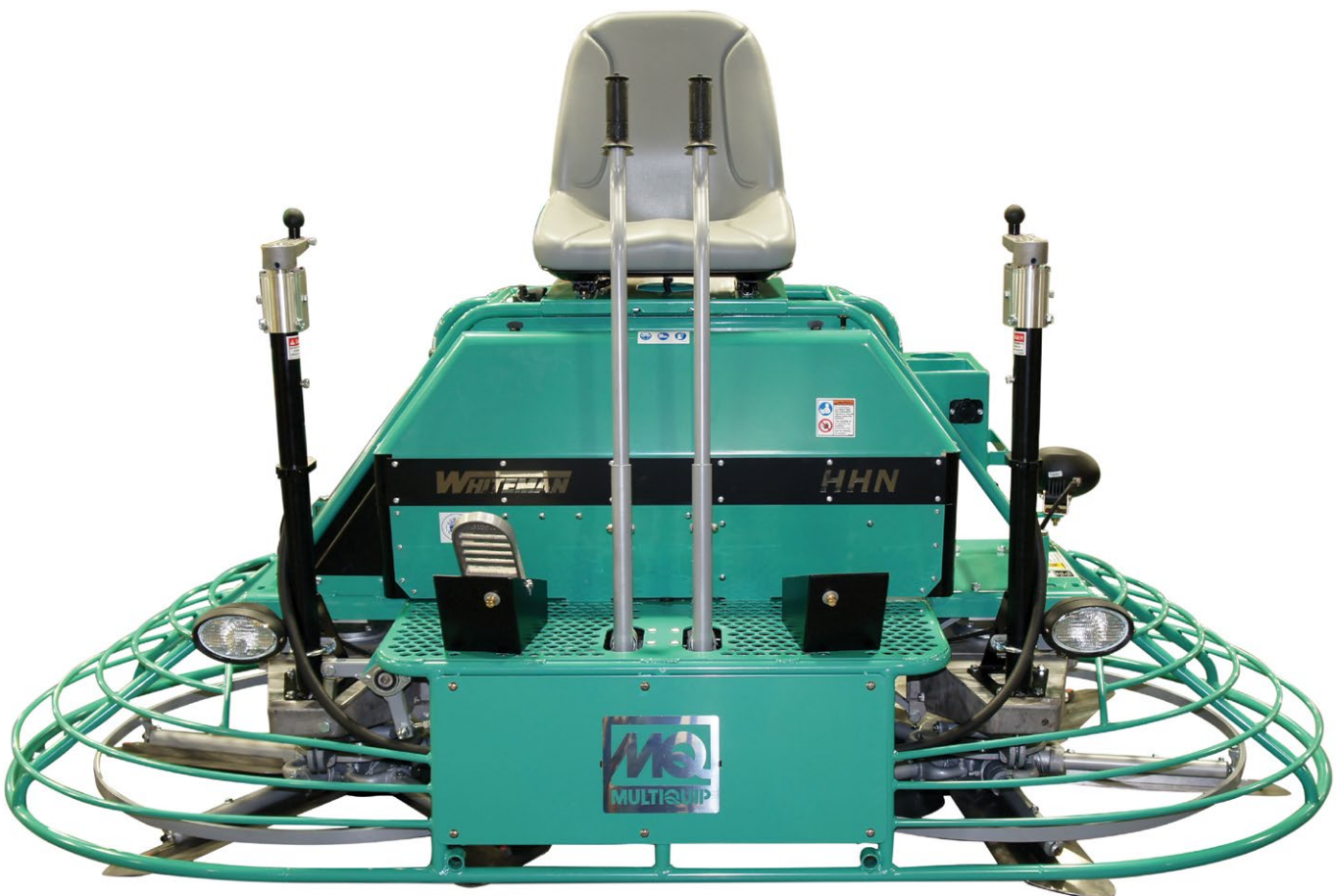




## SPARE PARTS MANUAL

# MQ WHITEMAN RIDE-ON POWER TROWEL HHNG4, HHNG5



U.S. Revision #16 (03/30/23)  
AUS Version 2.0 (November 2024)

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EXCLUSIVE TO



# PARTS MANUAL



**MODEL  
HHNG4  
HHNG5  
RIDE-ON TROWEL  
(VANGUARD 54000 35 HP GASOLINE ENGINE)**

Revision #16 (03/30/23)

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THIS MANUAL MUST ACCOMPANY THE EQUIPMENT AT ALL TIMES.

**PN: 30053**

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#### NOTICE

Part numbers are subject to change without notice.



# EXPLANATION OF CODE IN REMARKS COLUMN

The following section explains the different symbols and remarks used in the Parts section of this manual. Use the help numbers found on the back page of the manual if there are any questions.

## NOTICE

The contents and part numbers listed in the parts section are subject to change **without notice**. Multiquip does not guarantee the availability of the parts listed.

## SAMPLE PARTS LIST

NO.	PART NO.	PART NAME	QTY.	REMARKS
1	12345	BOLT.....	1	INCLUDES ITEMS W/%
2%		WASHER, 1/4 IN.....		NOT SOLD SEPARATELY
2%	12347	WASHER, 3/8 IN....	1	MQ-45T ONLY
3	12348	HOSE .....	A/R	MAKE LOCALLY
4	12349	BEARING .....	1	S/N 2345B AND ABOVE

## NO. Column

**Unique Symbols** — All items with same unique symbol

(@, #, +, %, or >) in the number column belong to the same assembly or kit, which is indicated by a note in the “Remarks” column.

**Duplicate Item Numbers** — Duplicate numbers indicate multiple part numbers, which are in effect for the same general item, such as different size saw blade guards in use or a part that has been updated on newer versions of the same machine.

## NOTICE

When ordering a part that has more than one item number listed, check the remarks column for help in determining the proper part to order.

## PART NO. Column

**Numbers Used** — Part numbers can be indicated by a number, a blank entry, or TBD.

TBD (To Be Determined) is generally used to show a part that has not been assigned a formal part number at the time of publication.

A blank entry generally indicates that the item is not sold separately or is not sold by Multiquip. Other entries will be clarified in the “Remarks” Column.

## QTY. Column

**Numbers Used** — Item quantity can be indicated by a number, a blank entry, or A/R.

A/R (As Required) is generally used for hoses or other parts that are sold in bulk and cut to length.

A blank entry generally indicates that the item is not sold separately. Other entries will be clarified in the “Remarks” Column.

## REMARKS Column

Some of the most common notes found in the “Remarks” Column are listed below. Other additional notes needed to describe the item can also be shown.

**Assembly/Kit** — All items on the parts list with the same unique symbol will be included when this item is purchased.

Indicated by:

“INCLUDES ITEMS W/(unique symbol)”

**Serial Number Break** — Used to list an effective serial number range where a particular part is used.

Indicated by:

“S/N XXXXX AND BELOW”

“S/N XXXX AND ABOVE”

“S/N XXXX TO S/N XXX”

**Specific Model Number Use** — Indicates that the part is used only with the specific model number or model number variant listed. It can also be used to show a part is NOT used on a specific model or model number variant.

Indicated by:

“XXXXX ONLY”

“NOT USED ON XXXX”

**“Make/Obtain Locally”** — Indicates that the part can be purchased at any hardware shop or made out of available items. Examples include battery cables, shims, and certain washers and nuts.

**“Not Sold Separately”** — Indicates that an item cannot be purchased as a separate item and is either part of an assembly/kit that can be purchased, or is not available for sale through Multiquip.

# SUGGESTED SPARE PARTS

## HHNG4, HHNG5 RIDE-ON TROWEL WITH VANGUARD 540000 GASOLINE ENGINE

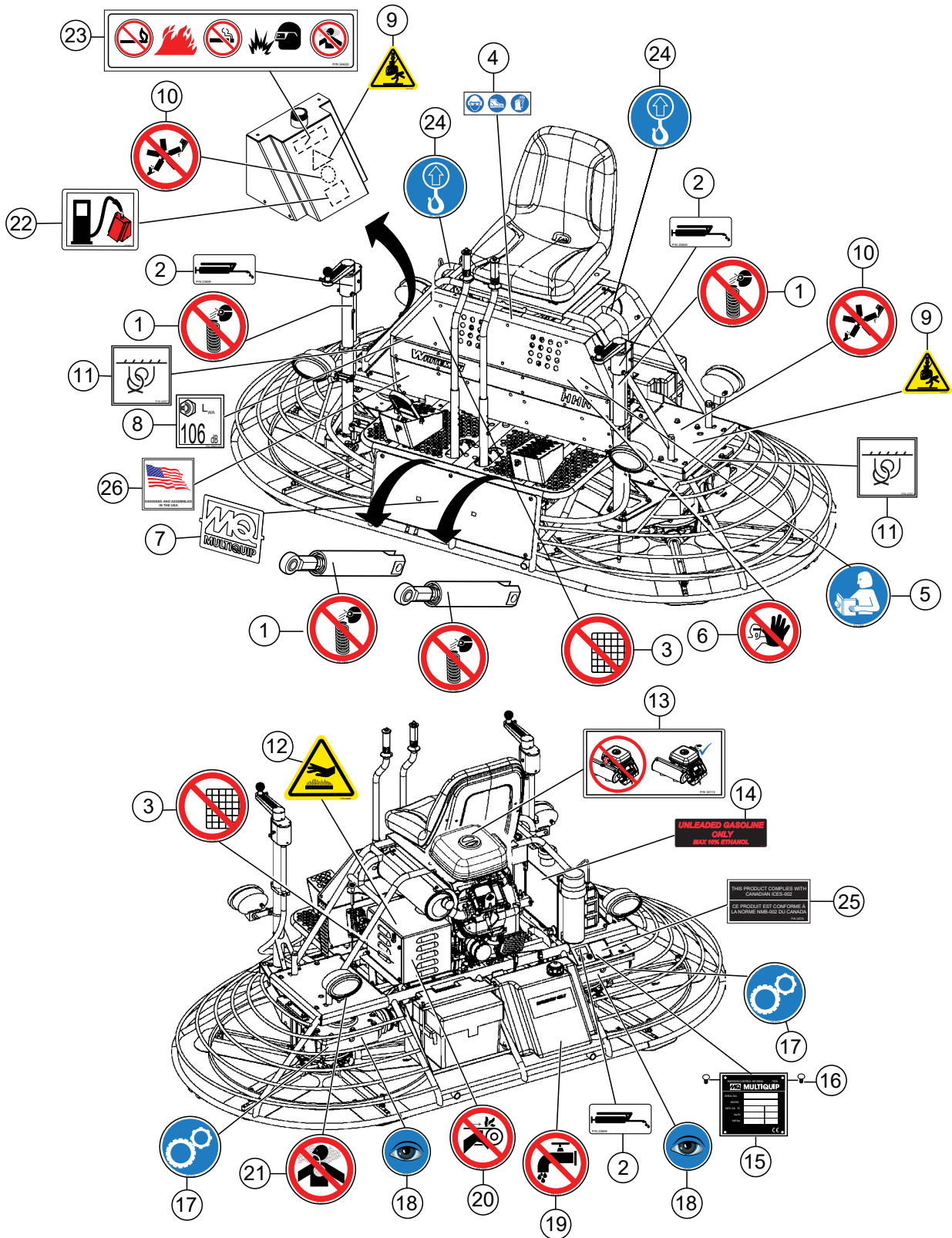
### 1 to 3 units

Qty.	P/N	Description
1	23365	BELT, CUT CLUTCH
1	2108	CAP, SPRAY TANK
1	23970	CABLE, THROTTLE
1	11029	CABLE, CHOKE 60"
1	23514	CAP, RATCHET W/ GAUGE "GASOLINE"
3	20445	OIL, 24 OZ. BOTTLE
1	23284-300	FUSE, 30 AMP
3	23284-100	FUSE, 10 AMP
1	22725-600	FUSE, 60 AMP
1	22725-200	FUSE, 20 AMP
1	12017	RELAY, KILL
1	32594	RELAY, 80 AMP
3	Q16PRU11	SPARK PLUG
3	842921	FILTER, OIL
2	692519	FILTER, AIR CLEANER CARTRIDGE
1	692520	FILTER, PRE AIR CLEANER
1	842109	SOLENOID, FUEL W/O-RING
3	842921	FILTER, OIL
1	841281	SWITCH, OIL PRESSURE
2	23959-1	KEY, IGNITION W/ BOOT
2	2829-1	ARM, TROWEL, SILVER
4	11039	BUSHING, TROWEL LARGE ARM
5	691035	FILTER, FUEL, 40 MICRON
2	845125	FILTER, FUEL, 20 MICRON
1	22724	MODULE, POWER RELAY
1	21870	SWITCH, KILL

### NOTICE

Part numbers on this Suggested Spare Parts list may supersede/replace the part numbers shown in the following parts lists.

# NAMEPLATE AND DECALS

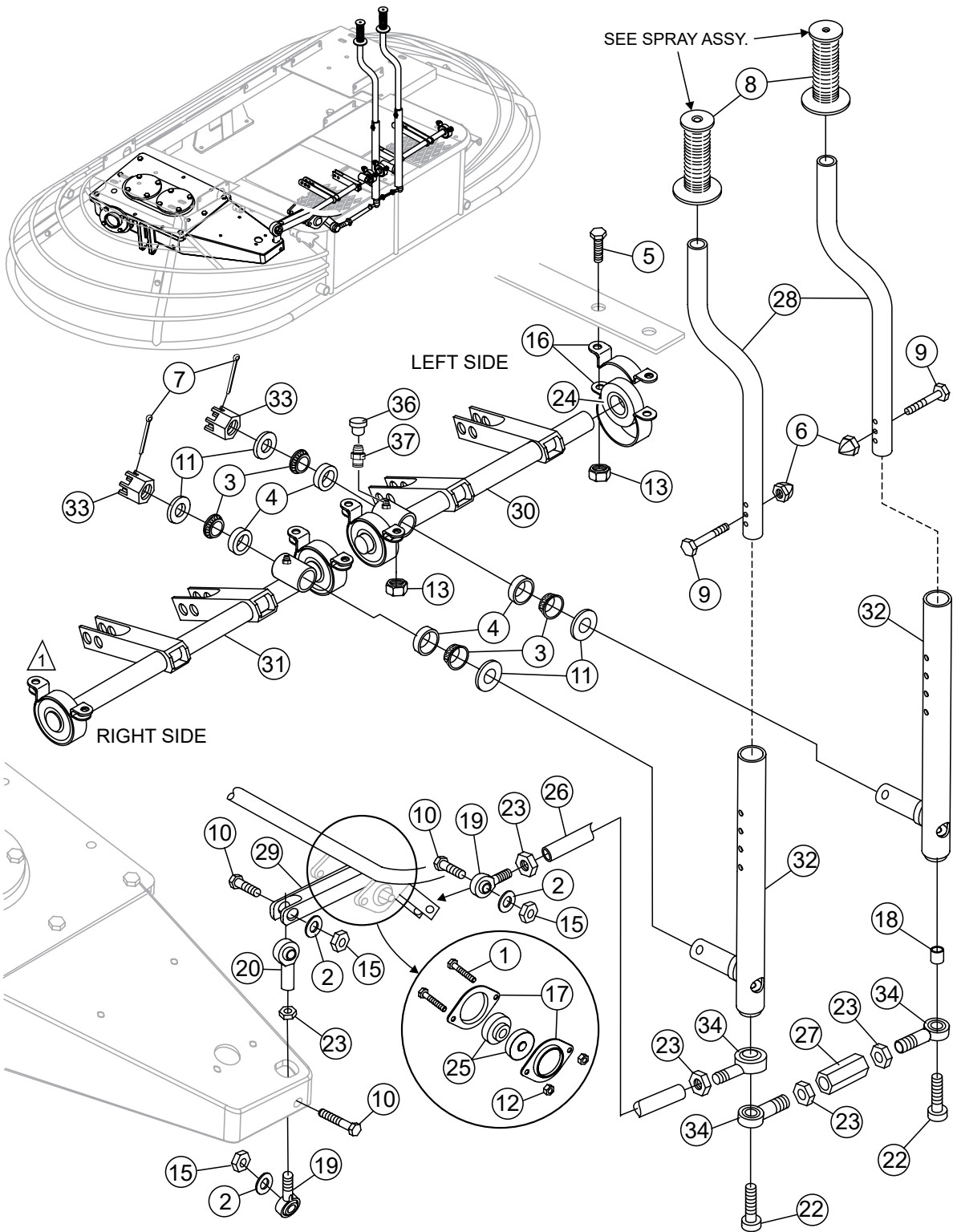


## NAMEPLATE AND DECALS

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	23804	ISO DECAL, DO NOT DISSASSEM. CYL. HAZ., 2.00" DIA	4	
2	23809	DECAL, LUBRICATION POINT 2.0" X 1.0"	3	
3	23874	ISO DECAL, DO NOT REMOVE GUARDS HAZ., 2.00" DIA	2	
4	36099	ISO DECAL, PROTECTIVE CLOTHING, 3.50" X 1.13"	1	
5	23699	ISO DECAL, READ MANUAL, 2.00" DIA	1	
6	23701	ISO DECAL, ASK FOR TRAINING, 2.00" DIA	1	
7	23235	BADGE, FOOT PLATFORM	1	
8	23803-106	ISO DECAL, GUARANTEE SND PWR LVL., 1.41" X 1.57"	1	
9	23700	DECAL ISO, LIFTING/CRUSH, 2.4" X 2.0" DIA	2	
10	23698	DECAL ISO, ROTATING BLADE HAZARD, 2.00" DIA	2	
11	42971	ISO DECAL, TIE DOWN, 1.75" X 1.75"	2	
12	23808	ISO DECAL, HOT SURFACE HAZARD, 2.00" DIA	1	
13	30113	DECAL, AIR CLEANER COVER, 4.00" X 2.00"	1	
14	23587	DECAL, UNLEADED GASOLINE	1	
15		DECAL, SERIAL PLATE, EPA EVAP .....	1	CONTACT MQ PARTS DEPT.
16	4014	SCREW, 2-3/16 P-K TYPE U-DRIVE	4	
17	30118	ISO DECAL, GEAR DRIVE, 2.00" DIA	2	
18	30117	ISO DECAL, EYE, INSPECTION, 1.00" DIA	2	
19	23811	ISO DECAL, NO WATER WARNING, 2.00" DIA	1	
20	23704	ISO DECAL, GUARD HAZARD, 2.00" DIA.	1	
21	23810	ISO DECAL, INHALATION HAZARD, 2.00" DIA	1	
22	23812	DECAL, FUEL, GASOLINE, 3.00" X 2.45"	1	
23	34630	ISO DECAL, FIRE, EXPLOSION HAZ., 6.25" X 1.92"	1	
24	23805	ISO DECAL, LIFT LOCATION, 1.00" DIA.	2	
25	32578	ISO DECAL, SPARK CANADA	1	
26	30538	DECAL, FLAG DESIGNED AND ASSEMBLED IN USA	1	



# STEERING CONTROL HANDLE ASSY.

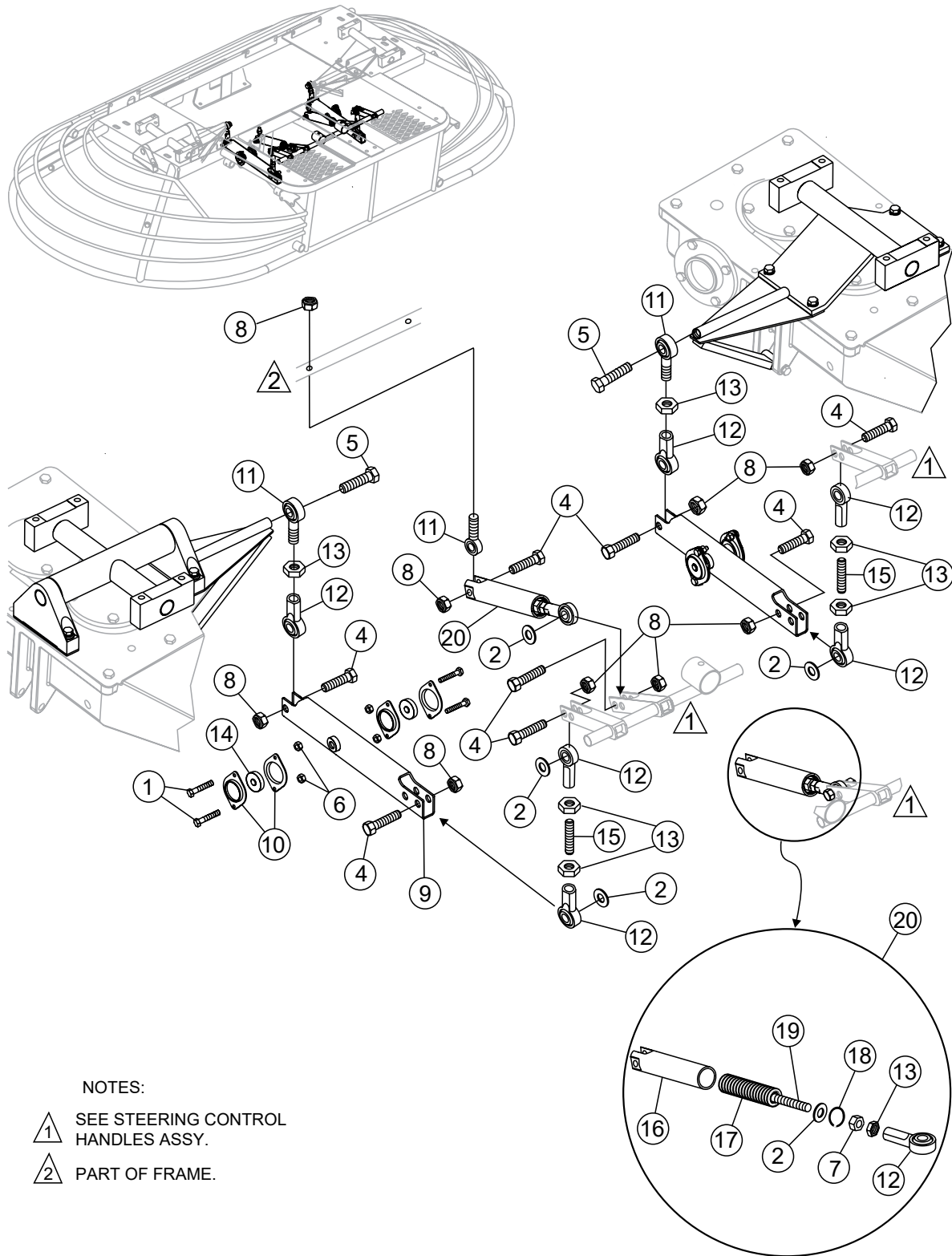


NOTES:  
 1 FOR COMPLETE STEERING ASSY  
 ORDER PART# 30061.

## STEERING CONTROL HANDLE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	0131 A	SCREW, HHC 1/4"-20 X 3/4"	4	
2	0447	WASHER, FLAT, 1/2" SAE	3	
3	0735	BEARING, CONE, TIMKEN #A6075	4	
4	0735 A	BEARING, CUP, TIMKEN #A6157	4	
5	07046-011	BOLT, CARRIAGE 5/16"-18 X 1-1/2" GRD 5	8	
6	2197	NUT, ACORN 1/4"-20	2	
7	2219	PIN, COTTER 1/8" X 1-1/2"	2	
8	22762	GRIP HANDLE, LEFT-RIGHT	2	
9	5277	SCREW, HHC 1/4"-20 X 1-1/2"	2	
10	6159 A	SCREW, HHC 1/2"-13 X 2"	3	
11	8151	WASHER, FLAT, 3/4" SAE	4	
12	10024	NUT, NYLOC 1/4"-20	4	
13	49071	NUT, NYLOC 3/8"-16	8	
15	10176	NUT, NYLOC 1/2"-13	4	
16	11138-SK	HOUSING, P-BLOCK 47MPB, 2 PC	4	
17	11139-SK	HOUSING, BEARING FLANGE 40M-2347	6	
18	22405	SPACER, .75 X .50 X 2.0	1	
19	11142	ROD END, 1/2"-20 MALE RH	11	
20	11143	ROD END, 1/2"-20 FEMALE RH	1	
22	11145	SCREW, SHC 1/2"-20 X 3" PLTD	2	
23	11146	NUT, HEX JAM 1/2"-20	5	
24	11149	BEARING, SB-204-12	4	
25	11150	BEARING, SB-201-B	6	
26	11172	ROD, L/R MOTION CONTROL	1	
27	22404	NUT, COUPLING, 1/2"-20 X 2.0 X .75 HEX	1	
28	11177	HANDLE TUBE, UPPER	2	
29	12193	LEVER, L/R MOTION	1	
30	12903	STEERING CONTROL W/A LS ASSIST	1	
31	12904	STEERING CONTROL W/A RS ASSIST	1	
32	12425	HANDLE , LOWER	2	
33	12426	NUT, SLOTTED 3/4"-16 PLATED	2	
34	21944	ROD END, 1/2"-20 M RH W/ CUSTOM BALL	3	
36	1162 A	CAP, GREASE ZERK	2	
37	2621	FITTING, GREASE ZERK STRAIGHT 1/4"-28	2	

# STEERING CONTROL (ASSIST) ASSY.



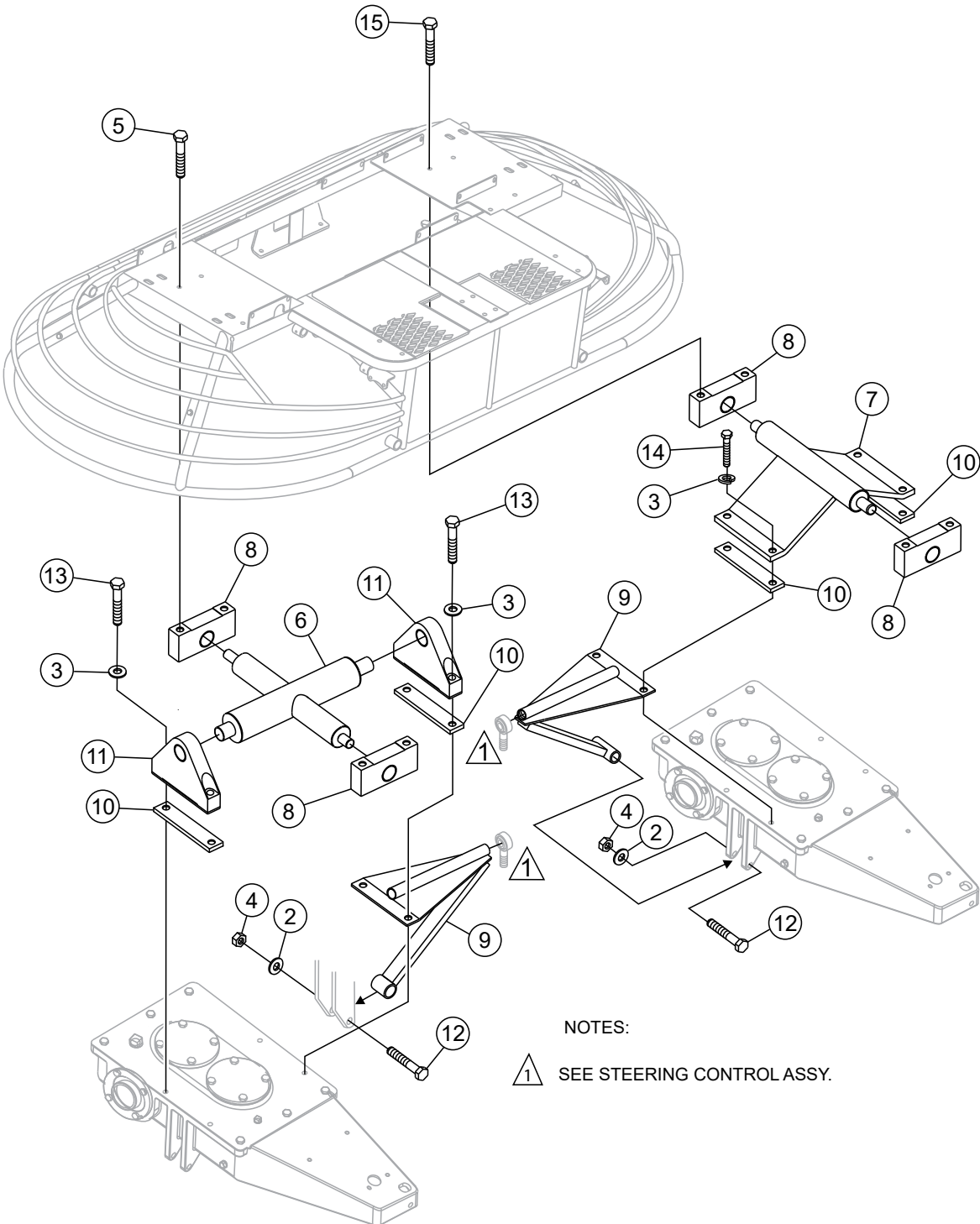
NOTES:

- ▲ 1 SEE STEERING CONTROL HANDLES ASSY.
- ▲ 2 PART OF FRAME.

## STEERING CONTROL (ASSIST) ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	0131 A	SCREW, HHC 1/4"-20 X 3/4"	12	
2@	0447	WASHER, FLAT, 1/2" SAE	12	
4	6159A	SCREW, HHC 1/2"-13 X 2"	8	
5	22135	SCREW, HHC 1/2"-20 X 1-1/2"	2	
6	10024	NUT, NYLOC 1/4"-20	16	
7@	10087	NUT, NYLOC 1/2"-20 THIN	2	
8	10176	NUT, NYLOC 1/2"-13	13	
9	11127	LEVER, STEERING CONTROL	2	
10	11139-SK	HOUSING, BEARING FLANGE 40M-2347	6	
11	11142	ROD END, 1/2"-20 MALE RH	4	
12@	11143	ROD END, 1/2"-20 FEMALE RH	6	
13@	11146	NUT, HEX JAM 1/2"-20	8	
14	11150	BEARING, SB-201-8	4	
15	11173	THREADPIECE, STEERING LEVERS	2	
16@	12195	HOUSING, STEERING ASSIST SPRING	2	
17@	12196	SPRING, STEERING ASSIST	2	
18@	12197	RING, RETAINING	2	
19@	12198	SCREW, HHC 1/2"-20 X 7" TAP GRD 5	2	
20	12200	ASSIST ASSY., STEERING.....	2.....	INCLUDES ITEMS W/@

# PIVOT ASSY.

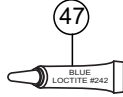
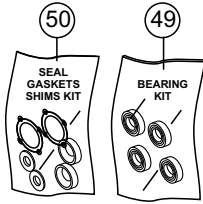


## PIVOT ASSY.

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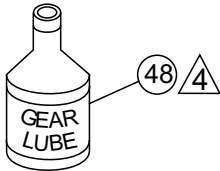
<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
2	0447	WASHER, FLAT 1/2" SAE	2	
3	21707	WASHER, FLAT 3/8" SAE	8	
4	10176	NUT, NYLOC 1/2"-13	2	
5	22106	SCREW, HHFS 3/8"-16 X 1-1/4" ZINC	6	
6	12716	TRUNNION	1	
7	12719	PIVOT, GEAR BOX	1	
8	12725	BLOCK, ROCKER	4	
9	12856	BRACKET, DIRECTION CONTROL	2	
10	12859	PLATE G.B. SPACER	4	
11	12713	ROCKER BLOCK	2	
12	2549	SCREW, HHC 1/2"-13 X 3"	2	
13	32272	SCREW, HHC 3/8"-16 X 2-1/4"	4	
14	32271	SCREW, HHC 3/8"-16 X 1-3/4"	4	
15	32476	SCREW, HHF 3/8"-16 X 1-1/4" GRD 8	2	

# GEARBOX ASSY. (SINGLE SIGHT GLASS)

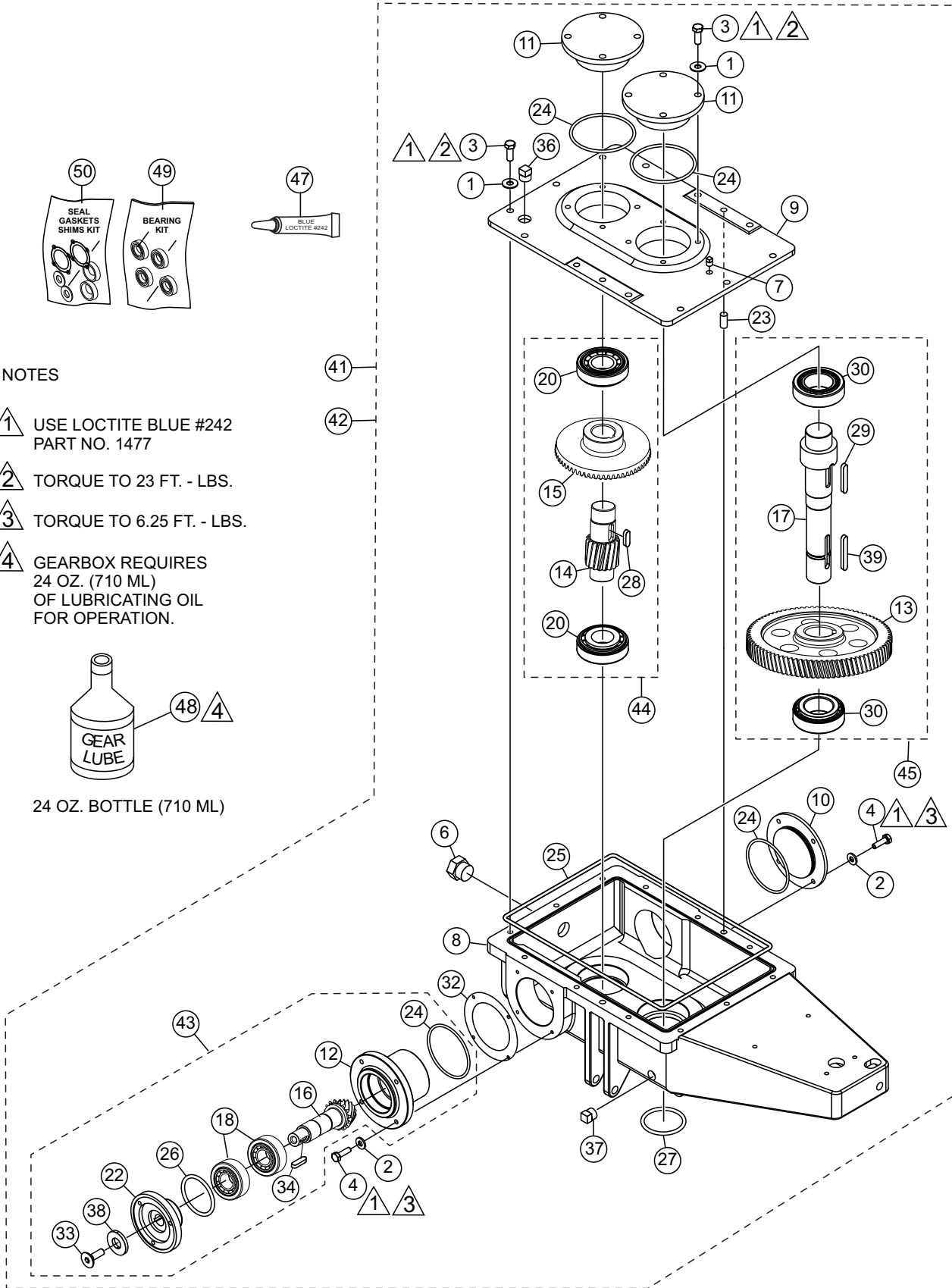


## NOTES

- 1 USE LOCTITE BLUE #242 PART NO. 1477
- 2 TORQUE TO 23 FT. - LBS.
- 3 TORQUE TO 6.25 FT. - LBS.
- 4 GEARBOX REQUIRES 24 OZ. (710 ML) OF LUBRICATING OIL FOR OPERATION.



24 OZ. BOTTLE (710 ML)

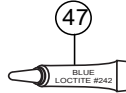
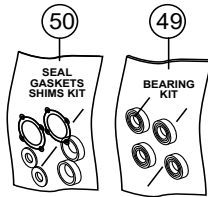


## GEARBOX ASSY. (SINGLE SIGHT GLASS)

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1\$	10136	WASHER, FLAT SAE 3/8"	16	
2\$	0948	WASHER, FLAT SAE 1/4"	8	
3\$	0205	SCREW, HHC 3/8"-16 X 1"	16	
4\$	2295	SCREW, HHC 1/4"-20 X 7/8"	8	
6\$	11584	SIGHT GLASS	1	
7\$	11682	FITTING, PLUG, 1/8" MP SQ HEAD	1	
8\$		GEARBOX HOUSING .....	1	NOT SOLD SEPARATELY
9\$	21811	COVER, GEAR BOX	1	
10\$	21813	CAP, HELICAL GEARBOX INPUT	1	
11\$	21810	CAP, HELICAL GEARBOX IDLER	2	
12\$%		HUB, HELICAL INPUT SHAFT .....	1	MUST PURCHASE KIT
13\$+		GEAR, 85T HELICAL .....	1	MUST PURCHASE KIT
14\$@		GEAR, PINION 17T, HELICAL .....	1	MUST PURCHASE KIT
15\$@		GEAR, SPIRAL BEVEL, 60T 6.00PD .....	1	MUST PURCHASE KIT
16\$%		PINION, 15T SPIRAL BEVEL.....	1	MUST PURCHASE KIT
17\$+	21804	SHAFT, OUTPUT .....	1	MUST PURCHASE KIT
18\$%#	21803	BEARING, TAPERED ROLLER SET	2	
20\$@#	21802	BEARING, TAPERED ROLLER SET	2	
22\$%		COUPLER, GEARBOX .....	1	MUST PURCHASE KIT
23\$	12697	PIN, DOWEL 0.375/.3752 X 3/4"	2	
24\$%>	12698	O RING	4	
25\$>	12700	SEAL, CASE O-RING HHN 0.103 X 46. 38	1	
26\$%>	12701	SEAL	1	
27\$>	12702	SEAL	1	
28\$@	12735	KEY, 3/8" X 3/4"	1	
29\$+	12736	KEY, HARDENED 3/8" X 1-1/2"	1	
30\$+#	21801	BEARING, CONE TAPERED ROLLER SET	2	
32\$		SHIM, INPUT 0.002 THICK .....	3	MUST ORDER P/N 20932
33\$%	1313	SCREW, FHSC 3/8"-24 X 3/4" PLAIN	1	
34\$%	26034	KEY, 3/16" X 17/32"	1	
36\$	911064	FITTING, PLUG 1/2" MP SQ HEAD	1	
37\$	911329	FITTING, PLUG 3/8" MP MAGNETIC	2	
38\$%	9120	RETAINER, DRIVEN PULLEY	1	
39\$+	12687	KEY, 3/8" SQ X 2"	1	
41	32214	GEARBOX ASSY. W/OIL, RIGHT.....	1	INCLUDES ITEMS W/\$
42	32213	GEARBOX ASSY. W/OIL, LEFT .....	1	INCLUDES ITEMS W/\$
43\$	21853854	INPUT KIT, INPUT PINION/HUB/COUPLER .....	1	INCLUDES ITEMS W/%
44\$	21853854	INTER KIT, INTER PINION/GEAR .....	1	INCLUDES ITEMS W/@
45\$	21853854	OUTPUT KIT, OUTPUT SHAFT/GEAR.....	1	INCLUDES ITEMS W/+
47	1477	LOCTITE BLUE #242	1	
48	20445	OIL, HELICAL SERVICE 24 OZ.	6	
49	32077	KIT, SERVICE, BEARING REPLACEMENT.	1	INCLUDES ITEMS W/#
50	20932	KIT, SEAL GEARBOX.....	1	INCLUDES ITEMS W/>

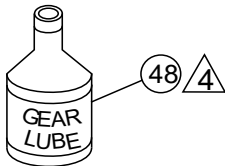


# GEARBOX ASSY. (DUAL SIGHT GLASS)

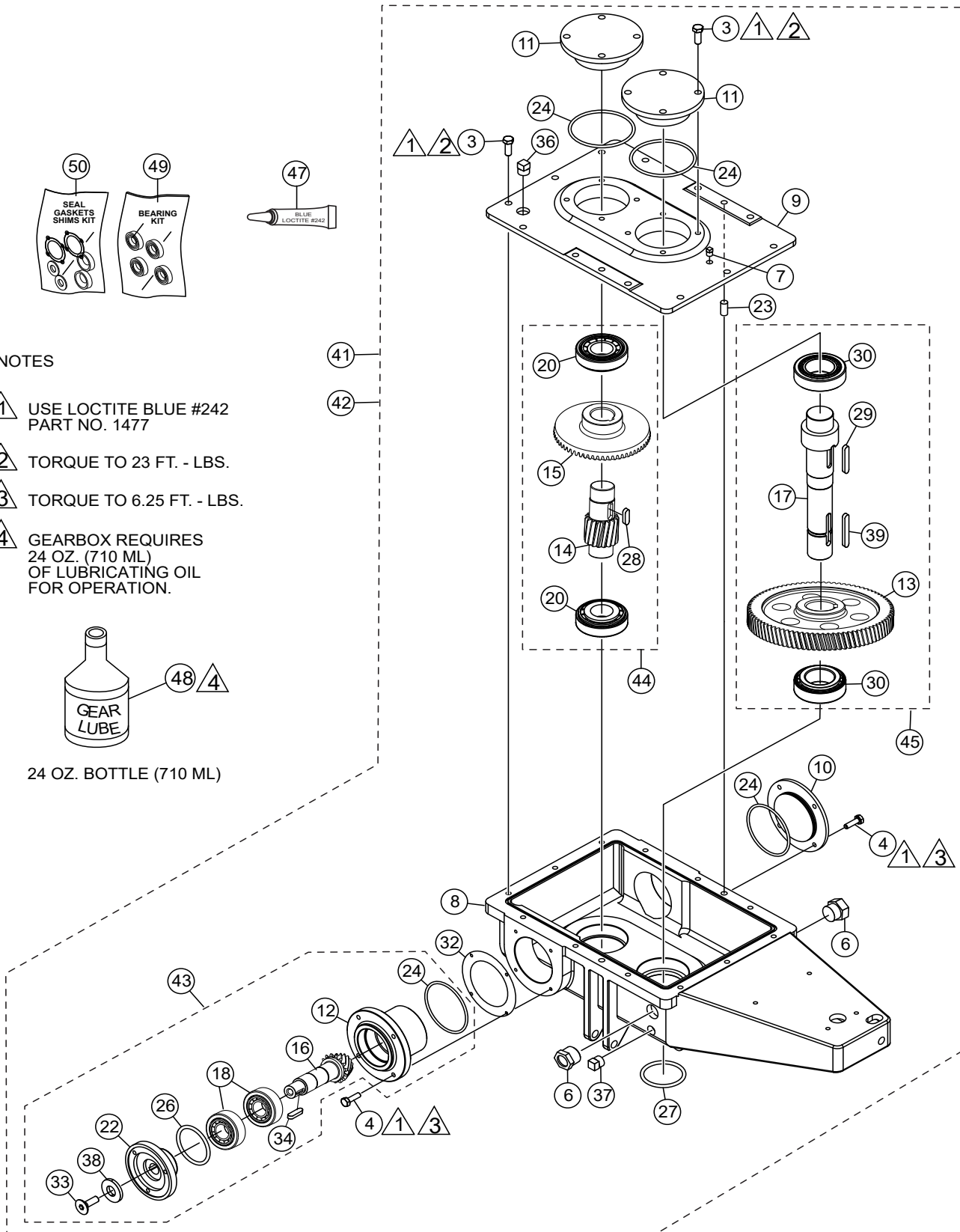


## NOTES

- ① USE LOCTITE BLUE #242 PART NO. 1477
- ② TORQUE TO 23 FT. - LBS.
- ③ TORQUE TO 6.25 FT. - LBS.
- ④ GEARBOX REQUIRES 24 OZ. (710 ML) OF LUBRICATING OIL FOR OPERATION.



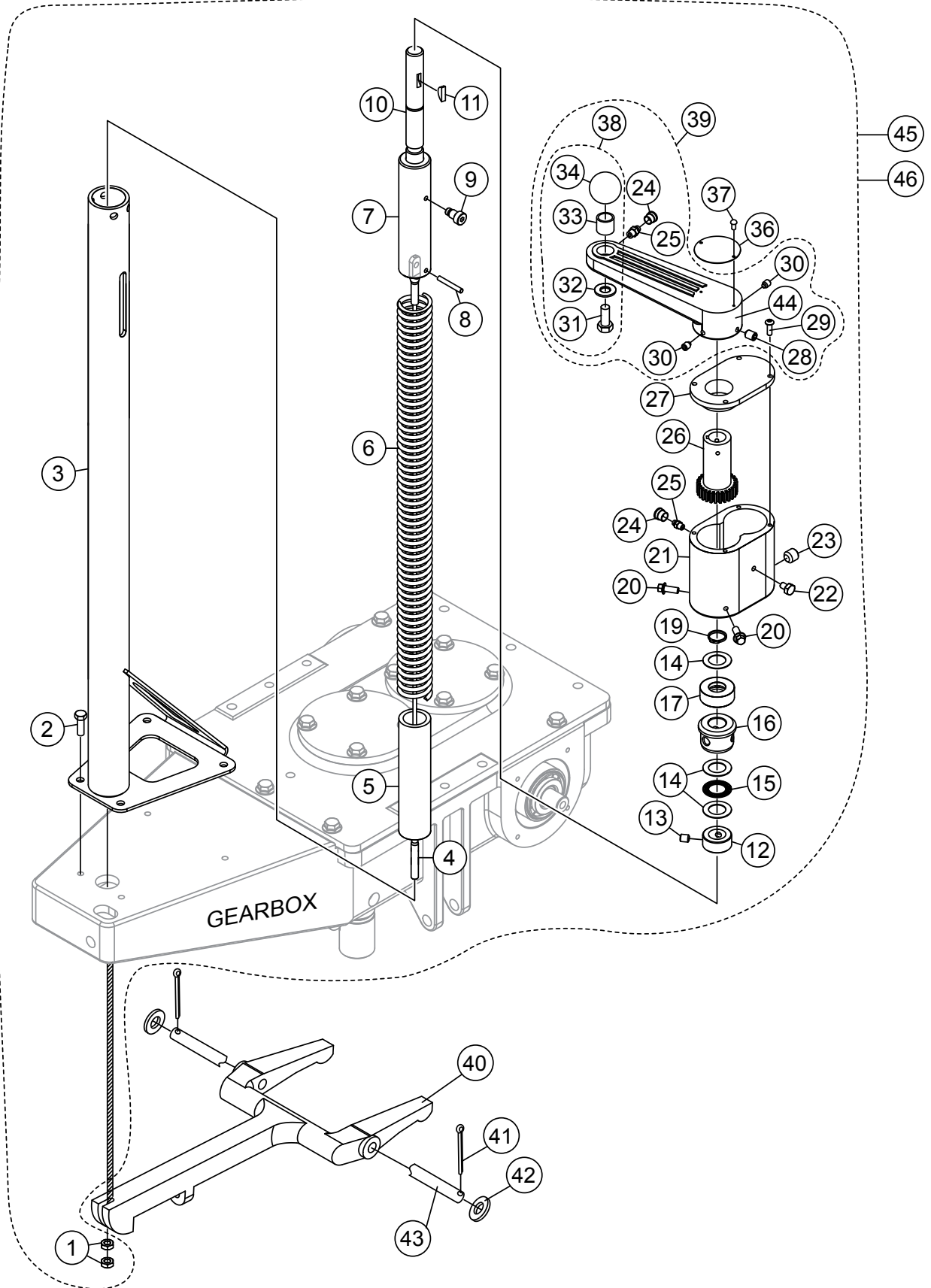
24 OZ. BOTTLE (710 ML)



## GEARBOX ASSY. (DUAL SIGHT GLASS)

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
3\$	32379	SCREW, HFS 3/8-16 X 1	20	
4\$	46031	SCREW, HFS 1/4-20 X 1	8	
6\$	21033	SIGHT GLASS	2	
7\$	11682	FITTING, PLUG, 1/8 MP SQ HEAD	1	
8\$	21812	GEARBOX HOUSING	1	
9\$	21811	COVER, GEAR BOX	1	
10\$	32537	END CAP, BLIND, INPUT	1	
11\$	32533	END CAP, UPPER SHAFT BEARING	2	
12\$%		HUB, HELICAL INPUT SHAFT .....	1.....	MUST PURCHASE KIT
13\$+		GEAR, 85T HELICAL.....	1.....	MUST PURCHASE KIT
14\$@		GEAR, PINION 17T, HELICAL.....	1.....	MUST PURCHASE KIT
15\$@		GEAR, SPIRAL BEVEL, 60T 6.00PD .....	1.....	MUST PURCHASE KIT
16\$%		PINION, 15T SPIRAL BEVEL .....	1.....	MUST PURCHASE KIT
17\$+		SHAFT, OUTPUT .....	1.....	MUST PURCHASE KIT
18\$%	21803	BEARING, TAPERED ROLLER SET	2	
20\$@	21802	BEARING, TAPERED ROLLER SET	2	
22\$%		COUPLER, GEARBOX.....	1.....	MUST PURCHASE KIT
23\$	926942	PIN, DOWEL 0.375 DIA. X 3/4	2	
24\$%	12698	O RING	2	
26\$%	12701	SEAL	1	
27\$	12702	SEAL	1	
28\$@	12735	KEY, 3/8 X 3/4	1	
29\$+	12736	KEY, HARDENED 3/8 X 1-1/2	1	
30\$+	21801	BEARING, CONE TAPERED ROLLER SET	2	
32\$	21800	SHIM, INPUT. 0.002 THICK	3	
33\$%	30318	SCREW, FHSC 3/8 - 24 X 1	1	
34\$%	26034	KEY, 3/16 X 17/32	1	
36\$	911064	FITTING, PLUG 1/2 MP SQ HEAD	1	
37\$	911329	FITTING, PLUG 3/8 MP MAGNETIC	2	
38\$%	9120	RETAINER, DRIVEN PULLEY	1	
39\$+	12687	KEY, 3/8 SQ X 2	1	
41	32958-SK	GEARBOX ASSY., RIGHT .....	1.....	INCLUDES ITEMS W/\$
42	32957-SK	GEARBOX ASSY., LEFT .....	1.....	INCLUDES ITEMS W/\$
43\$	32536	INPUT HUB ASSY.....	1.....	INCLUDES ITEMS W/%
44\$	32653	INTERMEDIATE SHAFT ASSY.....	1.....	INCLUDES ITEMS W/@
45\$	32652	OUTPUT SHAFT ASSY.....	1.....	INCLUDES ITEMS W/+
47	1477	LOCTITE BLUE #242	1	
48	20445	OIL, HELICAL SERVICE 24 OZ.	6	
49	32077	KIT, SERVICE, BEARING REPLACEMENT .....	1.....	INCLUDES ITEMS W/#
50	20932	KIT, SEAL GEARBOX.....	1.....	INCLUDES ITEMS W/>

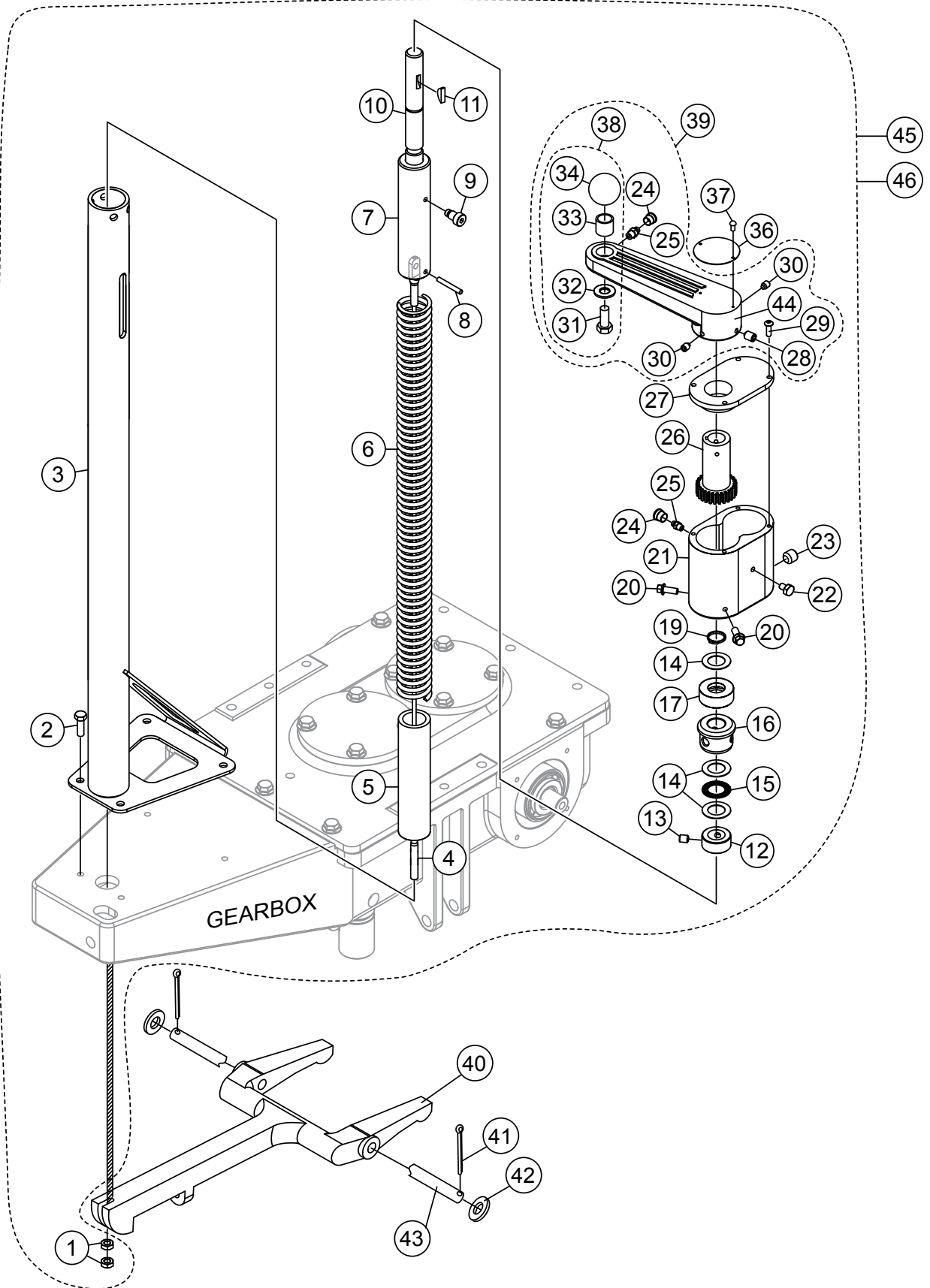
# PITCH CONTROL TOWER ASSY.



## PITCH CONTROL TOWER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1\$#	1116	NUT, BRASS JAM 5/16"-18	2	
2\$#	9091	SCREW, HHFS 5/16"-18 X 1" GRD 5	4	
3\$	23850	TOWER, PITCH CONTROL.....	1	RIGHT-SIDE
3#	23851	TOWER, PITCH CONTROL.....	1	LEFT-SIDE
4\$#	12460	CABLE, PITCH CONTROL	1	
5\$#	11649	SPACER, PITCH SPRING	1	
6\$#	2156	SPRING, HANDLE BALANCE COIL TWN RDR	1	
7\$	10721	SLIDE BLOCK, PITCH CONTROL .....	1	RIGHT-SIDE
7#	10722	SLIDE BLOCK, PITCH CONTROL .....	1	LEFT-SIDE
8\$#	10723	PIN, SPIRAL 3/16" X 1-3/8" HD	1	
9\$#	10382	BOLT, SHOULDER, 3/8" X 3/8" LONG	1	
10\$	10510	SHAFT, PITCH CONTROL .....	1	RIGHT-SIDE
10#	10511	SHAFT, PITCH CONTROL .....	1	LEFT-SIDE
11\$#	0126	KEY, WOODRUFF #606 3/16" X 3/4" (#9)	1	
12\$#	2367	COLLAR, SET .75 X 1.25 X .56	1	
13\$#	925437	SCREW, SHS, CP 5/16"-18 X 3/8"	2	
14\$#	2170	BEARING, RACE, TORR. #TRA1220	3	
15\$#	2169	BEARING, THRUST, TORR. #NTA1220	1	
16\$#	1612	BEARING, ALUMINUM, PITCH CONTR.	1	
17\$#	1604	BEARING, BALL THRUST E5 AETNA	1	
19\$#	10512	RING, SNAP, TRUARC 5160-75	1	
20\$#	22021	SCREW, HHFS M8-1.25 X 20 MM TENSILOK PATCH	2	
21\$#	23037	HOUSING, PITCH CONTROL	1	
22\$#	20476	SCREW, HHC 1/4"-28 X 3/8"	1	
23\$#	17109	SCREW, SHSCU M8-1.25 X 8MM	1	
24%\$#	1162 A	CAP, GREASE ZERK, #2 YELLOW	2	
25%\$#	2621	FITTING, GREASE ZERK STR 1/4"-28	2	
26\$#	1529	GEAR, DRIVE PITCH CONTROL	1	
27\$#	2649	COVER, PITCH CONTROL HOUSING	1	
28%\$#	0185	SCREW, SHS 3/8"-16 X 3/8", NO PLATE	1	
29\$#	9191	SCREW, BHSC M5-0.8 X 16MM	4	

# PITCH CONTROL TOWER ASSY.



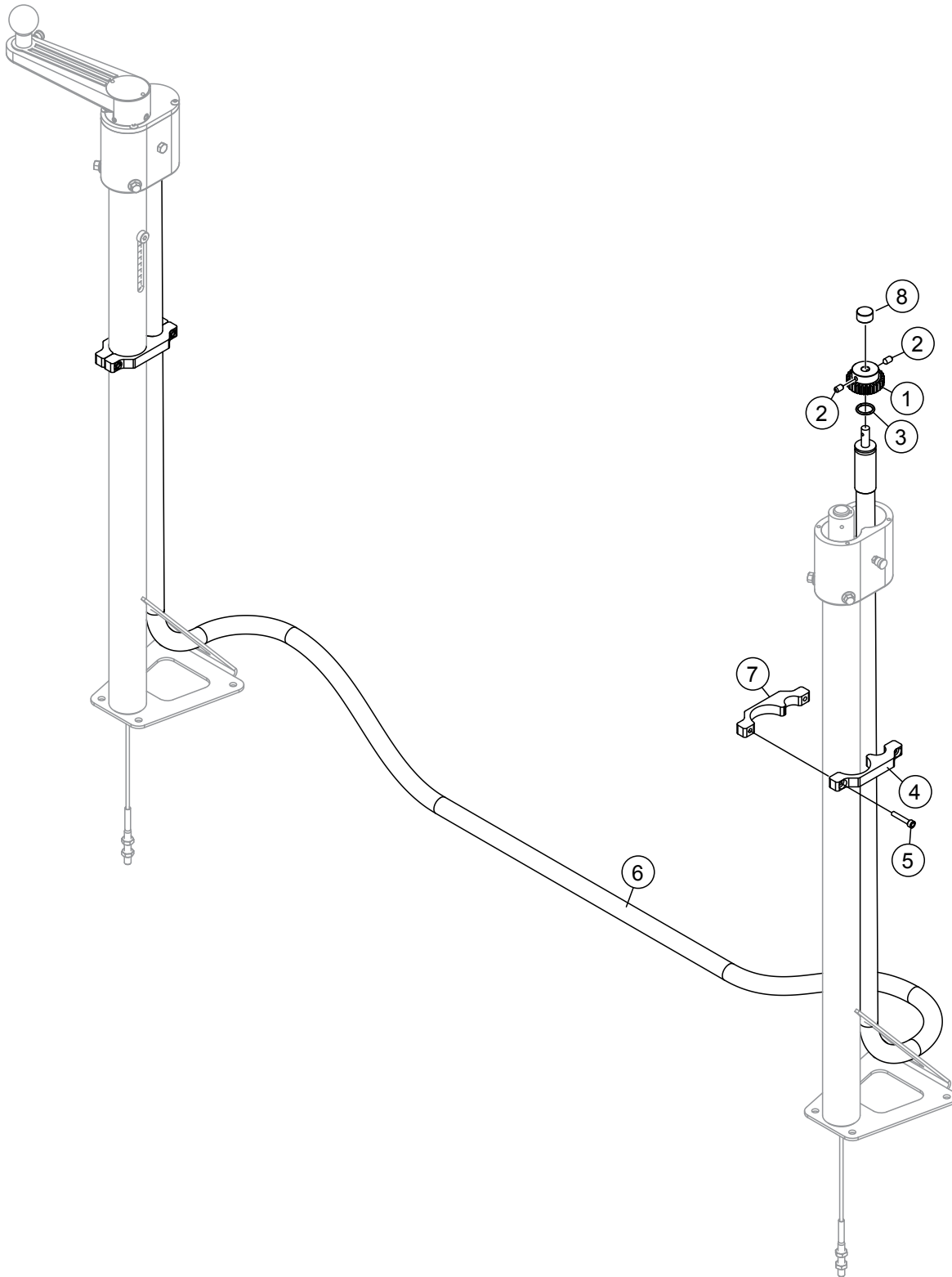
## PITCH CONTROL TOWER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
30%\$#	1528	SCREW, SHS 1/4"-20 X 5/16" H.D.P.	2	
31@%\$#	1616	BOLT, SHOULDER .5 DIA. X .469 X 3/8"-16	1	
32@%\$#	1733	WASHER, 1/2" X 1/32", AN960-816L	1	
33@%\$#	3231	SPACER, .75 DIA. X .406 DIA. X .688	1	
34@%\$#	4403	KNOB, ROUND 1-3/8" DIA. X 3/8"-16 BLACK	1	
36\$	2300	DECAL, PITCH .....	1	RIGHT-SIDE
36#	2332	DECAL, PITCH .....	1	LEFT-SIDE
37S#	4014	SCREW, #2, 3/16" P-K TYPE U DRIVE	2	
38%\$#	2737	KNOB, KIT .....	1	INCLUDES ITEMS W/@
39\$#	1617	LEVER ASSY., TROWEL ADJUSTMENT .....	1	INCLUDES ITEMS W/%
40	11499	YOKE ARM, PITCH	1	
41	0183	PIN, COTTER 1/8"D X 1-1/4"	2	
42	0448	WASHER, FLAT SAE 7/16"	2	
43	11648	SHAFT, YOKE PIVOT	1	
44%\$#	1615	LEVER, TROWEL ADJUSTMENT	1	
45	23850-SK	TOWER ASSY., RH.....	1	INCLUDES ITEMS W/\$
46	23851-SK	TOWER ASSY., LH .....	1	INCLUDES ITEMS W/#

### NOTICE

Indicated quantities are for one pitch tower. If ordering for two pitch towers, double the quantity.

# PITCH CONTROL DRIVE CABLE ASSY.



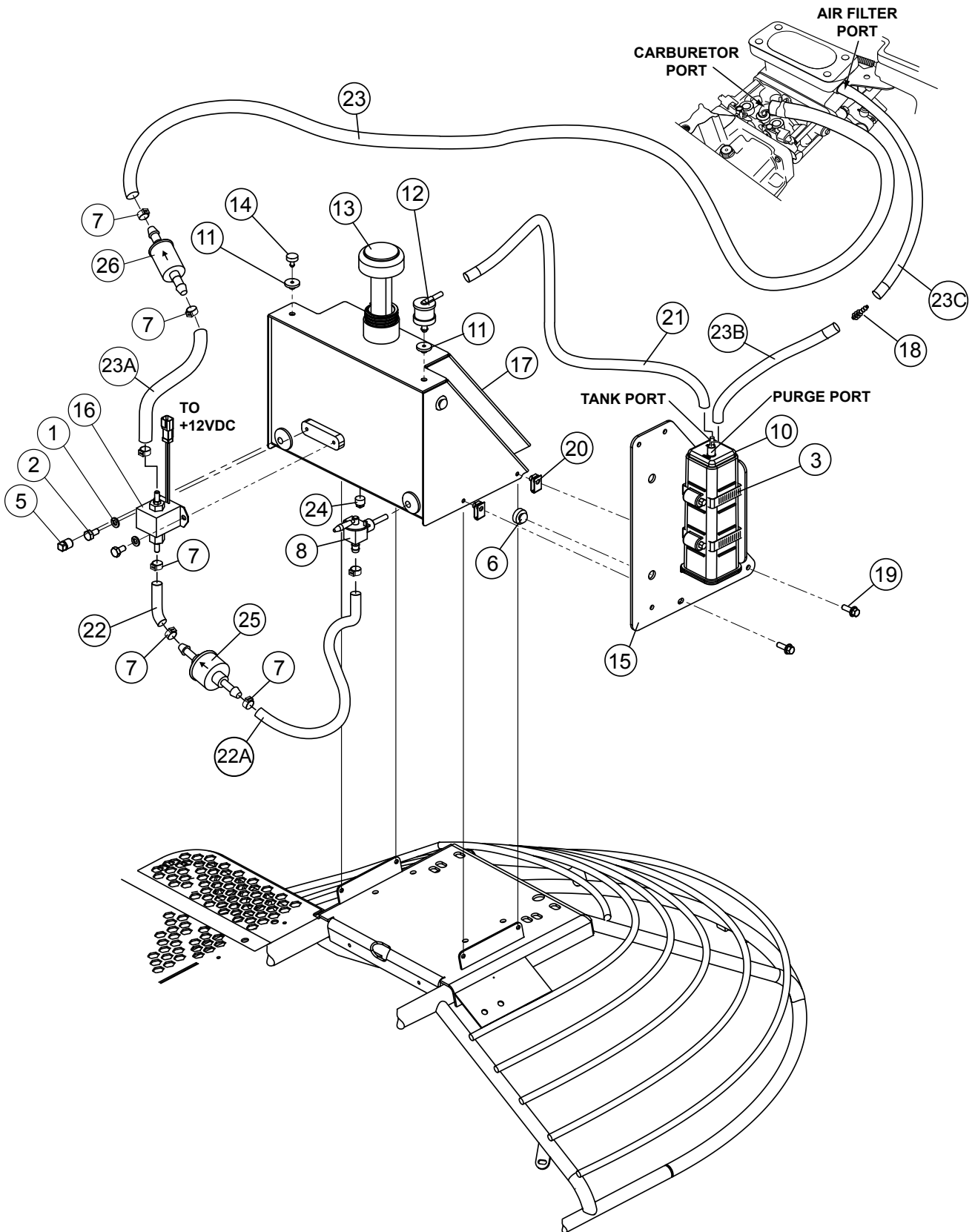
## **PITCH CONTROL DRIVE CABLE ASSY.**

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<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	23036	GEAR, PITCH CONTROL	2	
2	9195	SCREW, SHS M5-0.8 X 10 CONE PT PATCH	4	
3	9196	O-RING, SIZE 2-118 BUNA-N 70	2	
4	23295	CLAMP, PITCH CABLE	4	
5	37325	SCREW, SHC M5-0.8 X 30MM	4	
6	23849	DRIVE CABLE, PITCH CONTROL	1	
7	23615	CLAMP, PITCH CABLE, THREADED	2	
8	32802	SPACER, PITCH CONTROL	2	



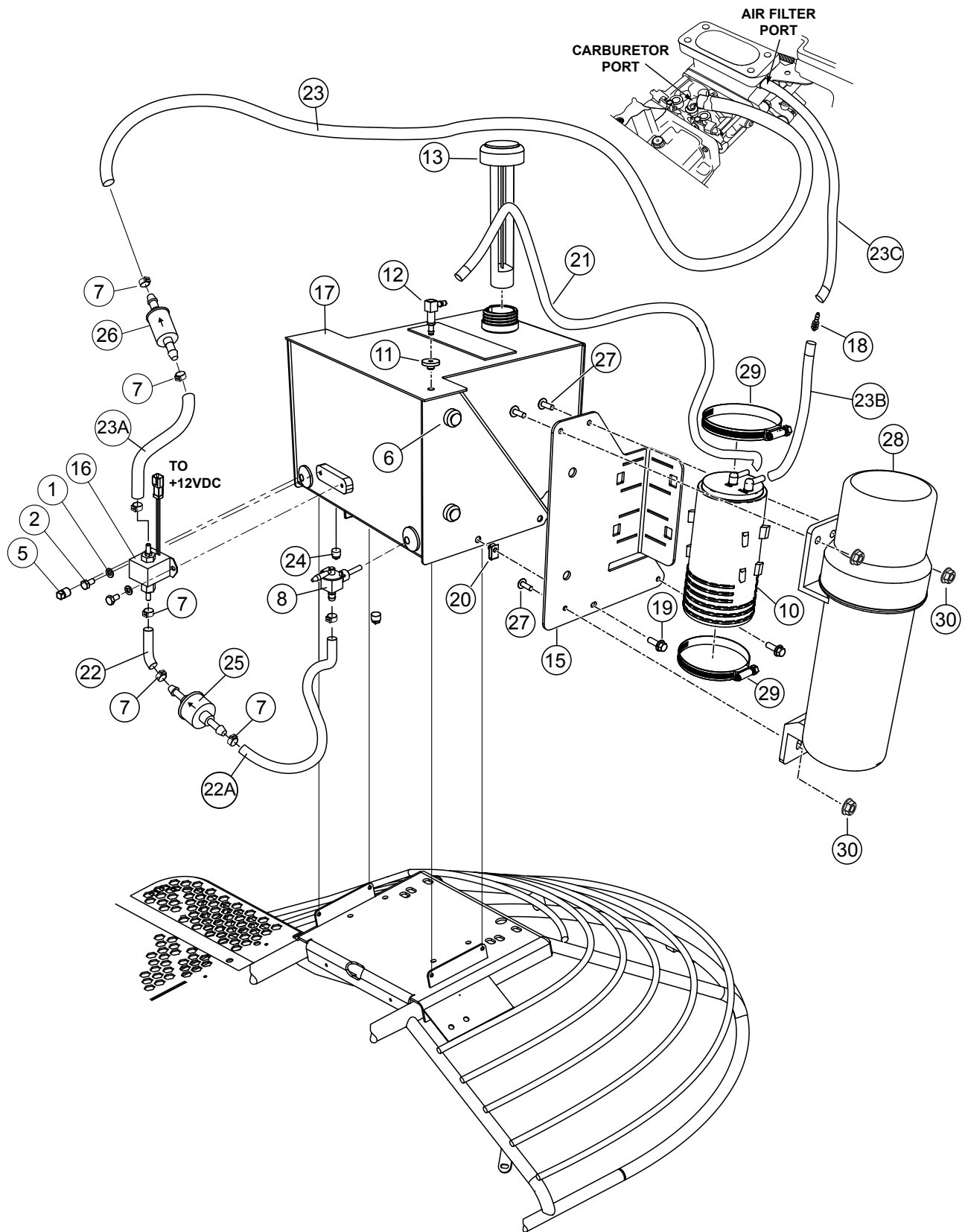
# FUEL TANK ASSY. (5.5 GALLON)



## FUEL TANK ASSY. (5.5 GALLON)

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	0181 B	WASHER, LOCK 1/4" MED	2	
2	1579	SCREW, HHC 1/4"-20 X 1/2"	2	
3	12277	CLAMP, HOSE WORM, #36, 1-13/16" X 2-3/4"	2	
5	16185	FITTING, PLUG 1/4"MP SQ HD	1	
6	21597	BUMPER,STEM 1.0"D X .5S X .31	2	
7	22067	CLAMP, STEPLESS EAR 1/4" HOSE	7	
8	22081	SHUTOFF VALVE, 1/4" NPT, 1/4" HOSE	1	
10	23505	CANISTER, CARBON, 390CC	1	
11	23507	GROMMET, ROLL OVER VALVE	2	
12	12007	FITTING, 90 4SBARB X 6-4SBARB THRU TANK	1	
13	23514	CAP, RATCHET W/GAUGE "GASOLINE" (10-1/2")	1	
14	23557	PLUG, FUEL TANK VENT	1	
15	23593	BRACKET, CHARCOAL CANISTER	1	
16	23873	FUEL PUMP ASSY.	1	
17	23940-SK	TANK, GAS (SERVICE)	1	
18	23966	FITTING, STR, BARB 5/16" TO 3/16" REDUCER	1	
19	49048	SCREW, HHFS 1/4"-20 X 3/4" GRD 5	4	
20	11534	NUT, "U" TYPE, 1/4"-20	4	
21	60004	HOSE, FUEL .187" DIA, 12" LENGTH.....	1	1PC=1FT
22	60013	HOSE, FUEL .250" DIA., 5-1/4" LENGTH .....	1	1PC=1FT
22A	60013	HOSE, FUEL .250" DIA., 7" LENGTH.....	1	1PC=1FT
23	60028	HOSE, FUEL .312" DIA., 17-1/2" LENGTH .....	2	1PC=1FT
23A	60028	HOSE, FUEL .312" DIA., 3-1/2" LENGTH .....	1	1PC=1FT
23B	60028	HOSE, FUEL .312" DIA., 12" LENGTH.....	1	1PC=1FT
23C	60004	HOSE, FUEL .187" DIA., 24" LENGTH.....	2	1PC=1FT
24	911329	FITTING, PLUG 3/8" MP MAGNET	1	
25	691035	FILTER, FUEL, 40 MICRON	1	
26	845125	FILTER, FUEL, 20 MICRON	1	

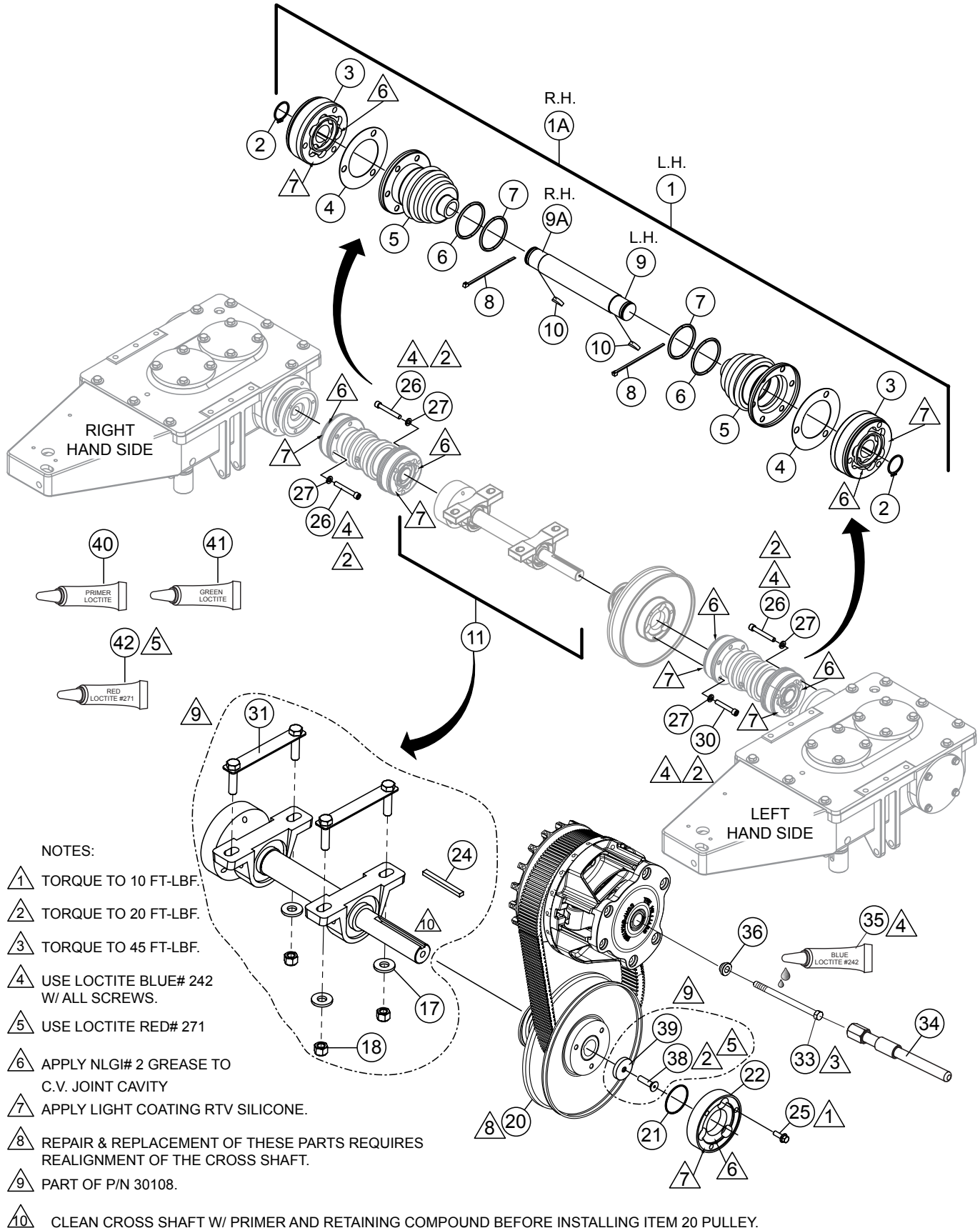
# FUEL TANK ASSY. (7.5 GALLON)



## FUEL TANK ASSY. (7.5 GALLON)

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	0181 B	WASHER, LOCK 1/4" MED	2	
2	1579	SCREW, HHC 1/4"-20 X 1/2"	2	
5	16185	FITTING, PLUG 1/4"MP SQ HD	1	
6	21597	BUMPER,STEM 1.0"D X .5S X .31	2	
7	22067	CLAMP, STEPLESS EAR 1/4" HOSE	5	
8	22081	SHUTOFF VALVE, 1/4" NPT, 1/4" HOSE	1	
10	23506	CANISTER, CARBON, 800CC	1	
11	23507	GROMMET, ROLL OVER VALVE	1	
12	12007	FITTING, 90 4SBARB X 6-4SBARB THRU TANK	1	
13	23514	CAP, RATCHET W/GAUGE "GASOLINE" (10-1/2")	1	
15	32679	BRACKET, CHARCOAL CANISTER	1	
16	23873	FUEL PUMP ASSY.	1	
17	32709-SK	FUEL TANK, ASSY., 7.5 GALLON	1	
18	23966	FITTING, STR, BARB 5/16" TO 3/16" REDUCER	1	
19	49048	SCREW, HHFS 1/4"-20 X 3/4" GRD 5	4	
20	11534	NUT, "U" TYPE, 1/4"-20	4	
21	60004	HOSE, FUEL .1875" DIA., 5.6 FEET LENGTH.....	6	1PC=1FT
22	60013	HOSE, FUEL .250" DIA., 6" LENGTH.....	1	1PC=1FT
22A	60013	HOSE, FUEL .250" DIA., 5" LENGTH.....	1	1PC=1FT
23	60028	HOSE, FUEL .312" DIA., 17-1/2" LENGTH .....	2	1PC=1FT
23A	60013	HOSE, FUEL .250" DIA., 8" LENGTH.....	1	1PC=1FT
23B	60028	HOSE, FUEL .312" DIA., 3.5 FEET LENGTH.....	4	1PC=1FT
23C	60004	HOSE, FUEL .187" DIA., 24" LENGTH.....	2	1PC=1FT
24	911329	FITTING, PLUG 3/8"MP MAGNET	1	
25	691035	FILTER, FUEL, 40 MICRON	1	
26	845125	FILTER, FUEL, 20 MICRON	1	
27	12287	SCREW, THP, 1/4"-20 X 3/4 SS	3	
28	23297	MANUAL HOLDER	1	
29	23794	CLAMP, HOSE WORM, #64, 3-9/2" TO 4-1/2"	2	
30	49070	NUT, FLANGED, 1/4"-20 SERRATED PLTD	3	

# DRIVE ASSY.



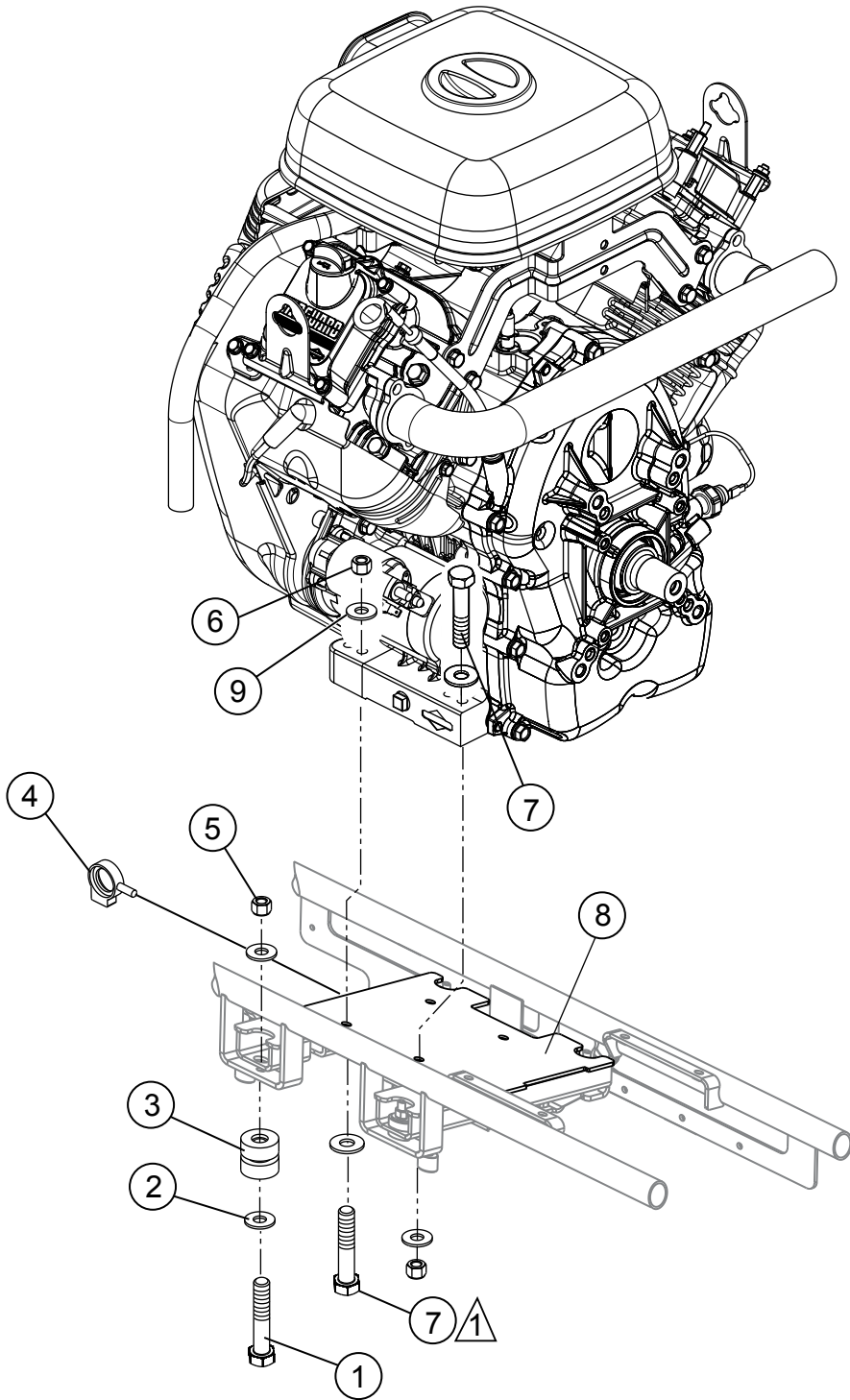
**NOTES:**

- ① TORQUE TO 10 FT-LBF.
- ② TORQUE TO 20 FT-LBF.
- ③ TORQUE TO 45 FT-LBF.
- ④ USE LOCTITE BLUE# 242 W/ ALL SCREWS.
- ⑤ USE LOCTITE RED# 271
- ⑥ APPLY NLGI# 2 GREASE TO C.V. JOINT CAVITY
- ⑦ APPLY LIGHT COATING RTV SILICONE.
- ⑧ REPAIR & REPLACEMENT OF THESE PARTS REQUIRES REALIGNMENT OF THE CROSS SHAFT.
- ⑨ PART OF P/N 30108.
- ⑩ CLEAN CROSS SHAFT W/ PRIMER AND RETAINING COMPOUND BEFORE INSTALLING ITEM 20 PULLEY.

## DRIVE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	23477	CV JOINT ASSY., LH .....	1 .....	INCLUDES ITEMS W/@
1A	23922	CV JOINT ASSY., RH.....	1 .....	INCLUDES ITEMS W/\$
2@\$	2090	SNAP RING, TRUARC#5100-106 1.062 DIA. X .056	2	
3@\$	392052	JOINT, C.V. ....	4 .....	INCLUDES ITEMS W/^
4@\$^	11108	GASKET, C.V. JOINT BOOT RIDERS	2	
5@\$^	2259	BOOT ASSY., C.V. JOINT RIDERS .....	2 .....	INCLUDES ITEMS W/#
6@#\$^	22219	O-RING, SIZE 2-228N-90 2.25 DIA. X .12	2	
7@#\$^	22220	O-RING, SIZE 2-225N-90 1.875 DIA. X .125	2	
8@\$	1662	TIE, CABLE TY-RAP BLACK	2	
9@		SHAFT, C.V. JOINT 7.44 LG.....	1 .....	MUST ORDER P/N 23477
9A\$		SHAFT, C.V. JOINT 10.00 LG.....	1 .....	MUST ORDER P/N 23922
10@\$	0126	KEY, WOODRUFF #606 3/16" X 3/4" (#9)	2	
11	30108	DRIVE, CROSS SHAFT ASSY.....	1 .....	INCLUDES ITEMS W/%
17%	13351	WASHER, FLAT 3/8"	4	
18%	10133	NUT, NYLOC 3/8"-16	4	
20	40140	CVT, LOWER DRIVEN, SERVICE KIT	1	
21	20116	O-RING, SIZE-031 BUNA-N	1	
22	23433	COUPLER, DRIVEN CCVT	1	
24%	20363	KEY, STEEL .188 X .250 X 2.5	1	
25	9165	SCREW, HHFS 1/4"-28 X 3/4" GRD 5 PATCH	3	
26	2186	SCREW, SHC 5/16"-16 X 2-1/4" PLTD	9	
27	0161 C	WASHER, LOCK, 5/16" MED	12	
30	0243	SCREW, SHC 5/16"-18 X 1-3/4"	3	
31%	20186	PLATE, BEARING MOUNT	2	
33	23377	SCREW, HHC 7/16"-20 X 6.5" GRD 8	1	
34	23678	PULLER, HILLIARD CVT	1	
35	1477	LOCTITE, BLUE #242, 0.5CC BOTTLE	AR	
36	23369	WASHER,STEP 7/16"	1	
38%	30107	SCREW, FHCS 3/8"-16 X 1-1/4" LH THREAD	1	
39%	30110	SPACER, CSK Ø 1.375" X .391" X .281"	1	
40	32441	PRIMER, LOCTITE	AR	
41	32434	COMPOUND, RETAINING 1/2ML	AR	
42	19379-014	LOCTITE, RED #271	AR	

# ENGINE MOUNTING ASSY.



NOTES:

**1** THIS HOLE ONLY, INSERT BOLT FROM BOTTOM.

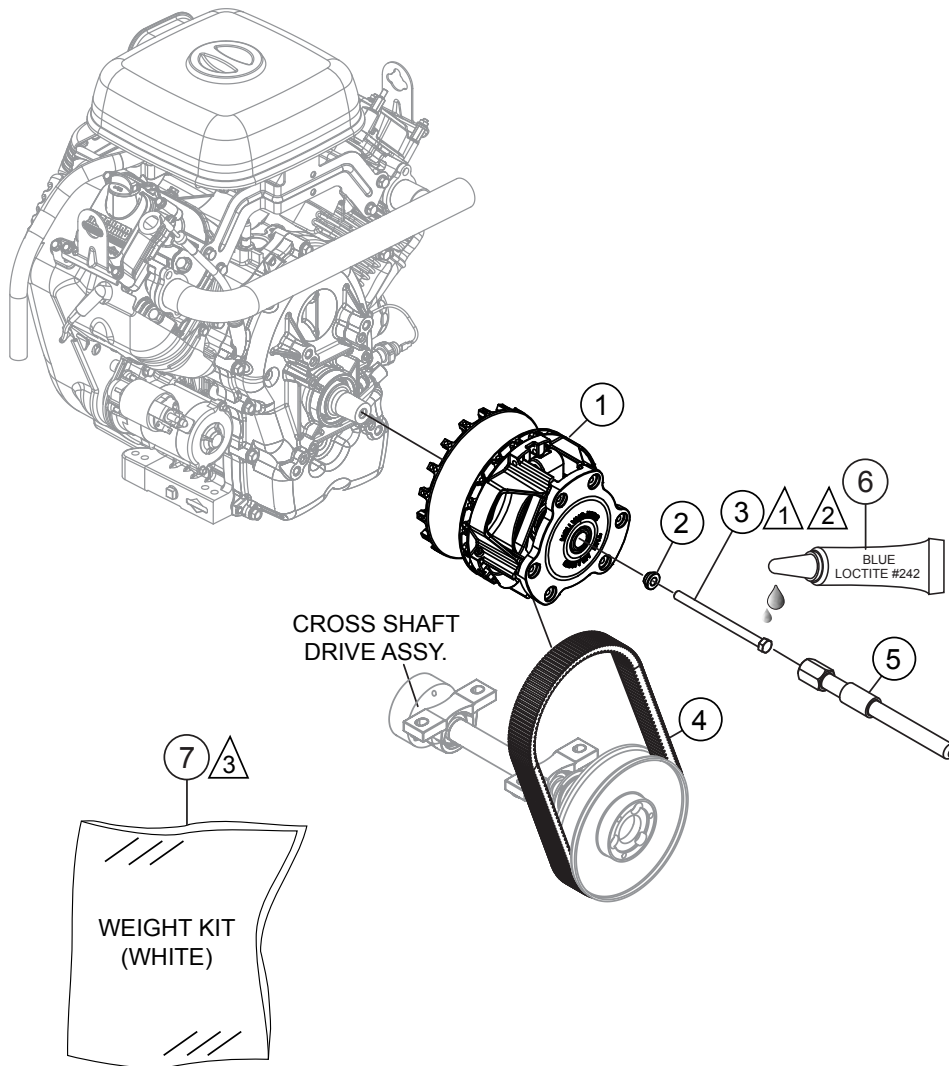
## ENGINE MOUNTING ASSY.




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<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	4370	SCREW, HHC 3/8"-16 X 2-1/4"	4	
2	4001	WASHER, FLAT USS 3/8" PLD	8	
3	21014	ISOLATOR, VIBRATION	4	
4	23843	CLIP, 1" WIRE LOOM	1	
5	10133	NUT, NYLOC 3/8"-16	4	
6	5283	NUT, NYLOC 5/16"-18	1	
7	0300 A	SCREW, HHC 5/16"-18 X 2"	4	
8	48359	CRADLE .....	1	REPLACES P/N 23891
9	0300 B	WASHER, FLAT SAE 5/16"	5	



# ENGINE CLUTCH ASSY.



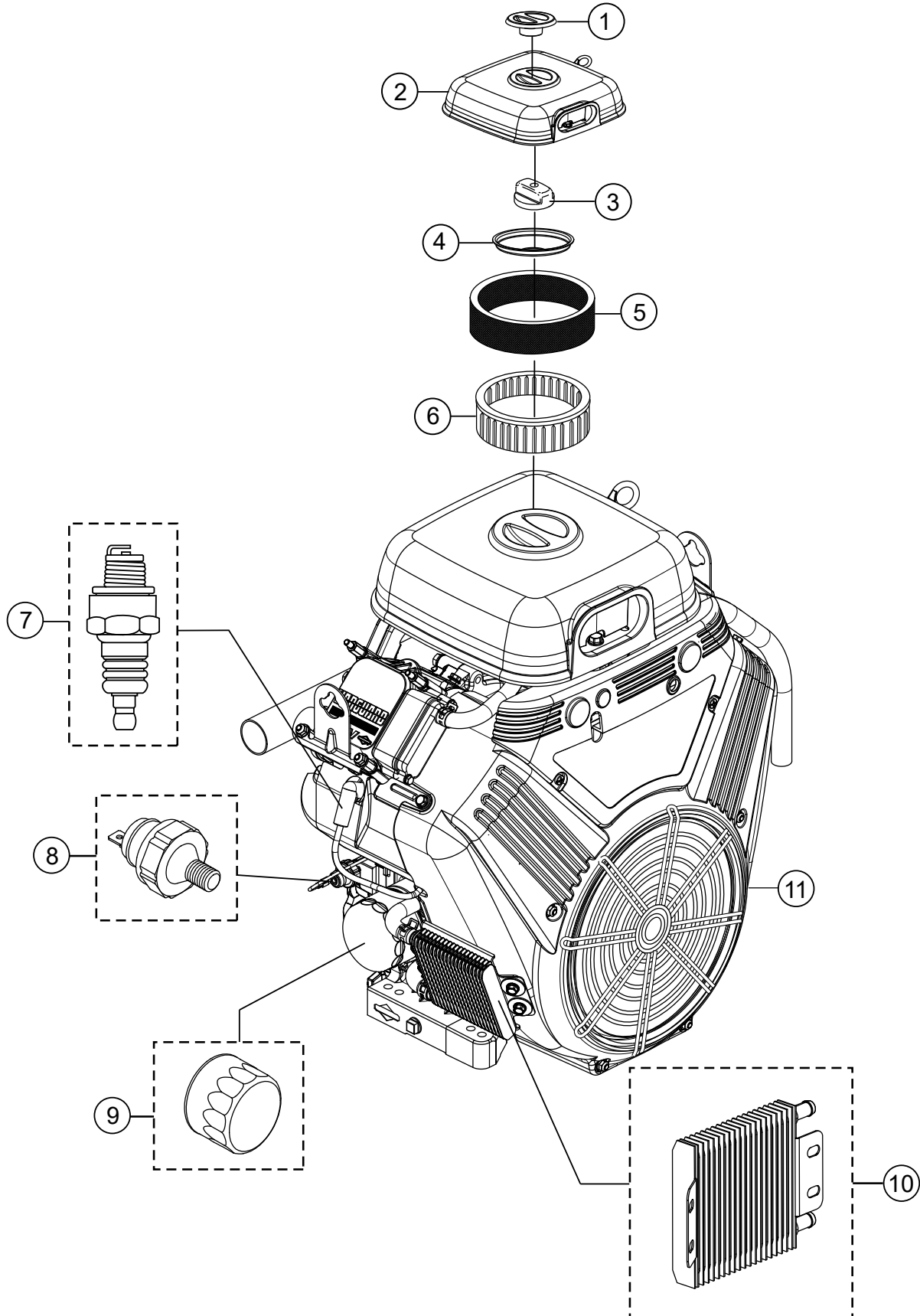
- NOTES:
-  USE LOCTITE BLUE #242.
  -  TORQUE TO 45 FT-LBS.
  -  USE P/N 32450 TO REPLACE YELLOW CLUTCH WEIGHTS.

## ENGINE CLUTCH ASSY.

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<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	32449	CLUTCH, CVT DRIVE W/TAPER-HIL	1	
2	23369	WASHER, STEP 7/16"	1	
3	23377	SCREW, HHC 7/16"-20 X 6.5" GRD 8	1	
4	23365	BELT, CVT MULTI-CLUTCH	1	
5	23678	PULLER, HILLIARD CVT	1	
6	1477	LOCTITE, BLUE #242, 0.5CC BOTTLE	1	
7	32450	WEIGHT KIT, WHITE.....	1.....	REPLACES YELLOW WEIGHTS

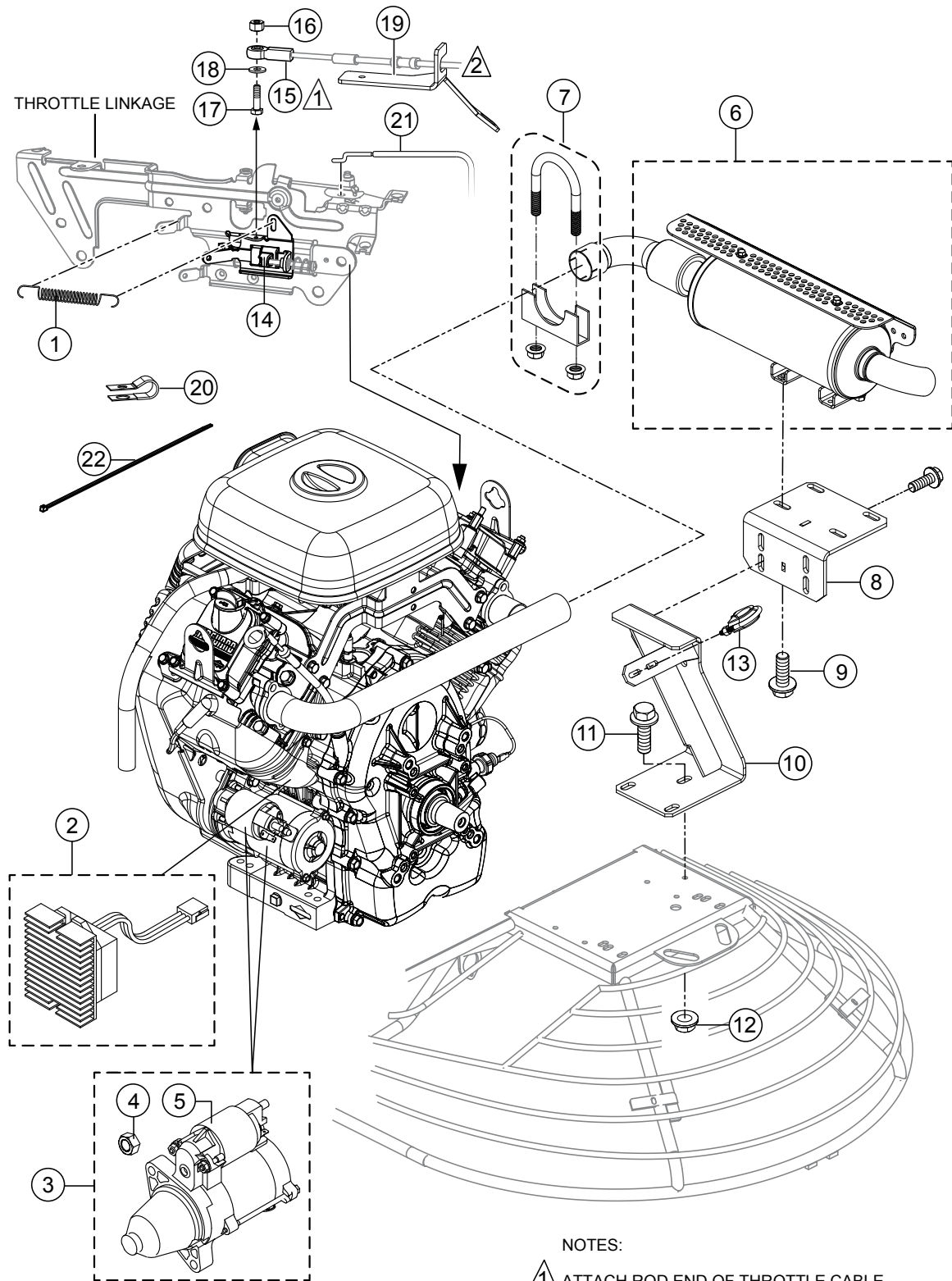
# ENGINE SERVICE PARTS



## ENGINE SERVICE PARTS

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	841846	KNOB, AIR CLEANER (M6).....	1.....	ENG. DATE CODE 14012700 AND BELOW
1	846008	KNOB, AIR CLEANER (M8).....	1.....	ENG. DATE CODE 15021700 AND ABOVE
2	841847	COVER, AIR CLEANER	1	
3	846431	KNOB, AIR CLEANER COVER (M6).....	1.....	REPLACES P/N 844618 ENG. DATE CODE 14012700 AND BELOW
3	846007	KNOB, AIR CLEANER COVER (M8).....	1.....	ENG. DATE CODE 15021700 AND BELOW
4	844932	RETAINER, AIR FILTER .....	1.....	REPLACES P/N 841850
5	692520	FILTER, PRE AIR CLEANER	1	
6	692519	FILTER, AIR CLEANER CARTRIDGE	1	
7	Q16PRU11	SPARK PLUG (RC12YC).....	2.....	REPLACES P/N 491055S
8	841281	SWITCH, OIL PRESSURE	1	
9	842921	FILTER, OIL	1	
10	841501	OIL COOLER	1	
11	23911-S	ENGINE, VANGUARD, 35HP, AIR COOLED	1	

# ENGINE COMPONENTS



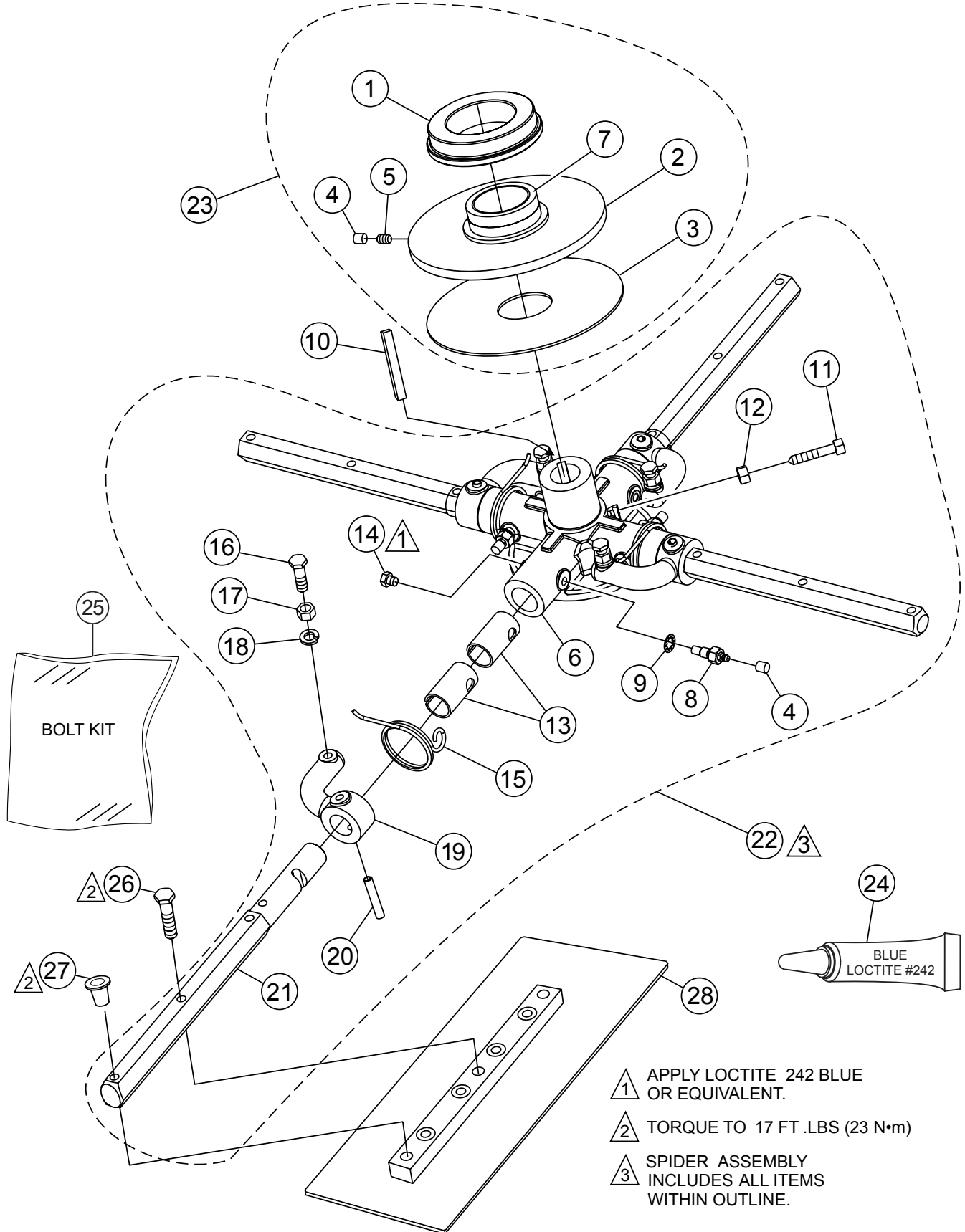
NOTES:

- ① ATTACH ROD END OF THROTTLE CABLE TO LINKAGE.
- ② CONNECT THIS END OF THROTTLE CABLE TO FOOT PEDAL ASSY.

## ENGINE COMPONENTS

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	32528	SPRING, EXT. .380D X 2.0L X .038ZP	1	
2	841170	REGULATOR.....	1	REPLACES P/N 691573
3	845760	STARTER MOTOR .....	1	INCLUDES ITEMS W/@
4@	845758	NUT	1	
5@	825418	SOLENOID-STARTER	1	
6	32560	MUFFLER, REAR MOUNT	1	
7	10855	CLAMP, 1-1/2" MUFFLER	1	
8	32741	MOUNT, MUFFLER-TOP	1	
9	36720	SCREW, HHFS 5/16" X 3/4" GRD 5	8	
10	32739	MOUNT, MUFFLER-BOTTOM	1	
11	32476	SCREW, HHF 3/8"-16 X 1-1/4" GRD 8	1	
12	21781	NUT, HFS 3/8"-16	1	
13	32603	CLAMP, CUSHIONED U-BOLT 1.00" TUBE	1	
14	30083	SLIDER, THROTTLE, B&S 35HP ENGINE	1	
15	2153	ROD END	1	
16	32526	NUT, 10-32 FLEX LOCK-CAD FINISH	1	
17	32527	SCREW, HHC 10-32 X 3/4" SS	1	
18	2203	WASHER, FLAT SAE #10	1	
19	32498	BRACKET, THROTTLE	1	
20	8126	CLAMP, HOSE 1/2" LOOP X .25 HOLE	1	
21	11029	CABLE, CHOKE MECHANICAL RIDER 60"	1	
22	1662	TIE WRAP, 11.02"L 50# UL, BLACK	1	

# SPIDER ASSY. (LEFT)(4-BLADE)

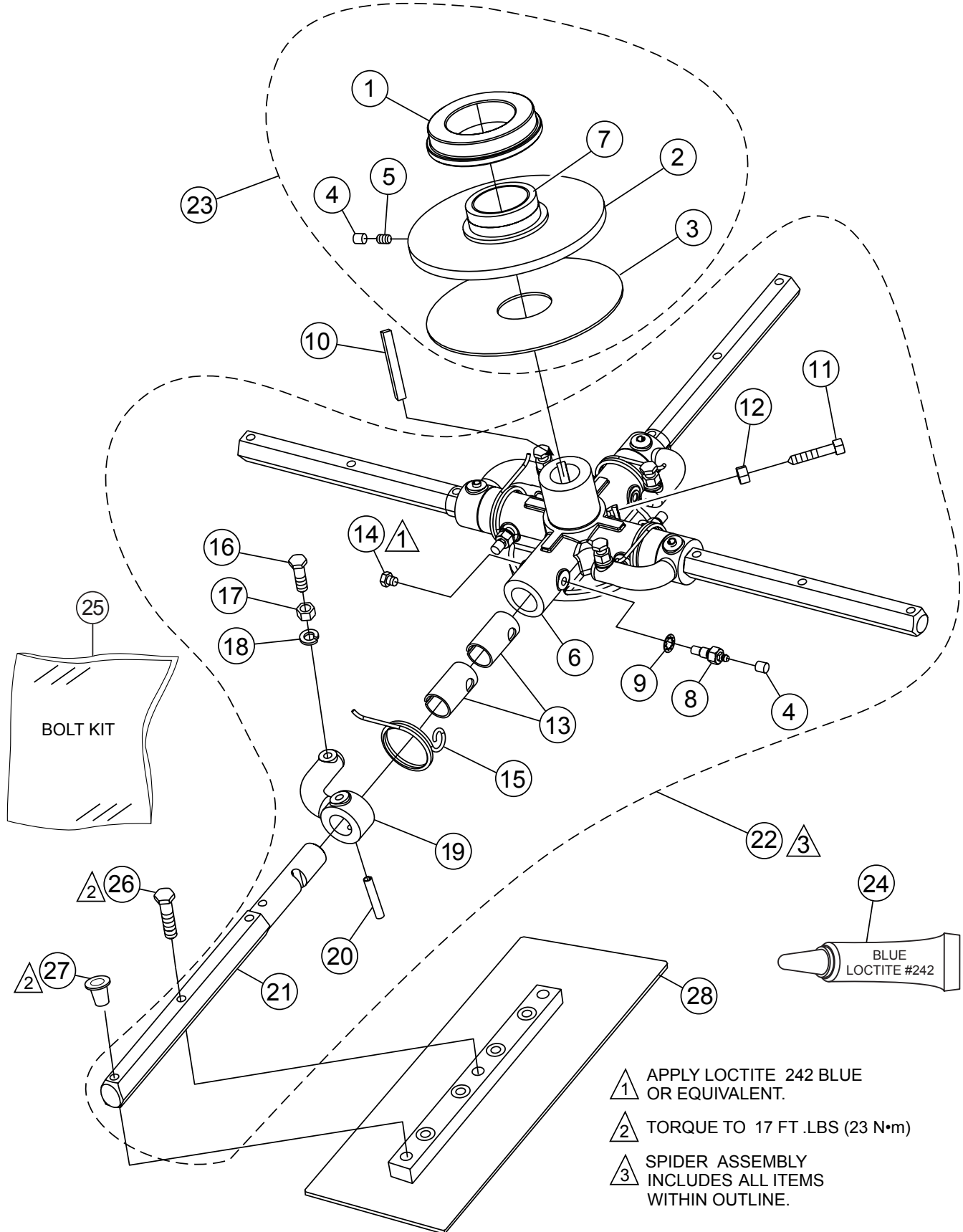


## SPIDER ASSY. (LEFT)(4-BLADE)

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1#	12779	BEARING, THRUST 6017-24S W/FLNG	1	
2#	11431	THRUST COLLAR W/BUSHING .....	1	INCLUDES ITEMS W/\$
3#	11419	PLATE, WEAR	1	
4#@	1162 A	CAP, GREASE ZERK, #2 YELLOW	5	
5#	2621	FITTING, GREASE ZERK STR 1/4"-28	1	
6@	11987X-SK	SPIDER PLATE, SERVICE KIT 4-BLADE MODIFIED	1	
7#\$	12316	BUSHING, THRUST COLLAR W/ HOLE	1	
8@	1322	SCREW, ARM RETAINING	4	
9@	1875	WASHER, INT. SHKP, 3/8"	4	
10	12687	KEY, 3/8" SQ X 2"	1	
11@	12097	SCREW, SQHS 3/8-16 X 1-3/4" CONE GRD 8 PT'D	2	
12@	1456	NUT, HEX FINISH 3/8"-16	2	
13@	11039	BUSHING, TROWEL LARGE ARM	8	
14@	11602	SCREW, HHC 3/8"-16 X 1/4"	4	
15@	11595	SPRING, LS H ARM RETURN LARGE BOSS	4	
16@	0164 B	SCREW, HHC ROUNDED 3/8"-16 SPCL	4	
17@	1876	NUT, HEX JAM 3/8"-16 CLASS 2B	4	
18@	0166 A	WASHER, LOCK, 3/8" MED.	4	
19@	11903-1	LEVER, TROWEL ARM, LEFT SILVER	4	
20@	9006	PIN, ROLL 5/16" X 2" NO PLATE	4	
21@	2829-1	ARM, TROWEL HD EXTENDED, SILVER	4	
22	12934X	SPIDER T/COLLAR ASSY., 4-BLADE, L.S.....	1	INCLUDES ITEMS W/@
23	20938	THRUST COLLAR ASSY.....	1	INCLUDES ITEMS W/#
24	1477	LOCTITE #242, BLUE, .5CC, BOTTLE	AR	
25	23643	KIT, BOLT SAE BLADE.....	1	INCLUDES ITEMS W/%
26%	22174	SCREW, HHFS, 5/16"-18 X 1-3/4" GRD 5	34	
27%	1434	PLUG, BLADE	10	
28		BLADE ASSEMBLY .....	4	CONTACT UNIT SALES DEPARTMENT



# SPIDER ASSY. (RIGHT)(4-BLADE)

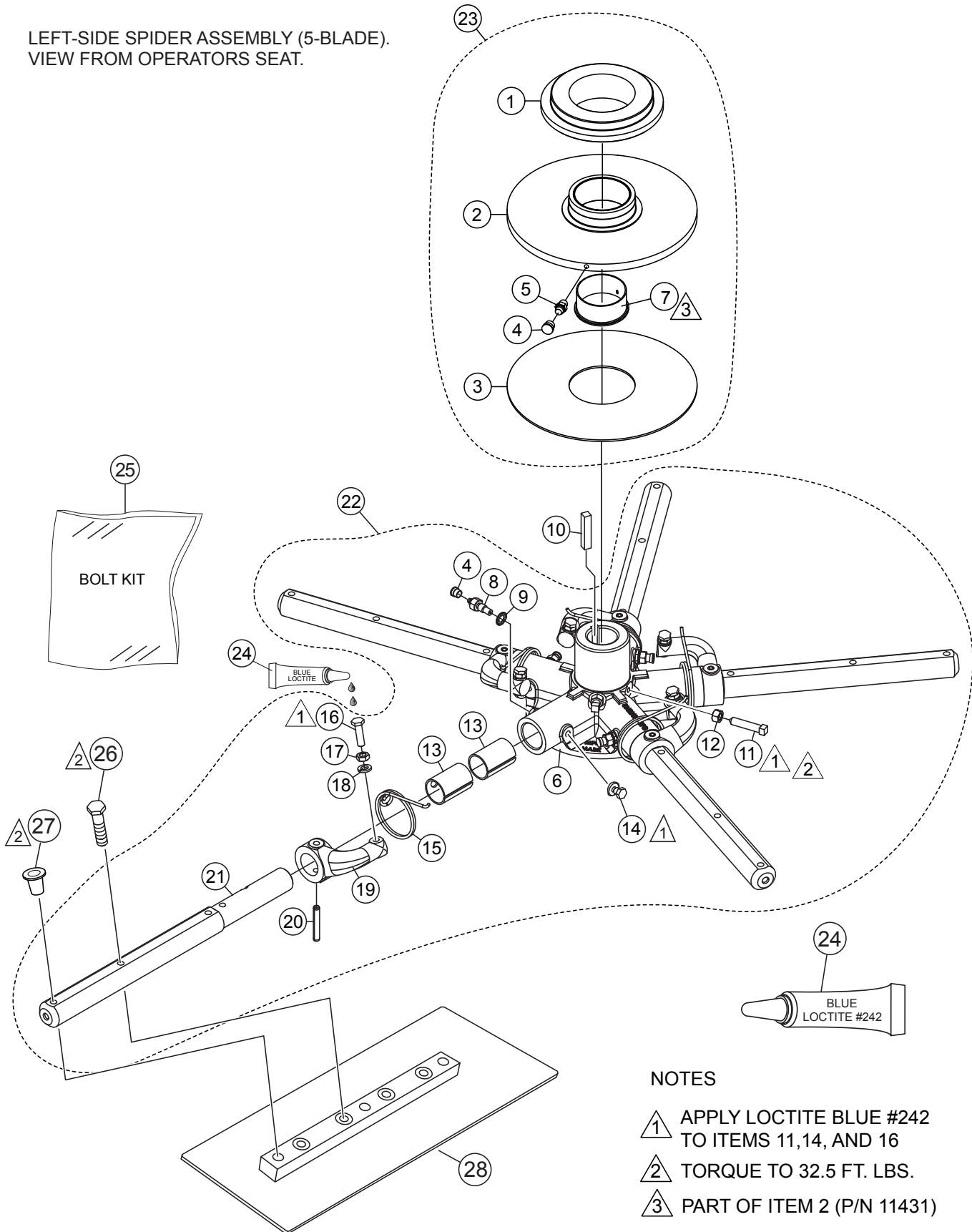


## SPIDER ASSY. (RIGHT)(4-BLADE)

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1#	12779	BEARING, THRUST 6017-24S W/FLNG	1	
2#	11431	THRUST COLLAR W/BUSHING .....	1	INCLUDES ITEMS W/\$
3#	11419	PLATE, WEAR	1	
4#@	1162 A	CAP, GREASE ZERK, #2 YELLOW	5	
5#	2621	FITTING, GREASE ZERK STR 1/4"-28	1	
6@	11987X-SK	SPIDER PLATE, SERVICE KIT 4-BLADE MODIFIED	1	
7#\$	12316	BUSHING, THRUST COLLAR W/ HOLE	1	
8@	1322	SCREW, ARM RETAINING	4	
9@	1875	WASHER, INT. SHKP, 3/8"	4	
10	12687	KEY, 3/8" SQ X 2"	1	
11@	12097	SCREW, SQHS 3/8"-16 X 1-3/4" CONE GRD 8 PT'D	2	
12@	1456	NUT, HEX FINISH 3/8"-16	2	
13@	11039	BUSHING, TROWEL LARGE ARM	8	
14@	11602	SCREW, HHC 3/8"-16 X 1/4"	4	
15@	11594	SPRING, RS H ARM RETURN LARGE BOSS	4	
16@	0164 B	SCREW, HHC ROUNDED 3/8"-16 SPCL	4	
17@	1876	NUT, HEX JAM 3/8"-16 CLASS 2B	4	
18@	0166 A	WASHER, LOCK, 3/8" MED.	4	
19@	11904-1	LEVER, TROWEL ARM, RIGHT SILVER	4	
20@	9006	PIN, ROLL 5/16" X 2" NO PLATE	4	
21@	2829-1	ARM, TROWEL HD EXTENDED, SILVER	4	
22	12935X	SPIDER T/COLLAR ASSY., 4-BLADE, R.S .....	1	INCLUDES ITEMS W/@
23	20938	THRUST COLLAR ASSY. ....	1	INCLUDES ITEMS W/#
24	1477	LOCTITE, #242 BLUE	AR	
25	23643	KIT, BOLT SAE BLADE.....	1	INCLUDES ITEMS W/%
26%	22174	SCREW, HHFS, 5/16"-18 X 1-3/4" GRD 5	34	
27%	1434	PLUG, BLADE	10	
28		BLADE ASSEMBLY .....	4	CONTACT UNIT SALES DEPARTMENT

# SPIDER ASSY. (LEFT)(5-BLADE)

LEFT-SIDE SPIDER ASSEMBLY (5-BLADE).  
VIEW FROM OPERATORS SEAT.



## NOTES

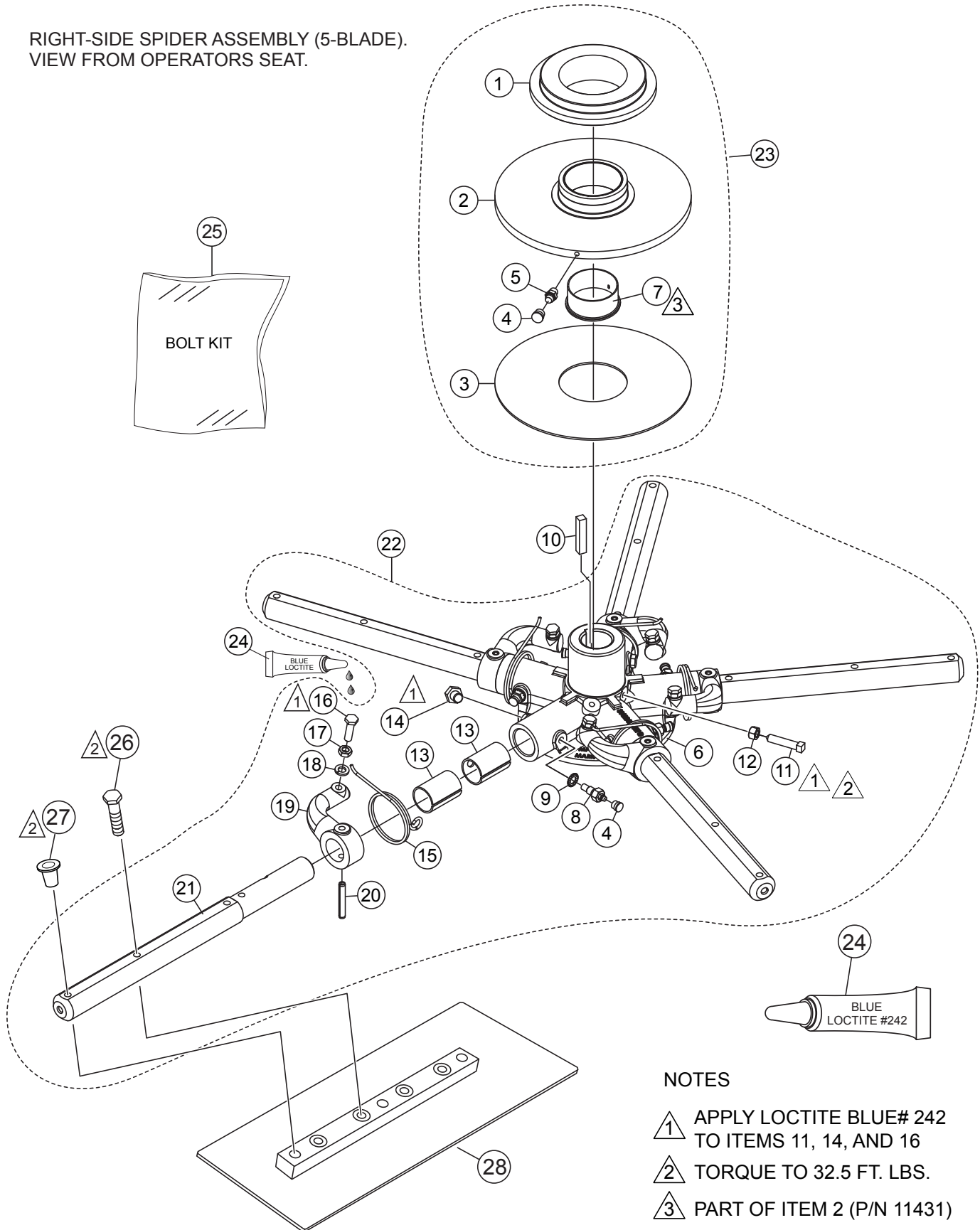
- ① APPLY LOCTITE BLUE #242 TO ITEMS 11, 14, AND 16
- ② TORQUE TO 32.5 FT. LBS.
- ③ PART OF ITEM 2 (P/N 11431)

## SPIDER ASSY. (LEFT)(5-BLADE)

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1#	12779	BEARING, THRUST 6017-24S W/FLNG	1	
2#	11431	THRUST COLLAR W/BUSHING .....	1	INCLUDES ITEMS W/\$
3#	11419	PLATE, WEAR	1	
4#@	1162 A	CAP, GREASE ZERK, #2 YELLOW	6	
5#	2621	FITTING, GREASE ZERK STR 1/4"-28	1	
6@	21208	SPIDER KIT, 5-BLADE SERVICE KIT	1	
7#\$	12316	BUSHING, THRUST COLLAR W/ HOLE	1	
8@	A5978	SCREW, ARM RETAINING	5	
9@	1875	WASHER, INT. SHKP, 3/8"	5	
10	12687	KEY, 3/8" SQ X 2"	1	
11@	12097	SCREW, SQHS 3/8"-16 X 1-3/4" CONE GRD 8 PT'D	2	
12@	1456	NUT, HEX FINISH 3/8"-16	2	
13@	11039	BUSHING, TROWEL LARGE ARM	10	
14@	11602	SCREW, HHC 3/8"-16 X 1/4"	5	
15@	9111	SPRING, LS H ARM RETURN STD BOSS	5	
16@	0164 B	SCREW, HHC ROUNDED 3/8"-16 SPCL	5	
17@	1876	NUT, HEX JAM 3/8"-16 CLASS 2B	5	
18@	0166 A	WASHER, LOCK, 3/8" MED.	5	
19@	11903-1	LEVER , TROWEL ARM, LEFT SILVER	5	
20@	9006	PIN, ROLL 5/16" X 2" NO PLATE	5	
21@	2829-1	ARM, TROWEL HD EXTENDED, SILVER	5	
22	12932	SPIDER ASSY. 5-BLADE L.S. 1-1/2" .....	1	INCLUDES ITEMS W/@
23	20938	THRUST COLLAR ASSY. ....	1	INCLUDES ITEMS W/#
24	1477	LOCTITE #242, BLUE, .5CC BOTTLE	AR	
25	23643	KIT, BOLT SAE BLADE.....	1	INCLUDES ITEMS W/%
26%	22174	SCREW, HHFS, 5/16"-18 X 1-3/4" GRD 5	34	
27%	1434	PLUG, BLADE	10	
28		BLADE ASSEMBLY .....	5	CONTACT UNIT SALES DEPARTMENT

# SPIDER ASSY. (RIGHT)(5-BLADE)

RIGHT-SIDE SPIDER ASSEMBLY (5-BLADE).  
VIEW FROM OPERATORS SEAT.



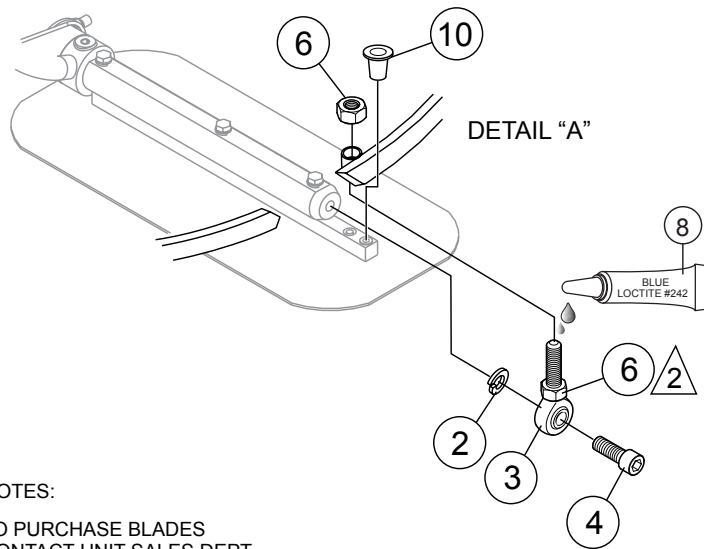
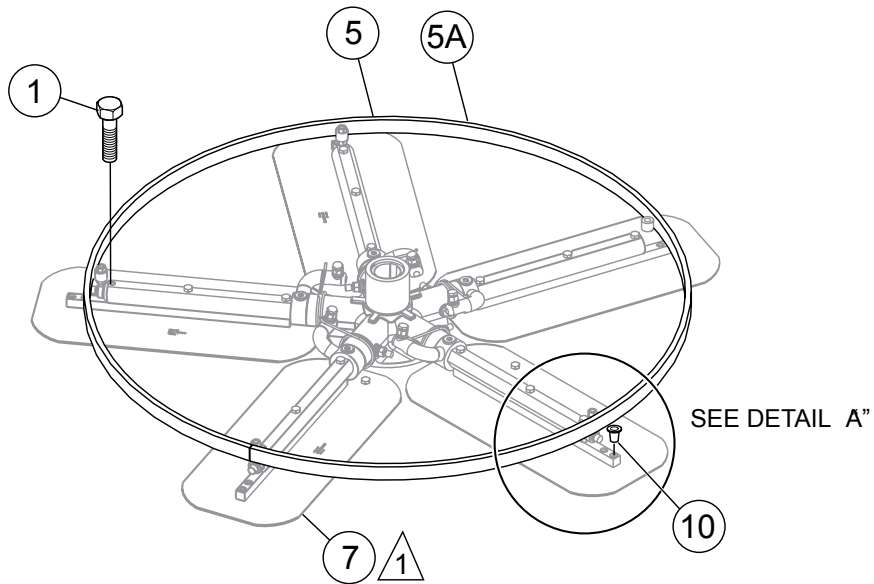
## NOTES

- ① APPLY LOCTITE BLUE# 242 TO ITEMS 11, 14, AND 16
- ② TORQUE TO 32.5 FT. LBS.
- ③ PART OF ITEM 2 (P/N 11431)

## SPIDER ASSY. (RIGHT)(5-BLADE)

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1#	12779	BEARING, THRUST 6017-24S W/FLNG	1	
2#	11431	THRUST COLLAR W/BUSHING .....	1	INCLUDES ITEMS W/\$
3#	11419	PLATE, WEAR	1	
4#@	1162 A	CAP, GREASE ZERK, #2 YELLOW	6	
5#	2621	FITTING, GREASE ZERK STR 1/4"-28	1	
6@	21208	SPIDER KIT, 5-BLADE, SERVICE KIT	1	
7#\$	12316	BUSHING, THRUST COLLAR W/ HOLE	1	
8@	A5978	SCREW, ARM RETAINING	5	
9@	1875	WASHER, INT. SHKP, 3/8"	5	
10	12687	KEY, 3/8" SQ X 2"	1	
11@	12097	SCREW, SQHS 3/8"-16 X 1-3/4" CONE GRD 8 PT'D	2	
12@	1456	NUT, HEX FINISH 3/8"-16	2	
13@	11039	BUSHING, TROWEL LARGE ARM	10	
14@	11602	SCREW, HHC 3/8"-16 X 1/4"	5	
15@	11594	SPRING, RS H ARM RETURN STD BOSS	5	
16@	0164 B	SCREW, HHC ROUNDED 3/8"-16 SPCL	5	
17@	1876	NUT, HEX JAM 3/8"-16 CLASS 2B	5	
18@	0166 A	WASHER, LOCK, 3/8" MED.	5	
19@	11904-1	LEVER, TROWEL ARM, RIGHT SILVER	5	
20@	9006	PIN, ROLL 5/16" X 2" NO PLATE	5	
21@	2829-1	ARM, TROWEL HD EXTENDED, SILVER	5	
22	12933	SPIDER ASSY. 5-BLADE R.S. 1-1/2" .....	1	INCLUDES ITEMS W/@
23	20938	THRUST COLLAR ASSY. ....	1	INCLUDES ITEMS W/#
24	1477	LOCTITE, #242 BLUE, .5CC, BOTTLE	AR	
25	23643	KIT, BOLT SAE BLADE.....	1	INCLUDES ITEMS W/%
26%	22174	SCREW, HHFS, 5/16"-18 X 1-3/4" GRD 5	34	
27%	1434	PLUG, BLADE	10	
28		BLADE ASSEMBLY .....	5	CONTACT UNIT SALES DEPARTMENT

# STABILIZER RING ASSY.



NOTES:

- 1 TO PURCHASE BLADES  
CONTACT UNIT SALES DEPT.
- 2 APPLY BLUE LOCTITE #242 X 10

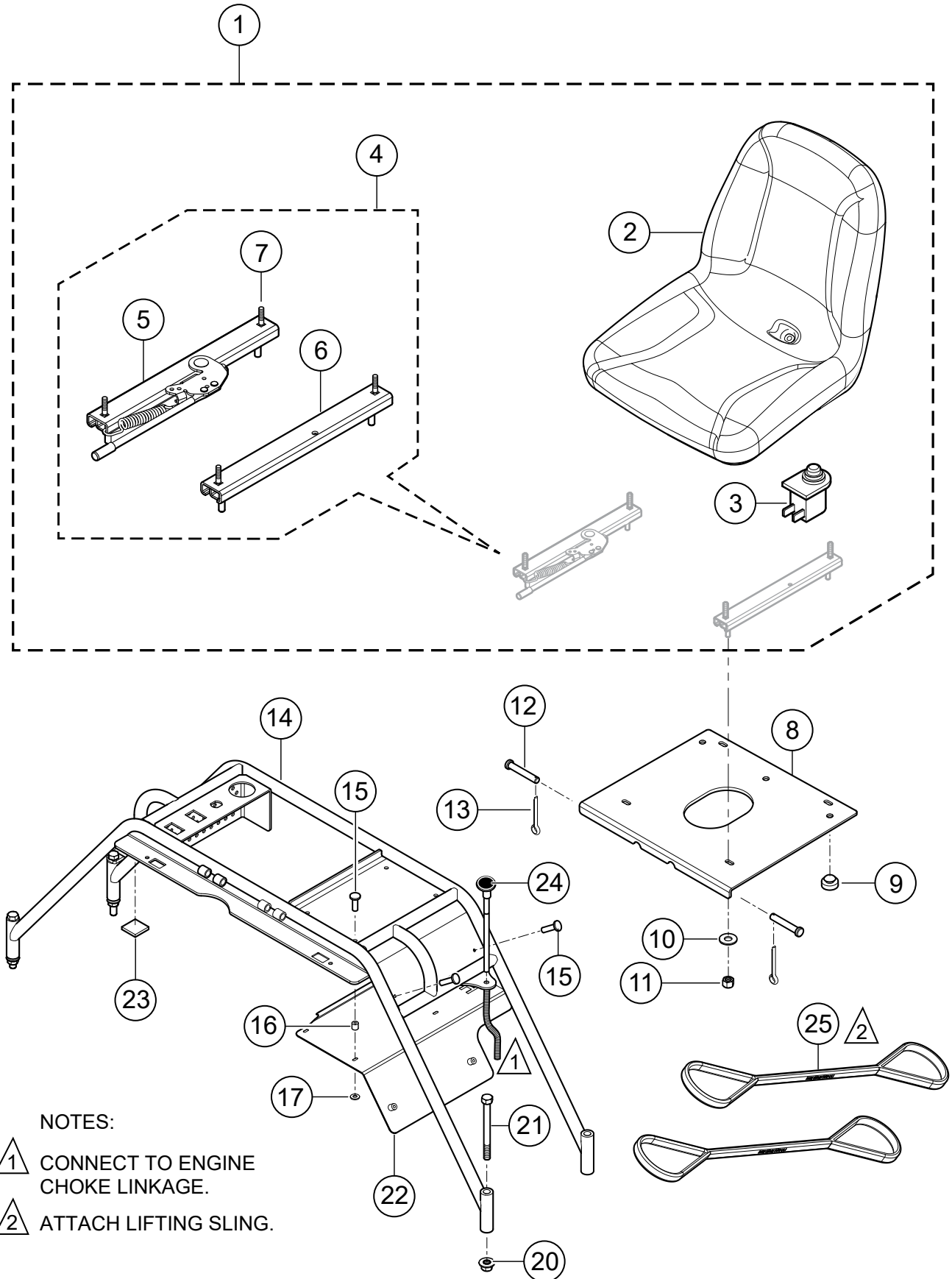
## STABILIZER RING ASSY.

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<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	22174	SCREW, HHFS 5/16"-18 X 1-3/4" GRD 5	30	
2	0161 C	LOCK WASHER, FLAT SAE 5/16" MED.	10	
3	1723	ROD END 5/16"-24 MALE RH	10	
4	1237	SCREW, SHC 5/16"-18 X 7/8" NYLOC	10	
5	12095	RING, STABILIZER.....	2.....	5-BLADE ONLY
5A	9148	RING, STABILIZER, EXT ARM.....	2.....	4-BLADE ONLY
6	6014 C	NUT, HEX FINISH 5/16"-24	20	
7		BLADE ASSEMBLY .....	10.....	CONTACT UNIT SALES DEPARTMENT
8	1477	LOCTITE, BLUE #242, BLUE, .5CC BOTTLE	AR	
10	1434	PLUG, BLADE	10	



# SEAT AND FRAME ASSY.



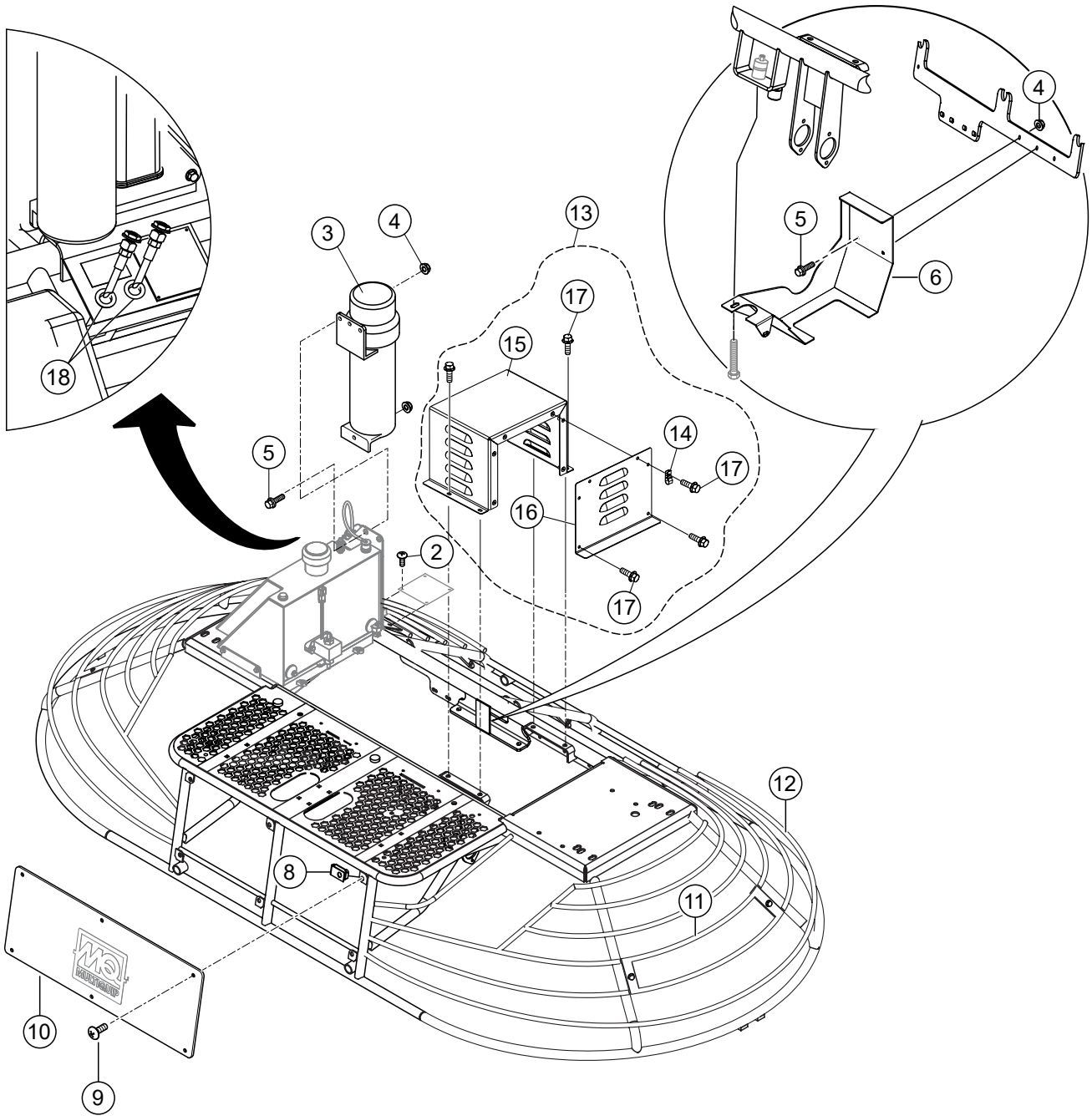
**NOTES:**

- 1 CONNECT TO ENGINE CHOKE LINKAGE.
- 2 ATTACH LIFTING SLING.

## SEAT AND FRAME ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	21861	SEAT, MICHIGAN ADJUSTABLE W/O ARMS .....	1.....	INCLUDES ITEMS W/@
2@	21860	SEAT, MICHIGAN, BASIC	1	
3@	21870	SWITCH, KILL	1	
4@	21865	SEAT ADJUSTER KIT.....	1.....	INCLUDES ITEMS W/%
5@%	21864	SEAT ADJUSTER, RH	1	
6@%	21863	SEAT ADJUSTER, LH	1	
7@%	0400 B	SCREW, HHC 5/16"-18 X 1/2"	4	
8	11472	SEAT PLATE	1	
9	21597	BUMPER, STEM 1.0"D X .5S X .31	3	
10	0300 B	WASHER, FLAT SAE 5/16"	4	
11	5283	NUT, NYLOC 5/16"-18	4	
12	8081	PIN, CLEVIS 1/2" X 2-3/4"	2	
13	0183	PIN, COTTER 1/8"D X 1-1/4"	2	
14	23932	FRAME, SEAT	1	
15	30059	RIVET, POP BH .187 X .626-.750 AL/AL	6	
16	30048	SPACER, .50 OD X .206 ID	6	
17	29342	WASHER, 3/16" POP-RIVET BACKUP SS	6	
20	26328	NUT, FLANGED 1/2"-13 SERRATED PLTD	2	
21	913222	SCREW, HHC 1/2"-13 X 4-3/4"	2	
22	30046	HEAT SHIELD, SS, SEAT FRAME	1	
23	23976	MOUNTING BASE, ADHESIVE TIE WRAP	1	
24	11029	CABLE, CHOKE 60"	1	
25	23165	SLING, LIFTING	2	

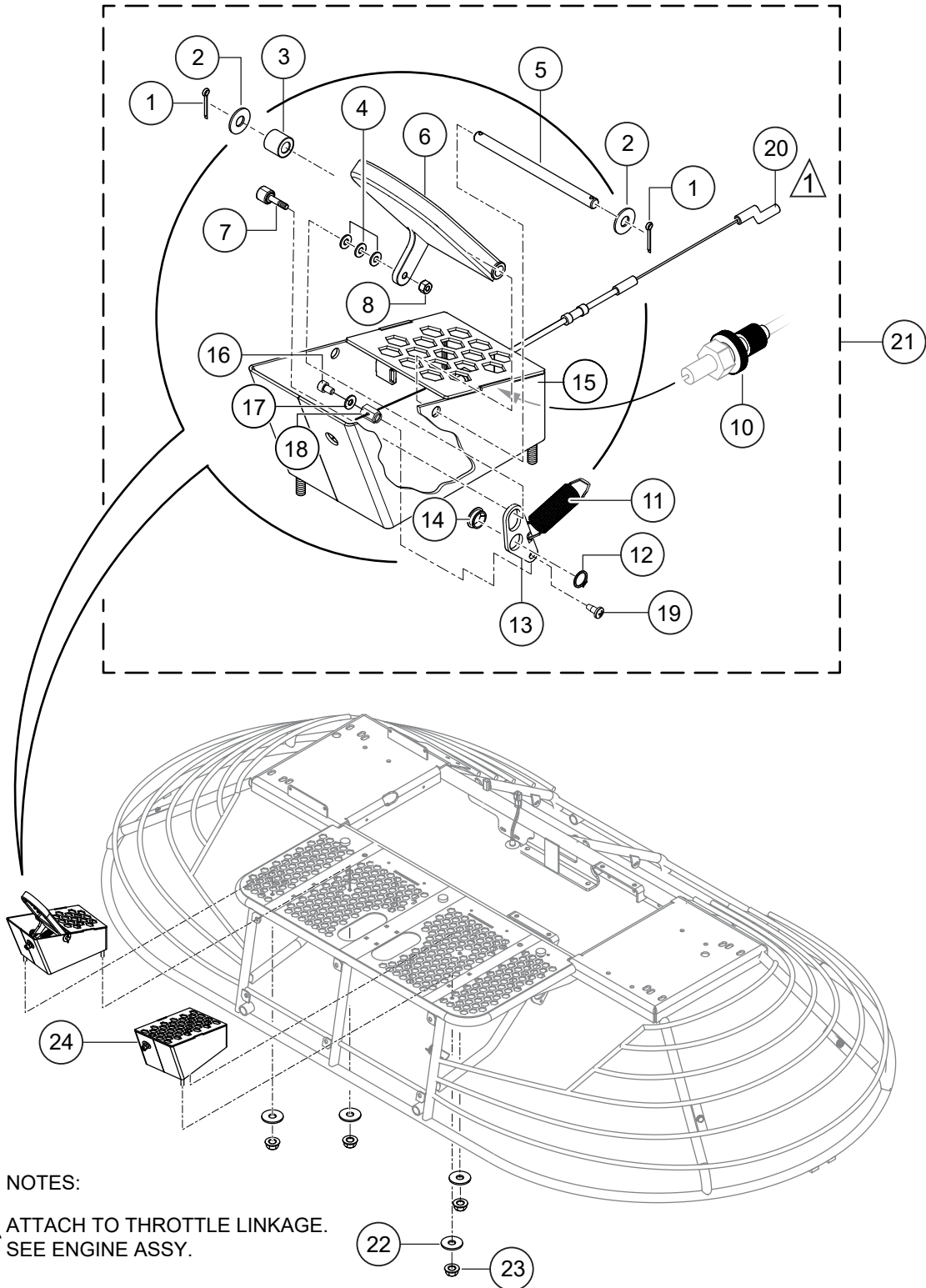
# FRAME AND COMPONENTS ASSY.



## FRAME AND COMPONENTS ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
2	4014	SCREW, 2-3/16" P-K TYPE U-DRIVE	4	
3	23297	MANUAL HOLDER	1	
4	49070	NUT, FLANGED 1/4"-20 SERRATED PLTD	5	
5	49048	SCREW, HHFS 1/4"-20 X 3/4" GRD 5	5	
6	20956	PAN, SPLASH LOWER	1	
8	11534	NUT, "U" TYPE, 1/4"-20	6	
9	12287	SCREW, THP 1/4"-20 X 3/4" SS	6	
10	20946	PANEL, FRONT BODY	1	
11	23894	COVER SET, BLADE ACCESS	1	
12	23910	FRAME, MAIN	1	
13	23888	GUARD ASSY. ....	1	INCLUDES ITEMS W/@
14@	8126	CLAMP, HOSE 1/2"	1	
15@	23937	GUARD RIVNUT ASSY., CLUTCH	1	
16@	23938	COVER, CLUTCH GUARD	1	
17@	49048	SCREW, HHFS 1/4"-20 X 3/4" GRD 5	10	
18	23943	TUBING, REMOTE GREASE LINE, W/ FITTINGS	2	

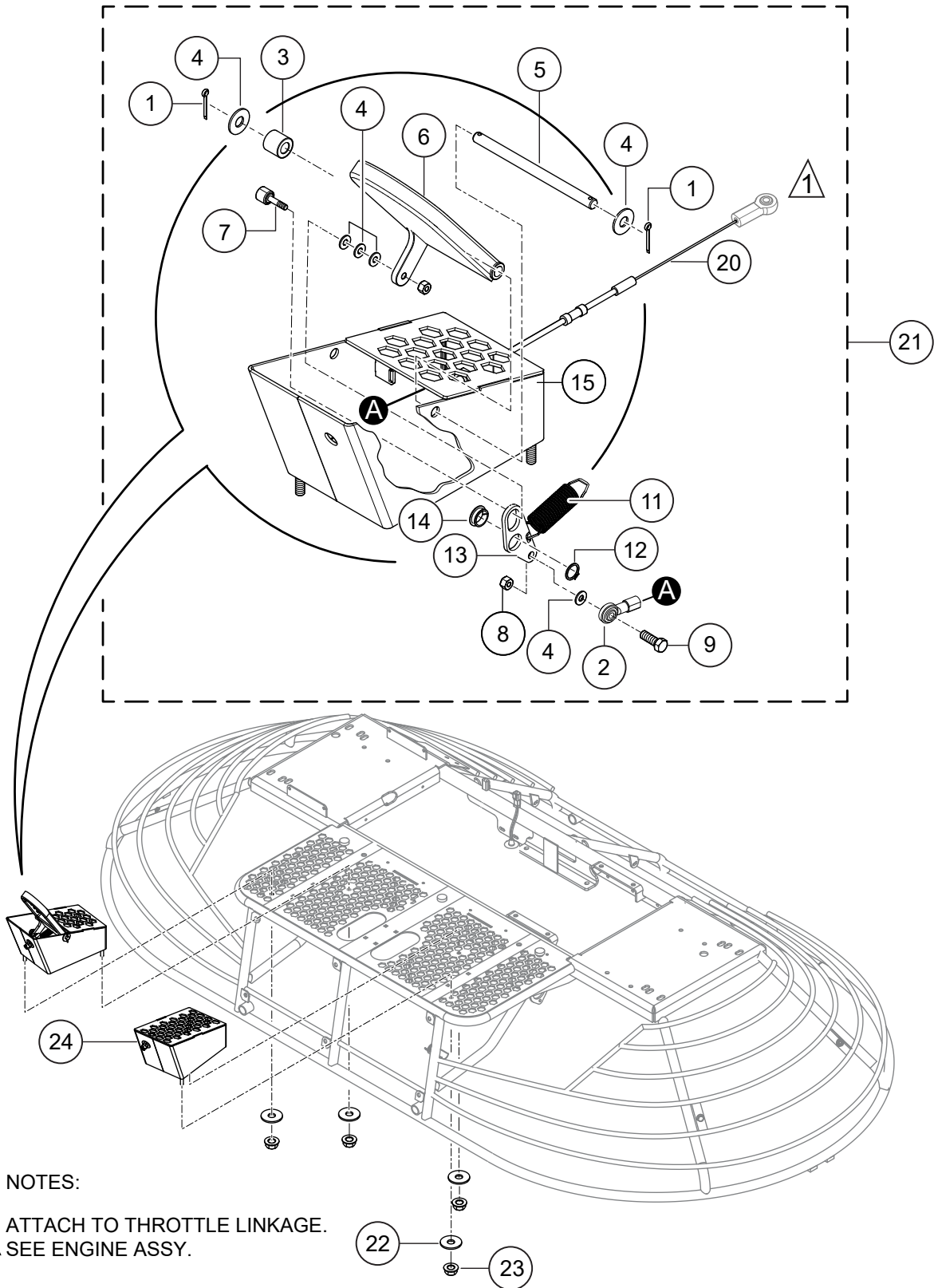
# THROTTLE ASSY. (OLD STYLE)



## THROTTLE ASSY. (OLD STYLE)

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1@	6014 B	PIN, COTTER 3/32" DIA. X 1.00"	2	
2@	10136	WASHER, FLAT SAE 3/8"	2	
3@	23596	SPACER, PEDAL	1	
4@	2203	WASHER, FLAT, #10	3	
5@	2772	PIN, ACCELERATOR PEDAL	1	
6@	23591	PEDAL, ACCELERATOR	1	
7@	460018	CAM ROLLER	1	
8@	10019	NUT, NYLOC 10-32	1	
10@	21824	ADJUSTER W/ THUMB WHEEL	1	
11@	37527	SPRING, EXT. .625 OD X 2.5L X .053 M WIRE	1	
12@	1737	SNAP RING, EXTERNAL, 1/2" DIA.	1	
13@	23473	LINKAGE, ACCELERATOR PEDAL	1	
14@	38368	BUSHING, SPLIT FLANGED, 1/2" ID.	1	
15@	23592	FOOT RISER W/A, ACCELERATOR SIDE	1	
16@	30086	SCREW, HHC 10-32 X 3/8" SS	1	
17@	2203	WASHER, FLAT SAE #10	6	
18@	30082	STAND-OFF, THROTTLE CABLE	1	
19@	4788	SCREW, SHC 10-32 X 3/8" SS	1	
20@	23970	CABLE, THROTTLE	1	
21	23896	ACCELERATOR PEDAL, ASSY.....	1	INCLUDES ITEMS W/@
22	933213	WASHER, FENDER 5/16" X 1" ZINC	4	
23	49071	NUT, FLANGED 5/16"-18 SERRATED PLTD	4	
24	23568	FOOT RISER, LEFT SIDE	1	

# THROTTLE ASSY. (NEW STYLE)



NOTES:

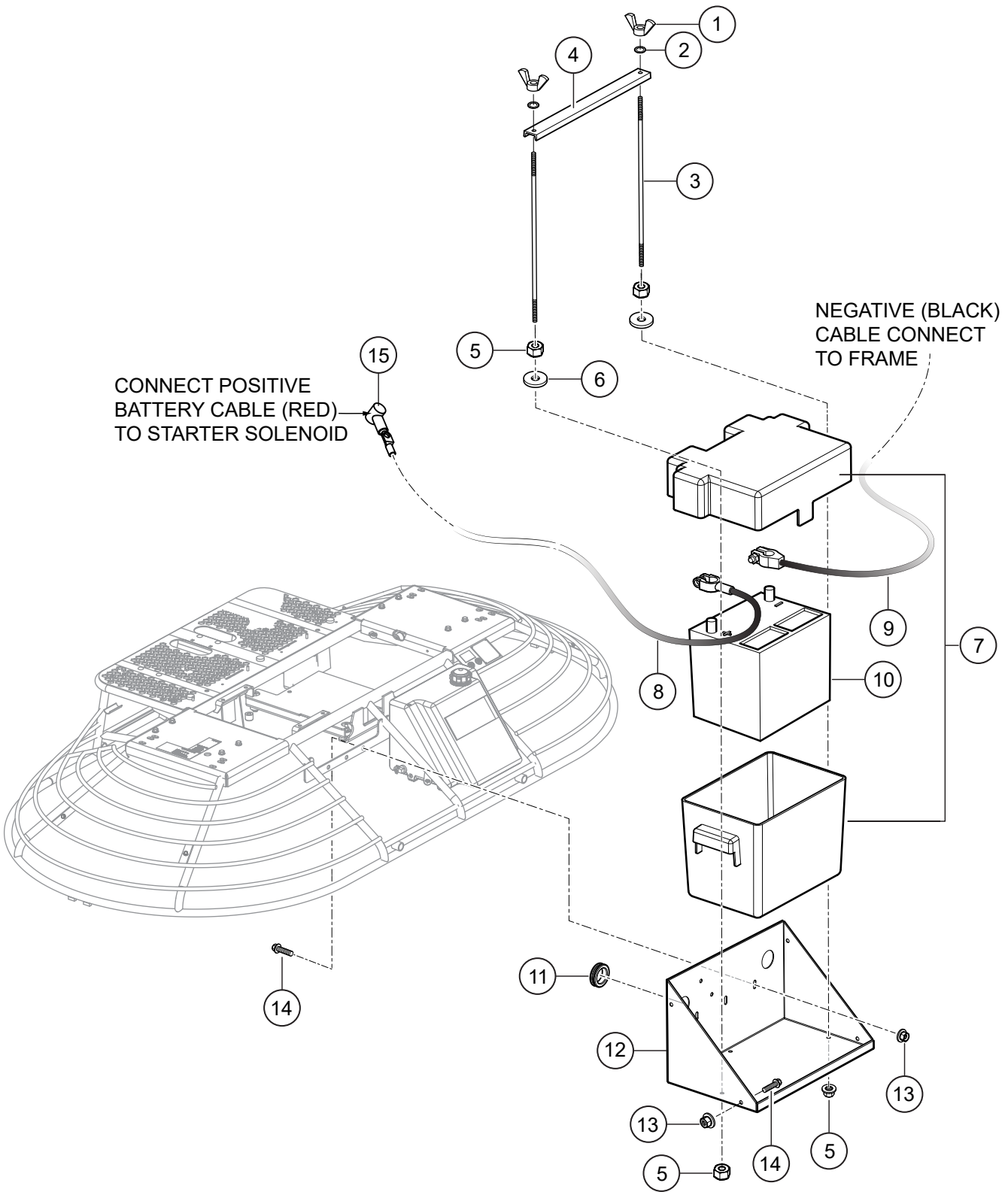
⚠ ATTACH TO THROTTLE LINKAGE.  
SEE ENGINE ASSY.

## THROTTLE ASSY. (NEW STYLE)

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1@	6014 B	PIN, COTTER 3/32" DIA. X 1.00"	2	
2@	2153	ROD END	1	
3@	23596	SPACER, PEDAL	1	
4@	2203	WASHER, FLAT SAE #10	8	
5@	2772	PIN, ACCELERATOR PEDAL	1	
6@	23591	PEDAL, ACCELERATOR	1	
7@	460018	CAM ROLLER	1	
8@	32526	NUT, 10-32 FLEX LOCK	2	
9@	32527	SCREW, HHC 10-32 X 3/4" SS	1	
11@	32512	SPRING, EXT., 0.625" OD X 2.25" L X 0.64Z	1	
12@	1737	SNAP RING, EXTERNAL, 1/2" DIA.	1	
13@	23473	LINKAGE, ACCELERATOR PEDAL	1	
14@	38368	BUSHING, SPLIT FLANGED, 1/2" ID.	1	
15@	32552	FOOT RISER, ACCELERATOR SIDE	1	
20@	32510	CABLE, PUSH/PULL THROTTLE, 60"	1	
21	23896	ACCELERATOR PEDAL, ASSY.....	1	INCLUDES ITEMS W/@
22	933213	WASHER, FENDER 5/16" X 1" ZINC	4	
23	49071	NUT, FLANGED 5/16"-18 SERRATED PLTD	4	
24	23568	FOOT RISER, LEFT SIDE	1	



# BATTERY ASSY.

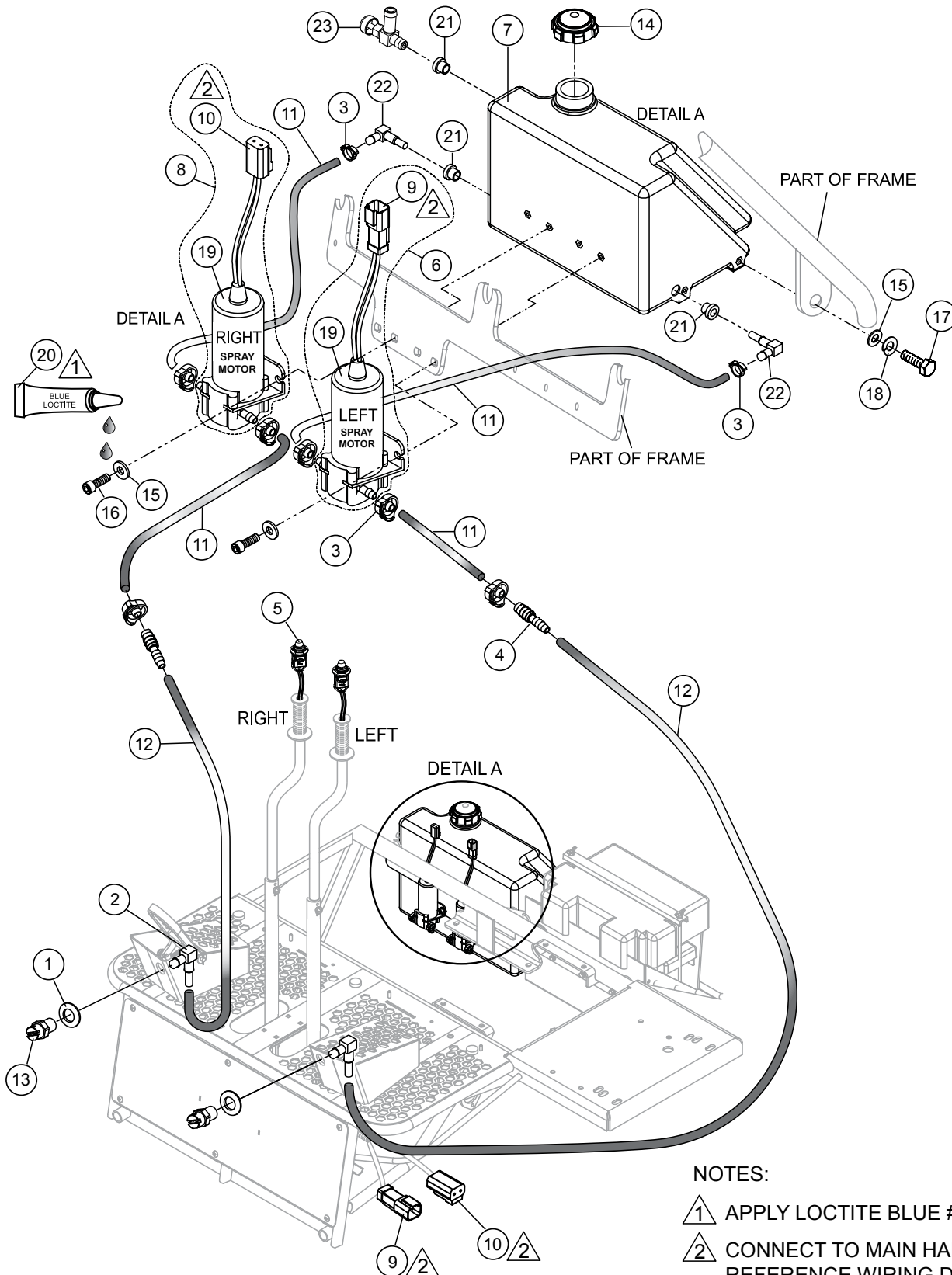


## BATTERY ASSY.

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<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	2509	NUT, WING 1/4"-20 PLATED	2	
2	10031	WASHER, EXT. SHKP, 1/4"	2	
3	11693	BOLT, BATTERY BRACKET	2	
4	11692	BRACKET, BATTERY BOX HOLD DOWN	1	
5	10024	NUT, NYLOC 1/4"-20	4	
6	0948	WASHER, FLAT SAE 1/4"	8	
7	10318	BATTERY BOX, GROUP 24	1	
8	19303	CABLE, BATTERY POS 4 GA X 48" POST	1	
9	10313	CABLE, BATTERY NEG 6 GA X 20" POST	1	
10	10315	BATTERY, WET 12V GR22	1	
11	13212	GROMMET, 1-1/4" ID.	1	
12	11362	BATTERY BOX	1	
13	49070	NUT, FLANGED 1/4"-20 SERRATED PLTD	5	
14	49048	SCREW, HHFS 1/4"-20 X 3/4" GRD 5	5	
15	2762	BOOT, TERMINAL	1	

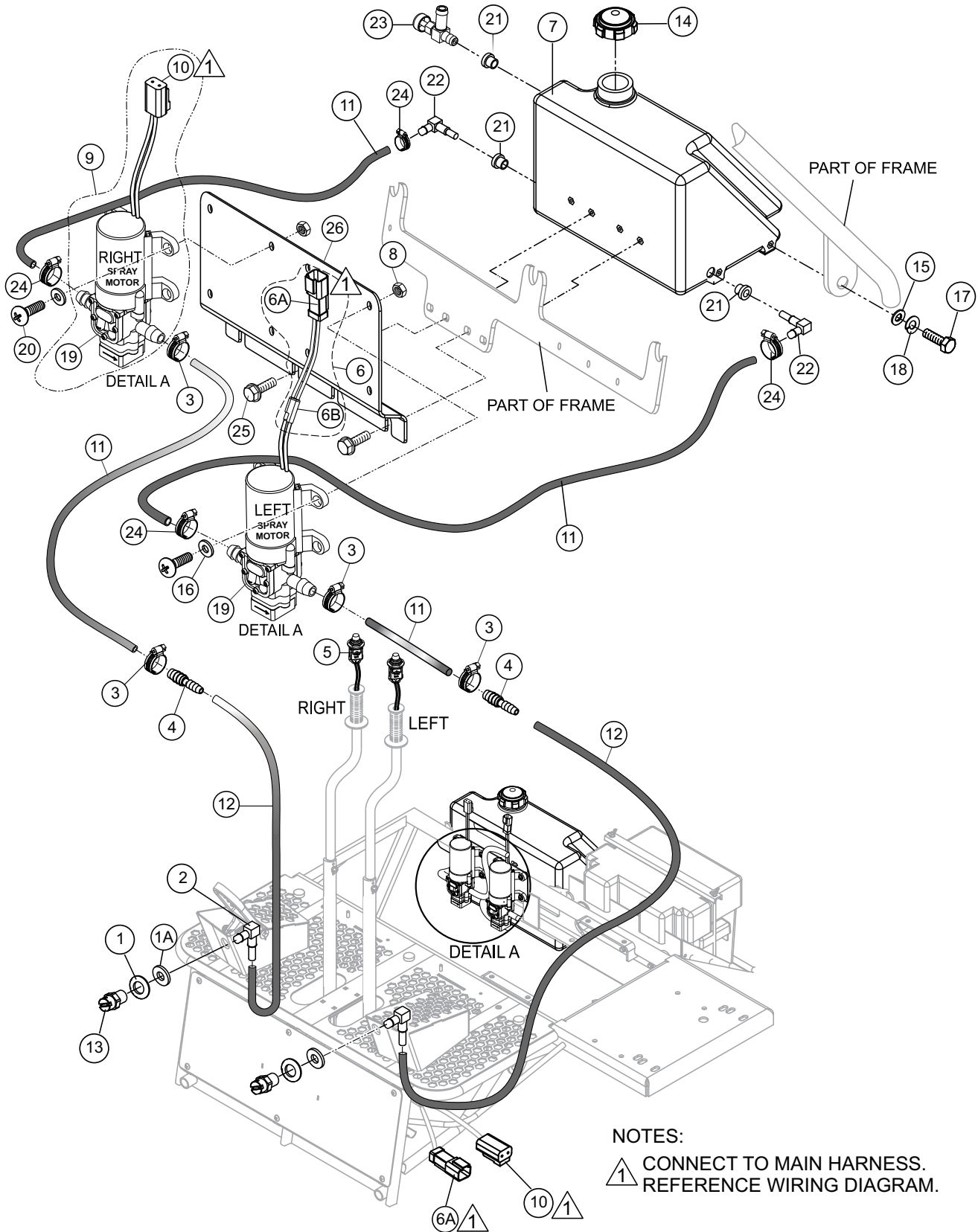
# SPRAY ASSY. (OLD STYLE)



## SPRAY ASSY. (OLD STYLE)

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	2898	WASHER, BONDED NEOPRENE 1 X 1/2"	2	
2	2912	FITTING, 90° 4BARB – 1/4" FP	2	
3	2918	CLAMP, HOSE, 475 - 536 ID.	6	
4	10022	FITTING, PLASTIC 6BARB-4BARB	2	
5	11430	SWITCH ASSY.	2	
6	23434	PUMP, MALE CONNECTOR .....	2	INCLUDES ITEMS W/@
7	12403	RETARDANT TANK 5 GALLON	1	
8	23971	PUMP, FEMALE CONNECTOR.....	1	INCLUDES ITEMS W/\$
9@	37402	CONNECTOR KIT, MALE	2	
10\$	37403	CONNECTOR KIT, FEMALE	2	
11	60002	HOSE, PVC CLEAR .375 ID. X .5 OD.....	8	1PC=1FT
12	60001	HOSE, .375 OD. X .25 ID. CLEAR PVC .....	9	1PC=1FT
13	392292	NOZZLE, SPRAY	2	
14	2108	CAP, SPRAY TANK	1	
15	0948	WASHER, FLAT SAE 1/4"	8	
16	923203	SCREW, SHC 1/4"-20 X 3/4"	4	
17	0131 A	SCREW, HHC 1/4"-20 X 3/4"	2	
18	0181 B	WASHER, LOCK 1/4" MED.	2	
19\$@	12548	PUMP, SPRAY	2	
20	1477	LOCTITE #242, BLUE, .5CC, BOTTLE	1	
21	19633	BUSHING, RUBBER FUEL	3	
22	29677	FITTING, 90°	2	
23	19661	VALVE, SHUTOFF	1	

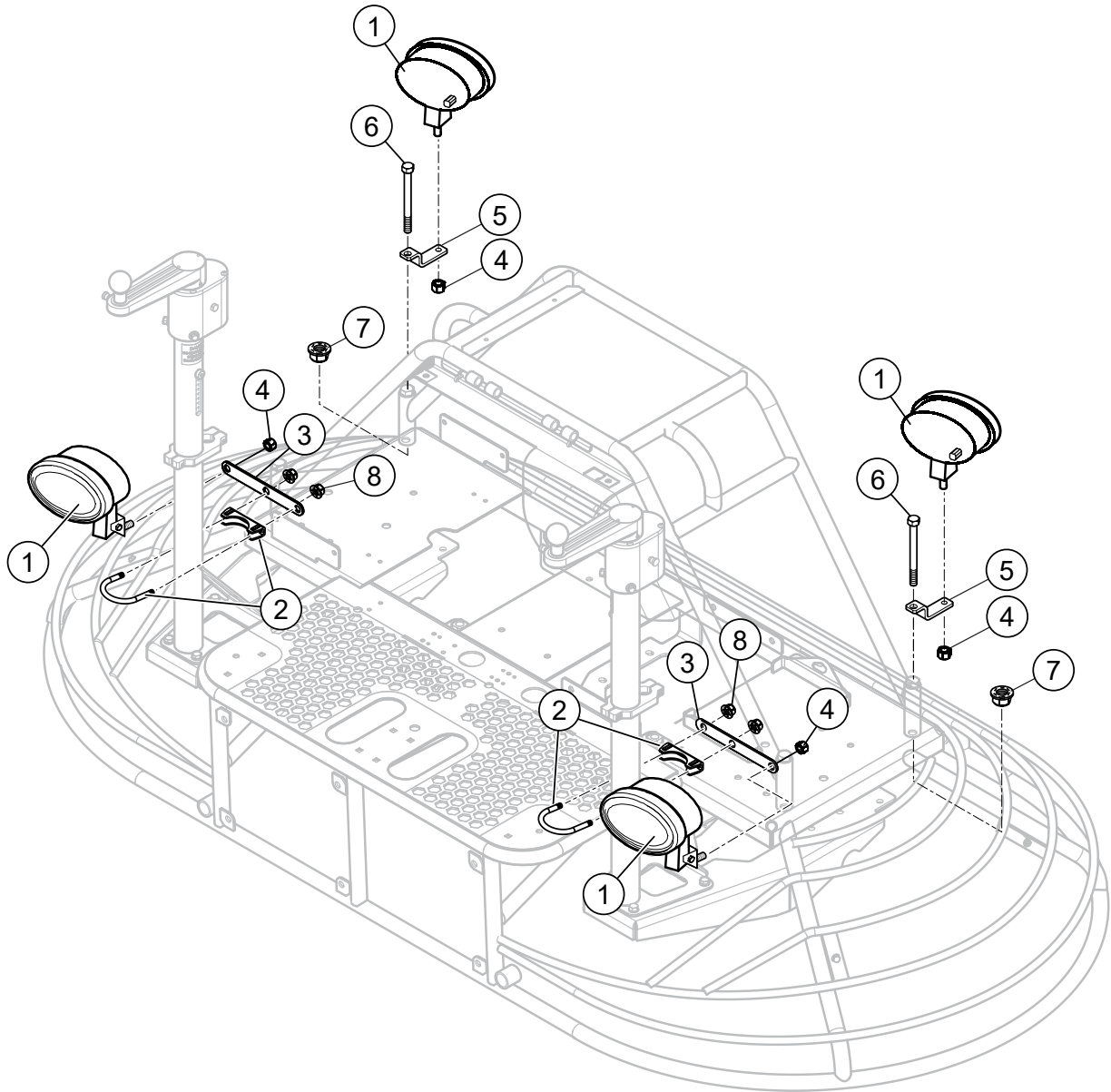
# SPRAY ASSY. (NEW STYLE)



## SPRAY ASSY. (NEW STYLE)

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	2898	WASHER, BONDED NEOPRENE 1 X 1/2"	2	
1A	0447	WASHER, FLAT 1/2" SAE	2	
2	2912	FITTING, 90° 4BARB – 1/4" FP	2	
3	19473	CLAMP, HOSE WORM #2, 1/4 TO 5/8"	6	
4	10022	FITTING, PLASTIC 6BARB-4BARB	2	
5	30568	SWITCH ASSY.	2	
6	30548	HARNESS, PUMP ADAPTER RECEPTACLE	1	INCLUDES ITEMS W/#
6A#	37402	CONNECTOR KIT, MALE 2 POSITION	1	
6B#	30541	CONNECTOR, MOLDED 2-POLE MALE	1	
7	12403	RETARDANT TANK 5 GALLON	1	
8	10019	NUT, NYLOC 10-32	8	
9	30547	PUMP ASSY., RIGHT-SIDE	1	INCLUDES ITEMS W/\$
10\$	37403	CONNECTOR KIT, FEMALE, DT06-2S	2	
11	60002	HOSE, PVC CLEAR .375 ID. X .5 OD.	8	1PC=1FT
12	60001	HOSE, .375 OD. X .25 ID. CLEAR PVC	9	1PC=1FT
13	392292	NOZZLE, SPRAY	2	
14	2108	CAP, SPRAY TANK	1	
15	0948	WASHER, FLAT SAE 1/4"	8	
16	2203	WASHER, FLAT SAE 1/4"	8	
17	0131 A	SCREW, HHC 1/4"-20 X 3/4"	2	
18	0181 B	WASHER, LOCK 1/4" MED.	2	
19\$	30540	PUMP, SPRAY	2	
20	8133	SCREW, PHC 10-32 X 3/4"	8	
21	19633	BUSHING, RUBBER FUEL	3	
22	29677	FITTING, 90°	2	
23	19661	VALVE, SHUTOFF	1	
24	15538	CLAMP, HOSE WORM #6	4	
25	49048	SCREW, HEX FLANGE	2	
26	30542	BRACKET, SPRAY PUMP ADAPTER	1	

# LIGHTS ASSY.



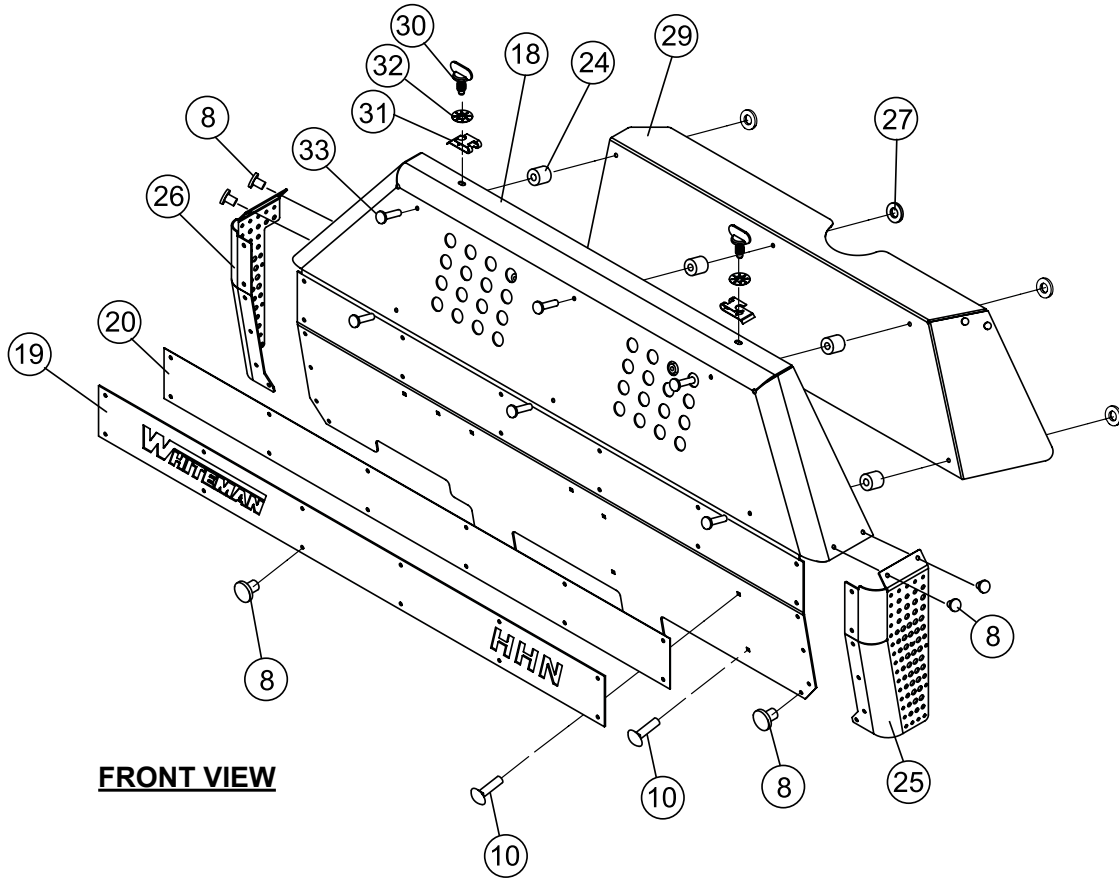
## LIGHT ASSY.

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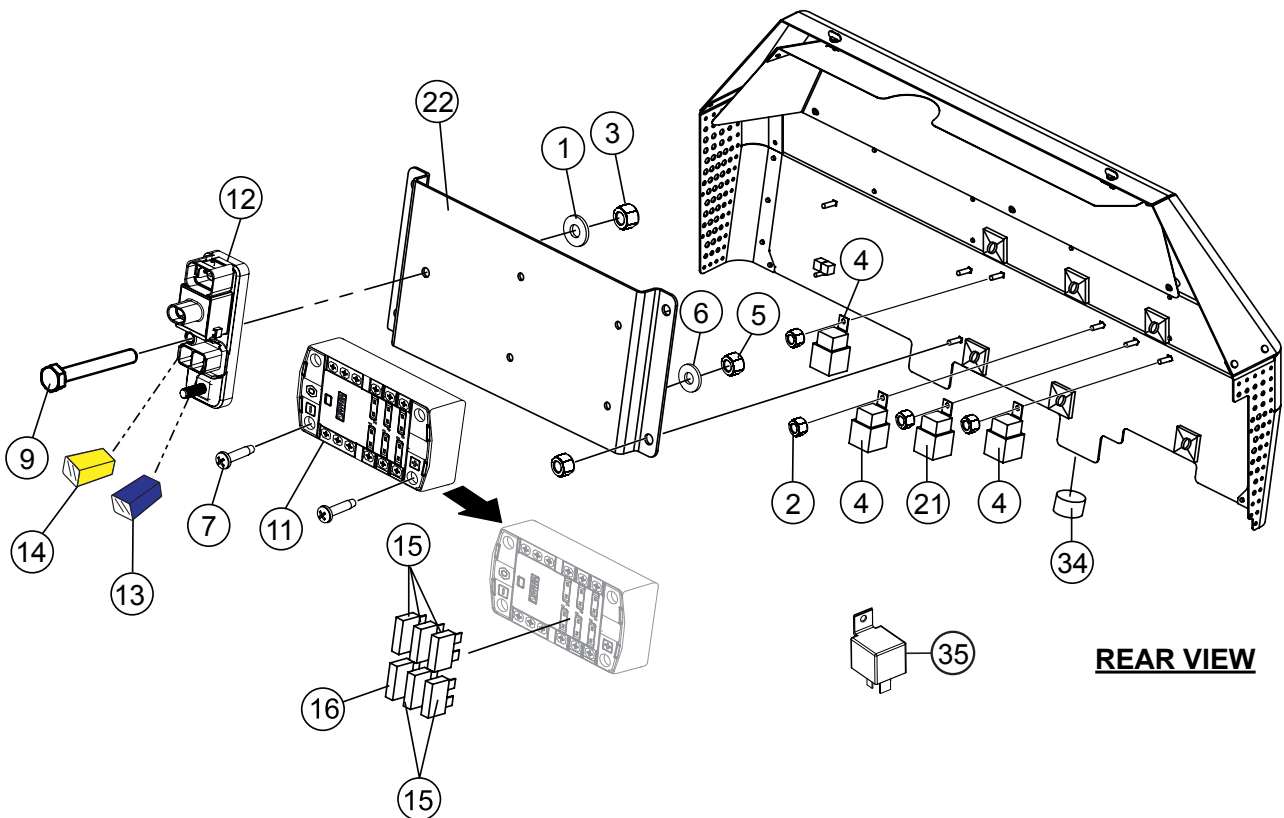
<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	22347	LIGHT, HELLA BOTTOM MOUNT OVAL.....	4.....	INCLUDES ITEMS W/\$ OLD STYLE
1	32640	LIGHT, LED 20W OVAL .....	4.....	INCLUDES ITEMS W/\$ NEW STYLE
2	2534	CLAMP, 1-3/4".....	2.....	INCLUDES ITEMS W/@
3	2531	BRACKET, LIGHT SIDE	2	
4\$		NUT	4	
5	22420	BRACKET, RIDER OP LIGHTS	2	
6	29017	SCREW, HHC 1/2"-13 X 5-1/2"	2	
7	26328	NUT, FLANGED 1/2"-13 SERRATED PLTD	2	
8@		NUT, FLANGE	4	



# FRONT PANEL ASSY.



**FRONT VIEW**

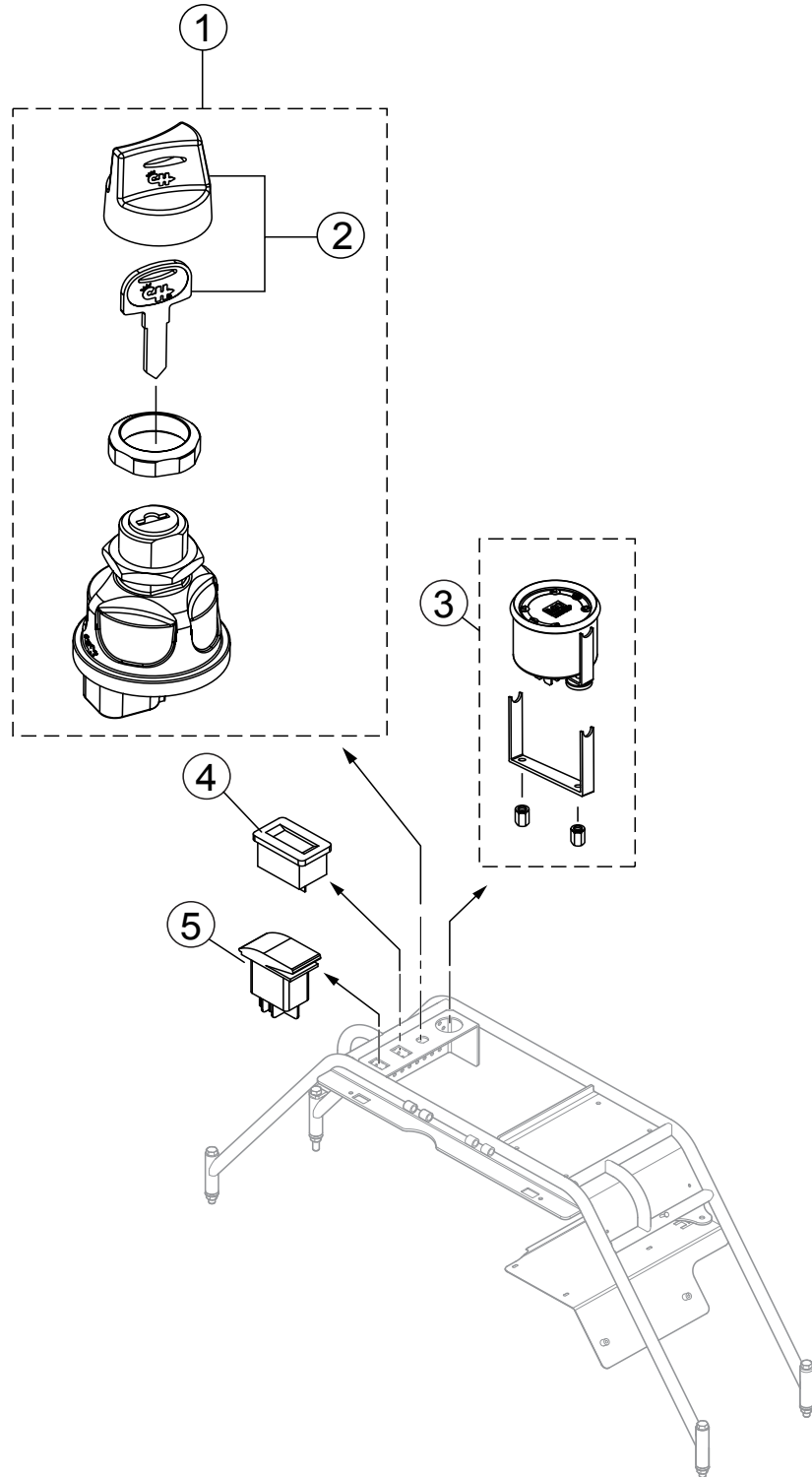


**REAR VIEW**

## FRONT PANEL ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	0948	WASHER, FLAT SAE 1/4"	1	
2	10019	NUT, NYLOC 10-32	8	
3	10024	NUT, NYLOC 1/4"-20	1	
4	12017	RELAY, KILL	3	
5	13287	NUT, NYLOC 8-32	4	
6	15173	WASHER, FLAT, #8	4	
7	15175	SCREW, PAN HEAD 8-32 X 3/4"	4	
8	19847	RIVET, POP, ALUM, 3/16" X 1/8"-1/4" GRIP	24	
9	20909	SCREW, HHC 1/4"-20 X 2"	1	
10	22131	BOLT, CARRIAGE 10-32 X 3/4" ZINC	8	
11	22426	BLOCK, TERMINAL FUSE	1	
12	22724	MODULE, POWER RELAY	1	
13	22725-200	FUSE, 20 AMP	1	
14	22725-600	FUSE, 60 AMP	1	
15	23284-100	FUSE, 10 AMP	5	
16	23284-300	FUSE, 30 AMP	1	
17	23908	HARNESS, FRONT PANEL	1	
18	23935	PANEL, FRONT	1	
19	23957	PANEL, "WHITEMAN"	1	
20	23958	PLATE, TRIM BACKING	1	
21	32594	RELAY, 80 AMP, 12VDC	1	
22	23974	MOUNT, FUSE BLOCK	1	
23	23976	MOUNTING BASE, ADHESIVE TIE WRAP	6	
24	23995	SPACER, .50 OD. X .206 ID.	6	
25	23997	PANEL, LEFT	1	
26	23999	PANEL, RIGHT	1	
27	29342	WASHER, 3/16" POP-RIVET BACKUP SS	6	
28	30037	CABLE, GROUND, RING TERMINAL	1	
29	30050	HEAT SHIELD ASSY., FRONT PANEL	1	
30	30055	SCREW, FAST LEAD, MED.	2	
31	30056	CLIP, FAST LEAD, MED.	2	
32	30057	WASHER, FAST LEAD SS, MED.	2	
33	30059	RIVET, POP BH .187 X .626 - .750 AL/AL	6	
34	21597	BUMPER, STEM 1" DIA. X 1/2" S DIA. X 19/64" TK	2	
35	32597-SK	RELAY, HHN, SERVICE KIT, 80AMP	1	

# TOP RIGHT CONTROL PANEL ASSY.

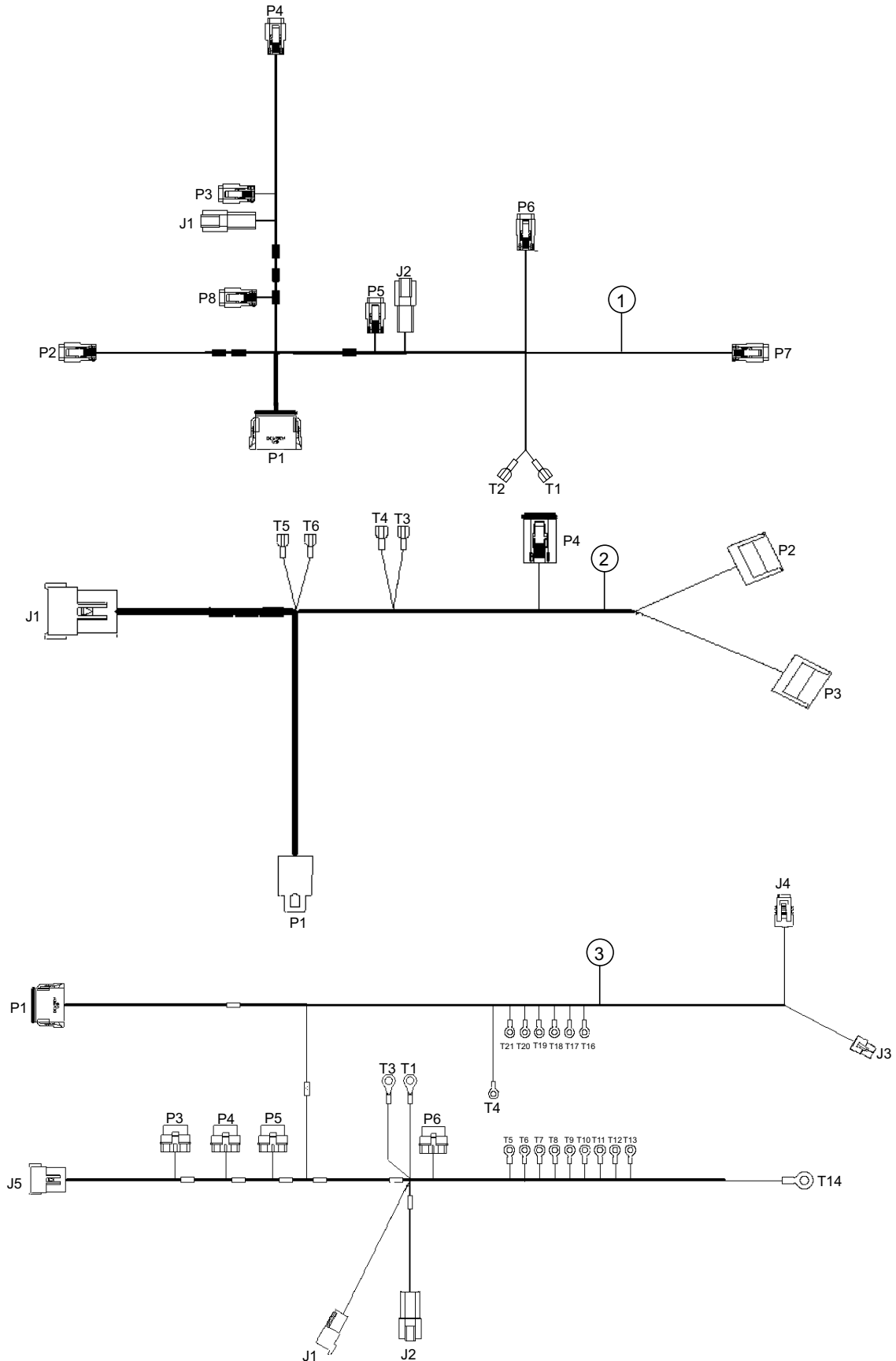


## TOP RIGHT CONTROL PANEL ASSY.

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<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	23959	SWITCH, IGNITION W/ BOOT .....	1.....	INCLUDES ITEMS W/@
2@	23959-01	IGNITION KEY W/ BOOT	1	
3	22408	GAGE, MULTI-LOFA	4	
4	29640	HOUR METER, SENDEC RECT FLUSH MOUNT	1	
5	406000	SWITCH, ROCKER	1	

# HARNESS ASSY.

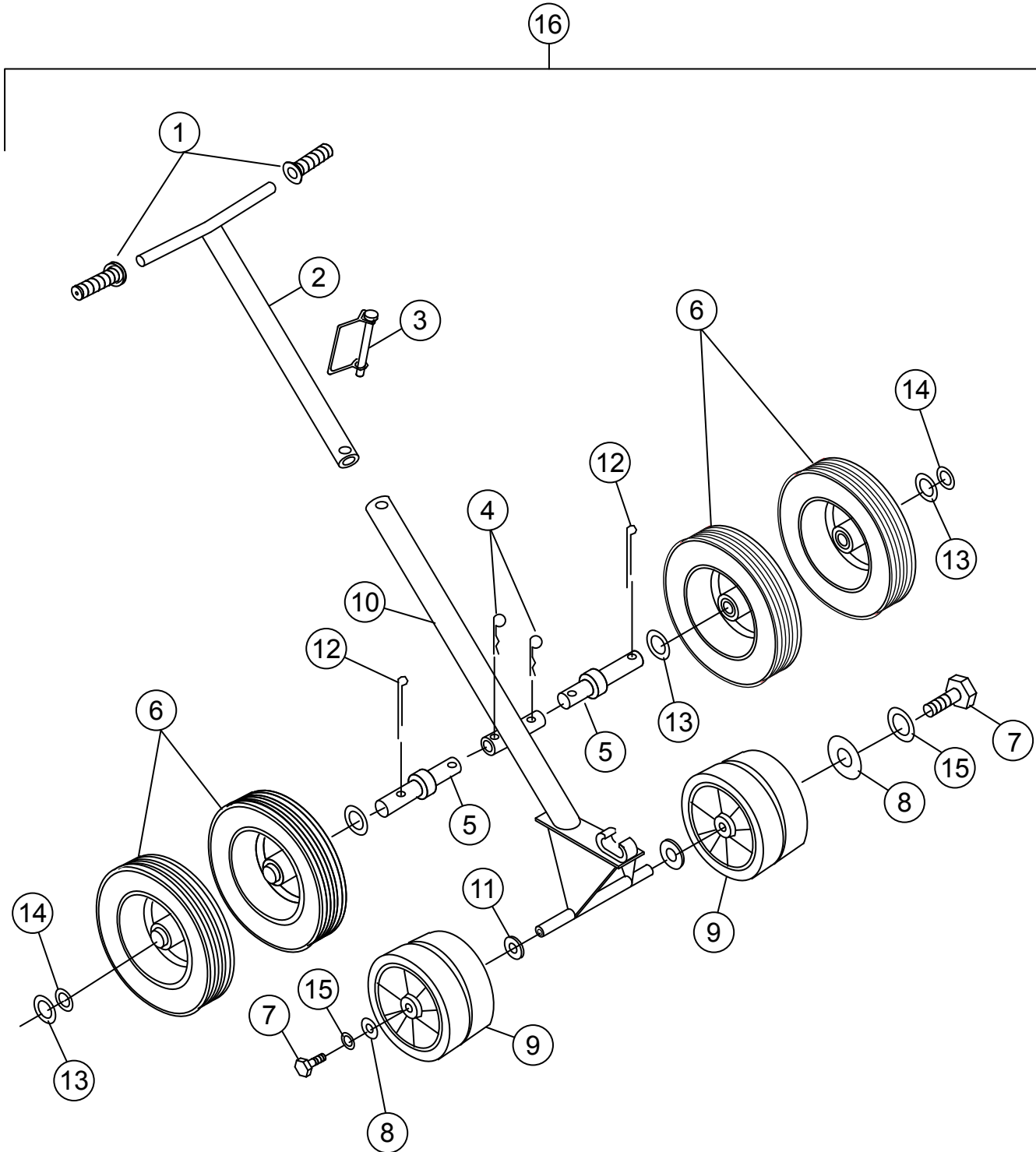


## HARNES ASSY.

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<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	23906	HARNES, MAIN FRAME	1	
2	23907	HARNES, SEAT FRAME	1	
3	23908	HARNES, FRONT PANEL	1	

# E-Z MOVER AND LIFT HANDLE ASSY.



## E-Z MOVER AND LIFT HANDLE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1\$	22762	HAND GRIP	2	
2\$	2336	UPPER HANDLE	1	
3\$	QS1869	SNAP PIN	1	
4\$	7170	CLIP	4	
5\$	11684	DOLLY AXLE	2	
6\$	10440	WHEEL AND TIRE	4	
7\$	0655	SCREW, HHCS 5/16"-18 X 3/4"	2	
8\$	0300 B	FLAT WASHER 5/16"	2	
9\$	2364	WHEEL	2	
10\$	10445	FRAME	1	
11\$	4684	FLAT WASHER 5/8"	2	
12\$	0183	COTTER PIN	4	
13\$	10446	FLAT WASHER 3/4"	8	
14\$	8151	FLAT WASHER 3/4" SAE	8	
15\$	0161 C	LOCK WASHER 5/16"	2	
16	EMR2	E-Z MOVER ASSY.....	1.....	INCLUDES ITEMS W/\$ (CONTACT UNIT SALES DEPARTMENT)



# PARTS MANUAL

## HERE'S HOW TO GET HELP

PLEASE HAVE THE MODEL AND SERIAL  
NUMBER ON-HAND WHEN CALLING

### United States

#### ***Multiquip Inc.***

(310) 537- 3700  
6141 Katella Avenue Suite 200  
Cypress, CA 90630  
E-MAIL: [mq@multiquip.com](mailto:mq@multiquip.com)  
WEBSITE: [www.multiquip.com](http://www.multiquip.com)

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### Canada

#### ***Multiquip***

(450) 625-2244  
4110 Industriel Boul.  
Laval, Quebec, Canada H7L 6V3  
E-MAIL: [infocanada@multiquip.com](mailto:infocanada@multiquip.com)

### United Kingdom

#### ***Multiquip (UK) Limited Head Office***

0161 339 2223  
Unit 2, Northpoint Industrial Estate, Globe Lane,  
Dukinfield, Cheshire SK16 4UJ  
E-MAIL: [sales@multiquip.co.uk](mailto:sales@multiquip.co.uk)

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This manual MUST accompany the equipment at all times. This manual is considered a permanent part of the equipment and should remain with the unit if resold.

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**PN: 30053**



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Phone (AUS): 1300 353 986

[flextool.com.au](http://flextool.com.au)

ABN 80 069 961 968

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