

RIDING TROWEL

MSP445



PARTS & DECALS MANUAL

Manual Part #: 075705P | Revision: H
Language: English | Original Instructions



NOTICE

This manual, or a copy of it, must be kept with the machine at all times.
There is a manual storage container located on the machine for your convenience.

RIDING TROWEL

PARTS & DECALS MANUAL

This manual covers the Riding Trowel model listed below:

<u>Part No.</u>	<u>Description</u>
071200	RIDER, MSP445, Kohler ECH980
076030	RIDER, MSP445, Vanguard 61G2

For more information regarding the following, please see “MSP445 Safety & Operations Manual”

- Warranty information
- Dealer information
- How to identify the model/serial numbers on the machine
- Technical specifications

Table of Contents

Sect No.	Title	Page
	Table of Contents	4
1	PARTS.....	5
	Factory Service Information	6
	Replacement Parts Procedure.....	7
	General Arrangement.....	8
	Main Frame Assembly	10
	Steering System	12
	Pitch Control Assembly.....	14
	Front Deck Assembly.....	15
	Throttle Pedal and Kill Switch	16
	Fuel System	18
	Spray System	20
	Seat Frame Assembly.....	22
	Power Unit Assembly.....	26
	Power Unit Continued, Drive-line Assembly	28
	Left Hand Rotor Assembly	30
	Left Hand Gearbox Assembly.....	32
	Right Hand Rotor Assembly	34
	Right Hand Gearbox Assembly.....	36
	Left Hand Spider Assembly.....	40
	Right Hand Spider Assembly.....	41
	General Arrangement, MSP445 w/ Vanguard Engine	42
	Front Deck Assembly, MSP445 w/ Vanguard Engine	43
	Power Unit Assembly, MSP445 w/ Vanguard Engine	44
	Seat Frame Assembly, MSP445 w/ Vanguard Engine	48
2	DECALS	50
	Decals, MSP445.....	52
	Revision Detail.....	56

SECTION 1: PARTS

SECTION 1 PARTS

Factory Service Information

This section contains illustrated drawings and parts list for help in identifying and/or ordering replacement parts for your machine. Follow the instructions in the Replacement Parts Procedure section of this manual when ordering replacement parts to insure prompt and accurate delivery.

The Right Hand (RH) and/or Left Hand (LH) orientations are defined from the operator's point of view while sitting on the machine (SOM).

NOTE

All set screws have blue (LOC-TITE™) applied at the factory. If set screw is removed or loosened for any reason re-apply blue (LOC-TITE™).

NOTE

All grease fittings are capped with CAP PLUG GC-5 (AEC PN 015692) to protect the fitting. If cap becomes missing or damaged replace it as soon as possible.

NOTE

Anti-Seize is applied at the factory to all drive line coupling, gear box main and counter shafts and pitch control threaded rod assemblies. If these parts are disassembled re-apply a light coat of a graphite based anti-seize.

We recommend AEC quality replacement parts, these are available from the AEC Customer Service Department or your nearest AEC Dealer.

Part numbers are subject to change without notice. Part numbers might be different outside of the United States of America. Use part numbers listed in the applicable parts list table when you place your order. If a part number changes, the AEC Customer Service Department or your nearest AEC dealer will have the latest part number for the replacement part.

Remember when you order replacement parts, you will need your model number and serial number. These are the numbers that you have recorded in the UNIT ID section of the Safety and Operations manual. Please order replacement parts by the appropriate part number, not the key number.

This manual contains an illustrated parts list for help in ordering replacement parts for your machine. Follow the instructions below when ordering parts to insure prompt and accurate delivery:

1. All orders for service parts must include the serial number for the machine. Shipment will be delayed if this information is not available.
2. Include the correct description and part number from Parts Section 1.
3. Specify exact shipping instructions, including the preferred routing and complete destination address
4. DO NOT return parts to AEC without receiving written authorization from AEC. All authorized returns must be shipped pre-paid.
5. When placing an order please contact the AEC dealer nearest to you.

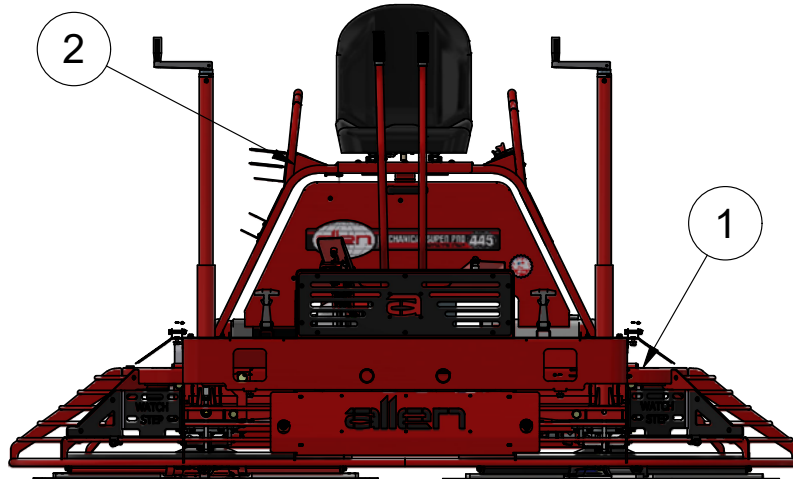


All information, specifications, and illustrations in this manual are subject to change without notice and are based on the latest information at the time of publication.

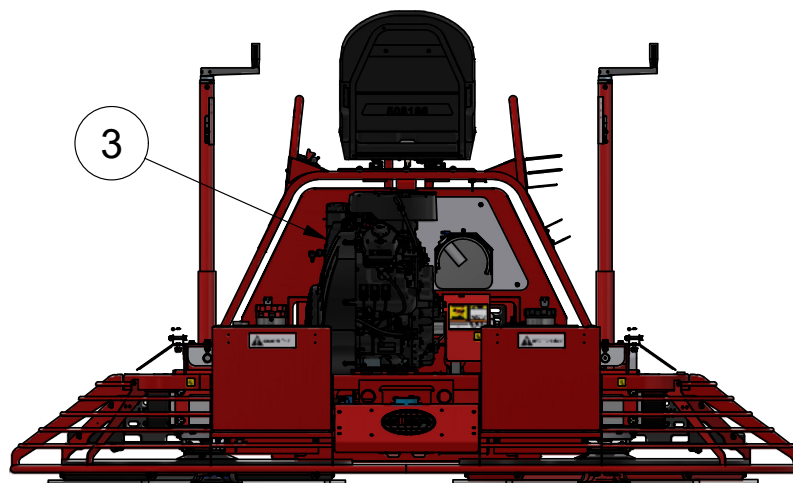
SECTION 1 PARTS

General Arrangement

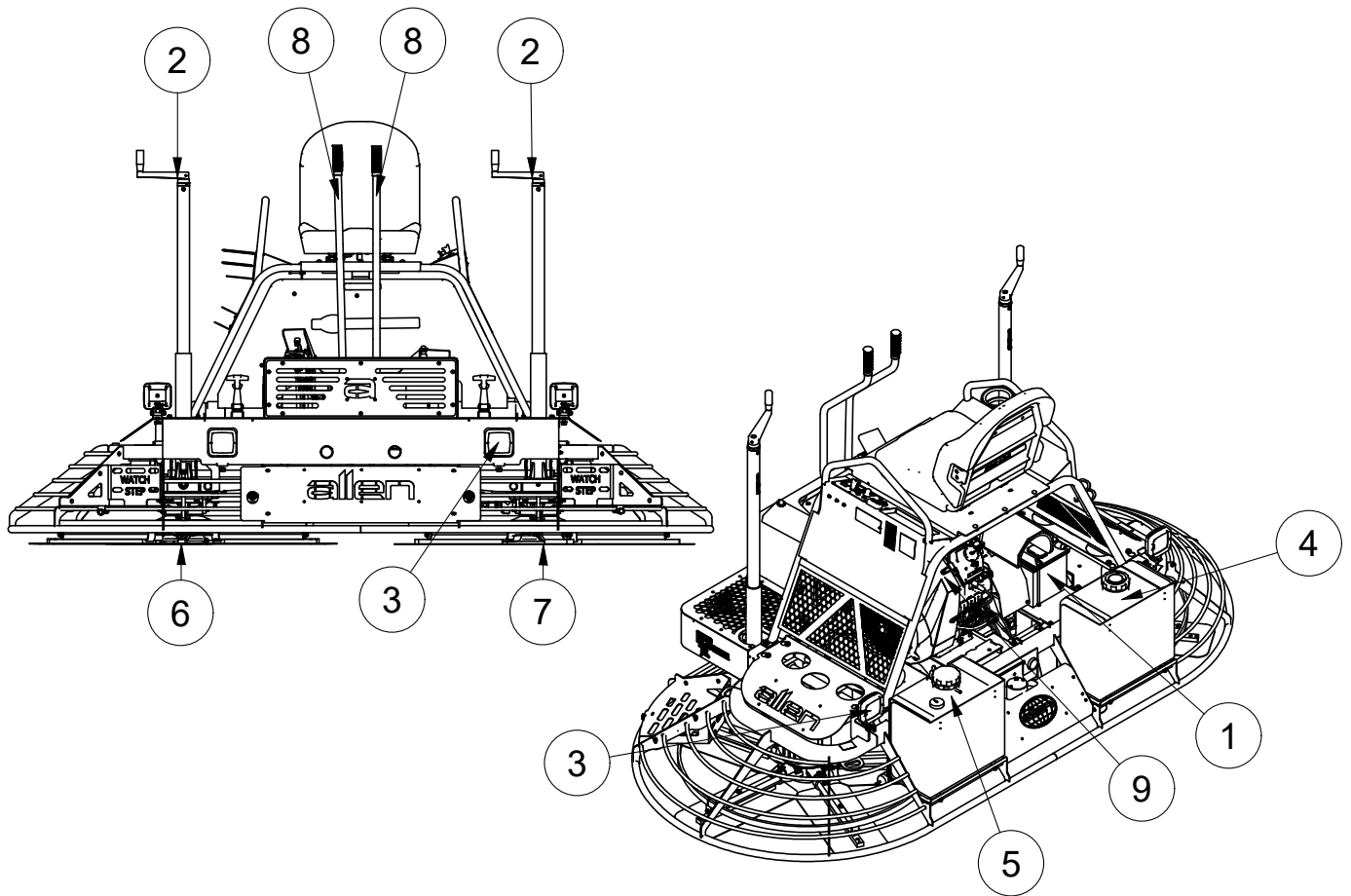
FRONT



REAR



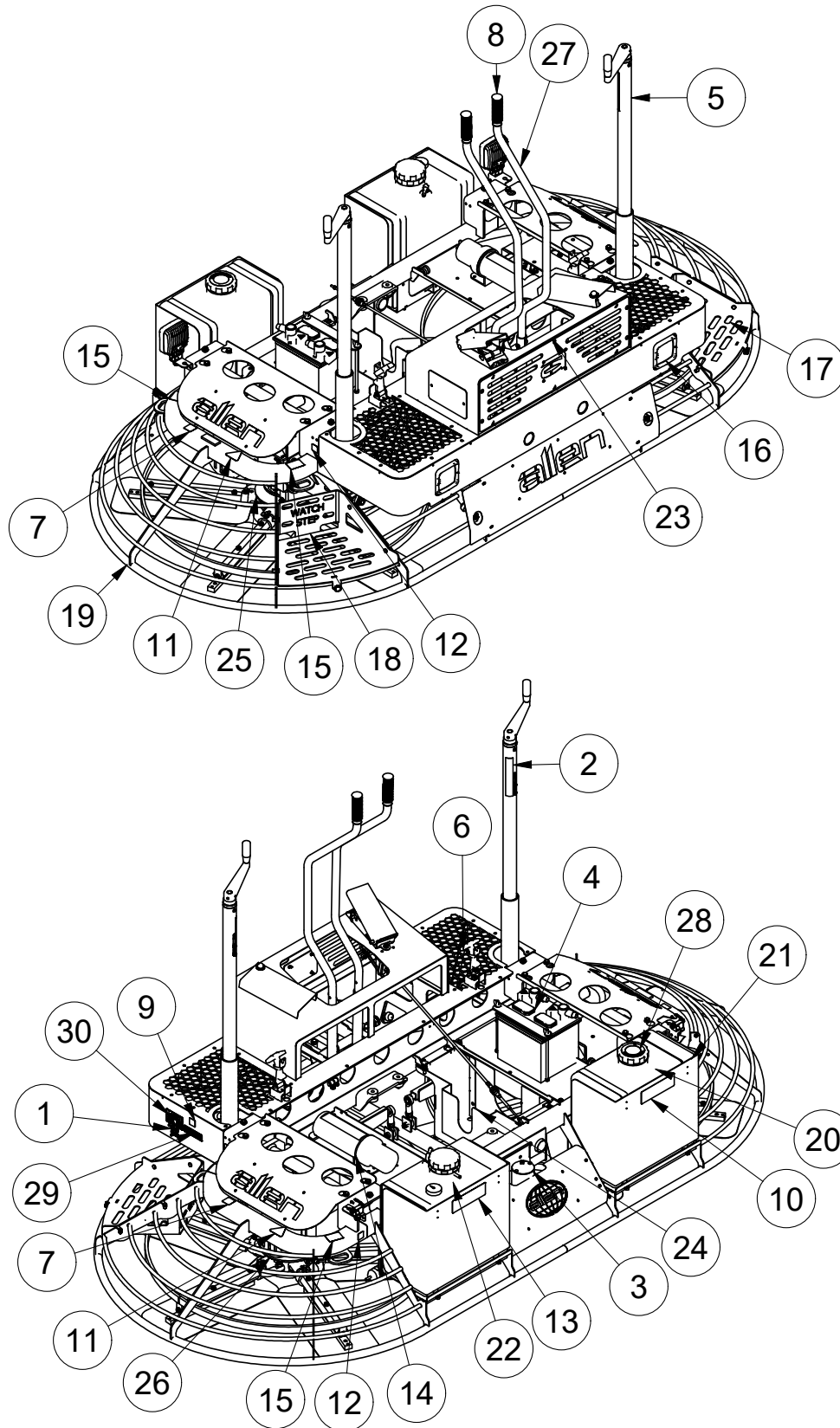
ITEM	PART #	DESCRIPTION	QTY
-	071200	ASSEMBLY, MSP445	-
1	071060	ASSEMBLY, MAIN FRAME	1
2	071110	ASSEMBLY, SEAT FRAME	1
3	071982	ASSEMBLY, POWER UNIT	1
-	074397	ELECTRICAL HARNESS	-



ITEM	PART #	DESCRIPTION	QTY
1	037771	BATTERY	1
2	038174	ASSEMBLY, PITCH CONTROL	2
3	069835	LIGHT LED 1200 LUMENS	4
4	071536	TANK, 7 GAL RETARDANT	1
5	072854	TANK, 7 GAL FUEL	1
6	073527	ASSEMBLY, RIGHT ROTOR	1
7	073528	ASSEMBLY LEFT ROTOR	1
8	073531	STEERING HANDLE	2
9	071982	ASSEMBLY, POWER UNIT	1

SECTION 1 PARTS

Main Frame Assembly



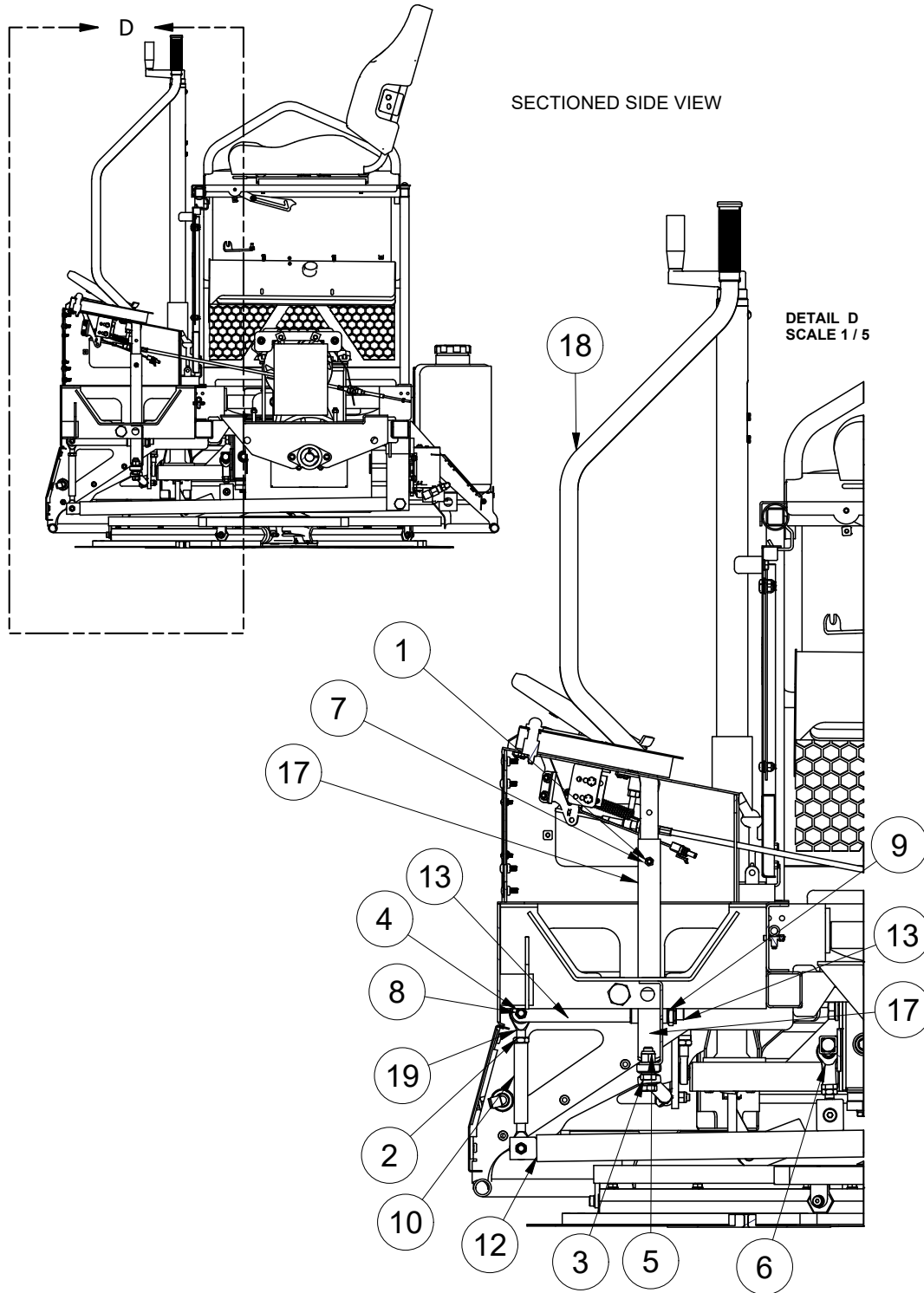
Main Frame Assembly Parts List

SECTION 1 PARTS

ITEM	PART #	DESCRIPTION	QTY
-	071060	ASSEMBLY, MAIN FRAME	-
1	010513	FITTING, STR GREASE 1/4"-28	4
2	032377	(CURVED) DECAL, PITCH CONTROL	2
3	033735	PUMP FOR SPRAY SYS.	1
4	037771	BATTERY 12V	1
5	038174	ASSEMBLY, PITCH CONTROL	2
6	042260	LATCH	2
7	048299D	DECAL, OIL GEARBOX	2
8	048354	GRIP FOR STEERING LEVER	2
9	065564	DECAL, RIDER GEARBOX OIL	1
10	065655	DECAL, RETARDANT ONLY	1
11	065656	DECAL, PAN FALL	2
12	065917	DECAL, PINCH POINT	4
13	066018	DECAL, GAS ONLY 7.72" X 2.5"	1
14	066255	MANUAL TUBE	1
15	068459	DECAL, TIE DOWN	4
16	069835	LIGHT, LED 1200 LUMENS	4
17	071099	STEP, LEFT SIDE	1
18	071103	STEP, RIGHT SIDE	1
19	071125	WELDMENT, MAIN FRAME	1
20	071536	TANK, 7 GALLON RETARDANT	1
21	072737	TANK GUARD	2
22	072854	TANK, 7 GALLON FUEL	1
23	073373	ASSEMBLY, FRONT DECK	1
24	073395	BELT GUARD	1
25	073528	ASSEMBLY, RIGHT MOTOR	1
26	073528	ASSEMBLY, LEFT MOTOR	1
27	073531	STEERING LEVER	2
28	073910	DECAL, RETARDANT CAP IDENTIFIER	1
29	074284	DECAL, GREASING OF U-JOINTS	1
30	074322	DECAL, GREASE PORTS	1
-	047730	BATTERY CABLE, 4 AWG 32" POSITIVE	1
-	048976	BATTERY CABLE, 4 AWG 35" NEGATIVE	1

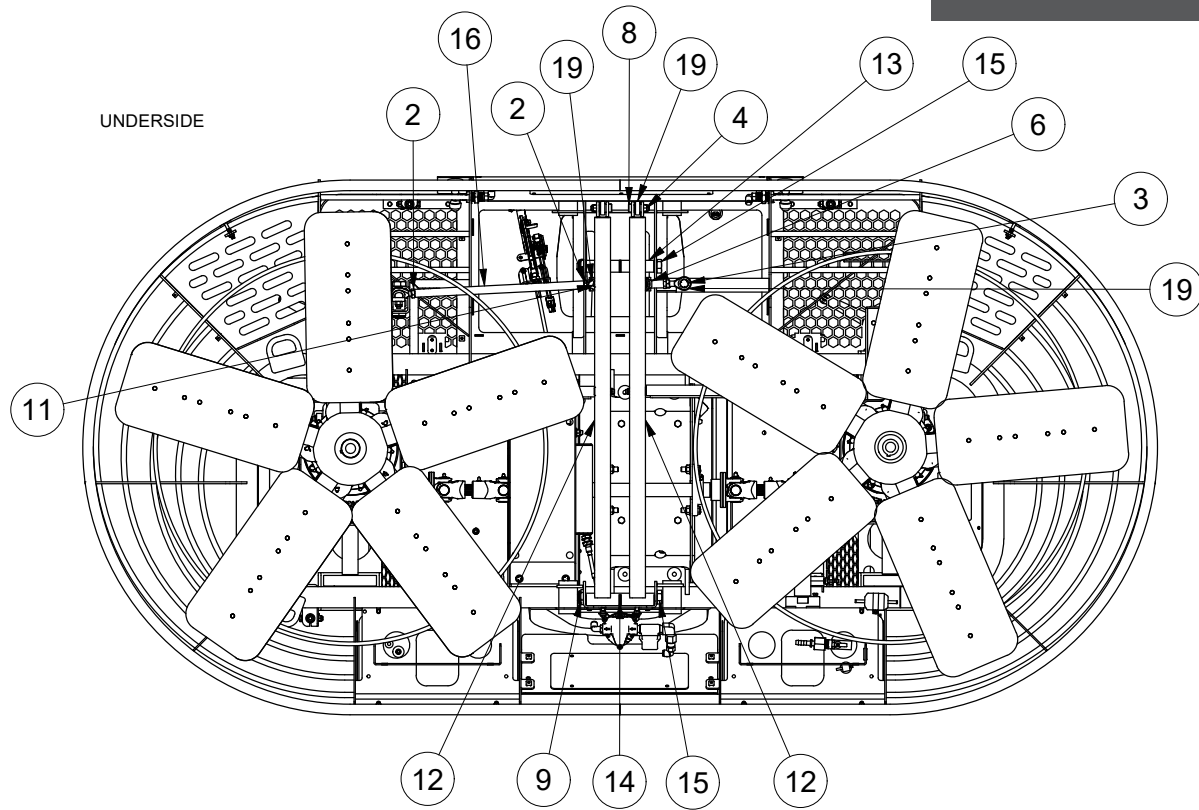
SECTION 1 PARTS

Steering System



Steering System & Parts List

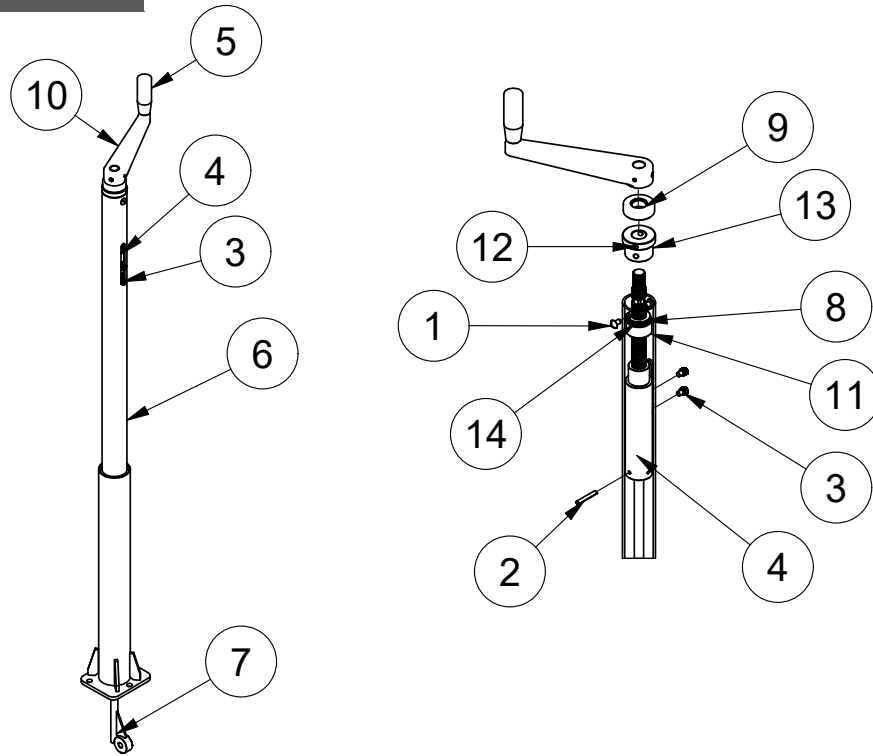
SECTION 1 PARTS



ITEM	PART #	DESCRIPTION	QTY
1	010005	FASTENER, HHCS 1/4"-20 X 1-1/2" GRADE 8	2
2	010051	FASTENER, HEX JAM NUT 1/2"-20 GRADE 8	8
3	010069	FASTENER, HHCS 1/2"-13 X 1-1/2" GRADE 8	2
4	010464	FASTENER, NUT NYLOCK 3/8"-16 GRADE 8	12
5	011238	FASTENER, HEX NUT NYLOCK 1/2"-13	1
6	019900	ROD, FEMALE END 1/2"	4
7	020542	FASTENER, NUT STOVER LOCK 1/4"-20	5
8	026267	BOLT 3/8"-16 X DIA 1/2" X 1	8
9	026447	FASTENER, NUT NYLOCK THIN 3/4"	5
10	046701	STEERING ARM 4-1/2"	2
11	046864	FASTNER, HHCS 1/2"-20 X 1-3/4" GRADE 8	2
12	048869	WELDMENT, LOWER CONTROL ARM	2
13	048894	WELDMENT, RIGHT HORIZONTAL CONTROL	2
14	048929	BEARING IGLIDE 3/4"	12
15	056636	FASTNER, HHCS 3/4"-10 X 7-1/2" GRADE 8	2
16	060882	SHAFT, STEERING LINKAGE 16"	1
17	073530	WELDMENT, STEERING SOCKET	2
18	073531	STEERING HANDLE	2
19	221408	ROD, MALE END 1/2"	12

SECTION 1 PARTS

Pitch Control Assembly

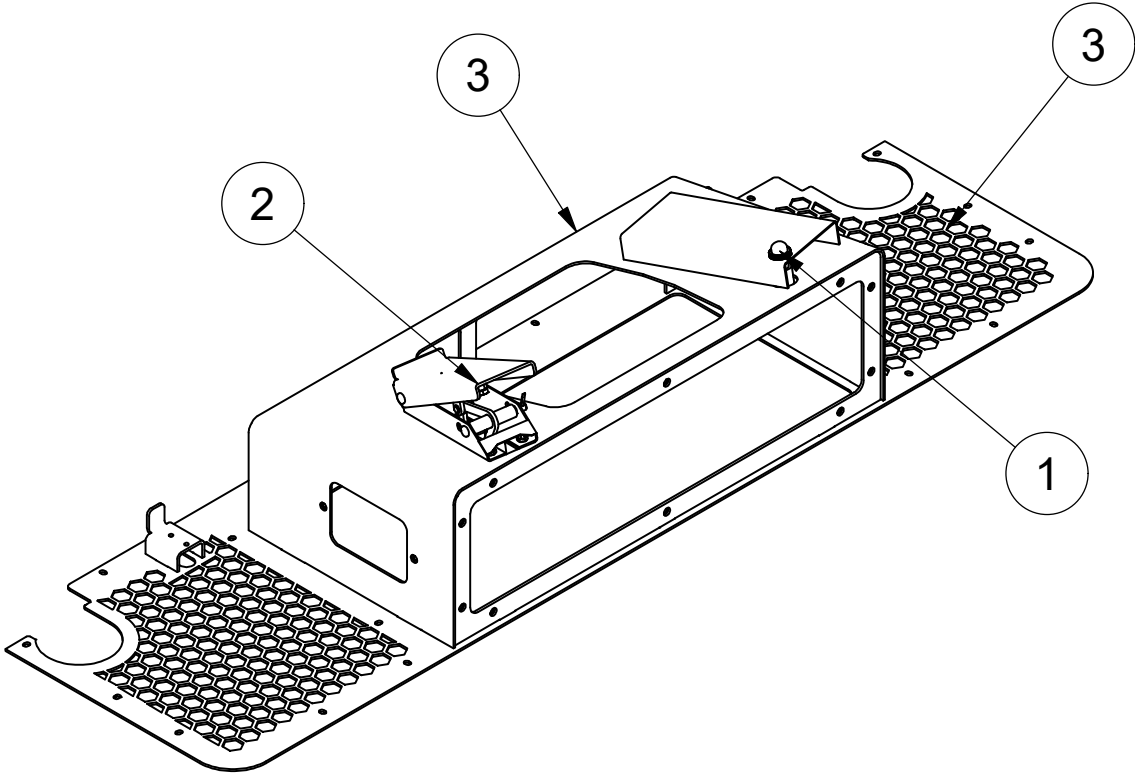


ITEM	PART #	DESCRIPTION	QTY
-	038174	ASSEMBLY, PITCH CONTROL	-
1	078505	FASTENER, RHMS 1/4"-20 X 3/8" (OLD PN 015410)	4
2	015747	PIN, ROLL 3/16" X 1-3/8" SPIROL	2
3	015768	FASTENER, SHCS 1/4"-20 X 1/4"	4
4	029812	BUSHING, SLIDE PITCH CONTROL	2
5	032115	KNOB, PITCH CONTROL HANDLE	2
6	038176	WELDMENT, PITCH CONTROL TUBE	2
7	038178	WELDMENT, PC SHAFT	2
8	012710	THRUST BEARING RACE	4
9	015742	THRUST BEARING	2
10	061529	ASSEMBLY, CRANK HANDLE AND SCREW SHAFT	2
11	032191	STOPPER FOR PITCH CONTROL	2
12	036797	SCREW, 1/4"-28 X 1/4	4
13	036914	BUSHING	2
14	100340	THRUST BEARING	2

***NOTE:** Part quantities referenced in this table represent quantity needed **PER MACHINE**.

Front Deck Assembly

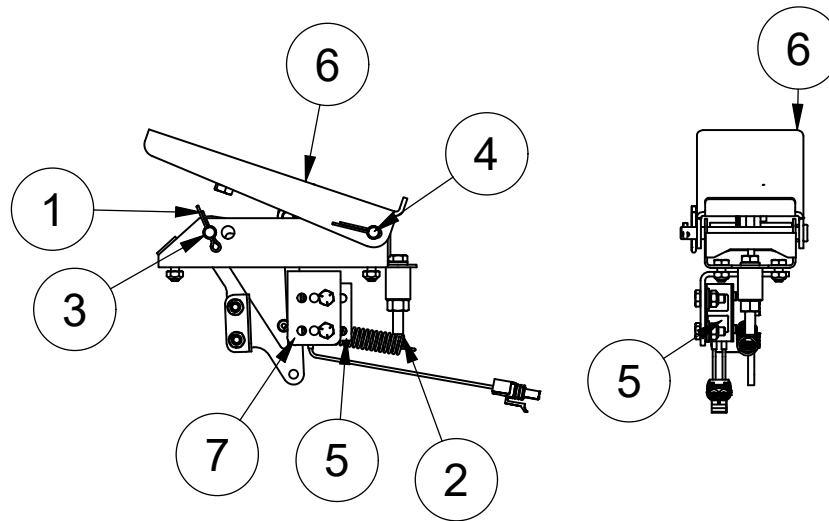
SECTION 1
PARTS



ITEM	PART #	DESCRIPTION	QTY
-	073373	ASSEMBLY, FRONT DECK	-
1	068956	MOMINTARY SWITCH, FOR SPRAY SYSTEM	1
2	071050	ASSEMBLY, THROTTLE PEDAL	1
3	071140	WELDMENT, UPPER DECK	1

SECTION 1 PARTS

Throttle Pedal and Kill Switch

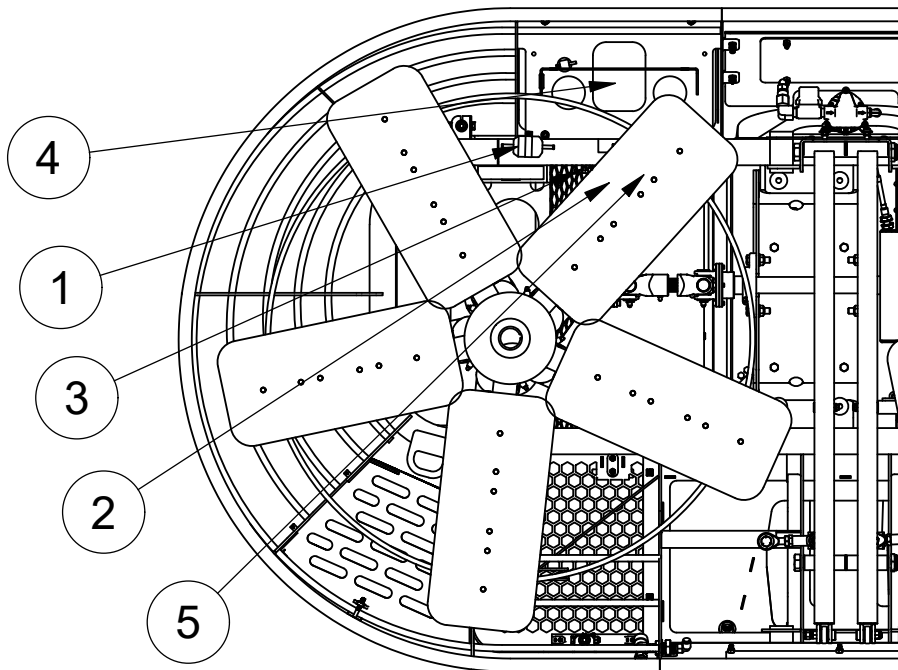
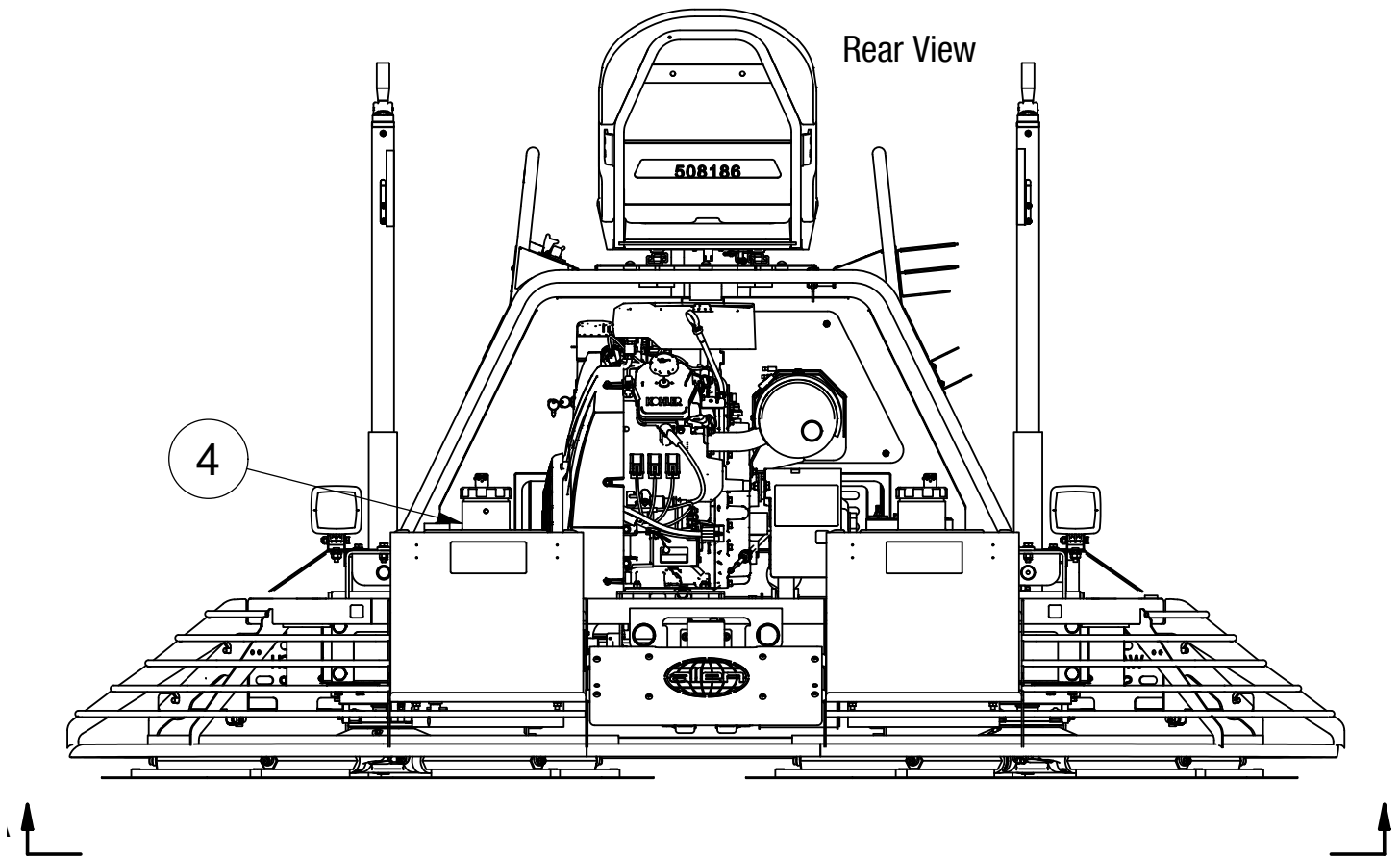


ITEM	PART #	DESCRIPTION	QTY
-	071050	ASSEMBLY, THROTTLE PEDAL	1
1	012361	COTTER PIN DIA. 1/8" X 1"	2
2	024981	EXTENSION SPRING	1
3	024983	FASTENER, CLEVIS PIN 3/8" X 3-1/4"	1
4	028895	FASTENER, CLEVIS PIN 3/8" X 3-3/4"	1
5	046742	PEDAL KILL SWITCH	1
6	072859	ASSEMBLY, FOOT PEDAL	1
7	073372	BRACKET, MOUNT FOR KILL SWITCH	1

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SECTION 1 PARTS

Fuel System



UNDERSIDE

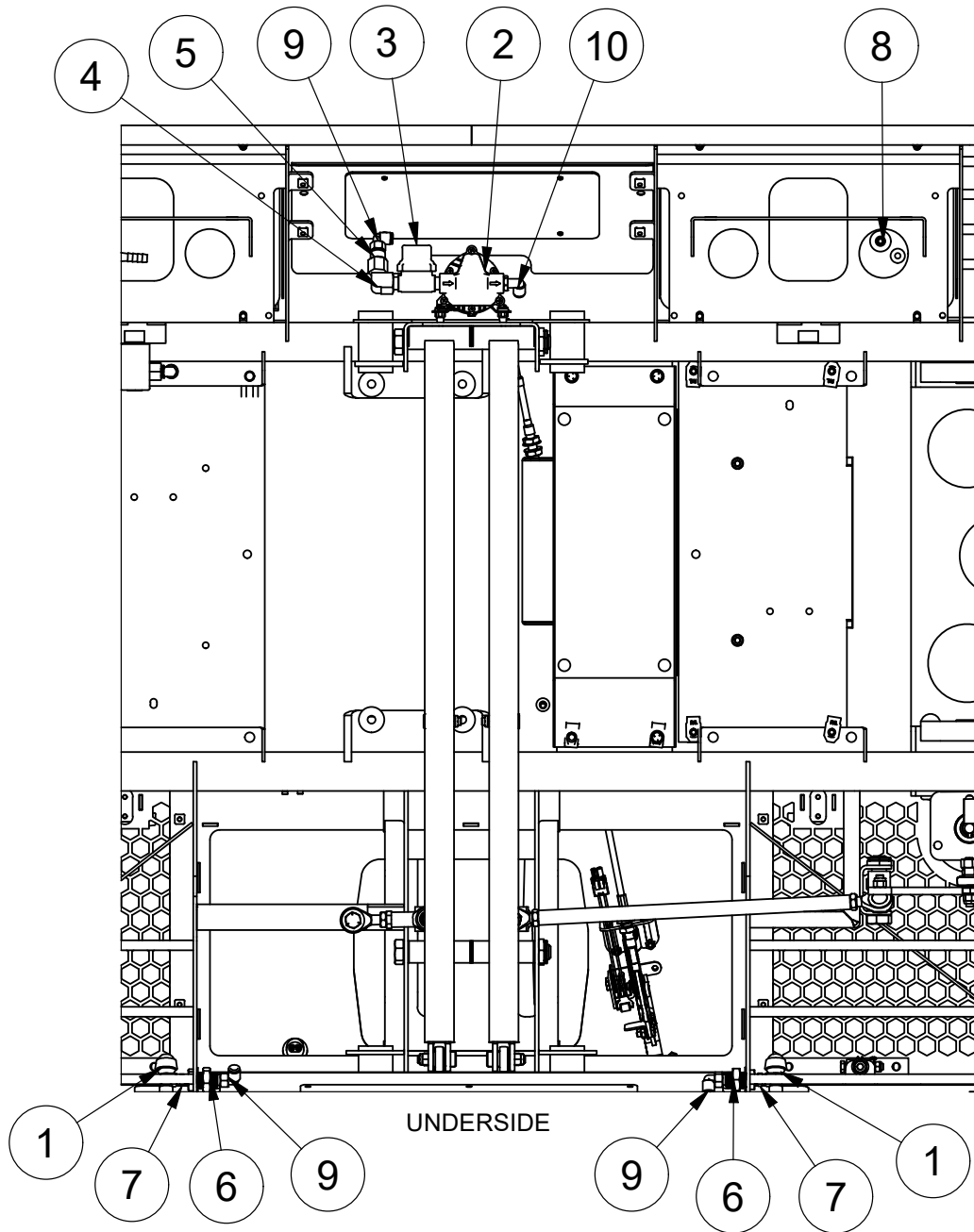
Fuel System Parts List

SECTION 1 PARTS

ITEM	PART #	DESCRIPTION	QTY
1	057993	FUEL FILTER	1
2	060915	ELECTRIC FUEL PUMP	1
3	069211	HOSE FITTING 1/4" HOSE X 1/8" NPT	1
4	072854	TANK, 7 GAL FUEL	1
5	072877	BARBED ELBOW 1/4" X 1/8"	1

SECTION 1 PARTS

Spray System



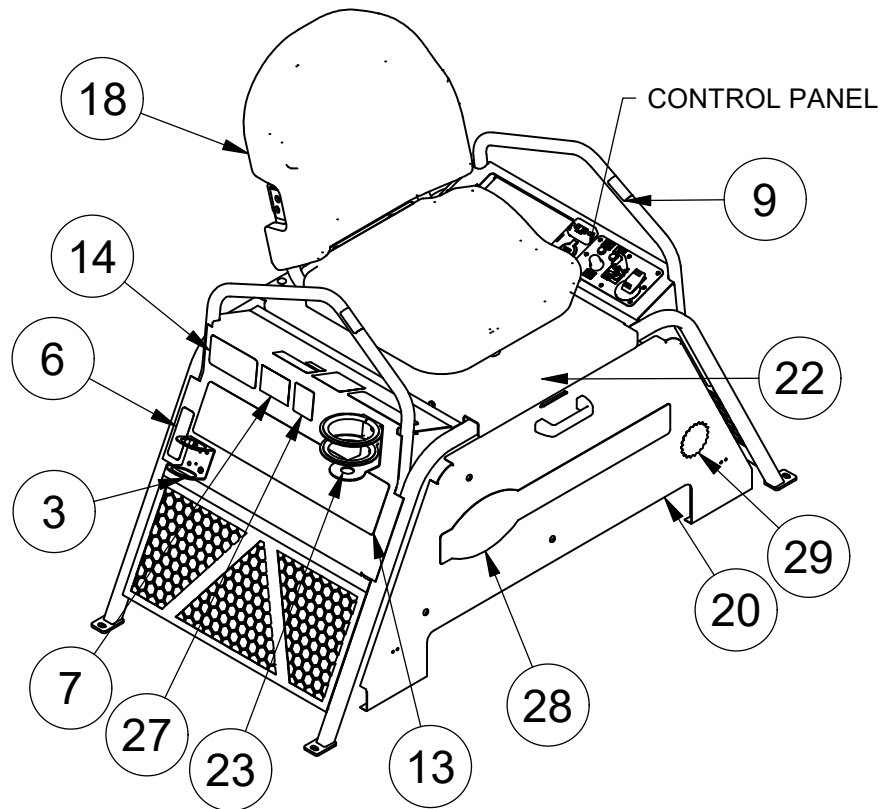
Spray System Parts List

SECTION 1 PARTS

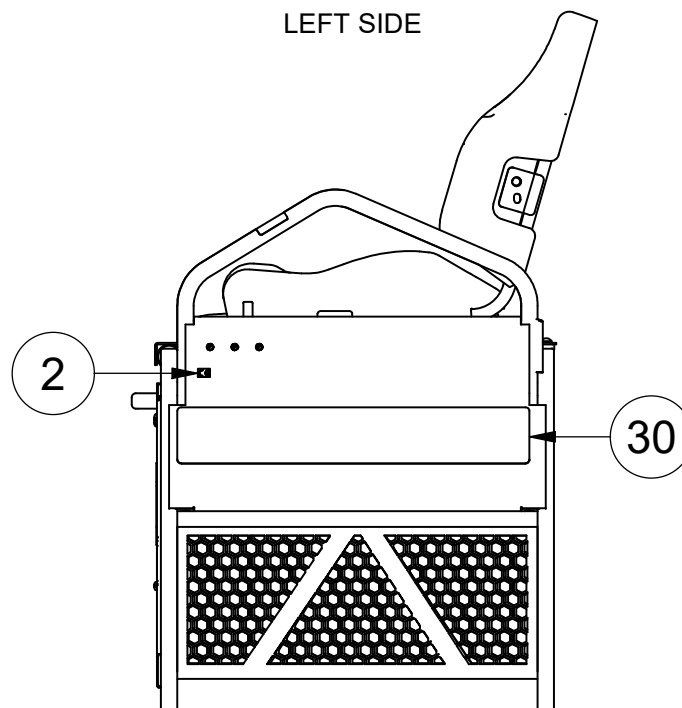
ITEM	PART #	DESCRIPTION	QTY
-	074139	KIT, HYDRAULIC SPRAY AND LUBRICATION	1
1	012704	SPRAY NOZZLE	2
2	033735	PUMP FOR SPRAY SYSTEM	1
3	040209	FILTER FOR SPRAY SYSTEM	1
4	040387	ELBOW 3/8" BRASS 90° STREET	1
5	040388	FTG 3/8" X 1/4" BRASS FM TO FM REDUCER	1
-	048246	(NOT SHOWN) HOSE, 3/8" WATER LINE	-
6	071016	FTG BULK HEAD 1/4" NPT	2
7	071017	FITTING, REDUCING HEX NIPPLE 1/4" TO 1/8"	2
8	071536	TANK, 7 GAL RETARDANT	1
9	071596	FTG ONE TOUCH ELBOW 1/4" MALE NPT TO 3/8"	3
10	071598	FTG ONE TOUCH ELBOW 3/8" NPT MALE TO 3/8"	1

SECTION 1 PARTS

Seat Frame Assembly



LEFT SIDE

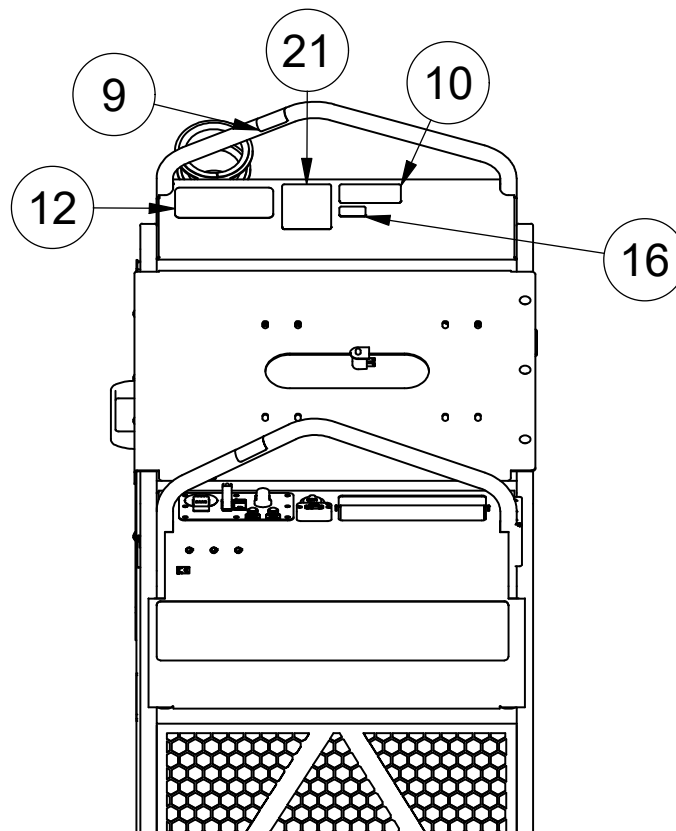
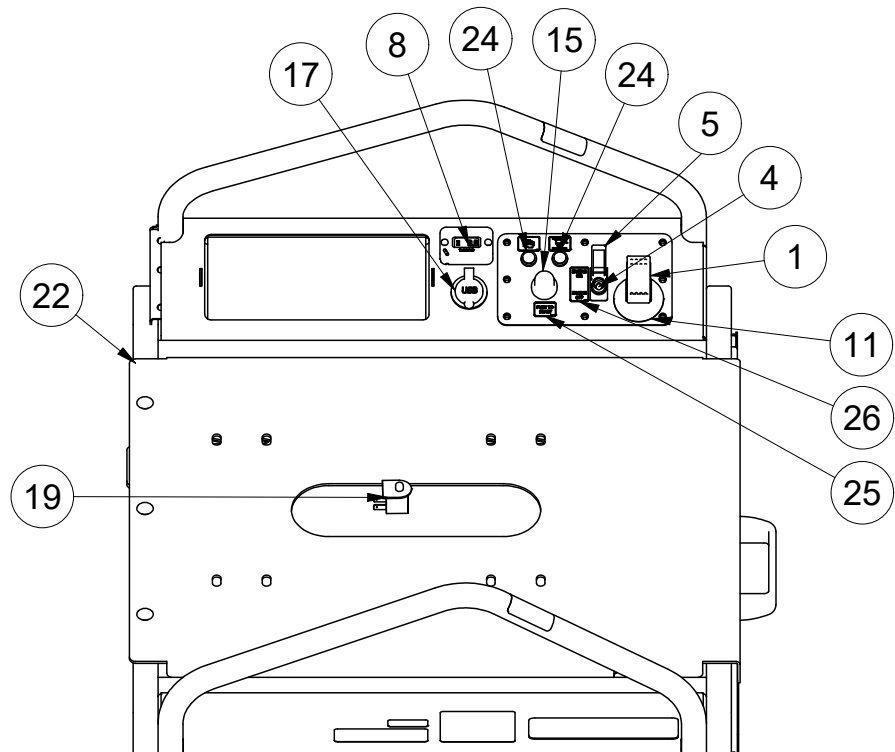


Seat Frame Assembly Parts List

SECTION 1 PARTS

ITEM	PART #	DESCRIPTION	QTY
-	071110	ASSEMBLY, SEAT FRAME	-
1	032125	ROCKER SWITCH FOR LIGHTS	1
2	039893	DECAL, CE MARKING	1
3	049632	BRACKET, TOOL HOLDER	1
4	050603	TOGGLE SWITCH ON/OFF	1
5	050604	COVER FOR TOGGLE SWITCH	1
6	053447	DECAL, HAND TOOL AREA	1
7	056338	DECAL, AEC 1.5" X 3.25"	1
8	064386	TACH/HOUR METER	1
9	065653	(BENT) DECAL, LIFT HOOK	2
10	065657	DECAL, OPERATOR'S MANUAL	1
11	065897	DECAL, LIGHTS	1
12	066061	DECAL, STARTING INSTRUCTIONS	1
13	066064	DECAL, MSP445 STRIPE W/O CUTOUT	1
14	068457	DECAL, PATENT PLACARD 6.5" X 3.5"	1
15	068956	MOMENTARY SWITCH, PUSH TO START	1
16	069225	DECAL, PROPOSITION 65	1
17	069850	USB RECEPTACLE 12VDC	1
18	069874	SEAT	1
19	071032	SWITCH, SEAT KILL SWITCH	1
20	071066	ASSEMBLY, FRONT SCREEN	1
21	071102	DECAL, EPA LABEL	1
22	071111	WELDMENT, SEAT FRAME	1
23	071120	METAL CUP HOLDER	1
24	073948	RED LIGHT	2
25	074011	DECAL, PUSH TO START	1
26	074012	DECAL, ENGINE ON/OFF	1
27	075176	DECAL, QR CODE	1
28	075265	DECAL, MSP445 FRONT	1
29	075276	DECAL, MADE IN AMERICA	1
30	075284	DECAL, MSP445 STRIPE W/O CUTOUT	1

Seat Frame Assembly Continued



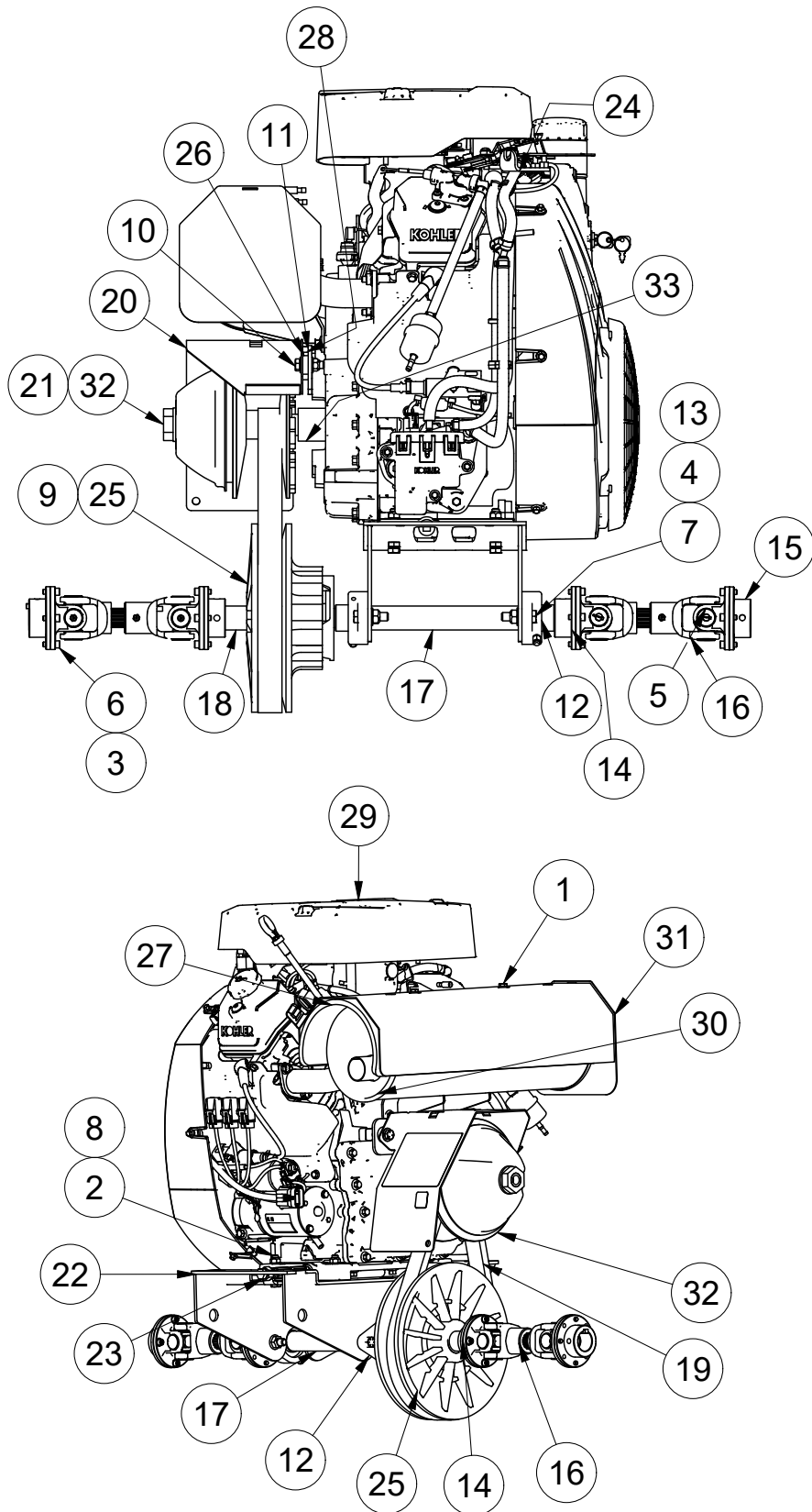
Seat Frame Assembly Parts List

SECTION 1 PARTS

ITEM	PART #	DESCRIPTION	QTY
-	071110	ASSEMBLY, SEAT FRAME	-
1	032125	ROCKER SWITCH FOR LIGHTS	1
2	039893	DECAL, CE MARKING	1
3	049632	BRACKET, TOOL HOLDER	1
4	050603	TOGGLE SWITCH ON/OFF	1
5	050604	COVER FOR TOGGLE SWITCH	1
6	053447	DECAL, HAND TOOL AREA	1
7	056338	DECAL, AEC 1.5" X 3.25"	1
8	064386	TACH/HOUR METER	1
9	065653	(BENT) DECAL, LIFT HOOK	2
10	065657	DECAL, OPERATOR'S MANUAL	1
11	065897	DECAL, LIGHTS	1
12	066061	DECAL, STARTING INSTRUCTIONS	1
13	066064	DECAL, MSP445 STRIPE W/O CUTOUT	1
14	068457	DECAL, PATENT PLACARD 6.5" X 3.5"	1
15	068956	MOMENTARY SWITCH, PUSH TO START	1
16	069225	DECAL, PROPOSITION 65	1
17	069850	USB RECEPTACLE 12VDC	1
18	069874	SEAT	1
19	071032	SWITCH, SEAT KILL SWITCH	1
20	071066	ASSEMBLY, FRONT SCREEN	1
21	071102	DECAL, EPA LABEL	1
22	071111	WELDMENT, SEAT FRAME	1
23	071120	METAL CUP HOLDER	1
24	073948	RED LIGHT	2
25	074011	DECAL, PUSH TO START	1
26	074012	DECAL, ENGINE ON/OFF	1
27	075176	DECAL, QR CODE	1
28	075265	DECAL, MSP445 FRONT	1
29	075276	DECAL, MADE IN AMERICA	1
30	075284	DECAL, MSP445 STRIPE W/O CUTOUT	1

SECTION 1 PARTS

Power Unit Assembly



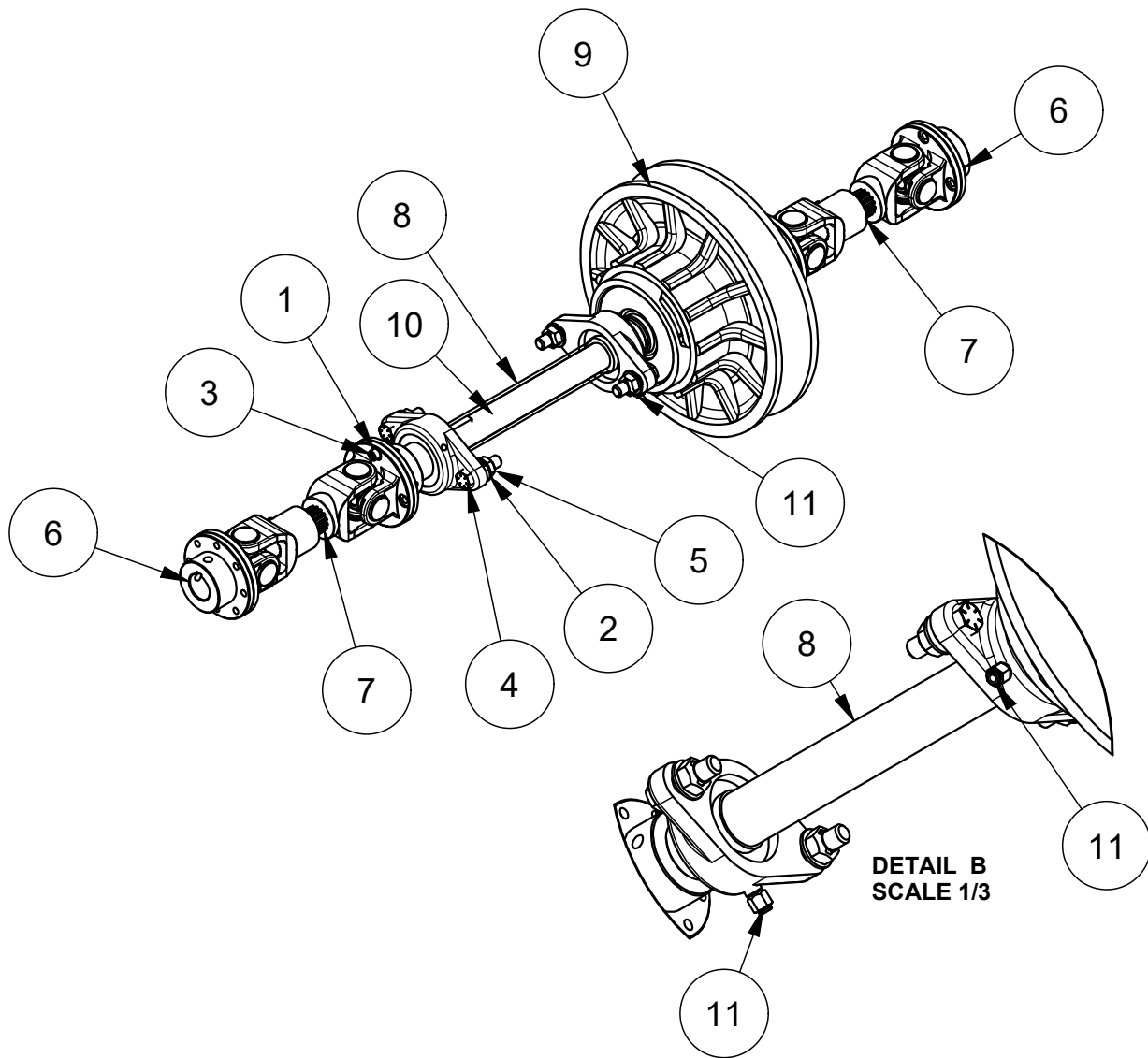
Power Unit Assembly Parts List

SECTION 1 PARTS

ITEM	PART #	DESCRIPTION	QTY
-	071982	ASSEMBLY, POWER UNIT	-
1	010002	FASTENER, HHCS 1/4"-20 X 3/4"	2
2	010039	FASTENER, HHCS 3/8"-16 X 1-3/4" GRADE 8	4
3	010089	FASTENER, LOCK WASHER 1/4"	16
4	010096	FASTENER, FLAT WASHER 7/16"	4
5	011791	KEY, 1/4" SQ X 1"	4
6	017314	FASTENER, SHCS 1/4"-20 X 5/8"	16
7	017898	FASTENER, 7/16"-20 X 1-1/2"	4
8	020514	FASTENER, NUT STOVER LOCK 3/6"-16	6
9	026992	KEY, 1/4" SQ X 3-1/8"	1
10	032875	FASTENER, HHCS 3/8"-16 X 1-1/4"	2
11	033638	BRACKET, CLUTCH GUARD	1
12	039136	FLANGE BEARING 1" W/LOCK COLLAR	2
13	047477	FASTENER, STOVER HEX NUT	4
14	047635	HUB, U-JOINT CENTER SHAFT DIA. 1"	4
15	047636	HUB, DIA. 1.25" BORE	2
16	047637	ASSEMBLY, U-JOINT TELESCOPING	2
17	048810	SPACER FOR DRIVEN PULLEY	1
18	048908	SPACER, 1-1/8" F/ DRIVEN PULLEY	1
19	051332	BELT, CVT	1
20	053136	CLUTCH GUARD	1
21	053210	KEY, 3/16" X 1/4" X 2"	1
22	053308	PLATE FOR ENGINE	1
23	053334	OIL DRAIN HOSE	1
24	053385	THROTTLE BRACKET	1
25	053389	DRIVEN PULLEY	1
26	056470	BUSHING, NITRIL	2
27	056938	HEAT WRAP 14" X 20"	1
28	065694	FASTENER, HHCS 7/16"-14 X 1"	2
29	065825	ENGINE, KOHLER ECH980	1
30	065875	MUFFLER	1
31	072755	WELDMENT, MUFFLER GUARD	1
32	073310	CLUTCH, DRIVER PULLEY	1
33	075129	SPACER F/ CLUTCH	1

SECTION 1 PARTS

Power Unit Continued, Drive-line Assembly



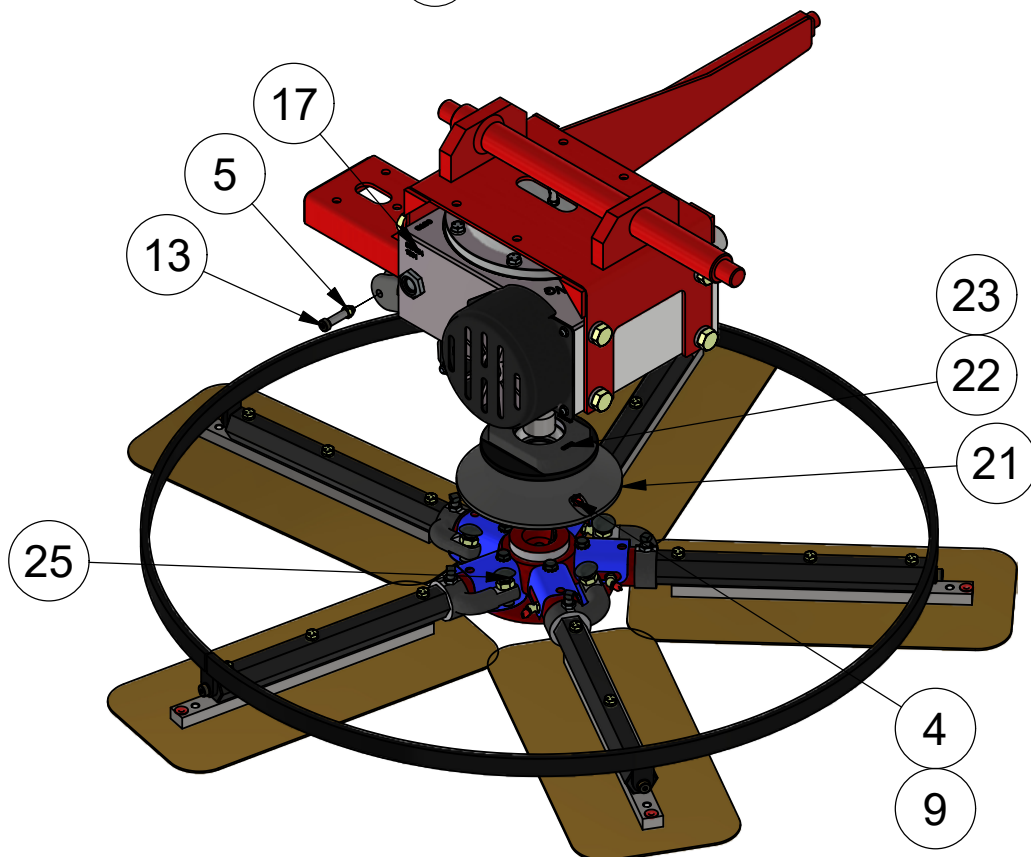
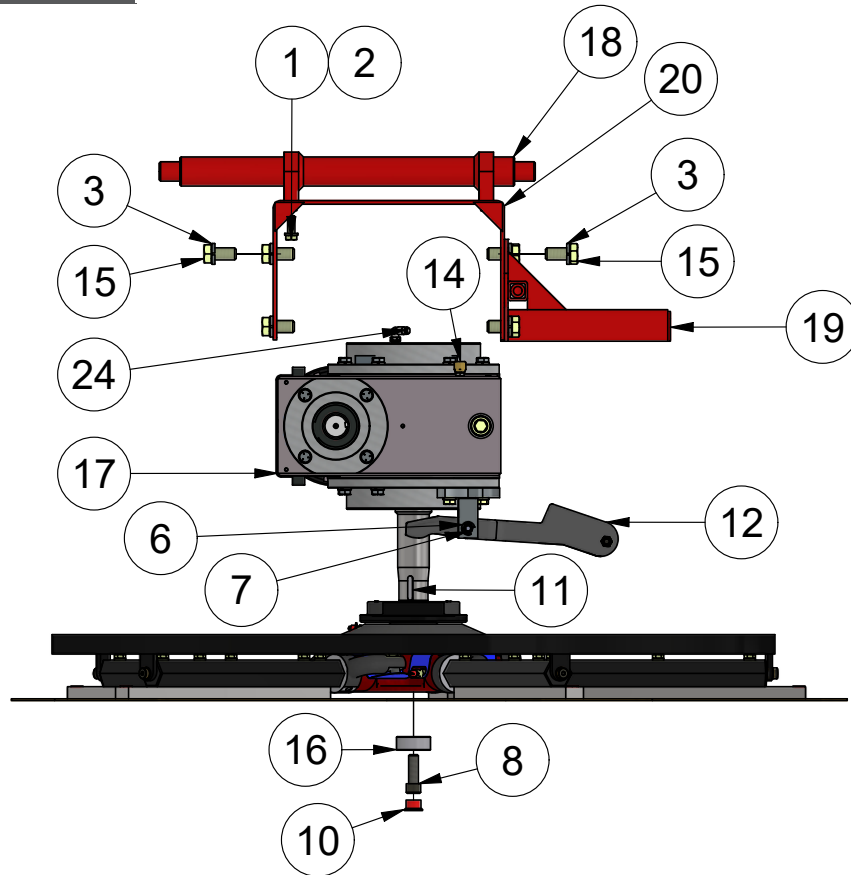
Drive-line Assembly Parts List

SECTION 1 PARTS

ITEM	PART #	DESCRIPTION	QTY
1	010089	FASTENER, LOCK WASHER 1/4"	16
2	010096	FASTENER, FLAT WASHER 7/16"	4
3	017314	FASTENER, SHCS 1/4"-20 X 5/8"	16
4	017898	FASTENER, HHCS 7/16"-20 X 1-1/2" GRADE 8	4
5	047477	FASTENER, STOVER NUT 7/16"-20	4
6	047635	HUB, U-JOINT CENTER SHAFT DIA. 1"	4
7	047637	ASSEMBLY, U-JOINT TELESCOPING	2
8	048810	SPACER FOR DRIVEN PULLEY	1
9	053389	DRIVEN PULLEY	1
10	075219	DRIVE SHAFT	1
11	073817	STRAIGHT PUSH IN FOR 4mm TUBING 1/8" NPT	2

SECTION 1 PARTS

Left Hand Rotor Assembly



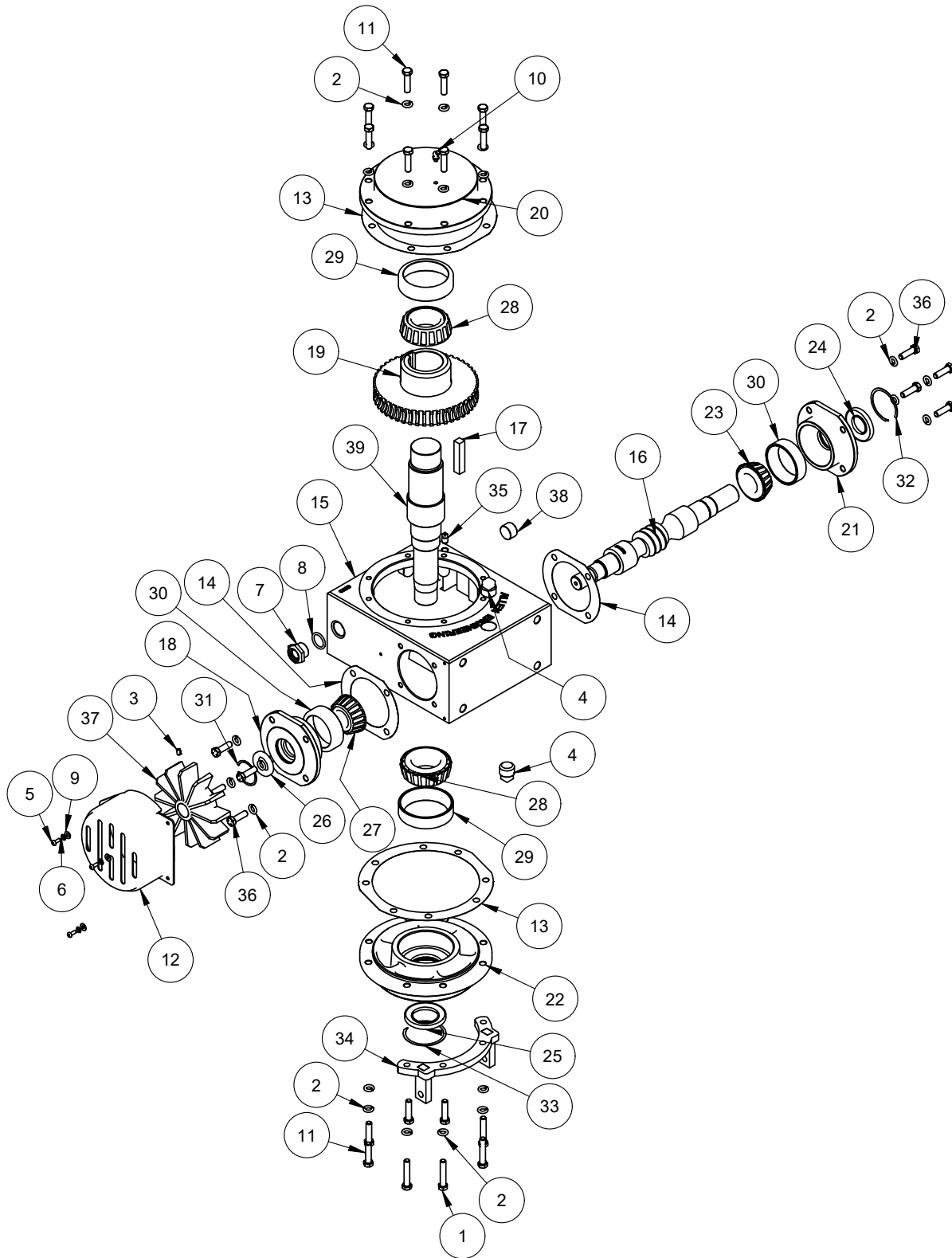
LH Rotor Assembly Parts List

SECTION 1 PARTS

ITEM	PART #	DESCRIPTION	QTY
-	073528	ASSEMBLY, LH ROTOR	1
1	010036	FASTENER, HHCS 3/8"-16 X 1" GRADE 8	4
2	010091	FASTENER, LOCK WASHER 3/8" GRADE 8	4
3	010095	FASTENER, LOCK WASHER 5/8" GRADE 8	8
4	010513	FITTING, 1/4"-28 STRAIGHT GREASE	1
5	012612	FASTENER, NUT HEX NYLOCK 5/16"-18	1
6	015677	FASTENER, RETAINING RING DIA. 7/16"	2
7	015678	PIN FOR YOKE ARM 7-3/8" DIA. 7/16"	1
8	015691	FASTENER, SHCS 1/2"-13 X 1-1/2" RH THREAD	1
9	015692	GREASE CAP DIA. 1/4"	6
10	015693	PLUG, PLASTIC CAP	1
11	015696	KEY, 1/4" X 1"	1
12	026215	YOKE ARM	1
13	026504	FASTENER, SHLD BOLT 3/8" X 1-1/4"	1
14	029529	RELIEF VALVE 1/8"-27 NPT	1
15	036787	FASTENER, HHCS 5/8"-11 X 1-1/4" GRADE 8	8
16	037652	RETAINING WASHER	1
17	037654	LEFT HAND GEAR BOX	1
18	048966	WELDMNT, 2 WAY CROSSHEAD	1
19	064210	WELDMNT STEERING ARM LH	1
20	064632	WELDMNT, CROSSHEAD GEARBOX MOUNT	1
21	073522	PLATE, SHD PRESSURE	1
22	073523	CAP, SHD PRESSURE PLATE	1
23	073524	THRUST BEARING	1
24	074094	FITTING, 90° ELBOW 4mm TUBE X 1/4"-28	1
25	076266	ASSEMBLY, LOWER SPIDER LH	1

SECTION 1 PARTS

Left Hand Gearbox Assembly



NOTES:

1. The shim thicknesses are established at the factory, call customer service for the appropriate replacement size.

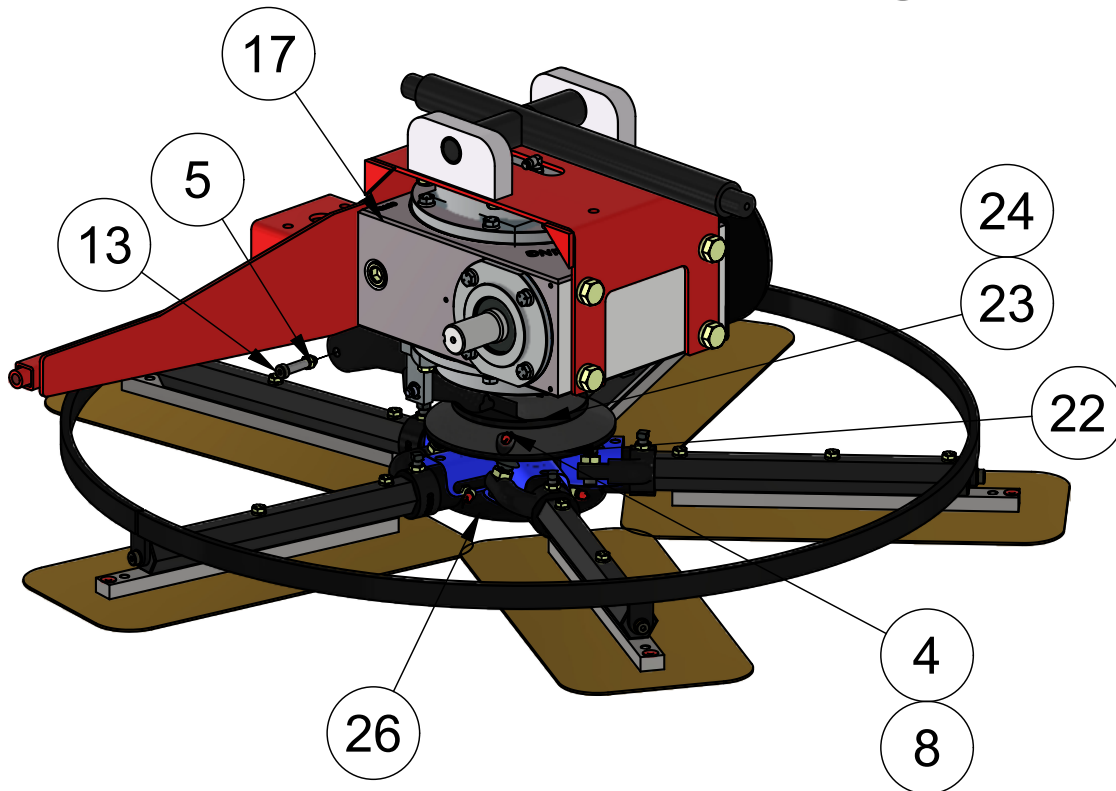
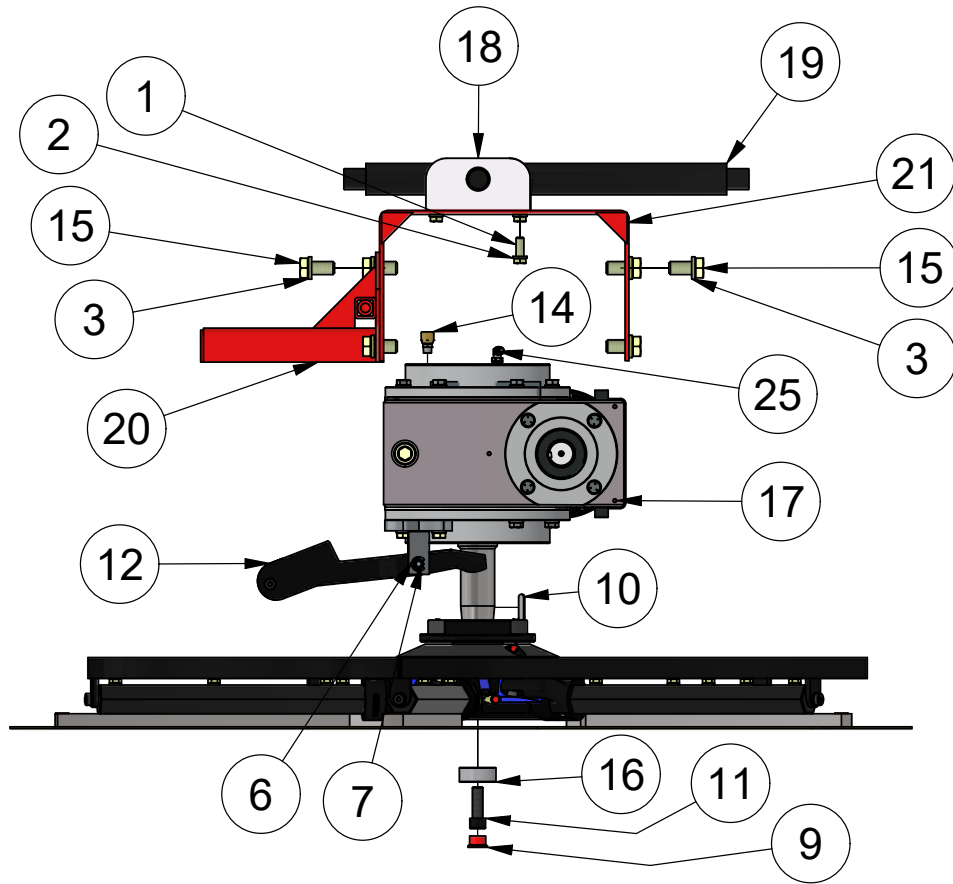
LH Gearbox Assembly Parts List

SECTION 1 PARTS

ITEM	PART #	DESCRIPTION	QTY
-	037654	ASSEMBLY, LH GEARBOX (SOM)	-
-	-	OIL, GEARBOX KLUBER GH-460	2.84 L
1	010040	FASTENER, HHCS 3/8"-16 X 2"	4
2	010091	FASTENER, LOCK WASHER 3/8"	24
3	012869	FASTENER, SHSS 1/4"-20 X 3/8"	1
4	012953	PLUG, 3/4" NPT	2
5	013484	FASTENER, SCREW #10-24 X 1/2"	3
6	013740	FASTENER, STAR WASHER #10	3
7	015672	GAUGE, 3/4"-14 NPT PORTHOLE VIEW	1
8	015673	O-RING 15/16" X 1-3/16" X 1/8" BUNA	1
9	018072	FASTENER, FLAT WASHER #10	3
10	018510	GREASE FITTING, 1/4"-28 45°	1
11	028402	FASTENER, HHCS 3/8"-16 X 1-1/2"	12
12	028703	SHROUD FOR FAN	1
13	028914-XX	GASKET SHIM, FOR TOP/BOTTOM CAP	AS REQ.
14	028915-XX	GASKET SHIM, FOR CAP FLANGE/END	AS REQ.
15	029143	GEARBOX CASE	1
16	029145	SHAFT, INPUT RH	1
17	029146	KEY, 1/2" X 2-1/2"	1
18	029147	FLANGE FOR GEARBOX	1
19	029149	GEAR, BRONZE/IRON RH	1
20	029150	CAP, LARGE FOR GEARBOX TOP	1
21	029154	CAP, END FOR GEARBOX	1
22	029155	CAP, LARGE FOR GEARBOX BOTTOM	1
23	029178	BEARING, TAPERED 1.4375" BORE	1
24	029179	SEAL, LDS & SMALL BORE 1.375"ID	1
25	029180	SEAL, OIL RADIAL SHAFT 1.875"	1
26	029181	SEAL, LDS & SMALL BORE 1.125"ID	1
27	029182	BEARING, TAPERED 1.3125" BORE	1
28	029183	BEARING, TAPERED 2" BORE	2
29	029184	BEARING RACE, TAPERED DIA. 3-43/64"	2
30	029272	BEARING RACE, TAPERED DIA. 3"	2
31	032713	RETAINING RING, 1.8270"	1
32	032714	RETAINING RING, 2.4780"	1
33	032715	RETAINING RING 2.857"	1
34	032716	BRACKET FOR GEARBOX	1
35	032745	PLUG, 1/8 NPT	1
36	032875	FASTENER, HHCS 3/8"-16 X 1-1/4"	8
37	034541	FAN FOR GEARBOX	1
38	035327	PLUG, 3/4"-14 NPT HOLLOW HEX	1
39	037650	SHAFT, MAIN RH	1

SECTION 1 PARTS

Right Hand Rotor Assembly



RH Rotor Assembly Parts List

SECTION 1 PARTS

ITEM	PART #	DESCRIPTION	QTY
-	073527	ASSEMBLY, RH ROTOR	1
1	010036	FASTENER, HHCS 3/8"-16 X 1" GRADE 8	4
2	010091	FASTENER, LOCK WASHER 3/8" GRADE 8	4
2	010095	FASTENER, LOCK WASHER 5/8" GRADE 8	8
4	010513	FITTING, 1/4"-28 STRAIGHT GREASE	1
5	012612	FASTENER, NUT HEX NYLOCK 5/16"-18	1
6	015677	FASTENER, RETAINING RING DIA. 7/16"	2
7	015678	PIN FOR YOKE ARM 7-3/8" DIA. 7/16"	1
8	015692	GREASE CAP DIA. 1/4"	6
9	015693	PLUG, PLASTIC CAP	1
10	015696	KEY, 1/4" X 1-1/8"	1
11	020155	FASTENER, SHCS 1/2"-13 X 1-1/2" LH THREAD	1
12	026215	YOKE ARM	1
13	026504	FASTENER, SHLD BOLT 3/8" X 1-1/4"	1
14	029529	RELIEF VALVE 1/8"-27 NPT	1
15	036787	FASTENER, HHCS 5/8"-11 X 1-1/4" GRADE 8	8
16	037652	RETAINING WASHER	1
17	037655	RIGHT HAND GEAR BOX	1
18	048561	BEARING ASSEMBLY FOR ROTOR MOUNT	2
-	048560	BEARING, FLANGED FOR ROTOR MOUNT	2
19	048964	WELDMENT, 4 WAY CROSSHEADS	1
20	063949	WELDMENT STEERING ARM RH	1
21	064632	WELDMENT, CROSSHEAD GEARBOX MOUNT	1
22	073522	PLATE, SHD PRESSURE	1
23	073523	CAP, SHD PRESSURE PLATE	1
24	073524	THRUST BEARING	1
25	074094	FITTING, 90° ELBOW 4mm TUBE X 1/4"-28	1
26	079267	ASSEMBLY, LOWER SPIDER RH	1

Right Hand Gearbox Assembly



Page 36

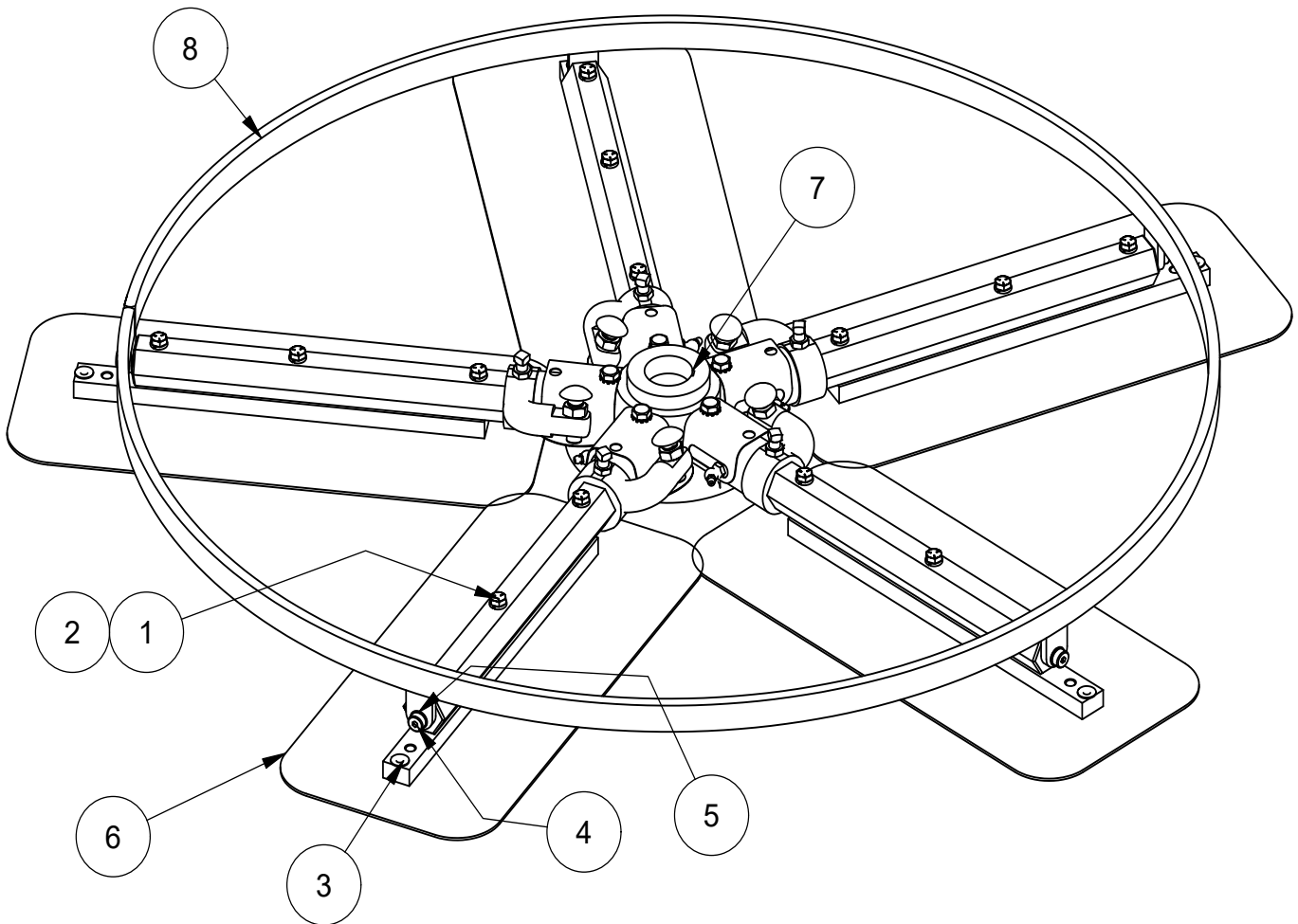
RH Gearbox Assembly Parts List

SECTION 1 PARTS

ITEM	PART #	DESCRIPTION	QTY
-	037655	ASSEMBLY, RH GEARBOX (SOM)	-
-	-	OIL, GEARBOX KLUBER GH-460	2.84 L
1	010040	FASTENER, HHCS 3/8"-16 X 2"	4
2	010091	FASTENER, LOCK WASHER 3/8"	24
3	012869	FASTENER, SHSS 1/4"-20 X 3/8"	1
4	012953	PLUG, 3/4" NPT	2
5	013484	FASTENER, SCREW #10-24 X 1/2"	3
6	013740	FASTENER, STAR WASHER #10	3
7	015672	GAUGE, 3/4"-14 NPT PORTHOLE VIEW	1
8	015673	O-RING 15/16" X 1-3/16" X 1/8" BUNA	1
9	018072	FASTENER, FLAT WASHER #10	3
10	018510	GREASE FITTING, 1/4"-28 45°	1
11	028402	FASTENER, HHCS 3/8"-16 X 1-1/2"	12
12	028703	SHROUD FOR FAN	1
13	028914-XX	GASKET SHIM, FOR TOP/BOTTOM CAP	AS REQ.
14	028915-XX	GASKET SHIM, FOR CAP FLANGE/END	AS REQ.
15	029143	GEARBOX CASE	1
16	029144	SHAFT, INPUT LH	1
17	029146	KEY, 1/2" X 2-1/2"	1
18	029147	FLANGE FOR GEARBOX	1
19	029148	GEAR, BRONZE/IRON LH	1
20	029150	CAP, LARGE FOR GEARBOX TOP	1
21	029154	CAP, END FOR GEARBOX	1
22	029155	CAP, LARGE FOR GEARBOX BOTTOM	1
23	029178	BEARING, TAPERED 1.4375" BORE	1
24	029179	SEAL, LDS & SMALL BORE 1.375"ID	1
25	029180	SEAL, OIL RADIAL SHAFT 1.875"	1
26	029181	SEAL, LDS & SMALL BORE 1.125"ID	1
27	029182	BEARING, TAPERED 1.3125" BORE	1
28	029183	BEARING, TAPERED 2" BORE	2
29	029184	BEARING RACE, TAPERED DIA. 3-43/64"	2
30	029272	BEARING RACE, TAPERED DIA. 3"	2
31	032713	RETAINING RING, 1.8270"	1
32	032714	RETAINING RING, 2.4780"	1
33	032715	RETAINING RING 2.857"	1
34	032716	BRACKET FOR GEARBOX	1
35	032745	PLUG, 1/8 NPT	1
36	032875	FASTENER, HHCS 3/8"-16 X 1-1/4"	8
37	034541	FAN FOR GEARBOX	1
38	035327	PLUG, 3/4"-14 NPT HOLLOW HEX	1
39	037651	SHAFT, MAIN LH	1

SECTION 1 PARTS

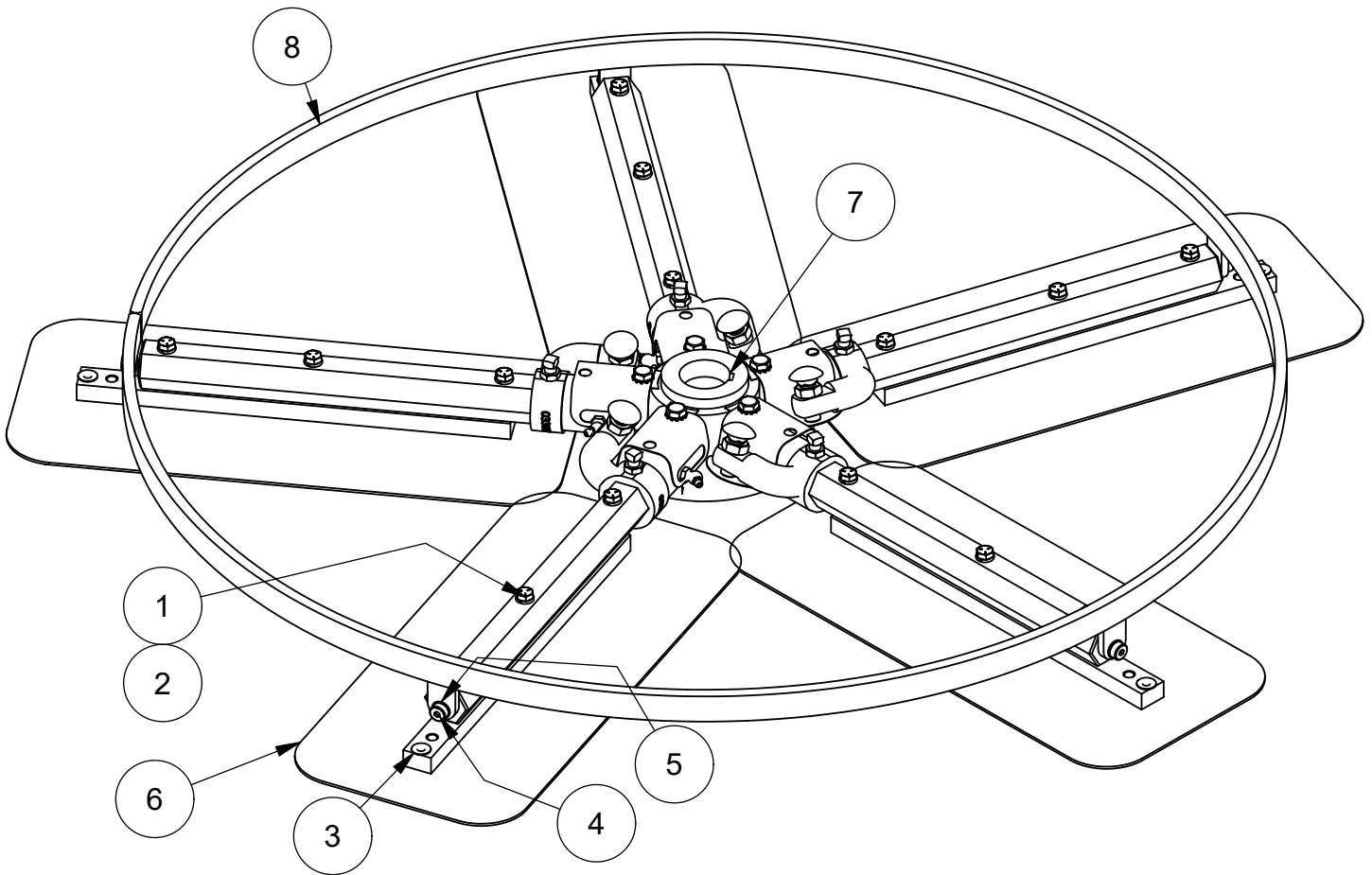
Left Hand Lower Spider Assembly



ITEM	PART #	DESCRIPTION	QTY
-	079266	ASSEMBLY, LH LOWER SPIDER	1
1	010024	FASTENER, HHCS 5/16"-18 X 2" GRADE 8	15
2	010090	FASTENER, LOCK WASHER 5/16" GRADE 8	15
3	015694	TAPERED PLUG	5
4	025091	FASTENER, SHLDR SC 5/16"-18X1/2 DIA.3/8"X3/8"	5
5	025092	BUSHING 3/8" X 1/2" X 5/16"	5
6	028778V	BLADE, 8" X 18" FLAT FINISHING GOLD	5
7	040794	SPIDER ASSEMBLY, LH	1
8	040833	WELDMENT, STABILIZING RING	1

Right Hand Lower Spider Assembly

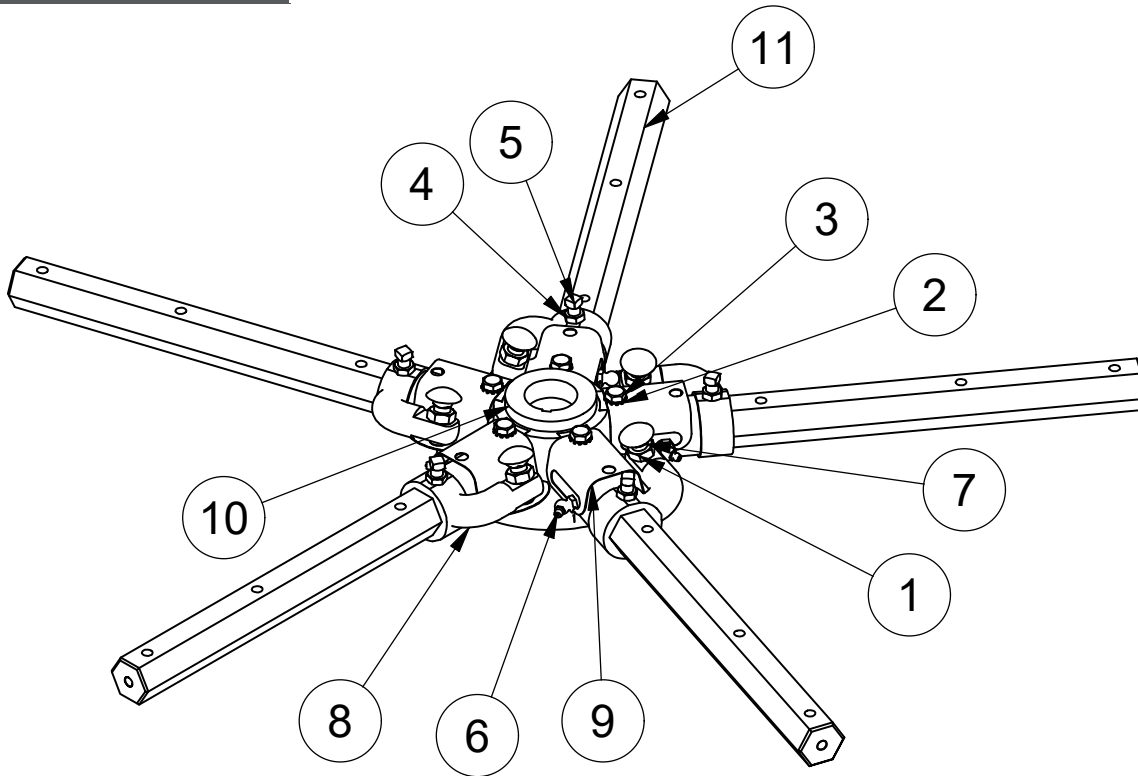
SECTION 1 PARTS



ITEM	PART #	DESCRIPTION	QTY
-	079267	ASSEMBLY, RH LOWER SPIDER	1
1	010024	FASTENER, HHCS 5/16"-18 X 2" GRADE 8	15
2	010090	FASTENER, LOCK WASHER 5/16" GRADE 8	15
3	015694	TAPERED PLUG	5
4	025091	FASTENER, SHLDR SC 5/16"-18X1/2 DIA.3/8"X3/8"	5
5	025092	BUSHING 3/8" X 1/2" X 5/16"	5
6	028778V	BLADE, 8" X 18" FLAT FINISHING GOLD	5
7	040795	SPIDER ASSEMBLY, RH	1
8	040833	WELDMENT, STABILIZING RING	1

SECTION 1 PARTS

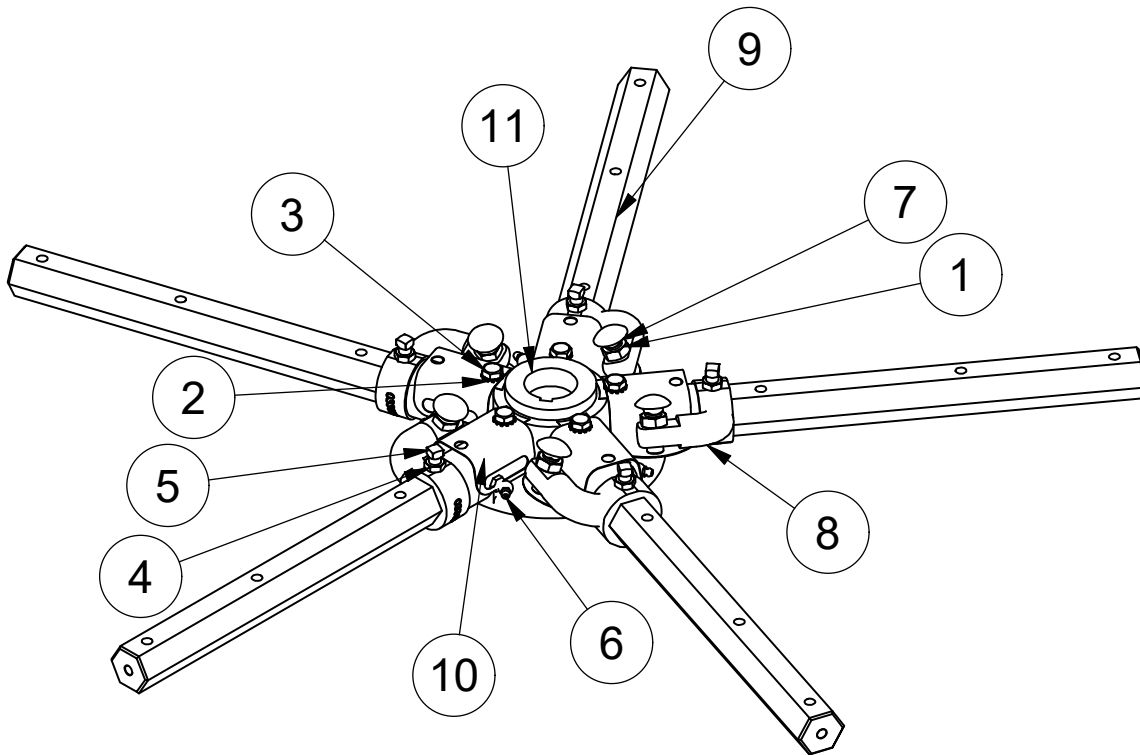
Left Hand Spider Assembly



ITEM	PART #	DESCRIPTION	QTY
-	040794	ASSEMBLY, LH SPIDER	1
1	010050	FASTENER, HEX JAM NUT 1/2"-13	5
2	015682	LOCK WASHER EXT STAR 3/8"	5
3	015683	FASTENER, DOG CAP SCREW 3/8"-16 X 7/8"	5
4	015684	FASTENER, HEX JAM NUT 3/8"-16	5
5	015686	FASTENER, SQHSS 3/8"-16 X 1"	5
6	024755	GREASE FITTING 1/8"-27 NPT 45°	5
7	028216	FASTENER, CABLT 1/2"-13 X 1-1/2" GRADE 8	5
8	033034	LIFT LEVER	5
9	040792	CLIP, 46-48" UNIVERSAL SPIDER SPRING	5
10	064220P	SPIDER BOSS SHD 5 BLADE UNIVERSAL	1
11	040700	TROWEL ARM	5

Right Hand Spider Assembly

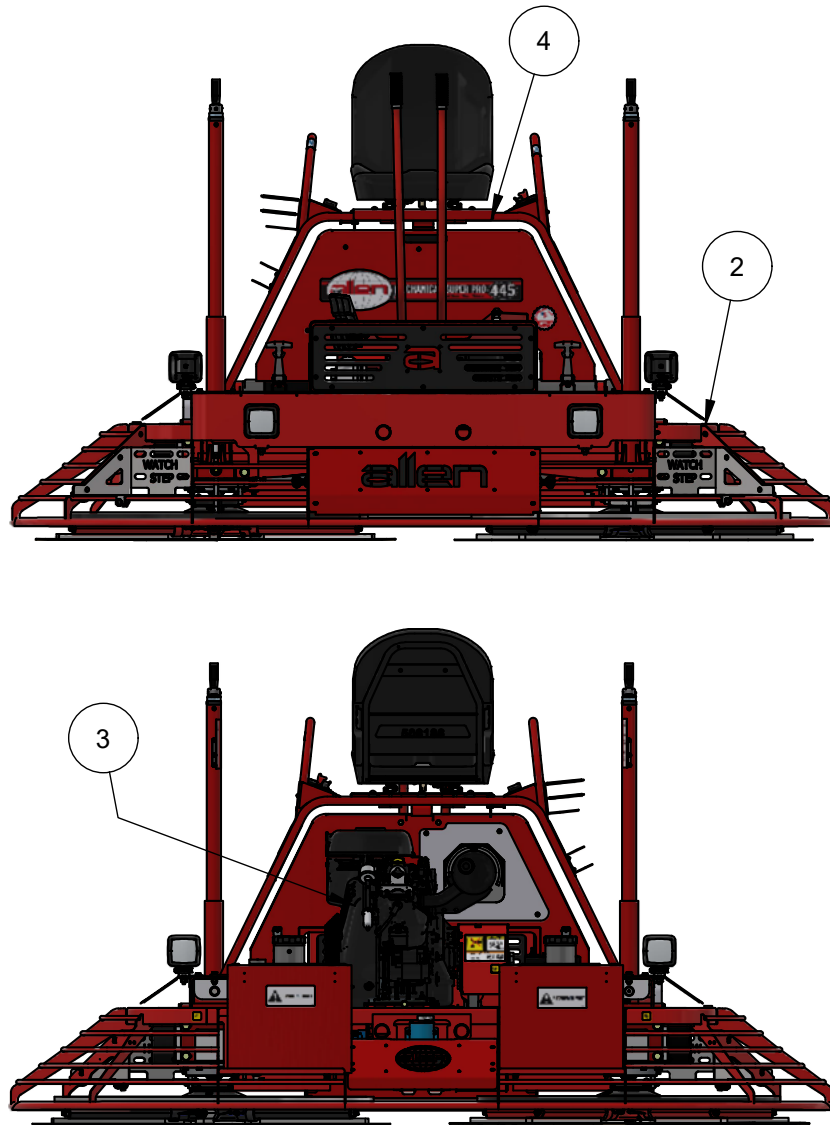
SECTION 1 PARTS



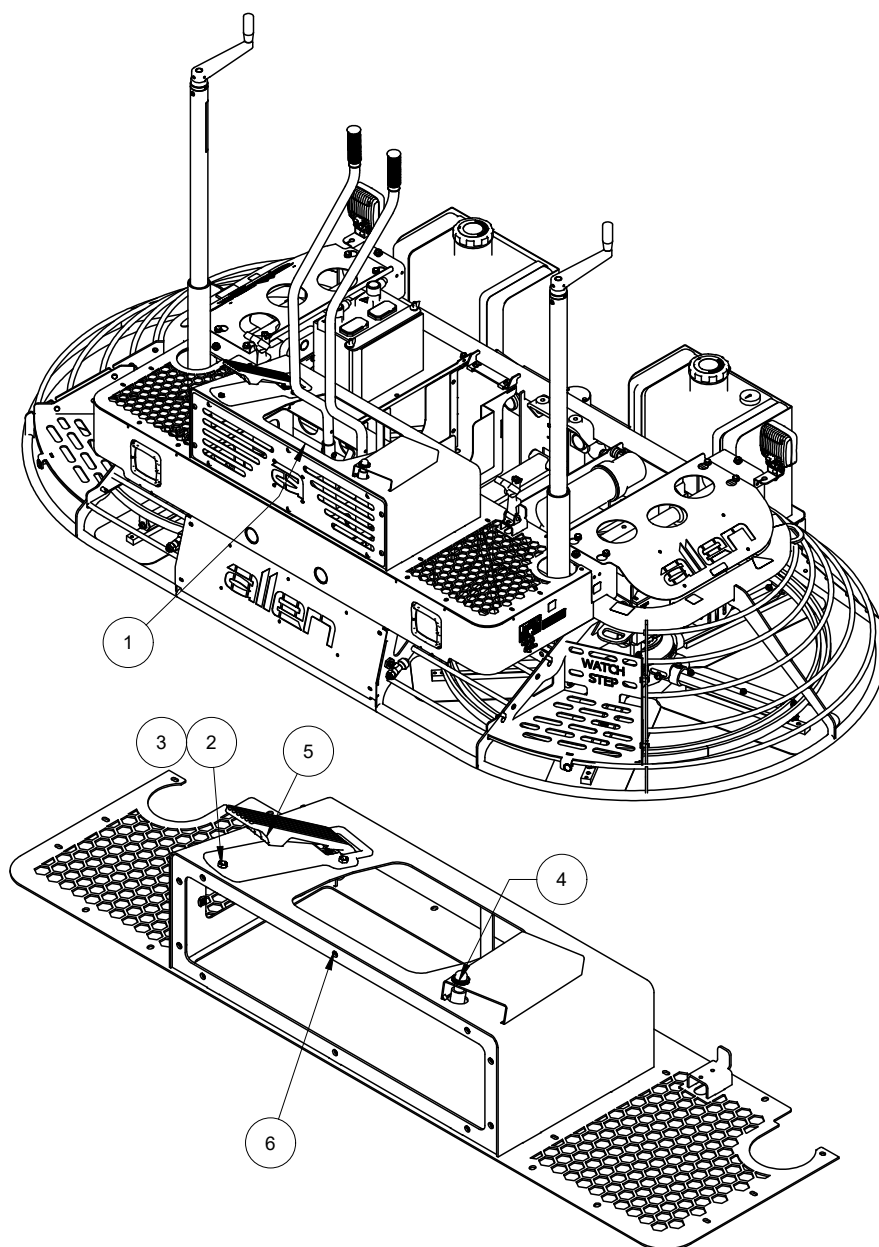
ITEM	PART #	DESCRIPTION	QTY
-	040795	ASSEMBLY, RH SPIDER	1
1	010050	FASTENER, HEX JAM NUT 1/2"-13	5
2	015682	LOCK WASHER EXT STAR 3/8"	5
3	015683	FASTENER, DOG CAP SCREW 3/8"-16 X 7/8"	5
4	015684	FASTENER, HEX JAM NUT 3/8"-16	5
5	015686	FASTENER, SQHSS 3/8"-16 X 1"	5
6	024755	GREASE FITTING 1/8"-27 NPT 45°	5
7	028216	FASTENER, CABLT 1/2"-13 X 1-1/2" GRADE 8	5
8	033034	LIFT LEVER	5
9	040700	TROWEL ARM	5
10	040792	CLIP, 46-48" UNIVERSAL SPIDER SPRING	5
11	064220P	SPIDER BOSS SHD 5 BLADE UNIVERSAL	1

SECTION 1 PARTS

General Arrangement, MSP445 w/ Vanguard Engine



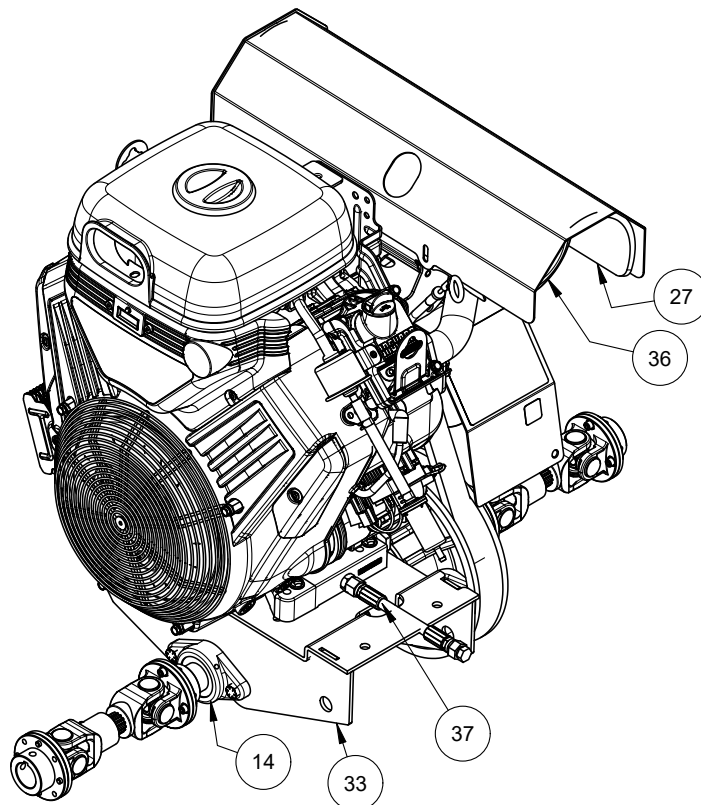
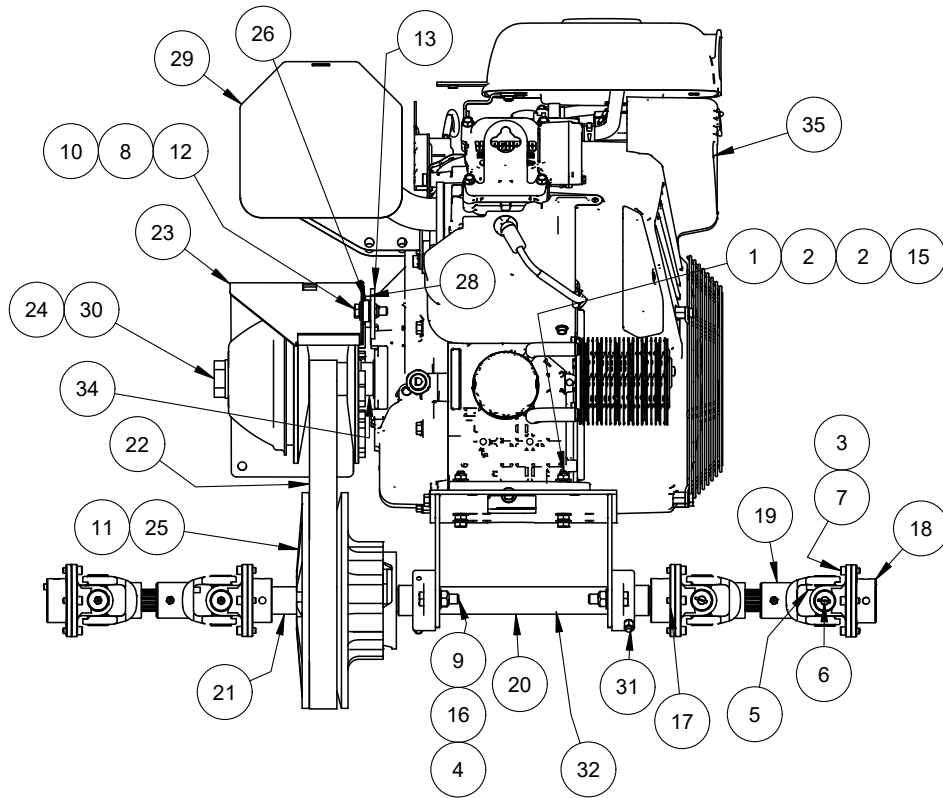
ITEM	PART #	DESCRIPTION	QTY
-	076030	ASSEMBLY, MSP445 W/ VANGUARD ENGINE	-
1	076031	ASSEMBLY, MAIN FRAME	1
2	076035	ASSEMBLY, POWER UNIT	1
3	077898	ASSEMBLY, SEAT FRAME	1
-	076198	ELECTRICAL HARNESS, F/ VANGUARD ENGINE	-



ITEM	PART #	DESCRIPTION	QTY
-	076031	ASSEMBLY, MAIN FRAME	-
1	077595	ASSEMBLY, FRONT DECK F/ MSP445 WITH VANGUARD	1
2	010019	FASTENER, HHCS 5/16"-18 X 3/4"	3
3	012612	FASTENER, HEX NUT NYLOCK 5/16"-18	3
4	068956	SWITCH, MOMENTARY	1
5	076973	FOOT PEDAL, ELECTRONIC THROTTLE CONTROL	1
6	077594	WELDMENT, UPPER DECK F/ MSP445 WITH VANGUARD	1

SECTION 1 PARTS

Power Unit Assembly, MSP445 w/ Vanguard Engine



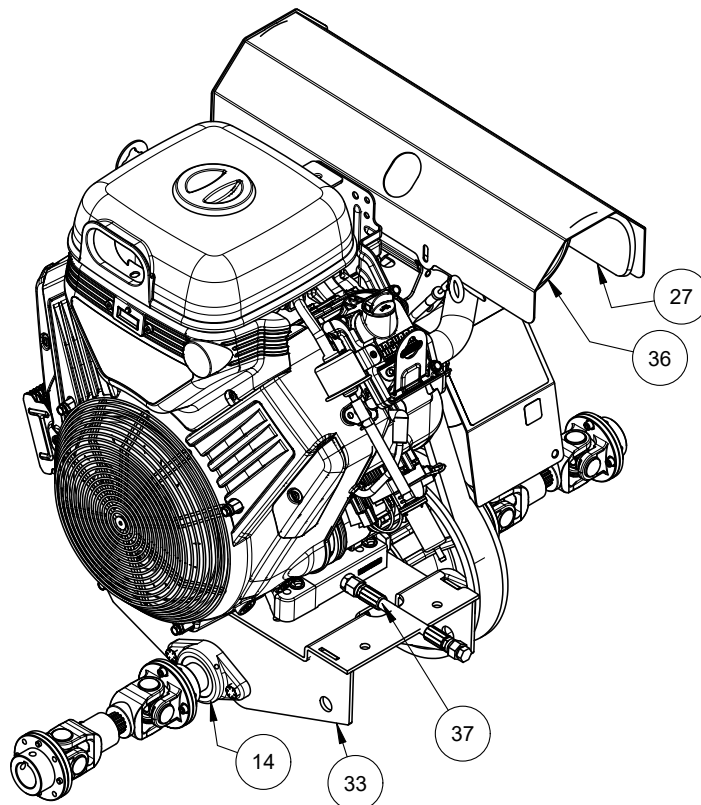
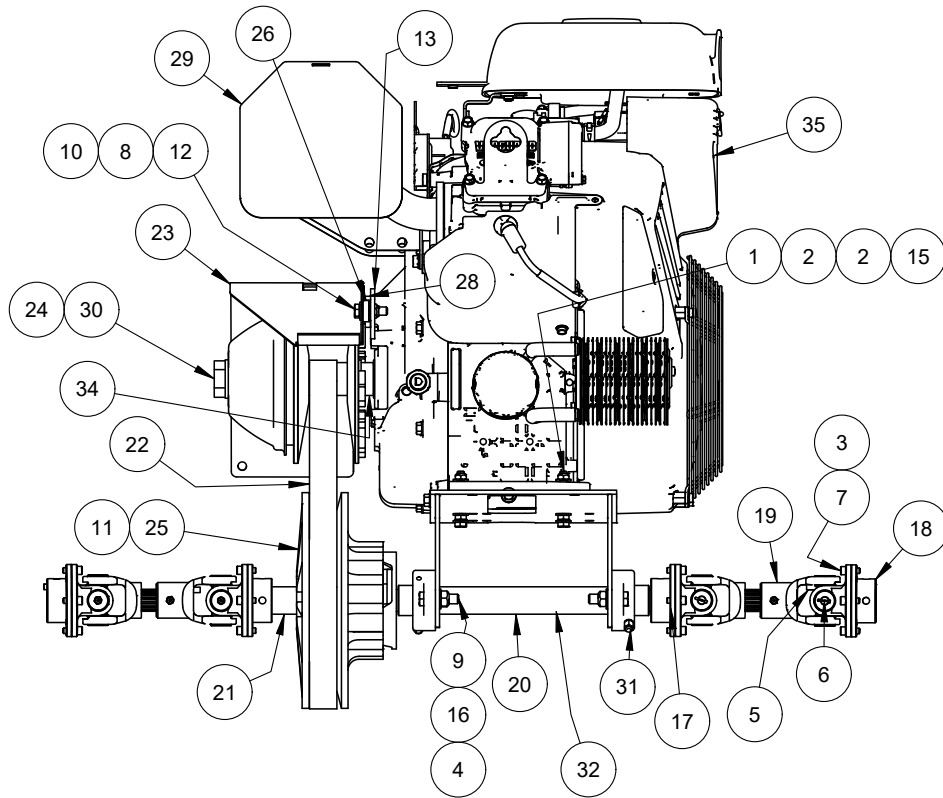
Power Unit Assembly, MSP445 w/ Vanguard Engine

SECTION 1 PARTS

ITEM	PART #	DESCRIPTION	QTY
-	076035	ASSEMBLY, POWER UNIT W/ VANGUARD	1
1	010024	FASTENER, HHCS 5/16"-18 X 2"	4
2	010082	FASTENER, FLAT WASHER 5/16"	8
3	010089	FASTENER, LOCK WASHER 1/4"	16
4	010096	FASTENER, FLAT WASHER 7/16"	4
5	011791	KEY, 1/4" SQ X 1"	4
6	015692	CAP, RED 1/4"	6
7	017314	FASTENER, SHCS 1/4"-20 X 5/8"	16
8	017751	FASTENER, FLAT WASHER 3/8"	4
9	017898	FASTENER, 7/16"-20 X 1-1/2"	4
10	020514	FASTENER, NUT STOVER LOCK 3/6"-16	2
11	026992	KEY, 1/4" SQ X 4"	1
12	032875	FASTENER, HHCS 3/8"-16 X 1-1/4"	2
13	033661	PLATE, BELT GUARD BRACKET	1
14	039136	FLANGED BEARING 1"	2
15	040004	FASTENER, STOVER HEX NUT 5/16"-18	4
16	047477	FASTENER, STOVER HEX NUT	4
17	047635	HUB, U-JOINT CENTER SHAFT DIA. 1"	4
18	047636	HUB, DIA. 1.25" BORE	2
19	047637	ASSEMBLY, U-JOINT TELESCOPING	2
20	048810	SPACER FOR DRIVEN PULLEY	1
21	048908	SPACER, 1-1/8" F/ DRIVEN PULLEY	1
22	051332	BELT, CVT	1
23	053136	CLUTCH GUARD	1
24	053210	KEY, 3/16" X 1/4" X 2"	1
25	053389	DRIVEN PULLEY	1
26	056470	BUSHING, NITRIL	2
27	056938	HEAT WRAP 14" X 20"	1
28	065694	FASTENER, HHCS 7/16"-14 X 1"	2
29	072755	WELDMENT, MUFFLER GUARD	1
30	073310	CLUTCH, DRIVER PULLEY	1
31	073817	FITTING, STRAIGHT PUSH IN, 4MM TUBING 1/8" NPT	2
32	075219	DRIVE SHAFT	1

SECTION 1 PARTS

Power Unit Assembly, MSP445 w/ Vanguard Engine Continued



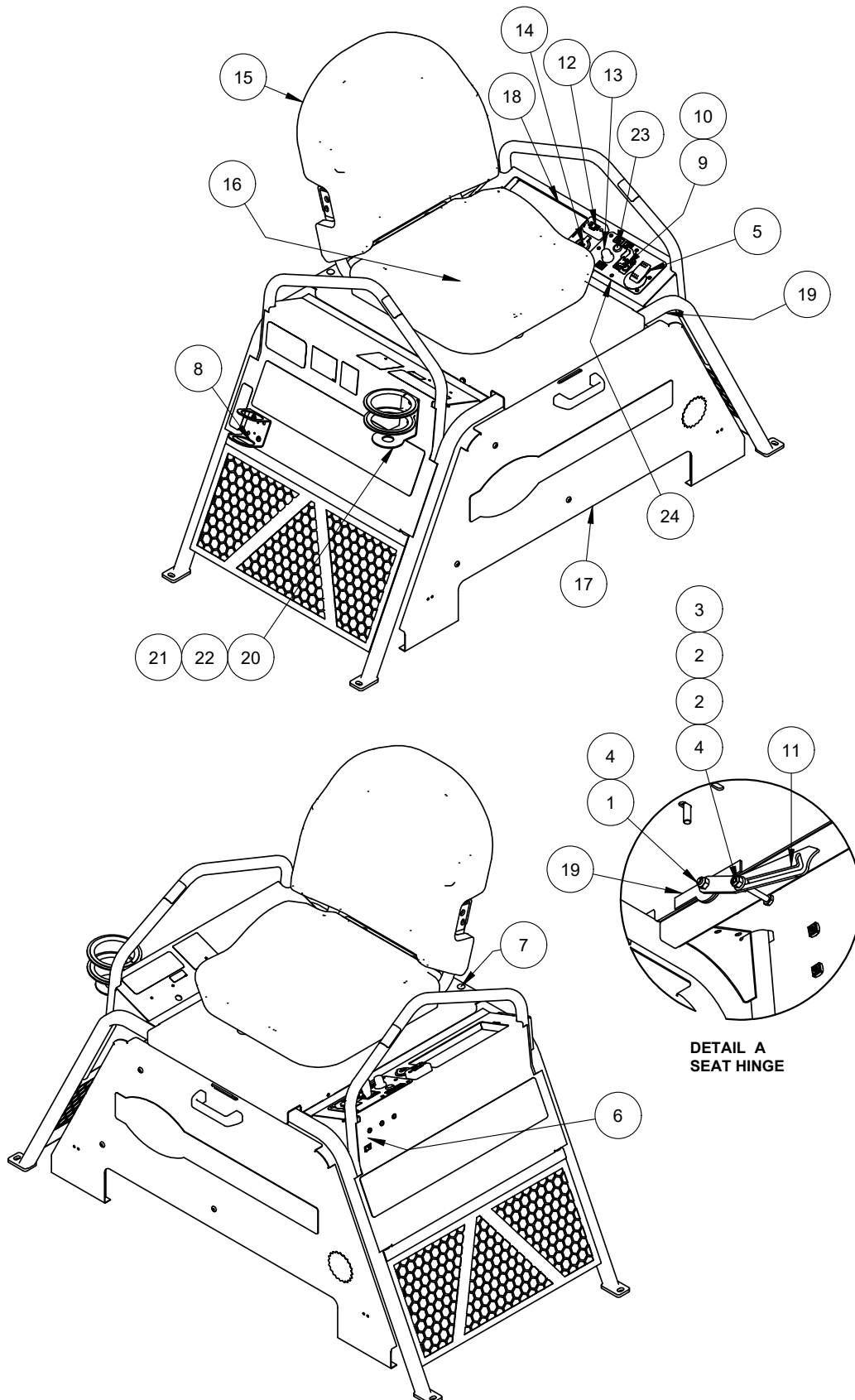
Power Unit Assembly, MSP445 w/ Vanguard Engine Continued

SECTION 1 PARTS

33	075835	WELDMENT, ENGINE PLATE F/ VANGUARD ENGINE	1
34	076032	SPACER F/ CLUTCH W/ VANGUARD ENGINE	1
35	076033	ENGINE, VANGUARD 40HP	1
36	076039	MUFFLER F/ VANGUARD ENGINE	1
37	077797	OIL DRAIN HOSE F/ VANGUARD ENGINE	1
-	047730	BATTERY CABLE, 4 AWG 32" POSITIVE	1
-	048976	BATTERY CABLE, 4 AWG 35" NEGATIVE	1

SECTION 1 PARTS

Seat Frame Assembly, MSP445 w/ Vanguard Engine



Seat Frame Assembly, MSP445 w/ Vanguard Engine

SECTION 1 PARTS

ITEM	PART #	DESCRIPTION	QTY
-	077898	ASSEMBLY, SEAT FRAME W/ VANGUARD	1
1	010002	FASTENER, HHCS 1/4"-20 X 3/4"	1
2	010081	FASTENER, FLAT WASHER 1/4"	2
3	020542	FASTENER, STOVER HEX NUT	1
4	029671	FASTENER, HEX NUT NYLOCK	2
5	032125	ROCKER SWITCH	1
6	047052	RELAY	4
7	047665	RUBBER BUMPER F/ SEAT PLATE	3
8	049632	BRACKET, TOOL HOLDER	1
9	050603	TOGGLE SWITCH	1
10	050604	COVER F/ TOGGLE SWITCH	1
11	053211	PROP FOR SEAT FRAME	1
12	064386	TACHOMETER	1
13	068956	MOMENTARY SWITCH	1
14	069850	USB RECEPTACLE	1
15	069874	SEAT	1
16	061374	KILL SWITCH F/ SEAT	1
17	071066	ASSEMBLY, FRONT SCREEN	1
18	071106	RUBBER F/ CELL HOLDER TRAY	1
19	071111	WELDMENT, SEAT FRAME	1
20	071120	WELDMENT, CUT HOLDER	1
21	071123	TRIM 11-11/16" F/ CUP HOLDER, TOP LAYER [USES 071122]	1
22	071124	TRIM 9-3/16" F/ CUP HOLDER, MIDDLE LAYER [USES 071122]	1
23	073948	LIGHT, RED LED	1
24	077896	PANEL, ENGINE CONTROL F/ VANGUARD ENGINE	1

SECTION 2: DECALS

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SECTION 2 DECALS

Decals, MSP445



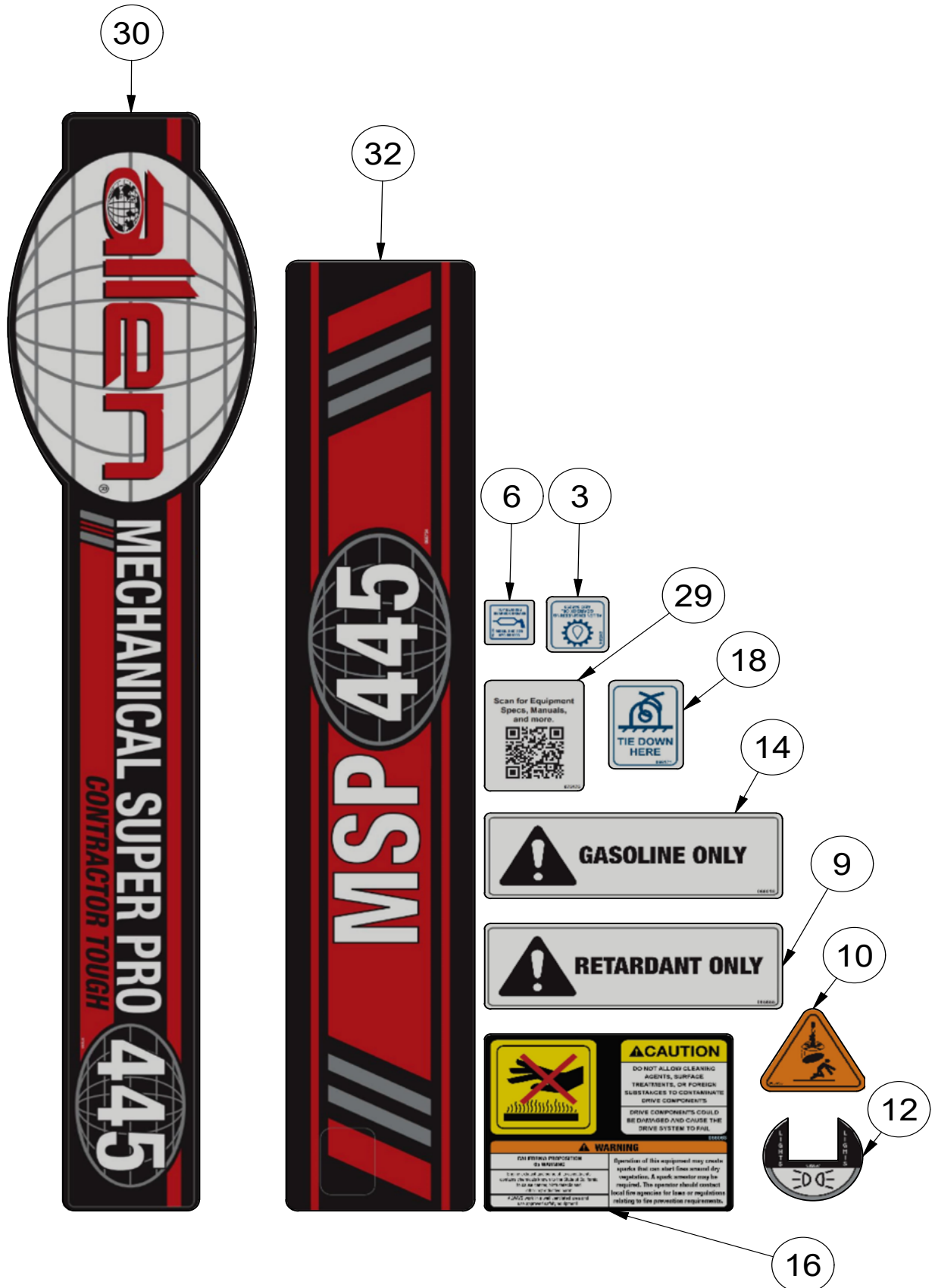
Decals, MSP445 Parts List

SECTION 2 DECALS

ITEM	PART #	DESCRIPTION	QTY
-	074090	KIT, MSP445 DECAL	1
1	032377	PITCH CONTROL	2
2	039893	CE MARKING	1
3	048299D	OIL, GEARBOX	2
4	053447	HAND TOOL AREA	1
5	056338	AEC 1.5" X 3.25" WHITE/RED	1
6	065564	RIDER GEARBOX OIL	1
7	065652	GREASE THRUST BEARINGS	3
8	065653	LIFT HOOK	2
9	065655	RETARDANT ONLY	1
10	065656	PAN FALL	2
11	065657	OPERATOR'S MANUAL	1
12	065897	LIGHTS	1
13	065917	PINCH POINT	5
14	066018	GAS ONLY 7.75" X 2.5"	1
15	066061	STARTING INSTRUCTIONS	1
16	066063	HOT, CAUTION, WARNING	1
17	066064	MSP 445 19.5" X 4.25"	1
18	066171	TIE DOWN ONLY	4
19	068457	PATENT PLACARD	1
20	069225	PROPOSITION 65	1
21	071102	EPA LABEL	1
22	072966	CHECK ENGINE LIGHT	1
23	072967	OIL PRESSURE	1
24	074011	PUSH TO START	1
25	074012	ENGINE ON/OFF	1
26	074086	GREASE PORT	1
27	074087	DRIVE LINE BEARING GREASE & GEARBOXES	1
28	074284	GREASING OF U-JOINTS	1
29	075175	QR CODE	1
30	075265	MSP FRONT SEAT SCREEN	1
31	075276	MADE IN AMERICA	1
32	075284	MSP 445 21.5" X 3.8"	1

SECTION 2 DECALS

Decals Continued, MSP445



Decals, MSP445 Parts List

SECTION 2 DECALS

ITEM	PART #	DESCRIPTION	QTY
-	074090	KIT, MSP445 DECAL	1
1	032377	PITCH CONTROL	2
2	039893	CE MARKING	1
3	048299D	OIL, GEARBOX	2
4	053447	HAND TOOL AREA	1
5	056338	AEC 1.5" X 3.25" WHITE/RED	1
6	065564	RIDER GEARBOX OIL	1
7	065652	GREASE THRUST BEARINGS	3
8	065653	LIFT HOOK	2
9	065655	RETARDANT ONLY	1
10	065656	PAN FALL	2
11	065657	OPERATOR'S MANUAL	1
12	065897	LIGHTS	1
13	065917	PINCH POINT	5
14	066018	GAS ONLY 7.75" X 2.5"	1
15	066061	STARTING INSTRUCTIONS	1
16	066063	HOT, CAUTION, WARNING	1
17	066064	MSP 445 19.5" X 4.25"	1
18	066171	TIE DOWN ONLY	4
19	068457	PATENT PLACARD	1
20	069225	PROPOSITION 65	1
21	071102	EPA LABEL	1
22	072966	CHECK ENGINE LIGHT	1
23	072967	OIL PRESSURE	1
24	074011	PUSH TO START	1
25	074012	ENGINE ON/OFF	1
26	074086	GREASE PORT	1
27	074087	DRIVE LINE BEARING GREASE & GEARBOXES	1
28	074284	GREASING OF U-JOINTS	1
29	075175	QR CODE	1
30	075265	MSP FRONT SEAT SCREEN	1
31	075276	MADE IN AMERICA	1
32	075284	MSP 445 21.5" X 3.8"	1

Revision Detail

MANUAL REVISION DETAIL

REVISION #	REVISION DATE	REVISION REFERENCE #	REVISION BY
	11/21	Initial Release	MK
A	01/22	Updated Covers	MK
B	06/22	Updated Trowel Arm PN	MK
C	10/23	Added Vanguard Part Illustrations	MK
D	02/24	24-064	MK
E	03/24	Vanguard updates	MK
F	01/25	Pg. 45 Item 16 PN Correction	MK
G	01/25	Added GB Exploded View	MK
H	07/25	Pg. 33 & 37 Item #, PN, U/M corrections	MK

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