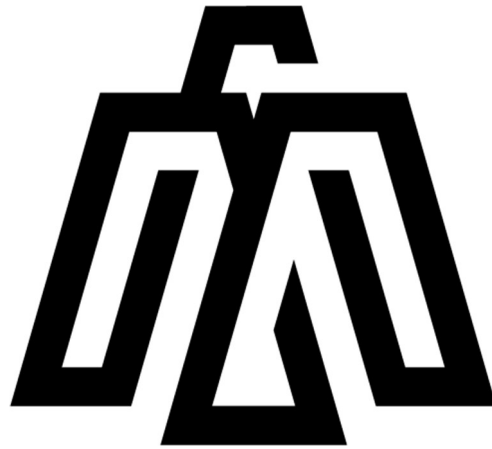


Mowhawk Parts Manual

Model: RANGER PRO



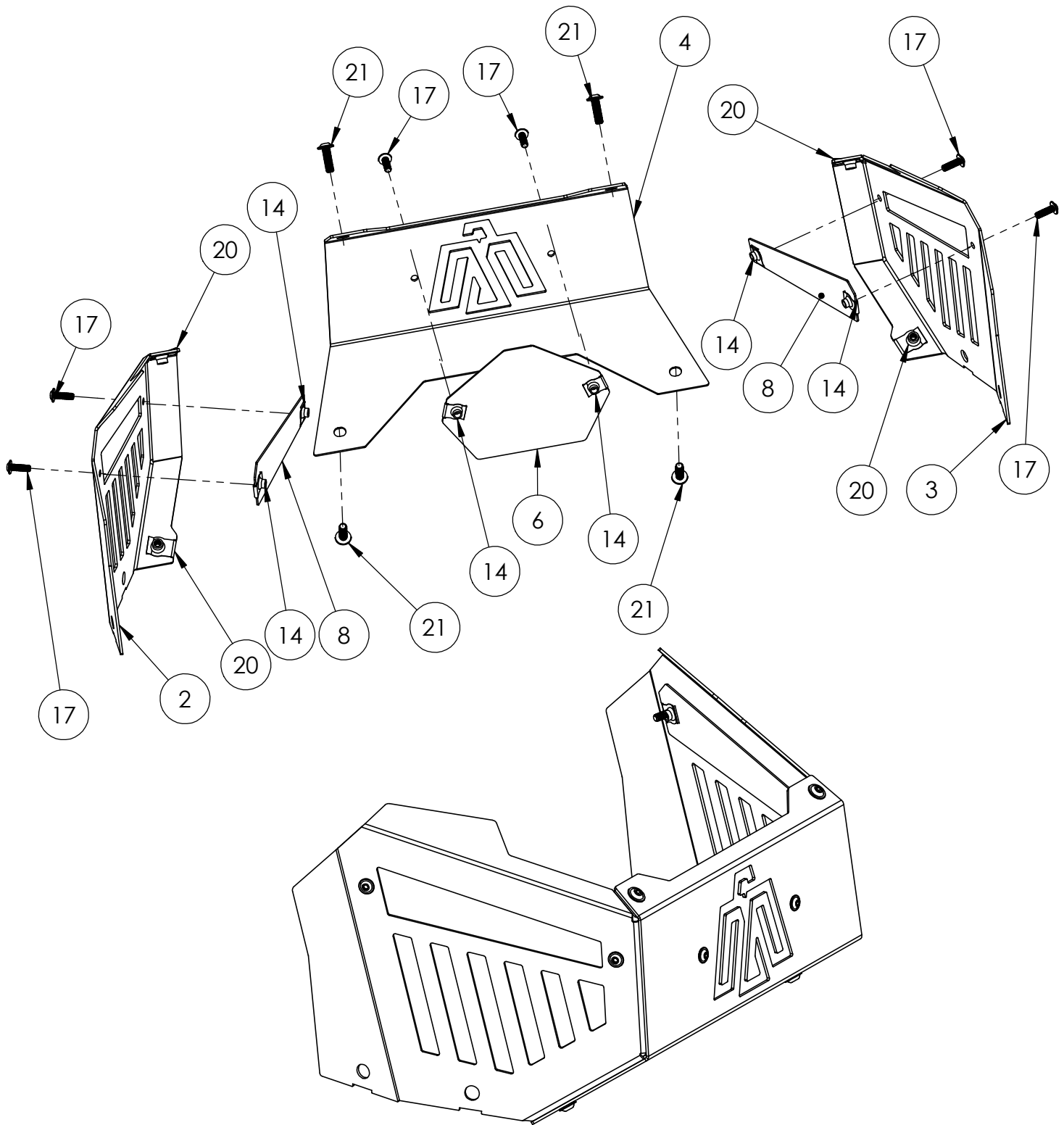
Document Number: D4000009

Document Rev: A

This document covers model numbers: M50000005, M50000009

A45001002

RANGER / RANGER PRO BODY PANELS



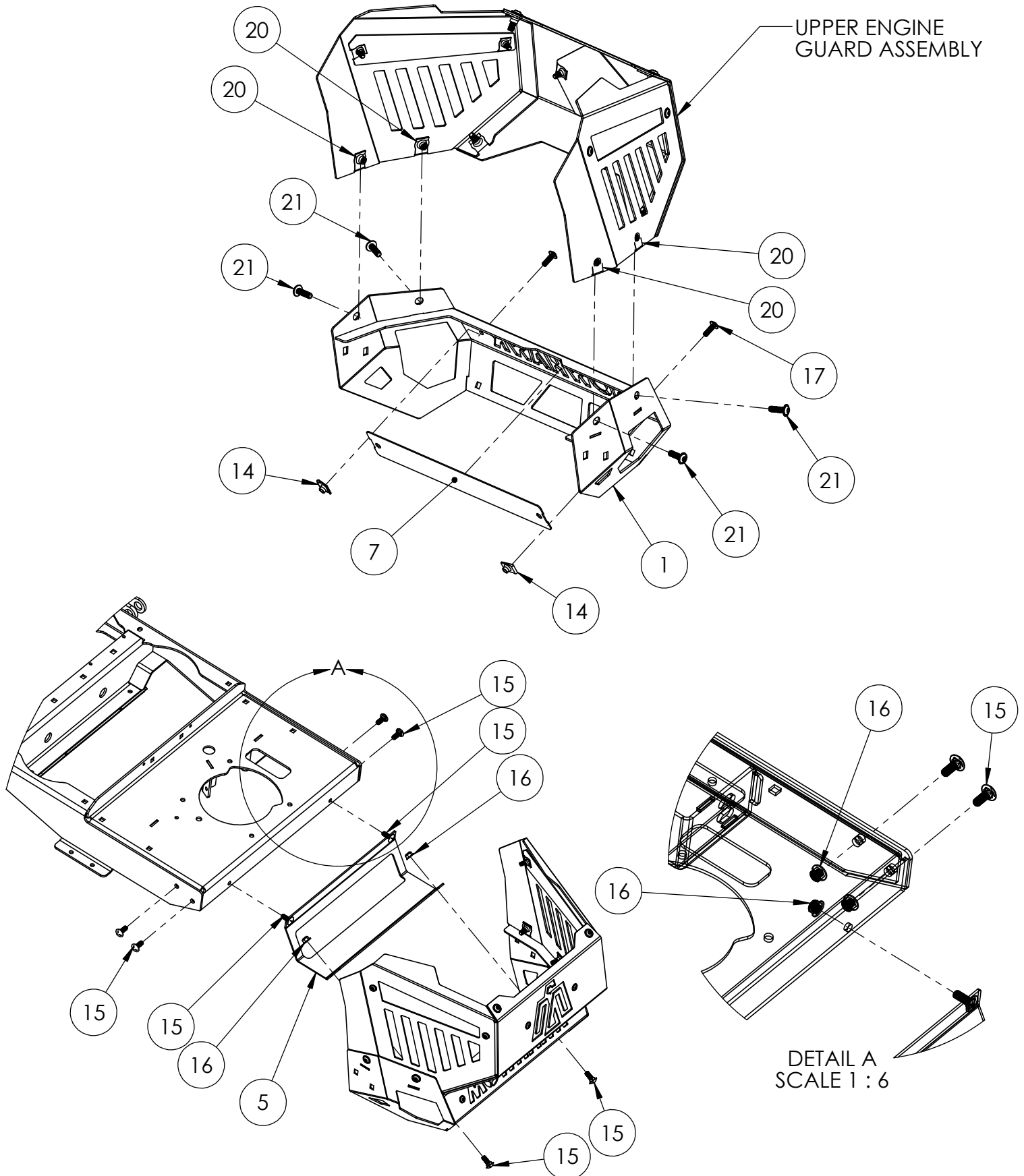
UPPER ENGINE GUARD ASSEMBLY

REVISION: A

FASTENER TORQUE VALUES	
FASTENER SIZE	TORQUE REQUIRED
1/4 - 20	8.2 FT-LBS
5/16 - 18	17 FT-LBS
3/8 - 16	30 FT-LBS
7/16 - 14	48 FT-LBS
1/2 - 13	73 FT-LBS
5/8 - 11	145 FT-LBS
3/4 - 10	260 FT-LBS

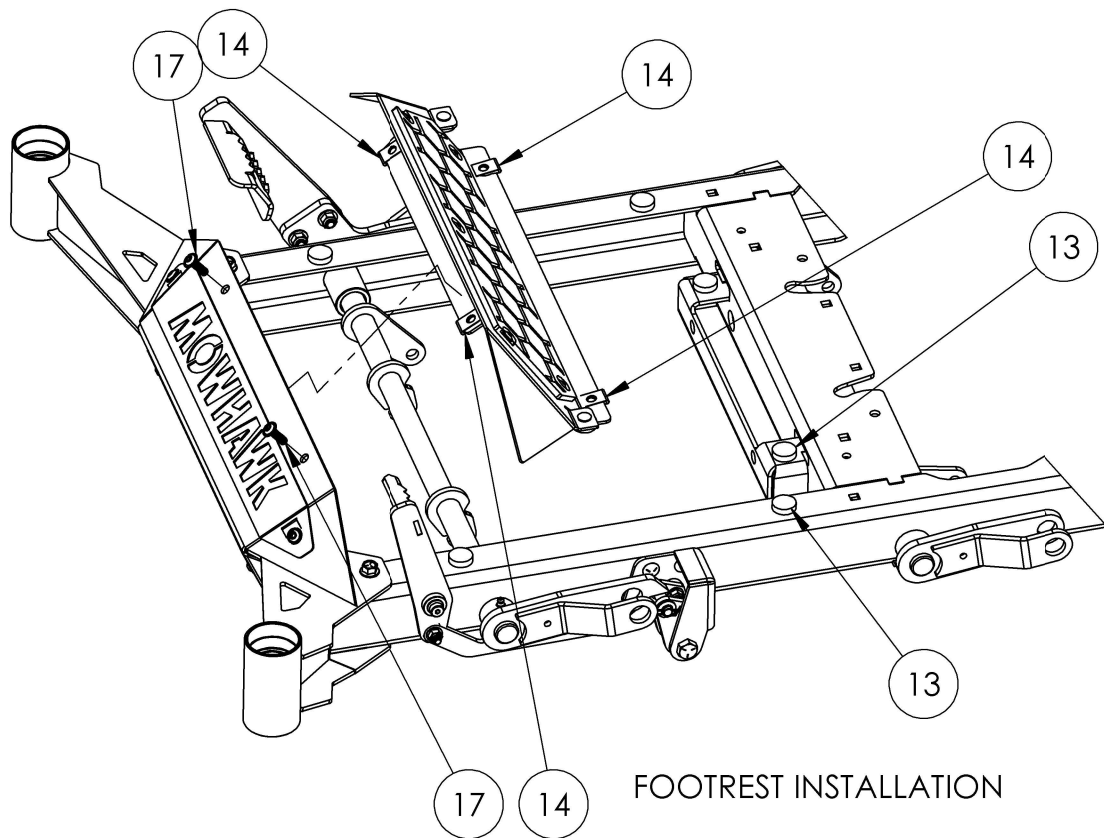
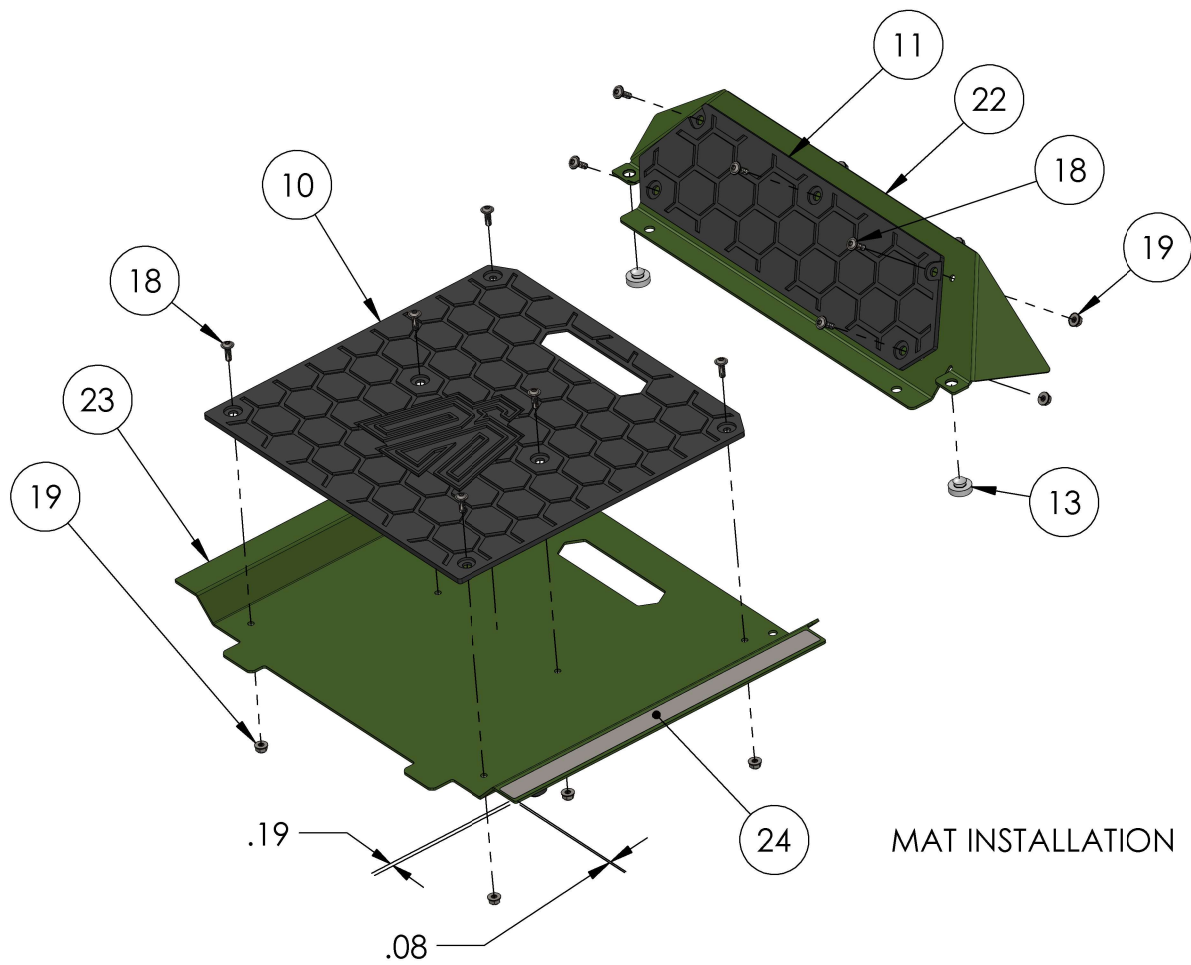
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RANGER / RANGER PRO BODY PANELS



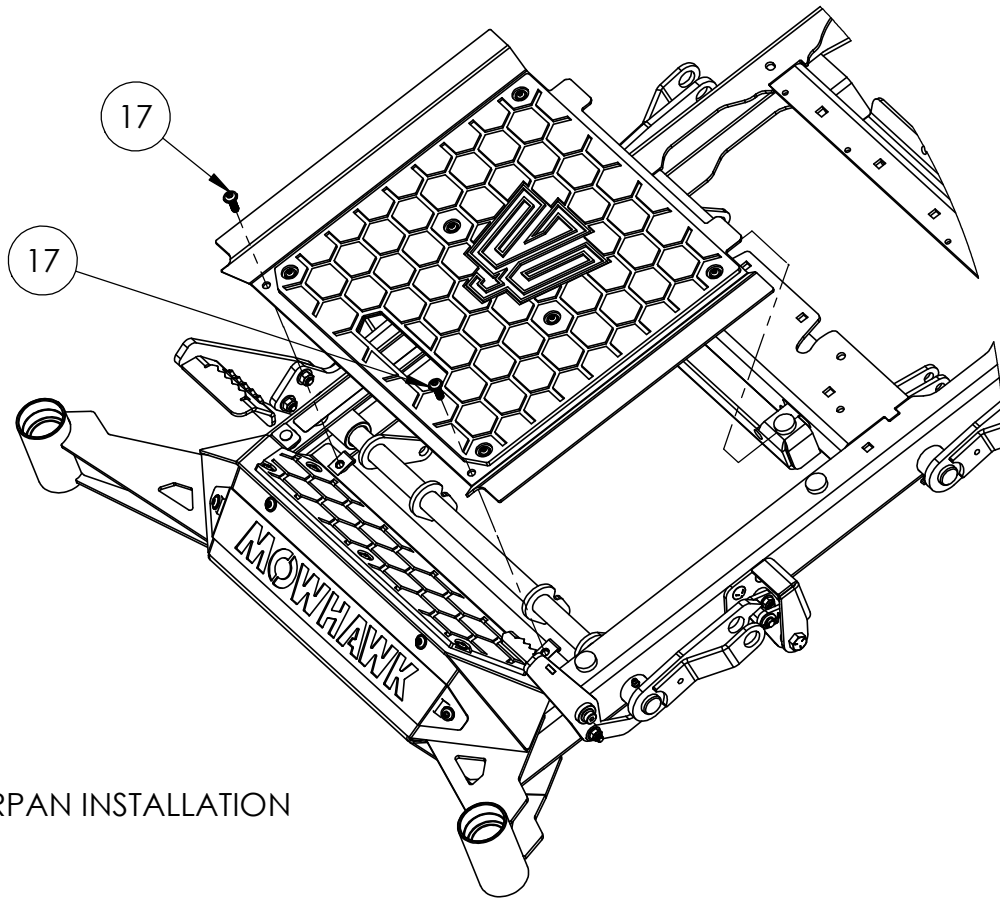
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RANGER / RANGER PRO BODY PANELS

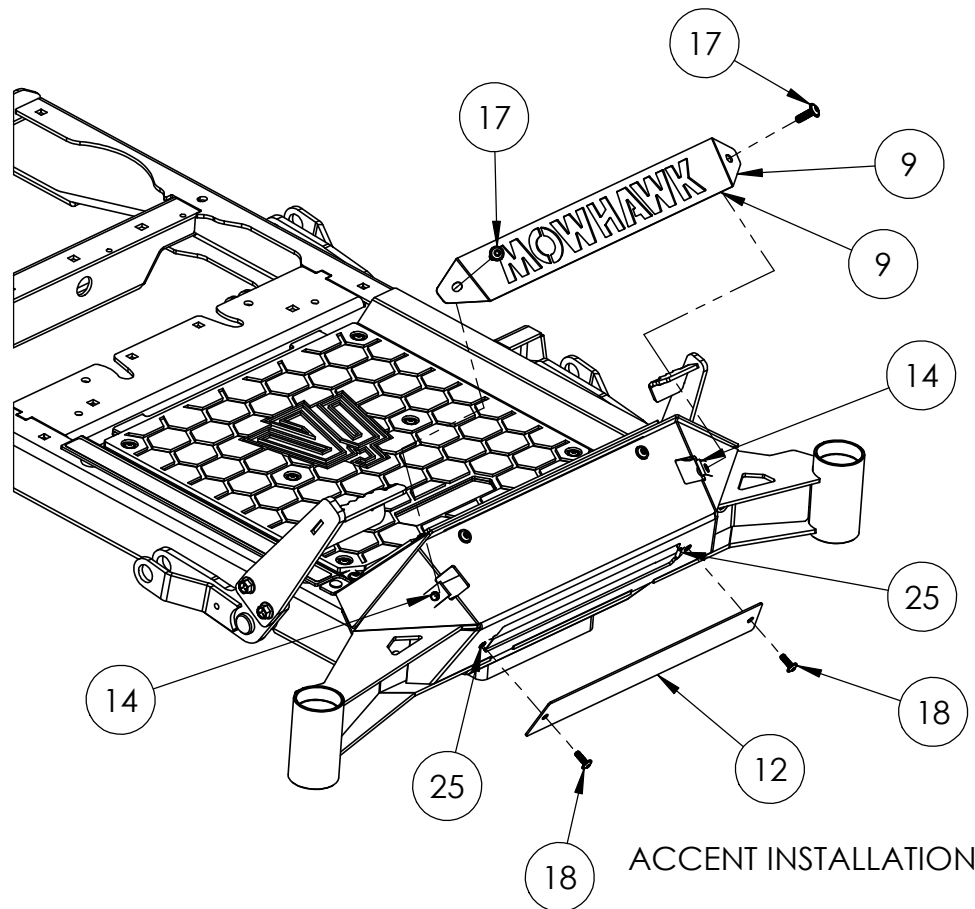


A45001002

RANGER / RANGER PRO BODY PANELS



FLOORPAN INSTALLATION



ACCENT INSTALLATION

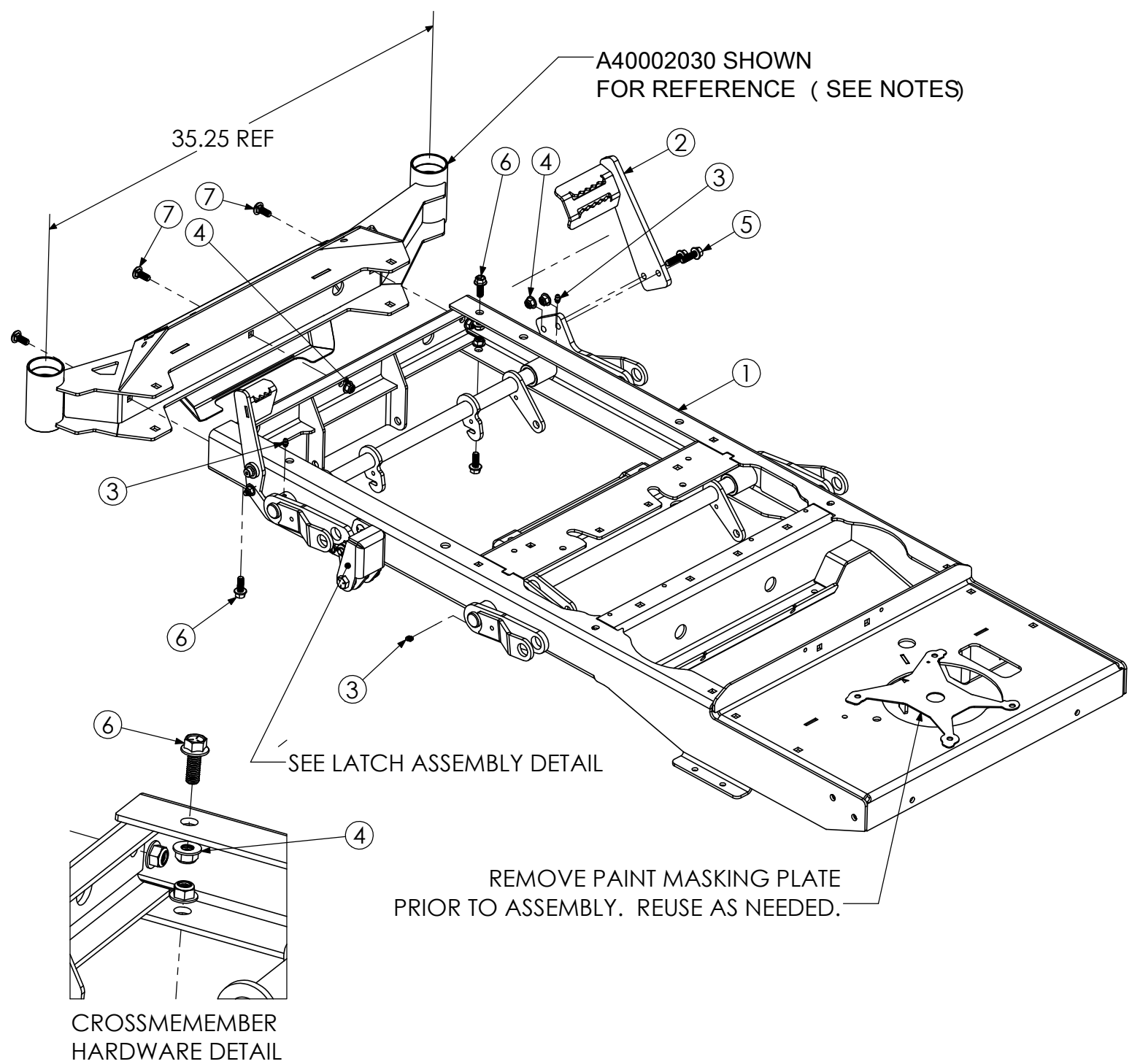
A45001002

RANGER / RANGER PRO BODY PANELS

ITEM NO.	PART NUMBER	DESCRIPTION	TOTAL QTY.
1	A40001008	BUMPER WA	1
2	2500758	ENGINE GUARD RIGHT	1
3	2500759	ENGINE GUARD LEFT	1
4	2500757	ENGINE GUARD CENTER	1
5	2500756	MUFFLER SHIELD	1
6	2500429	ENGINE GUARD BACKER	1
7	2500430	BUMPER BACKER	1
8	2500762	ENGINE GUARD ACCENT	2
9	2500760	FRONT COVER	1
10	301400013	FLOORMAT	1
11	301400021	FOOTREST MAT	1
12	2500761	LIGHT COVER	1
13	301400002	ISOLATER, 1.0 X .28	8
14	300100028	CNT .312-18	14
15	300100026	CB .375-16 X 1.000	8
16	300100004	FLANGE NYLOCK, 3/8-16	8
17	300100035	FBHCS .312-18 X 1.000	14
18	300100194	FBHCS, 1/4-20 X .75	13
19	300100082	FLANGE NYLOCK, 1/4-20	11
20	300100055	CLIP NUT, 3/8-16	8
21	300100036	FBHCS .375-16 X 1.250	8
22	A40001007	FLOORPAN WA	1
23	S45000012	FLOOR PAN (W/ DECALS)	1
24	300300038	DECAL, SAFE OPERATION	1
25	300100054	CNT .250-20	2

REVISION: A

A45002003
RANGER / RANGER PRO FRAME



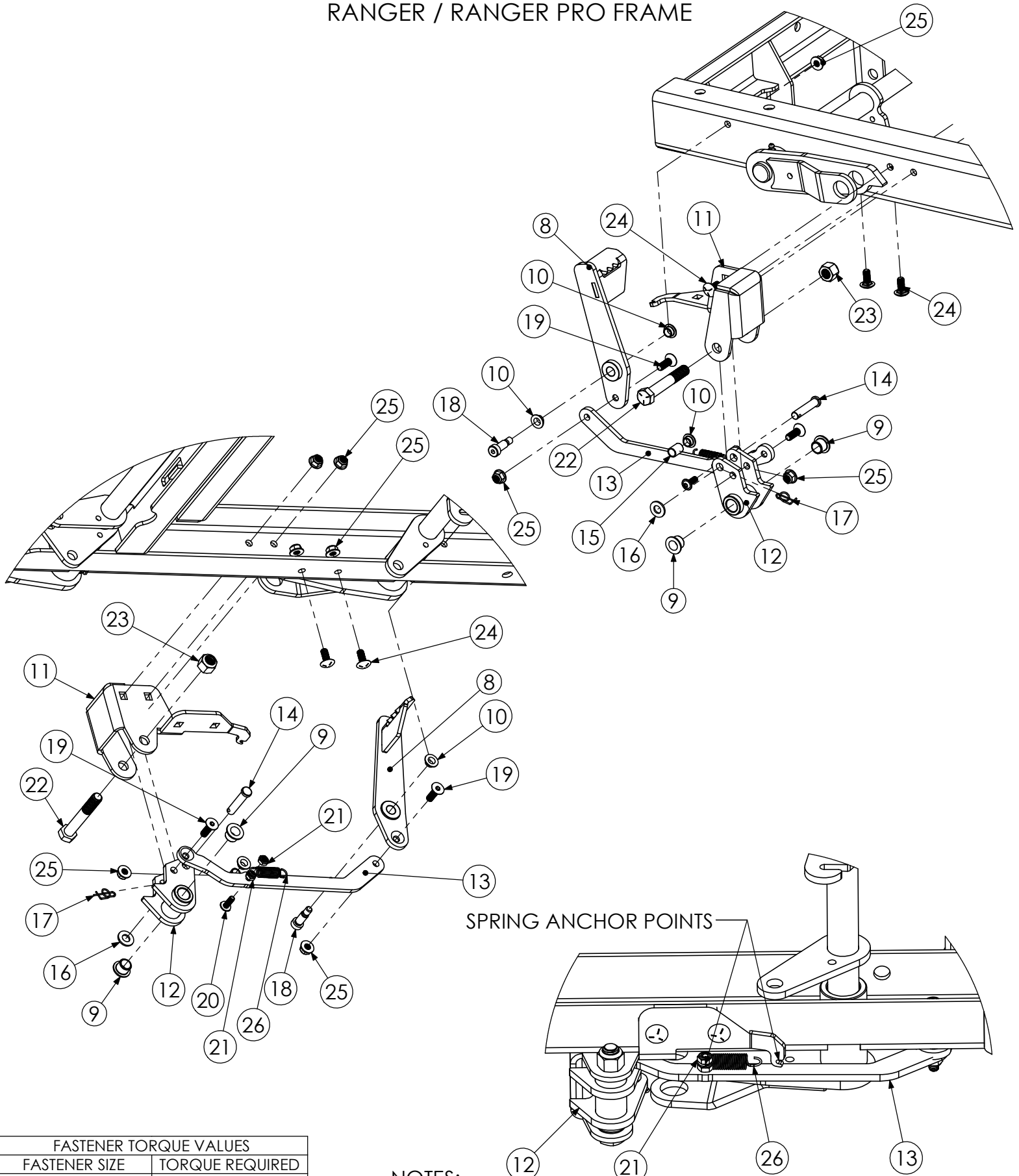
- NOTES:
1. INSTALL CORRECT CROSSMEBER PER END ITEM NUMBER BEING BUILT.

FASTENER TORQUE VALUES	
FASTENER SIZE	TORQUE REQUIRED
1/4 - 20	8.2 FT-LBS
5/16 - 18	17 FT-LBS
3/8 - 16	30 FT-LBS
7/16 - 14	48 FT-LBS
1/2 - 13	73 FT-LBS
5/8 - 11	145 FT-LBS
3/4 - 10	260 FT-LBS

CROSSMEMBER DETAILS		
PART NUMBER	DESCRIPTION	CENTER DISTANCE
A40002030	CROSSMEMBER, 48/54	35.25"
A40002034	CROSSMEMBER, 44	31.13"
A40002035	CROSSMEMBER, 60	39.25"

A45002003

RANGER / RANGER PRO FRAME



SPRING ANCHOR POINTS

FASTENER TORQUE VALUES	
FASTENER SIZE	TORQUE REQUIRED
1/4 - 20	8.2 FT-LBS
5/16 - 18	17 FT-LBS
3/8 - 16	30 FT-LBS
7/16 - 14	48 FT-LBS
1/2 - 13	73 FT-LBS
5/8 - 11	145 FT-LBS
3/4 - 10	260 FT-LBS

NOTES:

1. TRANSPORT LATCH COMPONENTS MUST PIVOT FREELY
DO NOT TORQUE HARDWARE FOR ITEMS 13, 14.

REVISION: A

A45002003

RANGER / RANGER PRO FRAME

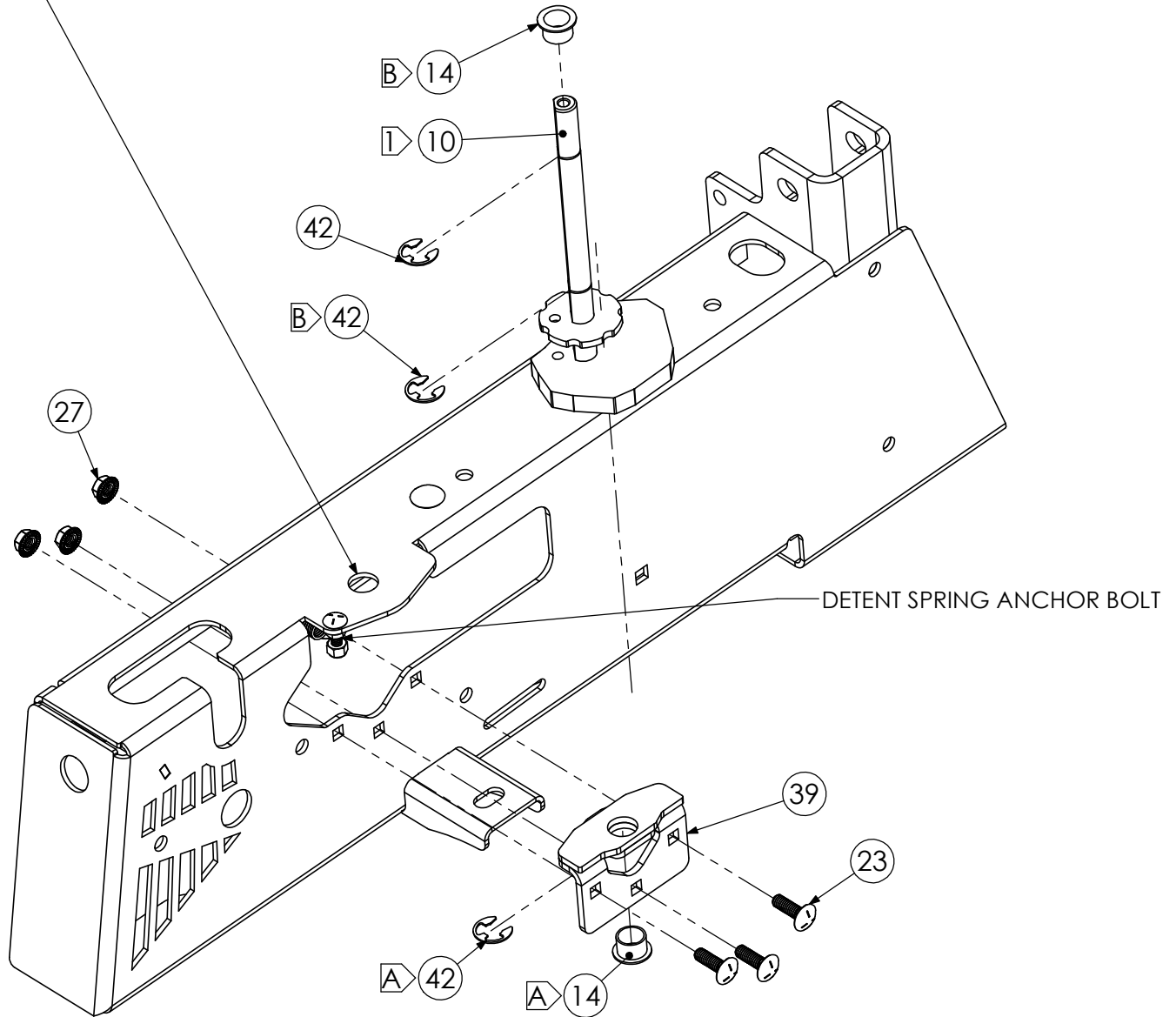
ITEM NO.	PART NUMBER	DESCRIPTION	TOTAL QTY.
1	A40002001	FRAME W/A, RANGER	1
2	A40003020	PEDAL WA	1
3	300600055	ZERK, GREASE 1/4-28	4
4	300100004	FLANGE NYLOCK, 3/8-16	9
5	300100005	FLANGED HHCS, 3/8-16 X 1.25	2
6	300100067	FHHCS .375-16 X 1.000	4
7	300100026	CB .375-16 X 1.000	3
8	A40003038	PEDAL WA, DECK LOCK	1
9	300600036	BUSHING, FLANGED, 1/2 ID	2
10	300600033	BUSHING, FLANGED, 3/8 ID	3
11	2500967	MOUNTING PLT, LATCH	1
12	A40003040	W/A, LATCH PIVOT	1
13	2500968	PLATE, LINK DECK LATCH	1
14	300100227	CLP .375 X 1.500	1
15	300600035	BUSHING, STRAIGHT, 3/8 ID	1
16	300100086	FW .375 SAE	1
17	300600045	RUE RING 3/8"	1
18	300100172	SB .375 X .750 X .312-18	1
19	300100223	FHCS .312-18 X 1.000	2
20	300100194	FBHCS, 1/4-20 X .75	1
21	300100224	NYLK .250-20 JAM	2
22	300100137	HHCS .500-13 X 3.250	1
23	300100160	NYLK .500-13	1
24	300100040	CB .312-18 X .75 LOW PROFILE	4
25	300100009	FLANGE NYLOCK, 5/16-18	7
26	300600032	SPRING, EXT, .50"	1

REVISION: A

A45003004

RANGER / RANGER PRO DECK LIFT

- ASSEMBLE ITEMS 39 & 14A. INSERT ITEM 10 AS SHOWN. SECURE WITH ITEM 42A.
- INSTALL ASSEMBLY UPWARDS THROUGH HOLE IN SIDE PANEL. INSTALL LOWER MOUNTING HARDWARE 23 & 27 TO SECURE TO THE PANEL.
- AFTER INSTALLATION, INSTALL ITEM 14B INTO FRAME PANEL. SECURE ITEM 10 WITH 42B. INSTALL ANY REMAINING HARDWARE.



FASTENER TORQUE VALUES	
FASTENER SIZE	TORQUE REQUIRED
1/4 - 20	8.2 FT-LBS
5/16 - 18	17 FT-LBS
3/8 - 16	30 FT-LBS
7/16 - 14	48 FT-LBS
1/2 - 13	73 FT-LBS
5/8 - 11	145 FT-LBS
3/4 - 10	260 FT-LBS

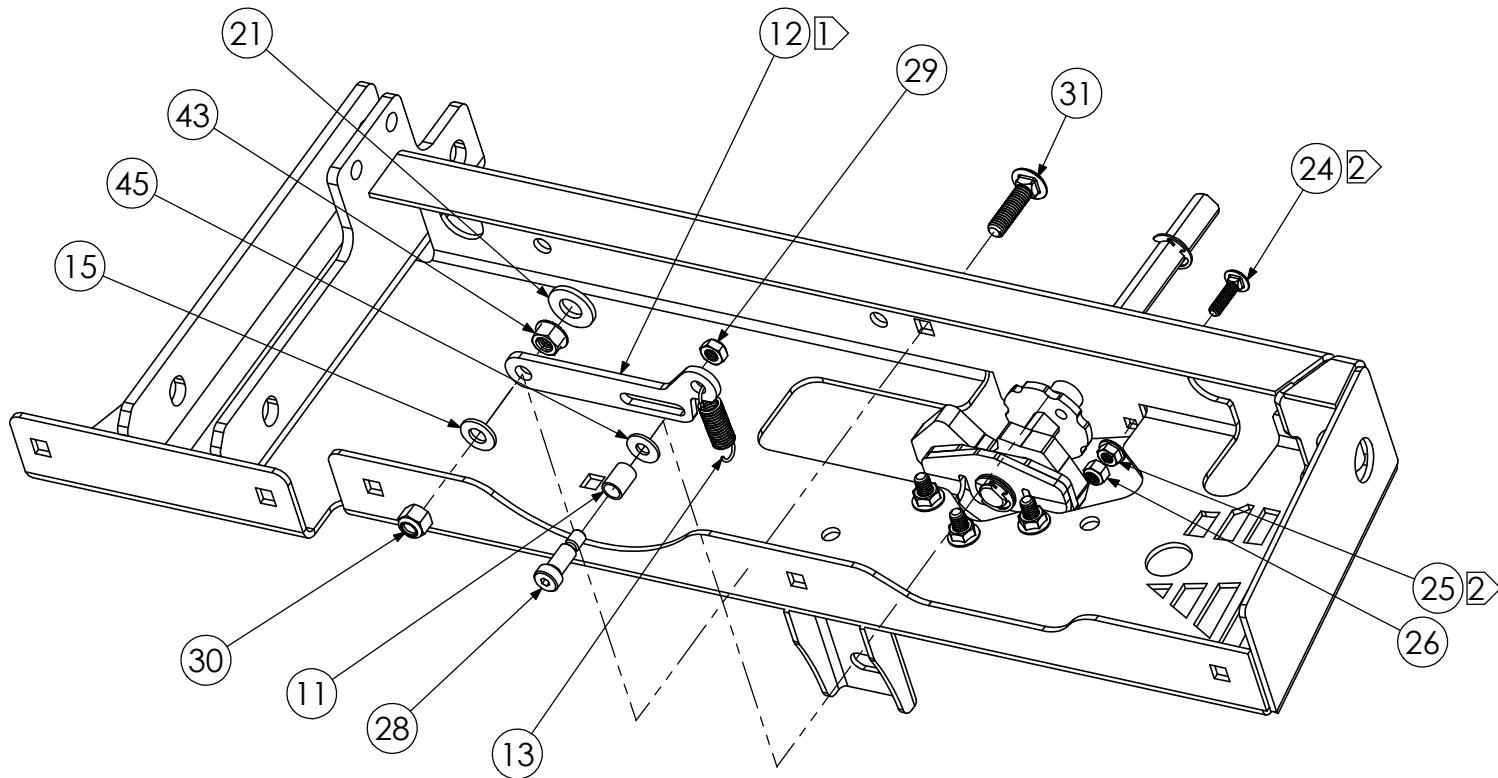
NOTES:

1. MUST PIVOT FREELY AFTER INSTALATION.

REVISION: A

A45003004

RANGER / RANGER PRO DECK LIFT

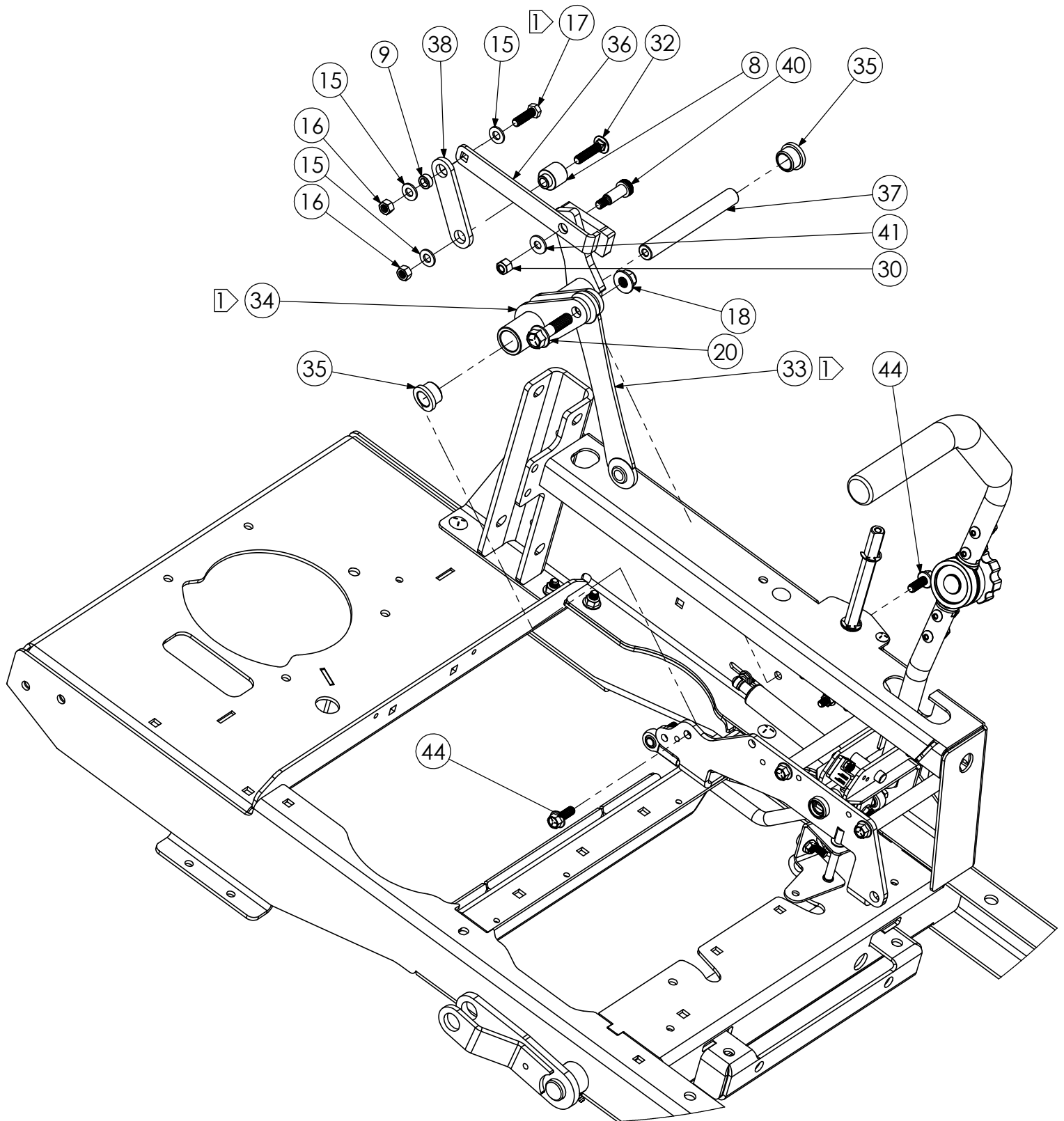


NOTES:

1. MUST PIVOT FREELY AFTER INSTALATION.
2. INSTALL ITEMS 24 & 25 TO PANEL. INSTALL DETENT ARM ASSEMBLY WITH SPRING TO PANEL. SECURE SPRING TO ITEM 24 AFTER INSTALLATION AND SECURE WITH ITEM 26.

A45003004

RANGER / RANGER PRO DECK LIFT



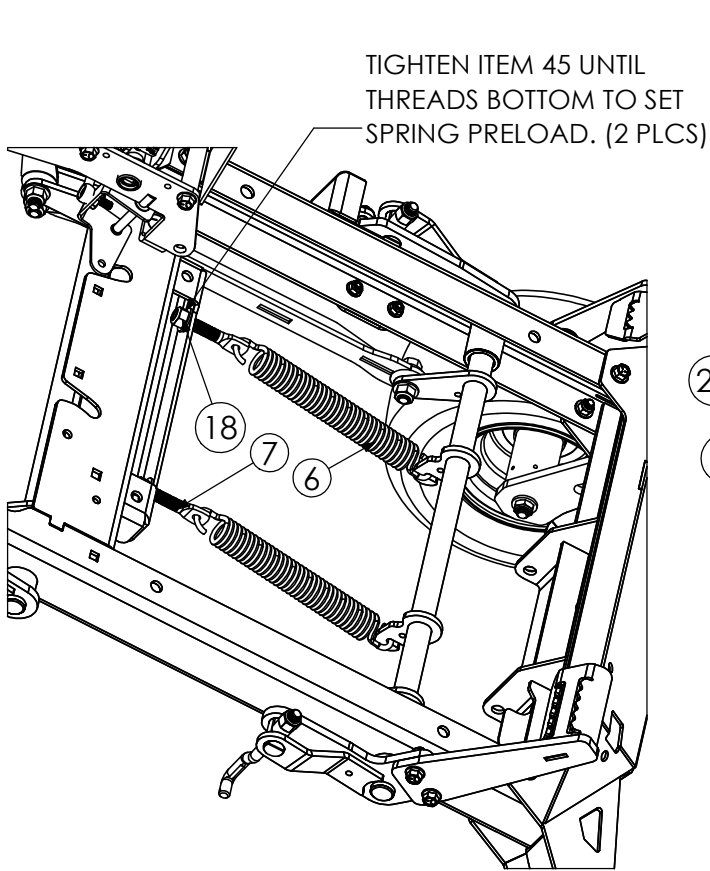
DECK LIFT STOP ASSEMBLY

NOTES:

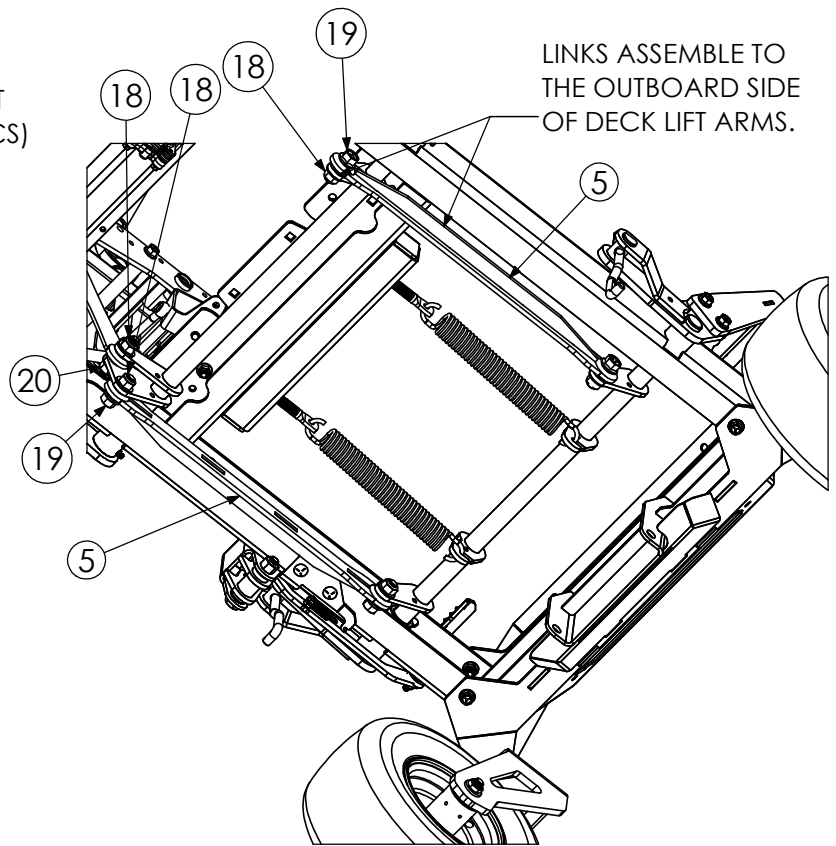
1. MUST PIVOT FREELY AFTER INSTALATION.

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RANGER / RANGER PRO DECK LIFT

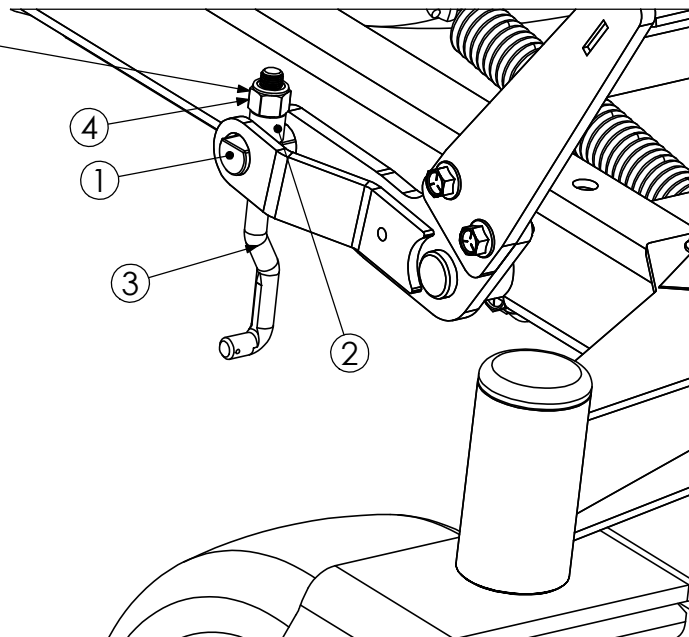


SPRING INSTALLATION



LIFT INSTALLATION

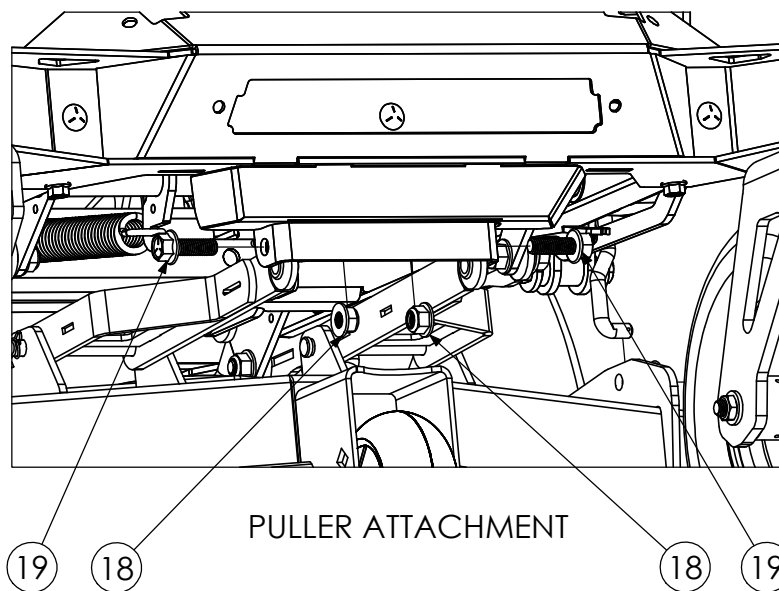
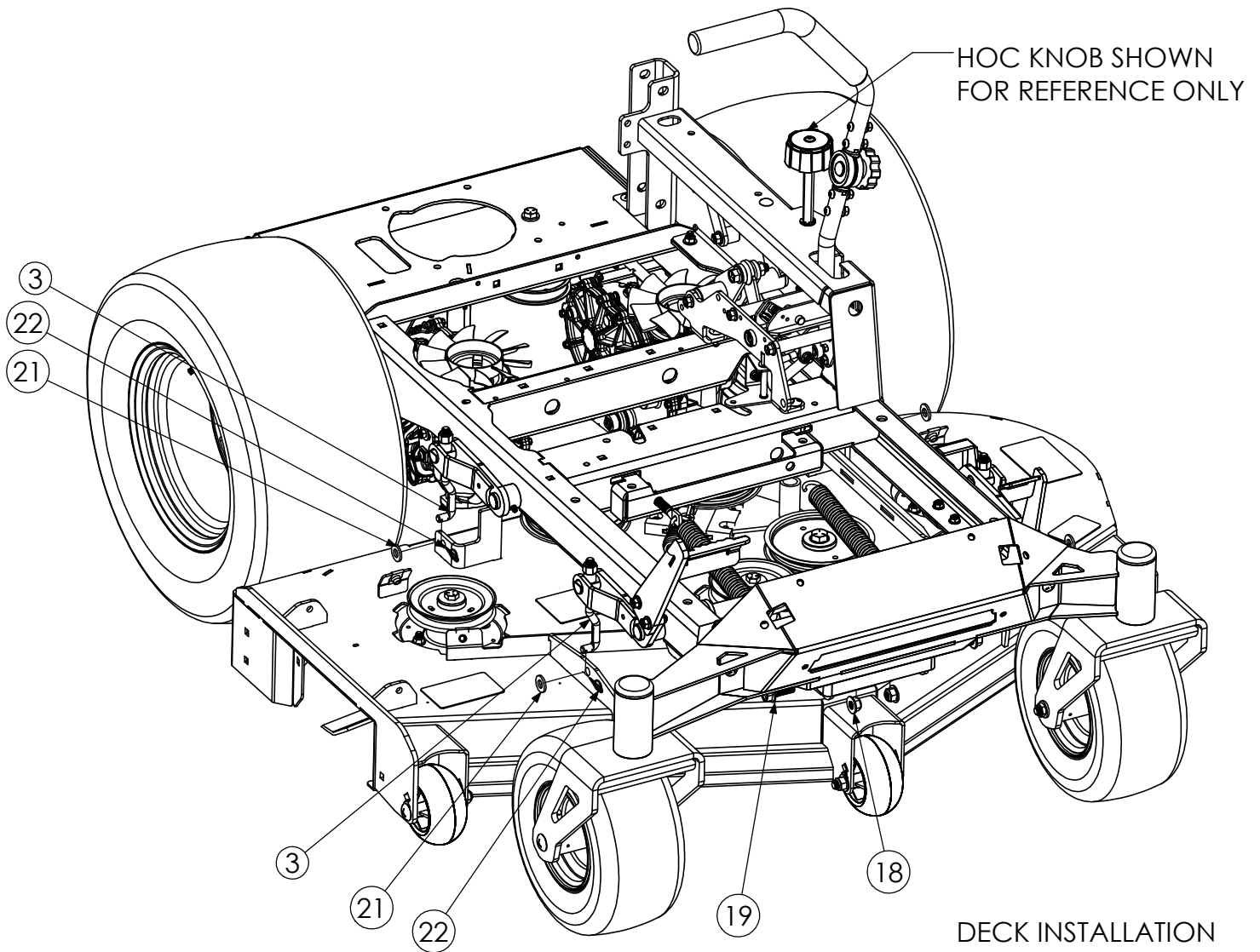
ADJUST ITEM 4
TO LEVEL DECK



HANGER ASSEMBLY
(OTHER CORNERS SIMILAR 4)

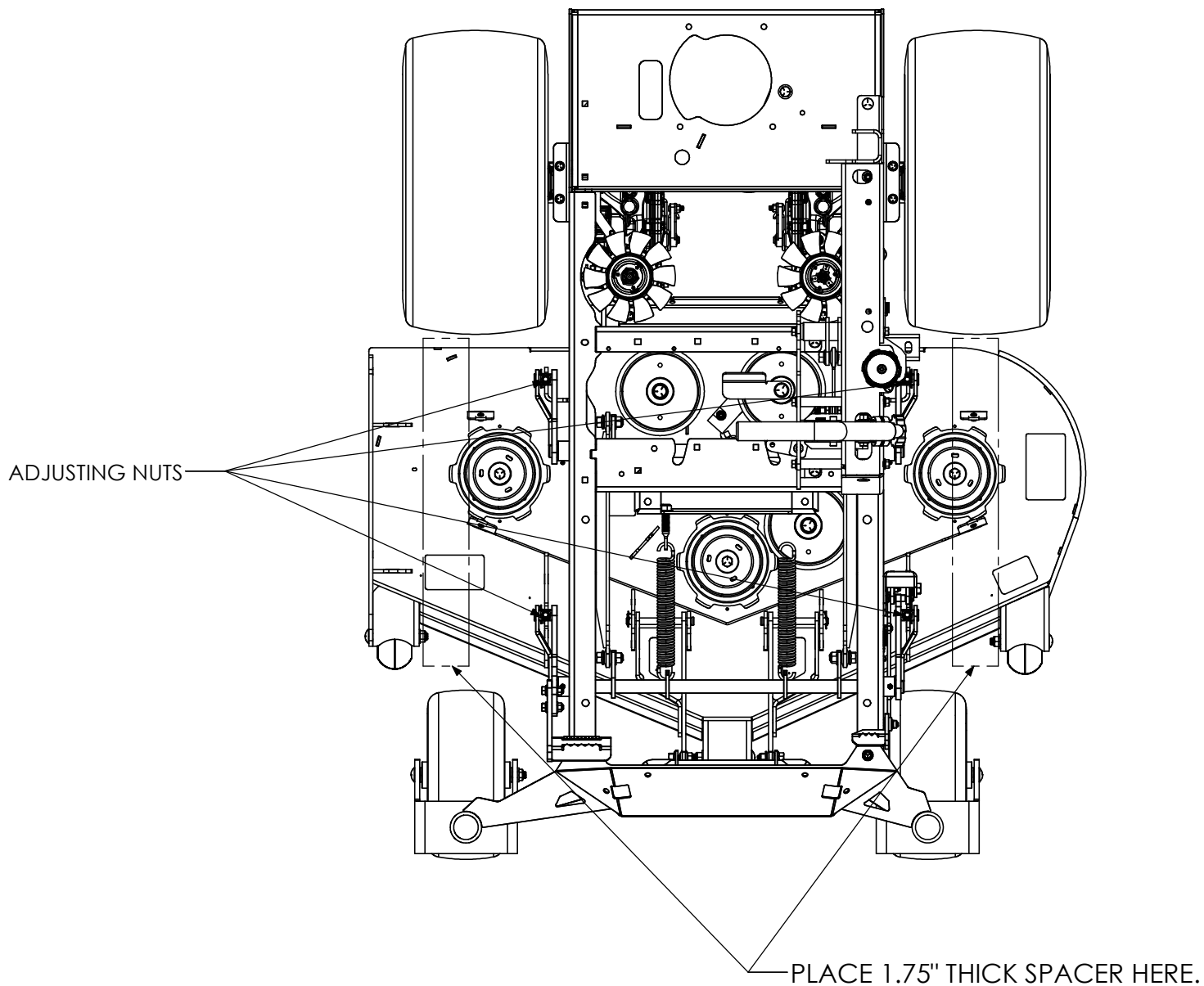
A45003004

RANGER / RANGER PRO DECK LIFT



A45003004

RANGER / RANGER PRO DECK LIFT



NOTES:

1. ON A FLAT SURFACE WITH WHEELS CHOCKED, PLACE 1.75" THICK SPACERS AT THE LOCATIONS SHOWN. FRONT AND BACK OF THE DECK MUST BE SUPPORTED ON FOUR POINTS.
2. SET HEIGHT OF CUT INDICATOR TO 2.0".
3. ADJUST THE ADJUSTMENT NUTS IN EACH CORNER UNTIL THERE IS NO NOTICABLE SLACK IN THE LINK BETWEEN THE FRAME AND DECK.
4. ONCE LEVELED, RETURN THE DECK THE TRANSPORT POSTION, REMOVE 1.5" SPACERS AND WHEEL CHOCKS.

A45003004

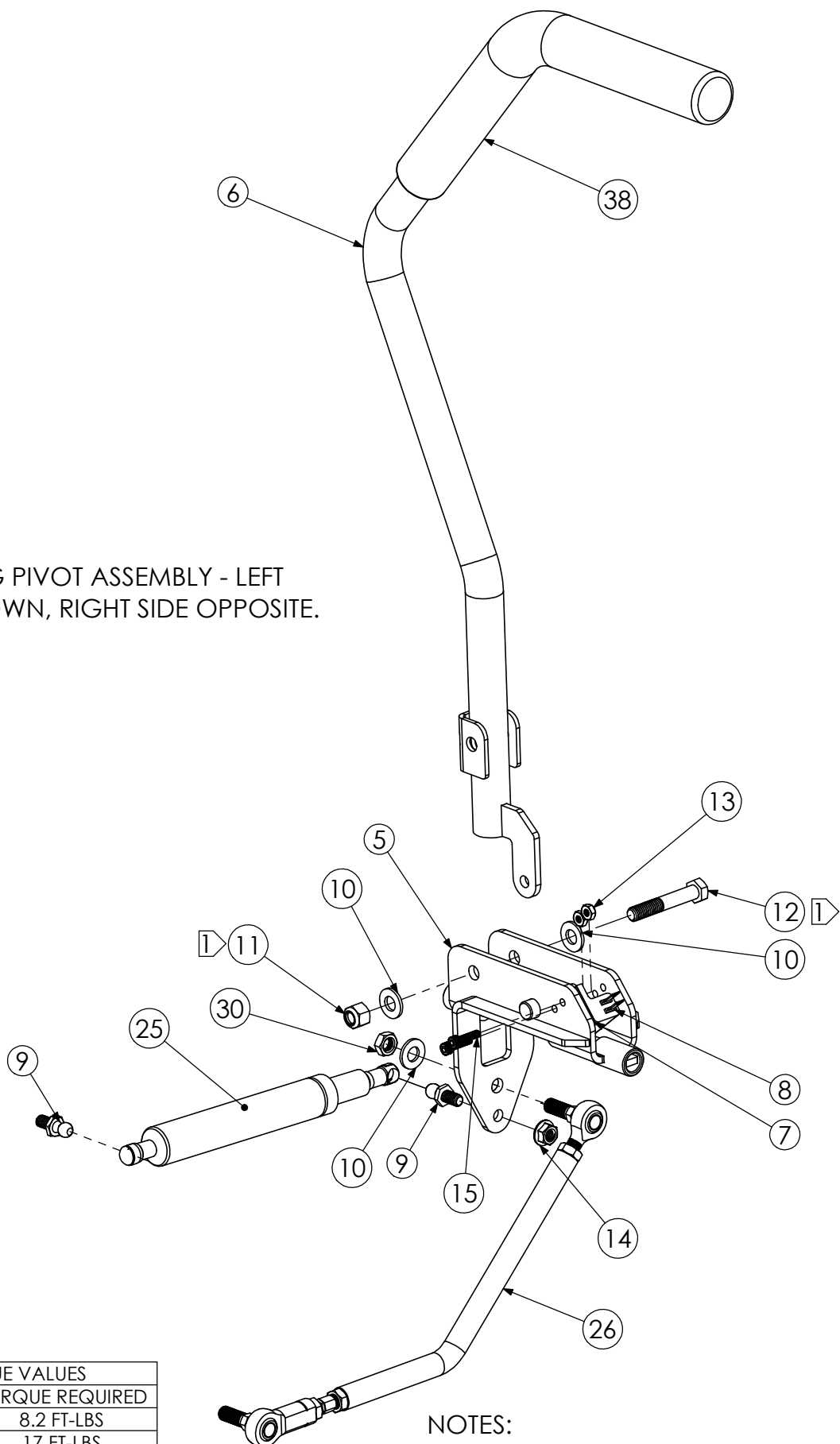
RANGER / RANGER PRO DECK LIFT

ITEM NO.	PART NUMBER	DESCRIPTION	TOTAL QTY.
1	1500178	PIVOT, DECK LIFT	4
2	1500179	SPACER	4
3	300600084	DECK LIFT LINK	4
4	300100162	NT 1/2-20 NL	4
5	A40003025	W/A, DECK LIFT LINK	2
6	300600083	EXTENTION SPRING, 1.312 OD	2
7	300100059	EB .500-13 X 3.438	2
8	1500180	LINK PIVOT	1
9	1500181	SPACER, PIVOT	1
10	A40003026	CUT HEIGHT INDICATOR	1
11	300600035	BUSHING, STRAIGHT, 3/8 ID	1
12	2500730	DETENT ARM	1
13	300600032	SPRING, EXT, .50"	1
14	300600030	BUSHING, FLANGED, 5/8 ID	2
15	300100086	FW .375 SAE	4
16	300100150	NT .375-16	2
17	300100120	HHCS .375-16 X 1.250	1
18	300100021	FNYLK .500-13	10
19	300100074	FHHCS .500-13 X 1.500	6
20	300100076	CS .500-13 X 2.000 FL	2
21	300100093	FW .500 SAE	5
22	300100050	CP .500 X 1.375 LOCKING	4
23	300100191	CB .312-18 X 1.000	3
24	300100039	CB .250-20 X 1.000	1
25	300100078	FNT .250-20	1
26	300100156	NYLK .250-20	1
27	300100079	FNT .312-18	3
28	300100172	SB .375 X .750 X .312-18	1
29	300100196	NYLK .312-18 JAM	1
30	300100159	NYLK .375-16	2
31	300100042	CB .375-16 X 1.500	1
32	300100043	CB .375-16 X 1.750 G5 ZN	1
33	A40003027	W/A, LINK ARM	1
34	A40003030	HOC PIVOT ASSY	1
35	300600052	BUSHING, FLANGED, 3/4 ID	2
36	A40003028	W/A STOP LINK	1
37	1500159	STEERING SPACER	1
38	2500727	LINK ARM	1
39	A40003029	W/A, INDICATOR MOUNT	1
40	300100177	SB .500 C 1.125 X .375-16	1
41	300100087	FW .375 X .875 X .085 ZN	1
42	300100175	E-CLIP, 5/8 SHAFT	3
43	300100081	FNT .375-16	1
44	300100067	FHHCS .375-16 X 1.000	2
45	300100226	FW, .312 X .750 X .065	1

REVISION: A

A45004008
RANGER / RANGER PRO STEERING BRAKE

STEERING PIVOT ASSEMBLY - LEFT
SIDE SHOWN, RIGHT SIDE OPPOSITE.



NOTES:
1. DO NOT TORQUE HARDWARE. STEERING
LEVER MUST PIVOT WITH SLIGHT FRICTION.

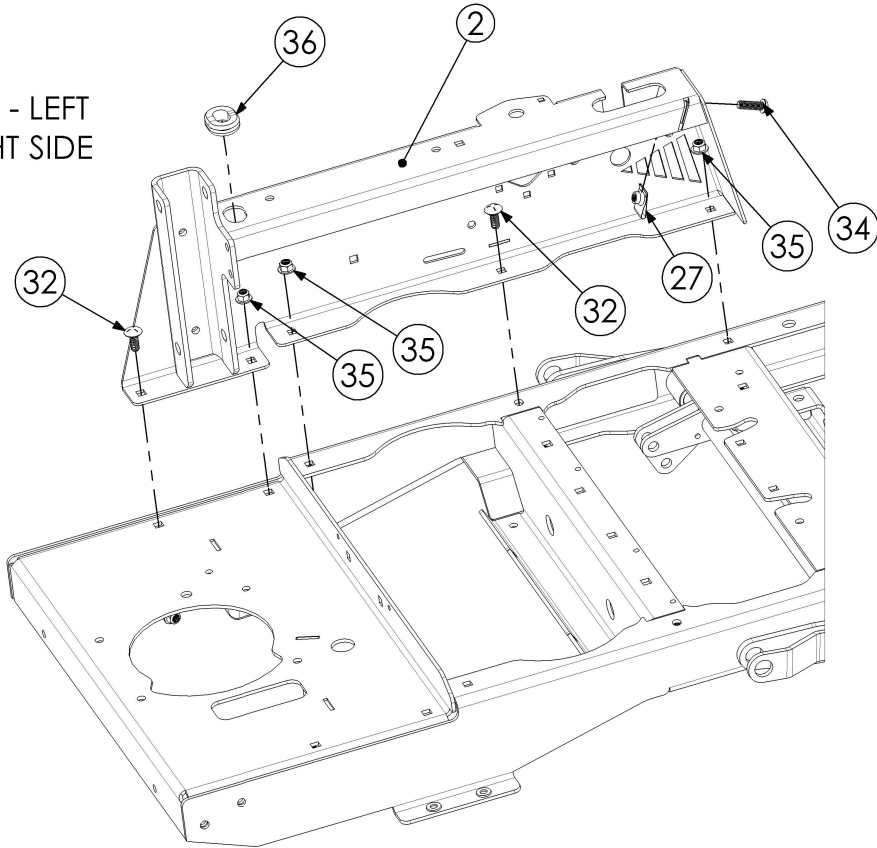
REVISION: A

FASTENER TORQUE VALUES	
FASTENER SIZE	TORQUE REQUIRED
1/4 - 20	8.2 FT-LBS
5/16 - 18	17 FT-LBS
3/8 - 16	30 FT-LBS
7/16 - 14	48 FT-LBS
1/2 - 13	73 FT-LBS
5/8 - 11	145 FT-LBS
3/4 - 10	260 FT-LBS

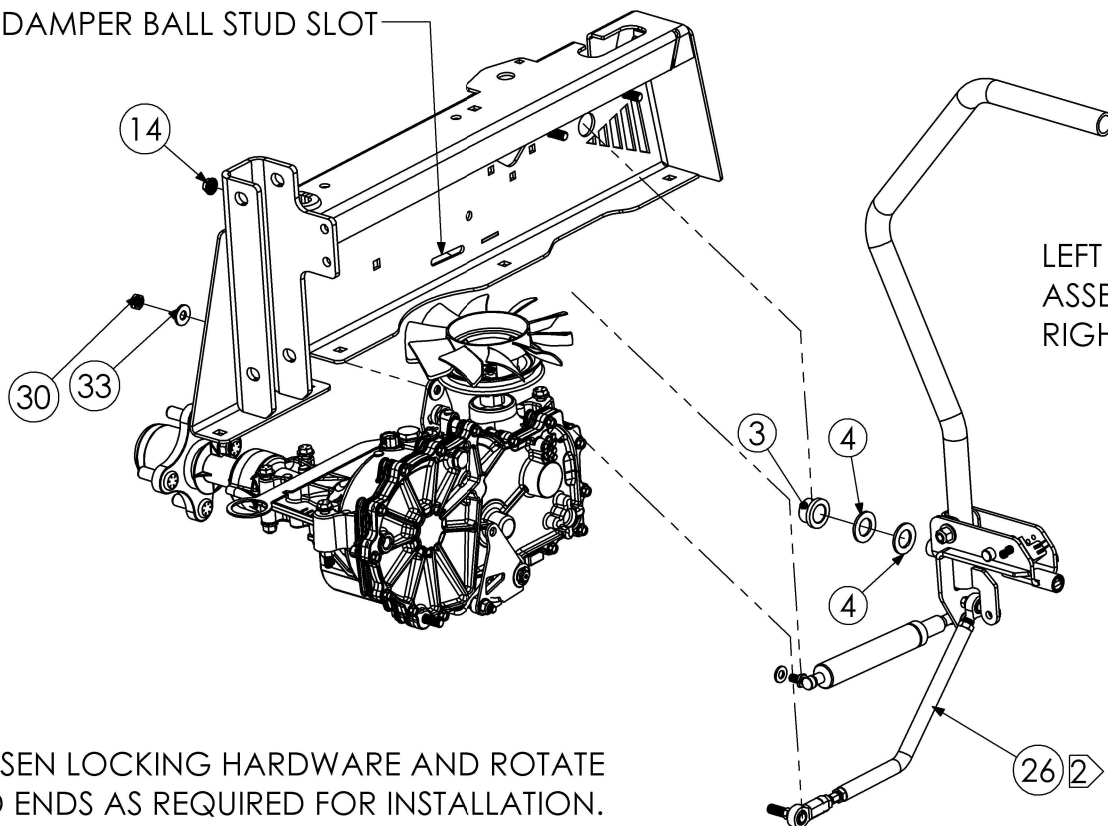
A45004008

RANGER / RANGER PRO STEERING BRAKE

PANEL MOUNTING - LEFT
SIDE SHOWN, RIGHT SIDE
OPPOSITE.



DAMPER BALL STUD SLOT

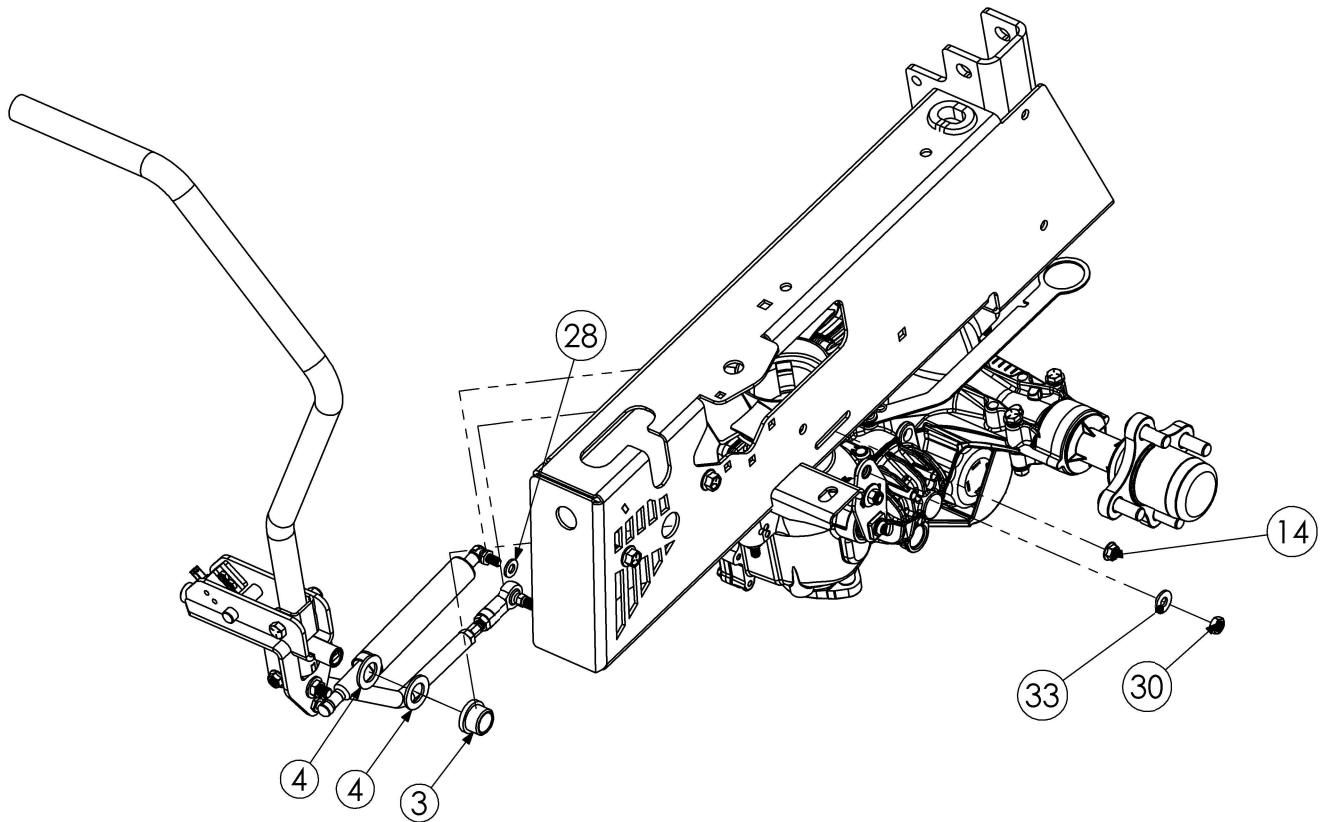


NOTES:

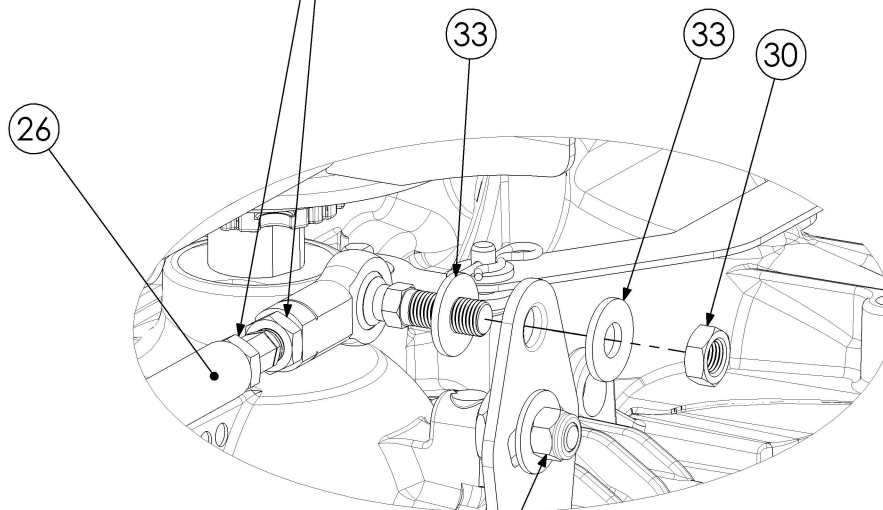
2. LOOSEN LOCKING HARDWARE AND ROTATE
ROD ENDS AS REQUIRED FOR INSTALLATION.
SECURE UPPER ROD END AFTER INSTALLATION.

A45004008

RANGER / RANGER PRO STEERING BRAKE



LOOSEN LOCKING HARDWARE AND ADJUST TURNBUCKLE AS NEEDED TO INSTALL ROD END INTO PUMP ARM. DO NOT TIGHTEN HARDWARE AFTER INSTALLATION.



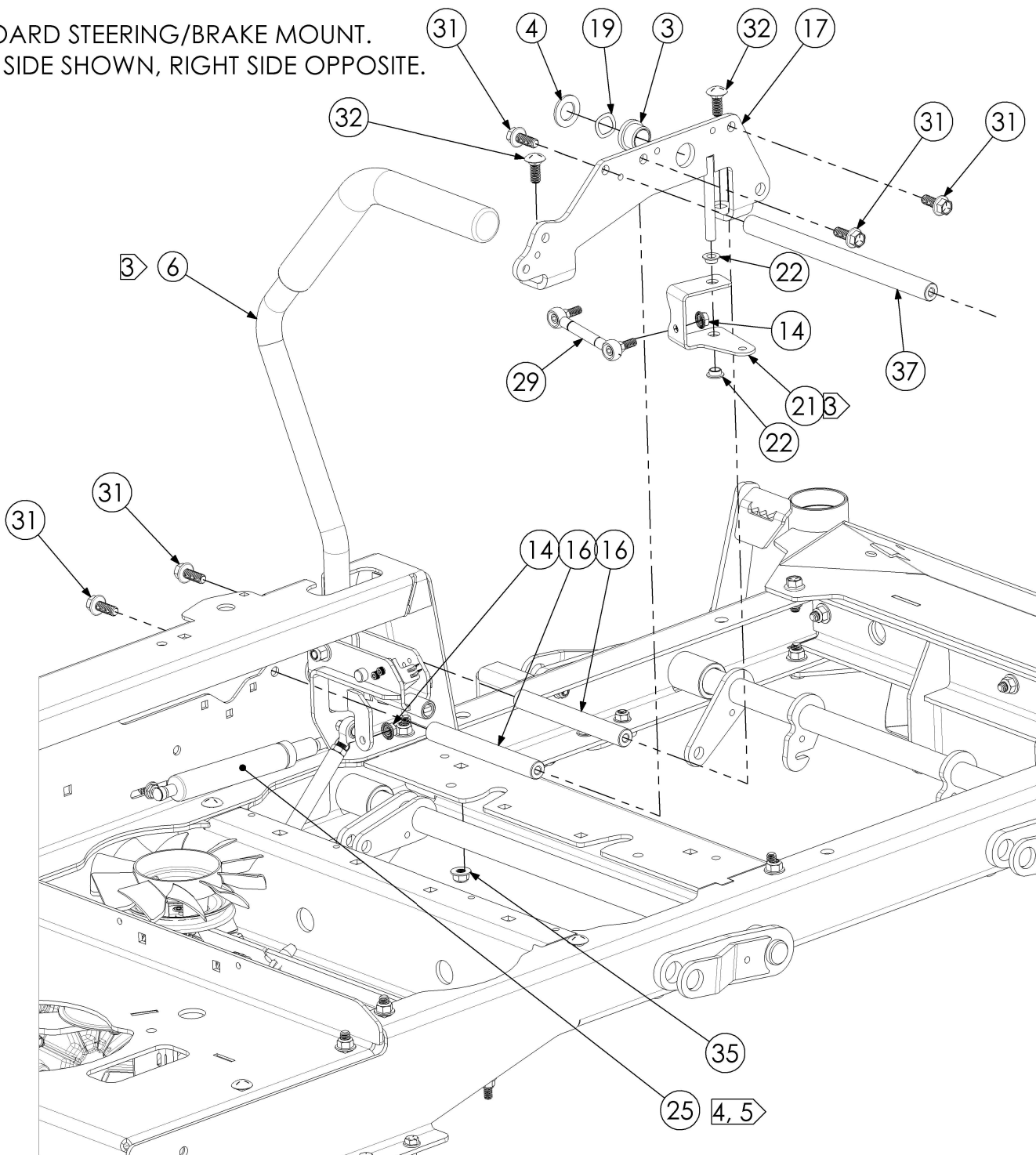
PUMP ROD INSTALLATION - LEFT SIDE SHOWN.
RIGHT SIDE OPPOSITE.

AFTER INSTALLING PUMP ADJUSTMENT ROD,
BACK ARM LOCKING HARDWARE OFF SO
NUT IS FLUSH WITH STUD.

A45004008

RANGER / RANGER PRO STEERING BRAKE

INBOARD STEERING/BRAKE MOUNT.
LEFT SIDE SHOWN, RIGHT SIDE OPPOSITE.



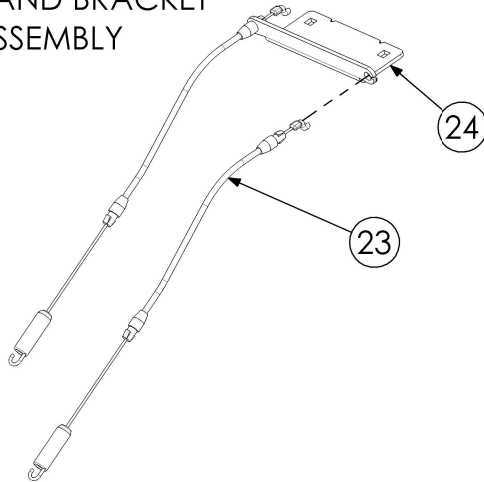
NOTES:

3. MUST PIVOT FREELY AFTER INSTALLATION.
4. WITH CONTROL ARM IN THE BRAKE POSITION, FULLY EXTEND DAMPER BY HAND AND ALLOW TO RETRACT TO ITS MID POSITION. INSTALL DAMPER AND HARDWARE INTO FRAME PANEL SLOT AND SECURE LOCKING HARDWARE.
5. AFTER DAMPER INSTALLATION, MOVE CONTROL ARM TO THE OPERATING POSITION, CYCLE LEVER TO THE FULL REVERSE POSITION AND RELEASE. VERIFY CONTROL ARM COMES BACK TO THE NEUTRAL/BRAKE SLOT. IF ARM DOES NOT CENTER IN THE SLOT, ADJUST REAR DAMPER HARDWARE AS NEEDED AND RE-CHECK THAT STEERING LEVER CENTERS IN THE SLOT.

A45004008

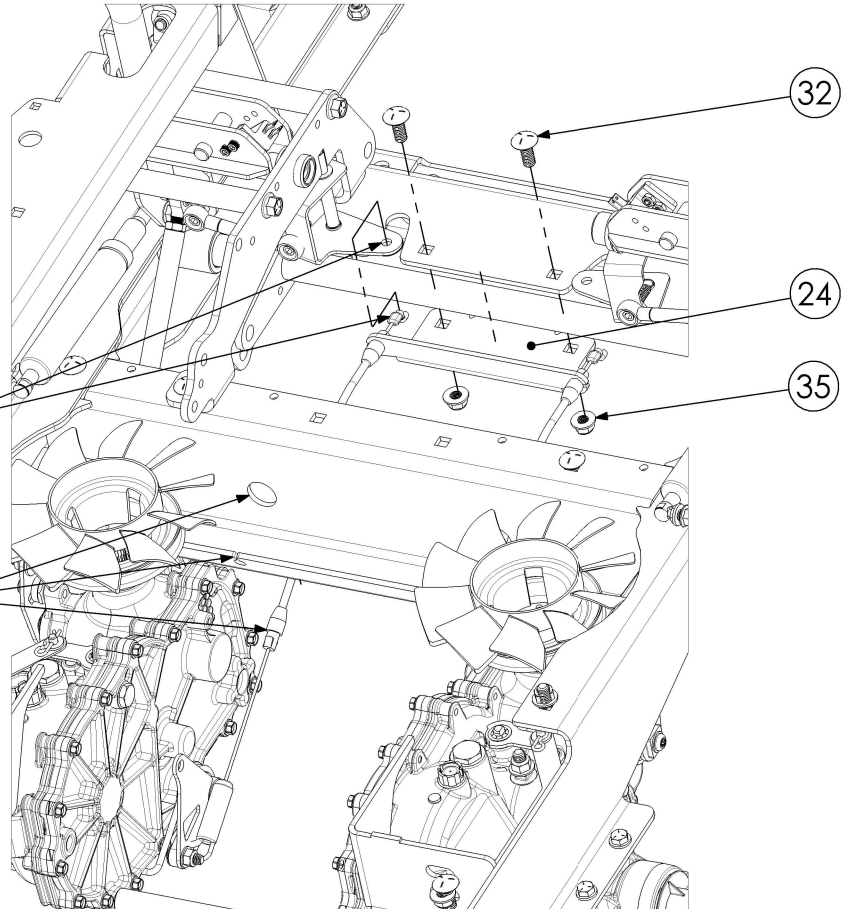
RANGER / RANGER PRO STEERING BRAKE

CABLE AND BRACKET ASSEMBLY

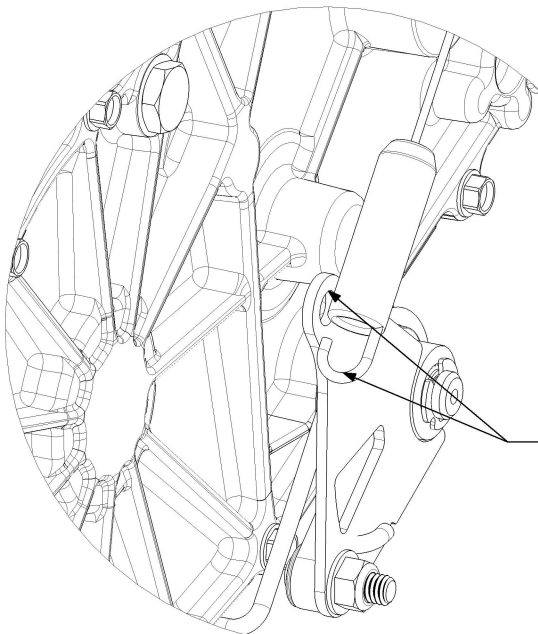


INSTALL ZEE FITTING THROUGH HOLE ON TOP SIDE OF BELL CRANK BEFORE MOUNTING BRACKET.

ROUTE REAR OF CABLE THROUGH HOLE IN CROSS MEMBER. SNAP FITTING INTO MOUNTING HOLE AT BASE.



BRAKE CABLE INSTALLATION



INSTALL SPRING HOOK INTO BRAKE ARM. ROTATE BRAKE ARM FORWARD BY HAND IF MORE SLACK IS NEEDED.

NOTES:

- MOVE CONTROL ARMS TO THE FULL FORWARD POSTION TO INSTALL ZEE FITTING AND ATTACH SPRING. THERE SHOULD BE SLACK IN THE CABLE ONCE INSTALLED.
- BRING ARMS BACK TO NEUTRAL AND MOVE TO THE BRAKE POSITION. VERIFY BRAKE ARM IS FULLY ENGAGED AND THE SPRING HAS BEEN EXTENDED. AXLE SHOULD NOT ROTATE.

A45004008

RANGER / RANGER PRO STEERING BRAKE

STEERING ADJUSTMENTS

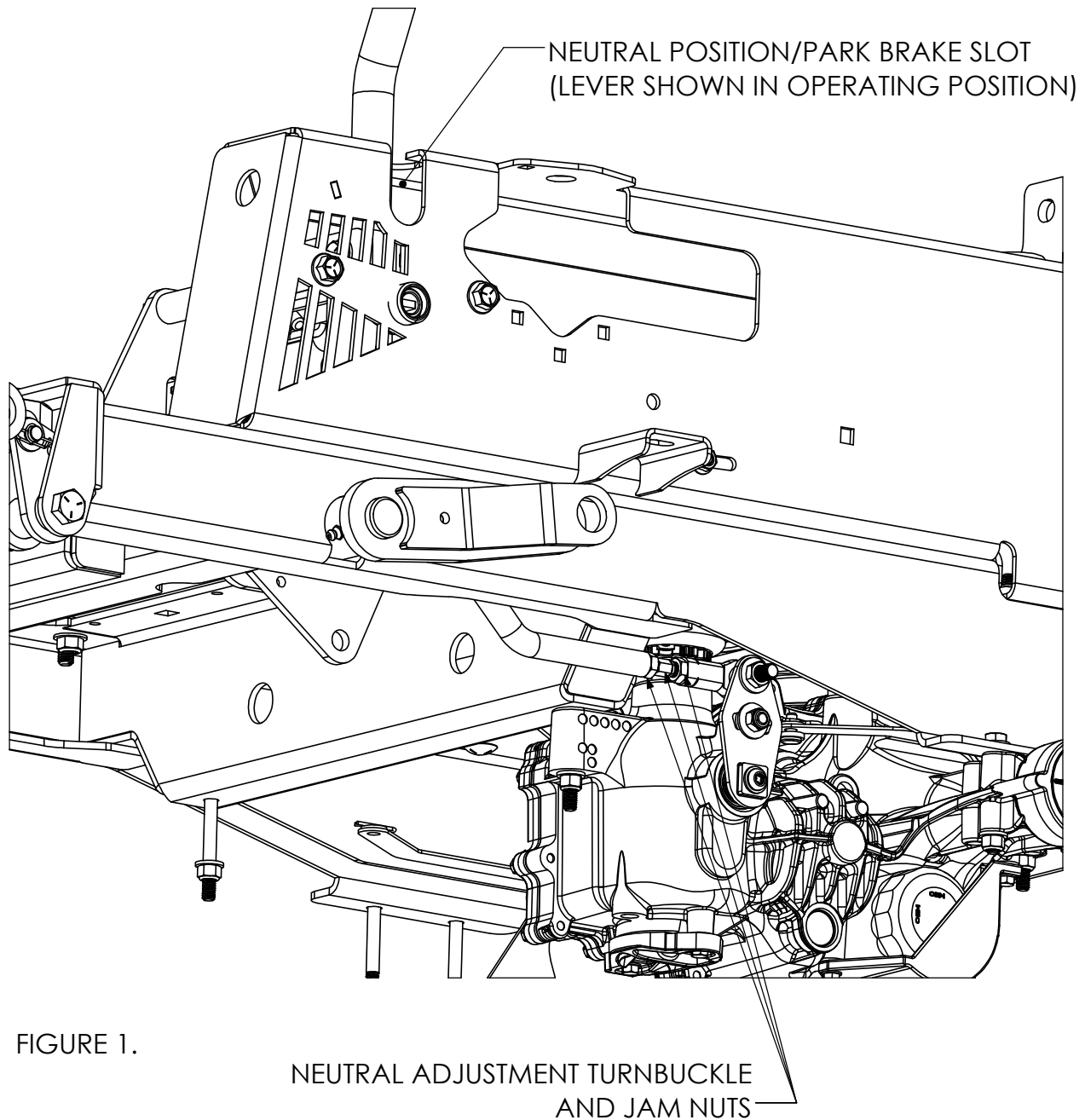


FIGURE 1.

NOTES:

- STEERING CONTROL LEVER NEUTRAL ADJUSTMENT: REFER TO STEERING CONTROL LEVER NEUTRAL ADJUSTMENT SECTION OF THE OPERATOR'S MANUAL FOR ADJUSTMENT PROCESS.

A45004008

RANGER / RANGER PRO STEERING BRAKE

STEERING ADJUSTMENTS CONTINUED

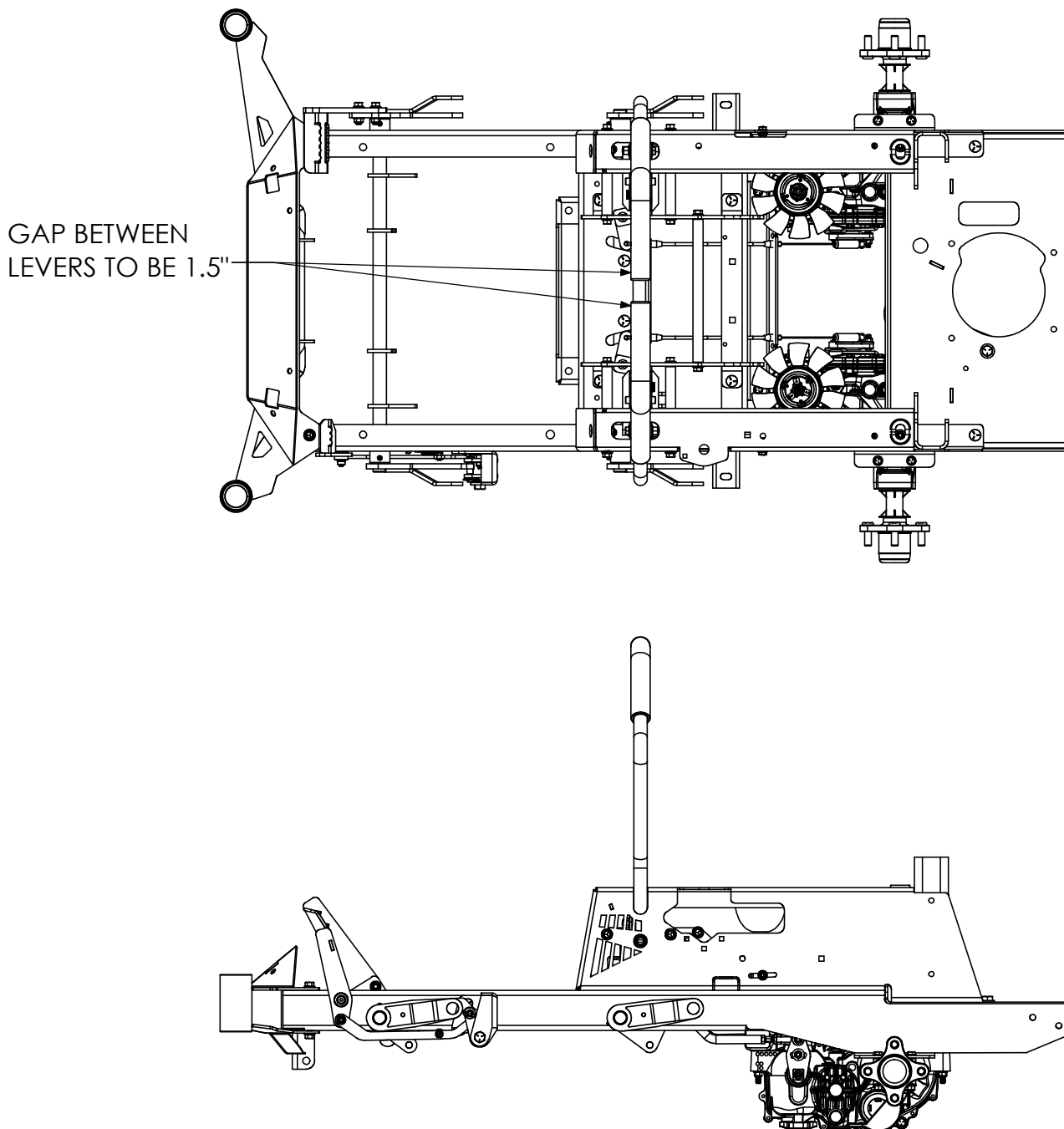


FIGURE 2.

NOTES:

- STEERING CONTROL LEVER NEUTRAL ADJUSTMENT: REFER TO STEERING CONTROL LEVER NEUTRAL ADJUSTMENT SECTION OF THE OPERATOR'S MANUAL FOR ADJUSTMENT PROCESS.
- THE STEERING CONTROL LEVERS SHOULD BE ADJUSTED SO THAT THEY ALIGN WITHIN $\pm .13"$ OF EACH OTHER WHEN IN THE NEUTRAL POSITION.

A45004008

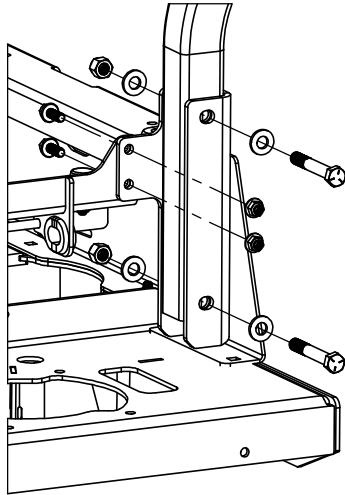
RANGER / RANGER PRO STEERING BRAKE

ITEM NO.	PART NUMBER	DESCRIPTION	TOTAL QTY.
1	A40006003	SIDE PANEL W/A, RH	1
2	A40006004	PANEL, LH SIDE	1
3	300600052	BUSHING, FLANGED, 3/4 ID	4
4	300100024	FW .765 X 1.312 X .09 SS	6
5	A40004020	W/A, STEER PIVOT	2
6	A40004035	W/A, STEER LEVER	2
7	2500584	SWITCH SPACER	2
8	301100025	SWITCH, NO	2
9	300600077	BALL STUD, 10MM	4
10	300100086	FW .375 SAE	6
11	300100159	NYLK .375-16	2
12	300100125	HHCS .375-16 X 2.250	2
13	300100166	NYLK 10-24 JAM	4
14	300100079	FNT .312-18	8
15	300100201	SHCS 10-24 X 0.750	4
16	1500159	STEERING SPACER	4
17	A40004021	W/A, STEERING PIVOT LS	1
18	A40004022	W/A, STEERING PIVOT RS	1
19	300100184	WW .752 X 1.062 X .115	2
20	2500586	BRAKE BELCRANK, RS	1
21	2500585	BRAKE BELLCRANK, LS	1
22	300600033	BUSHING, FLANGED, 3/8 ID	4
23	300200017	BRAKE CABLE ASSY	2
24	2500589	CABLE MOUNT, FRONT	1
25	300600039	DAMPER, CENTERING	2
26	300600074	PUMP ADJUSTMENT ROD	2
27	300100055	CLIP NUT, 3/8-16	2
28	300100017	FW .312 SAE	2
29	300600070	BALL JOINT LINK, 3.25"	2
30	300100151	NT .375-24 JAM	4
31	300100067	FHHCS .375-16 X 1.000	10
32	300100026	CB .375-16 X 1.000	16
33	300100087	FW .375 X .875 X .084	4
34	300100037	BHCS .375-16 X 1.250 SS TL	2
35	300100004	FLANGE NYLOCK, 3/8-16	16
36	301400015	GROMMET, 875ID	2
37	1500175	STEERING SPACER	1
38	300600024	GRIP, ROUND	2

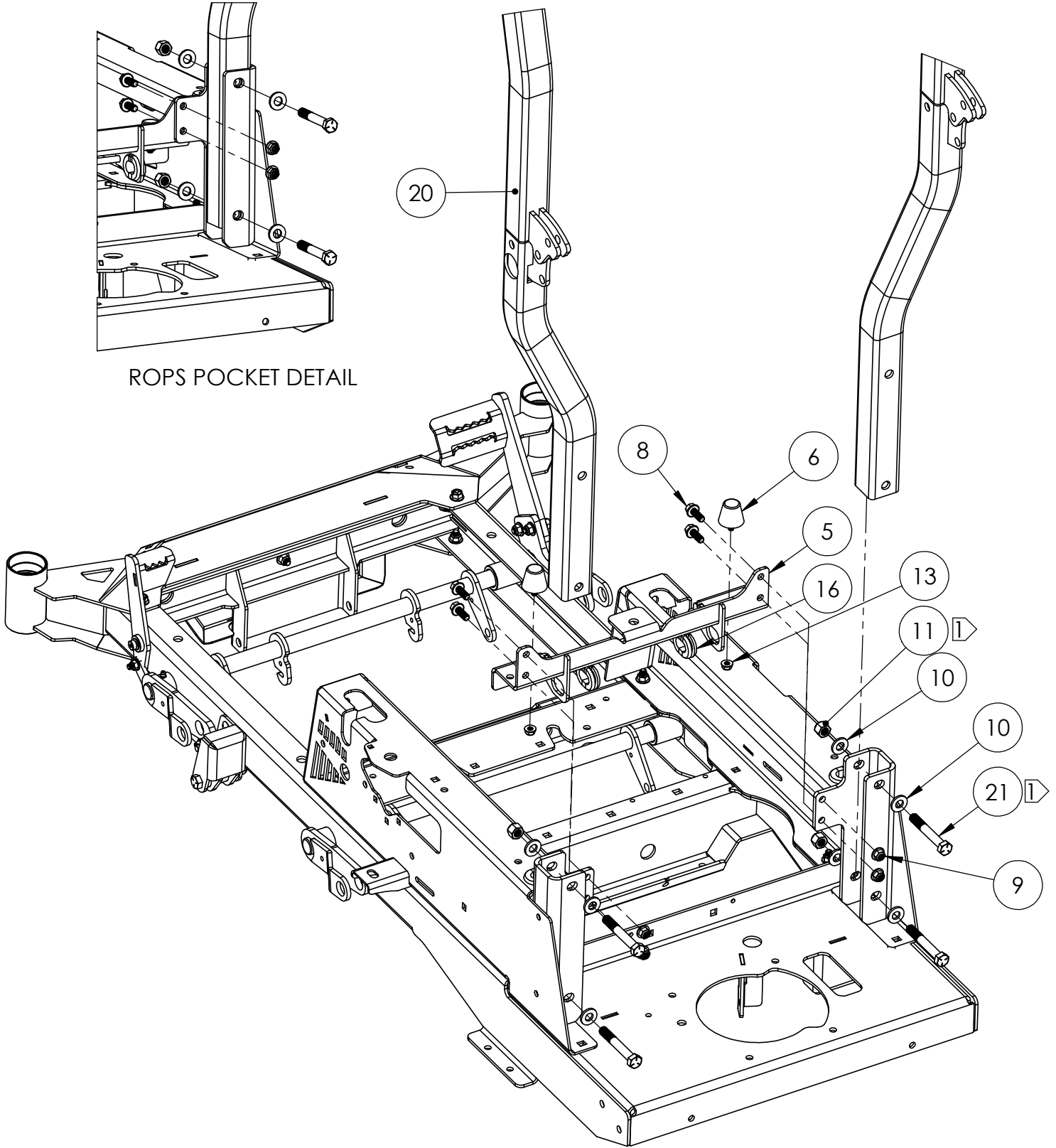
REVISION: A

A45006002

RANGER PRO SEAT



ROPS POCKET DETAIL



ROPS AND CROSSMEMBER ASSEMBLY

FASTENER TORQUE VALUES	
FASTENER SIZE	TORQUE REQUIRED
1/4 - 20	8.2 FT-LBS
5/16 - 18	17 FT-LBS
3/8 - 16	30 FT-LBS
7/16 - 14	48 FT-LBS
1/2 - 13	73 FT-LBS
5/8 - 11	145 FT-LBS
3/4 - 10	260 FT-LBS

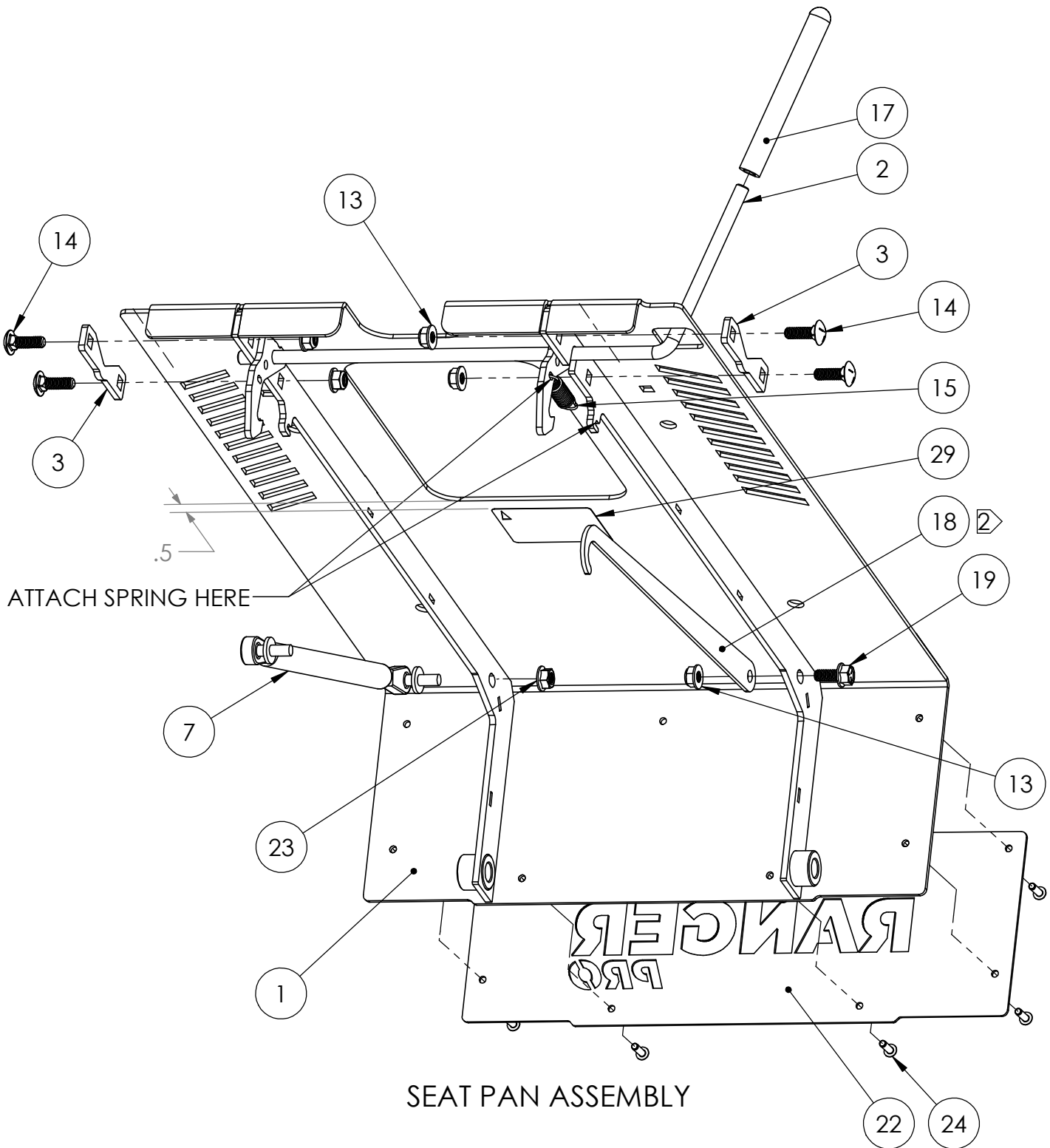
NOTES:

1. TORQUE ROPS HARDWARE TO 73 FT-LBS.
2. DO NOT TORQUE HARDWARE, MUST PIVOT FREELY, WITHOUT EXCESSIVE PLAY.

REVISION: A

A45006002

RANGER PRO SEAT



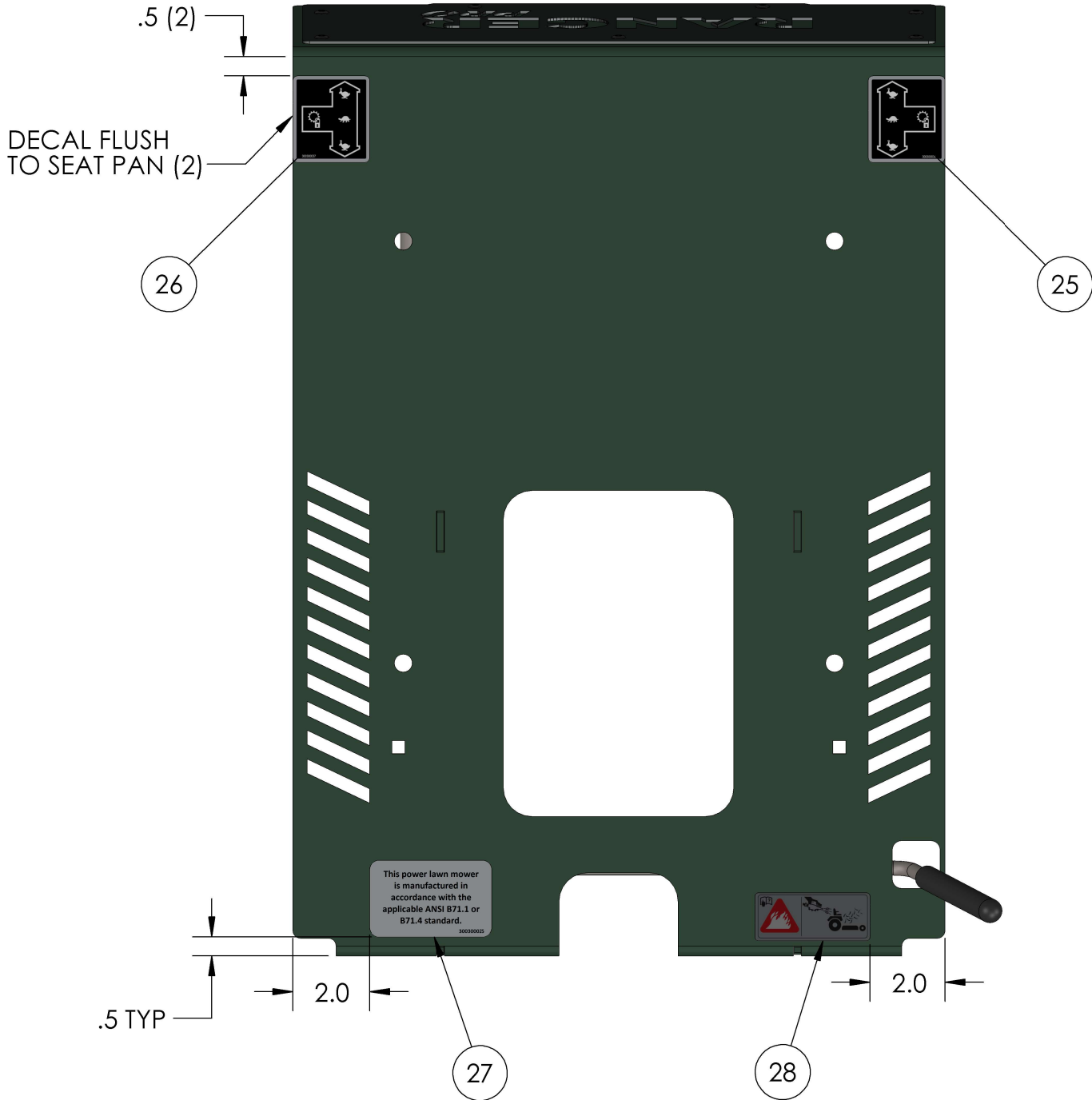
NOTES:

1. TORQUE ROPS HARDWARE TO 73 FT-LBS.
2. DO NOT TORQUE HARDWARE, MUST PIVOT FREELY, WITHOUT EXCESSIVE PLAY.

REVISION: A

A45006002

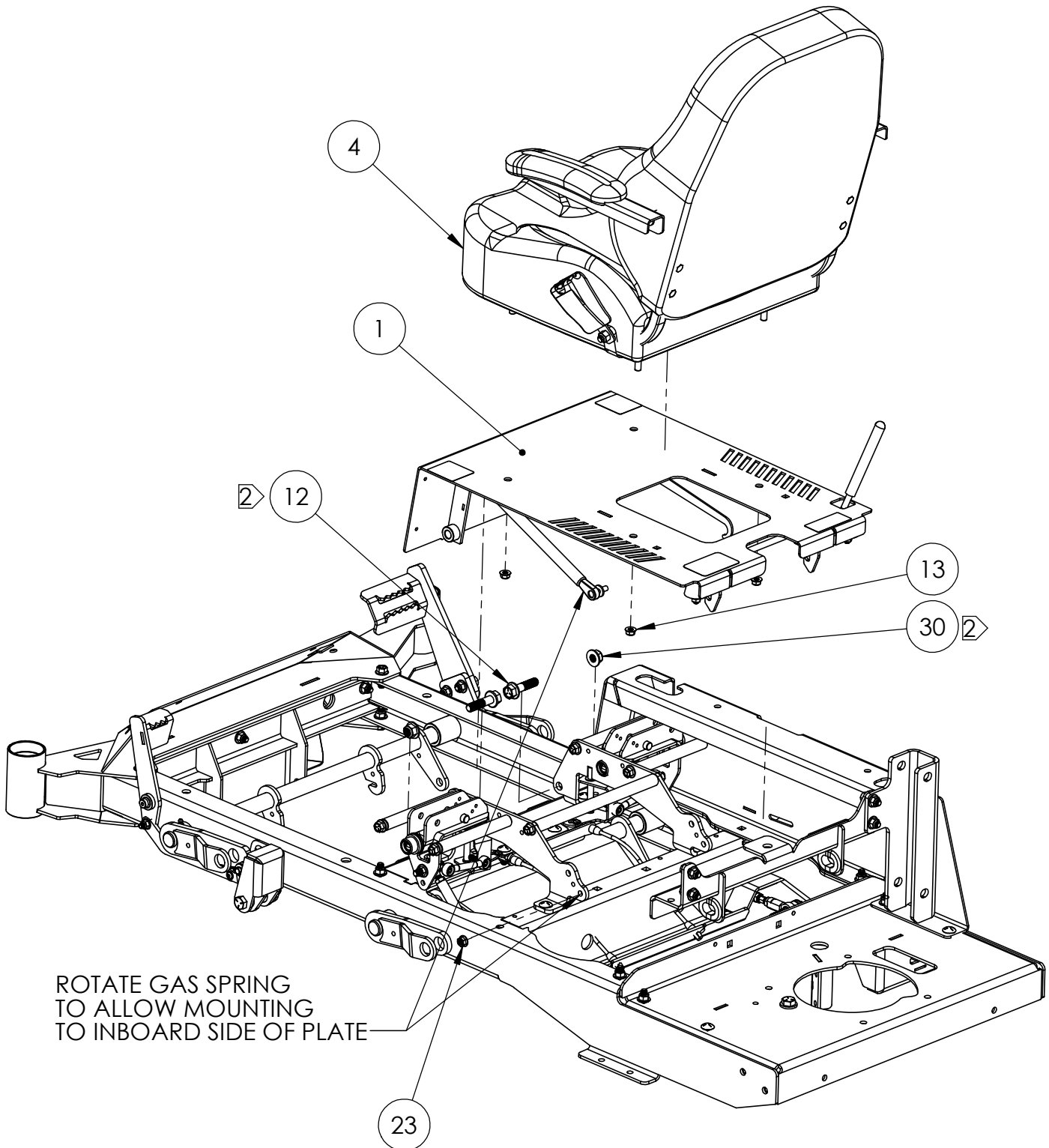
RANGER PRO SEAT



SEAT PAN DECALS

A45006002

RANGER PRO SEAT



ROTATE GAS SPRING
TO ALLOW MOUNTING
TO INBOARD SIDE OF PLATE

SEAT PAN AND SEAT MOUNTING

NOTES:

1. TORQUE ROPS HARDWARE TO 73 FT-LBS.
2. DO NOT TORQUE HARDWARE, MUST PIVOT FREELY, WITHOUT EXCESSIVE PLAY.

REVISION: A

A45006002

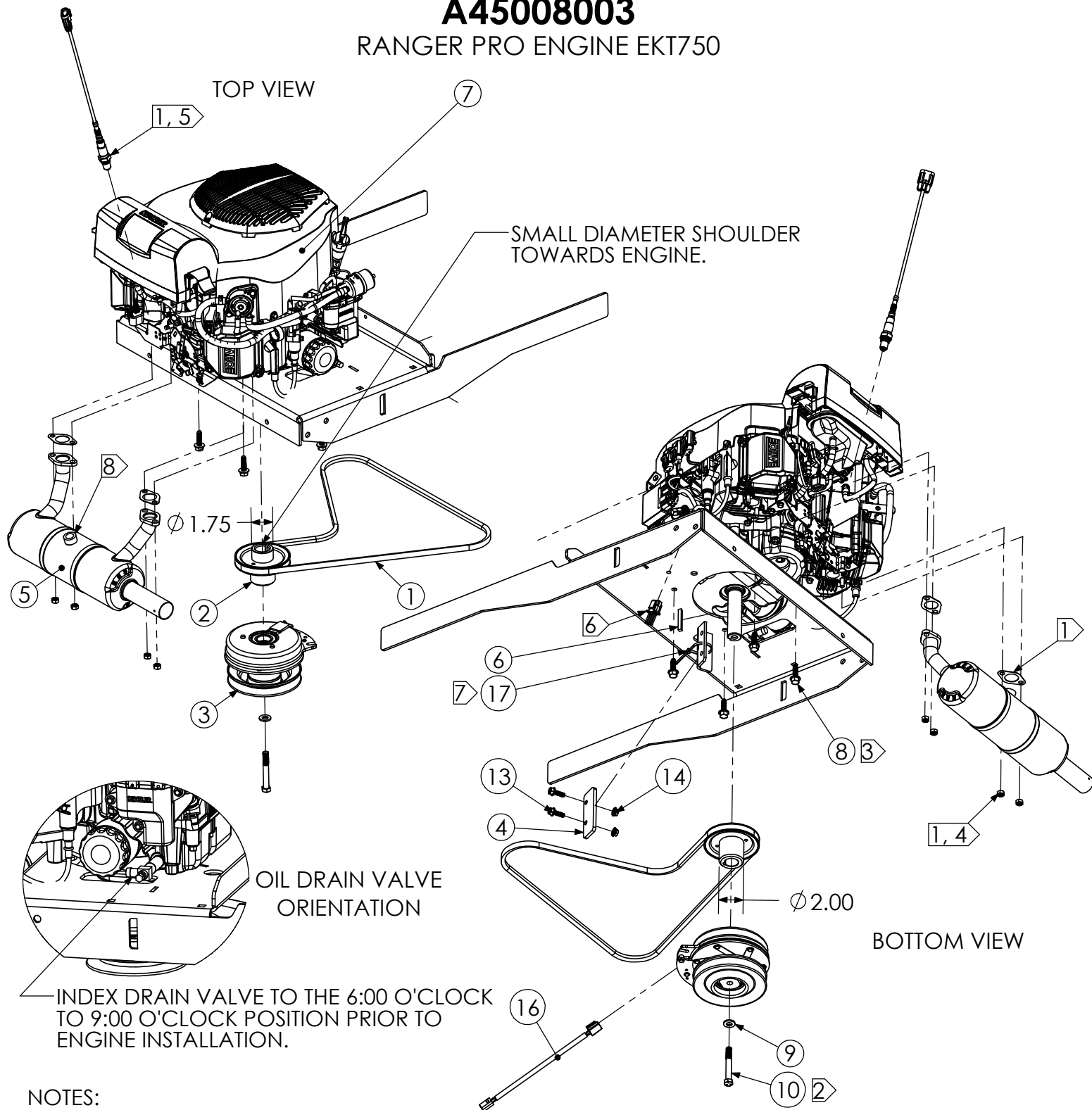
RANGER PRO SEAT

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	S45000013	SEATPAN W/A [W/ DECALS]	1
2	A40006018	LATCH W/A	1
3	2500403	PLATE, RETAINER	2
4	300700004	SEAT, SK230	1
5	A40006019	CROSSMEMBER WA	1
6	301400019	ISOLATOR, 1.50 X 1.26 CONICAL	2
7	300600085	GAS SPRING, 60LB	1
8	300100067	FHHCS .375-16 X 1.000	4
9	300100004	FLANGE NYLOCK, 3/8-16	4
10	300100093	FW .500 SAE	8
11	300100160	NYLK .500-13	4
12	300100076	FHHCS .500-13 X 2.000	2
13	300100009	FLANGE NYLOCK, 5/16-18	11
14	300100191	CB .312-18 X 1.000	4
15	300600032	SPRING, EXT, .50"	1
16	301400015	GROMMET, 875ID	2
17	300600061	GRIP, ROUND	1
18	2500740	SEAT STOP	1
19	300100061	FHHCS .312-18 X 0.750	1
20	300800002	ROPS ASSEMBLY, R/RP	1
21	300100138	HHCS .500-13 X 3.500	4
22	2500746	PLATE, R/P ID	1
23	300100213	FNT M8X1.25	2
24	300100207	RVT .188	7
25	300300036	DECAL, RH STEERING	1
26	300300037	DECAL, LH STEERING	1
27	300300025	DECAL, ANSI	1
28	300300018	DECAL, REMOVE DEBRIS	1
29	300300022	DECAL, BATTERY SAFETY	1
30	300100021	FNYLK .500-13	2

REVISION: A

A45008003

RANGER PRO ENGINE EKT750



NOTES:

1. SUPPLIED WITH ENGINE.
2. APPLY LOCTITE 242 TO THREADS. TORQUE TO 45-48 ft-lbs. REPLACE (DO NOT REUSE) THE CAP SCREW IF IT IS REMOVED OR LOOSENED. USE ONLY HAND TOOLS TO INSTALL THIS FASTENER.
3. TORQUE TO 44 ft-lbs. USE ONLY HAND TOOLS TO INSTALL THIS FASTENER.
4. TORQUE TO 20.5 ft-lbs.
5. TORQUE TO 14 ft-lbs. CONNECT TO ENGINE CONNECTOR. SECURE SO SENSOR CAN NOT TOUCH MUFFLER.
6. PART OF WIRE HARNESS.
7. SECURE CLUTCH PIGTAIL TO CLUTCH ANCHOR, ROUTE THROUGH ENGINE PLATE. CONNECT TO WIRE HARNESS.
8. REMOVE O2 SENSOR PLUG TO INSTALL SENSOR.

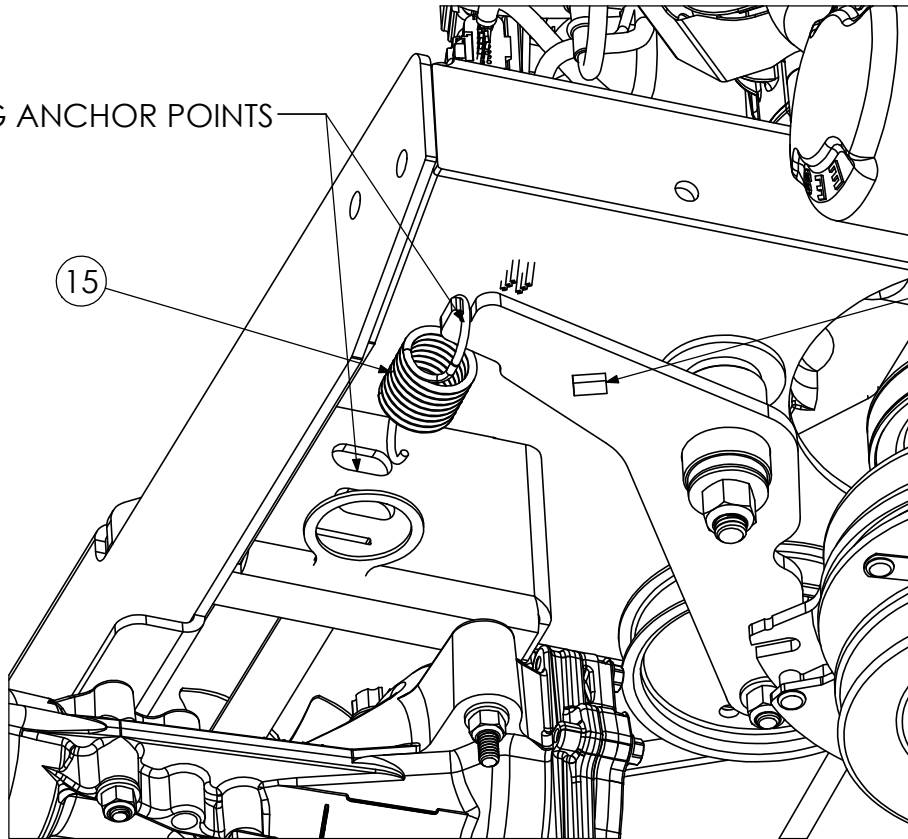
REVISION: A

FASTENER TORQUE VALUES	
FASTENER SIZE	TORQUE REQUIRED
1/4 - 20	8.2 FT-LBS
5/16 - 18	17 FT-LBS
3/8 - 16	30 FT-LBS
7/16 - 14	48 FT-LBS
1/2 - 13	73 FT-LBS
5/8 - 11	145 FT-LBS
3/4 - 10	260 FT-LBS

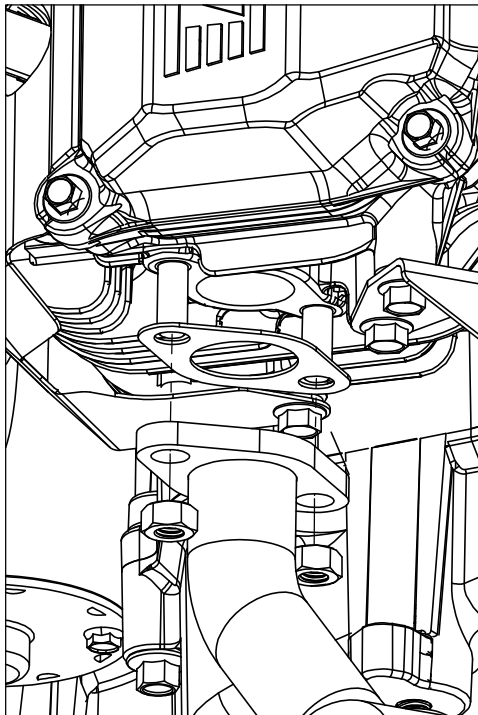
A45008003

RANGER PRO ENGINE EKT750

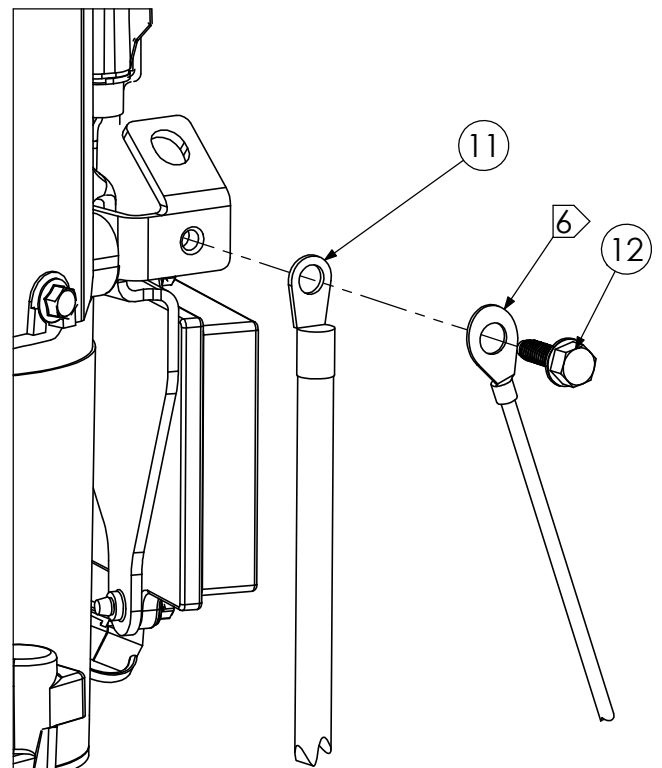
SPRING ANCHOR POINTS



USE 1/2 DRIVE SOCKET TOOL TO EXTEND SPRING AND PIVOT IDLER WHILE INSTALLING PUMP BELT.



EXHAUST GASKET
INSTALLATION

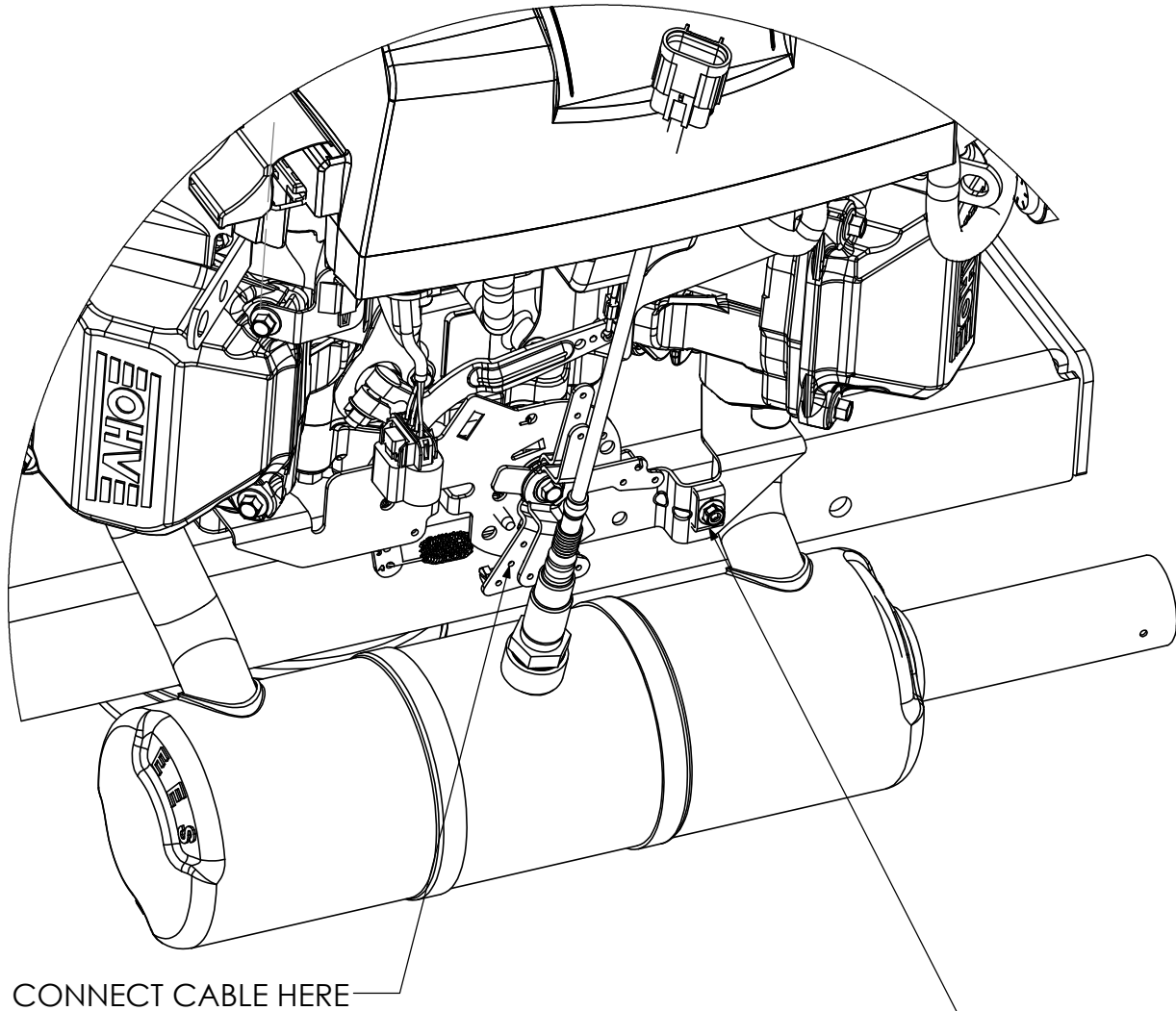


BATTERY CABLE
INSTALLTION

A45008003

RANGER PRO ENGINE EKT750

THROTTLE CABLE CONNECTION



WITH THROTTLE LEVER IN THE FULL SPEED DETENT POSITION (ENGINE NOT RUNNING), PULL CABLE TO FULL SPEED ON THE THROTTLE PLATE. TIGHTEN 8mm CABLE CLAMP BOLT.

AFTER ENGINE RUN-IN, VERIFY ENGINE RPM.
ENGINE SPEEDS SHOULD BE: 3600 RPM (+/-75 RPM)
HIGH SPEED, NO LOAD.
1750 RPM (+150/-250 RPM) GOV IDLE.

ADJUST CABLE IF NEEDED TO ACHIVE HIGH SPEED RPM.

A45008003

RANGER PRO ENGINE EKT750

ITEM NO.	PART NUMBER	DESCRIPTION	TOTAL QTY.
1	300200003	BELT, A SEC 66.2"	1
2	300500006	PULLEY, ENGINE 4.831 OP	1
3	300900009	CLUTCH, CMS200	1
4	2500468	CLUTCH ANCOR	1
5	300900008	MUFFLER, KOHLER KT/EKT	1
6	300500036	SQ KEY, .25 X 2.0	1
7	300900012	ENGINE, EKT750	1
8	300100199	FHHCS .375-16 X 1.250 TF	4
9	300100092	FW .474 X .937 X .101	1
10	300100128	HHCS .437-20 X 3.250	1
11	301100020	BATTERY CABLE, NEG 20.0"	1
12	300100202	FHHCS M6X1.0X20 TF	1
13	300100010	FLANGE HHCS, 5/16-18 X 1	2
14	300100079	FNT .312-18	2
15	300600075	SPRING, EXTENSION 1.25 OD	1
16	301100024	HARNESS, CLUTCH	1
17	300600091	WIRE TIE, 8.0"	1

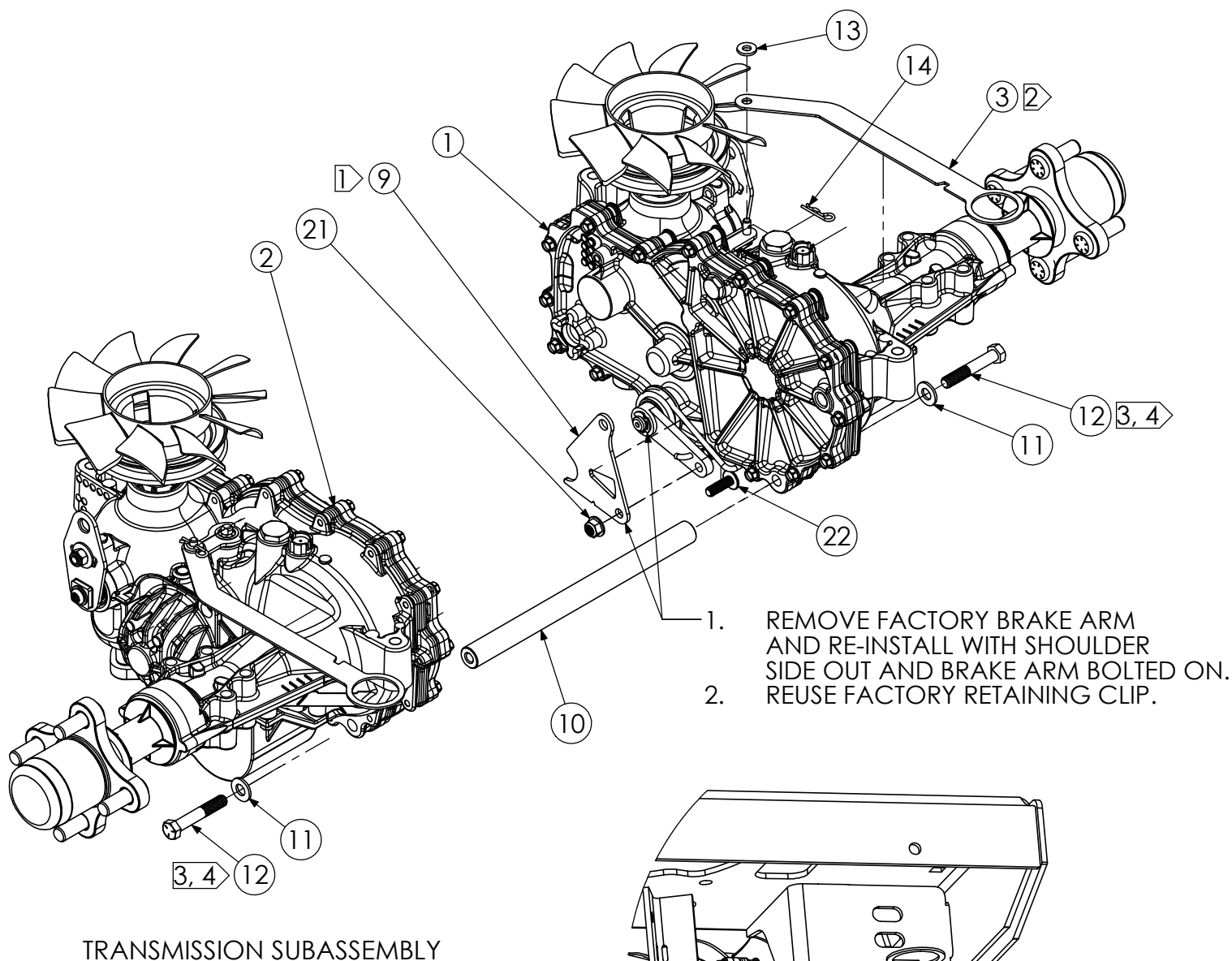
SERVICE PARTS FOR KOHLER EKT750

(CONTACT AUTHORIZED KOHLER DEALER/DISTRIBUTOR)

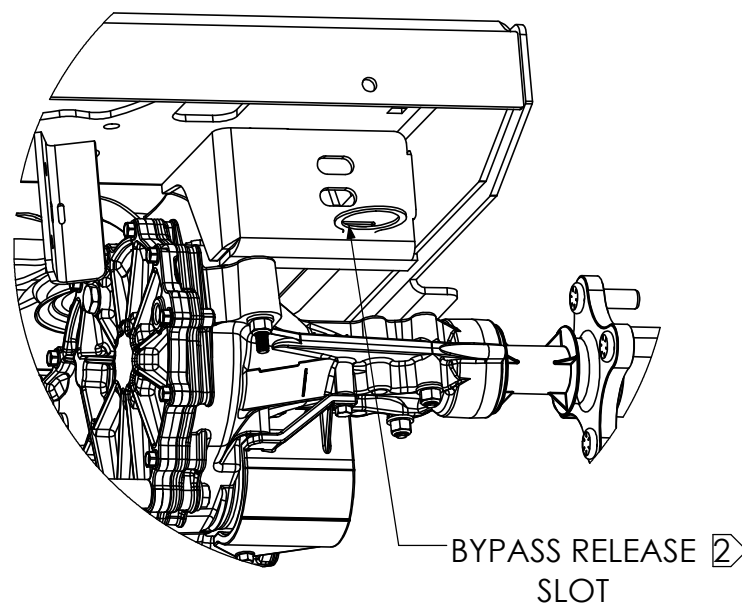
KOHLER PART NUMBER	DESCRIPTION
12 050 01-S	OIL FILTER
24 050 13-S	FILTER, FUEL
25 132 14-S	SPARK PLUG, RFI
32 050 06-S	FILTER, BREATHER
32 083 13-S	ELEMENT, AIR FILTER
32 083 14-S	ELEMENT, PRE-CLEANER

A45009004

GROUND DRIVE, RANGER PRO ZT3400



TRANSMISSION SUBASSEMBLY



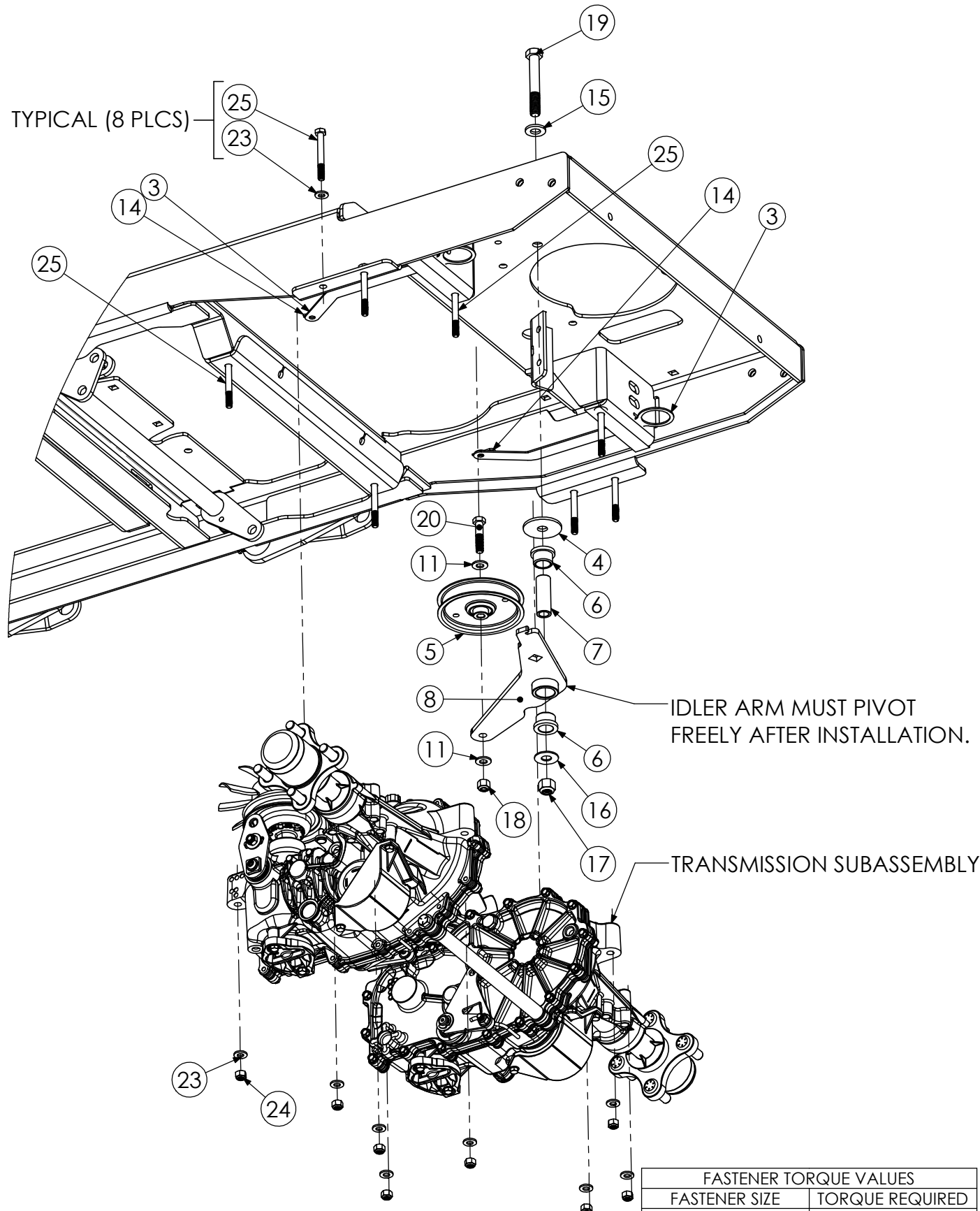
NOTES:

1. LEFT SIDE BRAKE ARM ASSEMBLED OPPOSITE SHOWN.
2. BYPASS RELEASE MUST BE INSERTED THROUGH SLOT IN REAR TRANSMISSION MOUNT. LEFT SIDE SIMILAR.
3. APPLY LOCTITE 242 TO THREADS PRIOR TO ASSEMBLY
4. TORQUE TO 35-37 Ft.Lb. AFTER INSTALLATION INTO FRAME.

FASTENER TORQUE VALUES	
FASTENER SIZE	TORQUE REQUIRED
1/4 - 20	8.2 FT-LBS
5/16 - 18	17 FT-LBS
3/8 - 16	30 FT-LBS
7/16 - 14	48 FT-LBS
1/2 - 13	73 FT-LBS
5/8 - 11	145 FT-LBS
3/4 - 10	260 FT-LBS

REVISION: A

A45009004
GROUND DRIVE, RANGER PRO ZT3400



REVISION: A

FASTENER TORQUE VALUES	
FASTENER SIZE	TORQUE REQUIRED
1/4 - 20	8.2 FT-LBS
5/16 - 18	17 FT-LBS
3/8 - 16	30 FT-LBS
7/16 - 14	48 FT-LBS
1/2 - 13	73 FT-LBS
5/8 - 11	145 FT-LBS
3/4 - 10	260 FT-LBS

A45009004

GROUND DRIVE, RANGER PRO ZT3400

ITEM NO.	PART NUMBER	DESCRIPTION	TOTAL QTY.
1	301000005	TRANSMISSION, 3400 RH	1
2	301000006	TRANSMISSION, 3400 LH	1
3	2500591	BYPASS RELEASE	2
4	300100095	FW .531 X 2.000 X .125	1
5	300500059	PULLEY, 4.00 IN	1
6	300600052	BUSHING, FLANGED, 3/4 ID	2
7	1500161	PIVOT SPACER	1
8	A40009005	W/A, IDLER IARM	1
9	2500590	BRAKE ARM	2
10	1500158	TRANSMISSION SPACER	1
11	300100086	FW .375 SAE	4
12	300100125	HHCS .375-16 X 2.250	2
13	300100085	FW .250 SAE	2
14	300100047	CP .312 X 1.250	2
15	300100093	FW .500 SAE	1
16	300100094	FW .531 X 1.250 X 0.062 SS	1
17	300100160	NYLK .500-13	1
18	300100159	NYLK .375-16	1
19	300100138	HHCS .500-13 X 3.500	1
20	300100122	HHCS .375-16 X 1.750	1
21	300100009	FLANGE NYLOCK, 5/16-18	2
22	300100035	FBHCS .312-18 X 1.000	2
23	300100017	FW .312 SAE	16
24	300100018	NYLK .312-18	8
25	300100116	HHCS .312-18 X 2.750	8

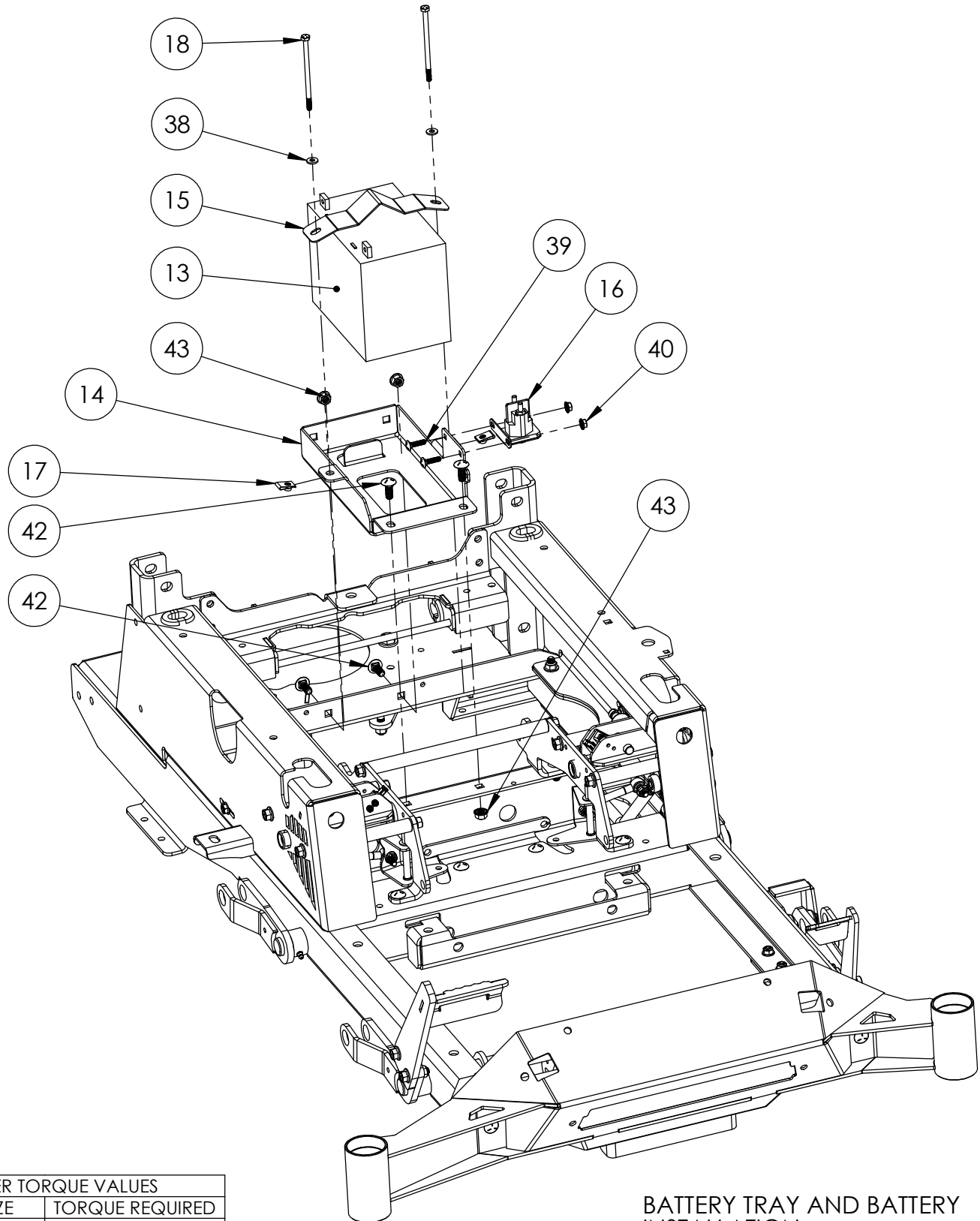
SERVICE PARTS FOR HYDRO-GEAR ZT3400

(CONTACT AUTHORIZED HYDRO-GEAR DEALER/DISTRIBUTOR)

HYDRO-GEAR PART NUMBER	DESCRIPTION
72750	KIT, OIL SERVICE [INCLUDES OIL/FILTERS]
52114	OIL FILTER
72656	KIT, FAN/PULLEY
53973	BRAKE ARM
52446	HUB W/STUDS

REVISION: A

A45011002
RANGER PRO FUEL & INST PANEL

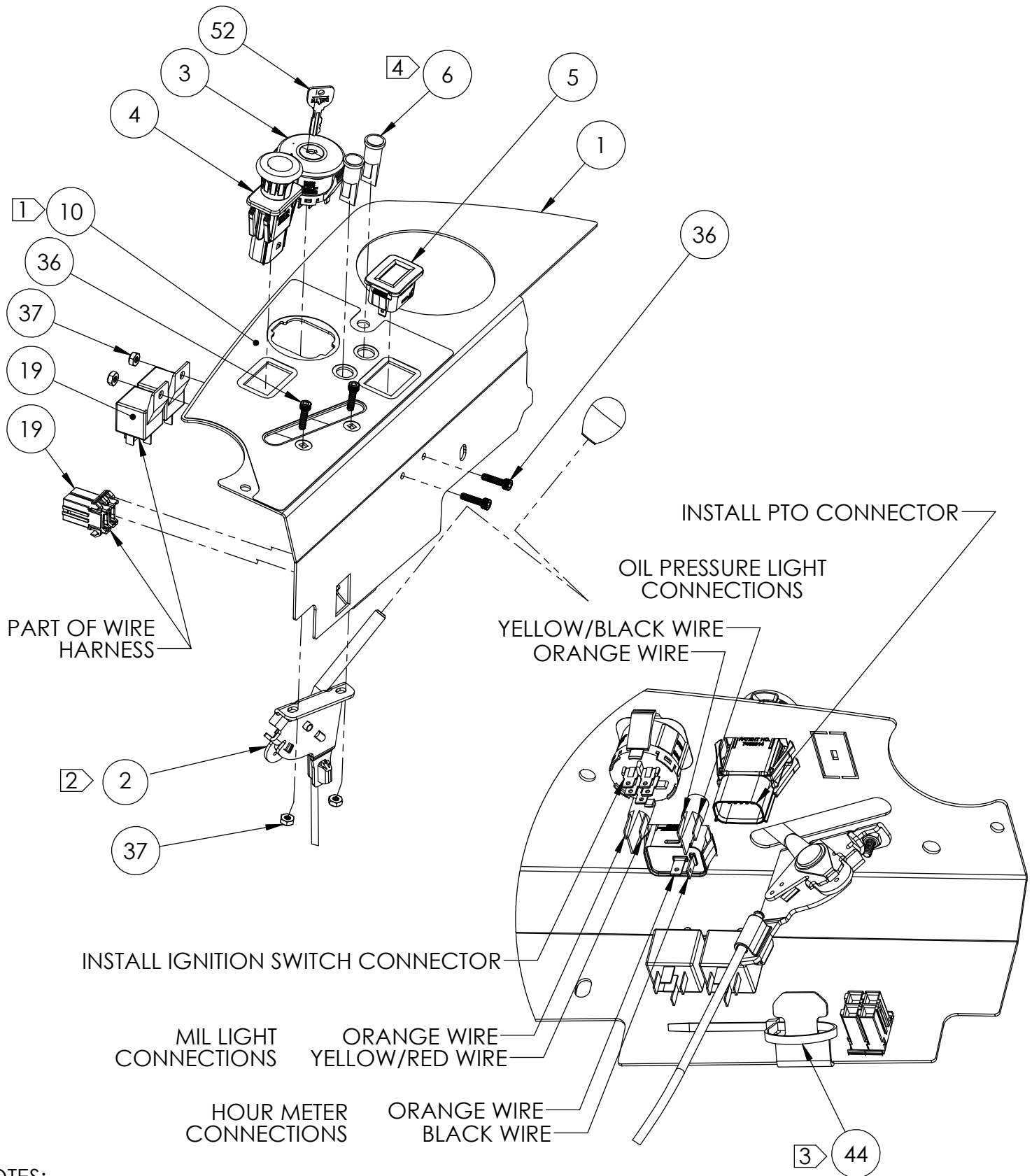


FASTENER TORQUE VALUES	
FASTENER SIZE	TORQUE REQUIRED
1/4 - 20	8.2 FT-LBS
5/16 - 18	17 FT-LBS
3/8 - 16	30 FT-LBS
7/16 - 14	48 FT-LBS
1/2 - 13	73 FT-LBS
5/8 - 11	145 FT-LBS
3/4 - 10	260 FT-LBS

BATTERY TRAY AND BATTERY
INSTALLATION

A45011002

RANGER PRO FUEL & INST PANEL

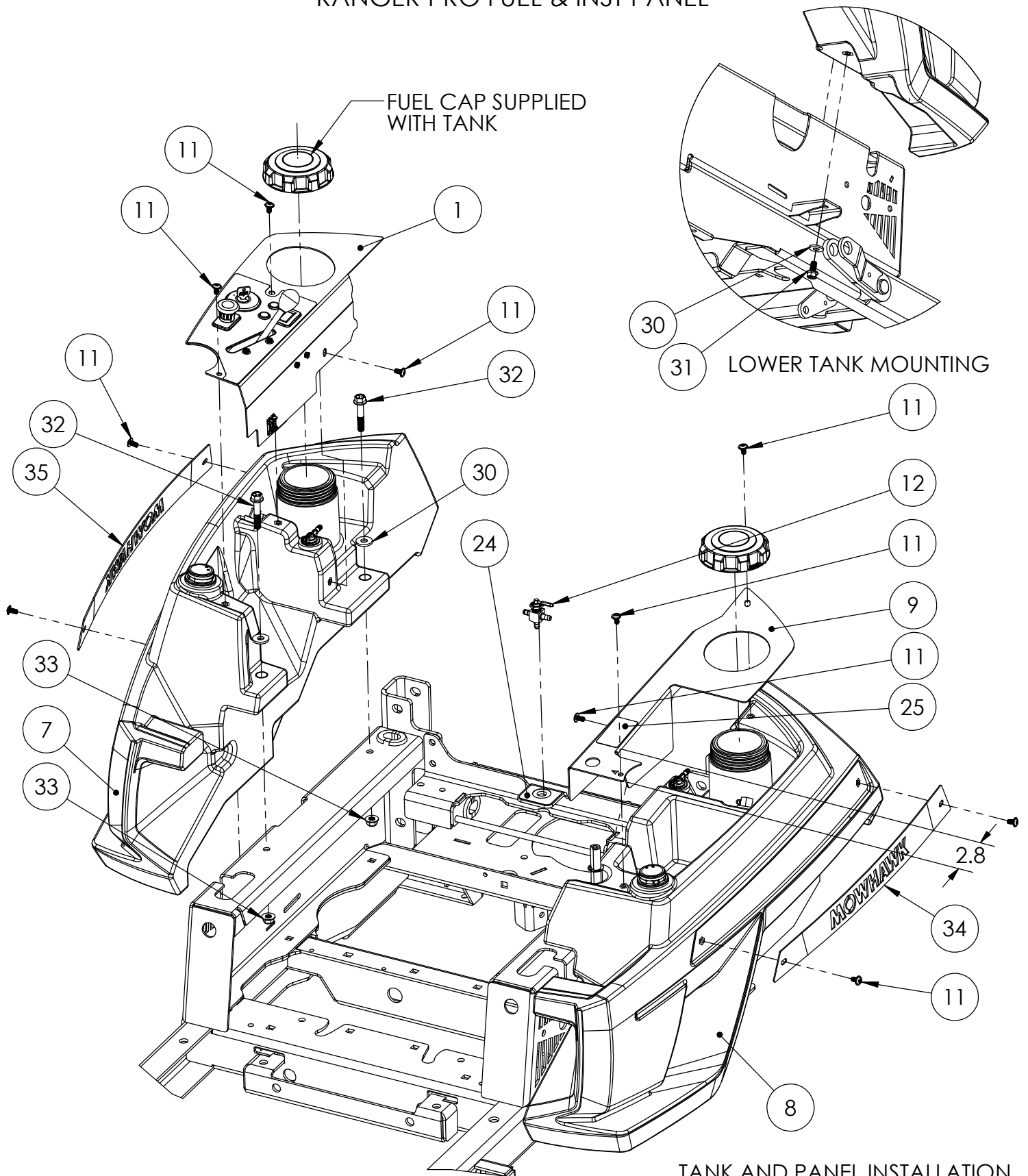


NOTES:

1. INSTALL DECAL WITH CUTOUTS CENTERED WITH PANEL OPENINGS.
2. INSTALL KNOB AFTER THROTTLE CABLE IS INSTALLED.
3. SECURE MAIN WIRE HARNESS TRUNK TO PANEL.
4. INDICATOR LIGHTS ARE POLARITY SPECIFIC.
ORANGE WIRE TO "+" SIDE.

A45011002

RANGER PRO FUEL & INST PANEL

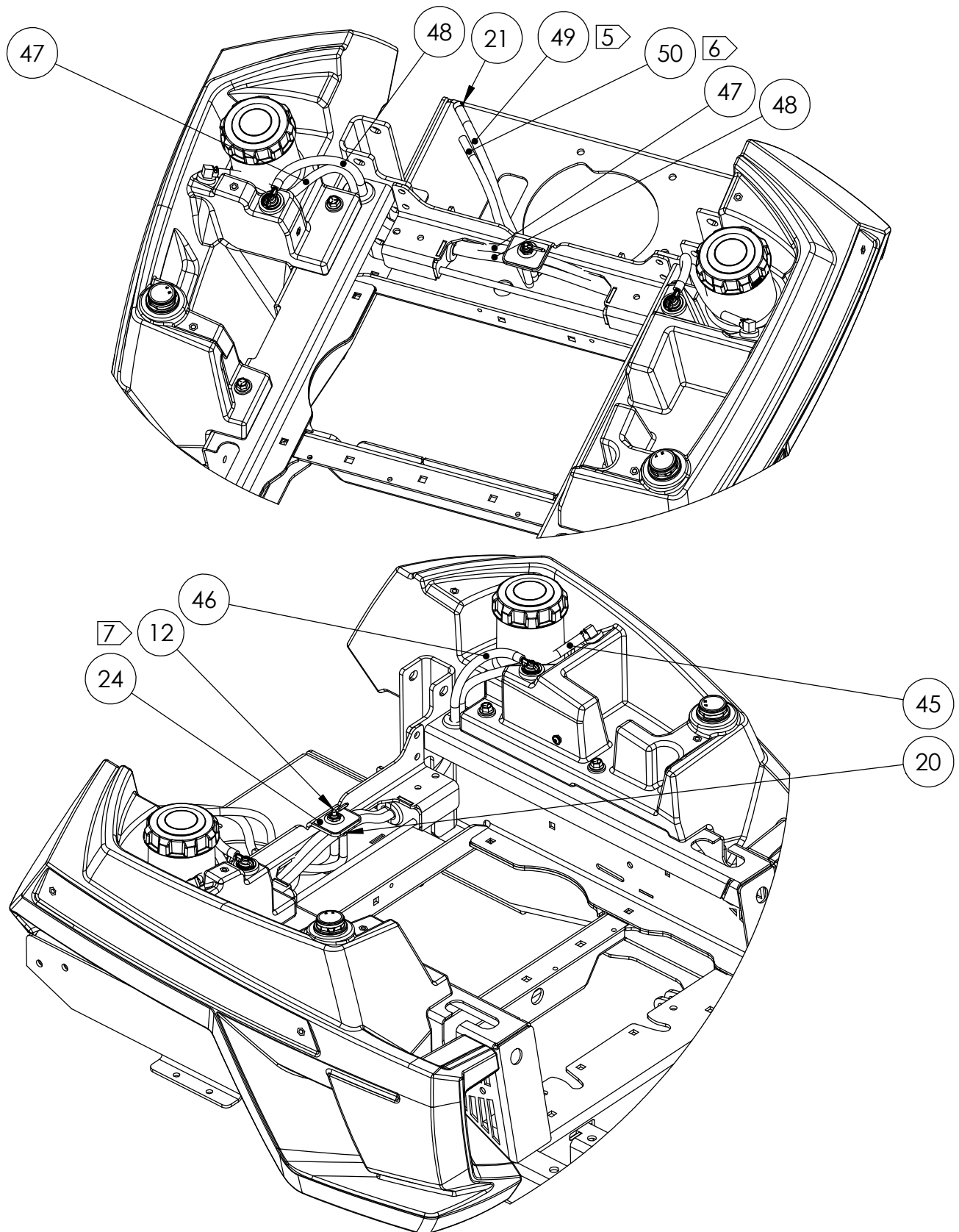


- NOTES:
- FUEL LINES CAN BE INSTALLED TO VALVE BEFORE MOUNTING VALVE TO CROSSMEMBER.
- DO NOT USE WASHER SUPPLIED WITH FUEL VALVE.
- DEPRESS CENTER OF TANK ID BADGE WHILE TIGHTENING HARDWARE.

REVISION: A

A45011002

RANGER PRO FUEL & INST PANEL



NOTES:

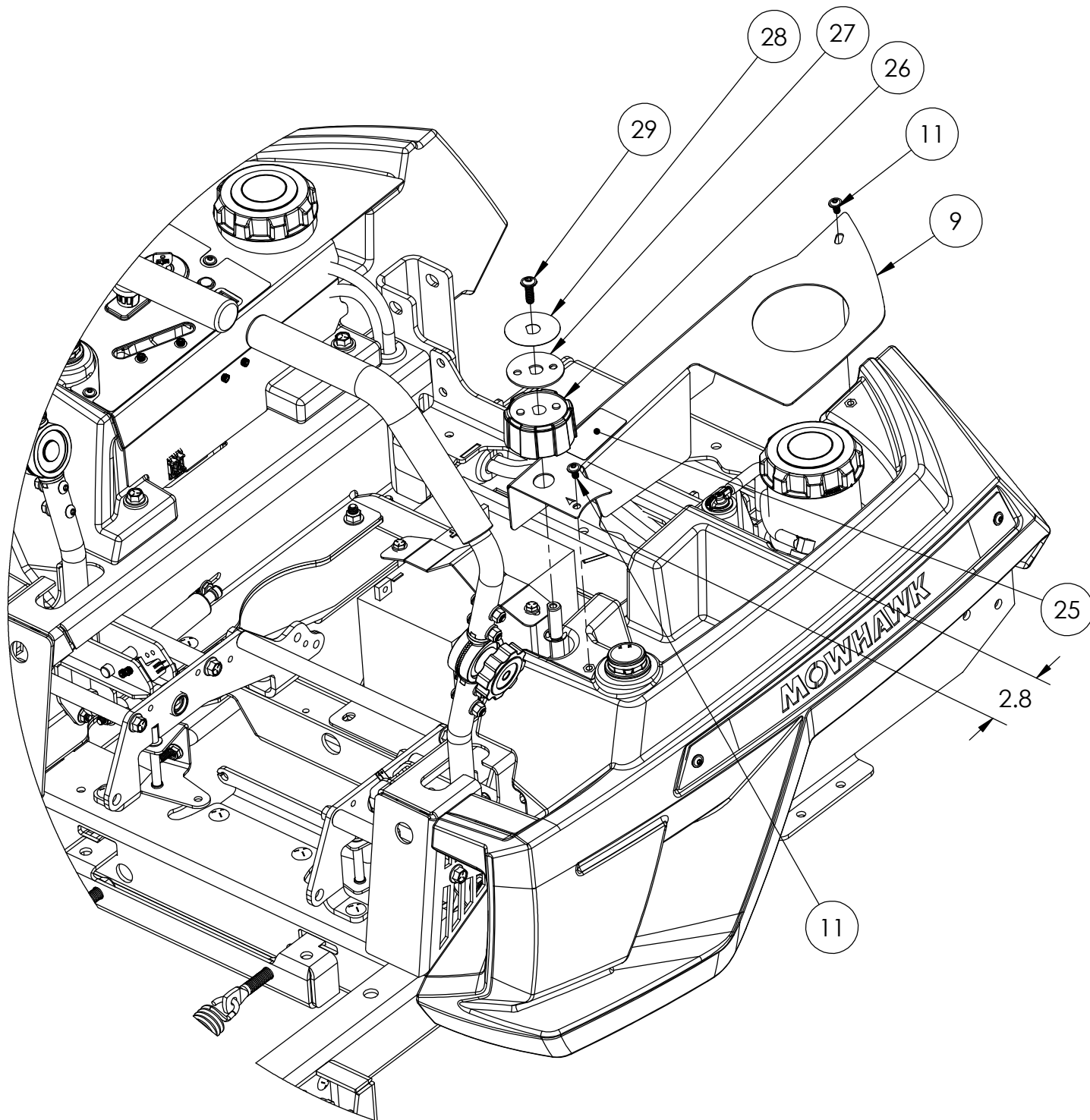
- 5. CONNECT TO ENGINE FUEL FILTER.
- 6. CONNECT TO ENGINE EVAP LINE (3/16" FITTING).
- 7. DO NOT USE WASHER SUPPLIED WITH FUEL VALVE. INSTALL VALVE WITH OFF POSTION TO FRONT OF VEHICLE.

TANK LINES ARE SYMETRICAL. ORIENT AS SHOWN THROUGH GROMMETS.

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RANGER PRO FUEL & INST PANEL



HOC KNOB INSTALLATION

NOTES:

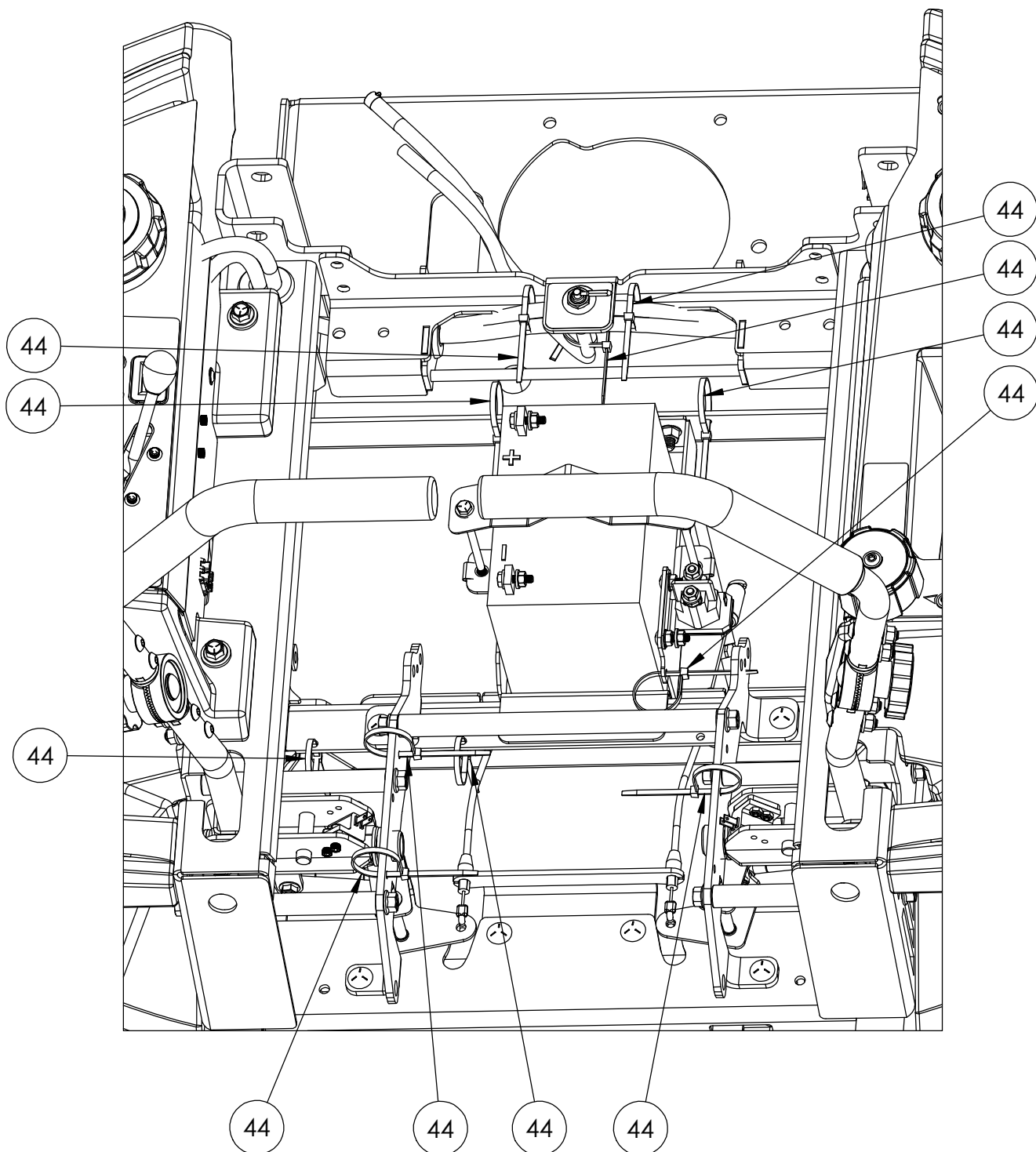
- HOC KNOB CAN ONLY BE INSTALLED AFTER TANK AND COVER ARE INSTALLED.

REVISION: A

A45011002

RANGER PRO FUEL & INST PANEL

WIRE TIE LOCATIONS



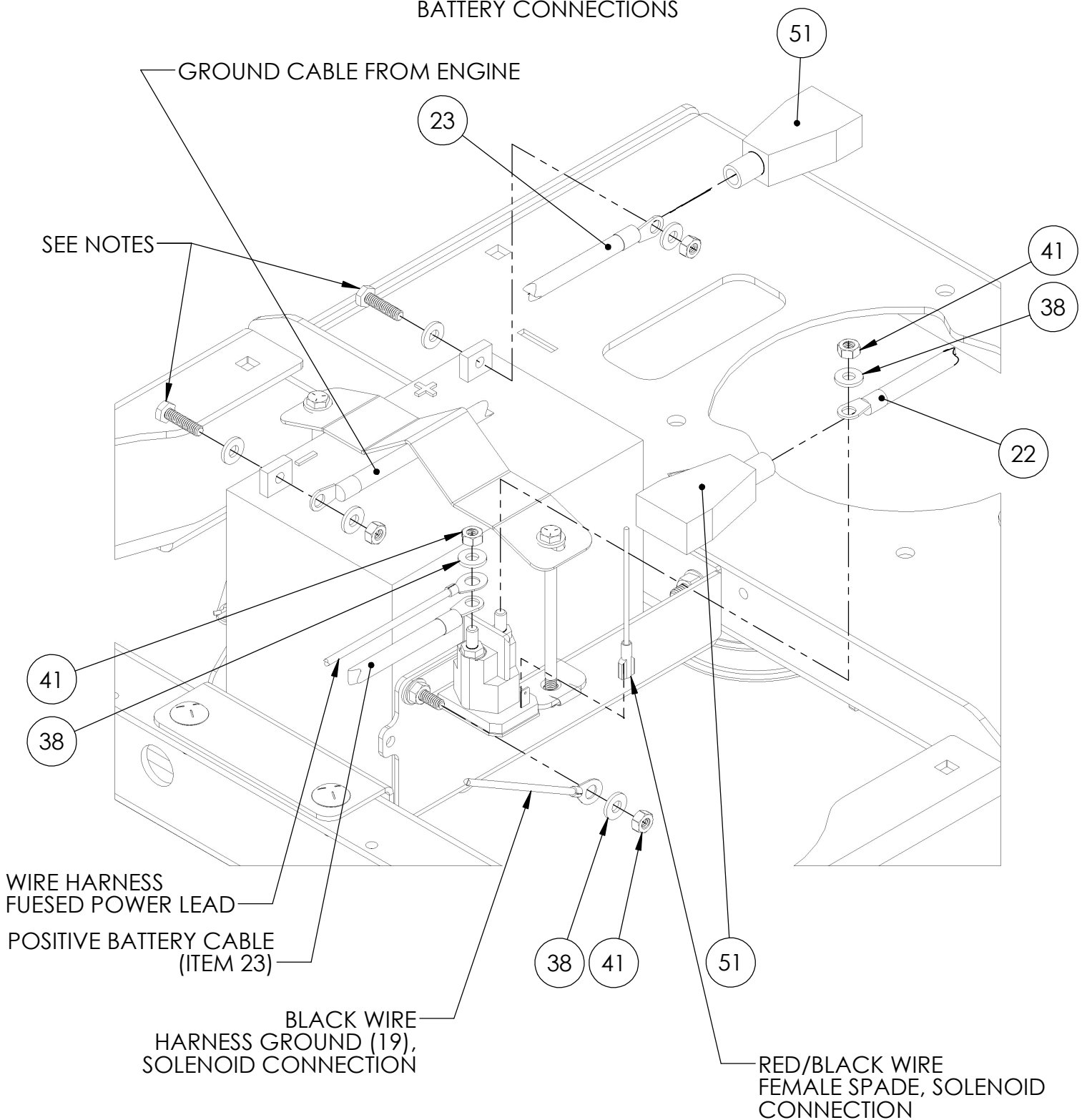
NOTES:

- SECURE FUEL AND VAPOR LINES TOGETHER WITH THREE WIRE TIES AS SHOWN.
- SECURE WIRE HARNESS USING THE REMAINING WIRE TIES.

A45011002

RANGER PRO FUEL & INST PANEL

BATTERY CONNECTIONS



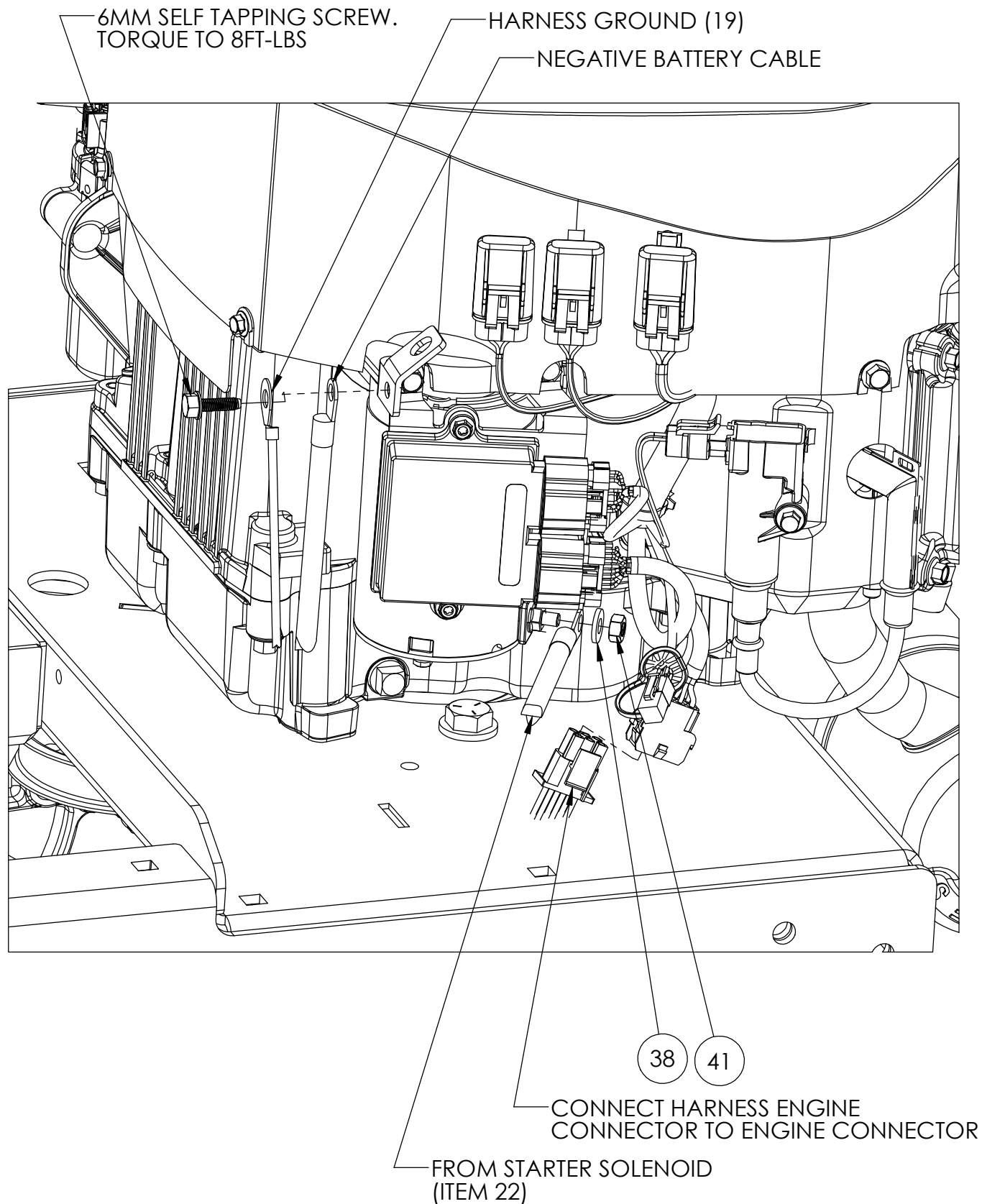
NOTES:

- ROUTE BATTERY CABLES CONNECTED TO BATTERY UNDER BATTERY HOLD DOWN.
- BATTERY TERMINAL HARDWARE SUPPLIED WITH BATTERY.

A45011002

RANGER PRO FUEL & INST PANEL

ENGINE CONNECTIONS



NOTES:

- INSTALL O2 SENSOR INTO MUFFLER AND CONNECT TO THE ENGINE HARNESS.

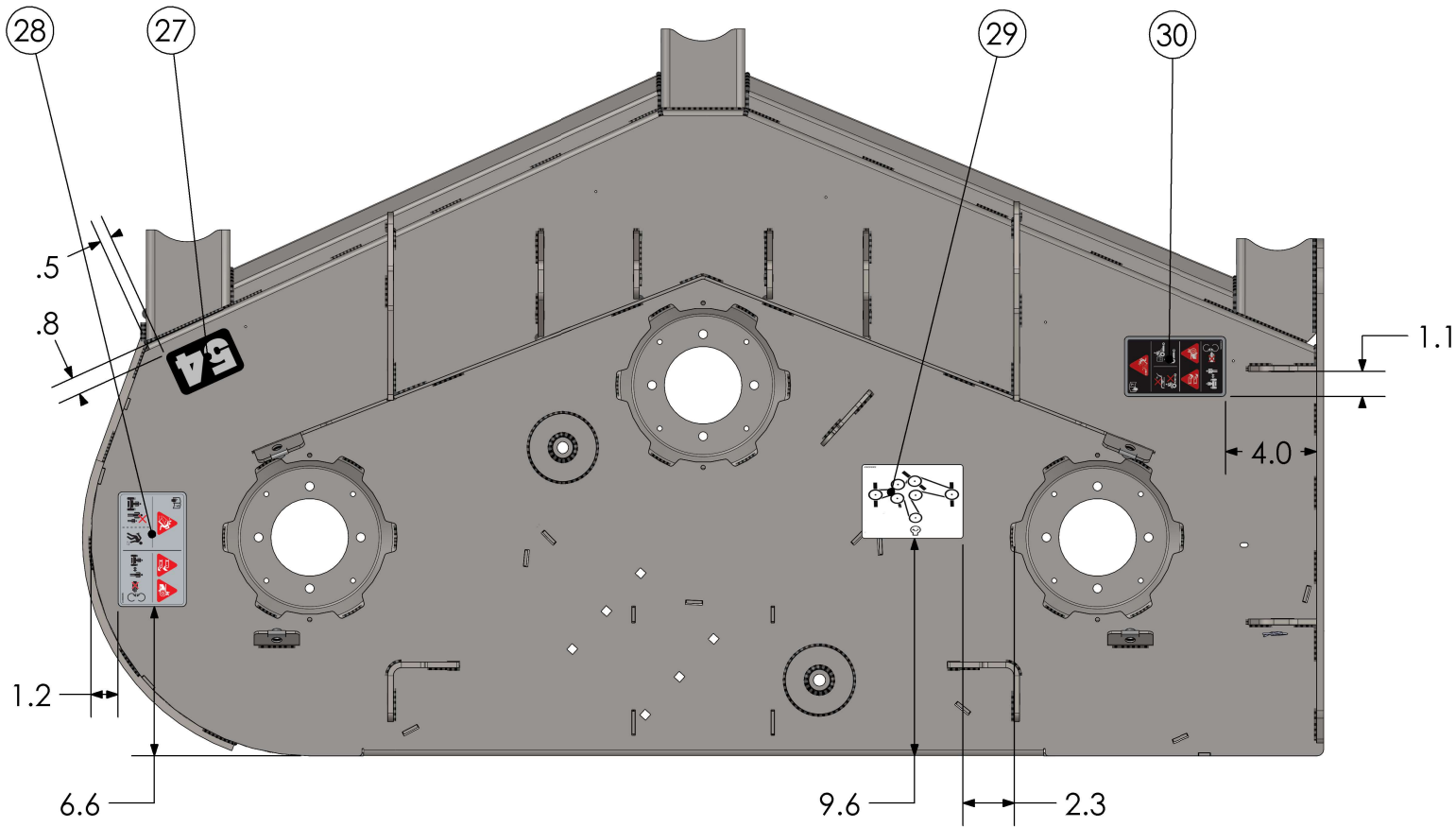
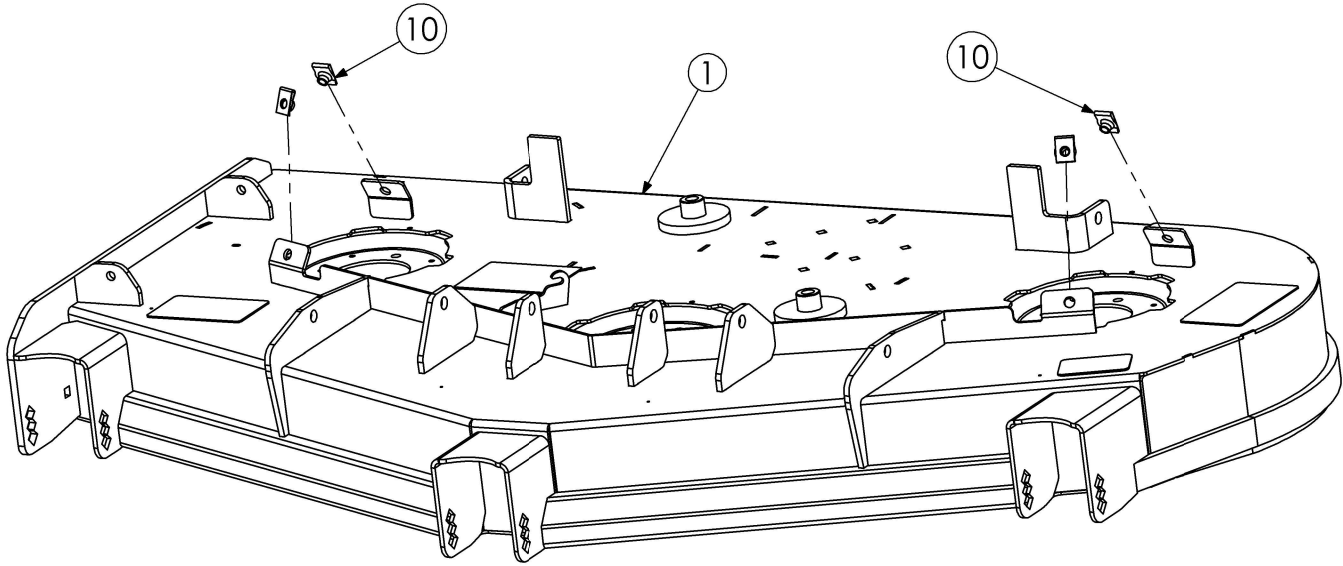
A45011002

RANGER PRO FUEL & INST PANEL

ITEM NO.	PART NUMBER	DESCRIPTION	TOTAL QTY.
1	S45000009	INSTRUMENT PANEL [W/ DECAL]	1
2	300200020	TRHOTTLE CABLE, 44"	1
3	301100006	SWITCH, IGNITION	1
4	301100005	SWITCH, PTO	1
5	301100010	HOURMETER	1
6	301100008	LIGHT, INDICATOR, ROUND	2
7	301300022	ASSY, FUEL TANK, RH	1
8	301300024	ASSY, FUEL TANK, LH	1
9	2500724	TANK COVER, LS	1
10	300300019	DECAL, R/P INST PANEL	1
11	300100212	BHCS, .250-20 x .500	10
12	300600014	VALVE, FUEL SELECTOR	1
13	301100003	BATTERY	1
14	2500747	BATTERY TRAY	1
15	2500463	STRAP, BATTERY	1
16	300900010	SOLENOID, STARTER	1
17	300100054	CNT .250-20	2
18	300100108	HHCS .250-20 X 4.500	2
19	301100015	HARNESS, EKT750 KOHLER	1
20	301300019	FITTING, TEE, 1/4X1/4X3/16	1
21	300600047	SPRING CLAMP, 1/2"	6
22	301100019	BATTERY CABLE, POS 20.0"	1
23	301100018	BATTERY CABLE, POS 12.0"	1
24	300300039	DECAL, FUEL SELECTOR	1
25	300300027	DECAL, HOC ROTATION	1
26	300600062	KNOB, HOC	1
27	2500449	PLATE, HOC KNOB	1
28	300300035	DECAL, RANGER HOC	1
29	300100035	BHCS .312-18 X 1.000	1
30	300100090	WASHER, .406 X 1.0 X .188	6
31	300100066	FHHCS .375-16 X .750	2
32	300100070	FHHCS .375-16 X 2.000	4
33	300100004	FLANGE NYLOCK, 3/8-16	4
34	2500957	BADGE, RANGER TANK LS	1
35	2500958	BADGE, RANGER TANK RS	1
36	300100201	SHCS 10-24 X 0.750	4
37	300100166	NT 10-24 THIN NL	4
38	300100085	FW .250 SAE	6
39	300100039	CB .250-20 X 1.000	2
40	300100078	FNT .250-20	2
41	300100146	NT .250-20	4
42	300100026	CB .375-16 X 1.000	4
43	300100081	FNT .375-16	4
44	300600091	WIRE TIE, 8.0"	12
45	300200011	HOSE, 1/4" FUEL	2.04ft
46	300200011	HOSE, 1/4" FUEL	2.04ft
47	300200011	HOSE, 1/4" FUEL	2.04ft
48	300200011	HOSE, 1/4" FUEL	2.04ft
49	300200011	HOSE, 1/4" FUEL	0.50ft
50	300200012	HOSE, 3/16" FUEL	1.00ft
51	301100027	COVER, TERMINAL, 4-6GA	2
52	301100014	KEY, IGNITION	1

REVISION: A

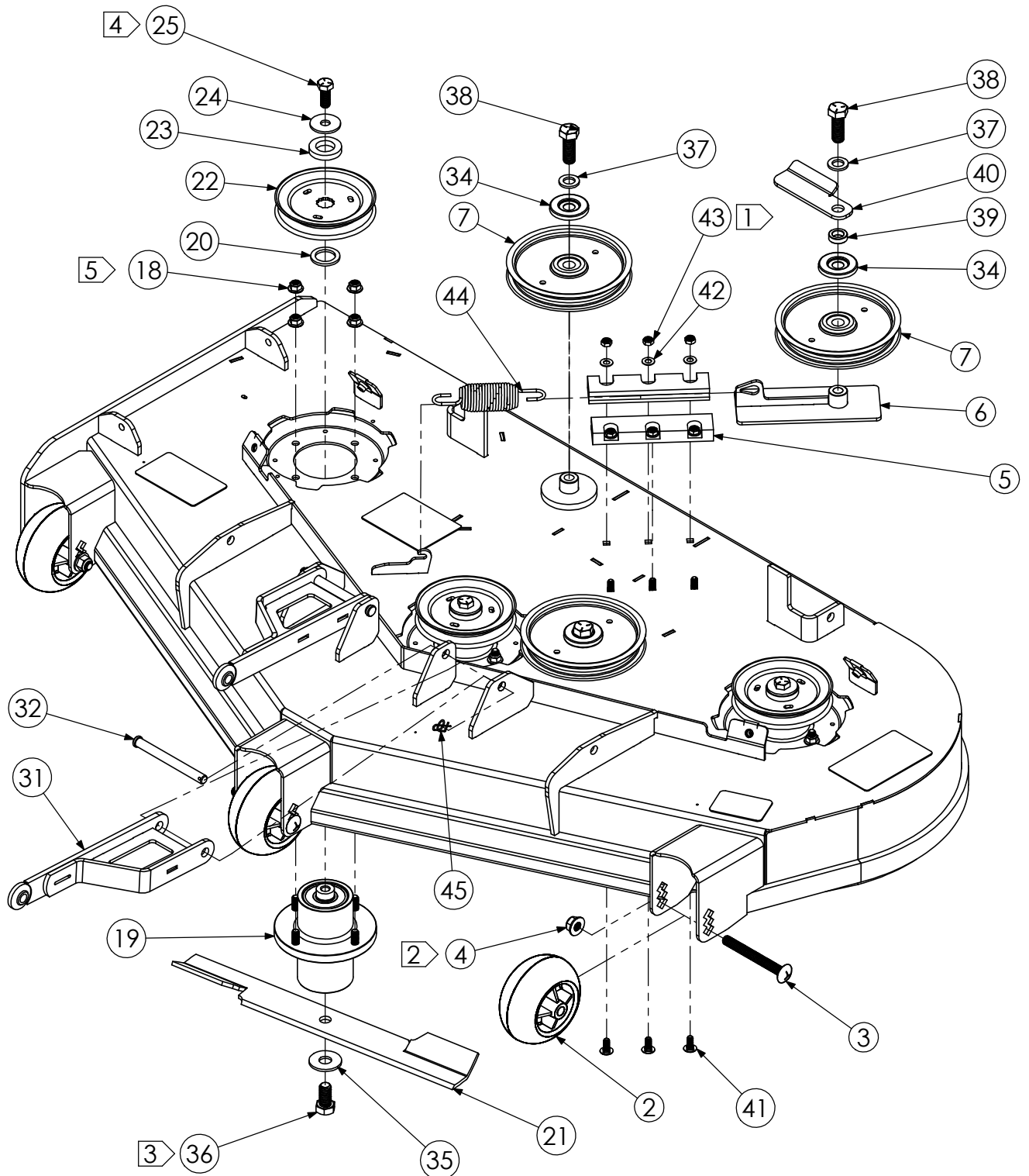
A45012006
DECK, 54", RANGER / RANGER PRO



FASTENER TORQUE VALUES	
FASTENER SIZE	TORQUE REQUIRED
1/4 - 20	8.2 FT-LBS
5/16 - 18	17 FT-LBS
3/8 - 16	30 FT-LBS
7/16 - 14	48 FT-LBS
1/2 - 13	73 FT-LBS
5/8 - 11	145 FT-LBS
3/4 - 10	260 FT-LBS

A45012006

DECK, 54", RANGER / RANGER PRO



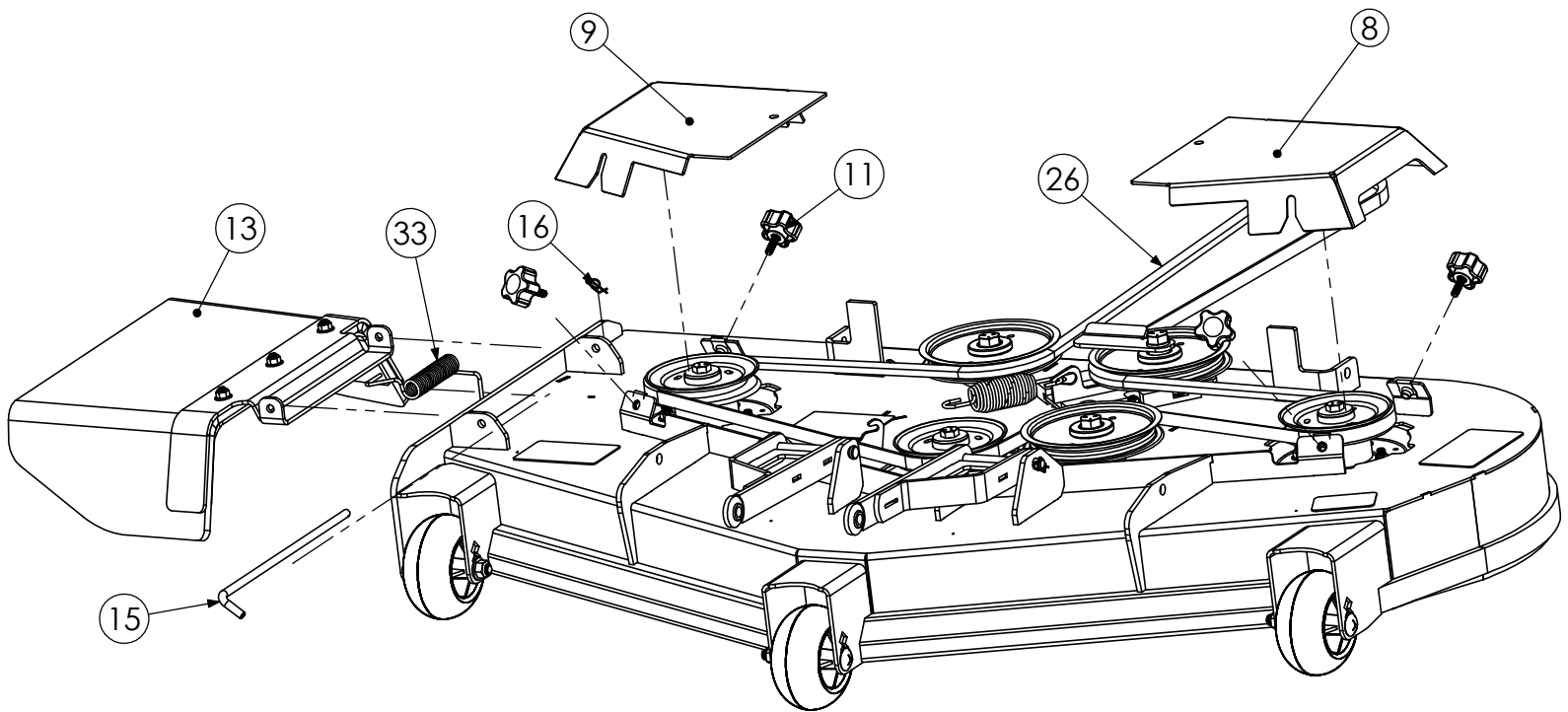
NOTES:

1. TORQUE TO 5 FT-LBS. DO NOT OVER TIGHTEN. SLED SHOULD SLIDE FREELY IN RAILS.
2. TIGHTEN TO REMOVE PLAY IN BOLT, ANTI-SCALP WHEEL MUST PIVOT FREELY.
3. TORQUE TO 118 FT-LBS.
4. TORQUE TO 73 FT-LBS.
5. TORQUE TO 30 FT-LBS.

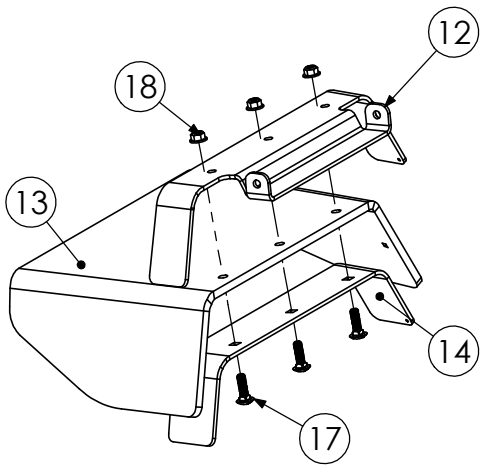
REVISION: A

A45012006

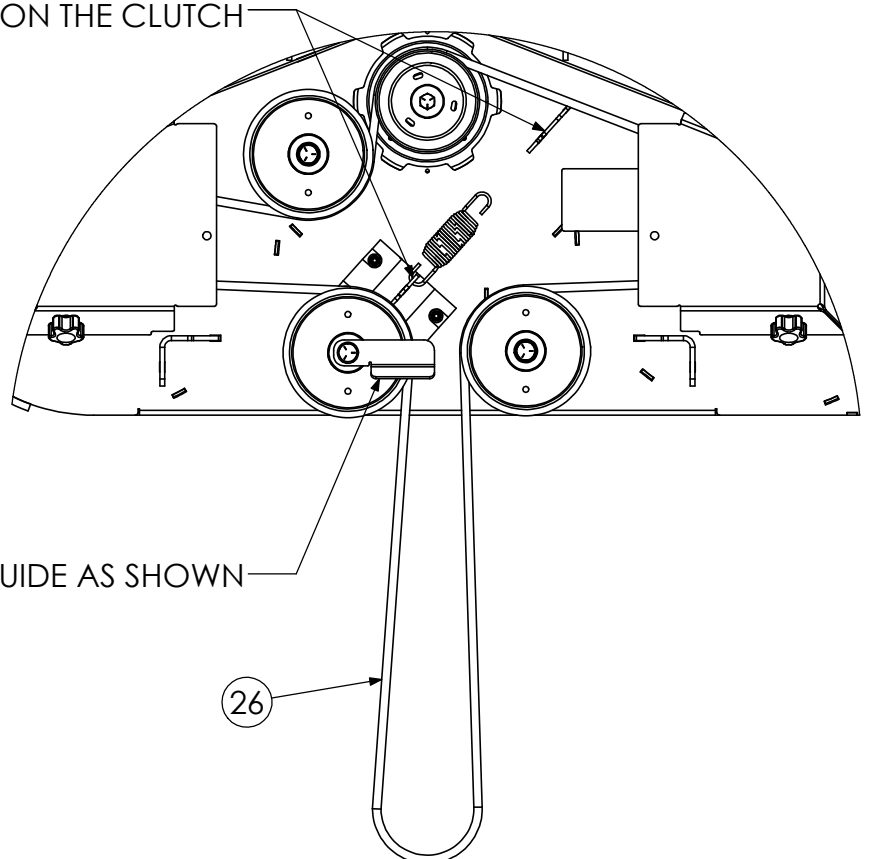
DECK, 54", RANGER / RANGER PRO



ATTACH SPRING AFTER
BELT HAS BEEN INSTALLED
ON THE CLUTCH



ORIENT BELT GUIDE AS SHOWN



A45012006

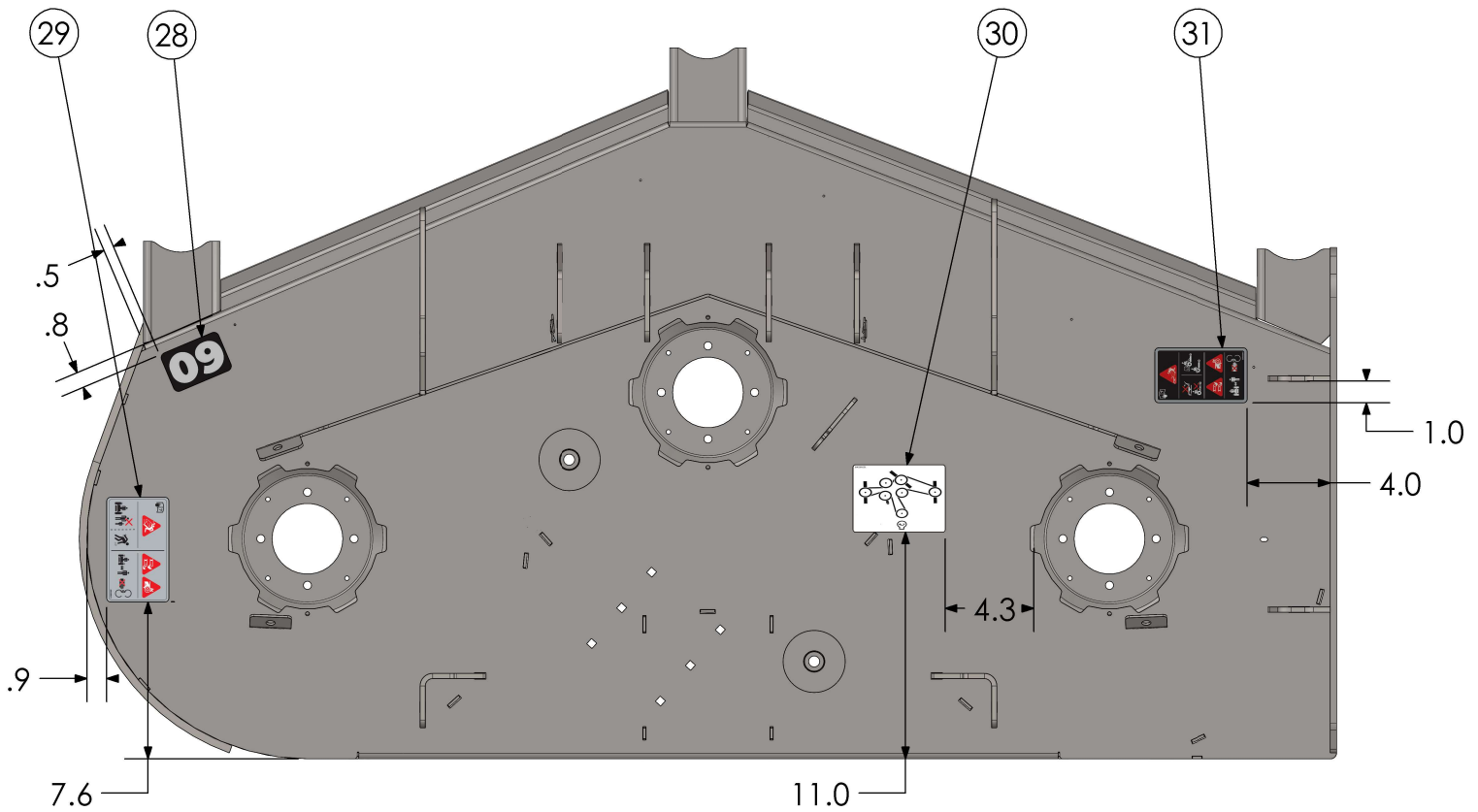
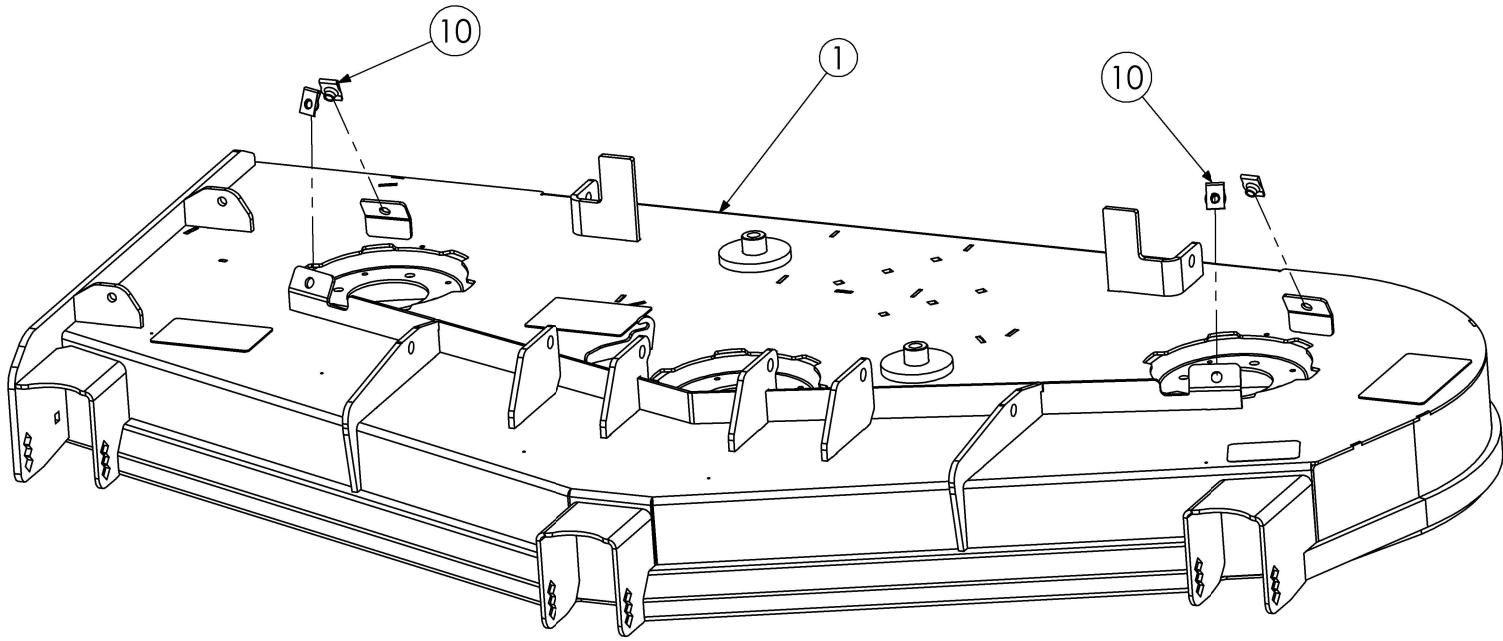
DECK, 54", RANGER / RANGER PRO

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	S45000016	DECK W/A, 54" [SERVICE DECK W/ DECALS]	1
2	301500005	ANTI-SCALP WHEEL .53 I.D.	3
3	300100044	CB .50-13 X 4.5	3
4	300100021	FNYLK .500-13	3
5	300600053	SLED RAIL, COMMON UHMW	2
6	A40012015	IDLER SLED, W/A	1
7	300500037	PULLEY, IDLER 6.00" BACKSIDE	3
8	2500489	PULLEY COVER, LS 54/60	1
9	2500490	PULLEY COVER, RS 54/60	1
10	300100028	CNT .312-18	4
11	300600042	KNOB, RUBBER COATED 5 LOBE	4
12	2500491	BRACKET, DISCHARGE PIVOT 54/60	1
13	301400016	CHUTE, RUBBER DISCHARGE 54" & 60" RAN	1
14	2500492	PLATE, BACKING 54/60	1
15	1500150	PIVOT PIN, DISCHARGE CHUTE 54" & 60"	1
16	300600045	RUE RING 3/8"	1
17	300100027	CB .375-16 X 1.250	3
18	300100004	FLANGE NYLOCK, 3/8-16	15
19	300500044	SPINDLE ASSEMBLY	3
20	300100206	FW 1.03" X 1.50" X 0.135"	3
21	300500062	BLADE, 18.50" X 2.50" X 0.203 CW	3
	300500082	BLADE, MULCHING WAVEY, 18-1/2"	
22	300500057	PULLEY, SPINDLE 5.247" EOD	3
23	300500064	FW 1.03" X 1.75" X .313	3
24	300100015	FW 0.515" X 1.65" X .12 HD ZN	3
25	300100130	HHCS 1/2-13 X 1.25	3
26	300200009	BELT, B-SEC 149.63"	1
27	300300015	DECAL, 54" DECK SIZE	1
28	300300011	DECAL, WARNING THROWN OBJECTS	1
29	300300009	DECAL, BELT ROUTING	1
30	300300010	DECAL, WARNING DISCHARGE CHUTE	1
31	A40012018	PULLER W/A	2
32	300100052	CLP .50 X 5.0" LG 4.76 USABLE LGTH	2
33	300600041	SPRING, DISCHARGE CHUTE RETURN	1
34	300500048	DUST SHIELD, IDLER PULLEY 5/8" BOLT	3
35	300100016	FW 0.688X1.750X0.134	3
36	300100140	HHCS 5/8-11 X 1.25	3
37	2500241	FW .64X1.10X.12 ZINC	3
38	300100032	HHCS .625-11 X 1.750	3
39	1500066	SPACER, BELT GUIDE	1
40	2500240	BELT GUIDE	1
41	300100040	CB .312-18 X .75 LOW PROFILE	6
42	300100197	FW .343 X .675 X .04 CZ	6
43	300100196	NYLK .312-18 JAM	6
44	300600015	SPRING, DECK TENSIONER	1
45	300100050	CP .500 X 1.375 LOCKING	2

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A45012008

DECK, 60" RANGER / RANGER PRO

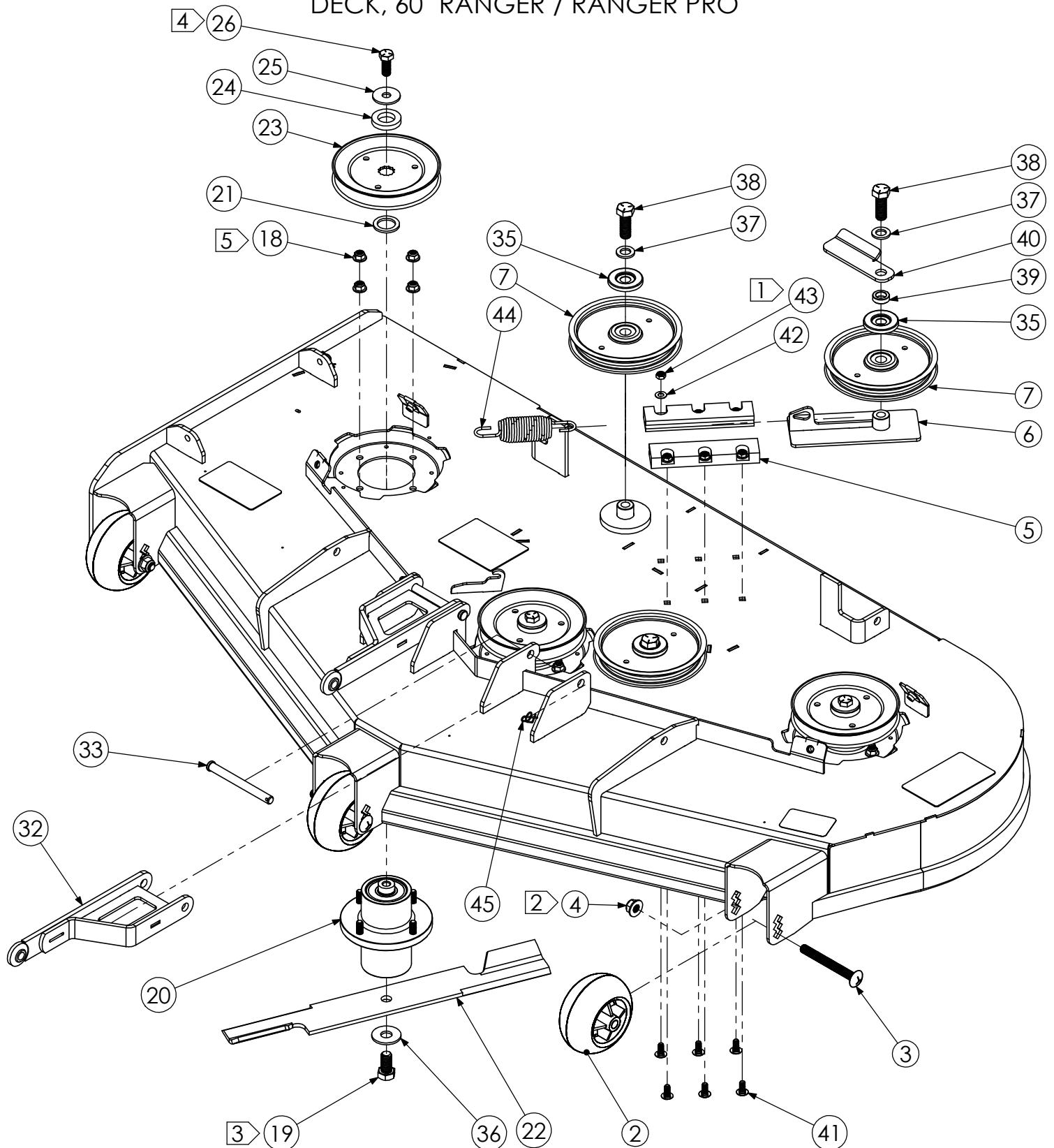


FASTENER TORQUE VALUES	
FASTENER SIZE	TORQUE REQUIRED
1/4 - 20	8.2 FT-LBS
5/16 - 18	17 FT-LBS
3/8 - 16	30 FT-LBS
7/16 - 14	48 FT-LBS
1/2 - 13	73 FT-LBS
5/8 - 11	145 FT-LBS
3/4 - 10	260 FT-LBS

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DECK, 60" RANGER / RANGER PRO



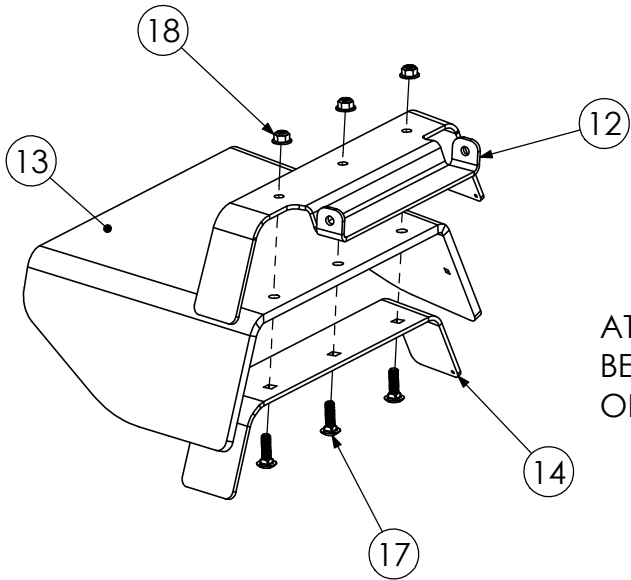
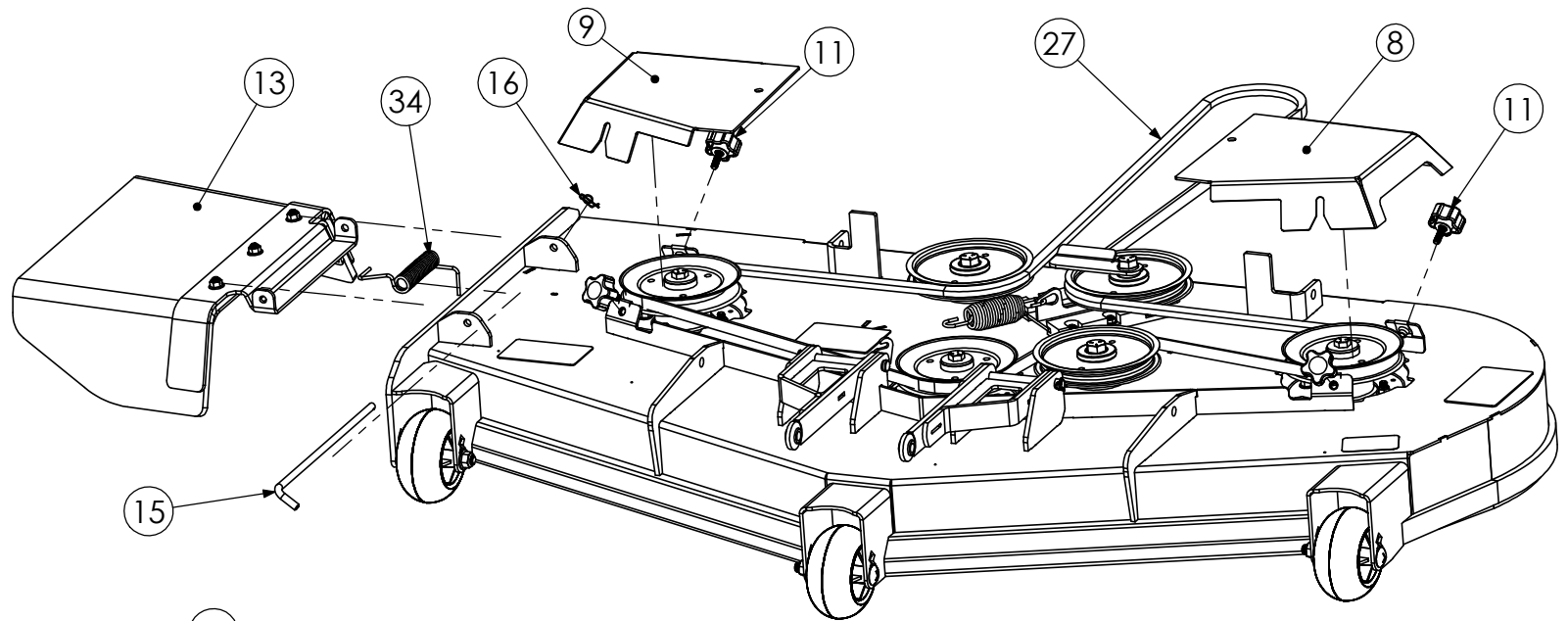
NOTES:

1. TORQUE TO 5 FT-LBS. DO NOT OVER TIGHTEN. SLED SHOULD SLIDE FREELY IN RAILS.
2. TIGHTEN TO REMOVE PLAY IN BOLT, ANTI-SCALP WHEEL MUST PIVOT FREELY.
3. TORQUE TO 118 FT-LBS.
4. TORQUE TO 73 FT-LBS.
5. TORQUE TO 30 FT-LBS.

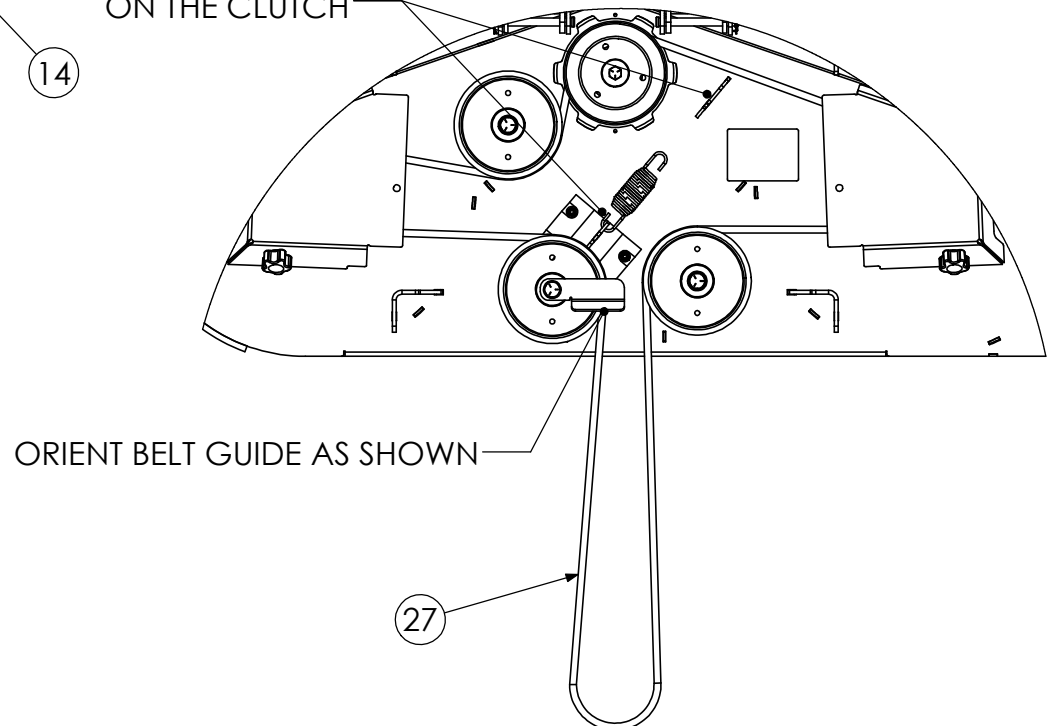
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DECK, 60" RANGER / RANGER PRO



ATTACH SPRING AFTER
BELT HAS BEEN INSTALLED
ON THE CLUTCH



A45012008

DECK, 60" RANGER / RANGER PRO

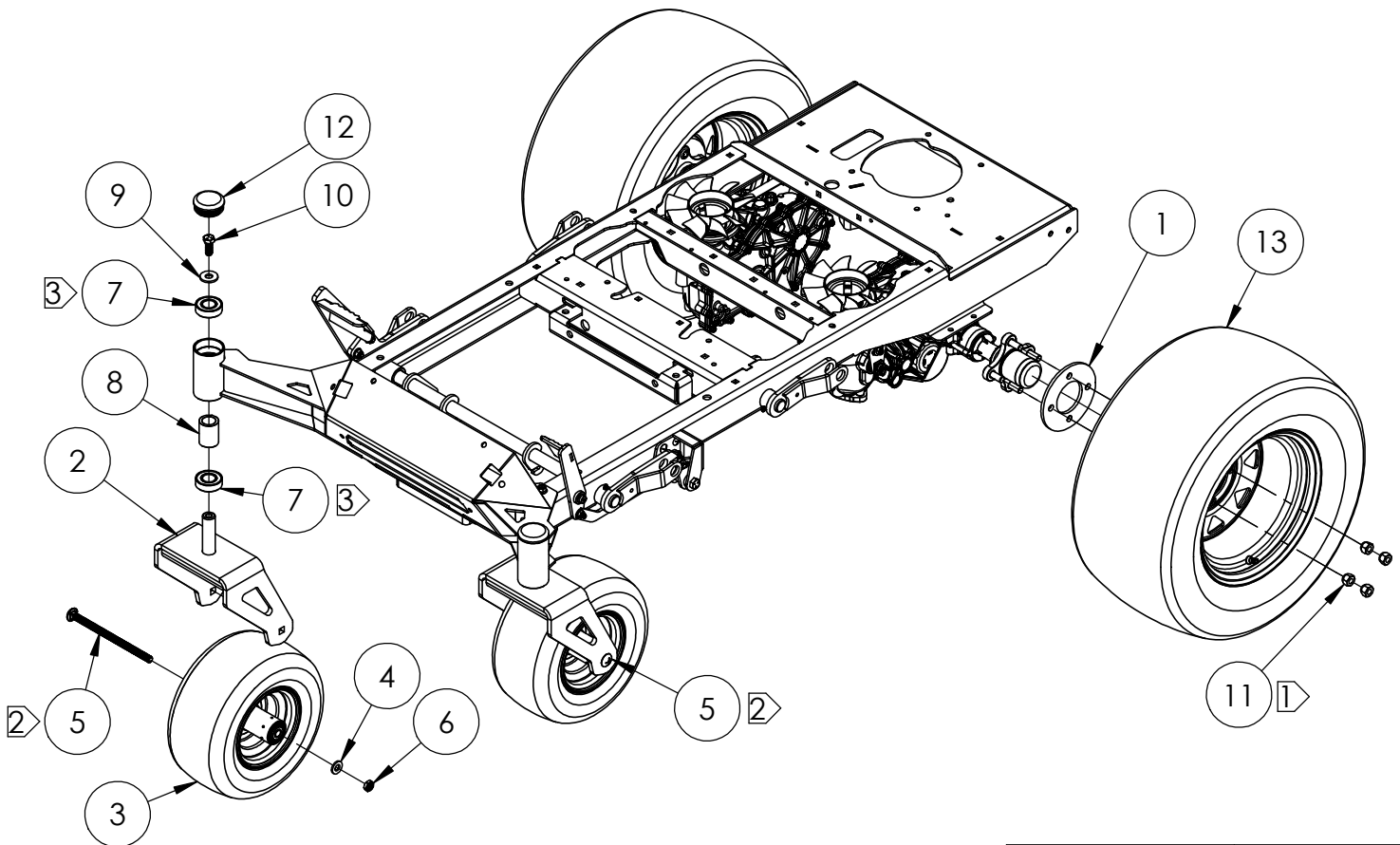
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	S45000017	DECK W/A, 60" [SERVICE DECK W/ DECALS]	1
2	301500005	ANTI-SCALP WHEEL .53 I.D.	3
3	300100044	CB .50-13 X 4.5	3
4	300100021	FNYLK .500-13	3
5	300600053	SLED RAIL, COMMON UHMW	2
6	A40012015	IDLER SLED, W/A	1
7	300500037	PULLEY, IDLER 6.00" BACKSIDE	3
8	2501160	PULLEY COVER, LEFT	1
9	2501161	PULLEY COVER, RS 54/60	1
10	300100028	CNT .312-18	4
11	300600042	KNOB, RUBBER COATED 5 LOBE	4
12	2500491	BRACKET, DISCHARGE PIVOT 54/60	1
13	301400016	CHUTE, RUBBER DISCHARGE 54" & 60" RAN	1
14	2500492	PLATE, BACKING 54/60	1
15	1500150	PIVOT PIN, DISCHARGE CHUTE 54" & 60"	1
16	300600045	RUE RING 3/8"	1
17	300100027	CB .375-16 X 1.250	3
18	300100004	FLANGE NYLOCK, 3/8-16	15
19	300100140	HHCS 5/8-11 X 1.25	3
20	300500044	SPINDLE ASSEMBLY	3
21	2501159	FW 1.09" X 1.56" X 0.135"	3
22	300500063	BLADE, 21.50 X 2.50 X 0.25 CW ROTATION	3
	300500083	BLADE, MULCHING WAVEY, 20-1/2"	
23	300500055	PULLEY, SPINDLE 5.899" EOD	3
24	300500064	FW 1.03" X 1.75" X .313	3
25	300100015	FW 0.515" X 1.65" X .12 HD ZN	3
26	300100130	HHCS 1/2-13 X 1.25	3
27	300200019	BELT, B-SEC 162.76"	1
28	300300007	DECAL, 60" DECK SIZE	1
29	300300011	DECAL, WARNING THROWN OBJECTS	1
30	300300009	DECAL, BELT ROUTING	1
31	300300010	DECAL, WARNING DISCHARGE CHUTE	1
32	A40012018	PULLER W/A	2
33	300100052	CLP .50 X 5.0" LG 4.76 USABLE LGTH	2
34	300600041	SPRING, DISCHARGE CHUTE RETURN	1
35	300500048	DUST SHIELD, IDLER PULLEY 5/8" BOLT	3
36	300100016	FW 0.688X1.750X0.134	3
37	2500241	FW .64X1.10X.12 ZINC	3
38	300100032	HHCS .625-11 X 1.750	3
39	1500066	SPACER, BELT GUIDE	1
40	2500240	BELT GUIDE	1
41	300100040	CB .312-18 X .75 LOW PROFILE	6
42	300100197	FW .343 X .675 X .04 CZ	6
43	300100196	NYLK .312-18 JAM	6
44	300600015	SPRING, DECK TENSIONER	1
45	300100050	CP .500 X 1.375 LOCKING	2

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A45014003

RANGER / RANGER PRO 54/60 TIRE-WHEEL

ITEM NO.	PART NUMBER	DESCRIPTION	TOTAL QTY.
1	2500597	BACKING PLT, 4 BOLT HUB	2
2	A40014002	W/A, FORK R/P	2
3	301500017	WHEEL/TIRE 13X6.5-6 SEMI-PNEUMATIC	2
4	300100093	FW .500 SAE	2
5	300100023	CB .500-13 X 8.500	2
6	300100161	NYLK .500-13 JAM	2
7	300500058	BEARING, W/O COLLAR 1.000 ID	4
8	1500163	BEARING SPACER	2
9	300100096	FW .562 X 1.375 X .109	2
10	300100130	HHCS 1/2-13 X 1.25	2
11	300100145	LUG NUT, .500-20	8
12	300600079	CAP PLUG, 2.375 OD	2
13	301500014	WHEEL/TIRE 22X12.00-12 TM	2
	301500024	TIRE, 22x12.00-12 TM	
	301500026	WHEEL, 12x8.0	
	301500022	VALVE STEM	



NOTES:

1. TORQUE LUG NUTS TO 65-75 FT-LBS.
2. CARRIAGE BOLT HEADS TO OUTBOARD SIDE OF FORK.
3. EXTENDED RACE ASSEMBLES DOWN.

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FASTENER TORQUE VALUES	
FASTENER SIZE	TORQUE REQUIRED
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5/16 - 18	17 FT-LBS
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7/16 - 14	48 FT-LBS
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