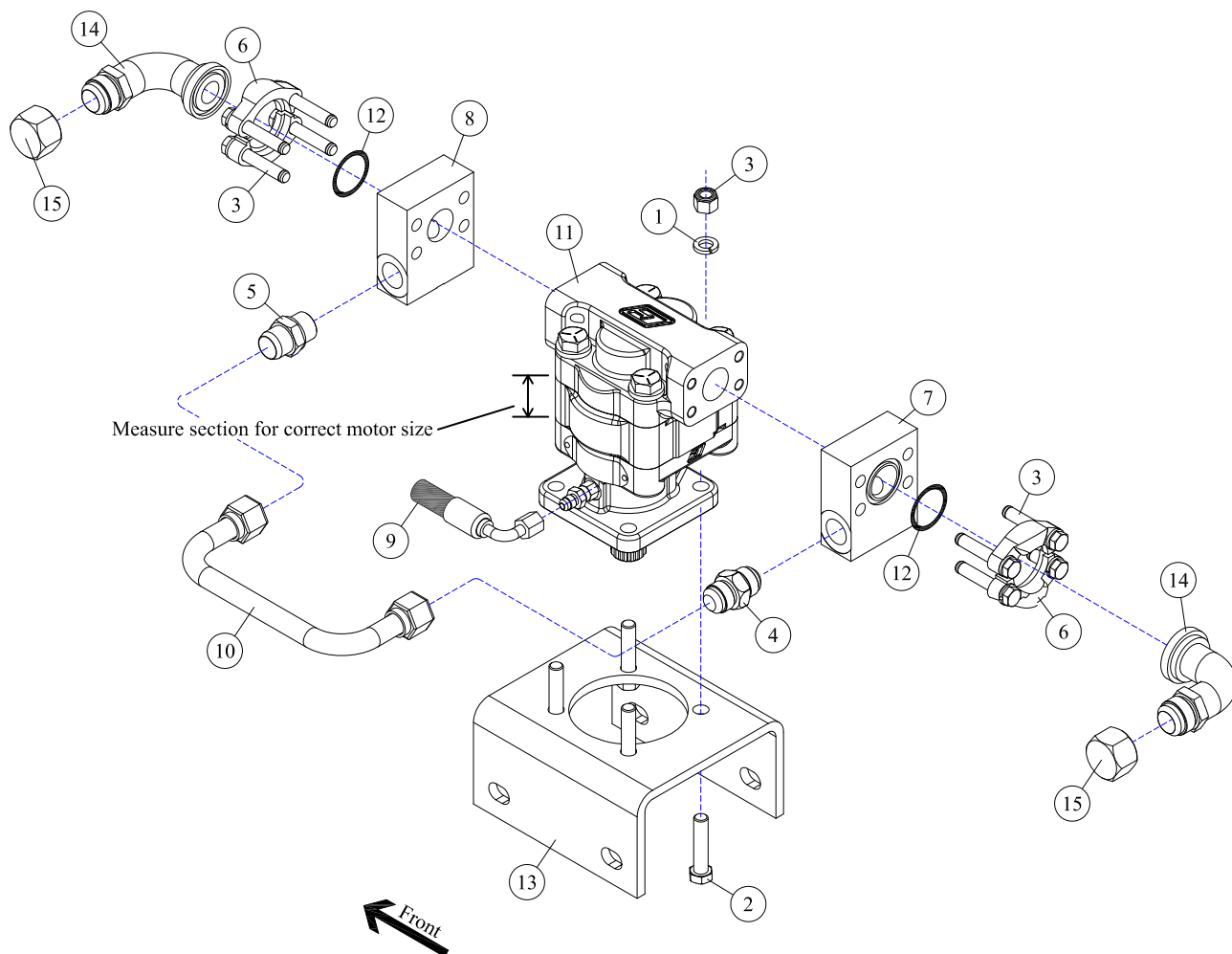


REF#	PARTS DESCRIPTION	REQ	PART #
1	5/8 LOCK WASHER GR 5	4	11-0004
2	3/8 LOCK WASHER GR 5	14	11-0005
3	5/16 FLAT WASHER GR 5	21	11-0015
4	5/8 FLAT WASHER GR 5	8	11-0025
5	3/4 LOCK WASHER GR 8	6	11-0040
6	5/8 LOCK WASHER GR 8	14	11-0043
7	1-1/8 SAE FLAT WASHER GR 8	3	11-0057
8	5/8 X 2 H.S. NF HEX CAPSCREW	14	11-0508
9	3/8 X 1 NC PLOW BOLT H.S.	14	11-0511
10	3/8 X 1-3/4 NC HEX CAPSCREW	7	11-0521
11	5/8 X 2-1/4 NC HEX CAPSCREW	4	11-0631
12	3/4 X 2-1/4 NF H.S. HEX CAPSCREW	6	11-0658
13	BLADE BOLT - HEX BASE	3	11-0759
14	3/8 NC HEX NUT	21	11-1001
15	5/8 NC NYLOCK NUT	4	11-1025
16	3/4 NF H.S. STOVER NUT	6	11-1032
17	1-1/8 NF CASTLE NUT	3	11-1050
18	5/8 H.S. NF STOVER NUT	8	11-1143
19	1/4 X 2 ROLL PIN	3	11-2005

REF#	PARTS DESCRIPTION	REQ	PART #
20	5/32 X 1 ROLL PIN	4	11-2054
21	FLAP	2	18-0067
22	5/8" BRUSH KNIFE	3	22-0006
23	40" HEA VY TRI-HEX DISH	1	24-0154
24	40" EXCAVATOR DECK	1	25-0146
25	FLAP RETAINING BAR	1	31-0205
26	MOTOR MOUNT	1	31-0242
27	SPINDLE ASSEMBLY	1	35-0010
28	TORSION SPRING	5	36-0003
29	COVER COUPLING	1	37-0004
30	CHAIN COUPLING	1	37-0006
31	1-1/4 SPROCKET	1	37-0031
32	REAR SHIELD	1	41-0816
33	FRONT SHIELD	1	41-0817
34	TRAP DOOR ROD - REAR	1	41-0818
35	TRAP DOOR ROD - FRONT	1	41-0819
36	LEFT SKID SHOE	1	42-0034
37	RIGHT SKID SHOE	1	42-0035
38	BLADE KIT (Includes 7, 13, 17, 19, & 22)	1	44-0228

ROTARY HEAD

DRIVE ASSEMBLY - 40" (1016MM)

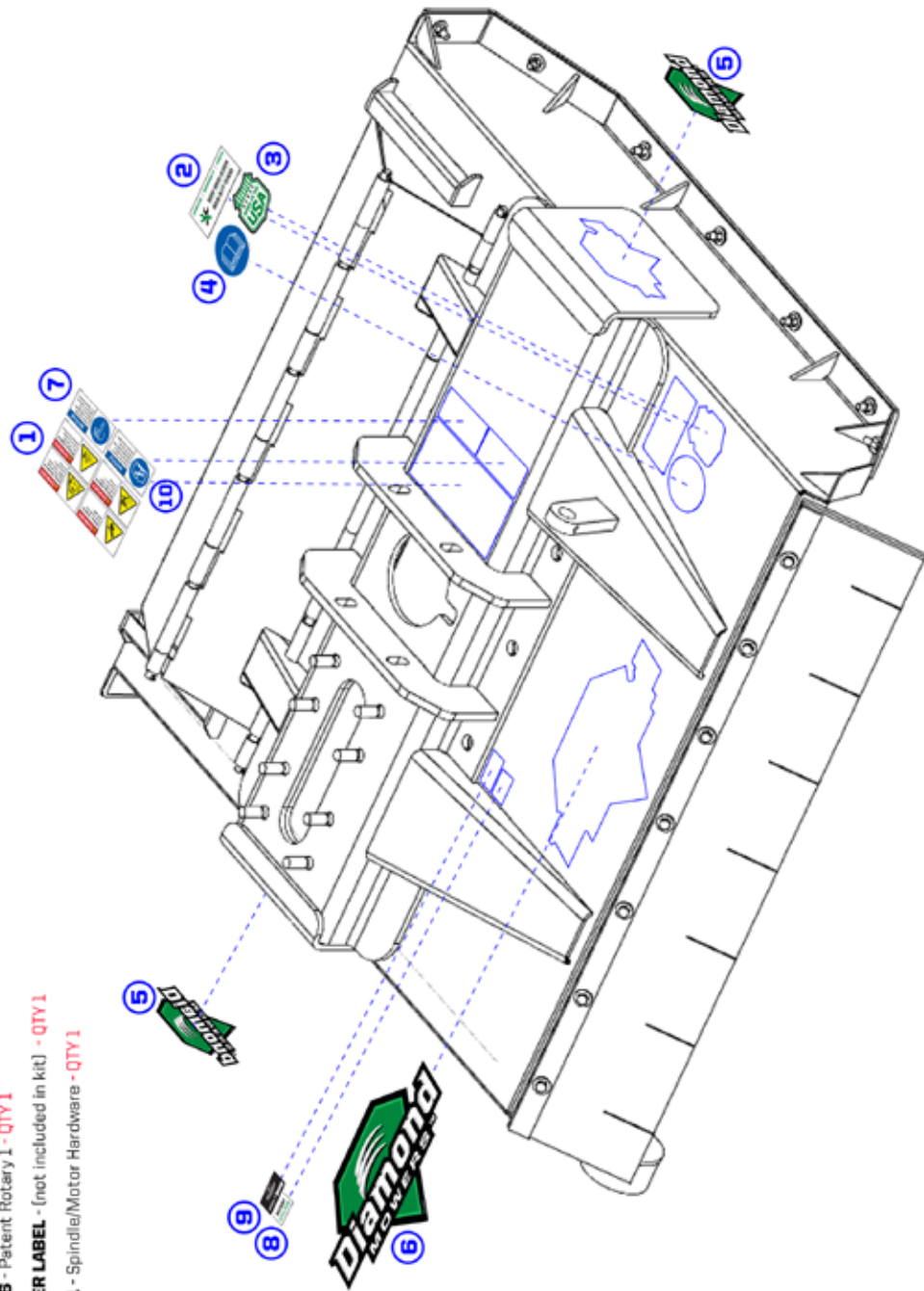


REF#	PARTS DESCRIPTION	REQ	PART #
1	1/2 LOCK WASHERS	4	11-0011
2	1/2 X 2-1/4 NC HEX CAPSCREW	4	11-0531
3	7/16 X 3 NC HEX CAPSCREW (included with #7 & 8)	4	11-0587
4	CHECK VALVE	1	21-1474
5	3/4 MORB X 3/4 MJIC ADAPTER	1	21-1475
6	#20 FLANGE KIT (included with #7 & 8)	2	21-2105
7	CROSS OVER MANIFOLD KIT (includes #3,6 & 12)	1	21-2180
8	TEE MANIFOLD KIT (includes #3,6 & 12)	1	21-2181
9	HOSE 3/8 X 24 (3/8FJIC 90DEG X 3/8MJIC)	1	21-4291
10	RUN-AROUND TUBE	1	28-0061
11	MOTOR		
	M330, 1" GEAR SET, 1-1/2" SECT, 16-21 GAL/MIN	1	30-0530
	M330, 1-1/4" GEAR SET, 1-3/4" SECT, 22-25 GAL/MIN	1	30-0525
	M330, 1-1/2" GEAR SET, 2" SECT, 26-29 GAL/MIN	1	30-0526
	M330, 1-3/4" GEAR SET, 2-1/4" SECT, 30-34 GAL/MIN	1	30-0531
12	O-RING (included with #6, 7 & 8)	2	33-0013
13	MOTOR MOUNT	1	31-0242
14	ADAPTER, #20FLG X 1MJIC 90DEG	2	21-1267
15	1FJIC CAP NUT	2	21-1454

DECAL ASSEMBLY

090119

- ① PART #15-0057 - Decal Group (horizontal) - QTY 1
- 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 #15-0050 - Diamond Mowers Logo 7in - QTY 2
- ⑥ PART #15-0053 - Diamond Mowers Logo 13in - QTY 1
- ⑦ PART #15-0007 - Chain Coupler Grease Notice - QTY 1
- ⑧ PART #15-0066 - Patent Rotary 1 - QTY 1
- ⑨ SERIAL NUMBER LABEL - (not included in kit) - QTY 1
- ⑩ PART #15-0101 - Spindle/Motor Hardware - QTY 1

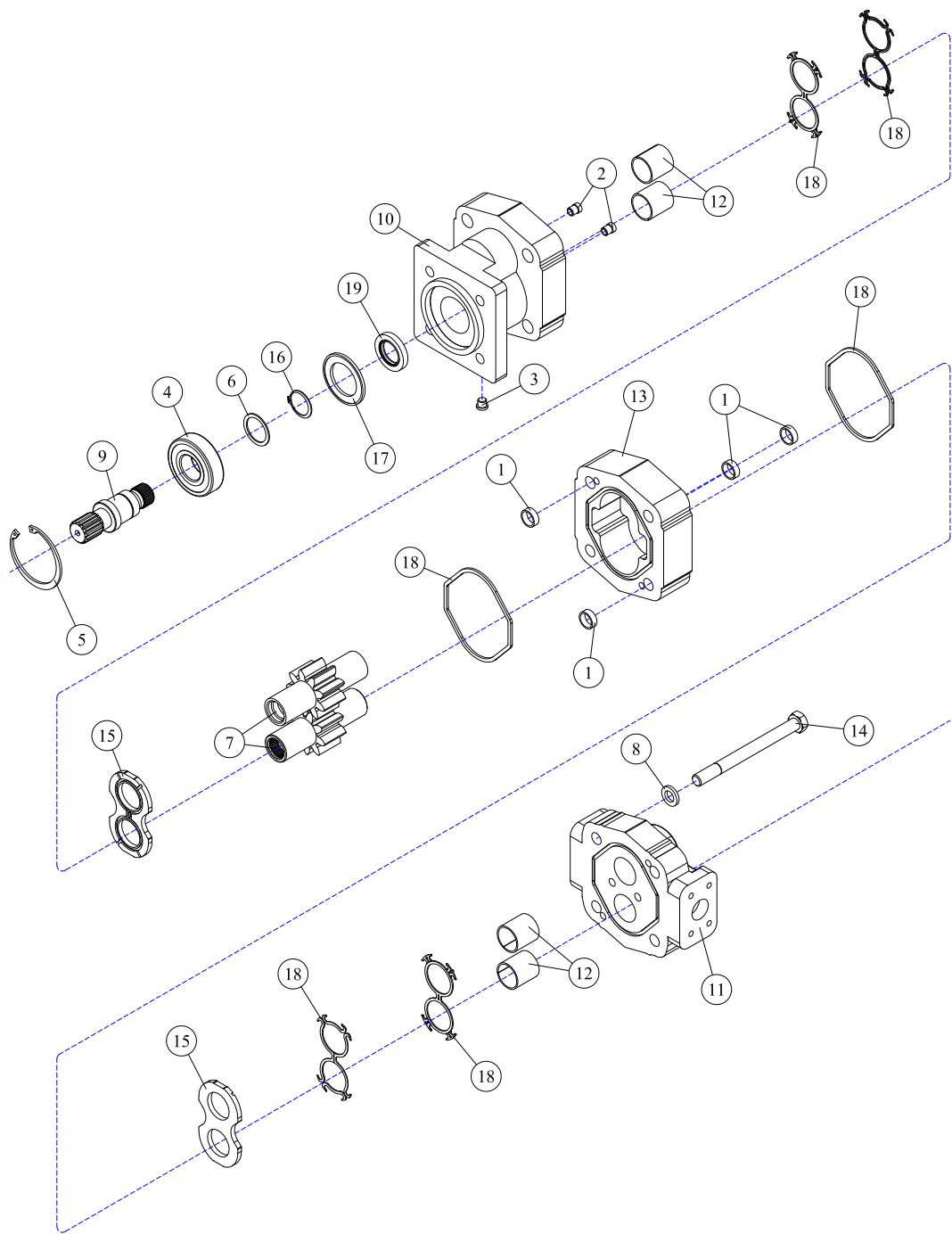




DECK ASSEMBLIES

DECK ASSEMBLIES

MOTOR ASSEMBLY - 30-0525

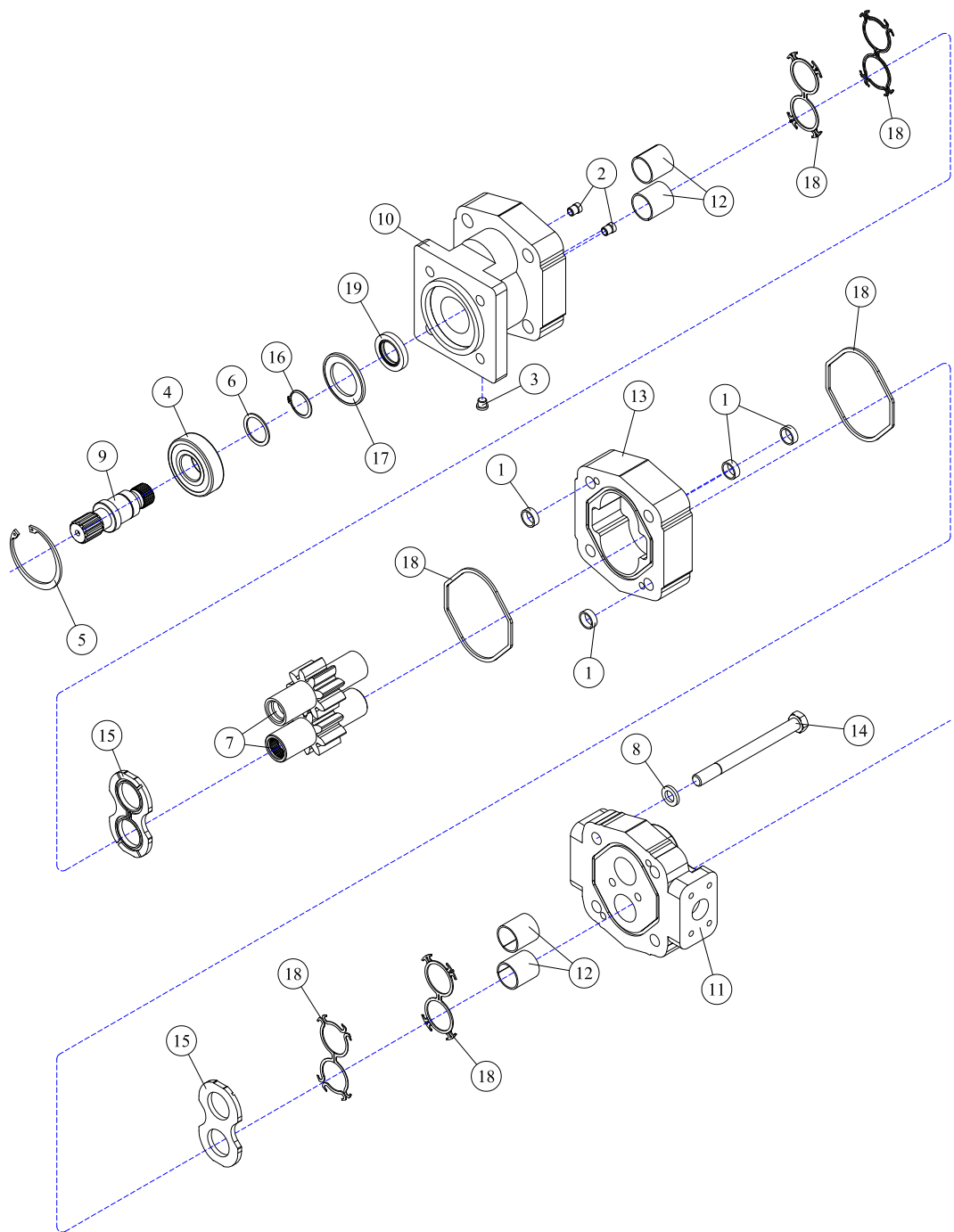


REF#	PARTS DESCRIPTION	REQ	PART #
1	DOWEL PIN	4	30-1086
2	CHECK ASSEMBLY	2	30-1087
3	PLUG	1	30-1096
4	OUTBOARD BEARING	1	30-1109
5	SNAP RING	1	30-1110
6	BEARING SPACER	1	30-1112
7	GEAR SET, M330, 1-1/4"	1	30-1191
8	WASHER	4	30-1127
9	CONTINENTAL SHAFT	1	30-1130
10	SHAFT END COVER	1	30-1182

REF#	PARTS DESCRIPTION	REQ	PART #
11	PORT END COVER	1	30-1183
12	BUSHING (included in shaft & port covers)	4	Call
13	GEAR HOUSING, M330, 1-1/4"	1	30-1192
14	STUD	4	30-1185
15	THRUST PLATE	2	30-1186
16	RETAINING RING	1	30-1187
17	SEAL RETAINER	1	30-1188
18	M330 SEAL KIT	Avail	30-1189
19	SHAFT SEAL 150 PSI (included in M330 seal kit)	1	30-1190

DECK ASSEMBLIES

MOTOR ASSEMBLY - 30-0526

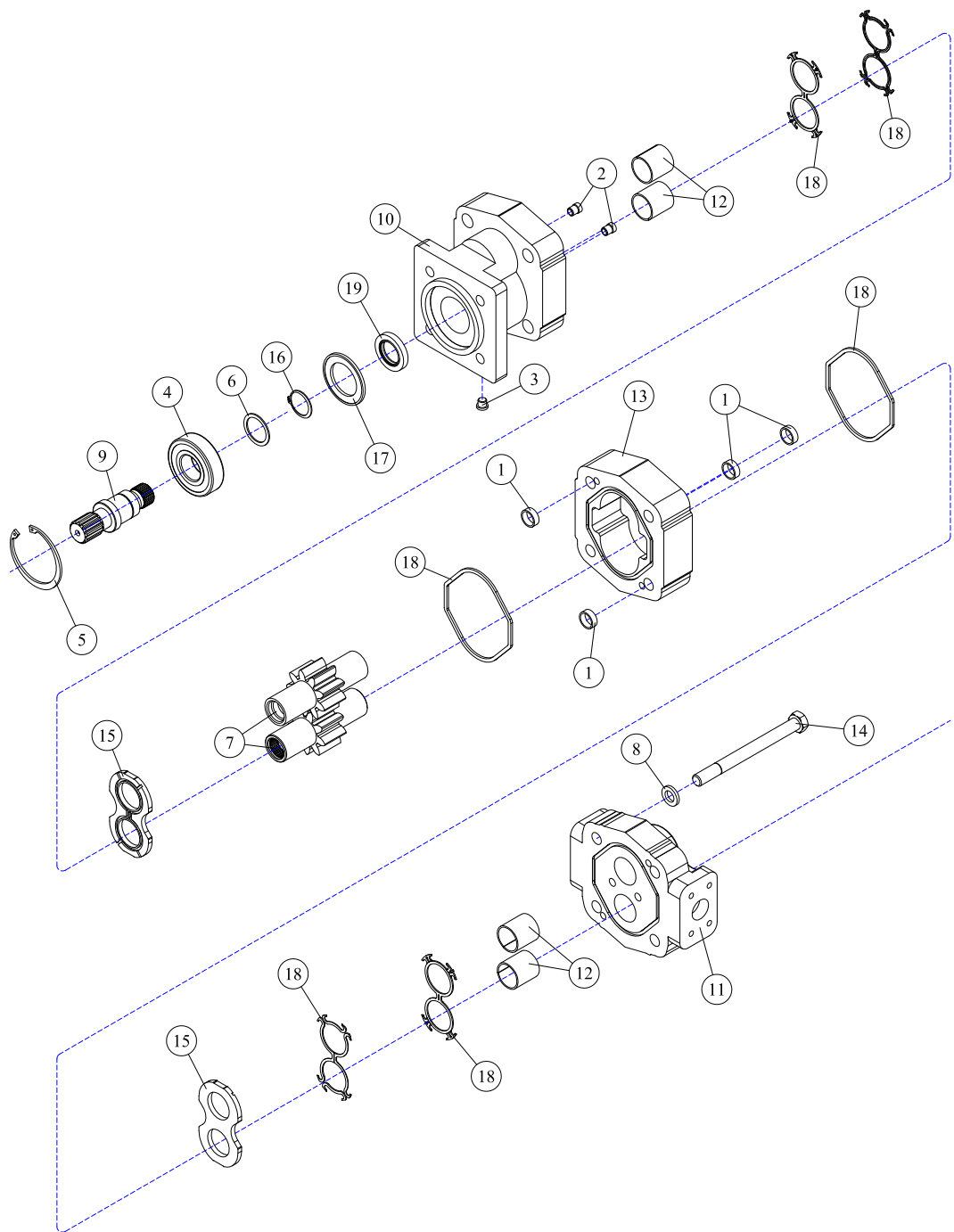


REF#	PARTS DESCRIPTION	REQ	PART #
1	DOWEL PIN	4	30-1086
2	CHECK ASSEMBLY	2	30-1087
3	PLUG	1	30-1096
4	OUTBOARD BEARING	1	30-1109
5	SNAP RING	1	30-1110
6	BEARING SPACER	1	30-1112
7	GEAR SET, M330, 1-1/2"	1	30-1119
8	WASHER	4	30-1127
9	CONTINENTAL SHAFT	1	30-1130
10	SHAFT END COVER	1	30-1182

REF#	PARTS DESCRIPTION	REQ	PART #
11	PORT END COVER	1	30-1183
12	BUSHING (included in shaft & port covers)	4	Call
13	GEAR HOUSING, M330, 1-1/2"	1	30-1184
14	STUD	4	30-1185
15	THRUST PLATE	2	30-1186
16	RETAINING RING	1	30-1187
17	SEAL RETAINER	1	30-1188
18	M330 SEAL KIT	Avail	30-1189
19	SHAFT SEAL 100 PSI (included in M330 seal kit)	1	30-1190
*	SEAL APPLICATOR TOOL (not shown)	Avail	30-1048

DECK ASSEMBLIES

MOTOR ASSEMBLY - 30-0530

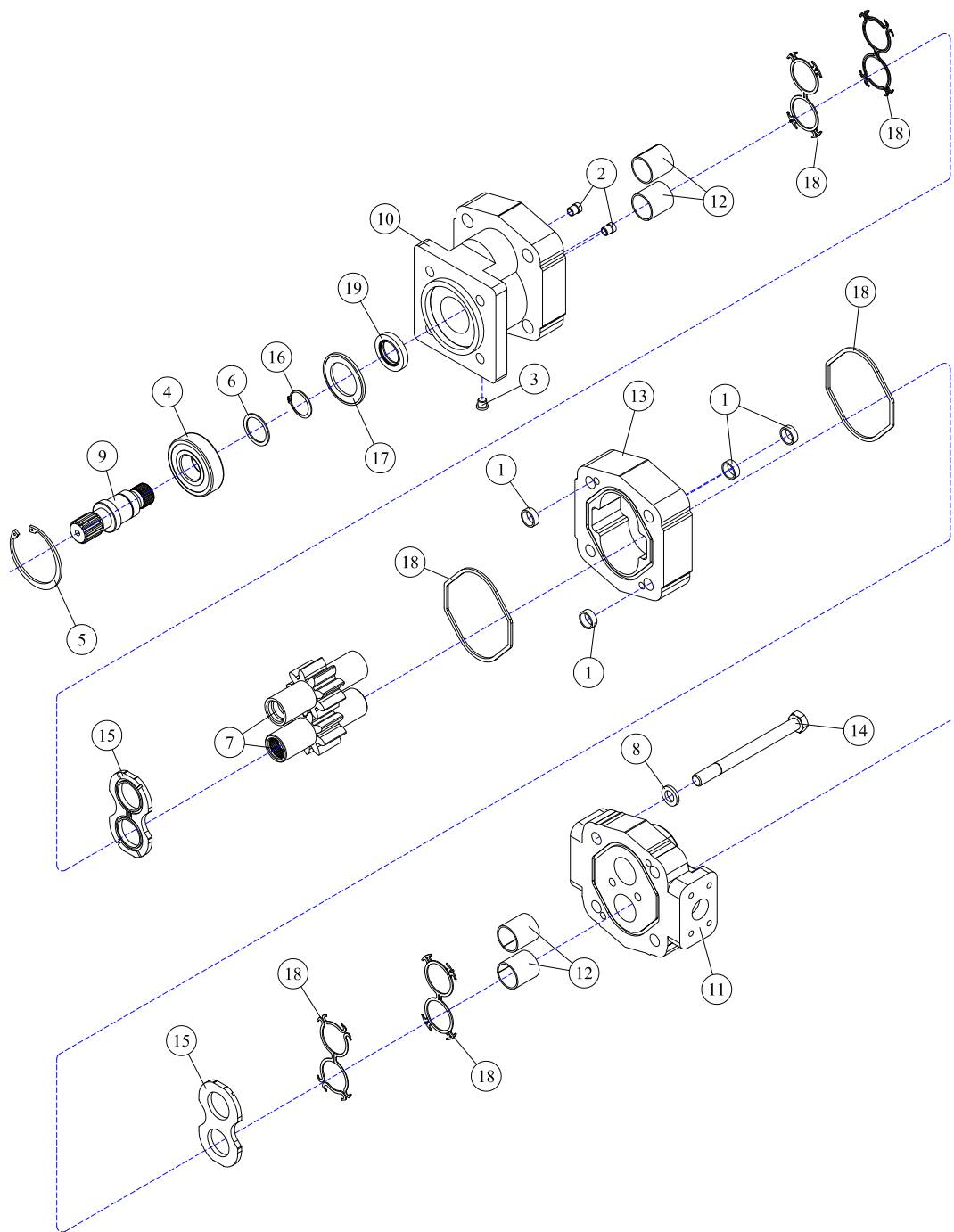


REF#	PARTS DESCRIPTION	REQ	PART #
1	DOWEL PIN	4	30-1086
2	CHECK ASSEMBLY	2	30-1087
3	PLUG	1	30-1096
4	OUTBOARD BEARING	1	30-1109
5	SNAP RING	1	30-1110
6	BEARING SPACER	1	30-1112
7	GEAR SET, M330, 1"	1	30-1196
8	WASHER	4	30-1127
9	CONTINENTAL SHAFT	1	30-1130
10	SHAFT END COVER	1	30-1182

REF#	PARTS DESCRIPTION	REQ	PART #
11	PORT END COVER	1	30-1183
12	BUSHING (included in shaft & port covers)	4	Call
13	GEAR HOUSING, M330, 1"	1	30-1197
14	STUD	4	30-1198
15	THRUST PLATE	2	30-1186
16	RETAINING RING	1	30-1187
17	SEAL RETAINER	1	30-1188
18	M330 SEAL KIT	Avail	30-1189
19	SHAFT SEAL 150 PSI (included in M330 seal kit)	1	30-1190
*	SEAL APPLICATOR TOOL (not shown)	Avail	30-1048

DECK ASSEMBLIES

MOTOR ASSEMBLY - 30-0531

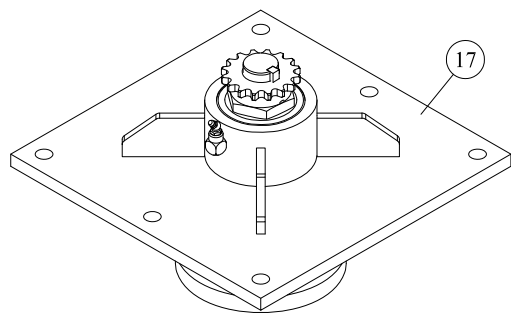


REF#	PARTS DESCRIPTION	REQ	PART #
1	DOWEL PIN	4	30-1086
2	CHECK ASSEMBLY	2	30-1087
3	PLUG	1	30-1096
4	OUTBOARD BEARING	1	30-1109
5	SNAP RING	1	30-1110
6	BEARING SPACER	1	30-1112
7	GEAR SET, M330, 1-3/4"	1	30-1202
8	WASHER	4	30-1127
9	CONTINENTAL SHAFT	1	30-1130
10	SHAFT END COVER	1	30-1182

REF#	PARTS DESCRIPTION	REQ	PART #
11	PORT END COVER	1	30-1183
12	BUSHING (included in shaft & port covers)	4	Call
13	GEAR HOUSING, M330, 1-3/4"	1	30-1203
14	STUD	4	30-1204
15	THRUST PLATE	2	30-1186
16	RETAINING RING	1	30-1187
17	SEAL RETAINER	1	30-1188
18	M330 SEAL KIT	Avail	30-1189
19	SHAFT SEAL 100 PSI (included in M330 seal kit)	1	30-1190
*	SEAL APPLICATOR TOOL (not shown)	Avail	30-1048

DECK ASSEMBLIES

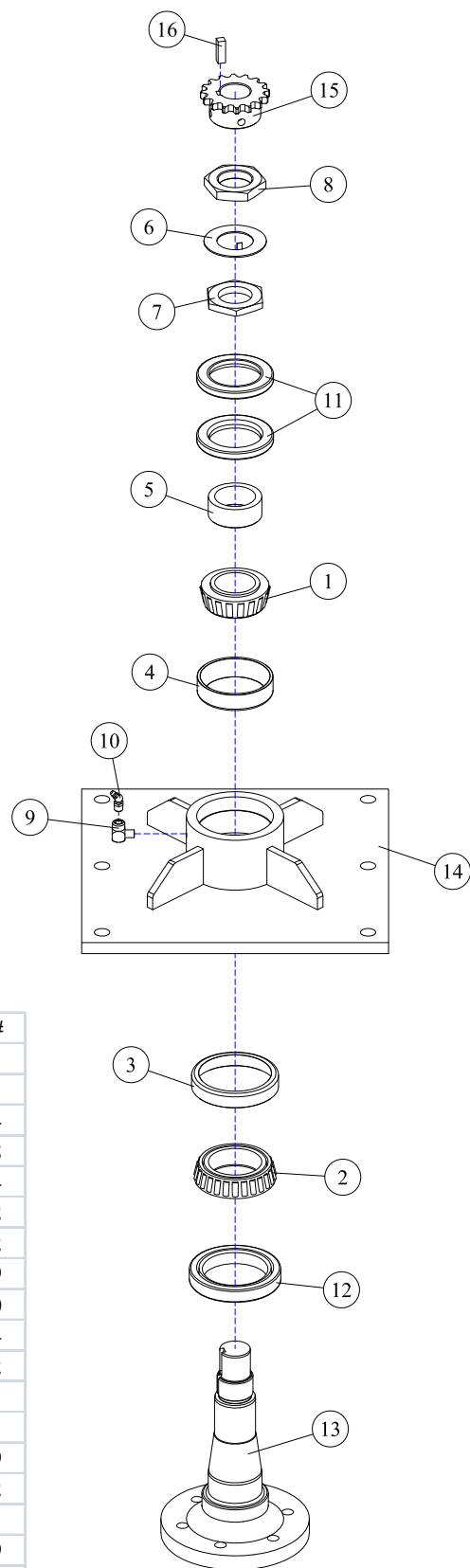
SPINDLE ASSEMBLY - 35-0010



* Complete spindle assemblies also available.
Diamond Part #35-0010

**Do not use #2 heavy-duty grease on spindle assembly. Use Diamond spindle grease parts #23-0001

***Complete spindle repair kits available.
These kits include 10-0003, 10-0004, 10-0008, 10-0014, 10-1002, 11-0002, 11-1009, 11-1010, 33-0001, 33-0003 & 37-0009. These can be purchased using part #44-0001



REF#	PARTS DESCRIPTION	REQ	PART #
1	BEARING CONE	1	10-0003
2	BEARING CONE	1	10-0004
3	BEARING CUP	1	10-0008
4	BEARING CUP	1	10-0014
5	BEARING ADJUSTMENT SLEEVE	1	10-1002
6	JAM WASHER	1	11-0002
7	ADJUSTMENT BEARING NUT	1	11-1009
8	ADJUSTMENT BEARING NUT	1	11-1010
9	1/8 X 90DEG ELBOW	1	21-1104
10	1/8" X 45 GREASE ZERK	1	23-0002
11	UPPER SEAL SET	1	33-0001
12	LOWER SEAL	1	33-0003
13	SPINDLE	1	35-0009
14	SPINDLE HOUSING	1	35-0012
15	SPROCKET	1	37-0003
16	SPINDLE KEY	1	37-0009
17*	SPINDLE ASSY COMPLETE	Avail	35-0010
18**	DIAMOND SPINDLE GREASE	Avail	23-0001
19***	SPINDLE REPAIR KIT	Avail	44-0001



APPENDIX

O-RINGS - S.A.E.

ORING (AS568) BOSS FITTINGS [KIT PART# 33-0122] SAE SIZES

STANDARD ORING PART #	HYDRAULIC SIZE	ORING ID SAE (IN)	ORING WIDTH SAE (IN)	ORING MATERIAL
902	-2	0.24	0.06	90-durometer Nitrile
903	-3	0.30	0.06	90-durometer Nitrile
904	-4	0.35	0.07	90-durometer Nitrile
905	-5	0.41	0.07	90-durometer Nitrile
906	-6	0.47	0.08	90-durometer Nitrile
908	-8	0.64	0.09	90-durometer Nitrile
910	-10	0.76	0.1	90-durometer Nitrile
912	-12	0.92	0.12	90-durometer Nitrile
914	-14	1.05	0.12	90-durometer Nitrile
916	-16	1.17	0.12	90-durometer Nitrile
920	-20	1.48	0.12	90-durometer Nitrile
924	-24	1.72	0.12	90-durometer Nitrile
932	-32	2.34	0.12	90-durometer Nitrile

ORING (AS568) FLAT SEAL FITTINGS [KIT PART# 33-0123] SAE SIZES & METRIC SIZES

STANDARD ORING PART #	HYDRAULIC SIZE	END SIZE		ORING ID		ORING WIDTH		ORING MATERIAL
		SAE (IN)	METRIC (MM)	SAE (IN)	METRIC (MM)	SAE (IN)	METRIC (MM)	
011	-4	1/4	6	0.30	7.70	0.07	1.78	90-durometer Nitrile
012	-6	3/8	8, 10	0.36	9.30	0.07	1.78	90-durometer Nitrile
014	-8	1/2	12	0.49	12.40	0.07	1.78	90-durometer Nitrile
016	-10	5/8	14, 15, 16	0.61	15.60	0.07	1.78	90-durometer Nitrile
018	-12	3/4	18, 20	0.74	18.80	0.07	1.78	90-durometer Nitrile
020	-14	7/8	22	0.86	21.80	0.07	1.78	90-durometer Nitrile
021	-16	1	25	0.93	23.50	0.07	1.78	90-durometer Nitrile
025	-20	1 1/4	28, 30, 32	1.18	29.90	0.07	1.78	90-durometer Nitrile
029	-24	1 1/2	35, 38	1.49	37.80	0.07	1.78	90-durometer Nitrile
135	-32	2	50	1.93	49.00	0.10	2.54	90-durometer Nitrile

S.A.E. TORQUE SPECIFICATIONS

Nominal Dia.	threads per inch	Tensile Stress Area		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
(in.)		(sq. in.)	(Lbs.)	K = 0.15	K = 0.17	K = 0.20	(Lbs.)	K = 0.15	K = 0.17	K = 0.20	(Lbs.)	K = 0.15	K = 0.17	K = 0.20	(Lbs.)	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

METRIC TORQUE SPECIFICATIONS

Nominal Dia. (mm)	Pitch	4.6 Class 4.6				8.8 Class 8.8				10.9 Class 10.9				12.9 Class 12.9			
		Tightening Torque				Tightening Torque				Tightening Torque				Tightening Torque			
		Clamp Load (lbs)	Lubricated (ft-lbs)	Zinc Plated (ft-lbs)	Plain&Dry (ft-lbs)	Clamp Load (lbs)	Lubricated (ft-lbs)	Zinc Plated (ft-lbs)	Plain&Dry (ft-lbs)	Clamp Load (lbs)	Lubricated (ft-lbs)	Zinc Plated (ft-lbs)	Plain&Dry (ft-lbs)	Clamp Load (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

**DEMAND
BRILLIANCE**