

# Parts Catalog

## Armadillo 9X Sweeper Series

Models: 9X & 9XCE



**PREFACE**

Thank you for your purchase of the new industry standard for sweepers. PowerBoss® takes great pride in offering the most dependable, reliable, and best value in industrial power sweepers and scrubbers. We set the standard.

Our Customer Service Department would like to hear from you. If you see any errors, omissions or something that needs clarification in this Parts Catalog, please let us know. We are working hard towards continually improving our processes--to benefit you, our valued customer.

Please copy the form below, fill out and comment on how you found our manual.

Thank you!

*The PowerBoss® Team*

Name \_\_\_\_\_

Title: \_\_\_\_\_

Company Name: \_\_\_\_\_

Address: \_\_\_\_\_

Country: \_\_\_\_\_

Type of equipment or model number: \_\_\_\_\_

Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Please return to:

Customer Service Manager  
PowerBoss®, Minuteman International, Inc.  
14N845 U.S. Route 20  
Pingree Grove, Illinois 60140 USA

Phone: 800-323-9420

Email: tech@powerboss.com

This is the Parts Catalog for the PowerBoss® Armadillo 9X & 9XCE Sweeper Series.

This Catalog covers the Armadillo 9X & 9XCE machine variations beginning December 2014.

We believe this machine will provide excellent service for many years.

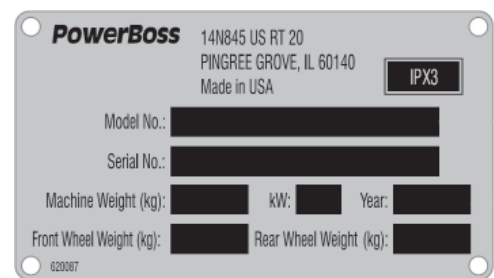
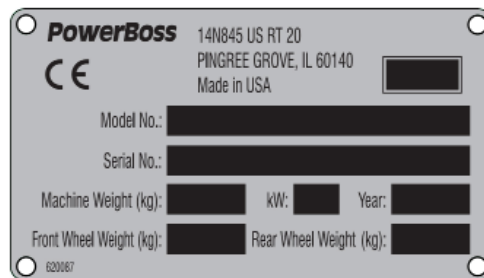
However, the best results will be obtained if:

- The machine is operated with reasonable care.
- The machine is maintained regularly per the maintenance schedule provided in the User Manual.
- The machine is maintained with PowerBoss® supplied or equivalent parts.

All right side and left side references to the machine (except for engine) are determined by facing the direction of forward travel. The front of the engine or engine fan faces the rear of the machine. Some hardware considered to be common or locally available has been omitted from the parts section to make this manual clear. Be sure to use equivalent hardware when replacement becomes necessary.

The Model and Serial Number of your machine is shown on the I.D. name plate. This information is needed when contacting Technical Support or when ordering parts. The I.D. plate is mounted on the console of the machine, left of the operator and adjacent the main broom adjustment access door.

**Example I.D Plates:**



Parts may be ordered by phone, fax, or email from any PowerBoss® parts and service center. Before ordering parts or supplies, be sure to have your machine model number and serial number handy. For your convenience Fill out the data block on the next page for future reference.

**MACHINE DATA**  
Fill out at installation

Serial Number: \_\_\_\_\_

Engine Serial Number: \_\_\_\_\_

Sales Rep.: \_\_\_\_\_

Date of Install: \_\_\_\_\_

All information contained in this catalog is current at the time of printing. PowerBoss®, Minuteman International, Inc. reserves the right to make changes at any time without notice.

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**TECHNICAL SPECIFICATIONS**

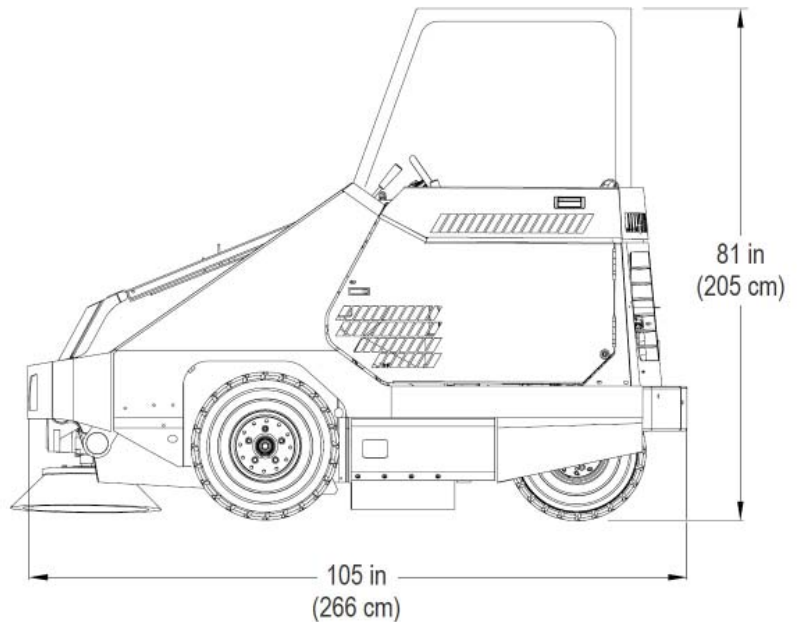
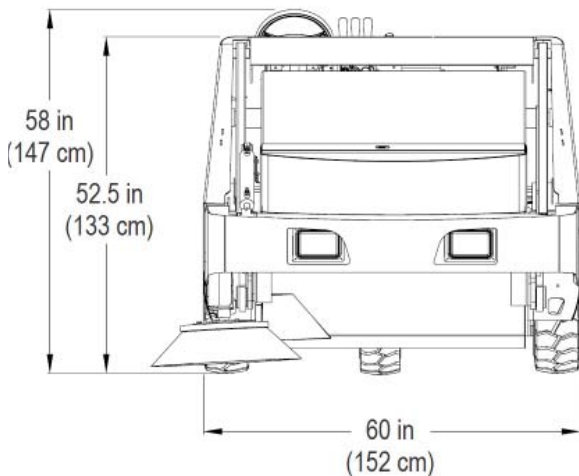
Model	Armadillo 9X Series
9X Model No.	SW9XKDSL; SW9XKGAS; SW9XKLPG
9X CE Model No.	9XRDSLCE; 9XRLPGCE

**DIMENSIONS & WEIGHT**

Length	105 in (267 cm)
Width	60 in (152 cm)
Height (machine)	52.5 in (133 cm)
Height (with steering wheel)	58 in (147 cm)
Height (with Overhead guard)	81 in (206 cm)
Height (with Cab)	81 in (206 cm)
Weight (Diesel engine)	4090 lb (1855 kg)
Weight (Gas & LPG engines)	4070 lb (1846 kg)
Minimum U-turn	110 in (280 cm)

**SWEEPING SYSTEM**

Productivity	184,800 ft²/hr (17,168 m²/hr)
Sweep path	62 in (157 cm)
Main broom	48 in (122 cm)
Side broom	24 in (61 cm)
with Dual side broom	optional 72 in path
	optional (183 cm) path
Hopper type	RTR™ high dump
Hopper volume	21.1 ft³ (0,59 m³)
Hopper load capacity	1100 lb (498 kg)
Dust control	110 ft² (10,22 m²)
High dump	64 in (162 cm)
include RTR™(Rotary Trash Relocation)	



dimensions shown in inches (cm)

**STANDARD ABBREVIATIONS**

°C-Degrees Celsius	INFO-Information
°F-Degrees Fahrenheit	INT-Internal or Interior
12V-12 Volts DC	LG-Long
AR-Abrasion Resistant	LH-Left Hand
ASSY-Assembly	LPG-Liquefied Petroleum Gas
ATO-Standard Auto Fuse Type Also called ATC	LP-Liquefied Petroleum
BHSCS-Button Head Screw SS	M8x1-Indicates Metric threads, 8mm Dia with a 1mm thread pitch
BLK-Black	MM-Millimeters
BLT-Belt	MNT-Mount
BR-Brass or Broom or Brush	MS-Mid Size
BRM-Broom	OD-Outside Diameter
BRKT-Bracket	PLTD-Plated
CB-Curb Broom	REV-Reverse
CCW-Counter Clockwise	RH-Right Hand
CI-Cubic Inch	ROT-Rotation
CW-Clockwise Rotation	RTR-Rotary Trash Relocator
CYL-Cylinder	SCR-Screw
DEG-Degrees	SC-Scrubber
DIA-Diameter	SP-Service Part
DPDT-Double Pole Double Throw	SPDT-Single Pole Double Throw
ELEC-Electric	SPST-Single Pole Single Throw
ES-Elastic Stop, also Nyloc	SS-Stainless Steel
EXT-Exterior or Extended	STR-Straight
FI-Fuel Injection	ST-Straight
FS-Full Size	SUB-Sub Assembly
FTG-Fitting	THD-Thread
FWD-Forward	THK-Thick
REV-Reverse	THRU-Through
GAL-US Gallon (3.79 Liters)	UNC-Unified Nat'l Coarse Threads
GOV-Governor	UNF-Unified Nat'l Fine Threads
HD-Head	V1505-Kubota Diesel Engine
HD-Heavy Duty	W/-With
HOP-Hopper	WELD-Weldment
HSS-High Speed Steel	W/O-Without
HT-High Temperature	SP-Zinc Plated
HT-Height	
HYD-Hydraulic	
ID-Identification	
ID-Inside Diameter	
IMP-Impeller	

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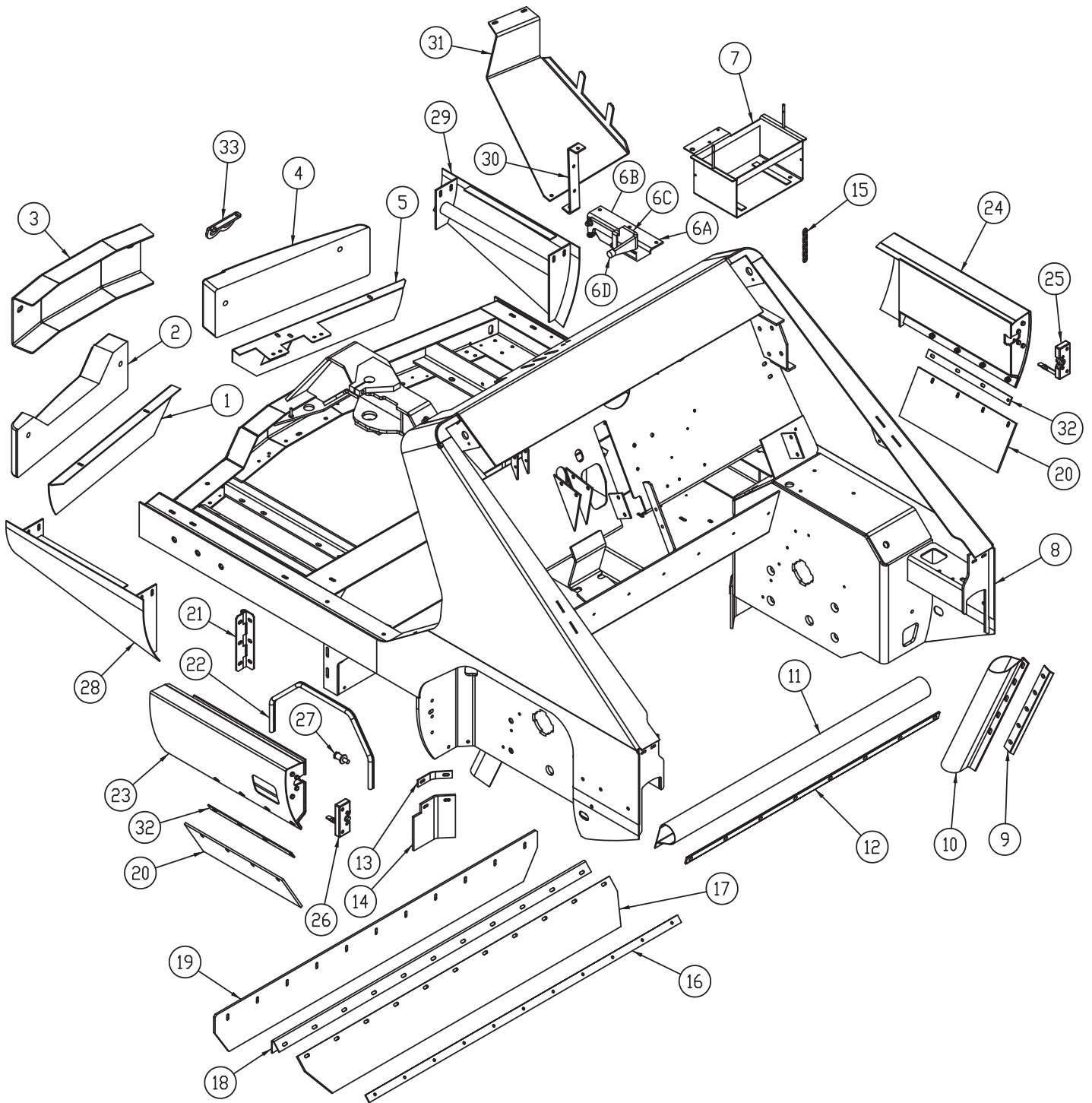
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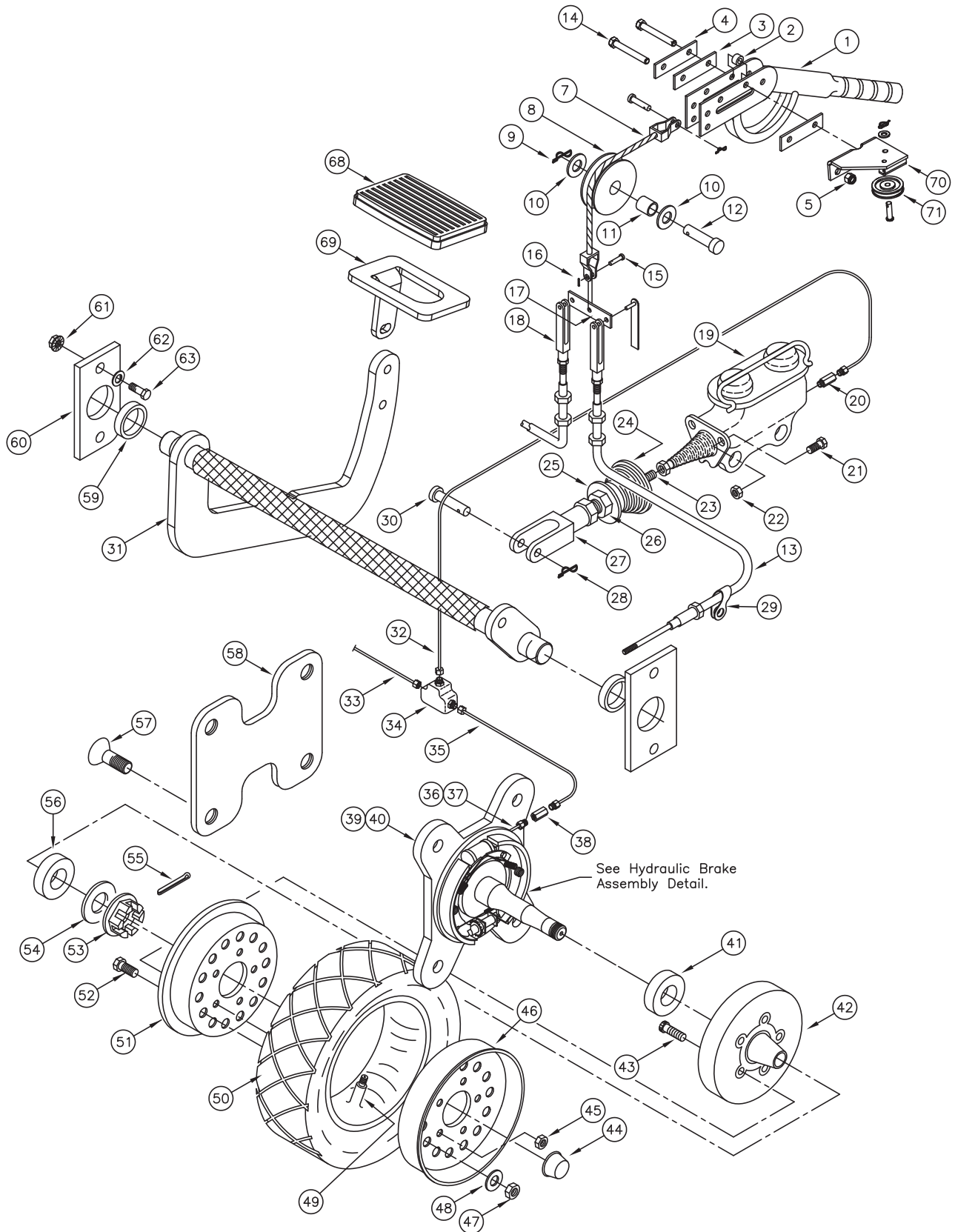
**FRAME ASSEMBLY**





FRAME ASSEMBLY ARMADILLO 9X			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	3332182M	1	SKIRT-RT REAR 9X, DARK GRAY
2	3309707	1	COUNTERWEIGHT-RH PAINTED
3	3332147P	1	COVER-COUNTER WEIGHT CENTER
4	3301046P	1	COUNTERWEIGHT-LH PAINTED
5	3335397M	1	SKIRT-LH REAR, 9X, DARK GRAY
6A	3309740	1	MNT-ENG LOCK
6B	3301522	1	SPRING-EXT BRAKE ARM (NOT SHOWN)
6C	3309743	1	ARM-ENG LOCK
6D	430119	1	RUBBER CAP 1/2 ID
7	3321296	1	WELDMENT-BATTERY BOX (MODELS W/ENGINE SWING)
8	3335310M	1	WELD-FRAME, TIER 2,
9	3315203	2	RETAINER-HOPPER SIDE SEAL
10	3318143	2	FLAP-RUBBER HOPPER/FRAME SIDE
11	3307276	1	SEAL-FRAME HOPPER HORIZONTAL
12	3307281	1	STRAP-FRAME HOP FLAP PAINTED
13	3307287	2	STRAP-BROOM CORNER FLAP PAINTED
14	3307286	2	FLAP-BROOM CHAMBER CORNER
15	3307658	1	CHAIN-FRAME GROUNDING
16	3307283	1	STRAP-REAR FEED FLAP PAINTED
17	3307279	1	FLAP-REAR FEED
18	3307282	1	ANGLE-REAR FLAP PAINTED
19	3307278	1	FLAP-REAR HOPPER
20	3307280	2	FLAP-MAIN BROOM DOOR
21	3307275	2	HINGE-BROOM DOOR
22	3318739	2X 3.0'	WEATHERSTRIPPING-RUBBER SPONGE
23	3307265M	1	ASSY- BROOM DOOR RH
24	3307266M	1	ASSY- BROOM DOOR LH
25	3307246	1	LATCH-LH BROOM DOOR
26	3307247	1	LATCH-RH BROOM DOOR
27	3307248	2	BOLT-STRIKER BROOM DOOR LATCH
28	3307519M	1	SKIRT-RH SIDE
29	3307520M	1	SKIRT-LH SIDE
30	3307792	1	BAR-HOSE PAN SUPPORT
31	3307791	1	PAN-HOSE
32	3307284	2	STRAP - BROOM DOOR FLAP
33	3343740	1	TIE DOWN-UNIVERSAL, REAR

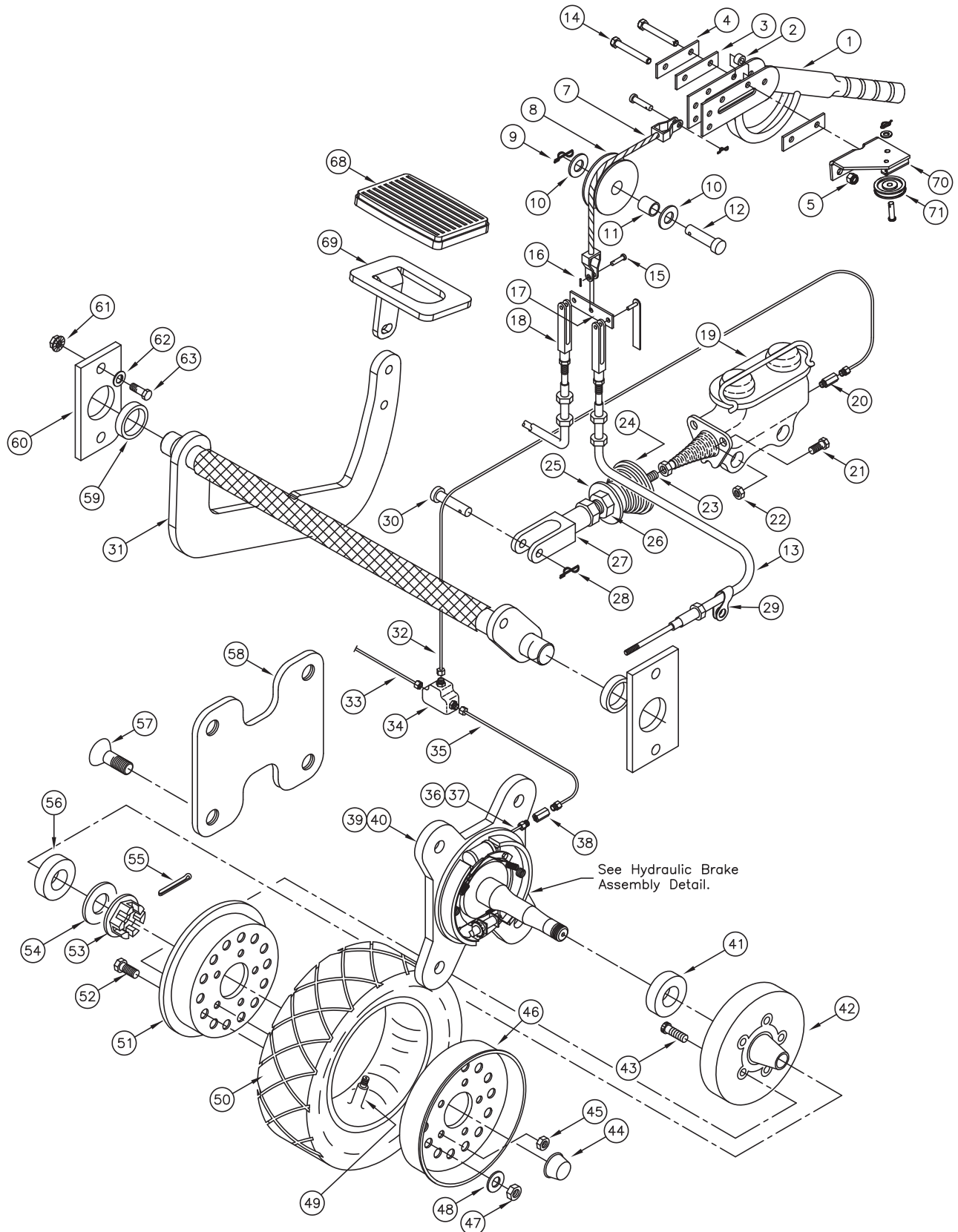
**HYDRAULIC BRAKE ASSEMBLY**



HYDRAULIC BRAKE ASSEMBLY			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	3303169	1	LEVER-HAND BRAKE
2	3307241	1	SPACER-HAND BRAKE ZP SW/A
3	3307273	2	BAR-HAND BRAKE SPACER, ZP SW/A
4	3307895	1	SPACER-THIN HAND BRAKE, ZP
5	711380	2	NUT-NYLOC 3/8-16
7	3307632	1	CABLE-CENTER BRAKE, SW/A
8	3300367	1	PULLEY-2.50 DIA, BUSHED, BRAKE
9	3400125	1	PIN-COTTER 3/8 RUE-RING
10	3400088	2	WASHER-FLAT 5/16 IDx.688 ODx.065 THK
11	3303552	1	SLEEVE-HAND BRAKE ZP
12	3400185	1	PIN-CLEVIS 5/16x1-1/4 ZP
13	3321452	2	CABLE-8" PARKING BRAKE (HAND)
14	3400473	2	SCR-HEX,3/8-16x3.00 ZP F'THD
15	3400118	1	PIN-CLEVIS 5/16x7/8 ZP
16	3400125	1	PIN-COTTER 3/8 RUE-RING
17	3307232	1	BAR-BRAKE EQUALIZER ZP SW/A
18	3321470	2	CLEVIS-BRAKE 8MM
19	3316717	1	CYLINDER-BRAKE MASTER, ARMA
20	3307638	1	FTG-REDUCER NAPA #7909
21	3400028	3	SCR-HEX,3/8-16x1.50 ZP
22	711380	3	NUT-HEX 3/8-16 ES ZP
23	3307235	1	ROD-BRAKE MASTER CYLINDER, ZP
24	3313109	1	SPRING-PEDAL RETURN
25	3400278	4	WASHER-FENDER 3/8
26	3400075	2	NUT-HEX JAM 3/8-24 ZP
27	3301447	1	CLEVIS-CABLECRAFT AC-218
28	3400125	1	PIN-COTTER 3/8 RUE-RING
29	3332271	1	CLAMP-3/8 DIA INSULATED HALF (STRAP)
30	3400117	1	PIN-CLEVIS 3/8x1-1/8, ZP
31	3337539	1	WELDMENT - BRAKE BAR, HYD.
32	3307637-1	1	ASSEMBLY-BRAKE LINE CENTER SW/A
33	3321457	1	BRAKE LINE-ARMA RH LONG
34	3306307	1	FTG-TEE HYD BRAKE
35	3321459	1	BRAKE LINE-ARMA LH LONG
36	3321455	1	BRAKE LINE-ARMA LH, SHORT
37	3321456	1	BRAKE LINE-ARMA RH, SHORT

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**HYDRAULIC BRAKE ASSEMBLY - CONTINUED**

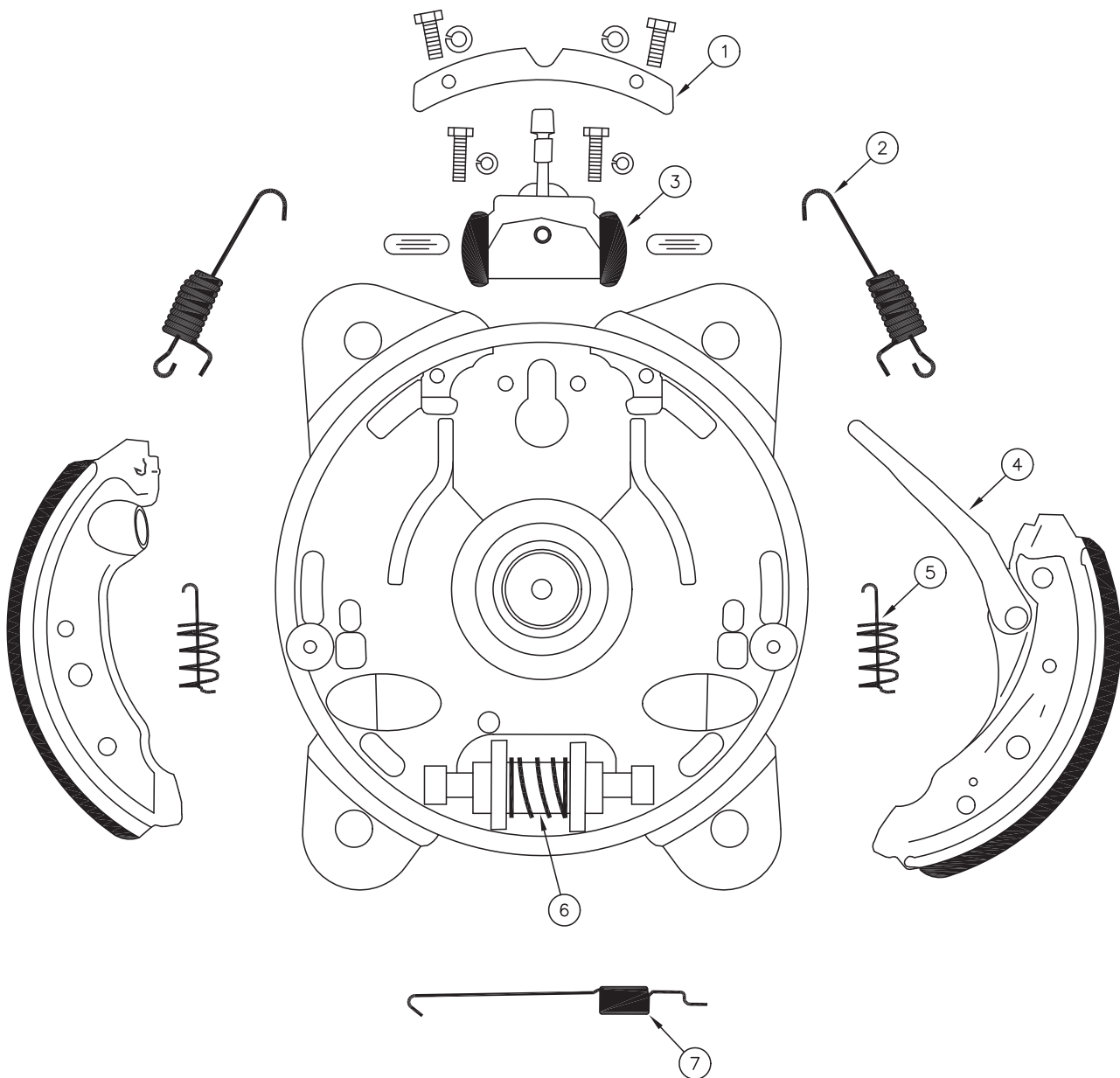


HYDRAULIC BRAKE ASSEMBLY - CONTINUED			
ITEM	PART NO.	REQ'D	DESCRIPTION
38	3400969	1	FTG-COUPLING, 3/16" OD HYD BRAKE, BRASS
39	3321450	1	ASSEMBLY-8" HYDRAULIC BRAKE LH
40	3321471	1	ASSEMBLY-8" HYDRAULIC BRAKE RH
41	3307238	1	BEARING-INNER WHEEL SW/A
42	3332483	1	BRAKE-DRUM 8" ARMA PAINTED
43	3307242	10	STUD-WHEEL, 1/2-20x1.75 LG
44	3300369	1	CAP-HUB, 2.44" DIA, ZP
45	3300411	5	NUT-WHEEL LUG, 1/2-20 UNF
46	3307255	1	RIM-FRONT OUTER SW/A PNTD
47	3400066	10	NUT-HEX 7/16-14 ZP
48	3400099	10	WASHER-LOCK 7/16 SPLIT ZP
49	3307253	2	TUBE-TIRE INNER, 650x10
50	3307252	2	TIRE-PNEUMATIC 650x10
51	3307254	1	RIM-FRONT INNER SW/A PNTD
52	3400022	10	SCR-HEX, 1/2-13X1.25 GR 5 ZP
53	3400076	1	NUT-HEX JAM SLOTTED, 1-14 ZP
54	3307352	1	WASHER-1.016 IDx1.50 ODx.25 THK
55	3400120	1	PIN-COTTER 5/32 DIAx2.00 LG, ZP
56	3300467	1	BEARING-BALL 2.44 ODx1.18 ID
57	3402030	4	SCR-FLT, 5/8-11x1.00, SOC ZP
58	3321453	1	PLT-8" BRAKE MOUNT RH&LH
59	3307220	2	BEARING-.88IDx1.00ODx.50LG
60	3307233	2	MOUNT-.88 DIA BEARING, ZP SW/A
61	711439	1	NUT-FLANGED WIZZ 3/8-16
62	3400385	1	WASHER-CONICAL SPRING 3/8
63	711250	1	BLT-HH 3/8-16 X 1.25 STL ZINC
68	3300413	1	PAD-RUBBER BRAKE PEDAL
69	3337386	1	PLT - BRAKE PEDAL
70	3307861	1	PULLEY MOUNT #3
71	3300368	1	PULLEY-PLASTIC 2" x .25" GROOVE

**End of Section**

**BRAKE - 8" ARMA L/H PN-3321450**

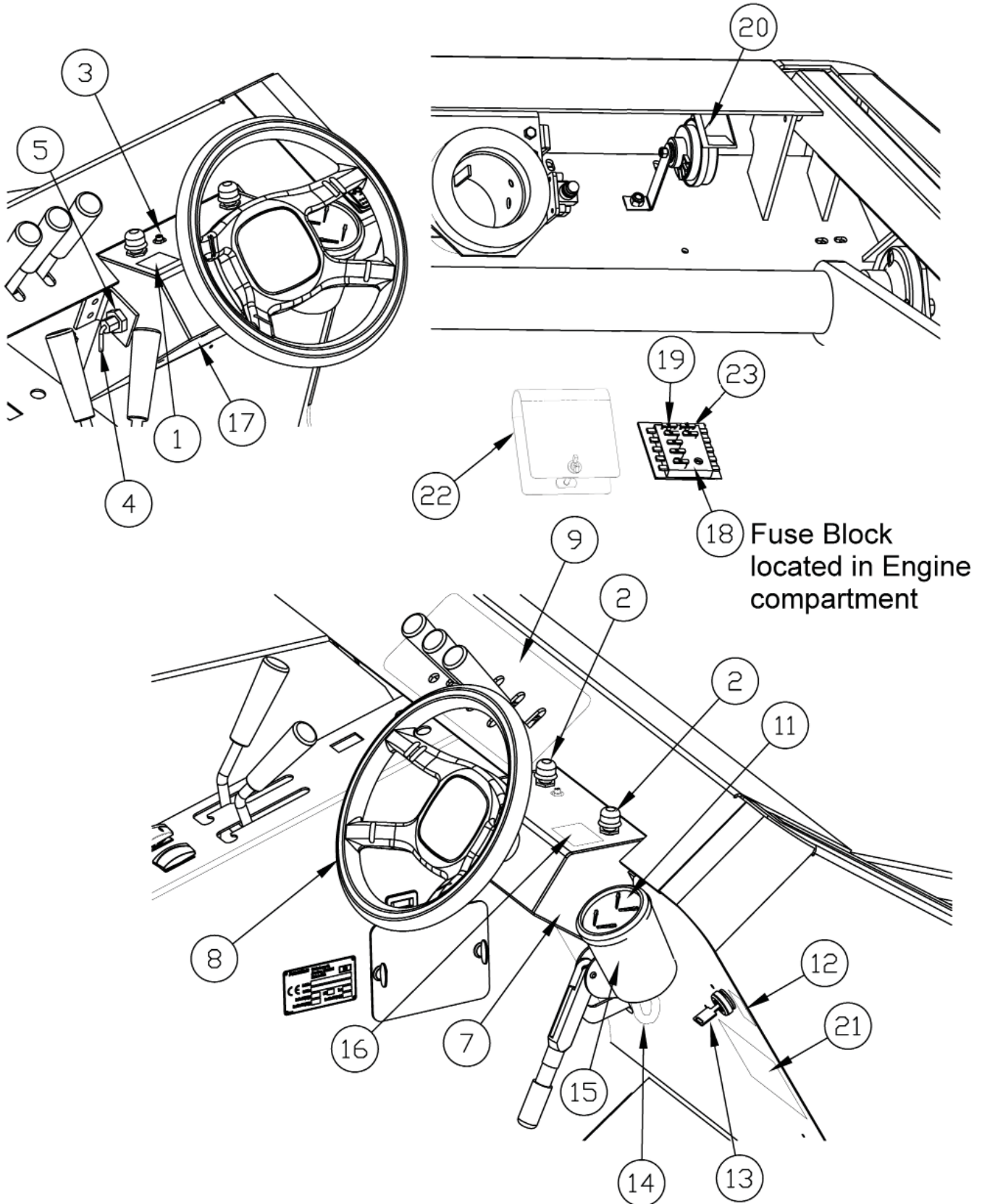
**BRAKE - 8" ARMA R/H PN-3321471**





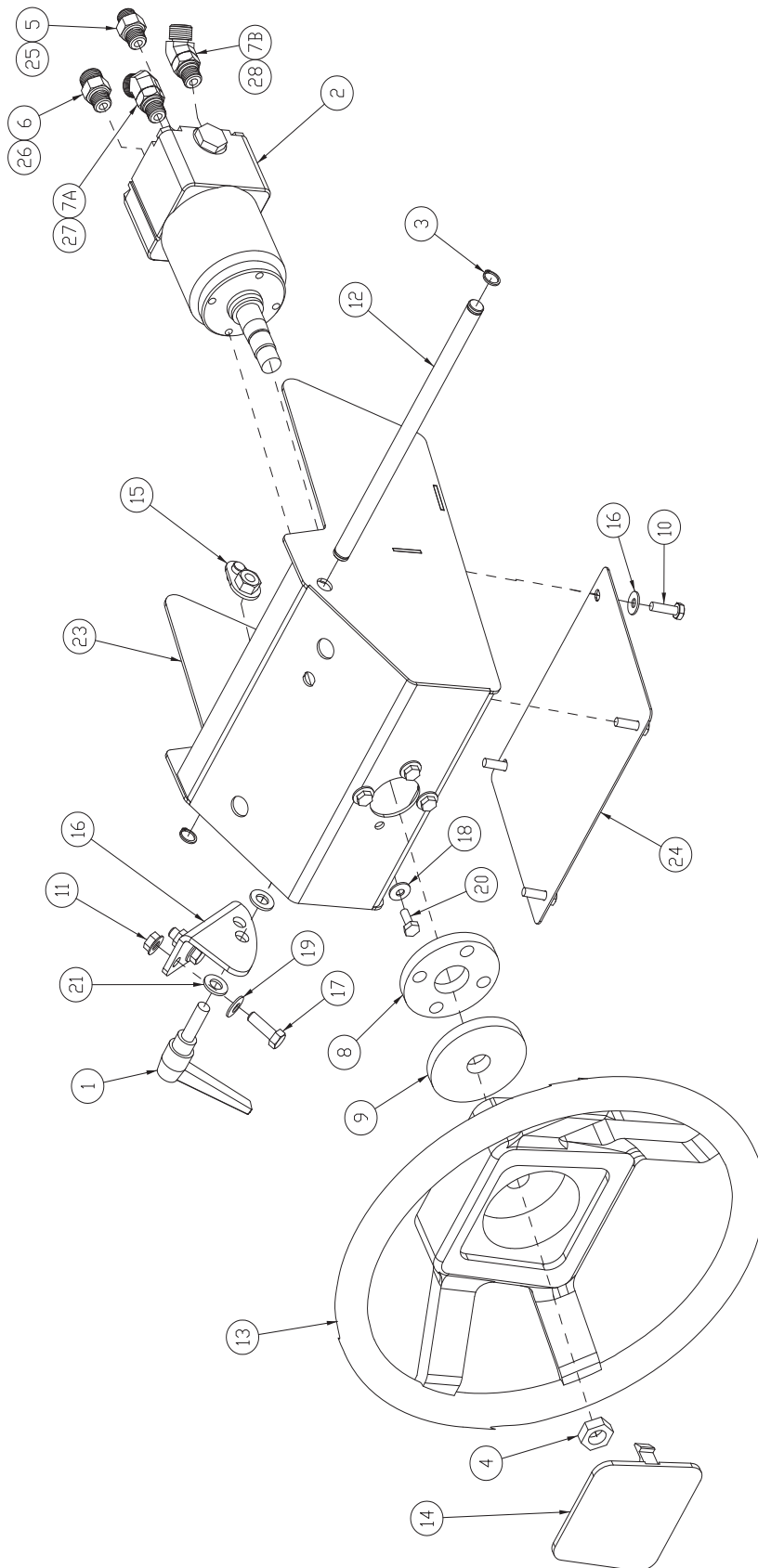
<b>BRAKE - 8" ARMA L/H PN-3321450</b>			
<b>BRAKE - 8" ARMA R/H PN-3321471</b>			
<b>Item</b>	<b>Part no.</b>	<b>Qty.</b>	<b>Description</b>
1	3321462	1	RETAINER-BRAKE 8" PLATE
2	3321465	2	SPRING-TENSION
3	3321461	1	ASSEMBLY-WHEEL CYLINDER, 8" BRAKE
4	3321467	1	BRAKE SHOE SET-8" LH (SHOWN)
4	3334766	1	BRAKE SHOE SET-8" RH (NOT SHOWN)
5	3321466	2	SPRING-HOLD DOWN
6	3321463	1	ASSEMBLY-MANUAL BRAKE ADJUSTER
7	3321464	1	SPRING-RETURN, 8" BRAKE
-	3321450	1	BRAKE-ASSEMBLY, 8" ARMA LH (ALL PARTS)
-	3321471	1	BRAKE-ASSEMBLY, 8" ARMA RH (ALL PARTS)

**STEERING WHEEL, GAUGES & FUSES**



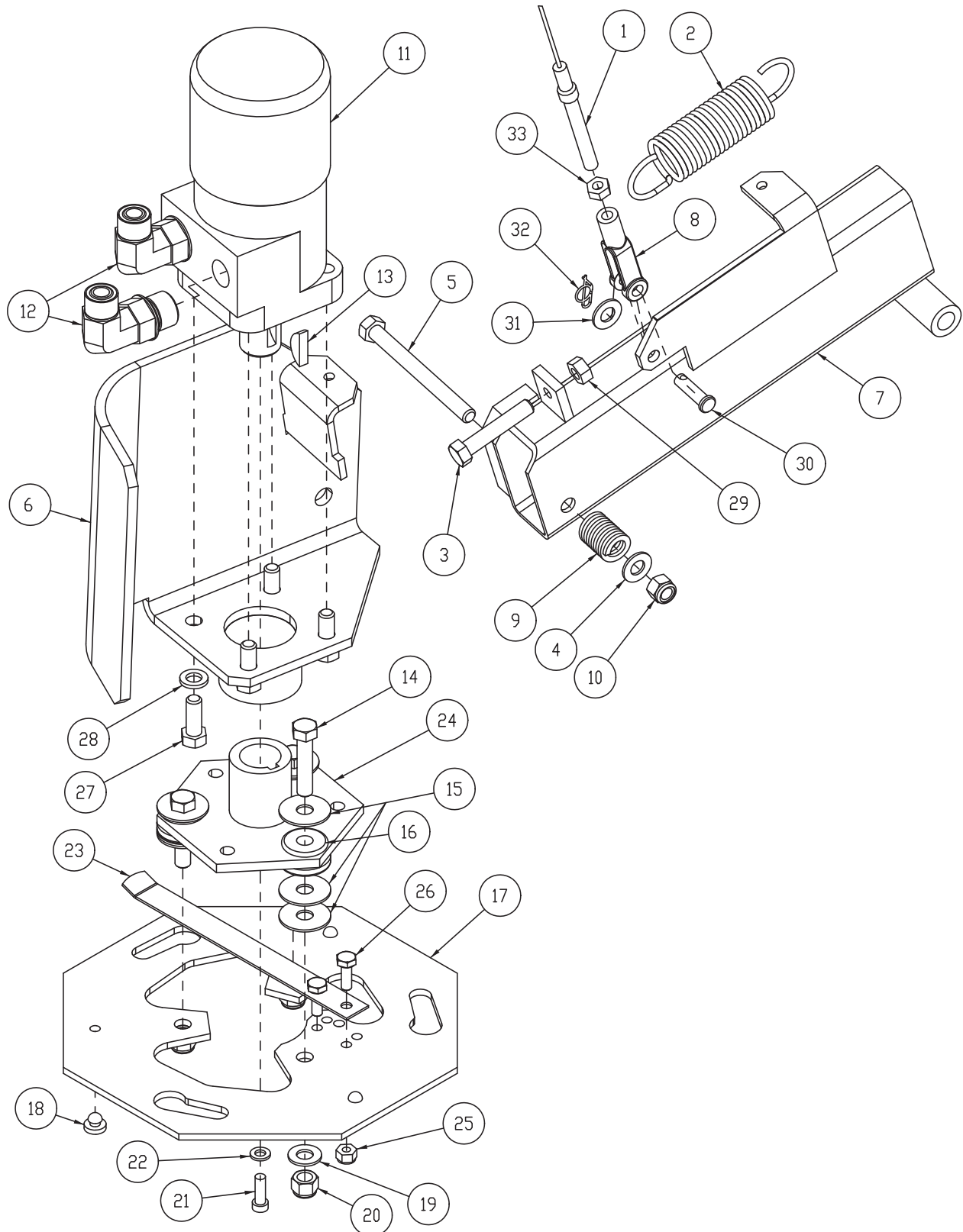
<b>STEERING WHEEL, GAUGES &amp; FUSES</b>			
<b>ITEM</b>	<b>PART NO.</b>	<b>REQ'D</b>	<b>DESCRIPTION</b>
1	3302520	1	DECAL-"FILTER SHAKER"
2	3300441	2	SWITCH MOMENTARY 12V
3	3026924	1	CIRCUIT BREAKER-45 AMP
4	600260	1	KNOB LEVER
5A	3338622	1	WDT - TILT STEERING LOCK
5B	3400192	2	NUT-HEX JAM 5/8-11 ZP
5C	12310058	1	WSR-FLT M10.5 X 20 X 2 STL
7	3338616P	1	WDT - AM9D TILT STEERING BOX
8	3338215	1	WHEEL-STEERING W/COVER SW
9	3307594	1	DECAL-FRONT PANEL SW/A
11	3333721	1	GAUGE-4 IN 1, 3.50" DIA
12	3307599	1	DECAL-IGNITION SW/A
13	3316100	1	SW-IGNITION, 3-POS, W/STARTER LOCKOUT
14	3335096	1	HARNESS-GAUGE
15	3333719P	1	WELDMENT-GAUGE MOUNT
16	3302525	1	DECAL-"HORN"
17	3338621P	1	COVER - PLT, TILT STEERING, AM9D
18	3322599	1	FUSE BLOCK-ATO, 10 POSITON
19	3322601	5	FUSE-15 AMP AUTOMOTIVE PUSH IN
20	3300379	1	HORN-AUTOMOTIVE 12V STANDARD
21	3301854	1	DECAL-CAUTION
22	690104	1	ASSY, RUBBER FUSE BOX COVER
23	3335380	2	FUSE-25 AMP STD, AUTO

**STEERING COLUMN**



STEERING COLUMN			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	600260	1	KNOB, LEVER
2	600368	1	STEERING UNIT
3	600569	2	RETAINING RING, EXT .50 HD
4	620057	1	NUT, JAM M16-1.50 STL ZP
5	675511	1	FTG-STR THD CONNECTOR -4 ORFS TO -6 SA
6	675515	1	FTG-STR THD CONNECTOR -6 ORFS TO -6 SA
7A	675552	1	FTG-STR THD 45 -6 ORFS TO -6 SAE
7B	675552	1	FTG-STR THD 45 -6 ORFS TO -6 SAE
8	690152	1	DUST RING, STEERING
9	690160	1	DUST RING, STEERING, UPPER
10	711206	4	BLT-HH 1/4-20 X .87 STL ZINC
11	711379	2	NUT-FLANGED WIZZ 5/16-18
12	750075	1	SHAFT - TILT STEERING PIVOT
13	3338215	1	STEERING WHEEL
14	PART OF 3338215	1	COVER, STEERING WHEEL
15	3338622	1	WDT - TILT STEERING LOCK
16	3338625	1	BRKT - TILT STEERING
17	3400035	2	SCR-HEX,5/16-18X1.00 ZP
18	3400383	8	WASHER-CONICAL SPRING 1/4
19	3400384	2	WASHER-CONICAL SPRING 5/16
20	11038072	4	BOLT, M6-100 X 16H
21	12310058	2	WSR-FLT M10.5 X 20 X 2 STL 140HV ZD DIN
23	3338616P	1	WDT - AM9D TILT STEERING BOX
24	3338621P	1	COVER - PLT, TILT STEERING, AM9D
25	675407	1	HYD HOSE - AUX PUMP TO PS UNIT
26	675411	1	HYD HOSE - PS UNIT TO ROT ACT P2
27	675409	1	HYD HOSE - PS UNIT TO RESV
28	675410	1	HYD HOSE - PS UNIT TO ROT ACT P1

**SIDE BROOM ASSEMBLY - DRIVE MOTOR, ARM, AND MOUNTING**

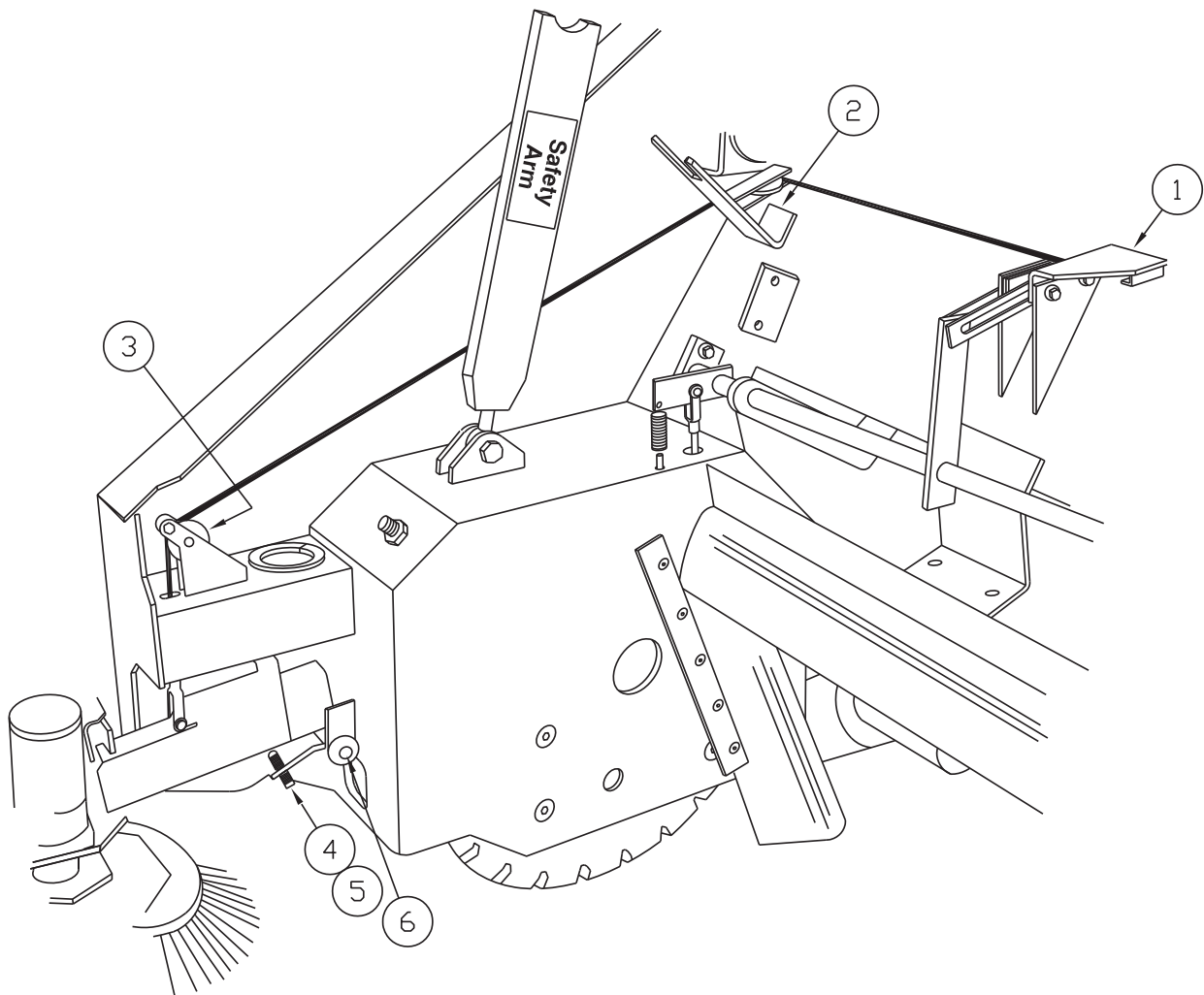
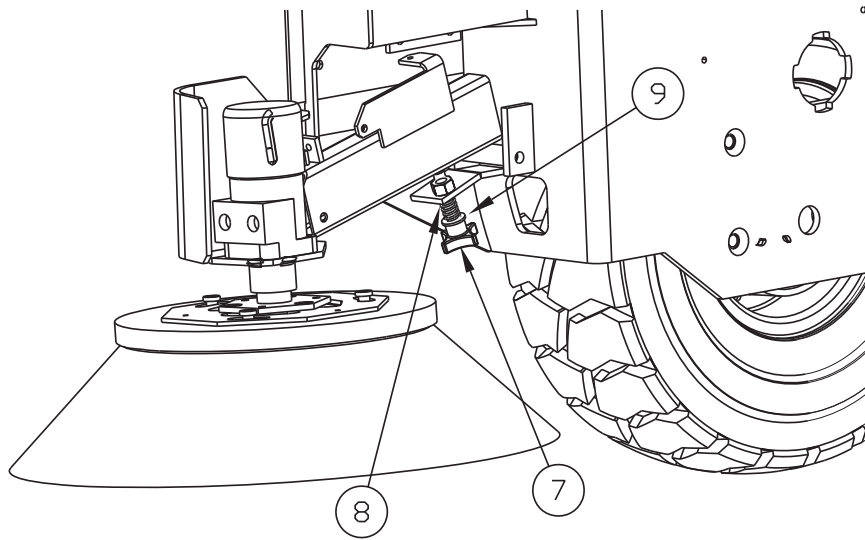




**SIDE BROOM ASSEMBLY - DRIVE MOTOR, ARM, AND MOUNTING**

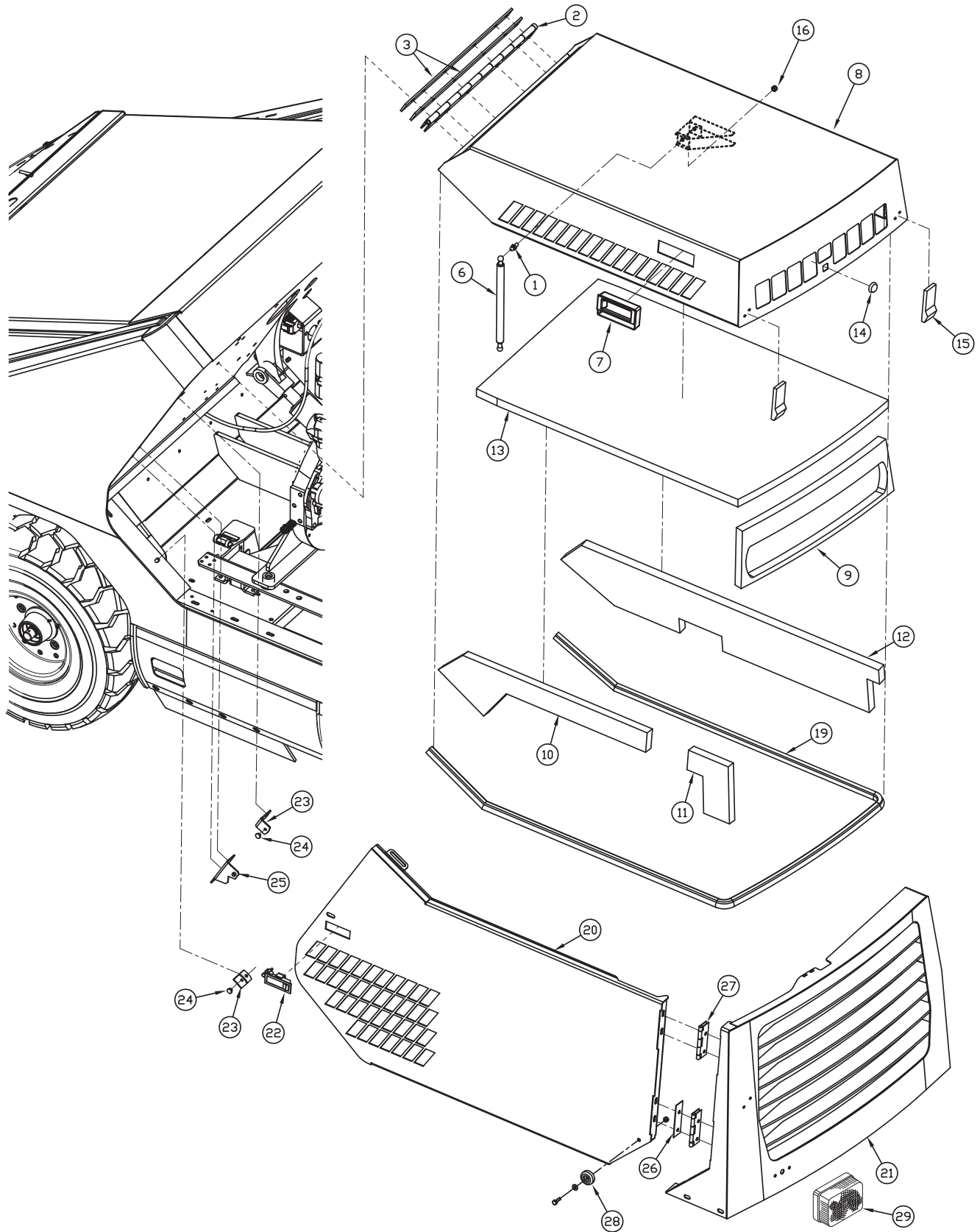
ITEM	PART NO.	REQ'D	DESCRIPTION
1	3335120	1	CABLE-SIDE BROOM
2	3302599	1	SPRING-EXT LOOPS-IN-LINE ZP
3	3401454	1	BOLT-HEX, TAP 3/8-16 X 2 ZP
4	3400087	1	WASHER-FLAT 3/8 STANDARD ZP
5	3400258	1	SCR-HEX,3/8-24X4.00 ZP
6	3307654P	1	RH SIDE BROOM MOUNT, AM9D
7	3307527P	1	O/S WELD-RH CURB BROOM ARM, AM9D
8	3307642	1	CLEVIS-5/16
9	3306179	1	SPRING-COMPRESSION, CURB BROOM
10	3400342	1	NUT-HEX 3/8-24 ES ZP
11	3316897	1	MOTOR-HYD CURB BROOM
12	675528	2	FTG-STR THD ELBOW -8 ORFS TO -10 SAE
13	3330338	1	KEY-SHAFT D-FOSS CB/MB/SC MTRS (REPLACEMENT)
14	3400027	3	SCR-HEX,3/8-16X1.75 ZP
15	3400278	9	WASHER-FENDER 3/8
16	3300465	3	ISOLATOR-RUBBER (.375IDx.81OD)
17	3301262	1	PLATE-GIMBAL SC HD
18	3300526	3	BUMPER-RUBBER 1/4IDx1/8 THK
19	3400087	3	WASHER-FLAT 3/8 STANDARD ZP
20	711380	3	NUT-NYLOC 3/8-16
21	3400049	1	SCR-SOCKET HEAD,1/4-20X0.75 NYLOCK
22	3400103	1	WASHER-LOCK 1/4 SPLIT ZP
23	3302058	1	BAR-CURB BROOM RETAINER
24	3300875	1	DRIVE HUB SC BR
25	711373	2	NUT-NYLOC 1/4-20
26	713002	2	BLT-HH 1/4-20 X .75 #5 ZINC
27	3400030	4	SCR-HEX,3/8-16X1.00, GRADE 5, ZP
28	3400101	4	WASHER-LOCK 3/8 SPLIT ZP
29	3400068	1	NUT-HEX 3/8-16 ZP
30	3400184	1	PIN-CLEVIS 5/16 X 1-1/8 ZP
31	3400087	1	WASHER-FLAT 3/8 STANDARD ZP
32	3400125	1	RING-RUE 3/8 COTTER PIN
33	3400069	1	NUT-HEX 5/16-24 ZP
-	3307033	-	SUB-CURB BROOM SUB ASSY (INCLUDES ALL ITEMS, EXCEPT: 1, 4, 8, 13, 30, 31, 33)

**SIDE BROOM ASSEMBLY - ADJUSTMENT COMPONENTS**



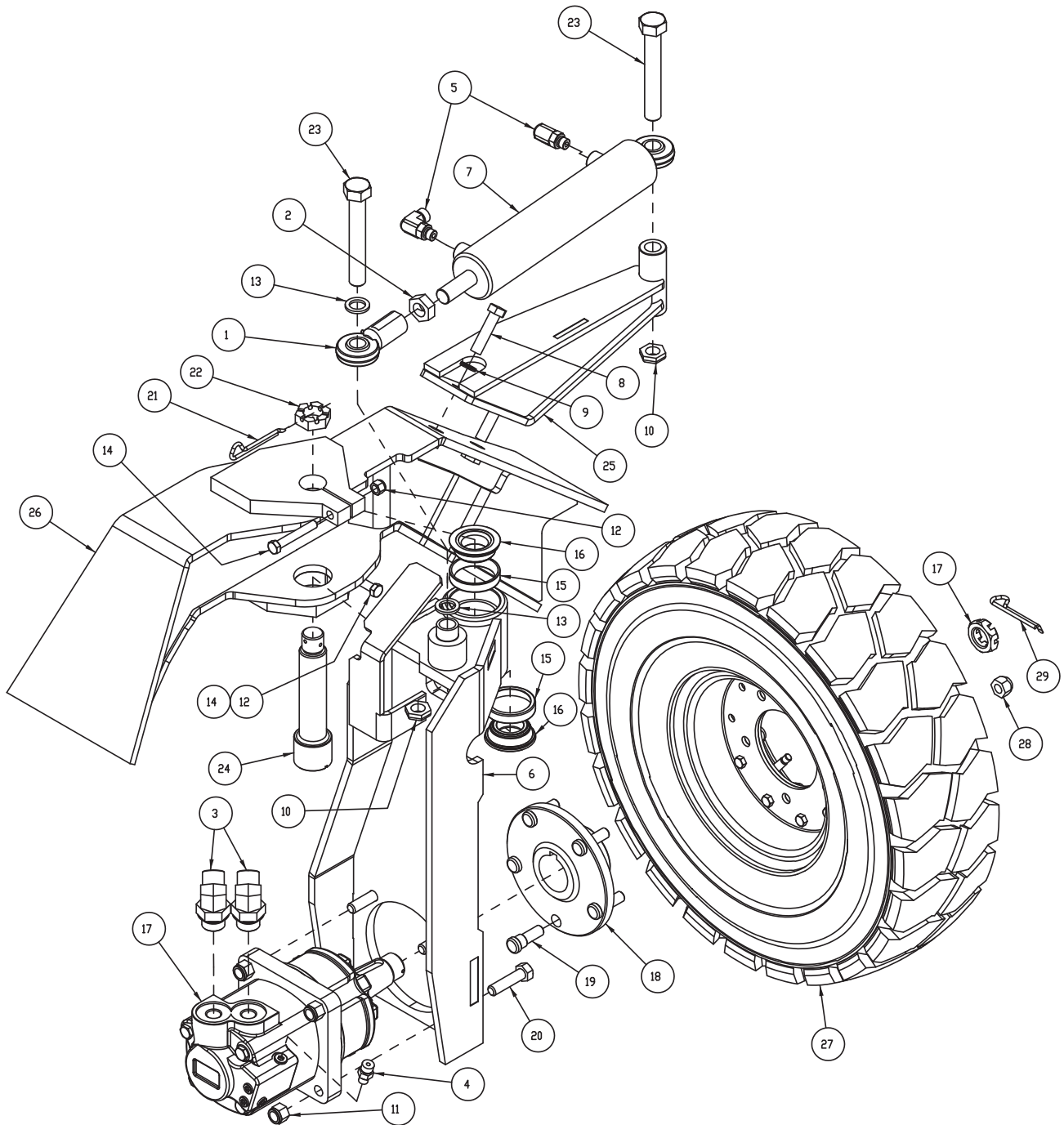
SIDE BROOM ASSEMBLY - ADJUSTMENT COMPONENTS			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	3307861	1	WELDMENT-PULLEY MOUNT #3
2	3307865	1	WELDMENT-SAFETY ARM RETAINER/PULLEY MOUNT
3	3300368	3	PULLEY-PLASTIC $\phi 2"$ , $\phi .25"$ GROOVE
4	3400404	1	SCR-SET, 1/2-20X3.00
5	3400449	1	NUT-HEX JAM 1/2-20 (NOT SHOWN)
6	620027	1	PIN-CLEVIS 1/2 X 4-1/2
7	3400404	1	SCR-SET, 1/2-20X3.00
8	3400449	1	NUT-HEX JAM 1/2-20 ZP
9	3400086	1	WASHER-FLAT 1/2 STANDARD ZP

**ENGINE COVER, SIDE DOOR, LATCH & REAR GRILL**



ENGINE COVER, SIDE DOOR, LATCH & REAR GRILL			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	3300376	1	STUD-BALL 10MM
2	3307503	1	HINGE ENGINE COVER
3	3307504	2	SPACER ENGINE COVER HINGE FRAME SIDE
6	3308767	1	GAS SPRING-8" STROKE
7	3335146	1	HANDLE - RECESSED NYLON INSET (.07-.13 WALL)
8	3336780M	1	ENGINE COVER 9X, ORANGE
9	690129	1	INSULATION - ENG COVER BACK
10	690127	1	INSULATION - ENG COVER LH FRONT PANEL
11	690128	1	INSULATION - ENG COVER LH BACK PANEL
12	690130	1	INSULATION - ENG COVER RT 9X
13	690131	1	INSULATION - ENG COVER TOP 9X
14	3330356	1	PLUG-PLASTIC HOLE, 3/4, 7 GA
15	3307719	2	LATCH-RUBBER SOFT
16	711374	1	NUT-HEX 5/16-18 ES
19	3500198	8.5'	SEAL-TRIM 90 DEG. MOUNT
20	3336786M	1	SIDE DOOR 9X, ORANGE
21	3335437M	1	RADIATOR GUARD 9X , ORANGE
22	3300380	1	LATCH ASSY-#C2-10-301-50
23	3335015	2	PLATE-STOP, SIDE DOOR, ARMA PLATED
24	3300526	2	BUMPER-RUBBER 1/4IDx1/8 THK
25	3335174	1	SIDE DOOR STRIKE ARMA
26	3307560	-	SPACER-METAL, 0.060" SIDE DOOR SW/A
27	3307513	2	HINGE-SIDE DOOR
28	3302482	1	BUMPER-RUBBER, 1.5" DIA, 5/8 THK
29	3303204-1	1	TAIL LIGHT - 12V COMBINATION ASSY

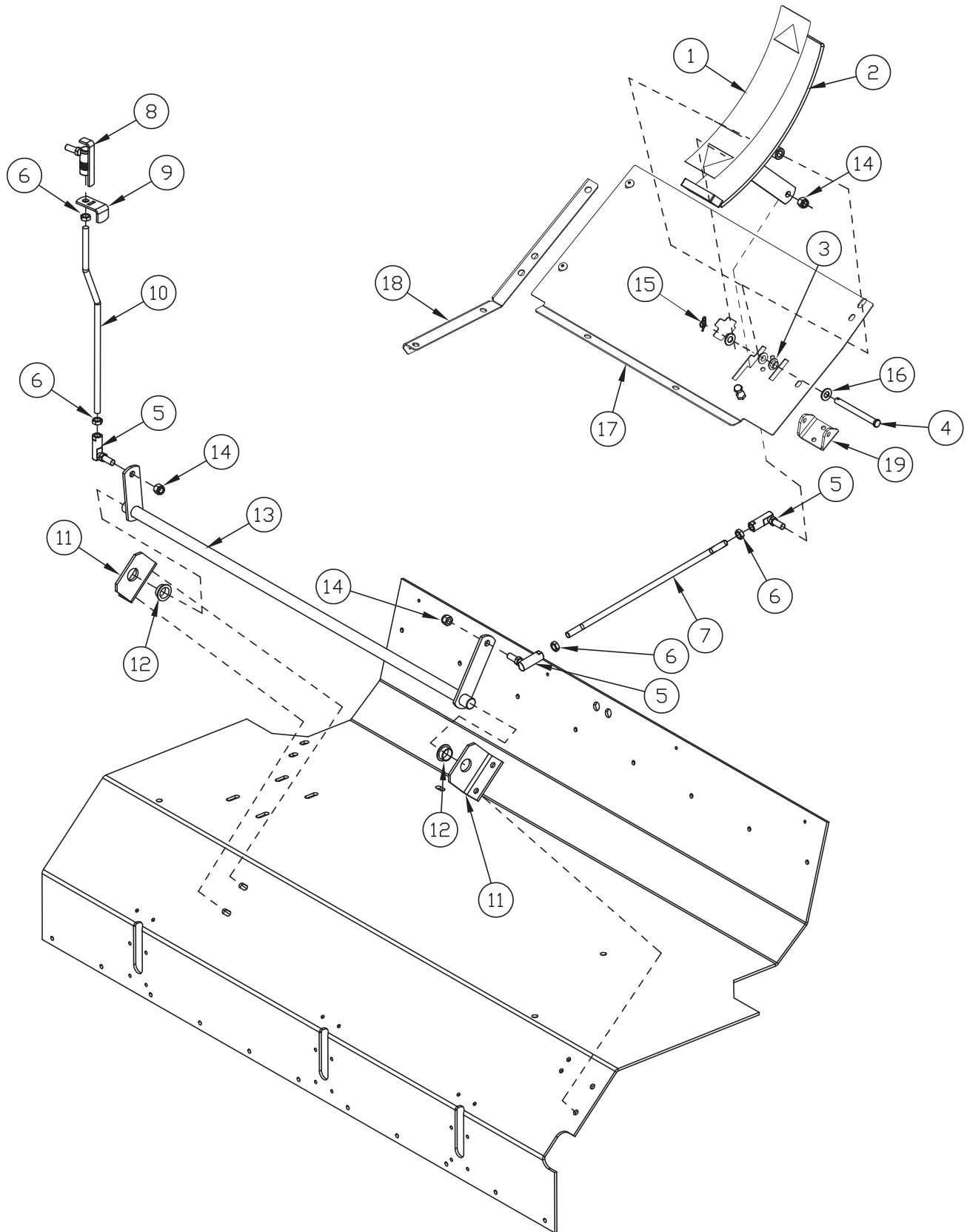
**REAR DRIVE ASSEMBLY**





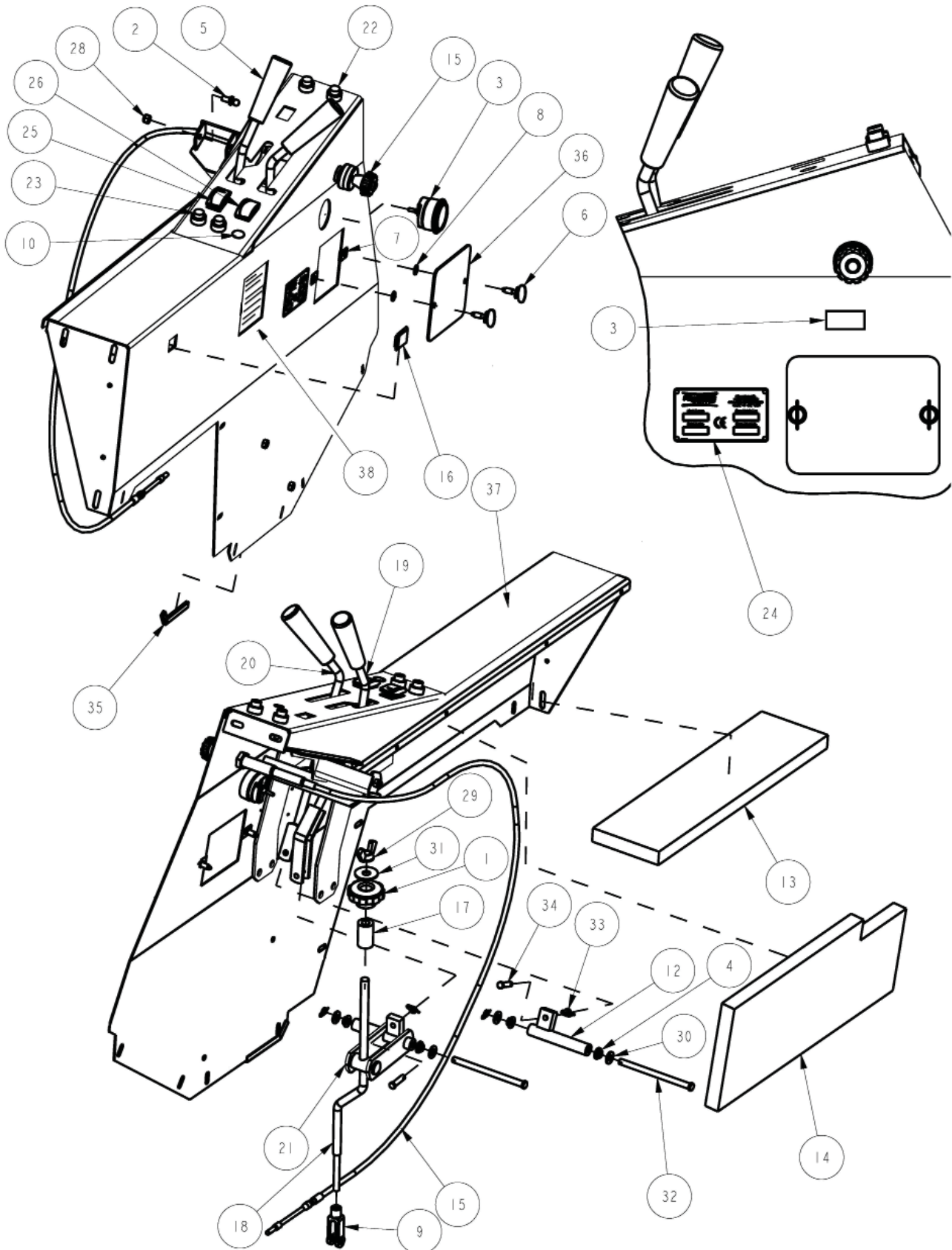
REAR DRIVE ASSEMBLY			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	600178	1	ROD END FEM 3/4-16 W/ZERK
2	600939	1	NUT 3/4-16 JAM
3	675501	2	FTG-45 DEG STR ELBOW -10 ORFS TO -12 SAE
4	675508	1	FTG-STR THD CONNECTOR -4 ORFS TO -4 SA
5	675518	2	FTG-STR THD ELBOW -6 ORFS TO -5 SAE
6	690003	1	CYL STEERING FORK
7	690025	1	STEERING CYL
8	710120	2	SCREW, HHCS, 1/2-13 X 2 GRD 8
9	710121	2	WASHER, NORDLOCK (2PC), 1/2 CARBON STEEL
10	710122	2	NUT, 3/4-10, NYLON LOCKING, LOW PROFILE
11	711376	4	NUT-NYLOC 1/2-13
12	711380	2	NUT-NYLOC 3/8-16 NUT
13	712318	2	WSR- FLAT .75 X 1.12 X .12 PL
14	713048	2	BLT-HH 3/8-16 X 2 1/2 #5
15	3300470	2	BEARING-TAPERED ROL CUP
16	3300471	2	BEARING-TAPERED ROLCONE W/SEAL
17	3306809	1	MOTOR - HYD, 400 SERIES
18	3307347	1	HUB-REAR SW/A, BLACK
19	3307348	5	STUD - WHEEL, 1/2-20X 1.63 (REAR SW/A)
20	3400020	4	SCR-HEX, 1/2-13 X 2.00 ZP
21	3400120	1	PIN-COTTER 5/32 X 2.00 ZP
22	3400223	1	NUT-SLOTTED, 1-20 UNEF
23	3400422	2	SCR-HEX, 3/4-10 X 5.00 ZP
24	3307349P	1	PIN - REAR FORK
25	3317370P	1	WELDMENT-CYL STEERING MOUNT
26	REF	-	WELDMENT- FRAME, AM9D/9X
27	3307021	1	ASSY-TIRE REAR
28	3300411	5	NUT-WHEEL LUG, 1/2-20 UNF
29	3400120	1	PIN-COTTER 5/32 DIAx2.00 LG, ZP

**DIRECTIONAL CONTROL LINKAGE ASSEMBLY**



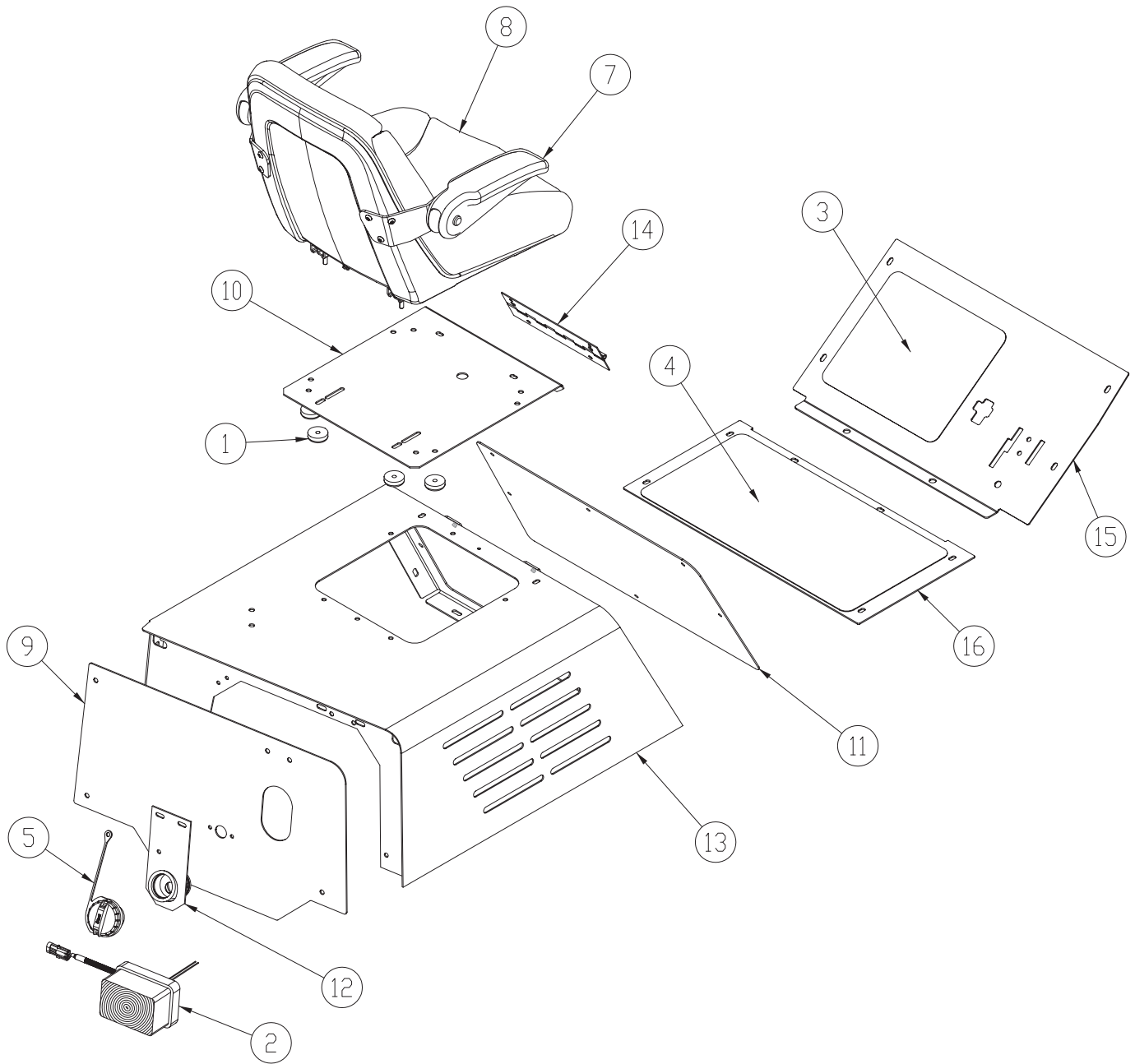
DIRECTIONAL CONTROL LINKAGE ASSEMBLY			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	3335609	1	PAD-FOOT PEDAL, ANTI-SKID, 2" X 9.5"
2	3337390	1	PEDAL - FWD/REV, 1-PC
3	3300414	2	BUSHING-PLASTIC FLANGED, .375IDx.50OD
4	711681	1	PIN-CLEVIS, 3/8x4
5	3300461	2	BALL JOINT-3/8-24
6	3400075	4	NUT-JAM, 3/8-24
7	3307222	1	ROD-DIRECTIONAL CONTROL, DIESEL
8	3307611	1	QUICK RELEASE- FWD/REV
9	3307613	1	HANDLE-QUICK RELEASE
10	3307938	1	ROD-DIRECTIONAL CONTROL DIESEL
11	3307223	2	MOUNT-DIRECTIONAL CONTROL BUSHING
12	3307220	2	BUSHING-PLASTIC FLANGED, .76IDx.88OD
13	3307215	1	DIRECTIONAL TORQUE TUBE
14	3400342	4	NUT-HEX 3/8-24 ES ZP
15	3400125	1	PIN-COTTER 3/8 RUE-RING
16	3400087	1	WASHER-FLAT 3/8 STANDARD ZP
17	3337387P	1	FLOOR BOARD - UPPER, AM9D
18	3337542	1	ASSY - 9XR FLOORBOARD LEDGE
19	3337389	1	MOUNT - FWD/REV PEDAL

**CONSOLE ASSEMBLY**



CONSOLE ASSEMBLY			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	3300352	1	KNOB-MB LIFT ADJ
2	3300376	1	STUD-BALL, GAS SPRING, 5/16-18
3	3336094	1	GAUGE-HOURMETER, DIGITAL, SNAP (AFTER SN-18168059)
4	3300414	4	BUSHING-PLASTIC 3/8IDx1/2OD
5	600264	2	HANDLE CONTURED
6	3301147	2	SCR-5/16 ACME THD, WING HEAD,
7	3301155	2	CLIPNUT-5/16-18
8	711744	2	RETAINER 5/16 PUSH NUT BOLT
9	3301447	1	CLEVIS WITH PIN AND COTTER
10	3301669	1	PLUG-PLASTIC, 11/16 DIA
12	3307614	1	WELD-PIVOT SB LIFT
13	3307846	1	INSULATION-CONSOLE TOP
14	3307847	1	INSULATION-DRIVER COMP SIDE
15	3337966	1	CABLE- THROTTLE
16	3323529	1	PLUG-CARLING CONTURA SWITCH
17	3333672	1	SPACER-MB LIFT ROD
18	3334984	1	ROD-MAIN BROOM, LOWER
19	3338296	1	WELD-ROD,MAIN BROOM, UPPER, ZP
20	3338297	1	WELD-ROD,SIDE BROOM, UPPER, ZP
21	3335112P	1	WELD-LIFT ARM, MAIN BROOM,
22	3342905	1	ASSY- INDICATOR LIGHT RED W/PACKARDTERMS
23	3342905	1	ASSY- INDICATOR LIGHT RED W/PACKARDTERMS
24	715731	1	ID PLATE-SERIAL# INFO
25	3342705	1	SWITCH-BASE, DPST CONTURA ROCKER
26	3343912	1	SW-ROCKER CONTURA DPDT ON-OFF
28	711374	1	NUT-NYLOC 5/16-18
29	3400084	1	NUT-WING 1/2-13
30	3400087	4	WASHER-FLAT 3/8 STANDARD ZP
31	3400091	1	WASHER-FENDER 1/2 ZP
32	3400113	4	PIN-CLEVIS 3/8x5-1/2 ZP
33	3400125	4	PIN-COTTER 3/8 RUE-RING
34	3400185	2	PIN-CLEVIS 5/16x1-1/4
35	3500118		EDGING-VINYL TRIM 1/8" X 250' (Sold Per Foot)
36	3307554	1	COVER BROOM ADJ, 9X ORANGE
37	3335003M	1	CONSOLE, 9X, ORANGE
38	3301854	1	DECAL-CAUTION, 5x4.50"

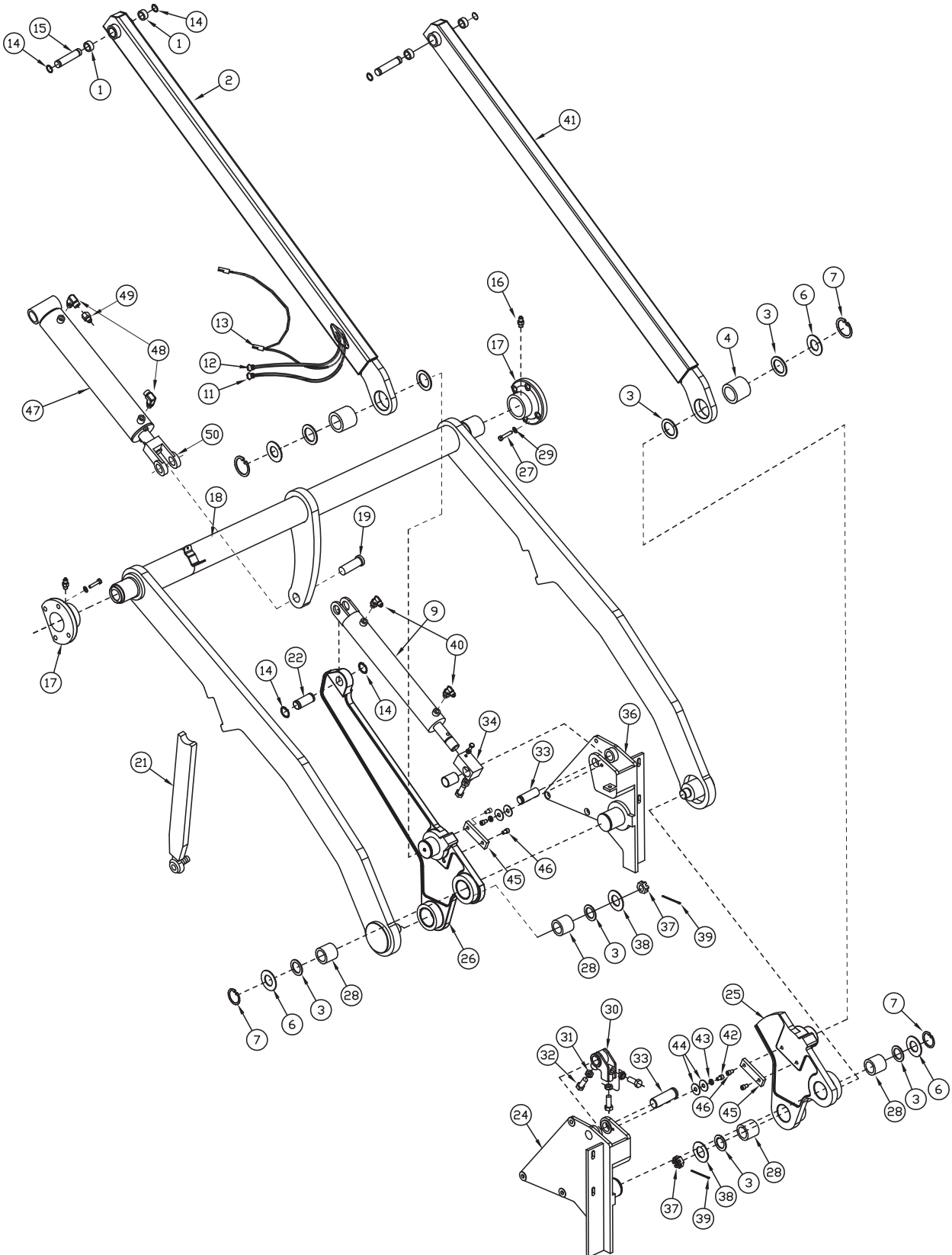
**SEAT, FLOOR PAN & TAIL LIGHT**



SEAT, FLOOR PAN & TAIL LIGHT			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	3302482	4	BUMPER-RUBBER, 1.5" DIA, 5/8 THK
2	3303204-1	1	TAIL LIGHT - 12V COMBINATION ASSY
3	3307587	1	FLOOR MAT-SMALL
4	3307588	1	FLOOR MAT-LARGE
5	3343413	1	CAP-FUEL TANK
7	620239	1	ARM-REST
8	620219	1	SEAT STD W SEAT BELT RECEIVERS
9	3309716P	1	PANEL-REAR COVER, 9X
10	3333729P	1	MNT-SEAT 9X DARK GRAY
11	3333733P	1	PLATE-ACCESS SEAT CLIP, 9X
12	3335010P	1	FUEL FILL, 9X
13	3335027M	1	CLIP, SEAT 9X, DARK GRAY
14	3335033P	1	HINGE-UNIVERSAL SEAT MNT, 9X
15	3337387P	1	FLOOR BOARD - UPPER
16	3337388P	1	FLOOR BOARD - LOWER



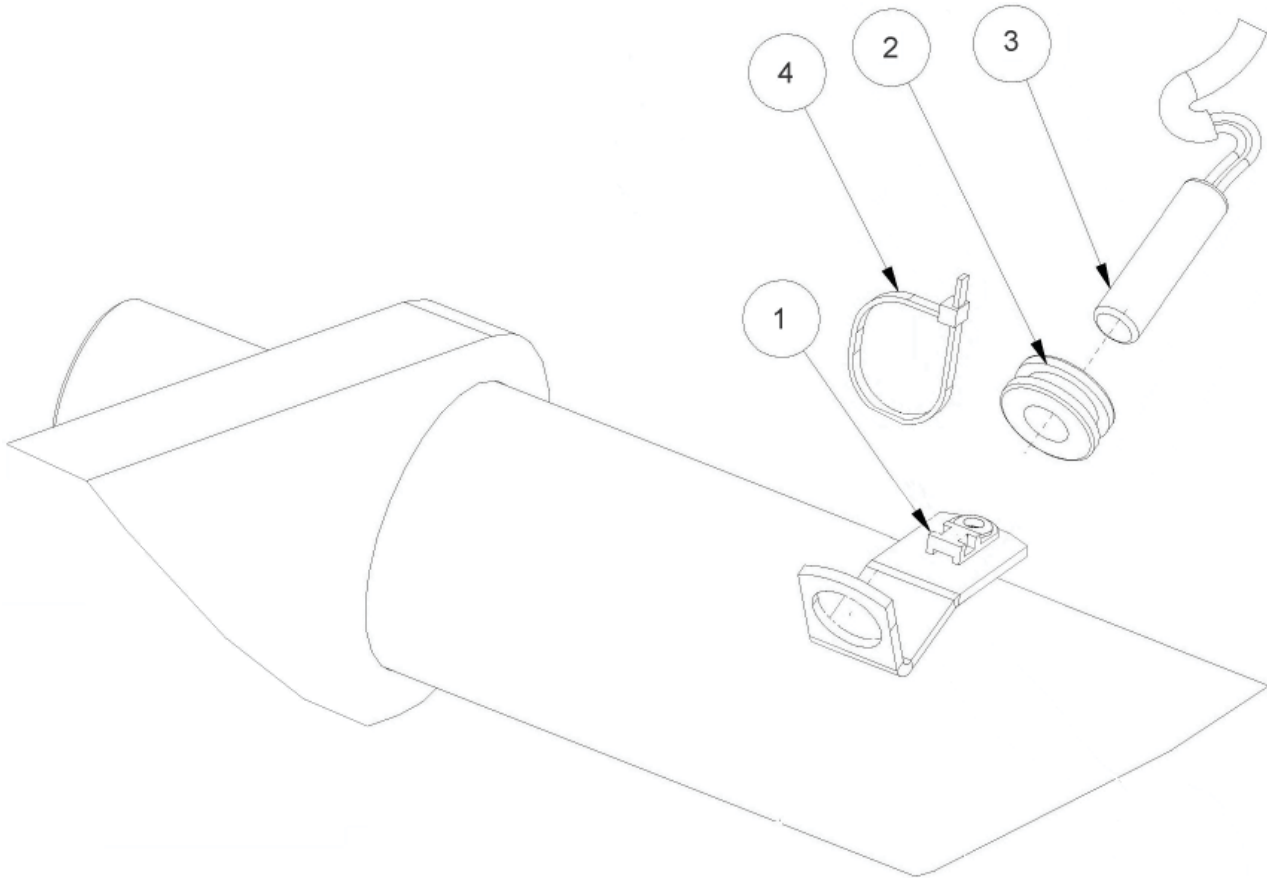
**LIFT & ROTATION CYLINDERS, HYDRAULIC HOSES**



## LIFT &amp; ROTATION CYLINDERS, HYDRAULIC HOSES

ITEM	PART NO.	REQ'D	DESCRIPTION
1	3300837	4	BEARING-1.12 ODx1.00 IDx.75
2	3334551P	1	LIFT ARM-UPPER RH 9X
3	3400177	8	BEARING-THRUST 2.06 IDx3.25 OD
4	3300836	2	BEARING-2.18 ODx2.00 IDx.75
6	3300882	4	WASHER-HD 3.25 ODx2.00 ID
7	3301709	4	RING-RETAINING, EXT 2.00 DIA
9	3316890	1	CYLINDER-HYD, ROTATION HOPPER LIFT
11	675420	1	HYD HOSE - NEED VALVE TO ROT CYL
12	675421	1	HYD HOSE - ROT CYL TO CONT VALVE
13	3336963P	1	HARNES - LIFT ARM
14	3301998	6	RING-RETAINING, EXT .940 DIA
15	3307430	2	PIN-UPPER LIFT ARM, .998 DIA,
16	3400012	2	FTG-GREASE 3/16
17	3307605	2	ASSEMBLY-DUMP ARM MOUNT
18	3307305M	1	LIFT ARM-HOPPER 9X DARK GRAY
19	3335285	1	PIN, LIFT CYL, ROD END
21	3343821	1	ASSY- SAFETY ARM W/ BALL JOINT
22	3307607	1	PIN-ROTATION CYL, .998 DIA,
24	3335361	1	PIVOT-HOPPER LH
25	3332416	1	ARM-ROTATION (W/PRESSED BEARINGS #28)
26	3307074	1	ARM-HOPPER ROTATION (W/PRESSED BEARINGS #28)
27	712162	8	SCREW, SHCS 7/16-14 X 1-1/2 STEEL ZINC
28	3300840	4	BEARING-2.18 ODx2.00 IDx1.50
29	3401570-11	8	WASHER-NORD-LOCK, 7/16, ZP
30	3336997	1	WELD - HOPPER ROTATE STOP
31	3400449	3	NUT-HEX JAM 1/2-20 ES
32	3400306	3	SCR-HEX,1/2-20X1.00 ZP
33	3307606	1	PIN-FRONT ROTATION CYL, .998 DIA,
34	3317119	1	ASSY- BLOCK ROTATION RH
36	3317364	1	PIVOT-HOPPER RH
37	3400076	2	NUT-HEX JAM SLOTTED, 1-14
38	3300879	2	WASHER-HD 3.25 ODx1.00 ID
39	3400122	2	PIN-COTTER 1/8 X 2.00 ZP
40	675507	2	FTG-STR THD ELBOW -4 ORFS TO -4 SAE
41	3334454P	1	LIFT ARM-UPPER LH 9X
42	3400219	2	SCR-SOC,5/16-18X0.50 ZP
43	3400102	2	WASHER-LOCK 5/16 SPLIT ZP
44	3400278	4	WASHER-FENDER 3/8 ZP
45	3321377	2	TOP-ROTATION CYL MNT ARMA
46	711239	4	SCR-HEX 3/8-16 X 1.00 GR8 ZP
47	3307243	1	ASSY, CYLINDER-HYD HOPPER LIFT
48	675518	2	FTG-STR THD ELBOW -6 ORFS TO -5 SAE
49	675550	4	FITTING ORIFICE .047 #6
50	3339955	1	CLEVIS-LIFT ARM 1.0 DIA. PIN 1.00-14 TD

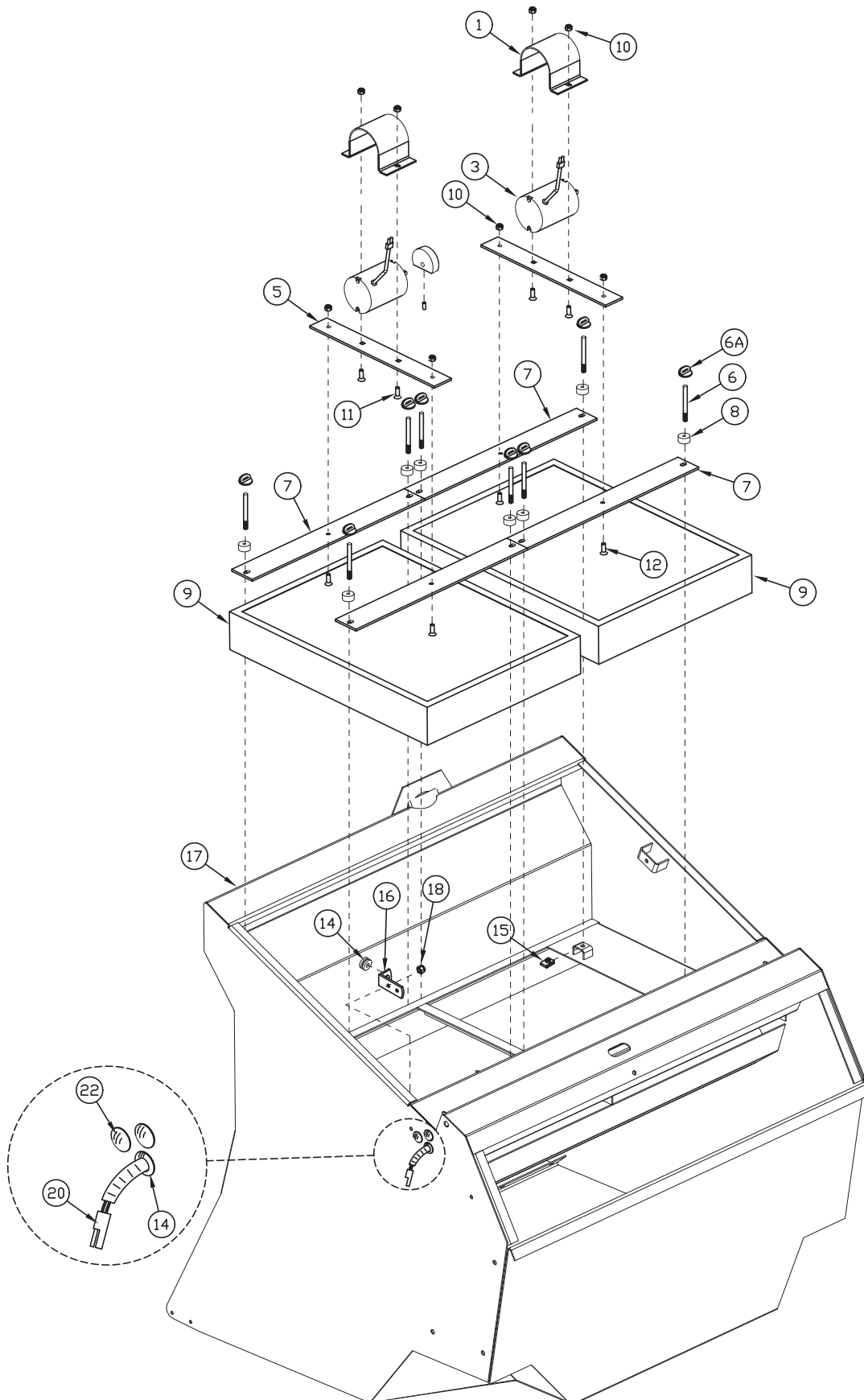
**RTR SWITCH DETAIL LIFT ARM**



<b>RTR SWITCH DETAIL LIFT ARM</b>			
<b>ITEM</b>	<b>PART NO.</b>	<b>REQ'D</b>	<b>DESCRIPTION</b>
1	3302472	1	MOUNT-WIRE TIE LOW PROFILE
2	3311564	1	GROMMET-RUBBER, 1/2 ID
3	3336963P	1	HARNESS - LIFT ARM, ARMA TIER II
4	828062-B	1	TIE-WIRE BLACK

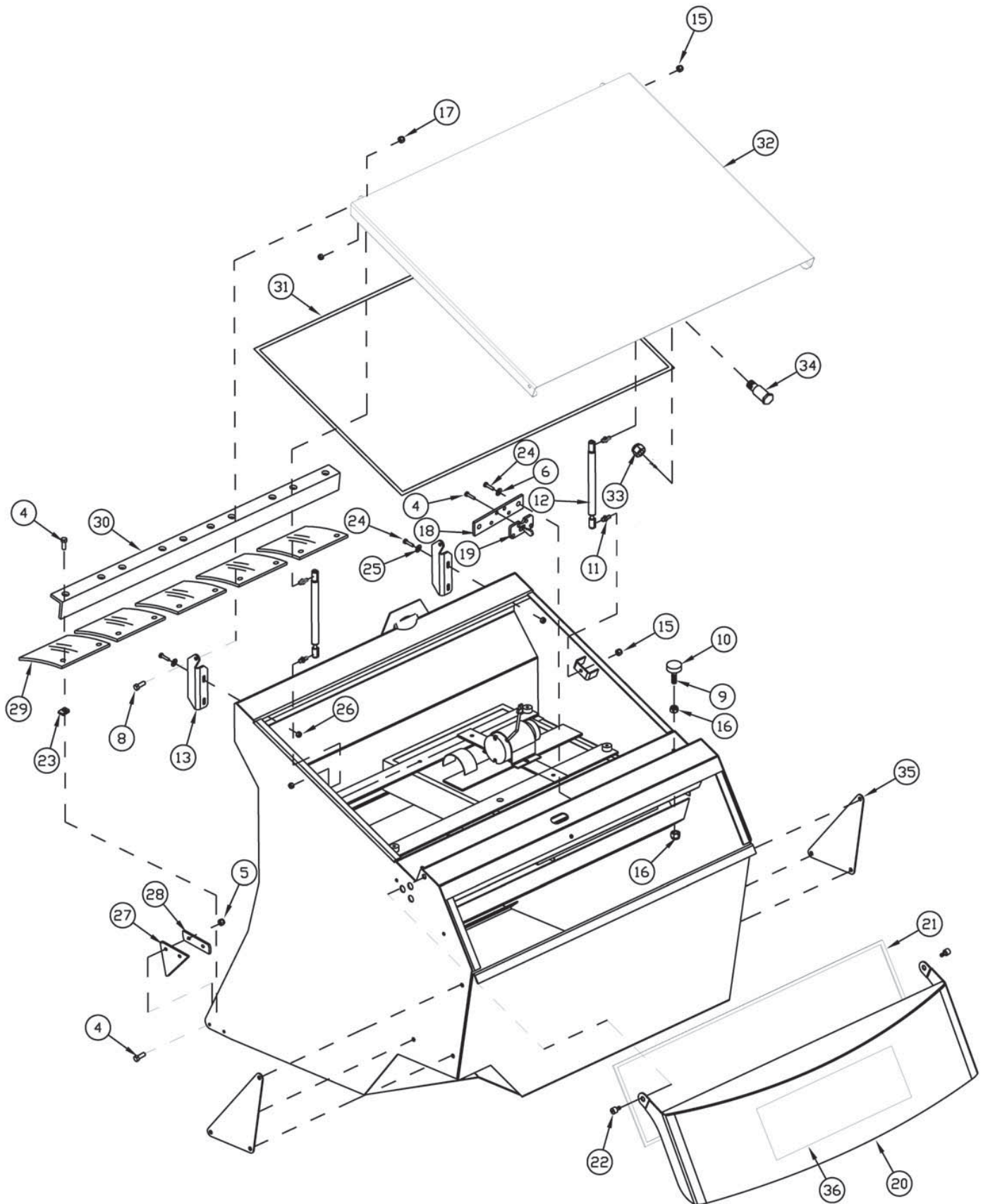
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**HOPPER - FILTER AND SHAKER MOTOR COMPONENTS**



<b>HOPPER - FILTER AND SHAKER MOTOR COMPONENTS</b>			
<b>ITEM</b>	<b>PART NO.</b>	<b>REQ'D</b>	<b>DESCRIPTION</b>
1	750073	2	BRACKET SHAKER MOTOR
3	748149-1	2	ASSY, SHAKER MOTOR W/CONNECTOR
5	3300917	2	BAR-FILTER RETAINER
6	3334676	8	ROD-5/16-18x4.63, FILTER TIE DOWN
6A	3334678	8	NUT-WING 5/16-18 NYLON INSERT
7	3300919	4	BAR-FILTER SHAKER
8	3307850	8	ISOLATOR-RUBBER, .25IDx1ODx.50THK, SW/A
9	3334070	2	FILTER-POLYESTER HOPPER 9XR (31x24x3.19)
10	711374	8	NUT-NYLOC 5/16-18
11	70-516-16	4	BLT-CARR 5/16-18 X 1 ZINC
12	3400329	4	SCR-FLT,5/16-18X.75,SLT ZP
14	3311564	3	GROMMET-RUBBER, 1/2 ID
15	832829	8	NUT-U TYPE 5/16-18
16	3336778	1	BRACKET- FOR SWITCH BALL (# 2 RTR LIGHT )
17	3307440M	1	HOPPER 9X, DUAL FILTER, ORANGE
18	3400484	1	RIVET-AVDEL 3/16 X .602
20	3336964P	1	HARNESS - HOPPER, ARMA
22	3330356	2	PLUG-PLASTIC HOLE, 3/4, 7 GA

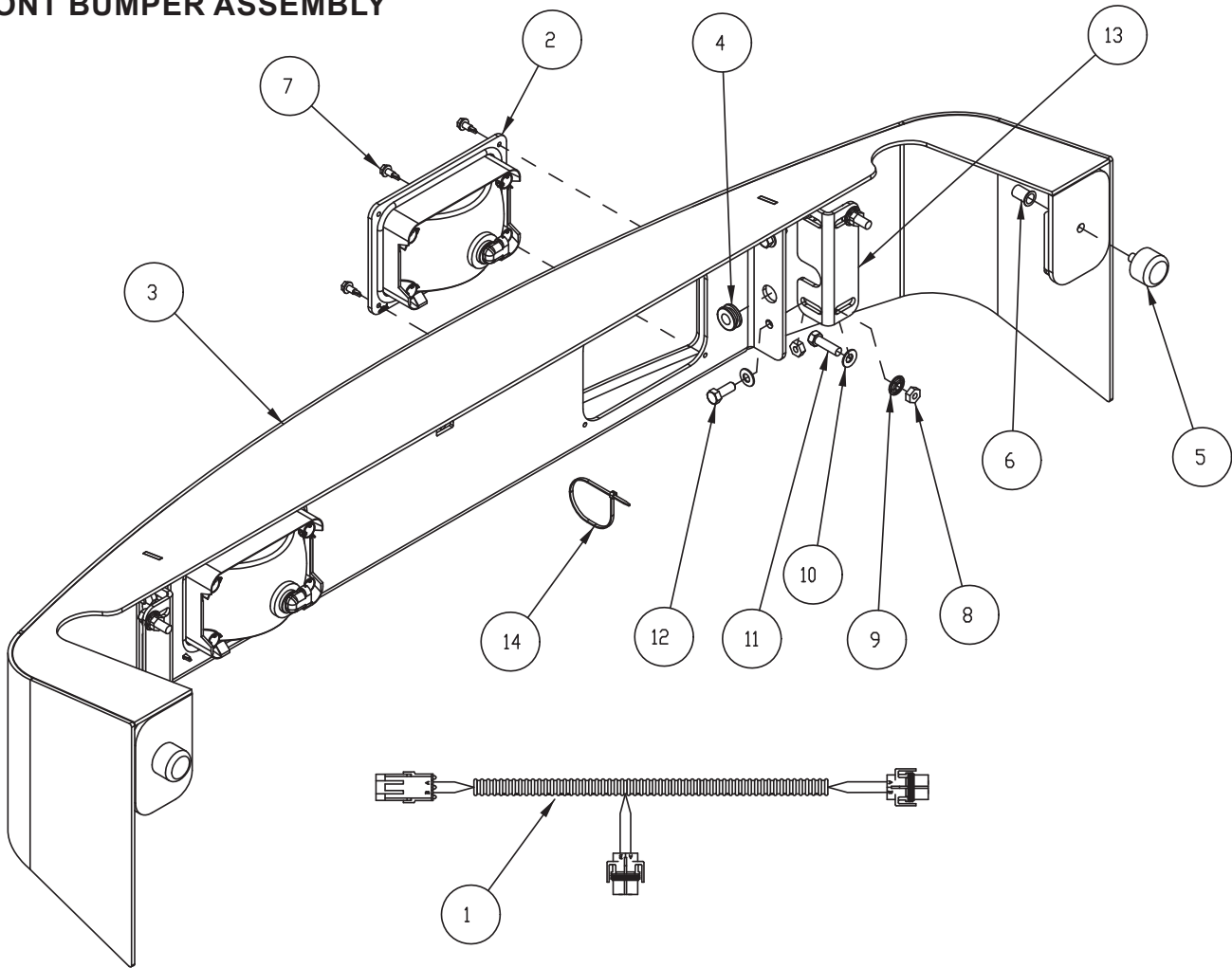
**HOPPER - COVER AND LATCH COMPONENTS**





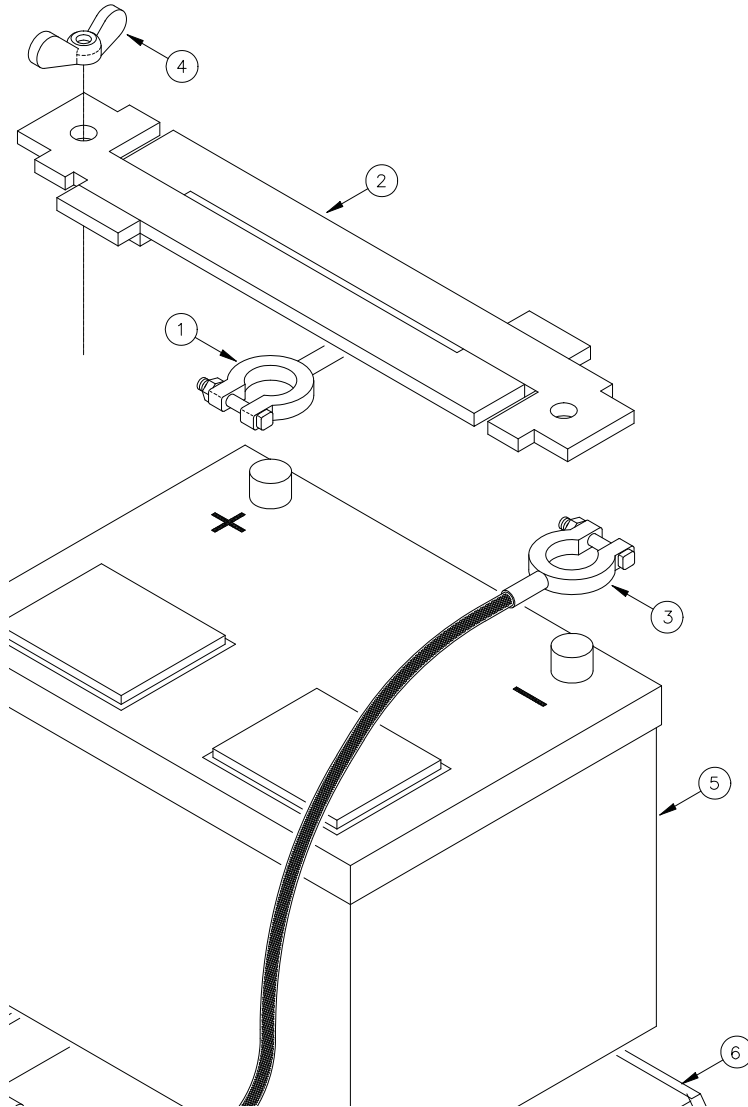
HOPPER - COVER AND LATCH COMPONENTS			
ITEM	PART NO.	REQ'D	DESCRIPTION
4	3400059	20	SCR-THM 1/4-20 X .75 SS
8	3400052	2	SCR-SHOULDER 5/16 DIA X 1/4 ZP
9	3400355	2	SCR-LEVEL BOLT, 3/8-16x2.50
10	3304624	2	CAP-RUBBER BUMPER, (USED WITH #10 ABOVE)
11	3300376	4	STUD-BALL, GAS SPRING, 5/16-18 THRD, .391 DIA.
12	3305006	2	SPRING-GAS 5" STROKE, 14.5" EXTENDED (100 LBF)
13	3307469	2	HINGE-FILTER COVER, ,
15	3400070	4	NUT-HEX 5/16-18 ZP
16	711439	2	NUT-FLANGED WIZZ 3/8-16
17	3401021	2	NUT-HEX ELASTIC JAM 1/4-20 #8 ZP
18	3307468	1	BAR-FILTER LATCH, ,
19	3307247	1	LATCH-RH BROOM DOOR
20	3316862M	1	LID-HOPPER 9X ORANGE
21	3318739	120"	WEATHERSTRIPPING-RUBBER SPONGE
22	3400170	2	SCR-HSS 1/2x.31,
23	3301146	10	CLIPNUT-1/4-20 ZP
24	3400059	4	SCR-THMS 1/4-20 X .75 SS SLOTTED
25	3400384	4	WASHER-CONICAL SPRING 5/16
26	711379	4	NUT-FLANGED WIZZ 5/16-18
27	3307842	2	FLAP-HOPPER SIDE
28	3307843	2	RETAINER-FLAP HOPPER SIDE
29	3307720	5	FLAP-HOPPER FRONT
30	3307721	1	RETAINER-HOPPER FLAP
31	3500198	134"	SEAL-TRIM 90 DEG. MOUNT
32	3307460M	1	HOOD-HOPPER 9X, ORANGE
33	3400394	1	NUT-FLANGE LOCK 7/16-14
34	3338592	1	BOLT-STRIKER .675 (17.1mm) DIA.
35	3307743	2	PLATE HOPPER BACKING
36	3334900	1	DECAL-"POWERBOSS" LOGO

**FRONT BUMPER ASSEMBLY**



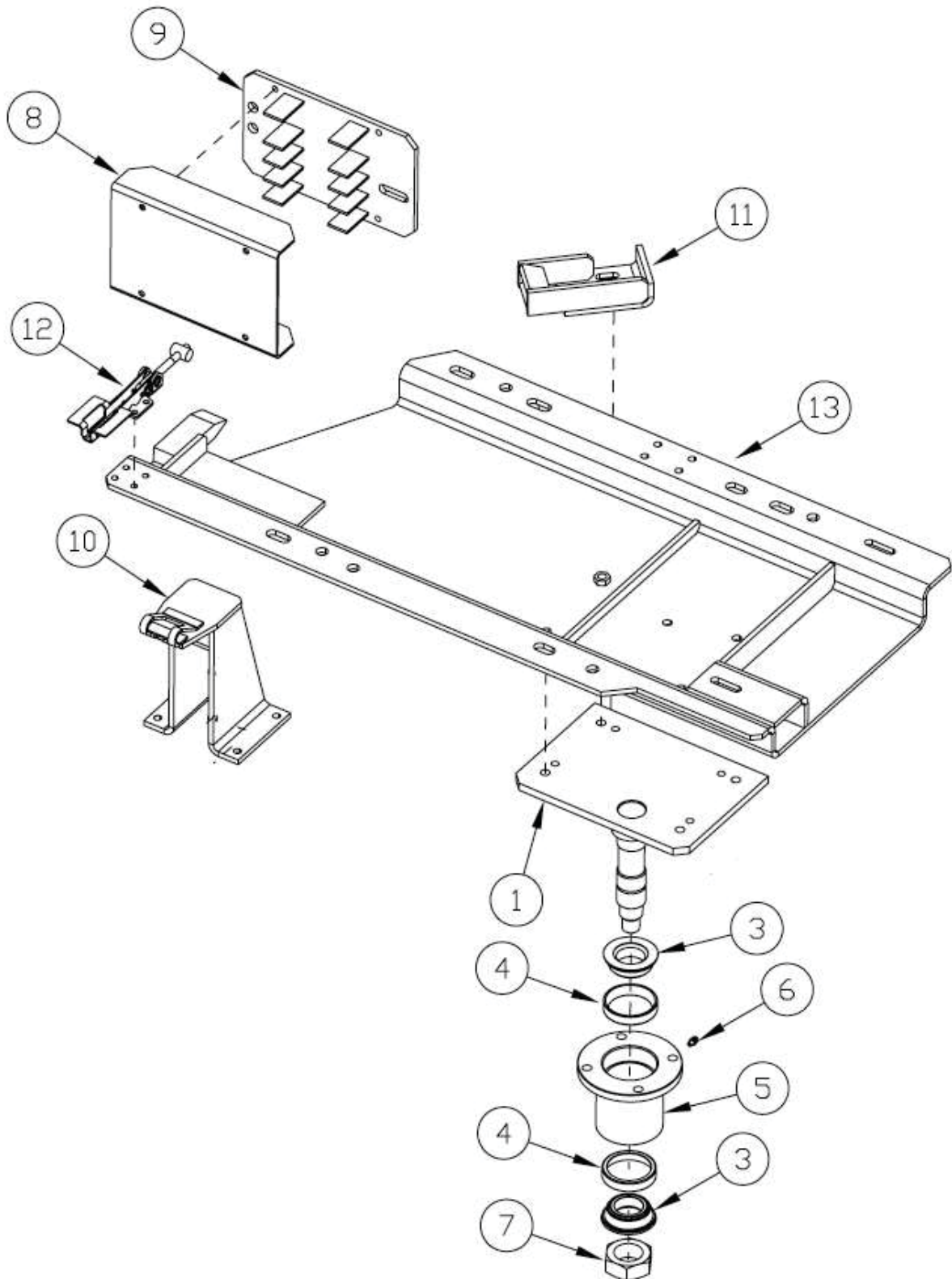
FRONT BUMPER ASSEMBLY			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	3335094	1	HARNES-FRONT BUMPER HEADLIGHT
2	3315839	2	HEADLIGHT-HALOGEN 12V, FLUSH MOUNT
-	3315869	-	BULB-HALOGEN REPLACEMENT (NOT SHOWN)
3	3316865M	1	BUMPER-FRONT, AM9D DARK GRAY
4	3311564	1	GROMMET-1/2" ID RUBBER
5	3316871	2	BUMPER-RUBBER, 1.50" DIA
6	3322186	2	INSERT-3/8-16 UNC
7	3311374	6	SCR-HEX,1/4-14X3/4 SELF TAP
8	711439	8	NUT-FLANGED WIZZ 3/8-16
9	3316981	2	RETAINER, PUSHNUT, 3/8 BOLT, 25/32 OD ZP
10	3400385	8	WASHER-CONICAL SPRING 3/8
11	711250	4	BLT-HH 3/8-16 X 1.25 STL ZINC
12	3400030	4	SCR-HEX,3/8-16X1.00, GRADE 5, ZP
13	3337303P	2	PLT-MOUNT, BUMPER, AM9D
14	828062-B	1	CABLE TIE-LARGE (BLACK)

**BATTERY COMPONENTS**



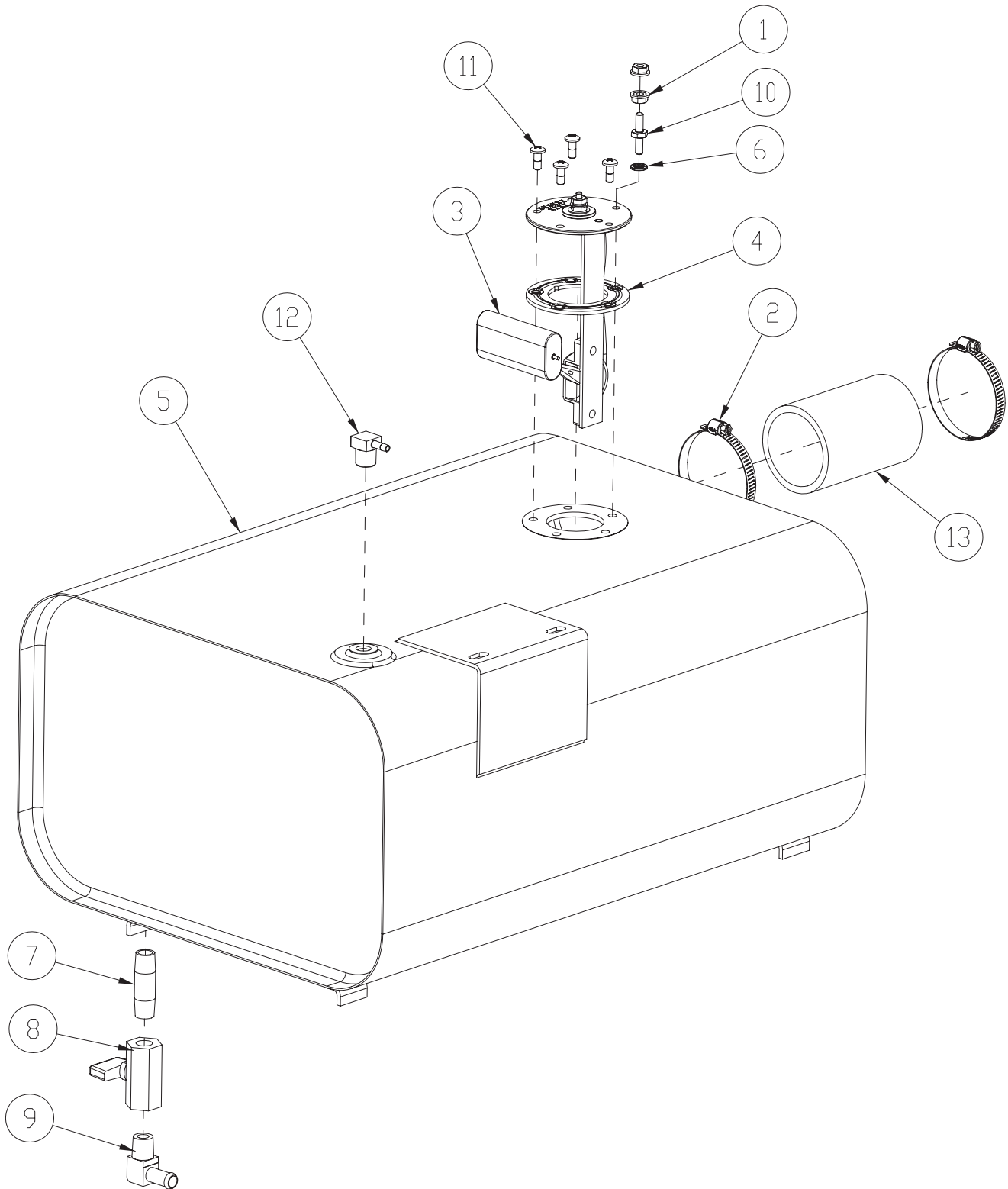
BATTERY COMPONENTS			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	3307939	1	CABLE-BATTERY POSITIVE DIESEL ENGINE
2	3301076	1	HOLD DOWN-BATTERY 2-PIECE
3	3307634	1	CABLE BATTERY NEGATIVE
4	3400085	2	NUT-WING 1/4-20
5	3300440	1	BATTERY-GAS/LP/DIESEL, 12V, 650 CCA, 125 MIN RESERVE
6	3321296	1	WELD-BATTERY BOX

**ENGINE PAN, HYDRAULIC HOSE RETAINER & LATCH**



ENGINE PAN, HYDRAULIC HOSE RETAINER & LATCH			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	3334951	1	WELDMENT-ENGINE PIVOT
3	3300471	1	BEARING-TAPERED ROLCONE W/SEAL
4	3300470	1	BEARING-TAPERED ROL CUP
5	3307326	1	BEARING MOUNT-ENGINE PIVOT
6	3400012	1	FTG-GREASE, $\phi$ 3/16
7	3400083	1	NUT-HEX JAM, 1 1/4-12 ES
8	3333303	1	COVER-HOSE RETAINER SHORT
9	3333302	1	HOSE RETAINER SW/A
10	3335208	1	WELDMENT-ENGINE CATCH OUTER
11	3335183	1	WELDMENT-ENGINE CATCH INNER
12	3337544	1	LATCH - ENGINE SWING
13	3334994M	1	WELD-ENGINE PAN,

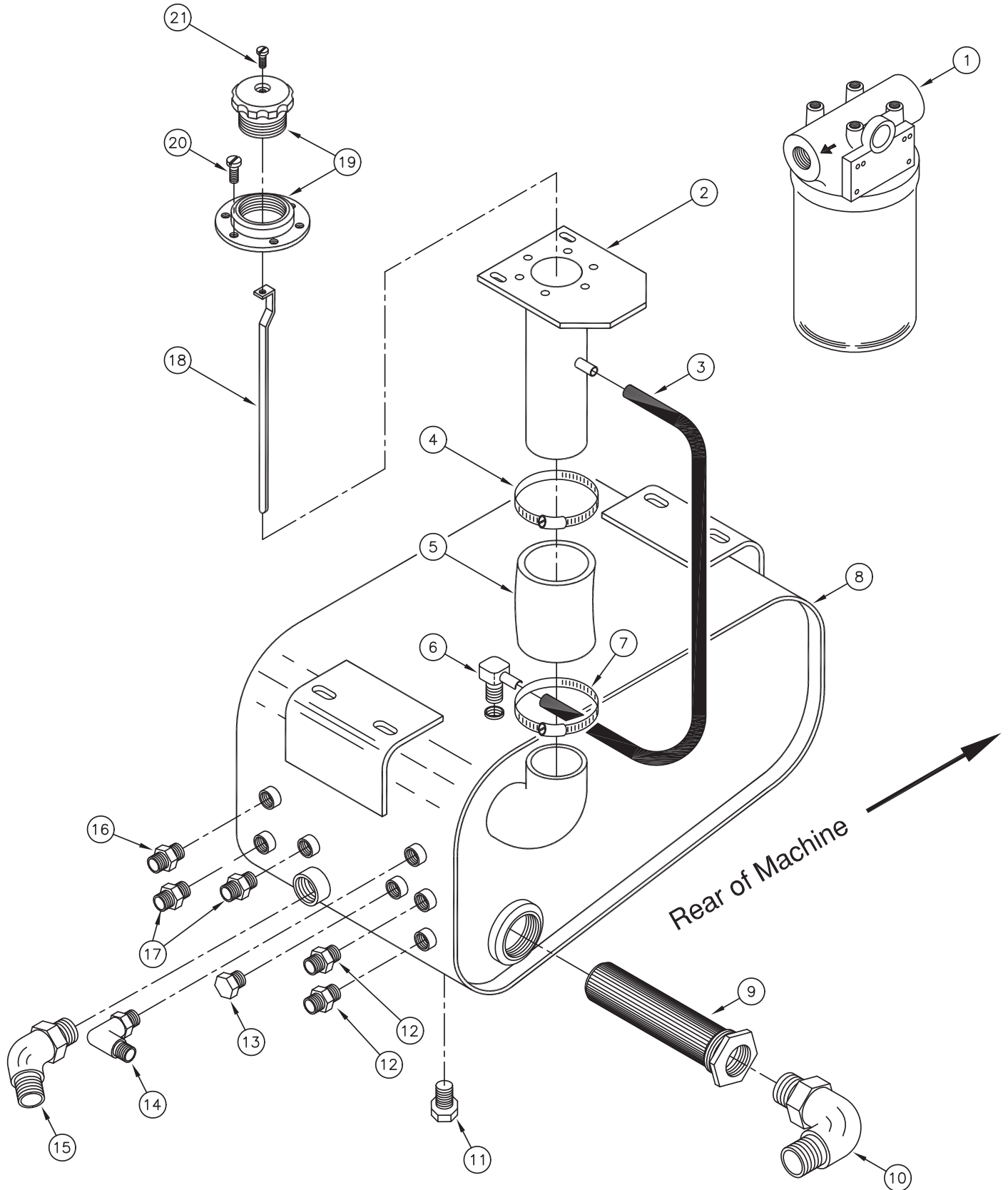
**FUEL TANK GASOLINE AND DIESEL**



FUEL TANK GASOLINE AND DIESEL			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	711427	2	NUT-FLANGED WIZZ 10-32
2	3044112	2	CLAMP-HOSE, SS, 2.50 MAX
3	3300388	1	SENDER-FUEL SHORT (5 INCH)
4	811023	1	GASKET, SENDER
5DSL	3307575	1	TANK-FUEL, 7.64 US GAL,
5GAS	3335055		FUEL TANK - GAS ARMA
6	3337019	1	SEAL - #10 BONDED NITRILE WASHER
7	3400498	1	FTG-BRASS NIPPLE, 1/4 NPTx2.0 LG
8	3400499	1	VALVE-MINATURE 1/4 FPT BALL
9DSL	3400793	1	FTG-90 3/8 BARBx1/4 NPT
9GAS	3336095		FTG-FUEL HOSE BARB
10	3401579	1	SCR - HEX STANDOFF, 2X 10-32X.50 LG
11	3401636	4	SCR, PPH, 10-32 X .50, W/O-RING 18-8 SS
12DSL	3402022	1	FTG-90 1/4 MPT X 1/4 HOSE BARB
12GAS	3401445		FTG-HOSE BARB 90? 5/16 X 1/4 NPT
13	3500221	1	HOSE-2" ID STRAIGHT RAD.
14	3307731	1	FUEL TANK STRAP (NOT SHOWN)

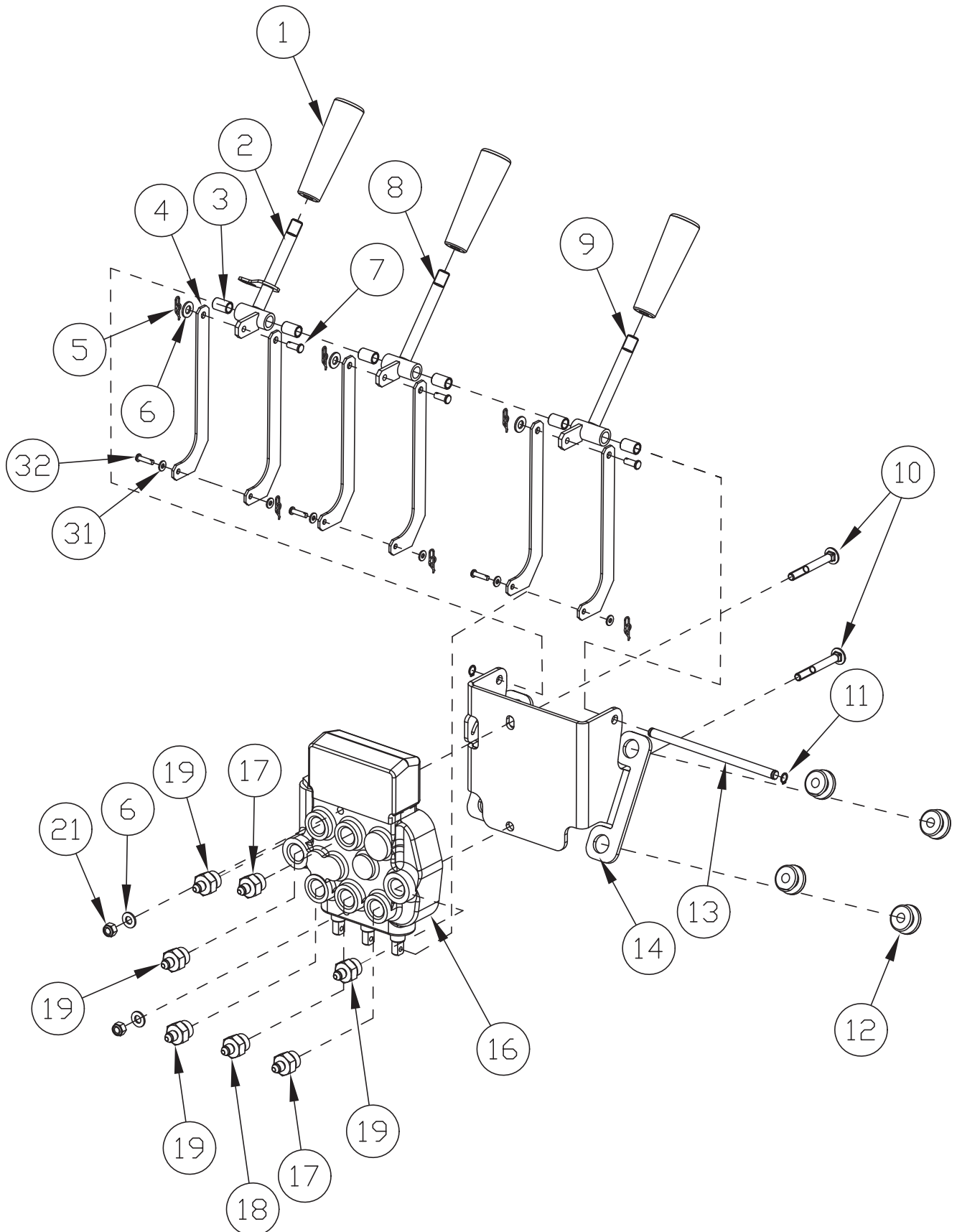


**HYDRAULIC RESERVOIR ASSEMBLY**



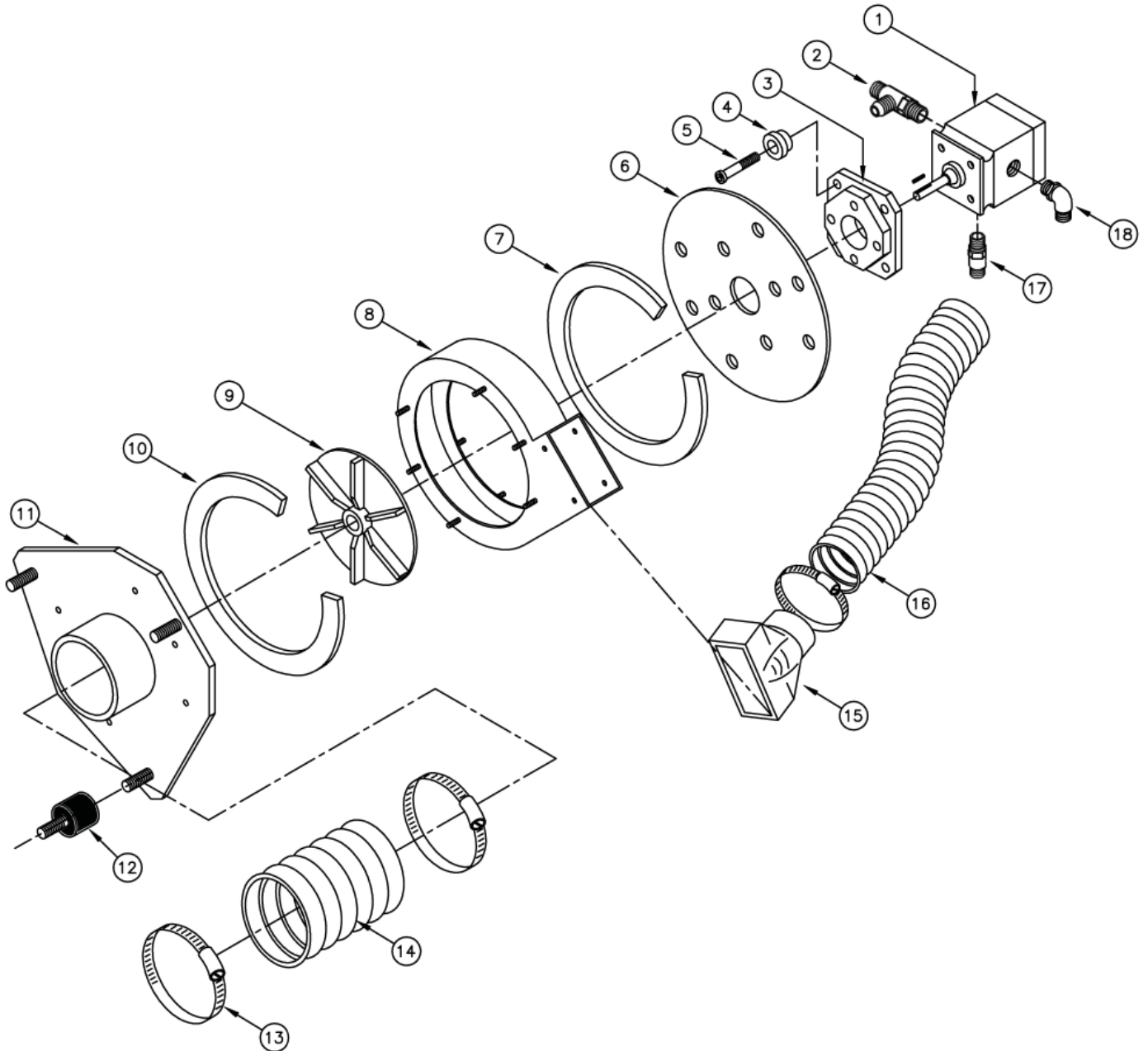
HYDRAULIC RESERVOIR ASSEMBLY			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	3300358	1	SUB-HYD FILTER SW/9X (FILTER, MOUNT & FITTINGS)
-	3300359	1	FILTER-HYDRUALIC OIL (FILTER ONLY)
-	3304899	1	FTG-ADAPTER, 3/4-16 TO 1/2 OD TUBE (NOT SHOWN)
-	3400167	1	FTG-ADAPTER, 1 1/6-12 EXT TO (NOT SHOWN)
-	3400632	1	FTG-ADAPTER, RUN TEE 1-1/16-12 (NOT SHOWN)
-	3400636	1	FTG-ADAPTER, SWIVEL NUT 90° ELBOW (NOT SHOWN)
2	3310072	1	WELDMENT-HYD FILL TUBE
3	3500137	1	HOSE-1/8 ID EEC-PCV
4	3044112	1	CLAMP-HOSE, SS, 2.50 MAX WORM
5	3303577	1	HOSE-RUBBER, 2.00IDx3.50 LG
6	3307778	1	FTG-90° 1/8MPTx1/4 BARB
7	3044112	1	CLAMP-HOSE, SS, 2.50 MAX WORM
8	3335527	1	RESERVOIR-HYDRAULIC, 7.5 US GA
9	3343836	1	STRAINER-HYDRAULIC TM-14
10	675506	1	FTG-STR THD ELBOW -16 ORFS TO -20 SAE
11	3400164	1	FTG-PLUG 3/4-16 O RING
12	675524	2	FTG-STR THD CONNECTOR -8 ORFS TO -8 SA
13	3400453	1	FTG-PLUG 9/16-18 O-RING STEEL
14	675510	1	FTG-STR THD CONNECTOR -5 ORFS TO -4 SA
15	675504	1	FTG-45 DEG STR ELBOW -12 ORFS TO -16 SA
16	675519	1	FTG-STR THD CONNECTOR -6 ORFS TO -5 SA
17	675510	2	FTG-STR THD CONNECTOR -5 ORFS TO -4 SA
18	3307580	1	DIPSTICK-HYD RESEVOIR
19	3305576	1	ASSEMBLY-HYD OIL FILTER BREATHER
20	3400044	6	SCR-HEX,#10-32X0.75
21	3400045	1	SCR-PAN,#8-32X0.62,SLT

**HYDRAULIC CONTROL VALVE DETAIL**



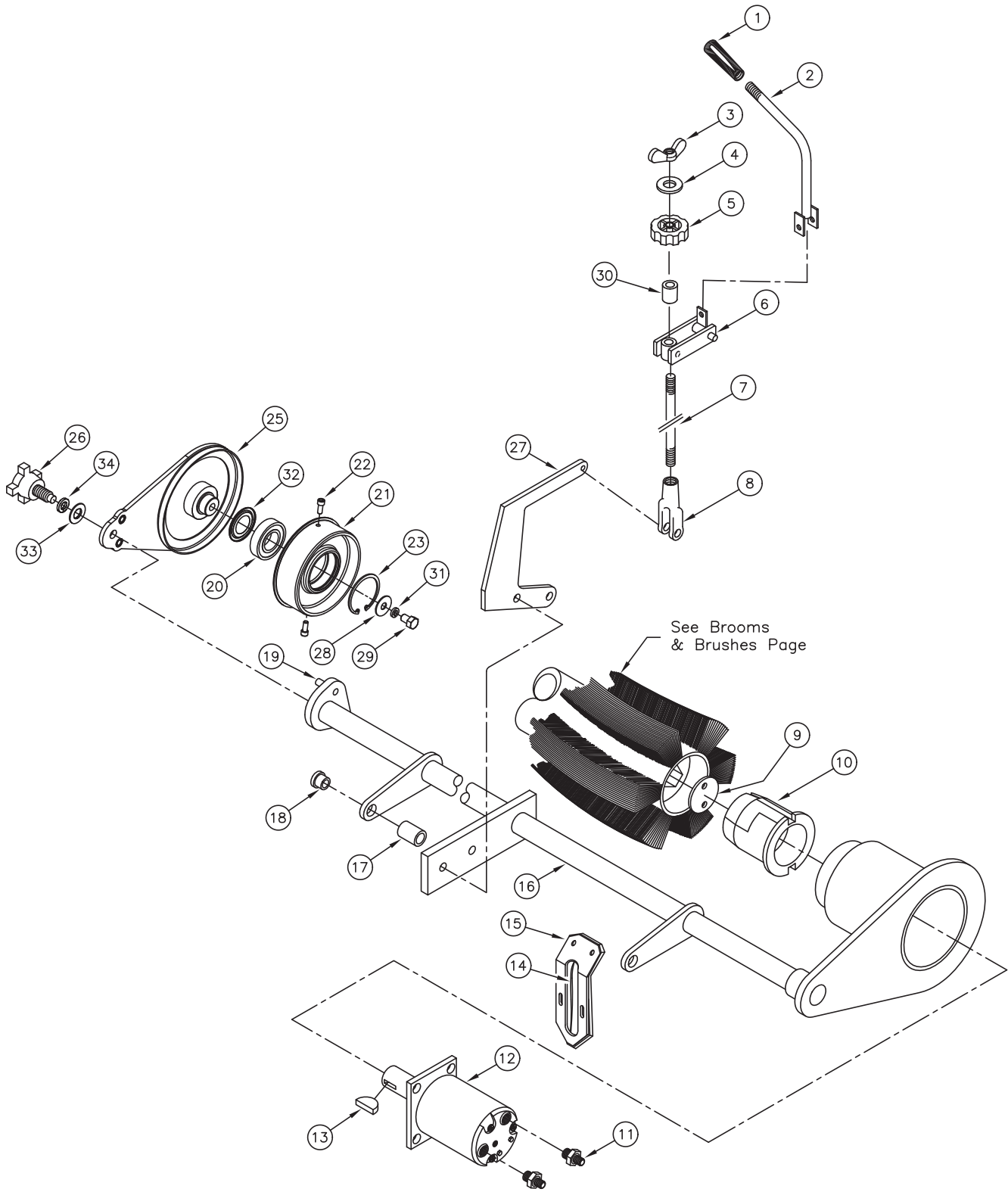
HYDRAULIC CONTROL VALVE DETAIL			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	600263	3	KNOB-PLASTIC TAPERED #145 BLACK
2	3338603	1	WELD - HANDLE CONT VLV 3 PLTD
3	3303996	6	BEARING-PLASTIC 1/2X3/8X.75 LG
4	3338456P	6	LINK-HYD VLV SW/A PLTD
5	3400125	6	RUE RING-1/4 HEAVY ZP
6	3400088	5	WASHER-FLAT 5/16 IDx.688 ODx.065 THK
7	3400425	3	PIN-CLEVIS 1/4 X 5/8 ZP
8	3338458	1	HANDLE CONT VLV 2 PLTD
9	3338459	1	HANDLE CONT VLV 1 PLTD
10	3400466	1	SCR-CAR,5/16-18X2.75 ZP
11	711724	2	RING-RET EXT .38
12	3300465	4	ISOLATOR-RUBBER (.375IDx.81OD)
13	3300884	1	ROD-PIVOT CONTROL VALVE PLTD
14	3338455	1	MNT - HYD. SPOOL VALVE ARMA
16	3338213	1	VALVE-HYD CONTROL 3-SPOOL SW/A
17	675513	2	FTG - HYD. TEE #8JIC X #10 ORB X #8JIC
18	690006	1	ORIFICE-BRASS #332, .041" DIA, HYDRAULIC, 3/4-16 THD
19	675524	4	FTG-TEE SWIVEL RUN #4 JIC ARMA
21	711374	2	NUT-NYLOC 5/16-18
31	3400088	6	WASHER-FLAT #8 ZP
32	450034	3	PIN-CLEVIS 3/16 X 3/4 ZP

**IMPELLER ASSEMBLY**



IMPELLER ASSEMBLY			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	3316832	1	MOTOR-HYDRAULIC, .323CI, CCW ROTATION, IMPELLER
	3337905	1	SEAL KIT IMPELLER MOTOR
2	675525	2	FTG-STR THD RUN TEE -8 ORFS TO -8 SAE
3	3307152	1	MOUNT-IMPELLER MOTOR
4	3300465	4	ISOLATOR-RUBBER, .375 IDx.81 OD
5	3400028	4	SCR-HEX 3/8-16x1.50"
6	3322121	1	MOUNT-IMPELLER MOTOR, CIRCULAR
7	3335458	2.5'	GASKET-TOP IMPELLAR, ARMA
8	3307004	1	SHROUD-IMPELLER,
9	3307003	1	IMPELLER-8.88" DIA, ARMA BALANCED
10	3335459	2.5'	GASKET-BOTT IMPELLAR, ARMA
11	3335192	1	IMPELLER MOUNT, ARMA
12	3333915	3	ISOLATOR-RUBBER, $\phi$ 1.5x1" LG, 3/8-16 THREAD
13	3300351	3	CLAMP-HOSE, 4.5" DIA, SS
14	3307767	1	HOSE-IMPELLER, $\phi$ 4"x7.5" LONG
15	3315347	1	TRANSITION-PLASTIC IMPELLER EXHAUST
16	3318203	1	HOSE-IMPELLER EXHAUST, 3.5"IDx62" LONG
17	675508	1	FTG-STR THD CONNECTOR -4 ORFS TO -4 SA
18	675523	1	FTG-STR THD ELBOW -8 ORFS TO -8 SAE

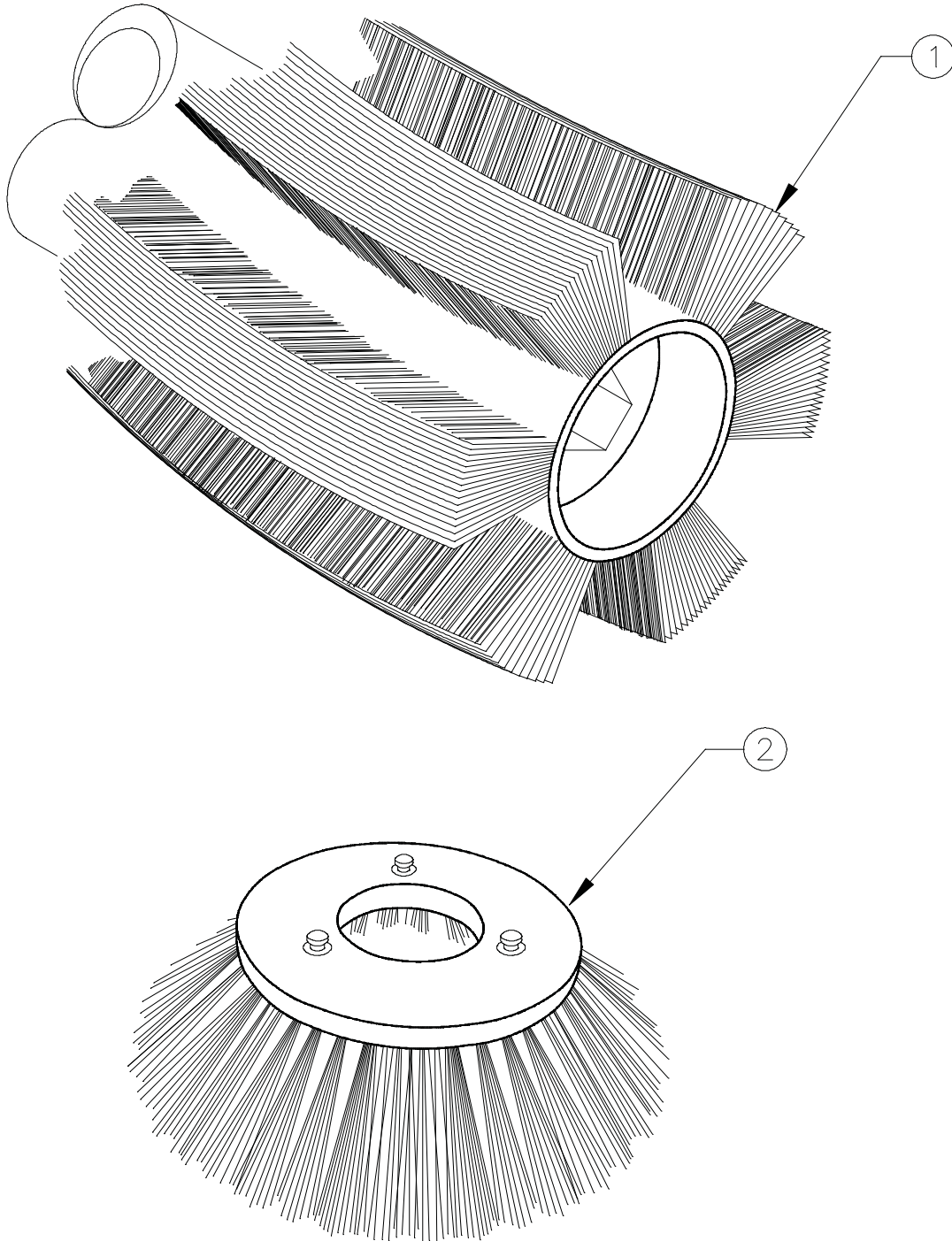
**MAIN BROOM ASSEMBLY**





MAIN BROOM ASSEMBLY			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	600263	1	HANDLE GRIP
2	3338296	1	WELD-ROD,MAIN BROOM, UPPER, 9X,ZP
3	3400084	1	NUT-WING 1/2-13
4	3400091	1	WASHER-FENDER 1/2
5	3300352	1	KNOB-MAIN BROOOM LIFT ADJUST
6	3335112P	1	WELDMENT-MAIN BROOM PIVOT LIFT
7	3334984	1	ROD-LIFT MAIN BROOM
8	3301447	1	CLEVIS-CABLECRAFT AC-218
9	3301285	1	RETAINER-MAIN BROOM DRIVER HUB
10	3301050P	1	HUB-MAIN BROOM DRIVE
11	675523	1	FTG-STR THD ELBOW -8 ORFS TO -8 SAE
12	3338661	1	MOTOR-HYD MAIN BROOM
13	3330338	1	KEY-SHAFT D-FOSS CB/MB/SC MOTORS
14	3307337	3'	GASKET-MAIN BROOM ARM
15	3307338	3'	RETAINER-GASKET MAIN BROOM ARM
16	3307207M	1	MAIN BROOM MNT AM9D-M
17	3307181	1	SPACER-MAIN BROOM
18	3300432	2	BUSHING-FL-52-4
19	690111	2	PIN-DOWEL, .375x1.25, SS
20	3305667	1	BEARING-MAIN BROOM
21	3305642	1	HUB-BROOM IDLER
22	3400047	2	SCR-SOCKET, 5/16-18x0.75
23	3305666	1	RING-RETAINING MAIN BROOM
25	3335220	1	MAIN BROOM PLT
26	3400748	1	KNOB-HAND 1/2-13x1-1/2 DOG POINT
27	3335196	1	PLATE-LIFT ARM, MAIN BROOM, ARMA
28	712305	1	WASHER, FENDER 5/8 X 2 X .125 ZINC
29	712003	1	SCREW, HHCS 5/8-11 X 0.75 ZINC
30	3333672	1	SPACER-MB LIFT ROD
31	712315	1	WASHER SR-HELICAL .64 X 1.26 X .06 ZINC
32	3335908	1	RING-NILOS, 2.55"OD
33	3400086	1	WASHER-FLAT 1/2 STANDARD ZP
34	3400098	1	WASHER-LOCK 1/2 SPLIT ZP

SIDE BROOM & MAIN BROOM



<b>SIDE BROOM &amp; MAIN BROOM</b>			
<b>ITEM</b>	<b>PART NO.</b>	<b>REQ'D</b>	<b>DESCRIPTION</b>
	<b>MAIN BROOM</b>		
1	3305818	1	BROOM-48"HIGH DEN FIBER & WIRE
	3305812	1	BROOM-48" NYLON
	3305665	1	BROOM-48" HIGH DENSITY NYLON
	3305814	1	BROOM-48" NYLON CHEVRON (PATROL)
	3315315	1	BROOM-48"STIFF NYLON
	3305663	1	BROOM-48" PROEX & WIRE
	3333483 *	1	BROOM-48" TRIPLE ROW POLY (CHEVRON PATTERN)
	<b>SIDE BROOM</b>		
2	3300308 *	1	BROOM-SIDE 24" WHITE NYLON
	3300306	1	BROOM-SIDE 24" DIA. BLACK POLY
	3300309	1	BROOM-SIDE 26" WHITE NYLON
	3300307	1	BROOM-SIDE 26" BLACK POLY
	3300311	1	BROOM-SIDE 26" WIRE

\* - Standard Broom used on the AM9D-III machine.

### **Main Broom User's Guide**

Proex & Wire - Slightly encrusted soilage & dusty conditions. High heat.

Nylon - General purpose broom with long life bristles.

Poly Proex - All purpose broom that stands up well on rough surfaces.

High Density Nylon - Highly effective for small particle soilage. Severe dust environments.

Crinkle Wire - Stiff bristles for compacted grime, oil, grease or mud. Fair to good broom life.

Natural Fiber & Wire - Good all around broom. Good for high heat applications.

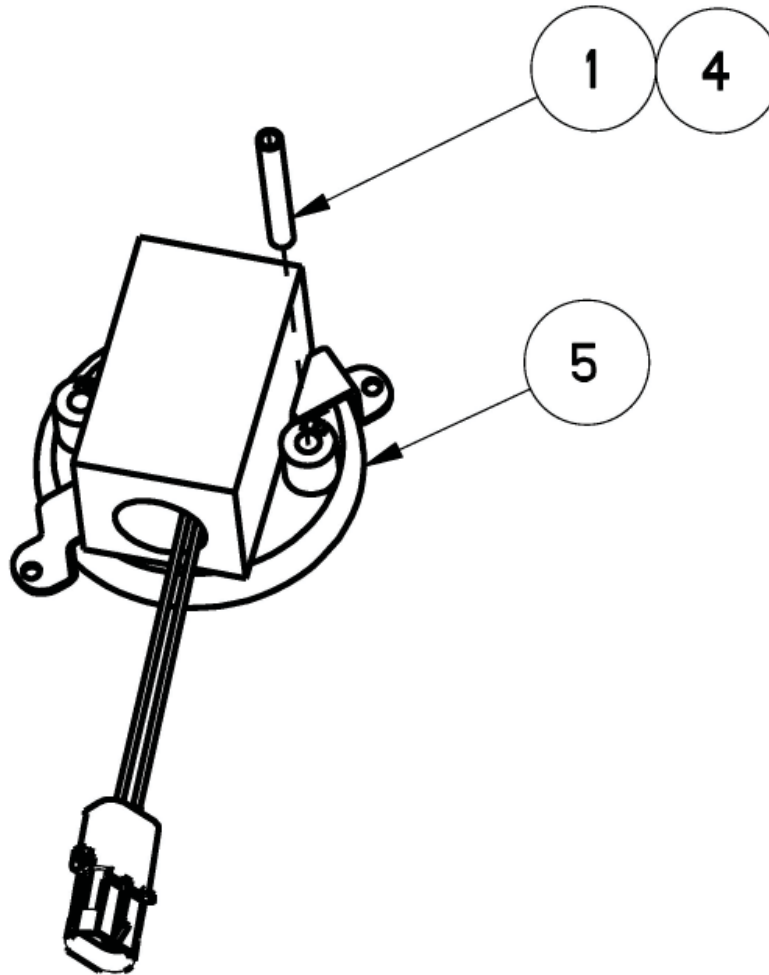
### **Side Broom User's Guide**

Poly - Stiff bristles for aggressive sweeping of mainly heavy litter. Not suited for high heat.

Nylon - Provides longest life. Recommended for tough sweeping jobs.

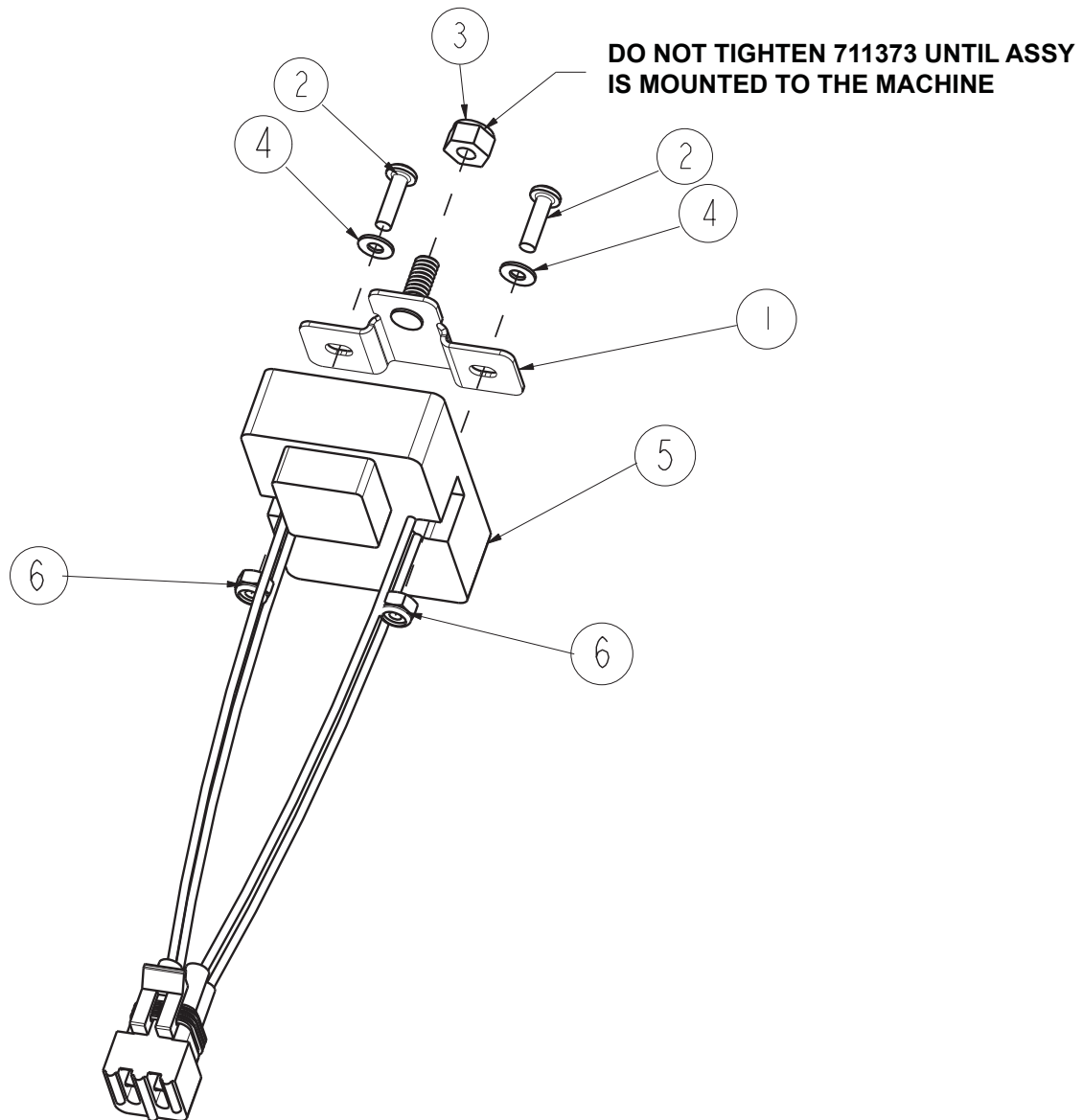
Wire (flat) - For areas of heavy grease build up or scarifying action. Used in high heat applications.

**VACUUM SWITCH**



VACUUM SWITCH			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	3303105	1	FTG-NIPPLE 1/8"MPT X 2.00 LG
4	3401122	0.1	SEALANT-THREADED PIPE, 565 PST
5	3303327-1	1	CLOG FILTER - PRESSURE SWITCH ASSY
6	3400315	2	SCR-HEX,#10-32X0.50 (Not Shown)
7	3400172	2	NUT-HEX JAM #10-32 ES (Not Shown)

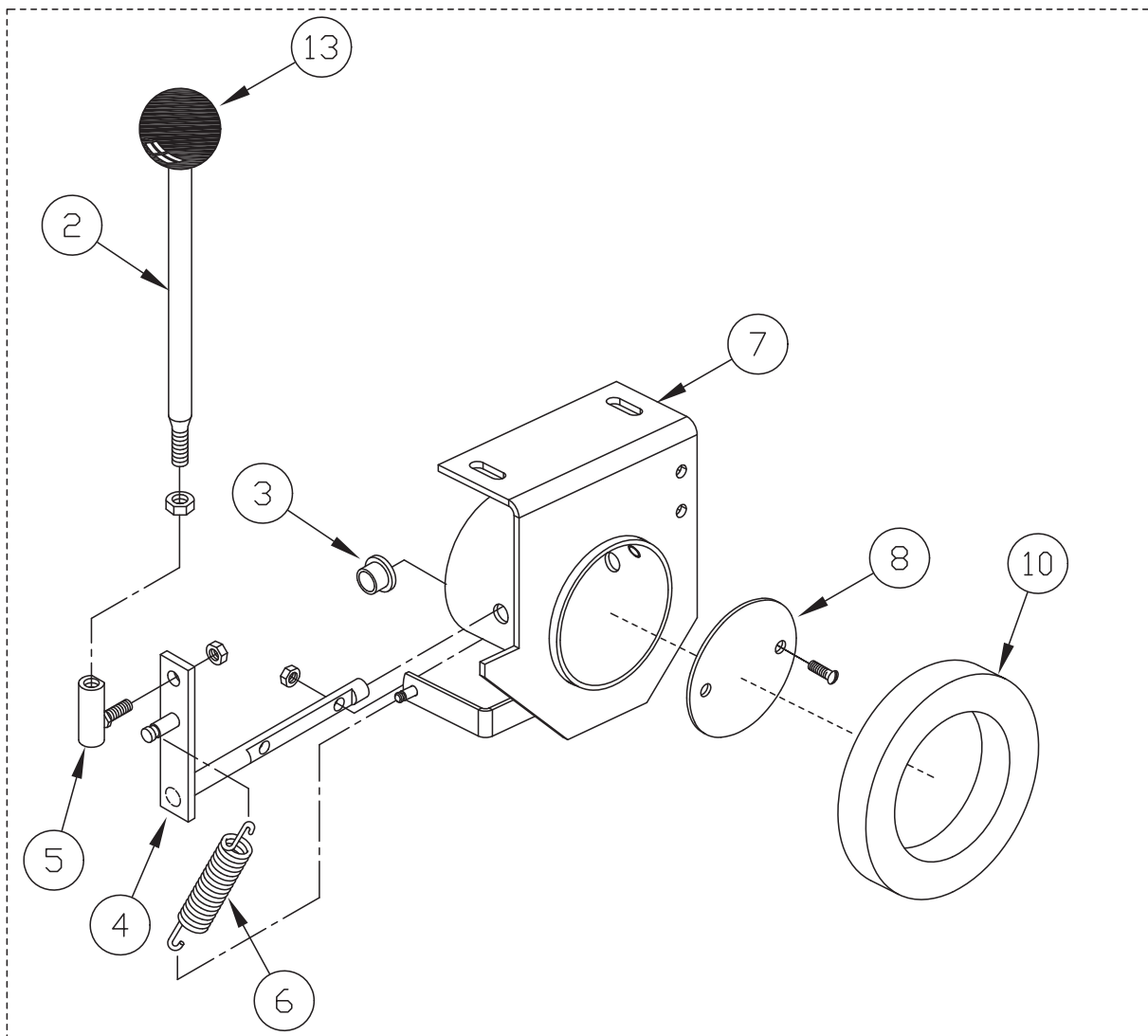
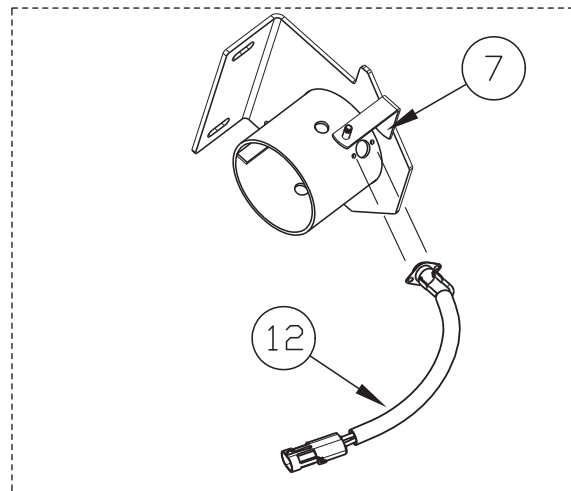
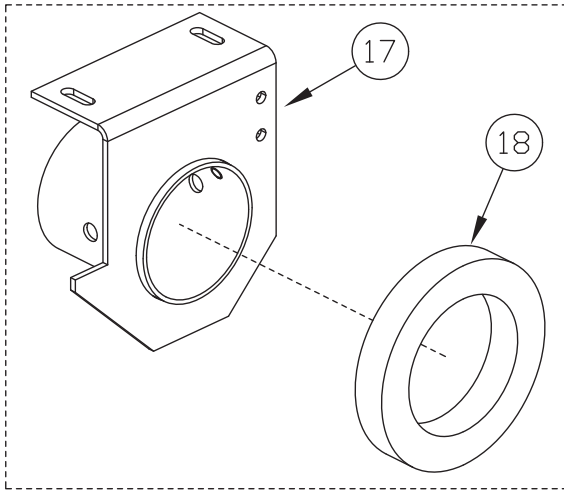
**TIMER-FILTER SHAKER SEALED**



**TIMER-FILTER SHAKER SEALED**

ITEM	PART NO.	REQ'D	DESCRIPTION
1	690138	1	BRACKET, TIMER
2	710230	2	SCR-MC 8-32 X .62 ST PL
3	711373	1	NUT - NYLOC 1/4-20
4	711502	2	WSR - FLT, .170 X .38 X .32 STL ZINC
5	748502-1	1	ASSY, RELAY - TIMER, W/CONNECTOR
6	3400082	2	NUT - HEX #8-32 ES ZP

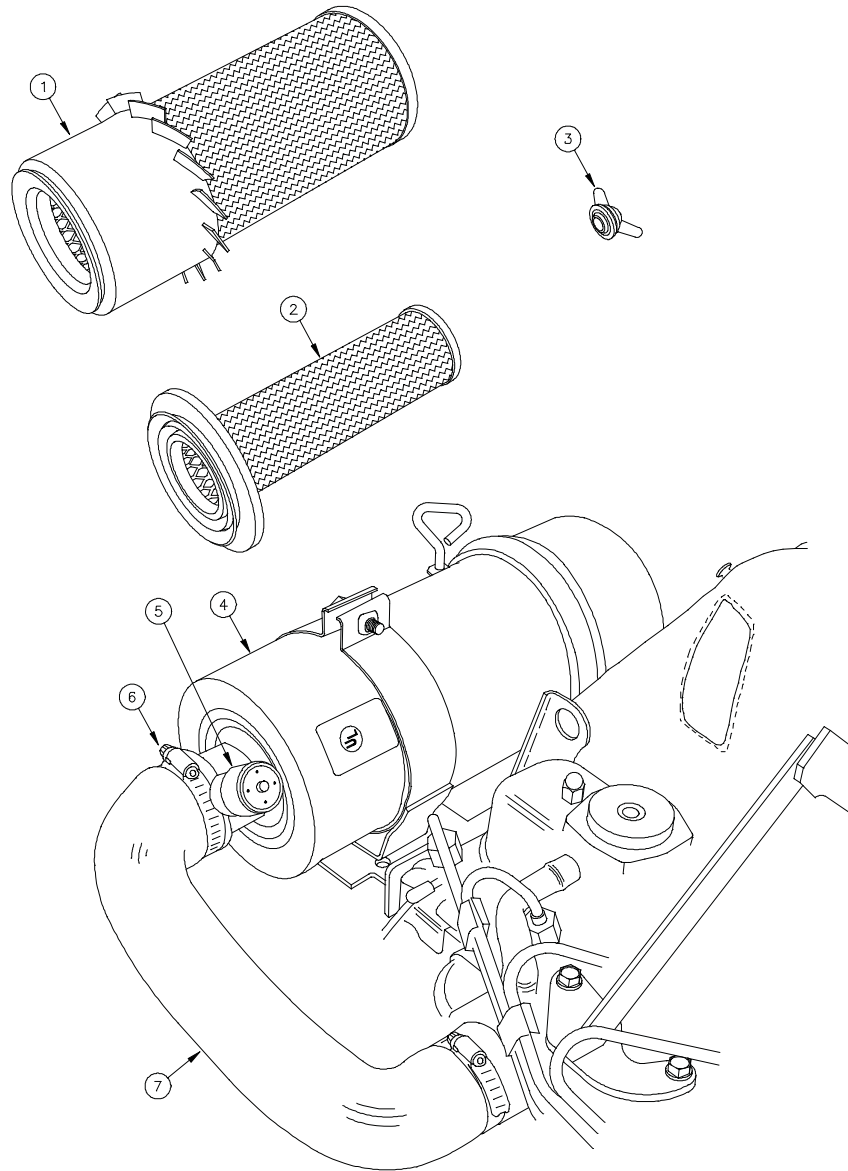
**GASKET MOUNT ASSEMBLY**



<b>GASKET MOUNT ASSEMBLY</b>			
<b>ITEM</b>	<b>PART NO.</b>	<b>REQ'D</b>	<b>DESCRIPTION</b>
	3307018	1	GASKET MOUNT SUB 9XV (Includes Items 1-13)
2	3307173	1	ROD-IMPELLER BAFFLE
3	3300414	2	BUSHING-PLASTIC, 3/8 ID X 1/2 OD
4	3307155	1	WELDMENT ROD GASKET MOUNT BAFFLE
5	3301199	1	BALL JOINT-1/4-28
6	3304160	1	SPRING-EXTENSION, 2.00 LG
7	3307182	1	WELDMENT-GASKET MOUNT,
8	3301498	1	DAMPER-HOPPER SHUTOFF,
10	3307005	1	GASKET-IMPELLER
12	748504-1	1	THERMOSTAT ASSEMBLY
-	3303729	1	GROMMET-RUBBER, .25IDx.56ODx.12 GROOVE (Not Shown)
13	3300563	1	KNOB-PLASTIC BALL 1" DIA, BLACK
17	3307182	1	WELD-GASKET MNT SW/A/62E
18	3307005	1	GASKET-IMPELLER



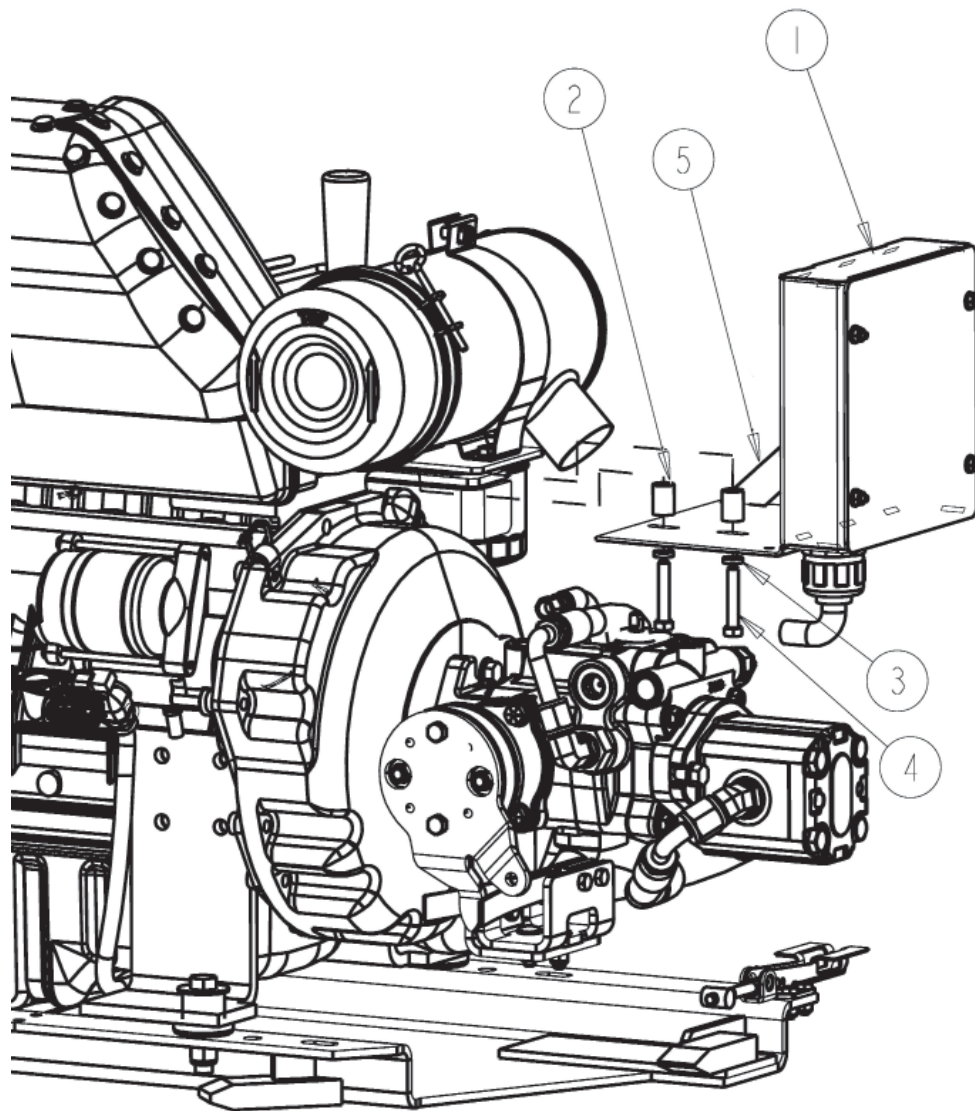
**ENGINE KUBOTA V1505 DIESEL - AIR CLEANER ASSEMBLY**



**ENGINE KUBOTA V1505 DIESEL - AIR CLEANER ASSEMBLY**

ITEM	PART NO.	REQ'D	DESCRIPTION
1	3302842	1	ELEMENT-AIR CLEANER, PRIMARY
2	3302597	1	ELEMENT-AIR CLEANER, SAFETY
3	3303827	1	NUT-WING, DONALDSON AIR CLEANER
4	3303031	1	"ASSEMBLY-DONALDSON HEAVY DUTY AIR CLEANER (Includes Items 1,2&3)"
5	3303991	1	INDICATOR-AIR CLEANER RESTRICTION
6	3044112	2	CLAMP-HOSE, φ2.5" SS
7	3332643	1	HOSE-RAD UPPER 1505 (COOLER)

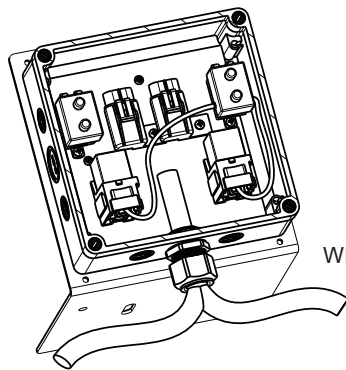
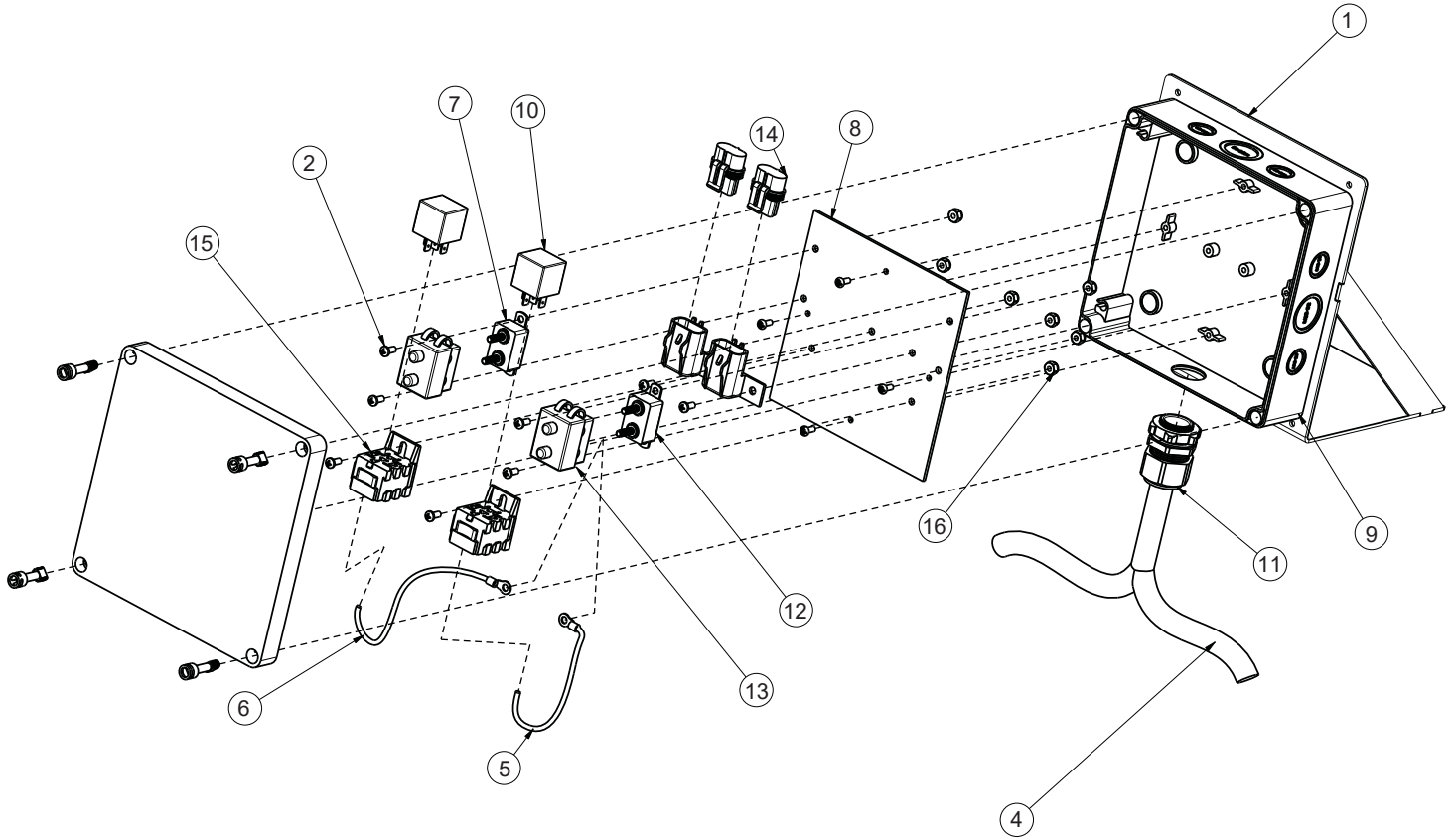
## ENGINE KUBOTA V1505 DIESEL - FUSE BOX ASSEMBLY



## ENGINE KUBOTA V1505 DIESEL - FUSE BOX ASSEMBLY

ITEM	PART NO.	REQ'D	DESCRIPTION
1	748769	1	ASSY - DIESEL CONTROL BOX
2	3342109	2	SPACER
3	3400102	2	WASHER
4	3400231	2	SCR-HEX,5/16-18X2.0 ZP
5	690042	1	BRACKET, MTG, WELD, DIESEL CONTROL BOX

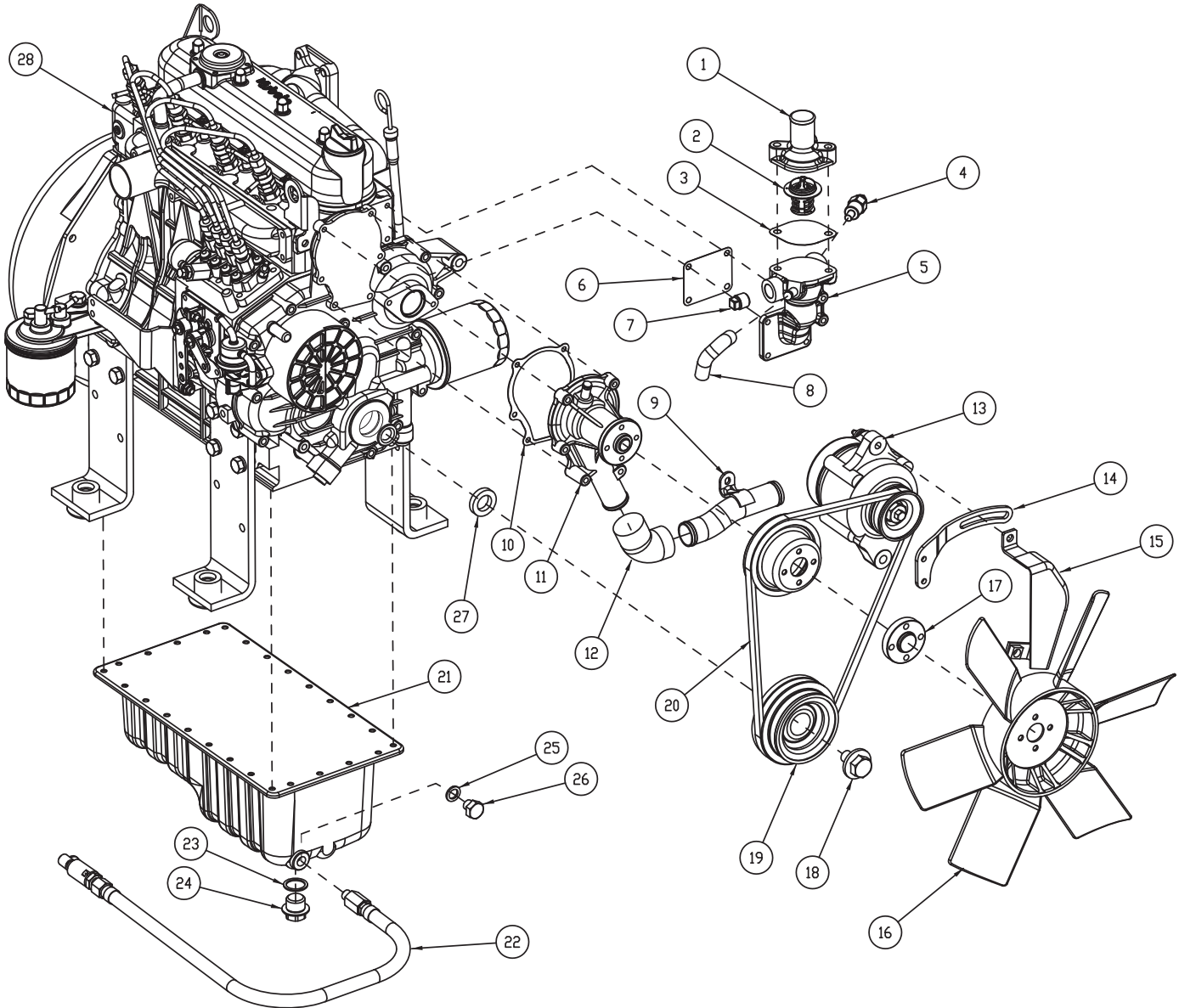
**ENGINE KUBOTA V1505 DIESEL - FUSE BOX DETAILS**



DIESEL CONTROL BOX  
WITH TOP COVER REMOVED

<b>ENGINE KUBOTA V1505 - DIESEL CONTROL BOX (748769)</b>			
<b>ITEM</b>	<b>PART NO.</b>	<b>REQ'D</b>	<b>DESCRIPTION</b>
1	690042	1	BRACKET, MTG, WELD, DIESEL CONTROL BOX
2	710328	8	SCR-RHMS 8-32 X .37 ZP
3	712540	4	SCR-THMS 10-24 X .37 SS
4	748447	1	WIRING HARNESS, KUBOTA DSL CONTROL BOX
5	748447-1	1	WIRE ASSY, ORANGE
6	748447-2	1	WIRE ASSY, YELLOW
7	748762	1	CIRCUIT BREAKER, 12V 50A
8	748763-MCH	1	MOUNTING PLATE, MACHINED
9	748764	1	ENCLOSURE W/ METRIC KNOCKOUTS
10	748767	2	RELAY, 14 VDC 50/30 A
11	748768	1	CORDGRIP, M25, LIQUID TIGHT
12	748962	1	CIRCUIT BREAKER, 12V 40A
13	748963	2	CIRCUIT BREAKER BOOT
14	748964-1	2	ASSY, FUSE HOLDER
15	748967	2	SOCKET, RELAY
16	3400082	8	NUT-NYLOC 8-32 ZP

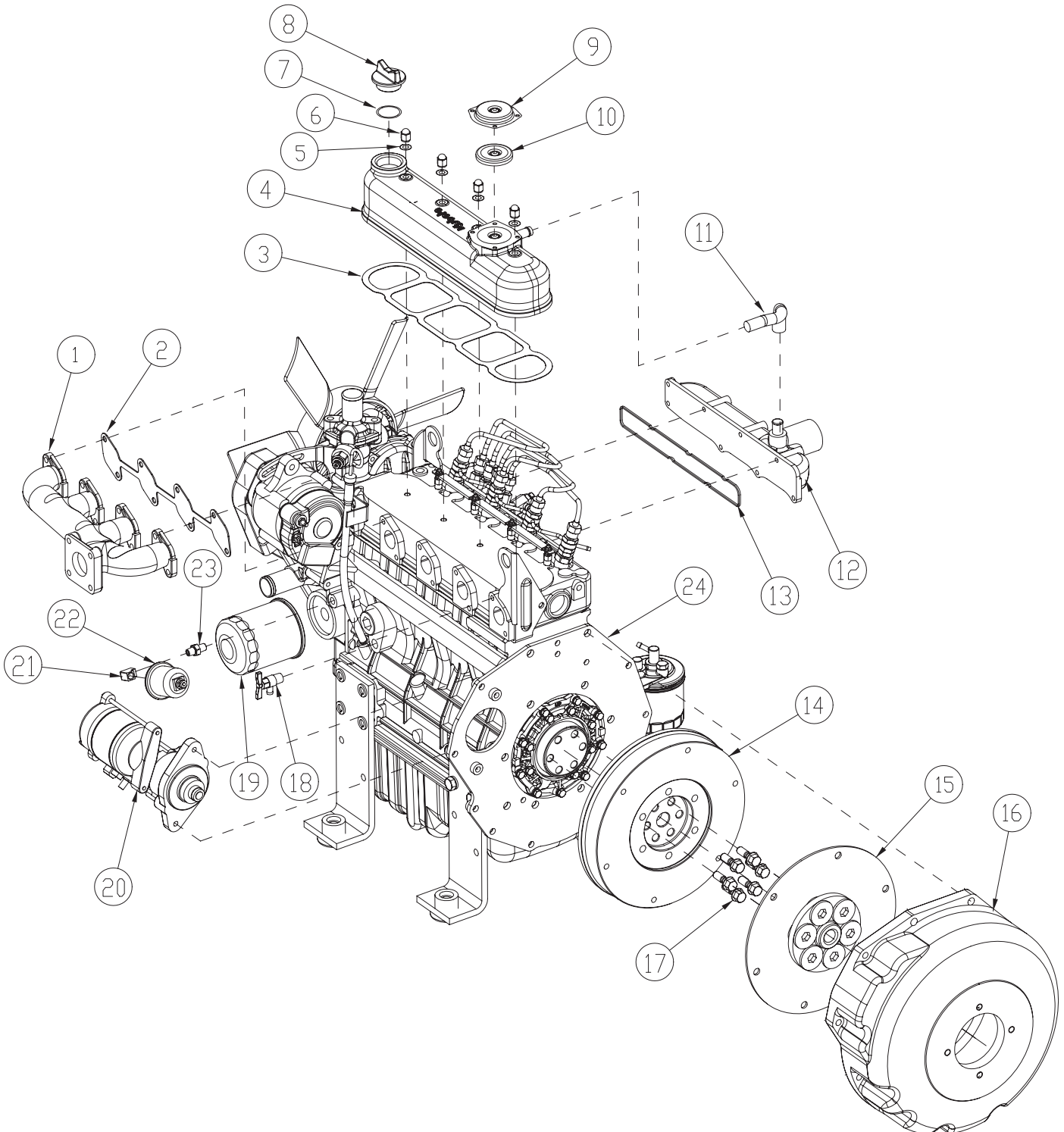
**ENGINE KUBOTA V1505 DIESEL - ALTERNATOR, WATER PUMP, FAN, AND OIL PAN**



<b>ENGINE KUBOTA V1505 DIESEL - ALTERNATOR, WATER PUMP, FAN, AND OIL PAN</b>			
<b>ITEM</b>	<b>PART NO.</b>	<b>QTY</b>	<b>DESCRIPTION</b>
1	3336919	1	COVER-THERMOSTAT KUBOTA V1505
2	3350446	1	THERMOSTAT-KUBOTA V1505 & V2203
3	3336918	1	GASKET-THERMOSTAT KUBOTA V1505
4	3341070	1	SENDER-TEMPERATURE 12V KUBOTA V1505
5	3336939	1	HOUSING-THERMOSTAT KUBOTA V1505
6	3336915	1	GASKET-WATER FLANGE KUBOTA V1505
7	3336947	1	PLUG-THERMOSTAT HSG KUBOTA V1505
8	3336931	1	PIPE-WATER RETURN THERMOSTAT HSG
9	3336946	1	PIPE-WATER KUBOTA V1505
10	3330793	1	GASKET - KUBOTA V1505 WATER PUMP
11	3330792	1	PUMP - WATER, KUBOTA V1505
12	3336932	1	PIPE-WATER PUMP KUBOTA V1505
13	3329875	1	ALTERNATOR-KUBOTA V1505
14	3336067	1	STAY-DYNAMO
15	3331935	1	COVER-BELT
16	3330210	1	FAN - KUBOTA V1505 ENGINE (SP) 1
17	3336933	1	SPACER-FAN 10MM KUBOTA V1505
18	3336937	1	BOLT-PULLEY KUBOTA V1505
19	3336934	1	PULLEY-ENGINE KUBOTA V1505
20	3329867	1	BELT-KUBOTA V1505V
21	3336920	1	PAN-OIL KUBOTA V1505
22	661004	1	OIL DRAIN ASSY, V1505
23	3344822	1	DRAIN PLUG GASKET, KUBOTA
24	3338327	1	PLUG-DRAIN (BOTTOM)
25	3338328	1	GASKET-OIL PAN (ALTERNATE)
26	3344821	1	PLUG-DRAIN (SIDE) (ALTERNATE)
27	3337571	1	SEAL, OIL KUBOTA V1505
28	690116	1	ENGINE, DSL, DE-RATED - V1505, KUBOTA



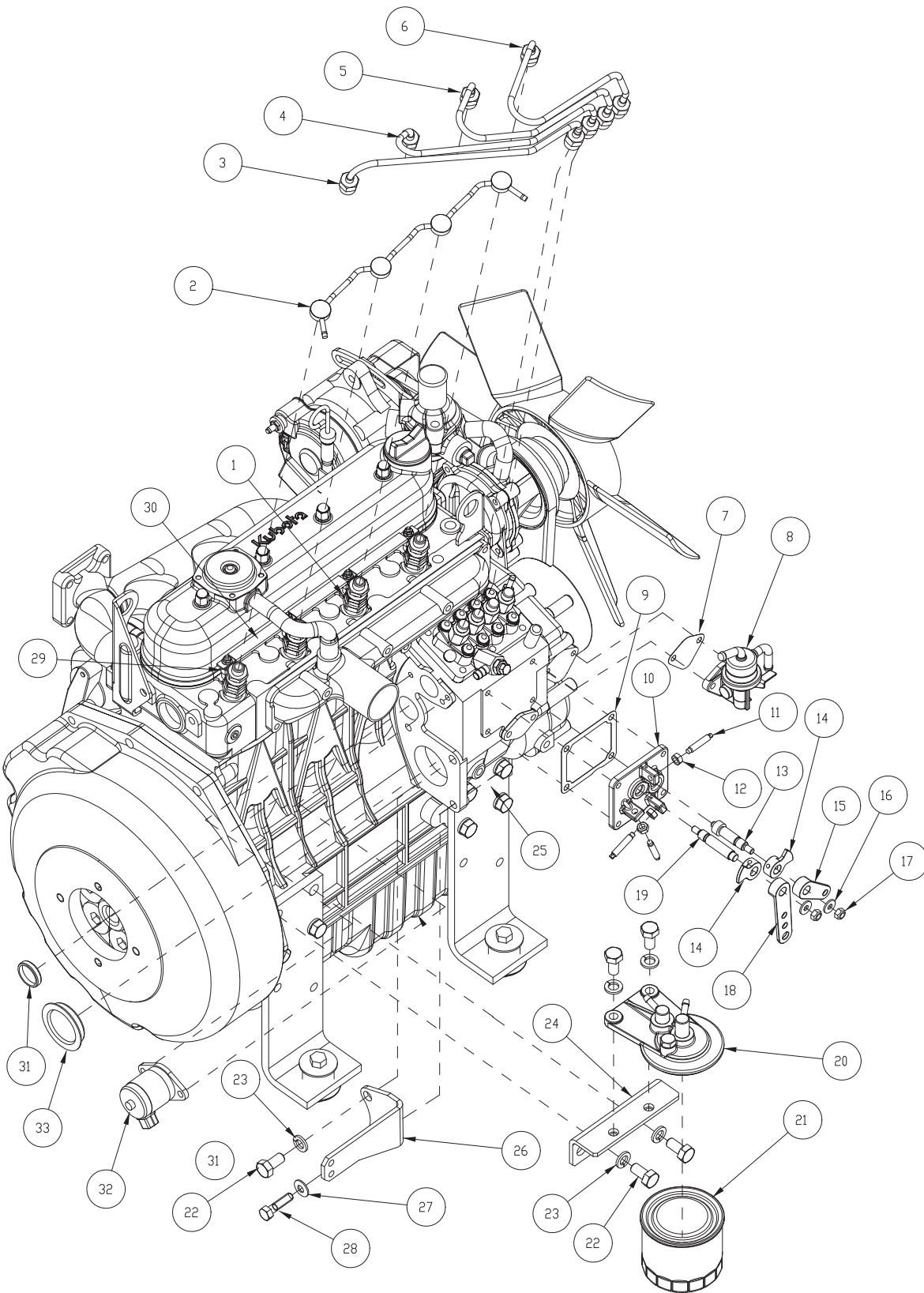
**ENGINE KUBOTA V1505 DIESEL - FLYWHEEL, STARTER, HEAD COVER, AND MANIFOLD**





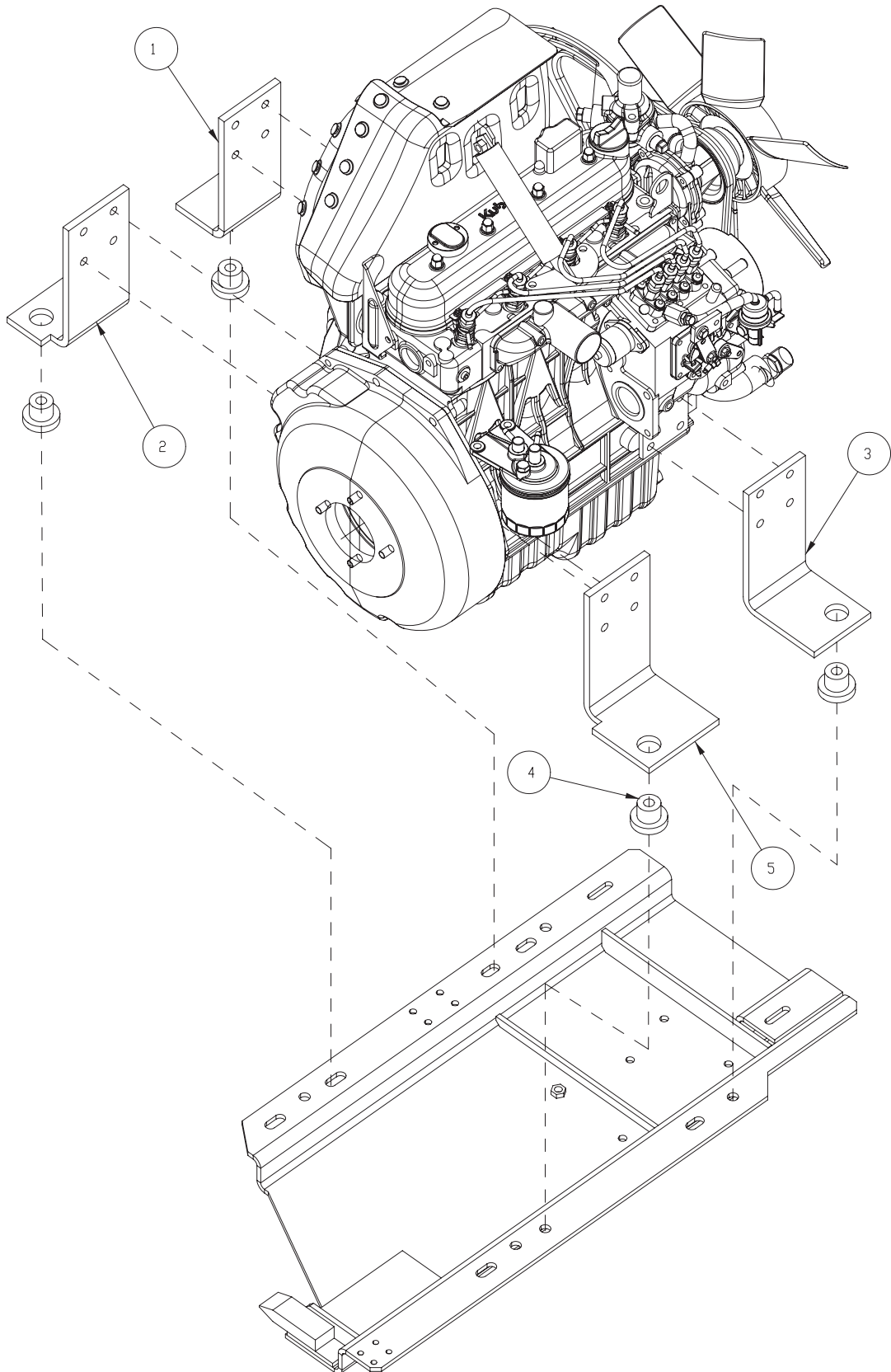
<b>ENGINE KUBOTA V1505 DIESEL - FLYWHEEL, STARTER, HEAD COVER, AND MANIFOLD</b>			
<b>ITEM</b>	<b>PART NO.</b>	<b>QTY</b>	<b>DESCRIPTION</b>
1	3334041	1	MANIFOLD-EXHAUST KUBOTA V1505
2	3333964	1	GASKET-EX-MANIFOLD KUBOTA V1505
3	3334278	1	GASKET - VALVE COVER KUBOTA V1505
4	3336910	1	COVER-CYLHEAD KUBOTA V1505
5	3337572	4	GASKET KUBOTA V1505
6	3336916	4	NUT-CYLHEAD COVER KUBOTA V1505
7	3337573	1	O-RING KUBOTA V1505
8	3336926	1	PLUG-OIL FILLER KUBOTA V1505
9	3337574	1	COVER, BREATHER KUBOTA V1505
10	3337575	1	VALVE BREATHER KUBOTA V1505
11	3337576	1	TUBE BREATHER KUBOTA V1505
12	3336911	1	MANIFOLD-INLET KUBOTA 1505
13	3337577	1	GASKET INTAKE MANIFOLD KUBOTA V1505
14	3336935	1	COMP-FLYWHEEL KUBOTA V1505
15	3329956	1	COUPLING-KUBOTA DIESEL V1505/D905
16	3329957	1	BELL HOUSING KUBOTA V1505 DIESEL
17	3336938	6	BOLT-FLYWHEEL KUBOTA V1505
18	3339628	1	ASSY-COCK DRAIN V1505
19	3324129	1	FILTER - OIL, 1505/905 KUBOTA DIE
20	3330402	1	STARTER - KUBOTA V1505, 12V
21	3301720	1	FTG-90 EL 1/8 FPT
22	3341069	1	SENDER-OIL PRESSURE 12V
23	3305640	1	FTG-NIPPLE 1/8BPT-1/8NPT BRASS
24	3336917	1	PLATE-REAR END V1505

**ENGINE KUBOTA V1505 DIESEL - FUEL SYSTEM AND SPEED CONTROL**



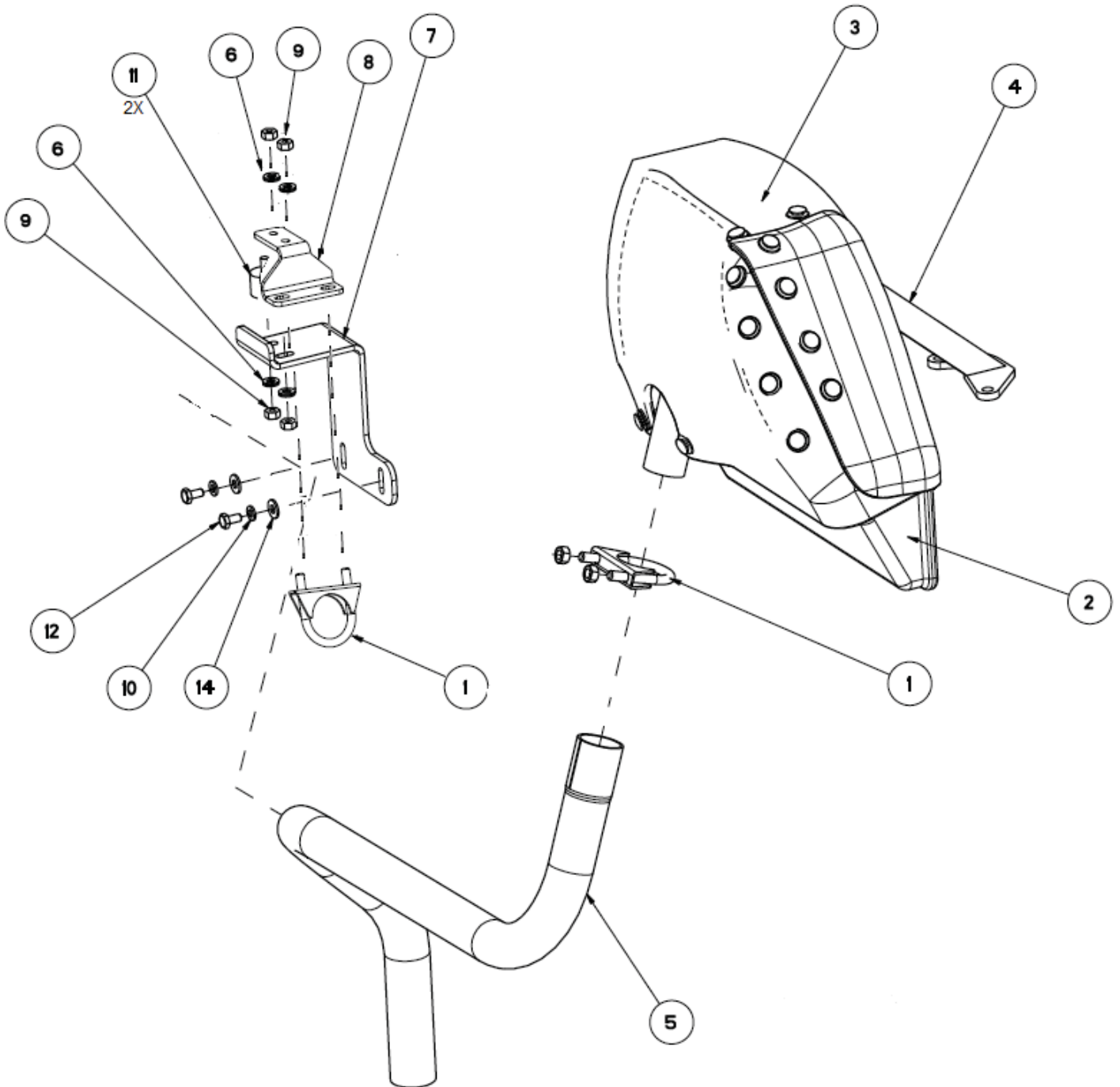
ENGINE KUBOTA V1505 DIESEL - FUEL SYSTEM AND SPEED CONTROL			
ITEM	PART NO.	QTY	DESCRIPTION
1	3330106	4	INJECTOR-KUBOTA V1505 DIESEL
2	3333567	1	FUEL LINE-KBA 1505 LEAK OFF LINE
3	3334998	1	PIPE INJECTION-KUBOTA V1505
4	3334997	1	PIPE INJECTION-KUBOTA V1505
5	3334996	1	PIPE INJECTION-KUBOTA V1505
6	3334995	1	PIPE INJECTION-KUBOTA V1505
7	3330693	1	KUBOTA 1505-FUEL PUMP GASKET
8	3330692	1	PUMP - FUEL, KUBOTA V1505 DIESEL
9	3336924	1	GASKET-CONTROL PLATE KUBOTA V1505
10	3336943	1	PLATE-SPEED CONTROL KUBOTA V1505
11	3336944	3	BOLT-ADJUSTING SPEED CONTROL KUBOTA
12	3336976	3	HUT-HEX JAM 6MM
13	3336948	1	SHAFT-LEVER STOP SPEED CONTROL KUBOTA
14	3336942	2	LEVER-SPEED CONTROL KUBOTA V1505
15	3336945	1	LEVER-ENGINE STOP KUBOTA V1505
16	3336969	2	WASHER-PLAIN 15MM OD X 6MM ID X 1
17	3336970	2	NUT-HEX LOCK 6MM
18	3336941	1	LEVER-SPEED CONTROL KUBOTA V1505
19	3336949	1	LEVER-GOVERNOR KUBOTA V1505
20	3305882	1	MOUNT, FUEL FILTER KUBOTA PNTD
21	3303324	1	FILTER - FUEL KUBOTA DSL (SP)
22	3400293	5	SCR-HEX 10MMX1.25PX20MM ZP
23	3401458	5	WSH-LOCK, 10 MM ZP
24	3336912	1	BRACKET-FUEL FILTER KUBOTA V1505
25	3400390	1	NUT-FLANGE LOCK 5/16-18
26	3350331	1	MOUNT-THROTTLE KBA 1505 DSL
27	3400384	1	WASHER CONICAL SPRING 5/16
28	3400034	1	SCR-HEX,5/16-18X1.25 ZP
29	3330795	4	GLOW PLUG KUBOTA V1505
30	3337578	1	CORD GLOW PLUG KUBOTA V1505
31	3336927	1	PLUG-ENGINE KUBOTA V1505
32	3334549	1	KIT-SOLENOID FUEL SHUT-OFF W/ JUMPER
33	3336925	1	COVER HYDRAULIC PUMP-ENGINE KUBOTA V1505

**ENGINE KUBOTA V1505 DIESEL - MOTOR MOUNTING**



ENGINE KUBOTA V1505 DIESEL - MOTOR MOUNTING			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	690032	1	ENGINE MOUNT, OUTER, AM9D, KUBOTA V1505
2	690031	1	ENGINE MOUNT, INNER, AM9D, KUBOTA V1505
3	690032	1	ENGINE MOUNT, OUTER, AM9D, KUBOTA V1505
4	3300464	4	ISOLATOR-RUBBER, 1.24 DIAx1.25 LG
5	690031	1	ENGINE MOUNT, INNER, AM9D, KUBOTA V1505
-	3350329	1	BRACKET-HOSE RETAINER, FRONT, KUBOTA V1505 DIESEL (NOT SHOWN)
-	3333301	1	BRACKET-HOSE RETAINER, REAR, KUBOTA V1505 DIESEL (NOT SHOWN)

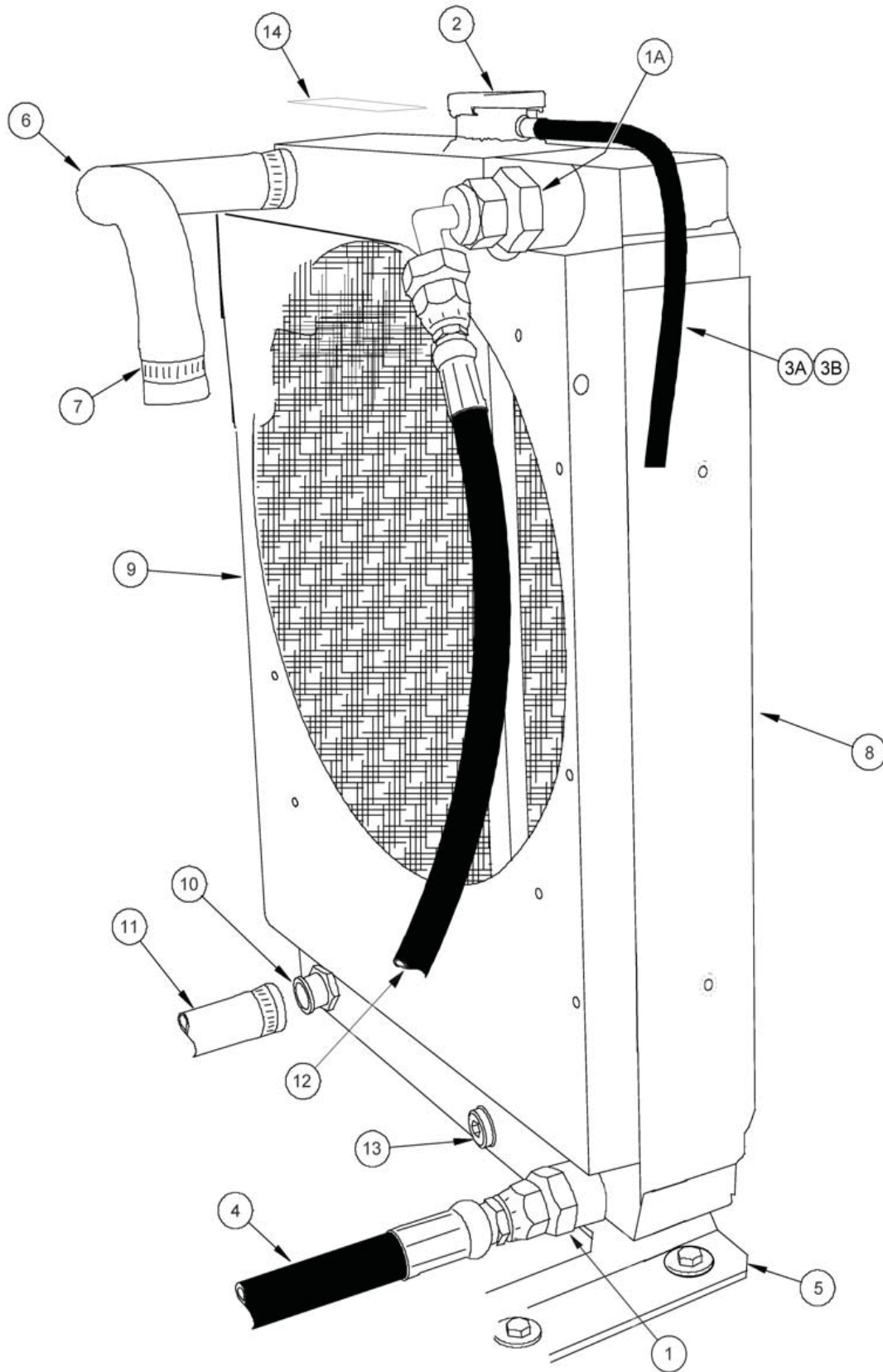
**ENGINE KUBOTA V1505 DIESEL - EXHAUST DETAIL**



ENGINE KUBOTA V1505 DIESEL - EXHAUST DETAIL			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	3301641	2	CLAMP-EXHAUST 1 1/2
2	3330627	1	MUFFLER-KUBOTA V1505 BOX
3	3330629	1	BLANKET-KUBOTA V1505E BOX EXHAUST
4	EPS2655	1	STAY MUFFLER
5	3335036	1	EXHAUST-KUBOTA V1505 9X
6	3401570-7W	4	WASHER-NORD-LOCK, 1/4, 0.53 OD
7	3336632	1	PLT - EXHAUST MNT BRKT
8	690113	1	BRACKET, UPPER EXHAUST HANGER, 9X/AM9D
9	3400071	4	NUT-HEX 1/4-20
10	3400103	2	WASHER-LOCK 1/4 SPLIT
11	3344112	2	ISO-CYL, 1 DIA X 3/4 X 1/4-20,
12	3400043	2	SCR-HH 1/4-20 X .50 ZINC
14	3400089	2	WASHER-FLAT 1/4 STANDARD
15	3335134	1	EXHAUST FUNNEL, ARMA
16	713002	4	BLT-HH 1/4-20 X .75 #5 ZINC
17	3400383	4	WASHER-CONICAL SPRING 1/4
18	711425	4	NUT-FLANGED WIZZ 1/4-20 STL ZP

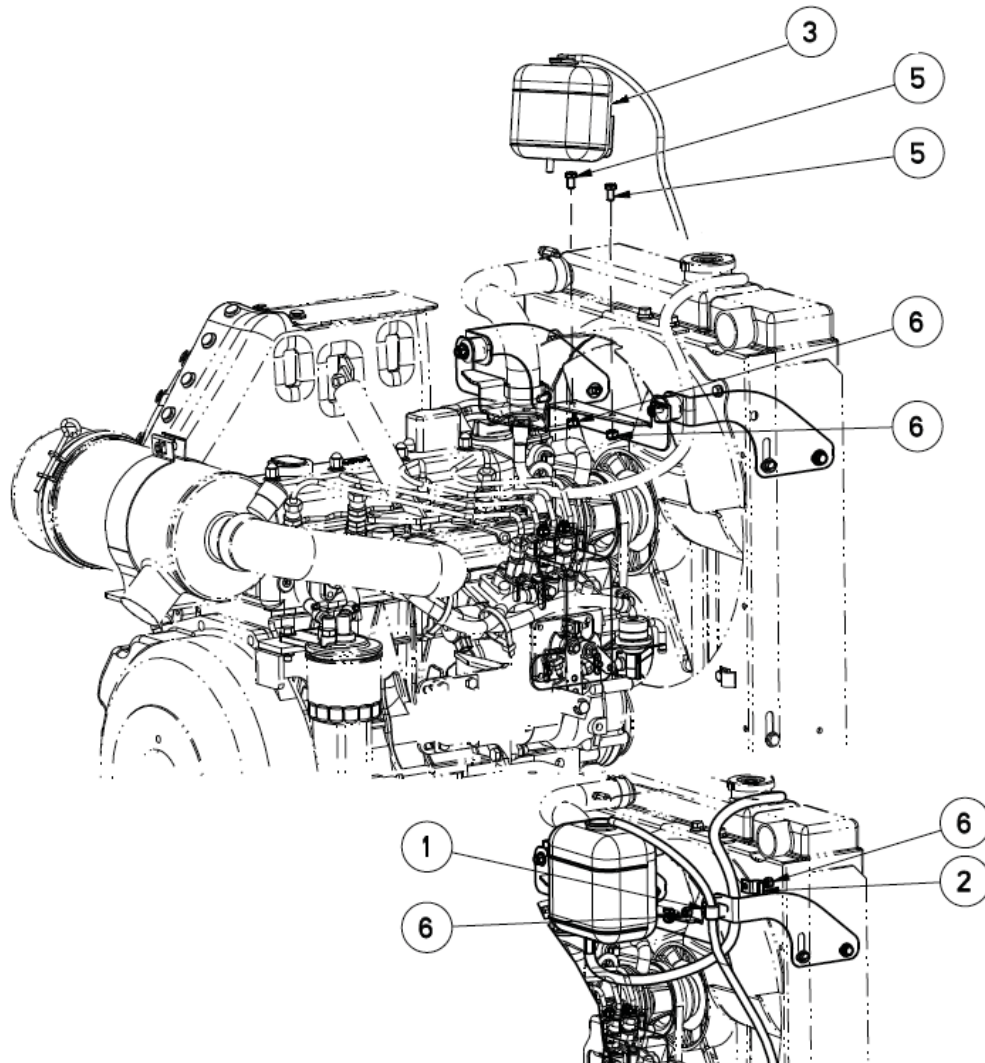


**ENGINE KUBOTA V1505 DIESEL - RADIATOR DETAIL**



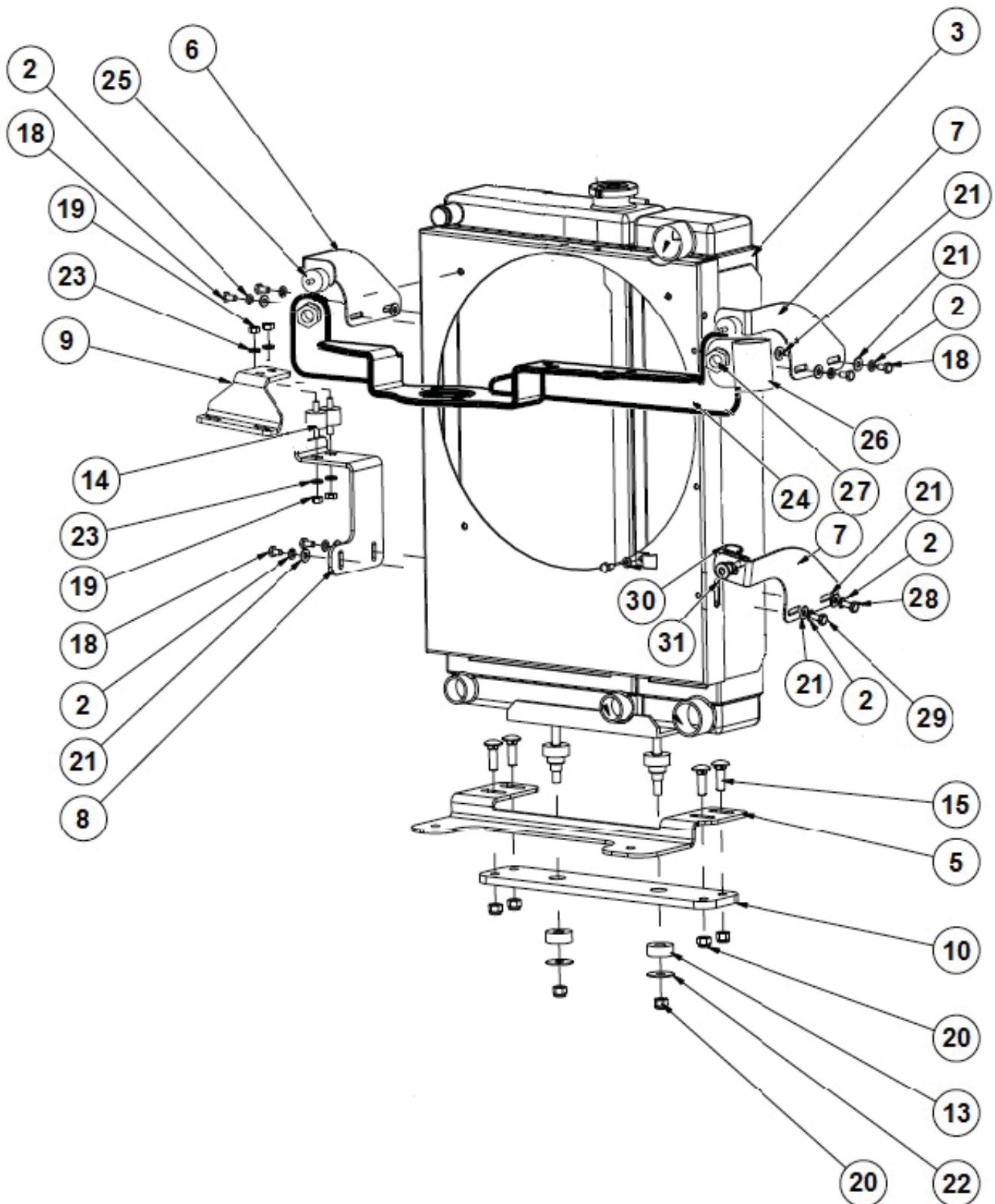
<b>ENGINE KUBOTA V1505 DIESEL - RADIATOR DETAIL</b>			
<b>ITEM</b>	<b>PART NO.</b>	<b>REQ'D</b>	<b>DESCRIPTION</b>
1	675503	1	FTG-STR THD CONNECTOR -12 ORFS TO -16 S
1A	675530	1	FTG-STR THD CONNECTOR -8 ORFS TO -16 S
2	3336527	1	RADIATOR CAP
3A	690019	24"	HOSE, RADIATOR TO OVERFLOW BOTTLE, 21" LENGTH
3B	690019	36"	HOSE, OVERFLOW BOTTLE EXIT, 36" LENGTH
4	675419	1	HYD HOSE - RAD OUT TO RESV
5	690033	1	MOUNT-RADIATOR HYD W/COOLER
6	3332643	2	HOSE-UPPER RADIATOR, KUBOTA 1505
7	3303255	4	CLAMP-HOSE 1.75 DIA NOMINAL
8	690125	1	RADIATOR-OIL COOLER, LP/GAS/DSL
9	690150	1	ASSY, FAN SHROUD, DSL/LP/GAS
10	3333489	1	FTG-RADIATOR HOSE
11	690020	1	LOWER RADIATOR HOSE, AM9D
12	675418	1	HYD HOSE - FILTER OUT TO RAD
13	3333488	1	FTG-PLUG, RADIATOR
14	3301733	2	DECAL-WARNING FAN (RAD SHROUD)
--	690225	4	CLAMP- HOSE .460 (NOT SHOWN - USED WITH ITEMS 3A and 3B ON EACH END)

**ENGINE KUBOTA V1505 DIESEL - RADIATOR COOLANT TANK & MOUNT**



ENGINE KUBOTA V1505 DIESEL - RADIATOR COOLANT TANK & MOUNT			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	713527	1	P-CLAMP, VINYL COVERED, 1/2 DIA
2	3301158	1	CLAMP-CABLE 11/16" DIA CLAMP-SADDLE TYPE 5/16" DIA.
3	3344101	1	RESERVOIR ASSY
4	3344112	4	ISOLATOR- CYLINDRICAL, 1 DIA X 3/4 X 1/4-20,
5	713002	6	BLT-HH 1/4-20 X .75 #5 ZINC
6	711373	10	NUT-NYLOC 1/4-20

**ENGINE KUBOTA V1505 DIESEL - RADIATOR ASSY & MOUNTING BRACKETS**

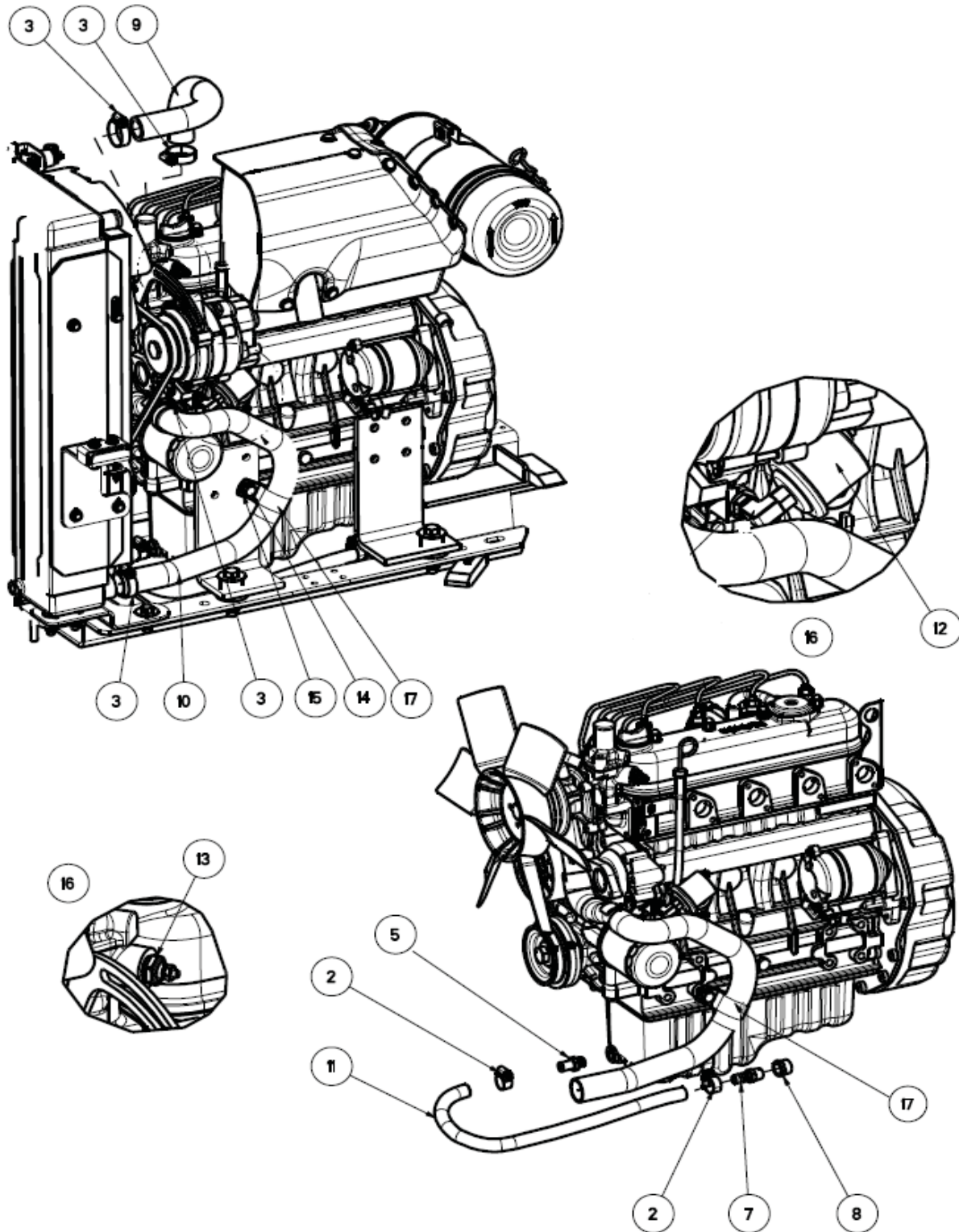


**ENGINE KUBOTA V1505 DIESEL - RADIATOR ASSEMBLY & MOUNTING BRACKETS**

ITEM	PART NO.	REQ'D	DESCRIPTION
1	3301158	1	CLAMP-SADDLE TYPE 11/16" DIA.
2	3400103	8	WASHER-LOCK 1/4 SPLIT
3	690125	1	RADIATOR-OIL COOLER COMBO
4	690150	1	ASSY, FAN SHROUD, DSL/LP/GAS
5	690033	1	PLATE- BASE, RADIATOR MOUNT, AM9D
6	3336627	1	PLT-RADIATOR MNT, RH TOP
7	3336629	2	PLT - RADIATOR MNT, LH TOP
8	3336632	1	PLT - EXHAUST MNT BRKT
9	690113	1	PLT - EXHAUST MNT, UPPER BRKT
10	3336634	1	PLT - RADIATOR MNT
13	3344110	2	ISOLATOR-BONDED BUSHING BOTTOM RADIATOR
14	3344112	2	ISOLATOR- CYLINDRICAL, 1 DIA X 3/4 X 1/4-20,
15	3400007	4	SCR-CAR,3/8-16X1.25
18	711207	6	BLT-HH 1/4-20 X 1.00 STL ZINC
19	3400071	4	NUT-HEX 1/4-20
20	711380	6	NUT-NYLOC 3/8-16
21	3400089	8	WASHER-FLAT 1/4 ZP
22	3400278	2	WASHER-FENDER 3/8
23	3401570-7W	4	WASHER-NORD-LOCK, 1/4, 0.53 OD
24	661133	1	BRKT, RADIATOR, UPPER
25	3334426	1	ISOLATOR-RAD MNT
26	713527	1	P-CLAMP, VINYL COVERED, 1/2 DIA
27	711374	2	NUT-NYLOC 5/16-18 ZP
28	713001	1	SCR-HH 1/4-20 X .62 PLAIN GR 5
29	713002	1	SCR-HH 1/4-20 X .75 ZP 5
30	82-54-A	1	CLAMP-P .75 I.D. 5/16 DIA.
31	711228	1	SCR-HH 5/16-18 X .75 ZP GR 5



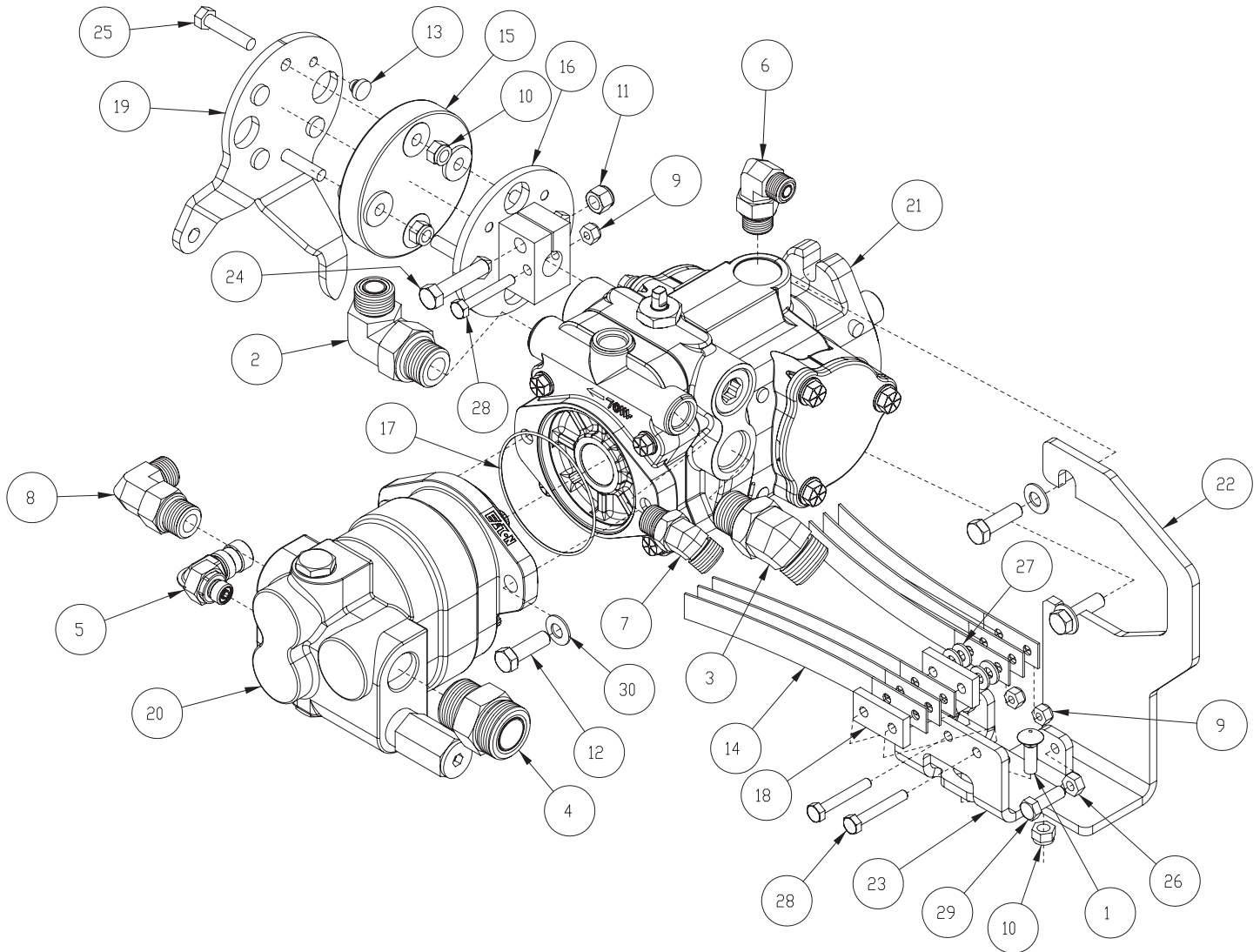
**ENGINE KUBOTA V1505 DIESEL - RADIATOR ASSY, CLAMPS, HOSES & SENDERS**





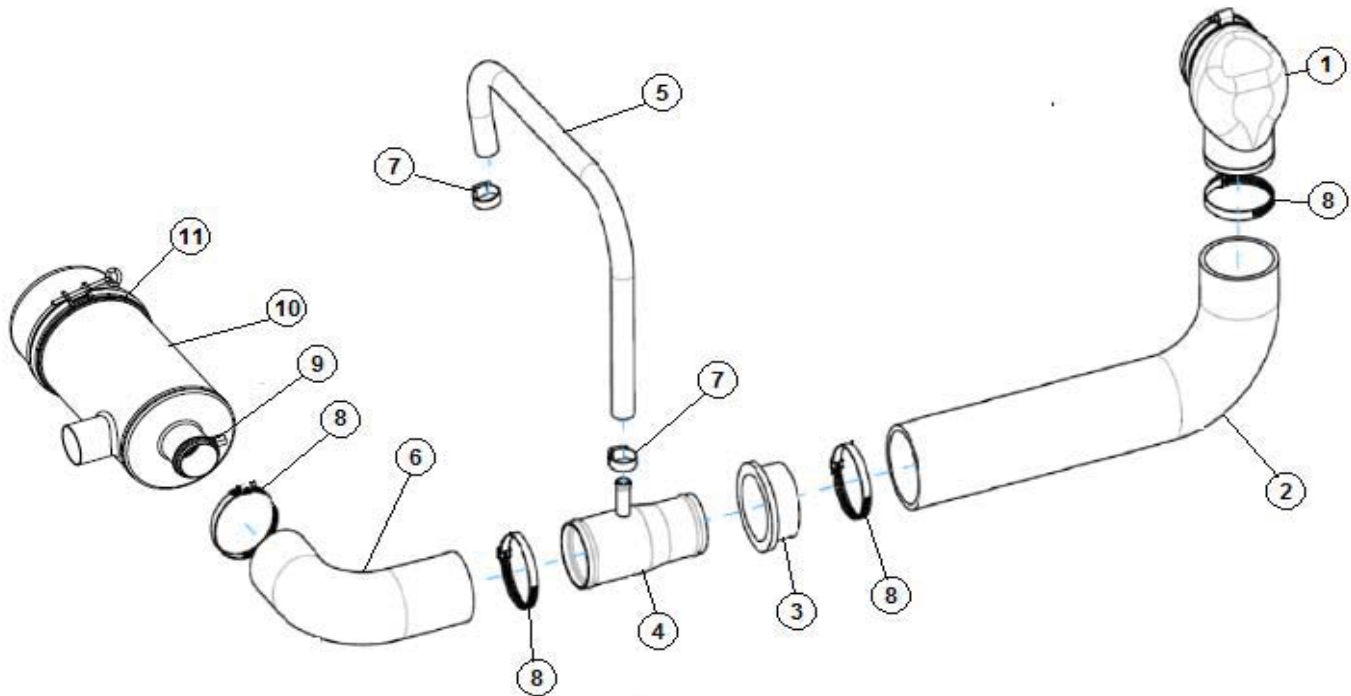
<b>ENGINE KUBOTA V1505 DIESEL - RADIATOR ASSEMBLY, CLAMPS, HOSES &amp; SENDERS</b>			
<b>ITEM</b>	<b>PART NO.</b>	<b>REQ'D</b>	<b>DESCRIPTION</b>
2	713527	2	CLAMP-HOSE 1/2 NOM
3	3301158	4	CLAMP-HOSE 1.25 NOM
5	3345502	1	ADAPTER, OIL DRAIN - MALE/FEMALE
7	3345503	1	FTG-BRASS,3/8" BARB X 1/4" MALE NPT
8	3345506	1	FTG-BRASS,3/8" BARB X 1/4" FEMALE NPT
9	3332643	1	HOSE-RAD UPPER 1505
10	690020	1	HOSE-RAD LOWER 1505
11	3345505	1	HOSE - 1/2" ID X 24" PCV OIL DRAIN
12	3341069	1	SENDER-OIL PRESSURE 12V
13	3341070	1	SENDER-TEMPERATURE 12V
14	711206	2	SCR-HH 1/4-20 X .87 ZP GR 5
15	3400385	1	WASHER-CONICAL SPRING 3/8
16	3401122	0.100	565 PST. Thrd Slnt 50ml (WHITE LOCTITE 565)
17	3343082	1	CLAMP-PIPE, 9/16 DIA, INSULATED

**ENGINE KUBOTA V1505 DIESEL, WG1605 GAS & LPG - HYDRAULIC PUMP DETAIL**



ENGINE KUBOTA V1505 DIESEL - HYDRAULIC PUMP DETAIL			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	70-516-16	2	BLT-CARR 5/16-18 X 1 ZINC
2	675500	1	FTG-STR ELBOW -10 ORFS TO -12 SAE
3	675502	1	FTG-45 DEG STR ELBOW -12 ORFS TO -12 SAE
4	675505	1	FTG-STR THD CONNECTR -16 ORFS TO -16 SAE
5	675512	1	FTG-STR THD ELBOW -4 ORFS TO -8 SAE
6	675520	1	FTG-STR THD ELBOW -6 ORFS TO -8 SAE
7	675527	1	FTG-45 DEG STR THREAD ELBOW -8 ORFS TO
8	675528	1	FTG-STR THD ELBOW -8 ORFS TO -10 SAE
9	711373	3	NUT-NYLOC 1/4-20
10	711374	6	NUT-NYLOC 5/16-18
11	711380	1	NUT-NYLOC 3/8-16
12	713043	4	BLT-HH 3/8-16 X 1.25 #5
13	3300526	8	BUMPER-RUBBER 1/4 ID X 1/8 THK
14	3300543	6	SPRING-FWD/REV RETURN
15	3301507	1	COUPLING-RUBBER, DIR CONTROL
16	3301544	1	DISC FWD/REV ZP
17	3303711	1	ORING-STATIC SEAL 3.239 ID
18	3303918	2	SPACER-FWD/REV BRACKET ZP
19	3307219	1	PLATE-DIRECTIONAL CONT PLTD SW/A
20	3321397	1	PUMP-AUX HYDRAULIC (9XR, 9XD, 10X, AM9D)
21	3335072	1	PUMP-PISTON, VARIABLE, 1.44 CIR, PROPEL
22	3335200	1	PLATE- FWD/REV SPRING MNT V1505
23	3335301	1	BRKT-FWD/REV ZP. 9X
24	3400027	1	SCR-HEX, 3/8-16X1.75 ZP
25	3400033	4	SCR-HEX, 5/16-18X1.50 ZP
26	3400069	2	NUT-HEX 5/16-24 ZP
27	3400089	4	WASHER-FLAT 1/4 STANDARD ZP
28	3400173	3	SCR-HH, 1/4-20X1.75, PART THRD, GR 5, ZP
29	3400221	2	SCR-HH, 5/16-24X1.00 GR 5, ZP
30	3400385	4	WASHER-CONICAL SPRING 3/8

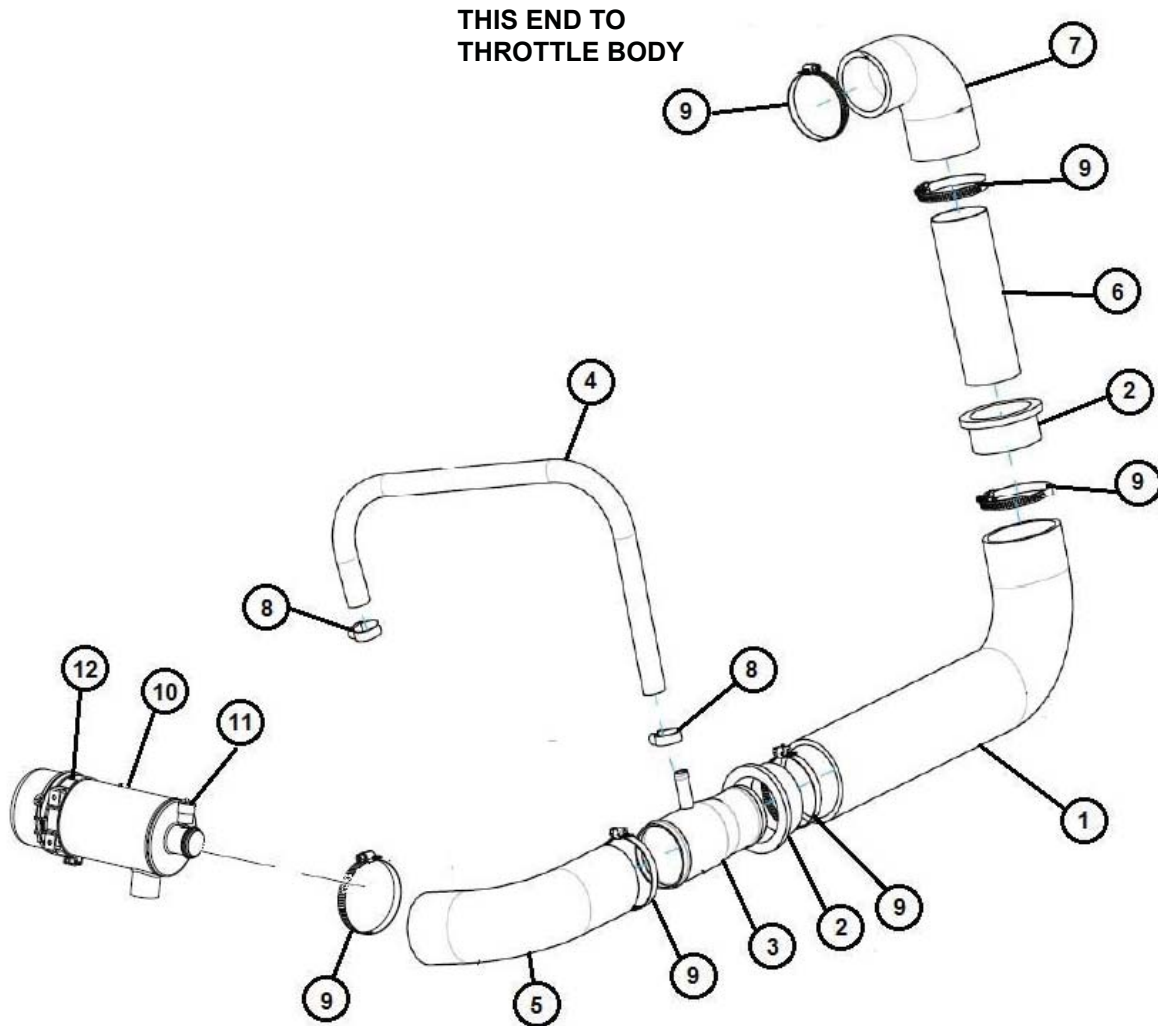
**ENGINE KUBOTA WG1605 LPG - AIR CLEANER DETAIL**



**ENGINE KUBOTA WG1605 LPG - AIR CLEANER DETAIL**

ITEM	PART NO.	REQ'D	DESCRIPTION
1	690194	1	COUPLER NECK, THROTTLE BODY - 9X LP
2	690195	1	INDUCTION HOSE, ENGINE SIDE - 9X LP
3	690196	1	COUPLER, REDUCER, 2.5 TO 2.25 - 9X LP
4	690197	1	TUBE, INDUCTION - 9X LP
5	690198	1	HOSE, CRANK CASE VENT - 9X GAS/LP
6	690199	1	INDUCTION HOSE, AIR CLEANER SIDE - 9X
7	829129	2	CLAMP-HOSE WORM-DRV8-22MM HOSE DIA. 5/16
8	3044112	4	CLAMP-HOSE, SS, 2.50 MAX WORM
9	3303991	1	INDICATOR-AIR CLEANER RESTRICTION
10	3303031	1	AIR CLNR- HEAVY DUTY; CAP, MOUNT, HOUSING
11	690008	1	CLAMP, W-FOOT, AIR CLEANER, AM9D

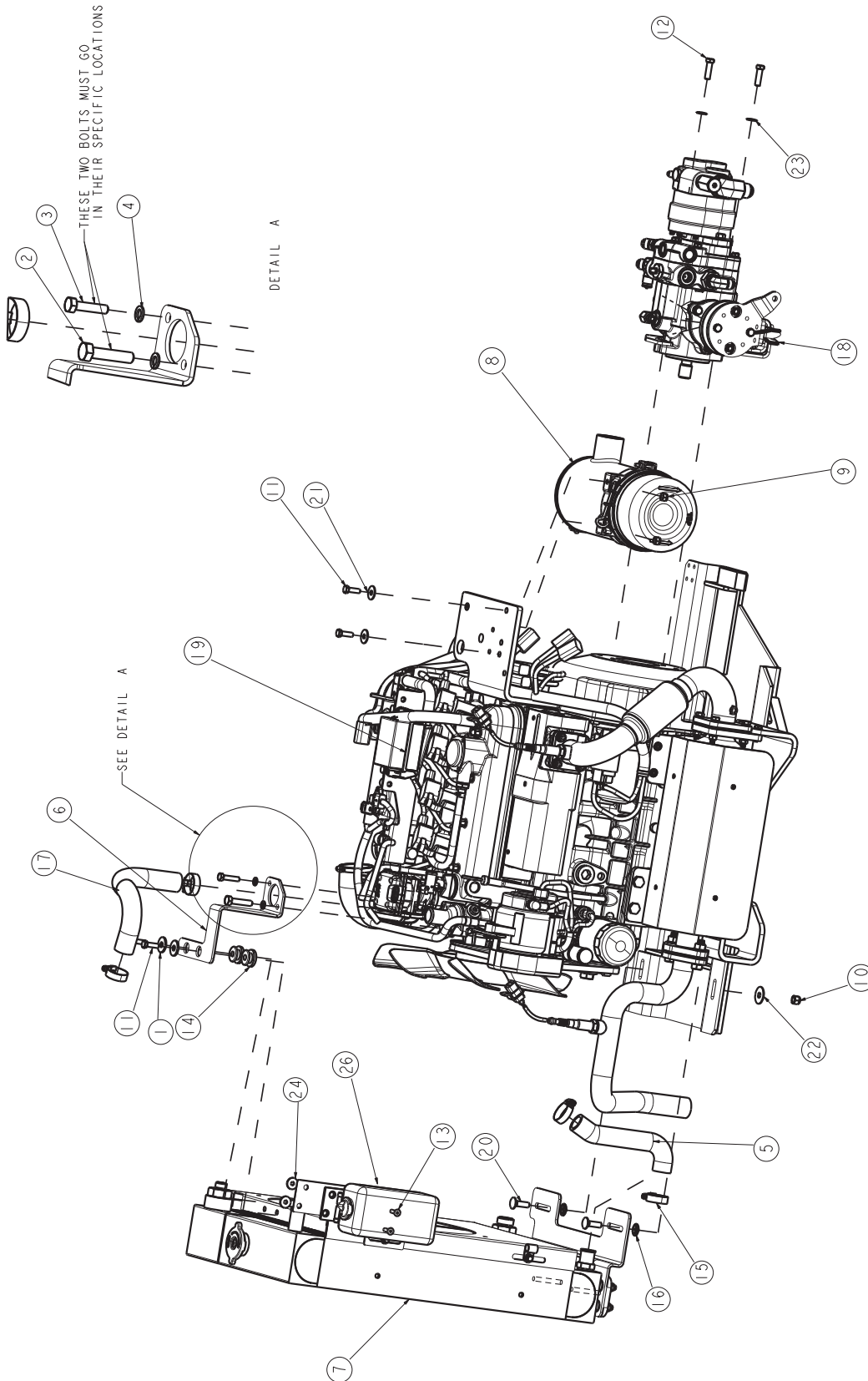
## ENGINE KUBOTA WG1605 GAS - AIR CLEANER DETAIL



## ENGINE KUBOTA WG1605 GAS - AIR CLEANER DETAIL

ITEM	PART NO.	REQ'D	DESCRIPTION
1	690195	1	INDUCTION HOSE, ENGINE SIDE - 9X LP
2	690196	2	COUPLER, REDUCER, 2.5 TO 2.25 - 9X LP
3	690197	1	TUBE, INDUCTION - 9X LP
4	690198	1	HOSE, CRANK CASE VENT - 9X GAS/LP
5	690199	1	INDUCTION HOSE, AIR CLEANER SIDE - 9X
6	690223	1	TUBE, INDUCTION, UPPER
7	690224	1	INDUCTION HOSE, UPPER
8	829129	2	CLAMP-HOSE WORM-DRV8-22MM HOSE DIA. 5/16
9	3044112	6	CLAMP-HOSE, SS, 2.50 MAX WORM
10	3303031	1	AIR CLNR- HEAVY DUTY; CAP, MOUNT, HOUSING
11	3303991	1	INDICATOR-AIR CLEANER RESTRICTION
12	690008	1	CLAMP, W-FOOT, AIR CLEANER, AM9D

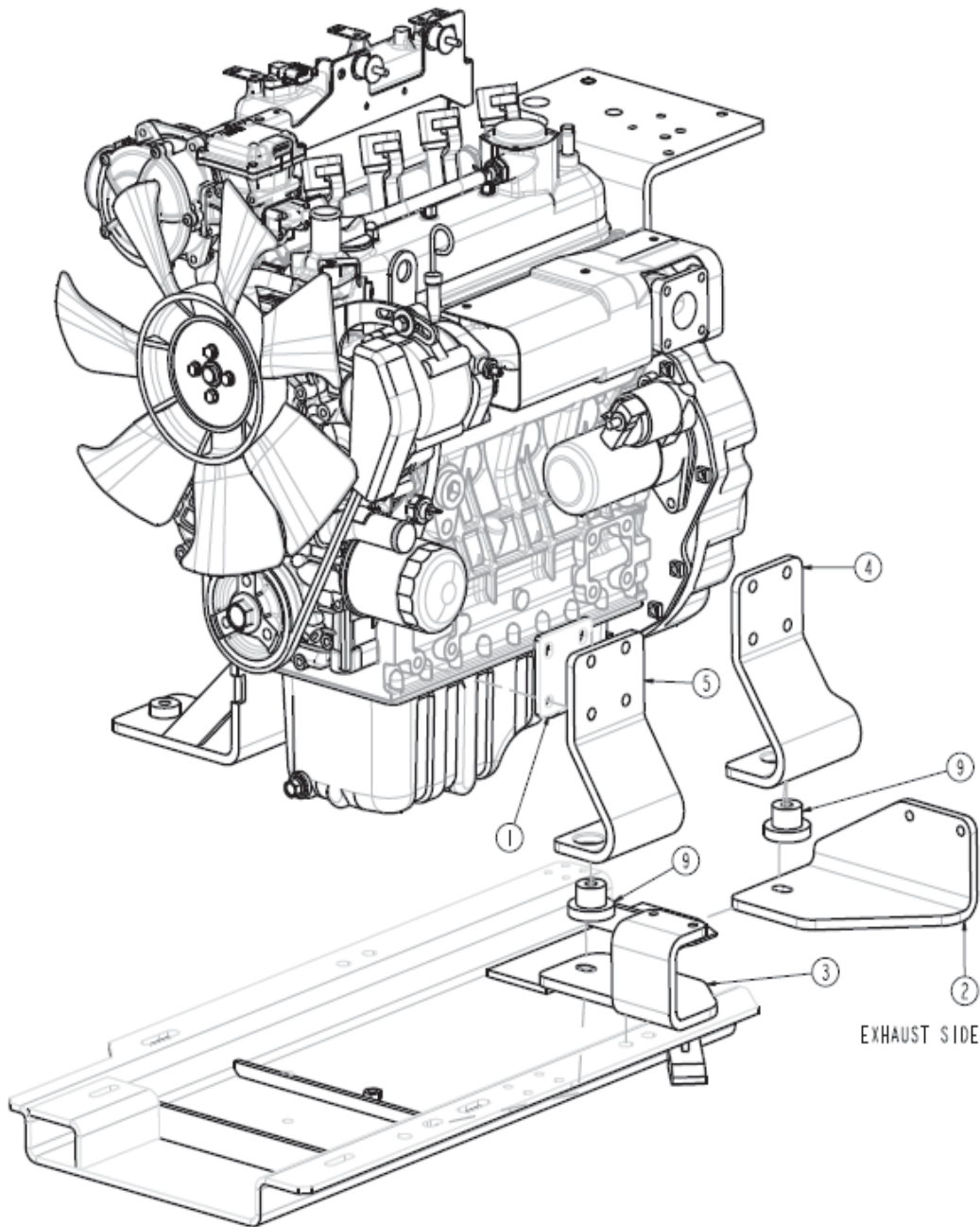
**ENGINE KUBOTA WG1605 GAS & LPG ENGINE ASSEMBLY**



ENGINE KUBOTA WG1605 GAS & LPG ENGINE ASSEMBLY			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	600363	2	WASHER-FLAT .39 X 1.12 X .1 ZP
2	600820	1	SCR-HH M8-1.25 X 45 ZP CLASS 8.8
3	600918	1	SCR-HH M8-1.25 X 35 ZP CLASS 8.8
4	600959	2	WASHER-LOCK M8 ZINC SPLIT
5	690020	1	LOWER RADIATOR HOSE, AM9D
6	690161	1	BRKT, RADIATOR UPPER - 9X LP/GAS
7	690125	1	RADIATOR-OIL COOLER, LP/GAS/DSL
8	690204	1	GROUP, AIR CLEANER - 9X
9	711374	2	NUT-NYLOC 5/16-18 ZP
10	711380	2	NUT-NYLOC 3/8-16 ZP
11	713027	4	SCR-HH 5/16-18 X 1 ZP GR 5
12	713043	2	SCR-HH 3/8-16 X 1.25 ZP GR 5
13	731382	2	SCR-FHSCS M6-1.00 X 20 ZP
14	3300465	2	ISOLATOR-RUBBER (.375IDx.81OD)
15	3303255	4	CLAMP-HOSE 1.75 DIA NOMINAL
16	3316981	2	NUT-PUSH RETAINER 3/8 BOLT, 25/32 OD ZP
17	3332643	1	HOSE-RAD UPPER 1505 (COOLER)
18	3338792	1	SUB-HYDRAULIC PUMPS ARMA
19	690176	1	ENGINE, BASE - 9X LP
	690221	1	ENGINE, RAW, WG1605, GASOLINE - 9X
20	3400007	2	BLT-CARR 3/8-16 X 1.25 ZP
21	3400233	2	WASHER-FENDER 5/16 X 1.00 ZP
22	3400278	2	WASHER-FENDER 3/8 X 1.25 ZP
23	3400385	2	WASHER-CONICAL SPRING 3/8
24	12040044	2	NUT-NYLOC M6 X 1.0 ZP CLASS 6
25	12347027	2	WASHER-FLAT M6.6 X 22 X 2 ZP
26	3318752	1	RSRVR-COOLANT OVRFLW

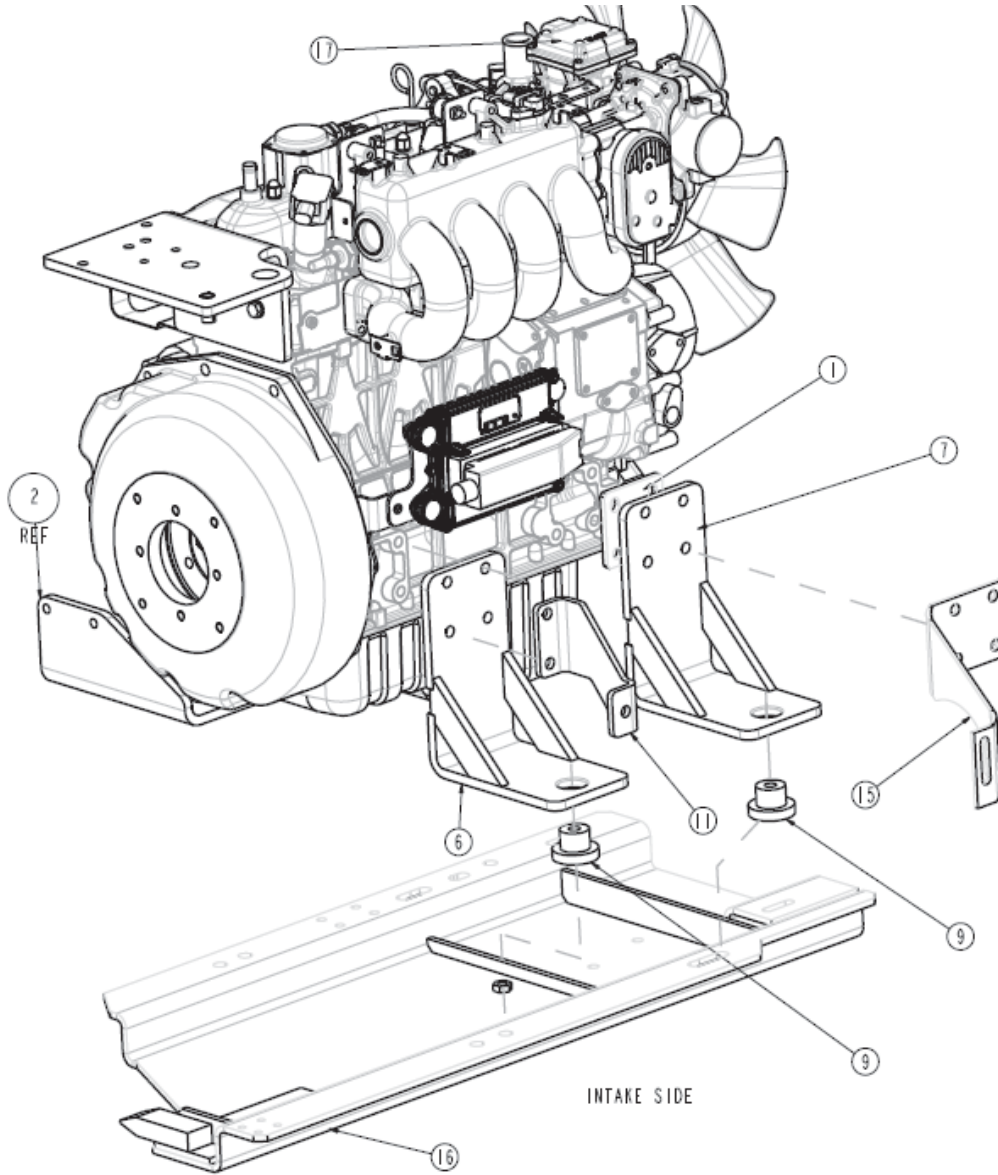


**ENGINE KUBOTA WG1605 GAS & LPG - MOUNTS-EXHAUST SIDE**



<b>ENGINE KUBOTA WG1605 GAS &amp; LPG - MOUNTS-EXHAUST SIDE</b>			
<b>ITEM</b>	<b>PART NO.</b>	<b>REQ'D</b>	<b>DESCRIPTION</b>
1	690030	2	SPACER, ENGINE MOUNT
2	690162	1	BRACKET, CAT CONV. SUPPORT
3	690163	1	BRACKET, CAT CONV. OUTER
4	690165	1	MOUNT - FOOT LEFT REAR
5	690166	1	MOUNT - FOOT LEFT FRONT
9	690175	4	ISOLATOR - ENGINE MOUNT

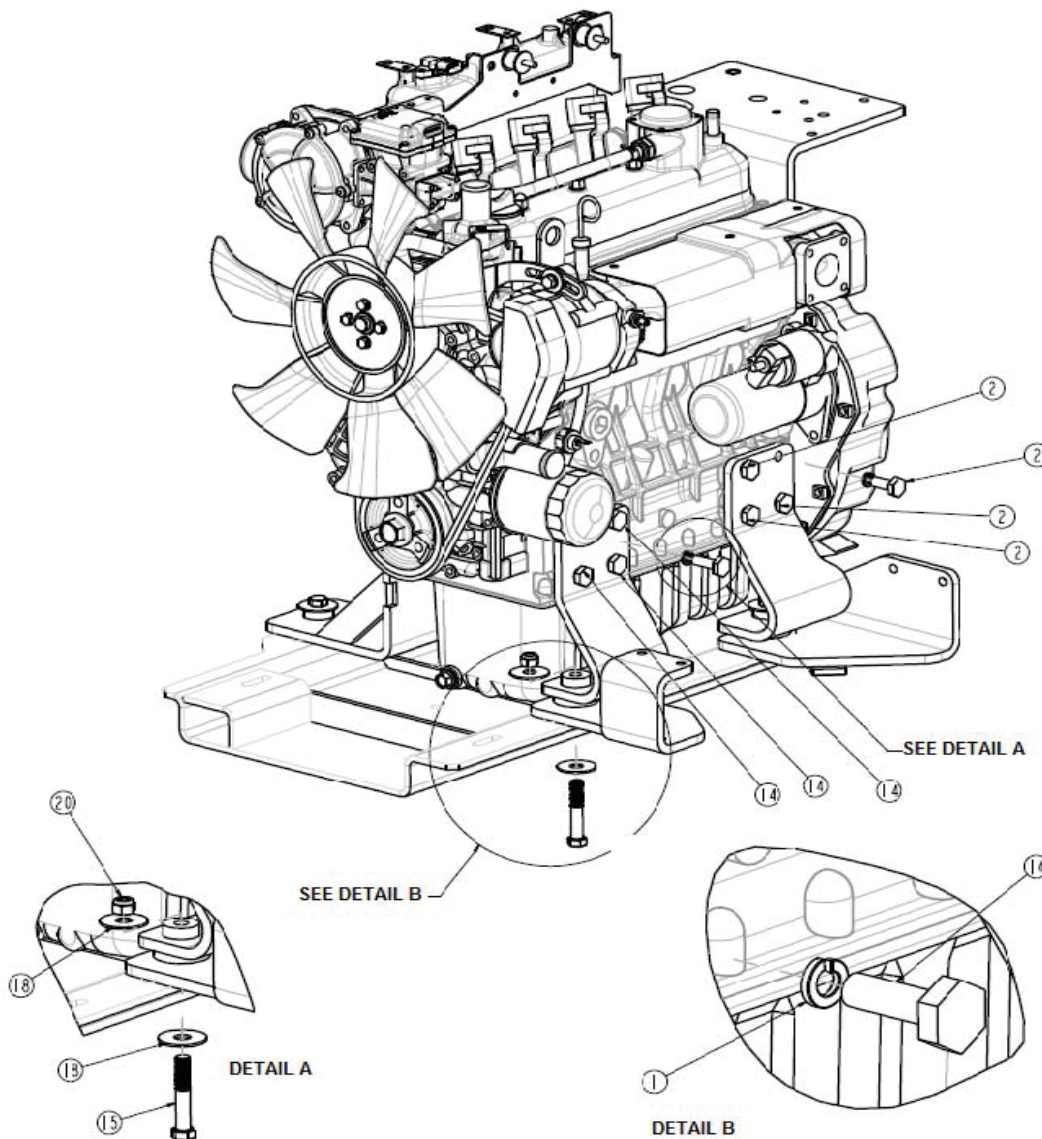
**ENGINE KUBOTA WG1605 GAS & LPG - MOUNTS-INTAKE SIDE**



**ENGINE KUBOTA WG1605 GAS & LPG - MOUNTS-INTAKE SIDE**

ITEM	PART NO.	REQ'D	DESCRIPTION
1	690030	2	SPACER, ENGINE MOUNT
2	690162	1	BRACKET, CAT CONV. SUPPORT
6	690167	1	MOUNT - FOOT RIGHT REAR
7	690168	1	MOUNT - FOOT RIGHT FRONT
9	690175	4	ISOLATOR, ENGINE MOUNT
11	690177	1	BRACKET-HOSE HOLDER - REAR
15	3333301P	1	BRACKET - HOSE RETAINER
16	3334994M	1	ENGINE PAN
17	690176	1	ENGINE - LPG
	690221	1	ENGINE - GAS

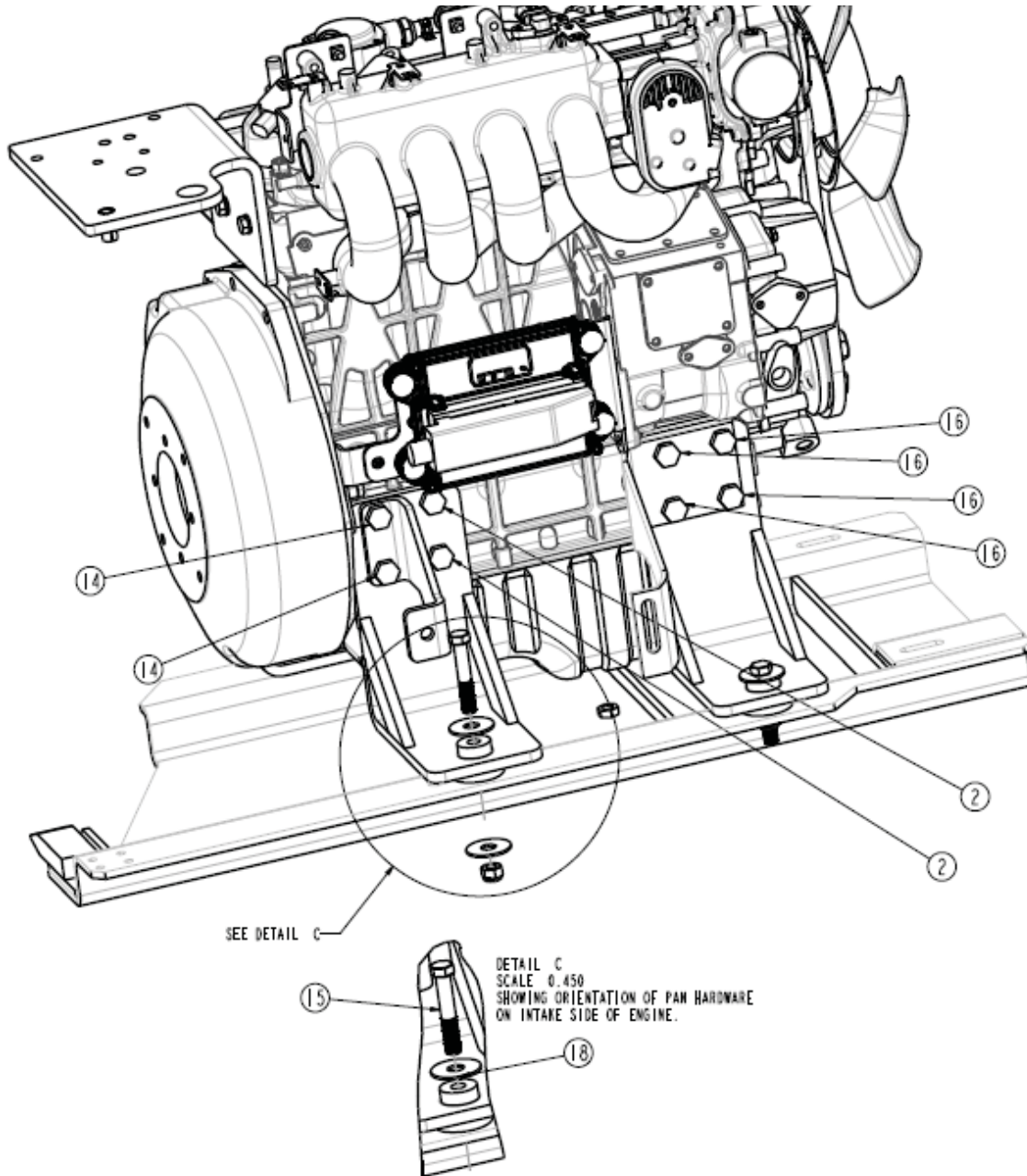
**ENGINE KUBOTA WG1605 GAS & LPG - MOUNTING FASTENER DETAIL**



<b>ENGINE KUBOTA WG1605 GAS &amp; LPG - MOUNTING FASTENER DETAIL</b>			
<b>ITEM</b>	<b>PART NO.</b>	<b>REQ'D</b>	<b>DESCRIPTION</b>
1	600945	16	LOCKWASHER M10
2	620082	6	BOLT M10 1.25 x .25 HH STL ZP (CLEAR)
14	713038	6	M10 - 1.25 x 30mm HHCS
15	713534	4	BOLT-HH 7/16 - 14 x 2.5 GRADE 5 ZINC
18	3400091	8	WASHER FENDER 1/2 ZP
20	3401429	4	NUT - 7/16 - 14 ES ZPBRACKET-HOSE RETAINER



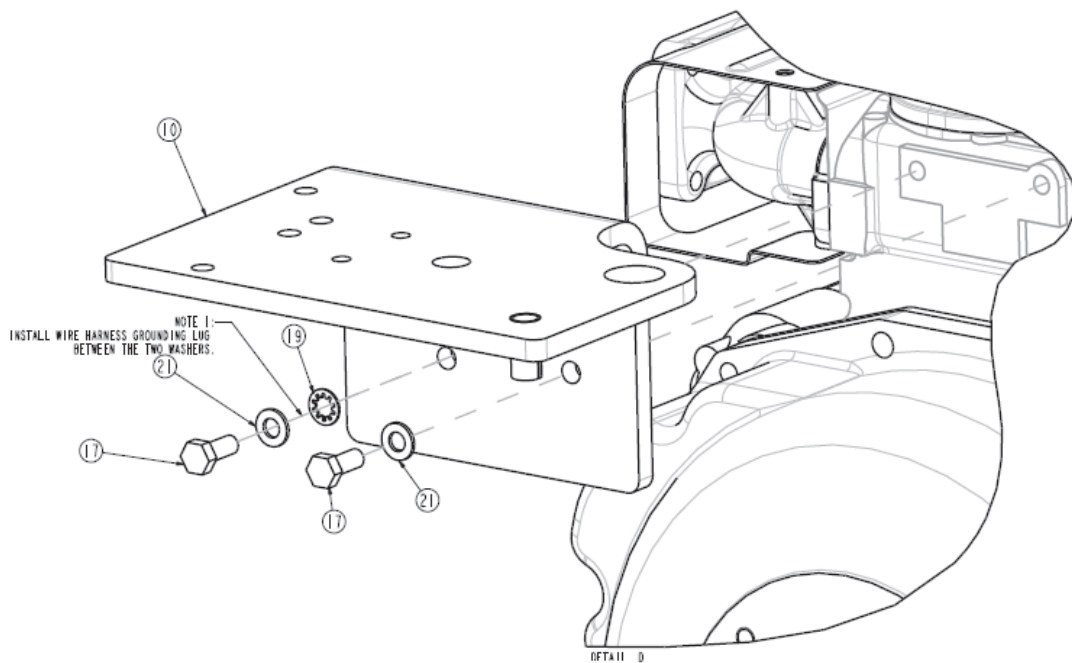
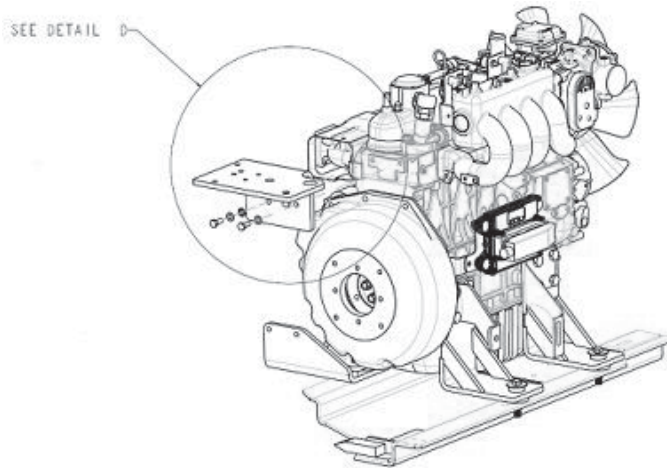
## ENGINE KUBOTA WG1605 GAS &amp; LPG - MOUNTING FASTENER DETAIL



## ENGINE KUBOTA WG1605 GAS &amp; LPG - MOUNTING FASTENER DETAIL

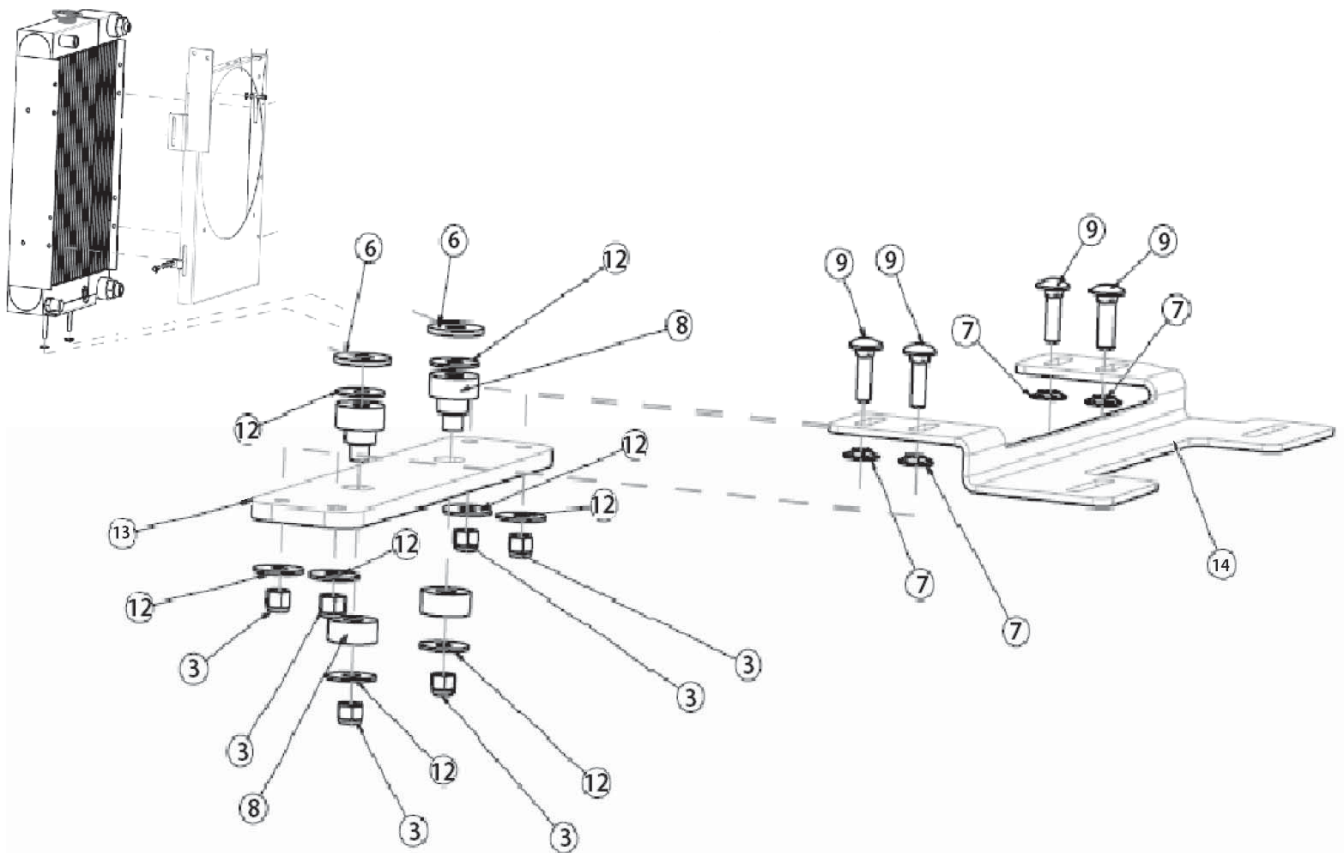
ITEM	PART NO.	REQ'D	DESCRIPTION
2	620082	6	BOLT M10 1.25 x .25 HH STL ZP (CLEAR)
14	713038	6	M10 - 1.25 x 30mm HHCS
15	713534	4	BOLT-HH 7/16 - 14 x 2.5 GRADE 5 ZINC
16	713535	4	HHCS M10 - 1.25 x 35mm GR 8.8 ZINC
18	3400091	8	WASHER FENDER 1/2 ZP
20	3401429	4	NUT - 7/16 - 14 ES ZPBRACKET-HOSE RETAINER

**ENGINE KUBOTA WG1605 GAS & LPG - MOUNTING AIR CLEANER BRACKET**



<b>ENGINE KUBOTA WG1605 GAS &amp; LPG - MOUNTING AIR CLEANER BRACKET</b>			
<b>ITEM</b>	<b>PART NO.</b>	<b>REQ'D</b>	<b>DESCRIPTION</b>
10	690173	4	BRKT, AIR CLEANER - 9X LP/GAS
17	717024	2	SCR-HH M8-1.25 X 20 ZP GRADE 8.8
19	3400273	1	WASHER-INT LOCK 5/16 ZP
21	12310041	2	WASHER-FLAT M8.4 X 16 X 1.6 ZP

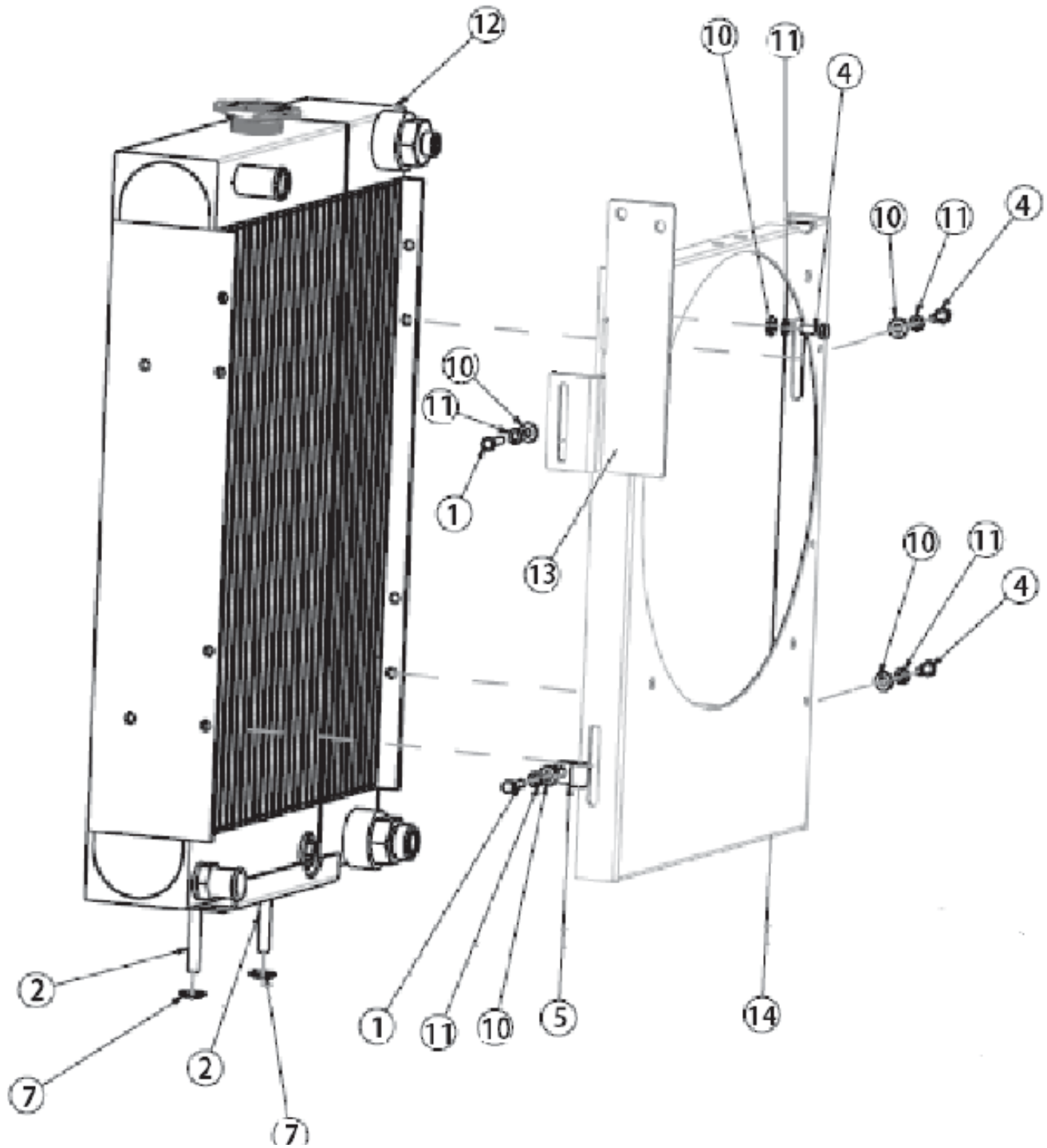
**ENGINE KUBOTA WG1605 GAS & LPG - RADIATOR MOUNTS**



**ENGINE KUBOTA WG1605 GAS & LPG - RADIATOR MOUNTS**

ITEM	PART NO.	REQ'D	DESCRIPTION
3	711380	6	NUT-NYLOC 3/8-16 ZP
6	730528	2	WASHER-FENDER M12 X 37 SS
7	3316981	4	NUT-PUSH RETAINER 3/8 BOLT, 25/32 OD ZP
8	3344110	2	ISOLATOR-BONDED BUSHING BOTT RAD
9	3400007	4	BLT-CARR 3/8-16 X 1.25 ZP
12	3400278	8	WASHER-FENDER 3/8 X 1.25 ZP
13	3336634	1	PLATE- RADIATOR MNT
14	690124	1	PLATE BASE - RADIATOR MNT

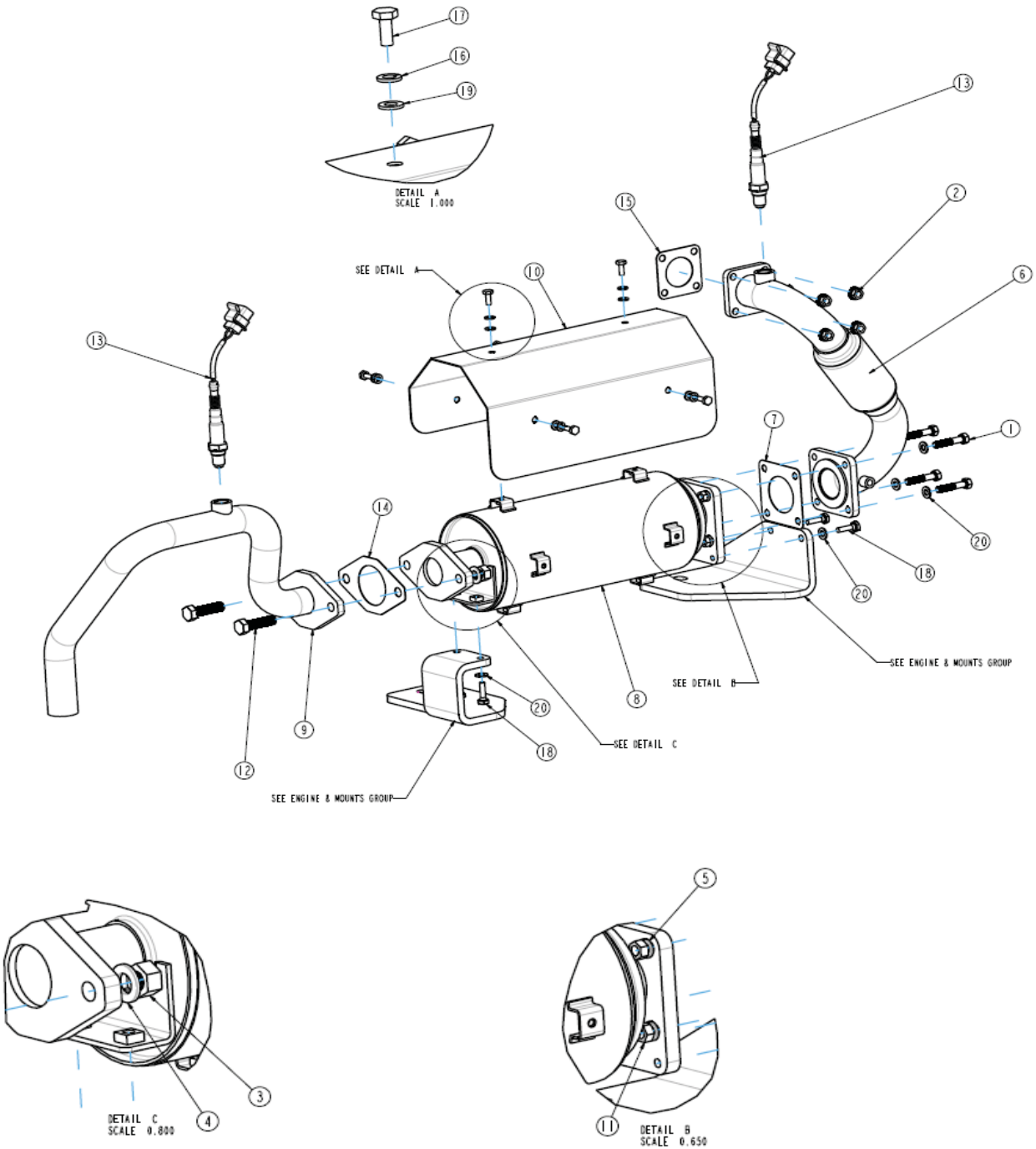
**ENGINE KUBOTA WG1605 GAS & LPG - RADIATOR**





ENGINE KUBOTA WG1605 GAS & LPG - RADIATOR			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	711207	2	SCR-HH 1/4-20 X 1.00 ZP GR 5
2	711254-1	2	BLT-CARR 3/8-16 X 2.50 ZP
4	713002	3	SCR-HH 1/4-20 X .75 ZP 5
5	713527	1	P-CLAMP, VINYL COVERED, 1/2 DIA
7	3316981	2	NUT-PUSH RETAINER 3/8 BOLT, 25/32 OD ZP
10	3400089	5	WASHER-FLAT 1/4 ZP
11	3400103	5	WASHER-LOCK 1/4 SPLIT ZP
12	690125	1	RADIATOR-OIL COOLER COMBO
13	690169	1	MOUNT, COOLANT OVERFLOW - 9X LP/GAS
14	690150	1	ASSY, FAN SHROUD, DSL/LP/GAS

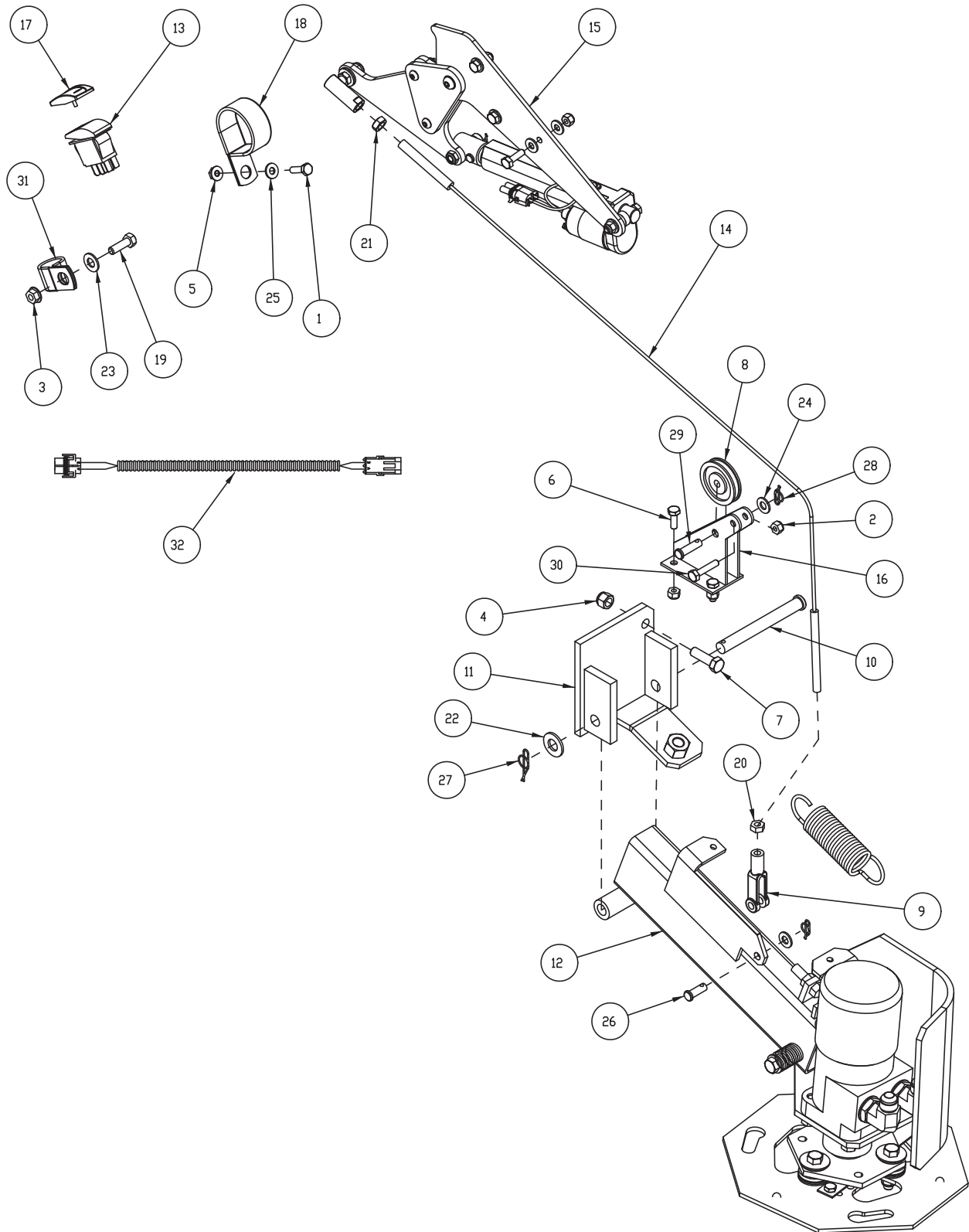
**ENGINE KUBOTA WG1605 GAS & LPG - EXHAUST DETAIL**



ENGINE KUBOTA WG1605 GAS & LPG - EXHAUST DETAIL			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	600919	4	SCR-HH M8-1.25 X 40 ZP CLASS 8.8
2	600934	4	NUT-FLANGE WIZZ M8-1.25 ZP
3	600947	2	WASHER-WAVE .313 ID x .69 OD x .031 THIC
4	600950	2	WASHER-FLAT M12 ZP
5	600959	4	WASHER-LOCK M8 ZINC SPLIT
6	690189	1	PIPE, EXHAUST, PRE-CAT - 9XLP/GAS
7	690190	1	GASKET, CATALYST, 4 BOLT - 9X LP/GAS
8	690191	1	CATALYTIC CONVERTER, 9X LP-GAS
9	690192	1	PIPE, EXHAUST, POST CAT - 9X LP/GAS
10	690193	1	HEAT SHIELD, CAT. CONVERTER - 9XLP/GAS
11	717013	4	NUT-HEX M8 X 1.25 ZINC
12	730667	2	SCR-HH M12-1.75 X 45 ZP CLASS 8.8
13	748476	2	SENSOR, OXYGEN - 9X LP/GAS
14	3345028	1	GASKET-CAT 1605 INLET
15	3345082	1	GASKET, FLANGE, EX MANIFOLD, KUBOTA 1605
16	3400103	6	WASHER-LOCK 1/4 SPLIT ZP
17	11038072	6	SCR-HH M6-1.0 X 16 ZP CLASS 8.8
18	11038247	4	SCR-HH M8-1.25 X 25 ZP CLASS 8.8
19	12310033	6	WASHER-FLAT M6.4 X 12 X 1.6 ZP
20	12310041	8	WASHER-FLAT M8.4 X 16 X 1.6 ZP

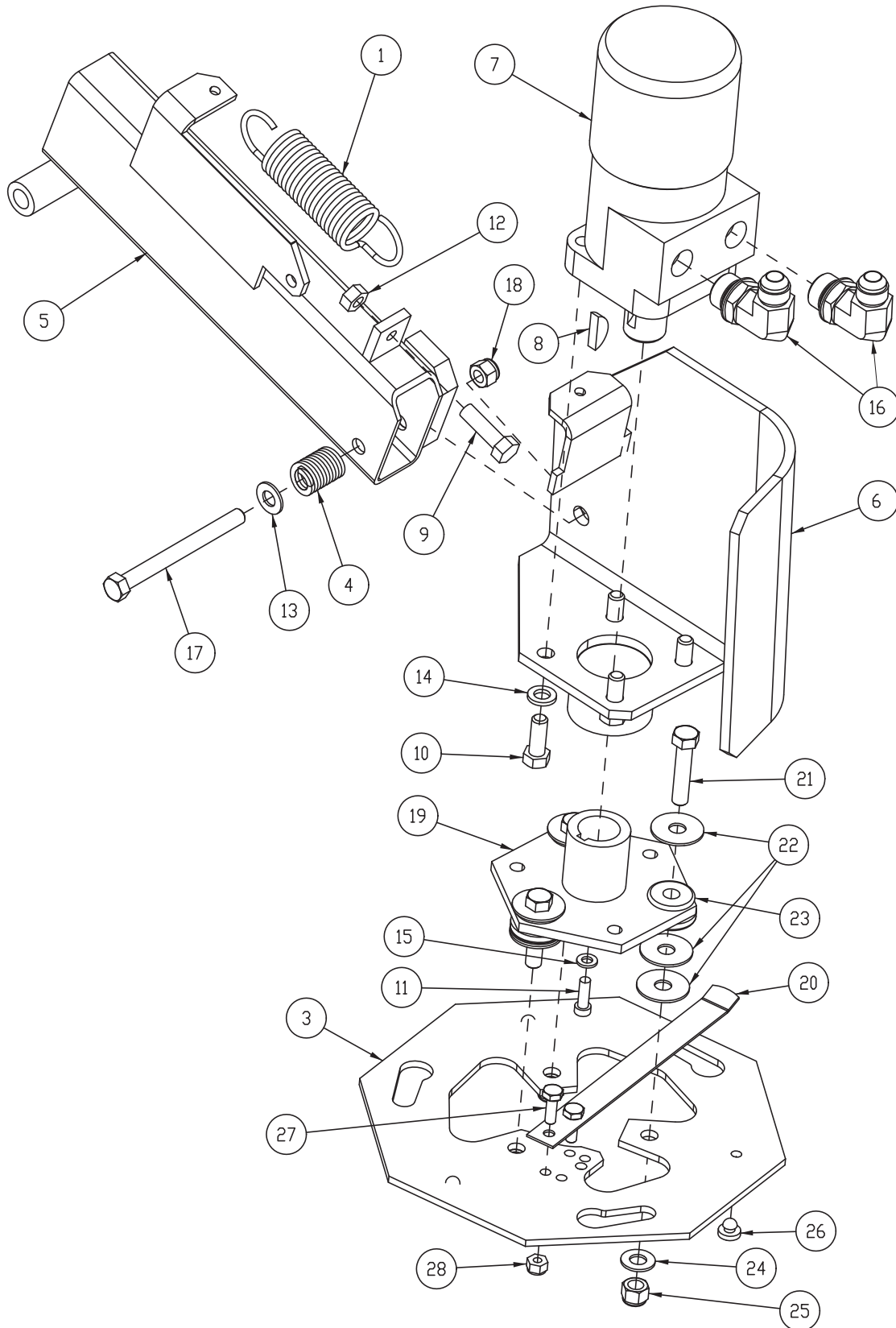
OPTIONS

OPTION - LH CURB BROOM KIT ASSEMBLY (3338666)



OPTION - LH CURB BROOM KIT ASSEMBLY (3338666)			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	711206	1	BLT-HH 1/4-20 X .87 STL ZINC
2	711373	3	NUT-NYLOC 1/4-20
3	711379	1	NUT-FLANGED WIZZ 5/16-18
4	711380	2	NUT-NYLOC 3/8-16
5	711425	1	NUT-FLANGED WIZZ 1/4-20 STL ZP
6	713002	2	BLT-HH 1/4-20 X .75 #5 ZINC
7	713043	2	BLT-HH 3/8-16 X 1.25 #5
8	3300368	1	PULLEY-PLASTIC 2" x .25" GROOVE
9	3307642	1	CLEVIS-5/16 PLTD SW/A
10	3307794	1	PIN-CLEVIS 1/2 X 4-1/2 ZP
11	3317214	1	MNT-DUAL CURB BROOM PNTD
12	3319421	1	ASSY-DUAL CURB BROOM (SEE DETAIL, PAGES 90-91)
13	3332713	1	SWITCH-DOUBLE SCRUB BROOM
14	3334946	1	CABLE-SIDE BROOM, 33" LG, 1/8"D
15	3335420	1	ASSY- SIDE BROOM LIFT LH
16	3335422	1	WELD-PULLEY LH SIDE BROOM
17	3342273	1	COVER-SWITCH, CARLING, BLACK W/LENS
18	3343539	1	CLAMP-P TYPE, 2 DIA
19	3400035	1	SCR-HEX,5/16-18X1.00 ZP
20	3400069	1	NUT-HEX 5/16-24 ZP
21	3400075	1	NUT-HEX JAM 3/8-24 ZP
22	3400086	1	WASHER-FLAT 1/2 STANDARD ZP
23	3400087	1	WASHER-FLAT 3/8 STANDARD ZP
24	3400088	2	WASHER-FLAT 5/16 IDx.688 ODx.065 THK
25	3400089	1	WASHER-FLAT 1/4 STANDARD ZP
26	3400118	1	PIN-CLEVIS 5/16x7/8 ZP
27	3400124	1	PIN-COTTER 5/8 RUE-RING
28	3400125	2	RING-RUE 3/8 COTTER PIN
29	3400184	1	PIN-CLEVIS 5/16 X 1-1/8 ZP
30	3400227	1	SCR-HEX,1/4-20X1.25 ZP
31	3400999	1	CLAMP-HOSE 1-1/8" DIA STEEL VINYL COATE
32	3317219P	1	HARNESS-DUAL CURB BRM, 9X
-	675427	1	HOSE-LH CB MTR IN TO RT CB OUT 170" (NOT SHOWN)
-	675428	1	HOSE-LH CB MTR OUT TO IMP TEE 100" (NOT SHOWN)
-	690262	1	DECAL, LEFT SIDE CURB BROOM - 9X (NOT SHOWN)
-	3338666	-	ASSY - DUAL CURB BROOM

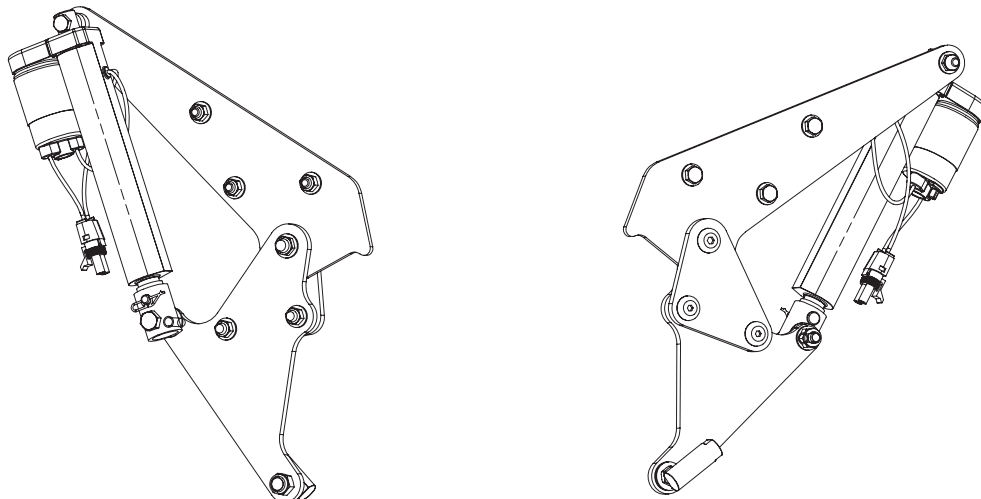
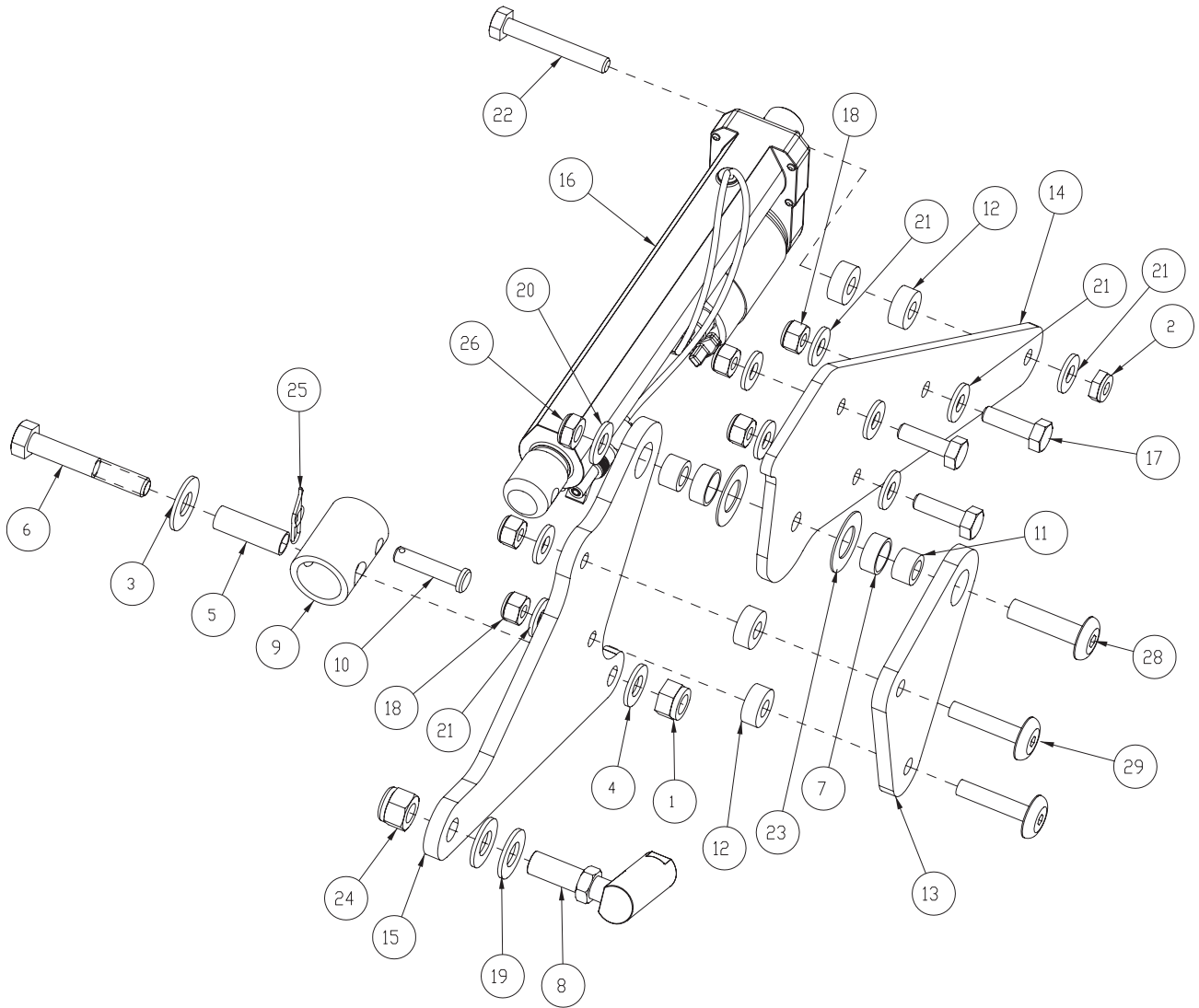
OPTION - DUAL CURB BROOM SUB-ASSEMBLY (3319421)



OPTION - DUAL CURB BROOM SUB-ASSEMBLY (3319421)			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	3302599	1	SPRING-EXT LOOPS-IN-LINE ZP
3	3301262	1	PLATE-GIMBAL SC HD
4	3306179	1	SPRING-COMPRESSION, CURB BROOM
5	3309778	1	LH CURB BROOM ARM PNTD
6	3309782	1	LH SIDE BROOM MOUNT PNTD
7	3316897	1	MOTOR-HYD CURB BRM
8	3330338	1	KEY-SHAFT D-FOSS CB/MB/SC MTRS (REPLACEMENT)
9	711250	1	SCR-HH 3/8-16 X 1.25 ZP GR 5
10	3400030	4	SCR-HEX,3/8-16X1.00, GRADE 5, ZP
11	3400049	1	SCR-SOCKET HEAD,1/4-20X0.75 ZP NYLOCK
12	3400068	1	NUT-HEX 3/8-16 ZP
13	3400087	1	WASHER-FLAT 3/8 STANDARD ZP
14	3400101	4	WASHER-LOCK 3/8 SPLIT ZP
15	3400103	1	WASHER-LOCK 1/4 SPLIT ZP
16	675528	2	FTG-STR THD ELBOW -8 ORFS TO -10 SAE
17	3400258	1	SCR-HEX,3/8-24X4.00 ZP
18	3400342	1	NUT-HEX 3/8-24 ES ZP
19	3300875	1	DRIVE HUB SC BR
20	3302058	1	BAR-CURB BROOM RETAINER
21	3400027	3	SCR-HEX,3/8-16X1.75 ZP
22	3400278	9	WASHER-FENDER 3/8
23	3300465	3	ISOLATOR-RUBBER (.375IDx.81OD)
24	3400087	3	WASHER-FLAT 3/8 STANDARD ZP
25	711380	3	NUT-NYLOC 3/8-16
26	3300526	3	BUMPER-RUBBER 1/4IDx1/8 THK
27	713002	2	BLT-HH 1/4-20 X .75 #5 ZINC
28	711373	2	NUT-NYLOC 1/4-20

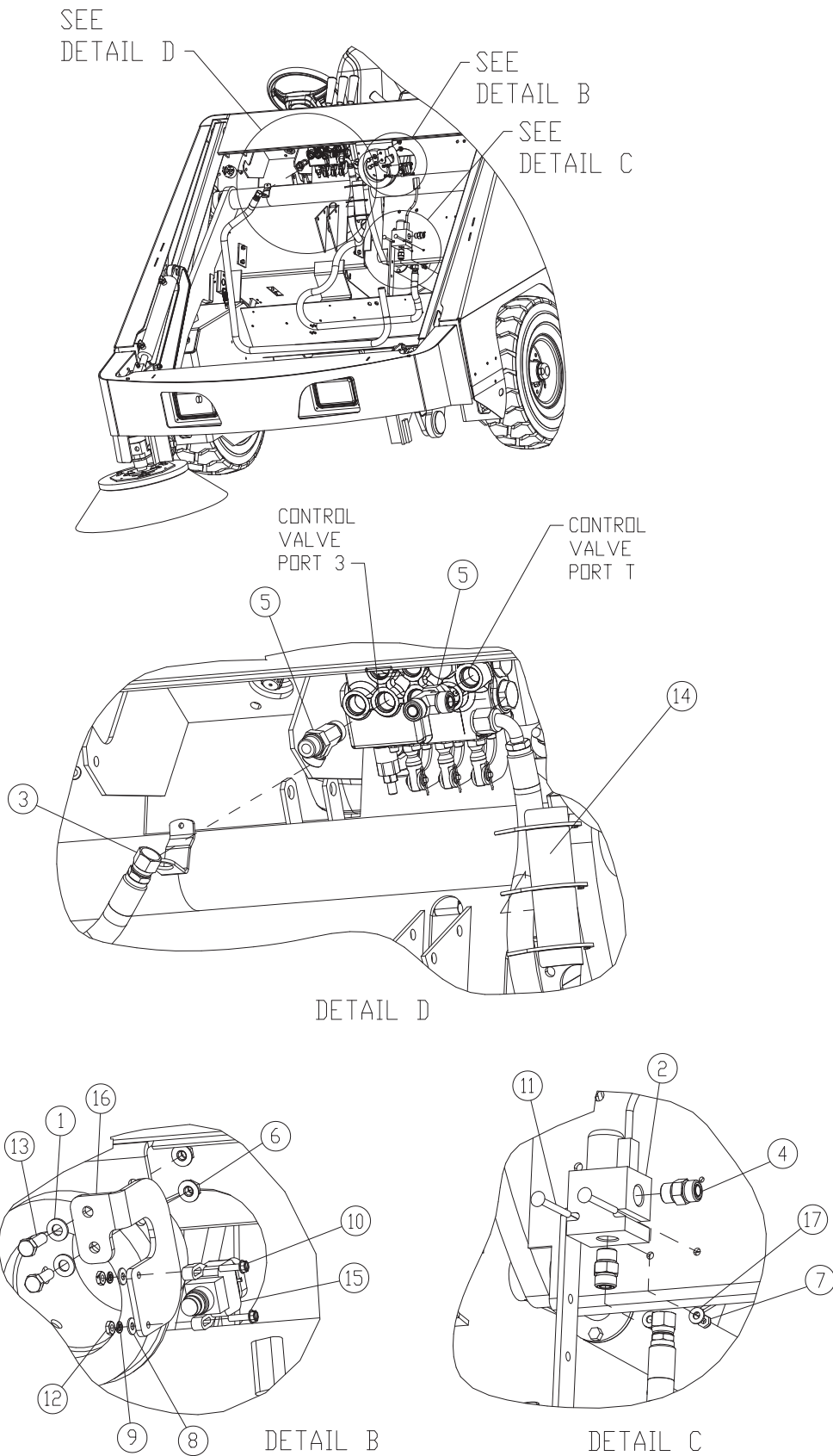


OPTION - SIDE BROOM LIFT LH (3335420)

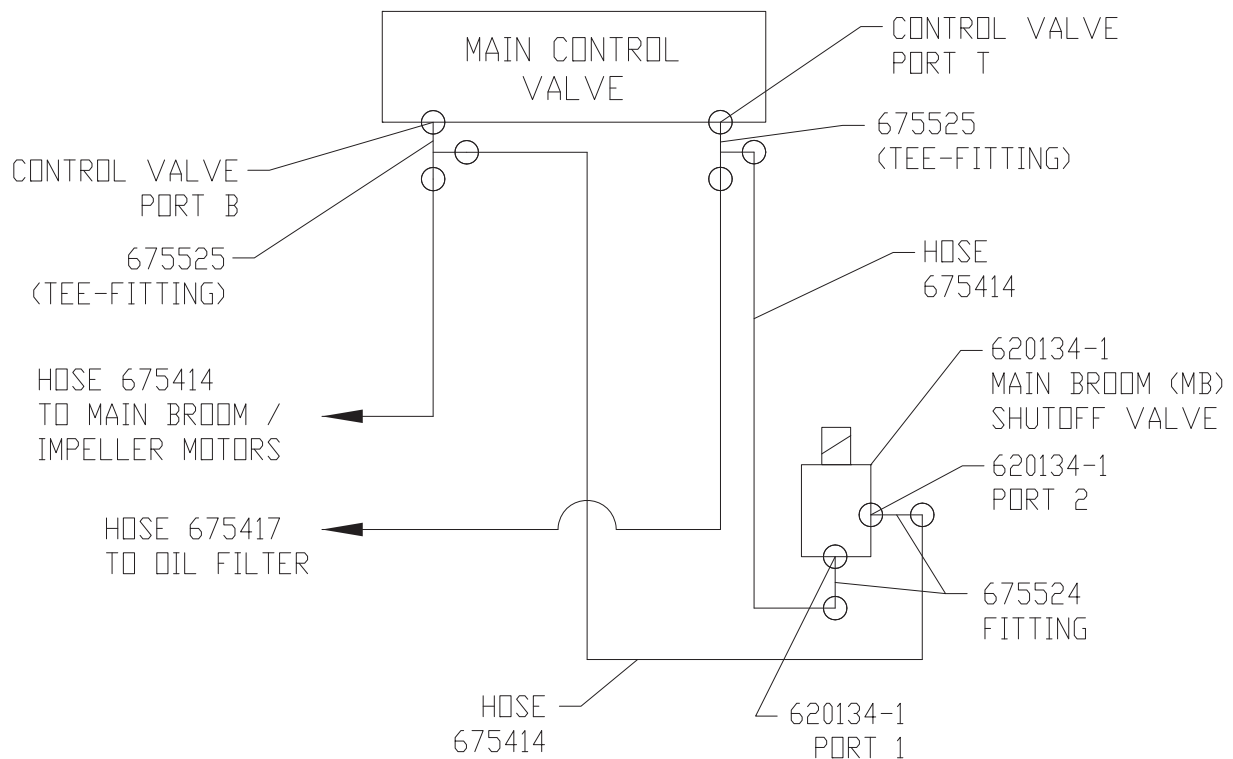


OPTION - SIDE BROOM LIFT LH (3335420)			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	711374	1	NUT -NYLOC 5 /16-18
2	711387	1	NUT -NYLOC 1/4-20 112 NUT
3	711569	1	WASHER-FLAT .390 X .880 X .062 NYL
4	712333	1	WASHER-FLAT 5/16 SS
5	713104	1	BUSHING, SLEEVE, 3/8
6	713107	1	GRD 9 ZP
7	3300431	2	BUSHING-.499 ID X . 594 DD C X. 250
8	3300461	1	BALL JOINT
9	3318884	1	ADAPTER -CURB BRM ACTUATOR
10	3318887	1	PIN-CLEVIS 1/4 X 1-1/ 8
11	3335273	2	SPACER -.32 ID X .499 DD x .31 LG
12	3335274	4	SPACER -.28 ID X . 625 DD x . 26 LG
13	3335275	1	PLATE-SUPPORT SB LIFT
14	3335372	1	MOUNT - PIVOT SIDE BROOM
15	3335373	1	PLATE - PIVOT SIDE BROOM
16	3336595	1	ACTUATOR-DUAL BROOM- 12VDC WEATHERPACK
17	3400041	3	SCREW -HHM 1/4-20 X . 875 LG ZP
18	3400081	5	NUT -HE X 1/4-20 ES ZP
19	3400087	2	WASHER-FLAT 3/8 ZP
20	3400088	1	WASHER-FLAT 5/16 X.688 X .065 ZP
21	3400089	9	WASHER-FLAT 1/4 ZP
22	3400173	1	SCREW -HHM 1/4-20 X 1.75 LG ZP
23	3400178	2	BEARING-THRUST .531 ID X 1.00 DD
24	3400342	1	NUT -HEX 3/8-24 ES ZP
25	3400742	1	RUE RING-1/4 HEAVY ZP
26	3401098	1	NUT -HEX JAM 5/16-18 ES ZP
28	3401440	1	5/16-18 X 1.25 LG ZP
29	3401983	2	SCREW BH 1/4-20 X 1.25 LG

**OPTION - RAISE HOPPER, MAIN BROOM SHUT OFF (690100) (CONTINUED NEXT PAGE)**

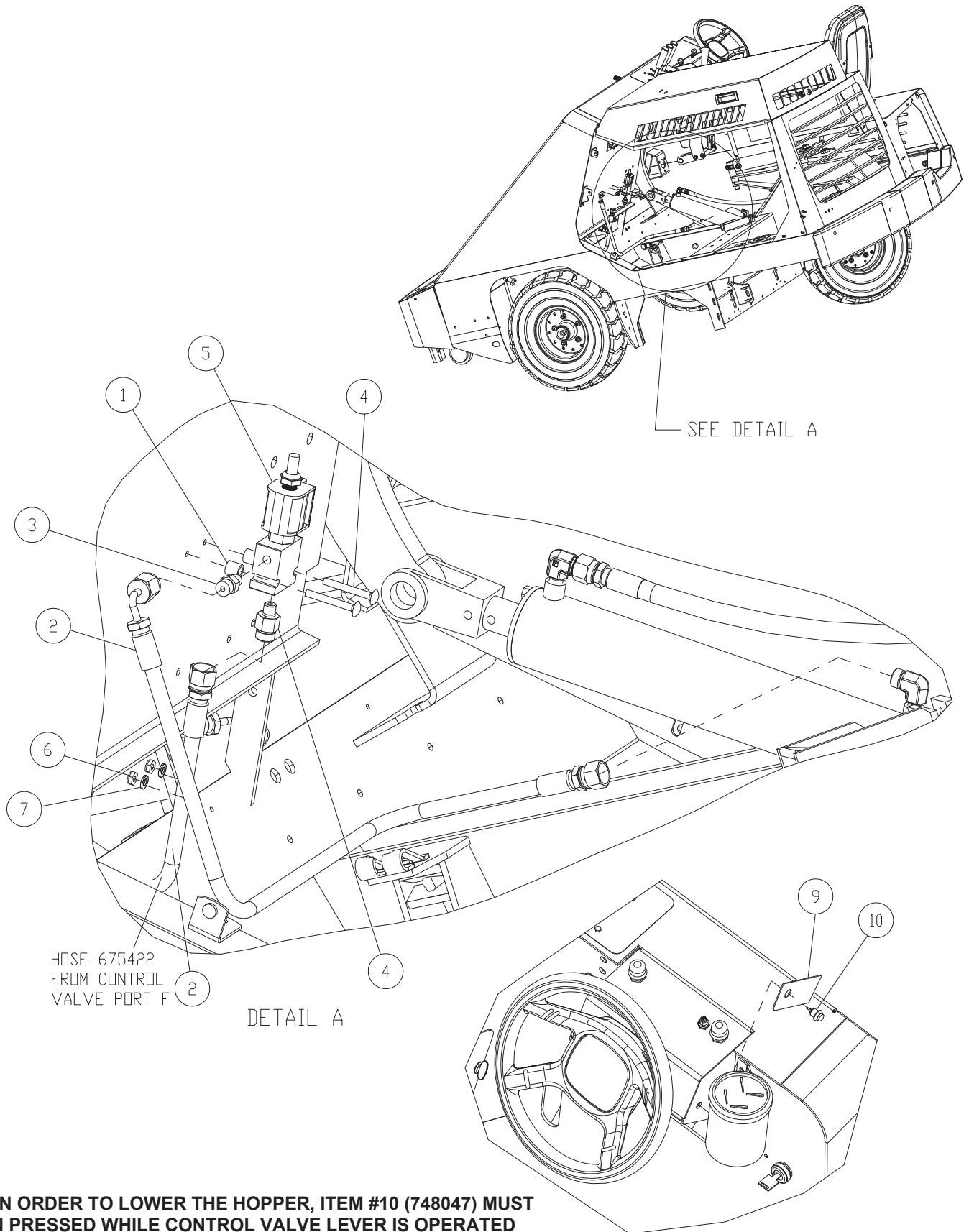


OPTION - RAISE HOPPER, MAIN BROOM SHUT OFF (690100)			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	600941	2	WASHER .344 ID x .688 OD x.065 THICK STE
2	620134-1	1	ASSY VALVE, SOLENOID N/C
3	675414	2	HYD HOSE - CONT VALVE TO IMP MOTOR
4	675524	2	FTG-STR THD CONNECTOR -8 ORFS TO -8 SA
5	675525	2	FTG-STR THD RUN TEE -8 ORFS TO -8 SAE
6	711379	2	NUT-FLANGED WIZZ 5/16-18
7	711387	2	NUT-NYLOC 1/4-20 1/2NUT
8	711503	2	WSR-FLT #10 (SPECIAL FLAT WASHER)
9	711543	2	WSR-HELICAL #10
10	712550	2	SCR-IHWH SLOT 10-32X.75 18-8 SS
11	712573	2	BLT-CARR 1/4-20 X 2.50 SS
12	712636	2	NUT-HEX 10-32 SS
13	713027	2	BLT-HH 5/16-18 X 1 #5 ZP
14	730690	1	4" HOSE PROTECTOR (10 PK)
15	3335945	1	SWITCH-COBO W/ AMP CONNECTOR
16	3337340	1	PLT - HOPPER POSITION SWITCH MOUNT
17	3400089	2	WASHER-FLAT 1/4 STANDARD ZP

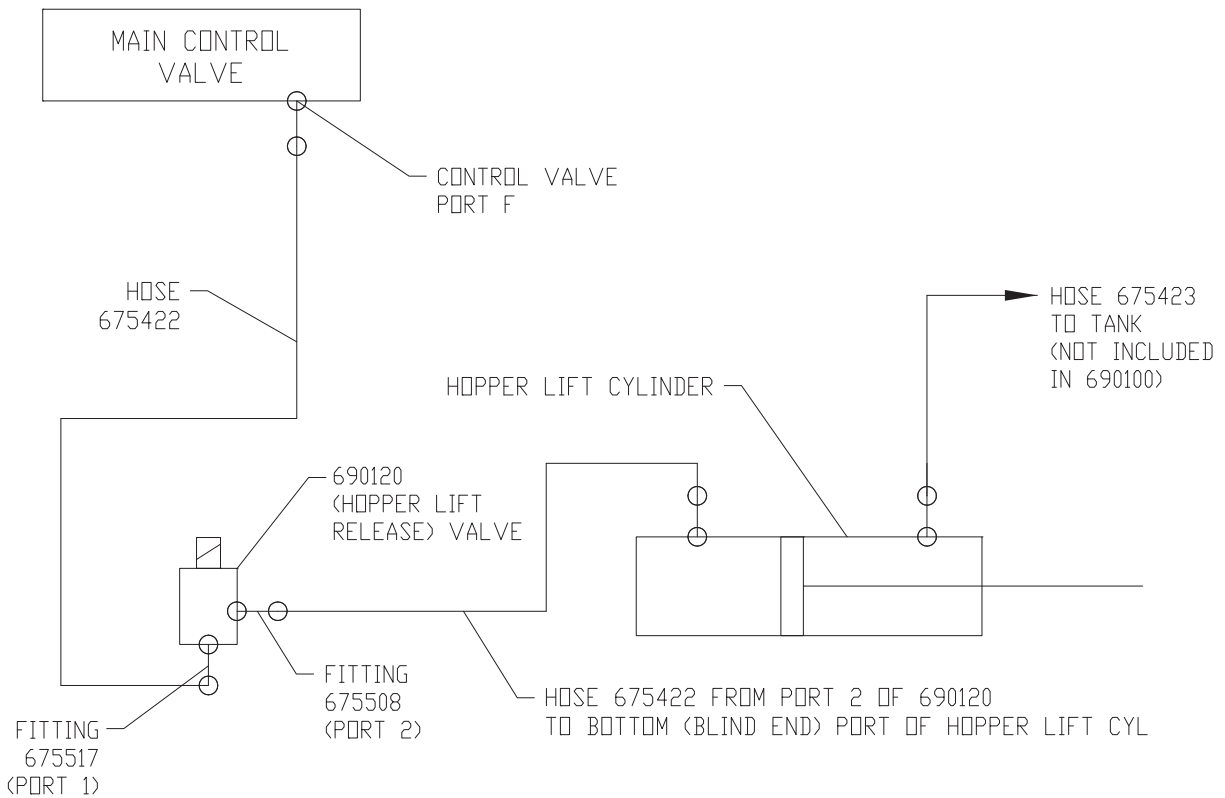


MAIN BROOM SHUTOFF  
HYDRAULIC CIRCUIT (ISOLATED)

**OPTION - RAISE HOPPER, MAIN BROOM SHUT OFF (690100) - CONTINUED**

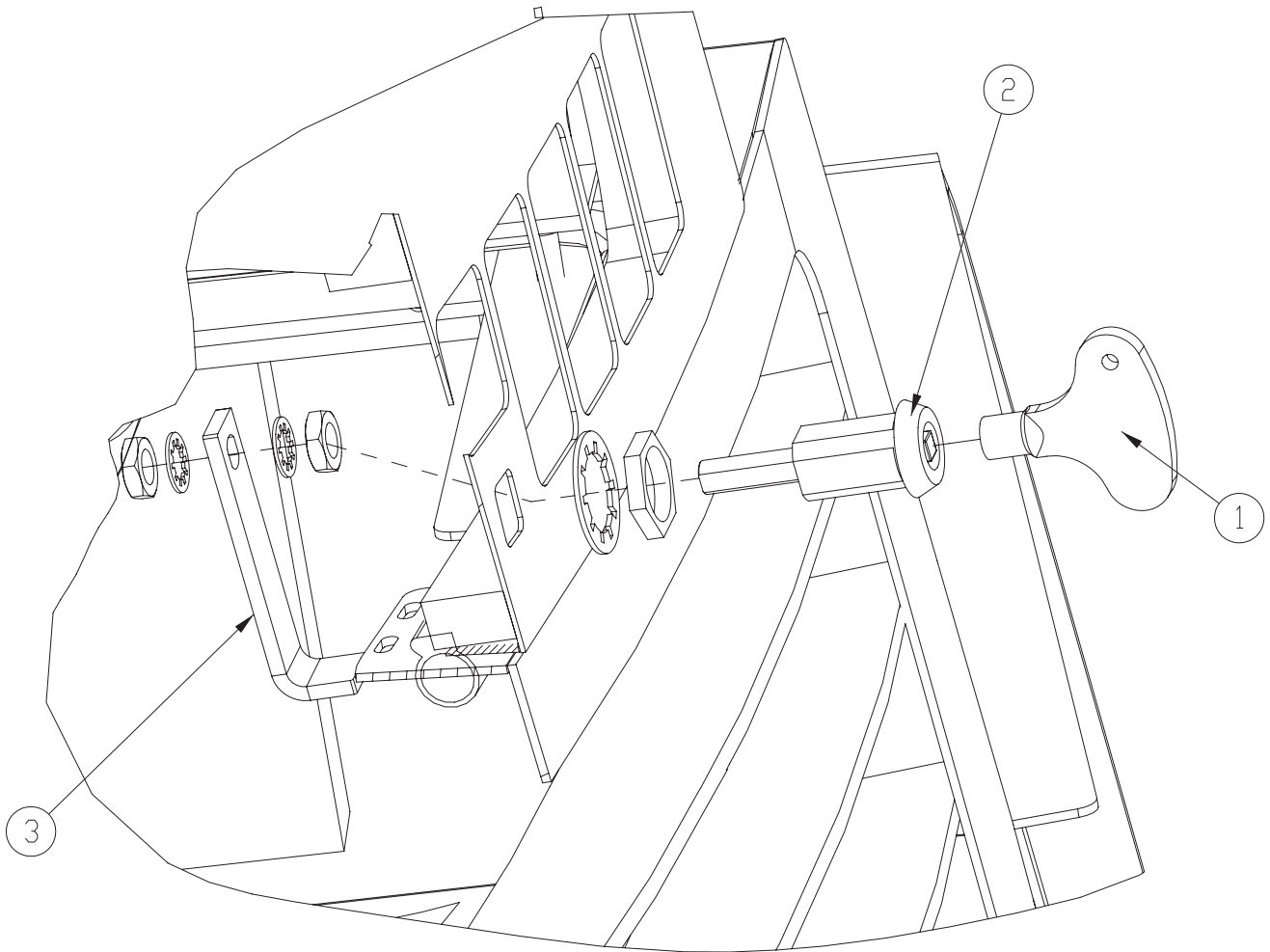
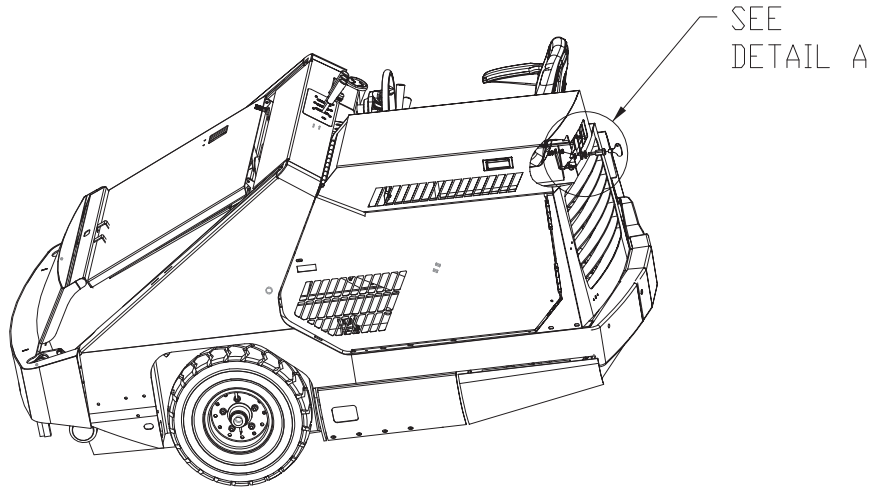


OPTION - RAISE HOPPER, MAIN BROOM SHUT OFF (690100)			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	600114	2	SPACER, .328 B .498 OD .500 ,SS
2	675422	2	HYD HOSE - LIFT CYL TO CONT VALVE E
3	675508	1	FTG-STR THD CONNECTOR -4 ORFS TO -4 SA
4	675517	1	FTG-STR THD CONNECTOR -6 ORFS TO -4 SA
5	690120	1	ASSY, HOPPER RETURN VALVE, 9X CE
6	711387	2	NUT-NYLOC 1/4-20 1/2NUT
7	711566	2	WSR-FLT .259 X .50 X .065
8	712572	2	BLT-CARR 1/4-20 X 2.00 SS
9	690151	1	DECAL, HOPPER UNLOCK - 9X CE
10	748047	1	SECONDHAND OPERATION PUSH BUTTON



HOPPER LIFT CYL RELEASE  
HYDRAULIC CIRCUIT (ISOLATED)

OPTION - KEY LATCH (690102)



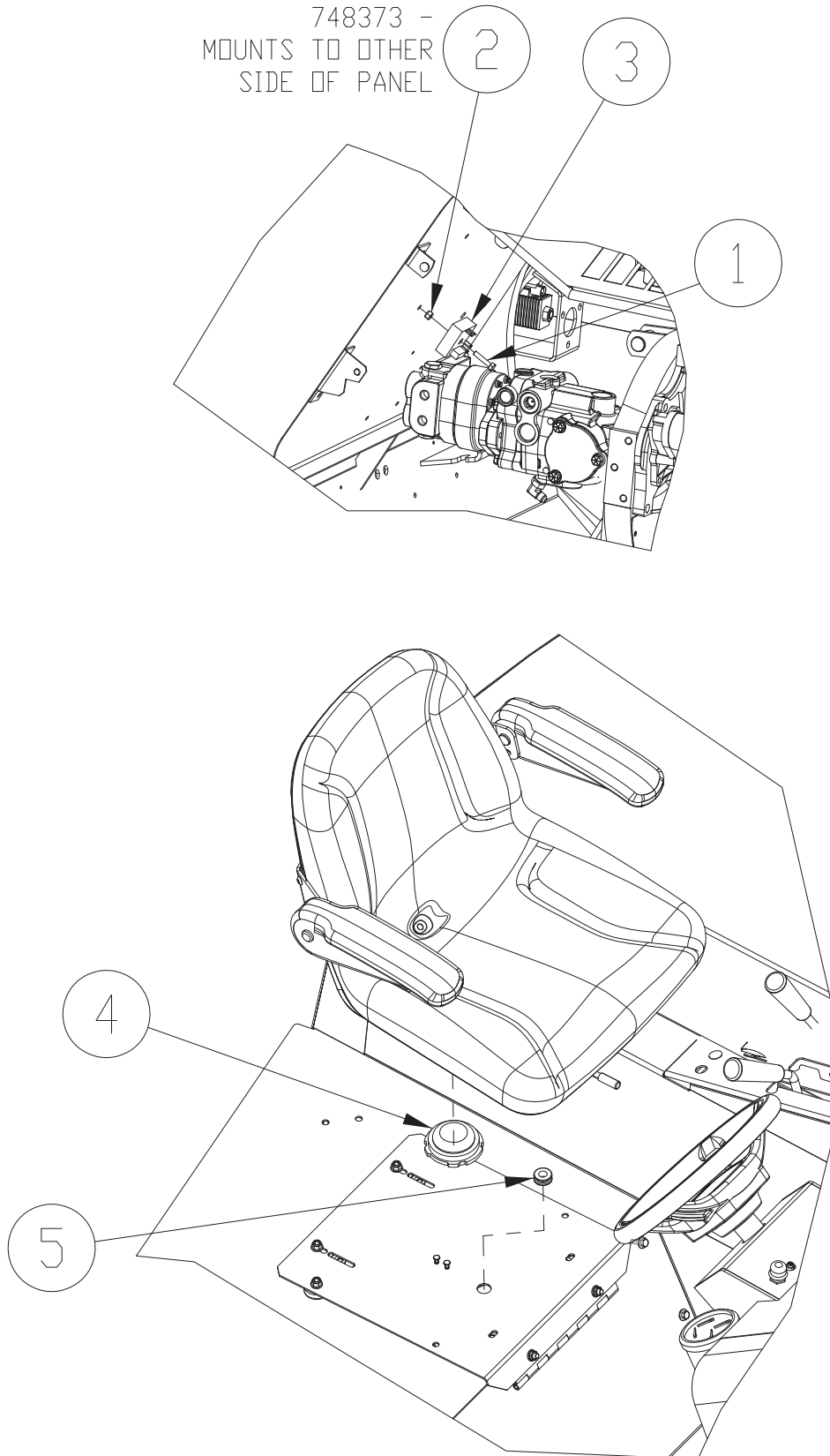
DETAIL A



OPTION - KEY LATCH (690102)			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	3343016	1	KEY-LATCH 7MM SQUIRE
2	3343017	1	LATCH-VISE ACTION LARGE, KEYED
3	3343066	1	PAWL-LATCH, 1800/5550 ENG COVER

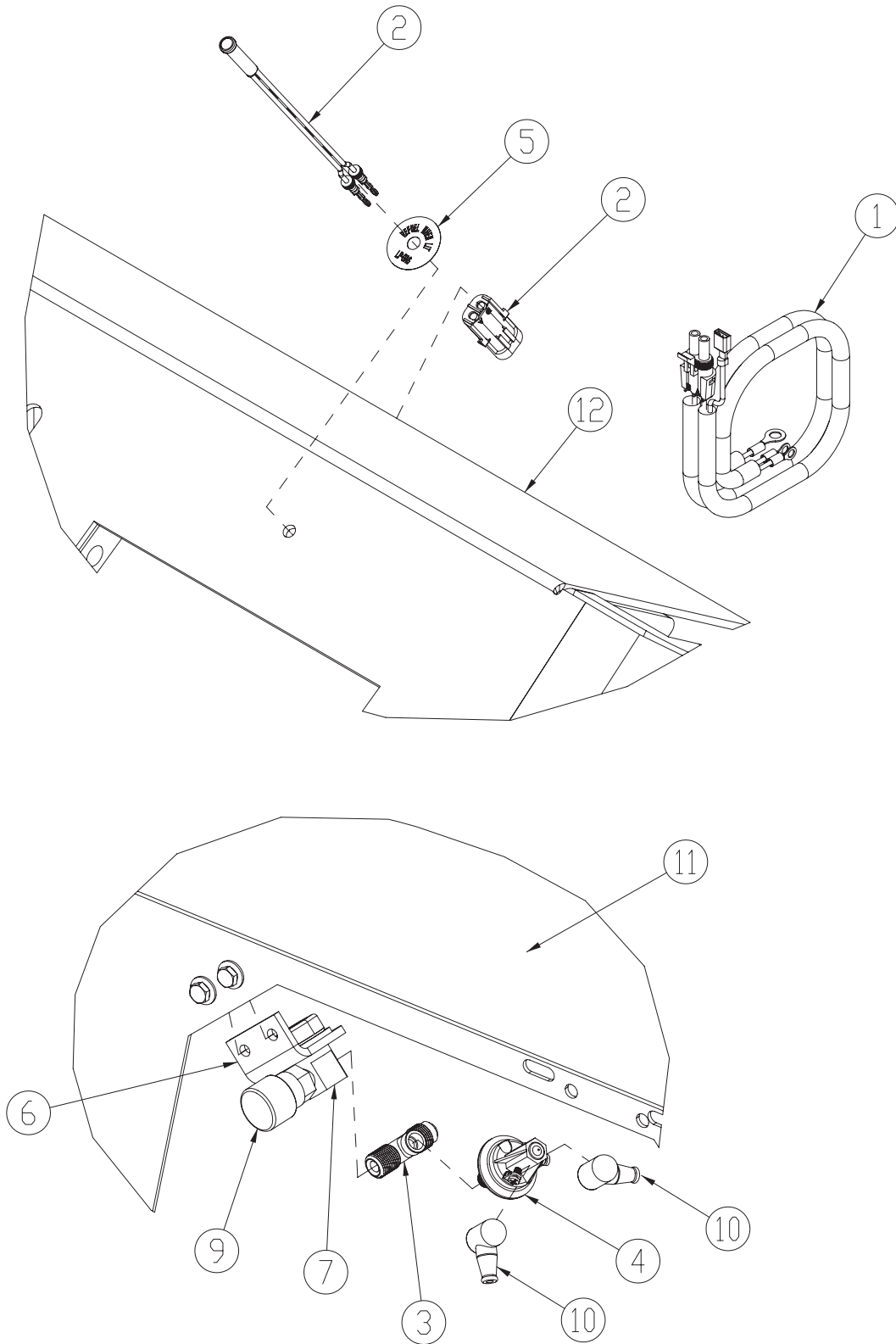
**OPTION - SEAT SWITCH ENGINE SHUT OFF (690147)**

748373 -  
MOUNTS TO OTHER  
SIDE OF PANEL



OPTION - SEAT SWITCH ENGINE SHUT OFF (690147)			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	711210	1	BLT-HH 1/4-20 X 1.25 STL ZINC FULL THRD
2	711373	1	NUT-NYLOC 1/4-20
3	741036	1	TIMER-RELAY-TRUE OFF 12V 3 SEC
4	748445	1	DELTA SW - N/O TWIST LOCK
5	3311564	1	GROMMET-RUBBER, 1/2 ID

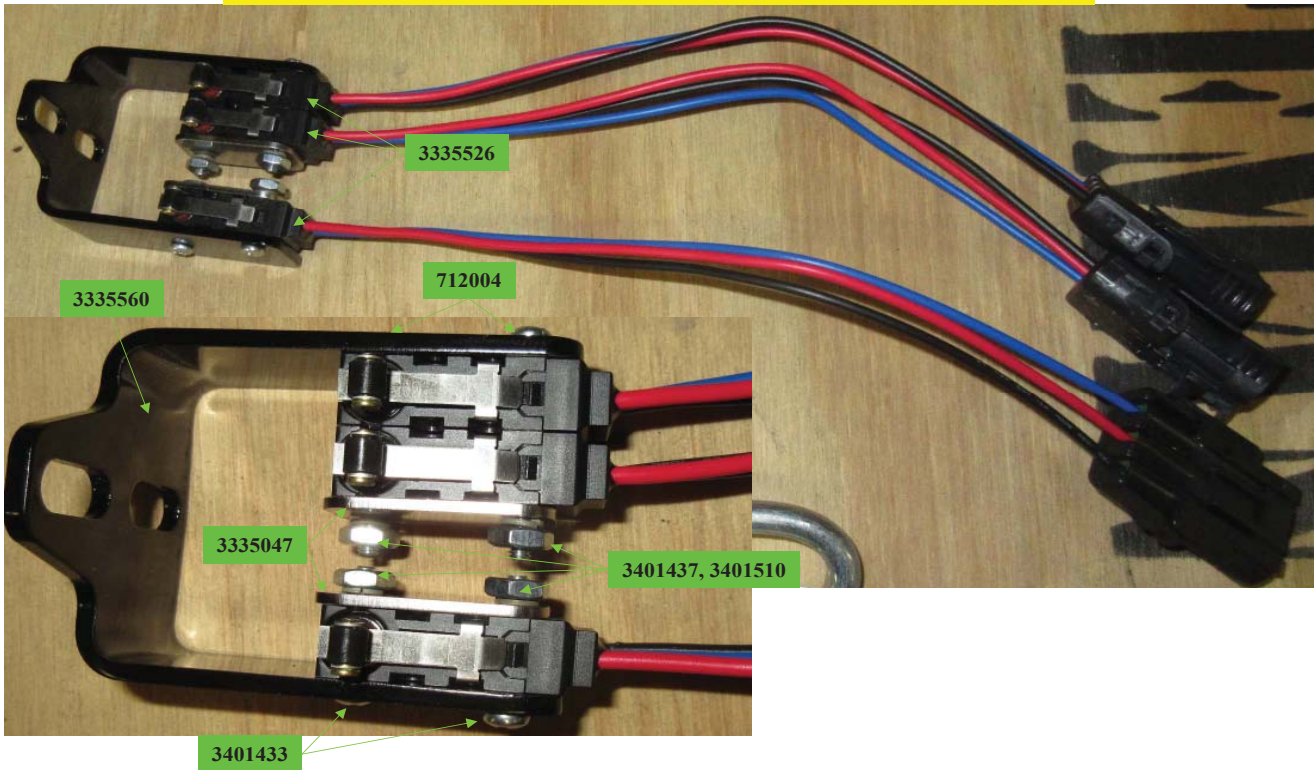
OPTION - LOW LP INDICATOR (690148)



OPTION - LOW LP INDICATOR (690148)			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	748453	1	HARNESS, LOW LP INDICATOR
2	748960	1	LIGHT ASSY, INDICATOR LAMP, LOW LP
3	3305535-2	1	TEE, LOW LP INDICATOR
4	3305535-3	1	SENSOR, LOW LP INDICATOR
5	3305535-4	1	LABEL, LOW LP INDICATOR
6	REF	-	MOUNT - LPG SAFTEY VALVE
7	REF	-	BULKHEAD - 62 LP
9	REF	-	VALVE - LP RELIEF
10	90524174	2	COVER, SAFETY CAP WIRE TERMINAL
11	REF	-	WELDMENT - CLIP SEAT
12	REF	-	WELDMENT - FRAME 9X

OPTION - BACKUP ALARM & NEUTRAL SAFETY SWITCH (3317306P)

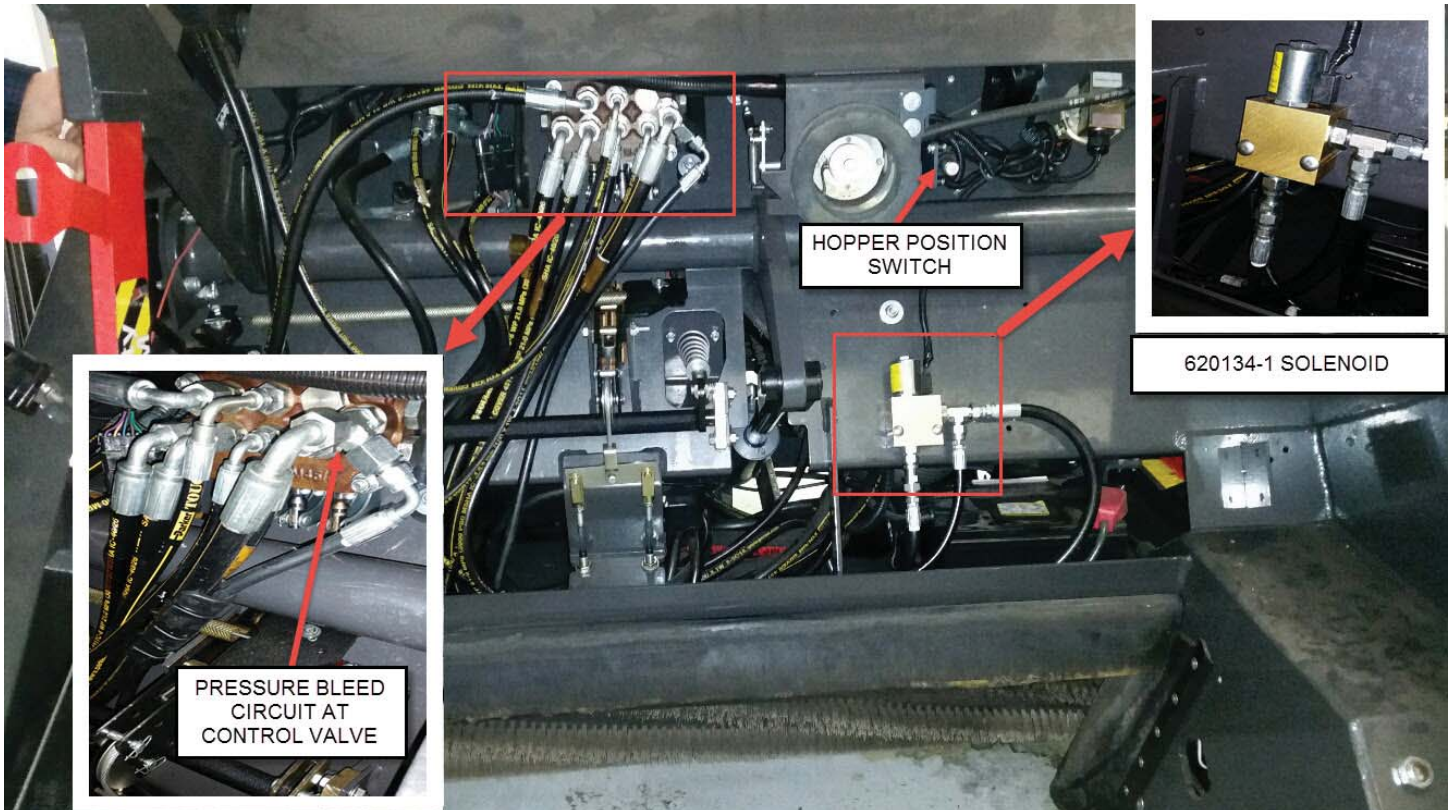
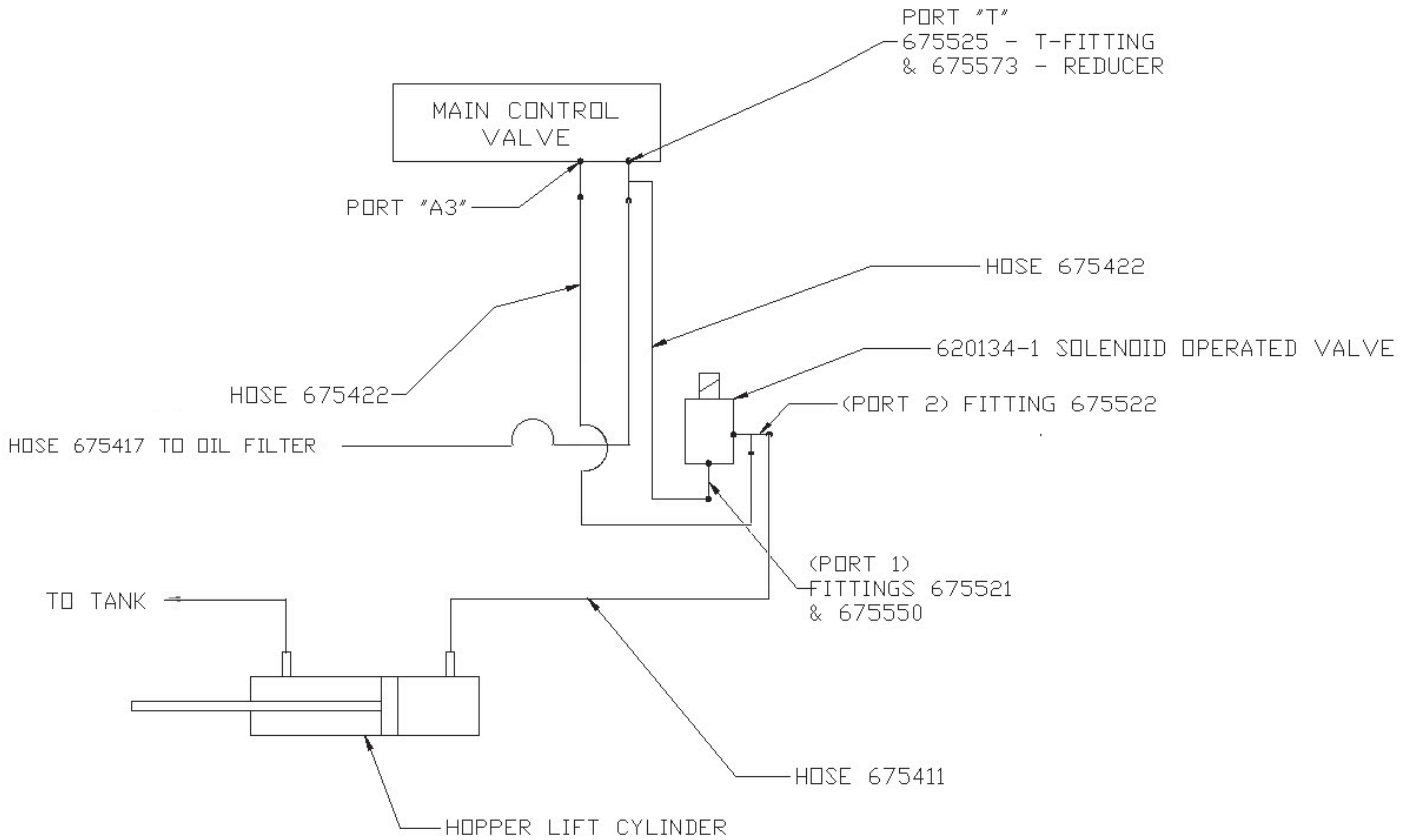
ASSEMBLE SWITCHES AND BRACKET AS SHOWN BELOW



<b>OPTION - BACKUP ALARM &amp; NEUTRAL SAFETY SWITCH (3317306P)</b>		
<b>PART NO.</b>	<b>REQ'D</b>	<b>DESCRIPTION</b>
3303002	1	HORN-BACK UP, 97 db(A), 12VDC (NOT SHOWN)
3322601	1	FUSE-15 AMP AUTOMOTIVE PUSH IN (NOT SHOWN)
3335222	3	CAM-SWITCH, LOWER THRTL POS (NOT SHOWN)
3335223	3	CAM-SWITCH, UPPER, BACKUP (NOT SHOWN)
749014	1	HARNESS ASSY, NEUTRAL SAFE (NOT SHOWN)
3335047	2	CLAMP-SWITCH
3335526	2	ASSY- SWITCH LIMIT, MALE
3401437	2	NUT-HEX #5-40 ZP
3401510	2	WASHER-MED SPLIT LOCK, #5, ZP
712004	2	SCREW-MACH SLOT ROUND HD 5-40x1-1/4 ZINC
3401433	2	SCR-PHMS 5-40 X 0.75 ZP
3335560	1	MNT-SWITCH POS, FWD/REV, 1900
3337565	1	HARNESS - OPT, BACKUP ALARM, ARMA
747021	1	CONNECTOR-PACKARD 3 PIN MALE

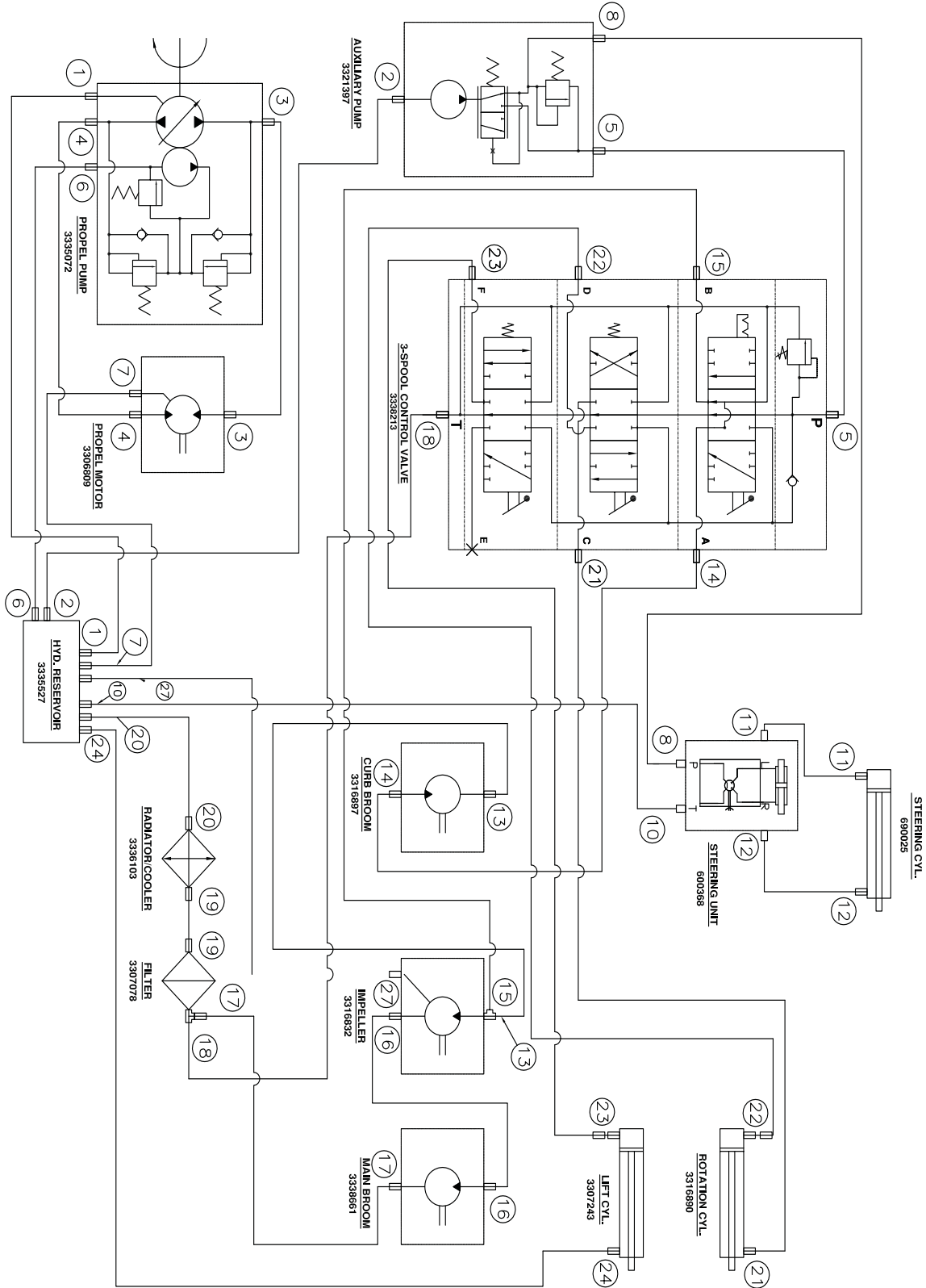


**OPTION - HOPPER PRESSURE BYPASS (690231)**



OPTION - HOPPER PRESSURE BYPASS (690231)		
PART NO.	REQ'D	DESCRIPTION
3335945	1	SWITCH-COBO W/ AMP CONNECTOR
3337340	1	PLT - HOPPER POSITION SWITCH MOUNT
3400035	2	SCR-HH 5/16-18 X 1.00 ZP GR 5
3400384	2	WASHER-CONICAL SPRING 5/16
620134-1	1	ASSY VALVE, SOLENOID N/C
675411	1	HYD HOSE - PS UNIT TO ROT ACT P2
675422	1	HYD HOSE - LIFT CYL TO CONT VALVE E
675521	1	FTG-STR THD CONNECTOR -6 ORFS TO -8 SA
675522	1	FTG-STR THD RUN TEE -6 ORFS TO -8 ORFS T
675525	1	FTG-STR THD RUN TEE -8 ORFS TO -8 SAE
675550	1	FITTING ORIFICE .047 #6
675573	1	FITTING
711310	2	NUT-HEX 10-32 ZP
711379	2	NUT-FLANGED WIZZ 5/16-18 ZP
711387	2	NUT-JAM 1/4-20 ZP NYLOC
711503	2	WASHER-FLAT #10 X .50 ZP
711505	2	WASHER-FLAT 1/4 ZP
711543	2	WASHER-LOCK #10 SPLIT ZP
712550	2	SCR-HH 10-32 X.75 SS SLOTTED WSH HEAD
712573	2	BLT-CARR 1/4-20 X 2.50 SS
749017	1	HARNESS ASSY, HOPPER SWITCH

HYDRAULIC SCHEMATIC 9X

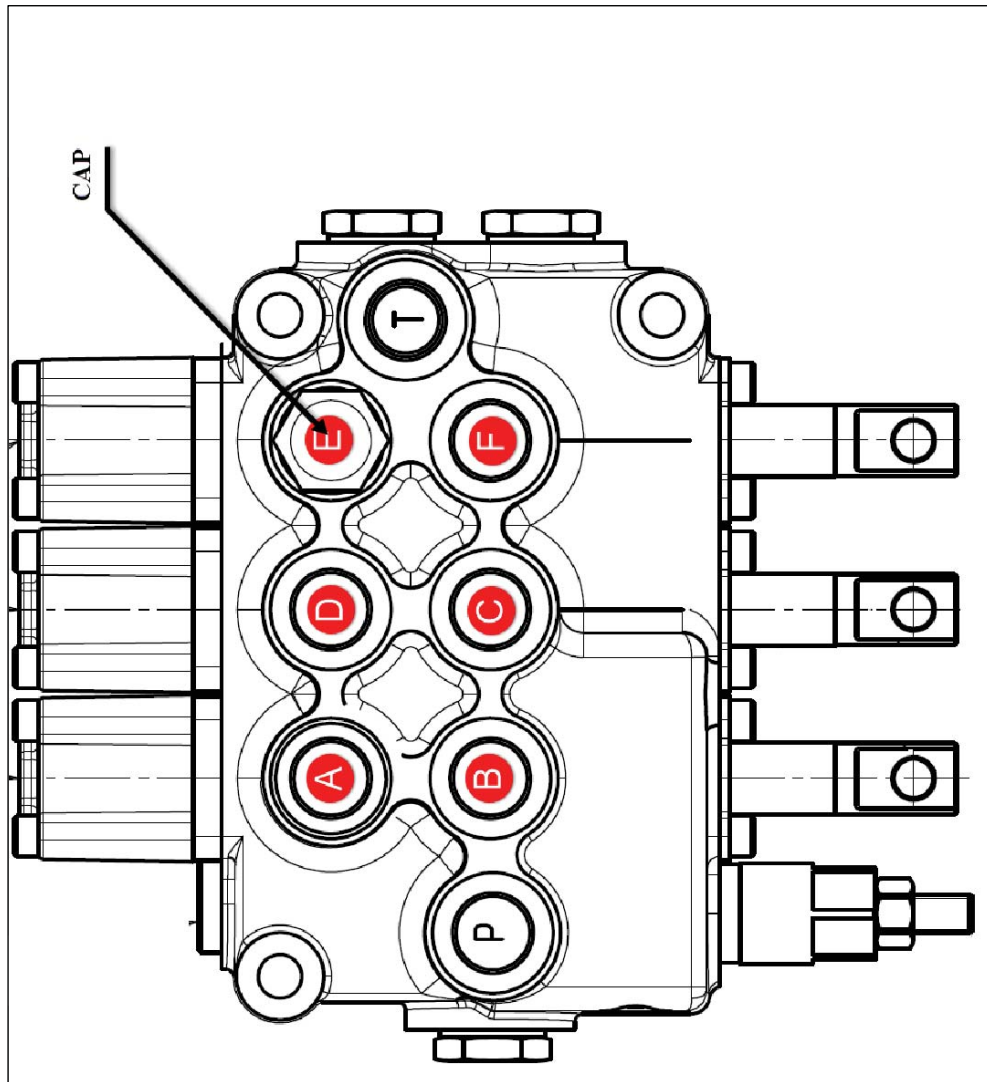


3334846, Sheet 1 of 3, Rev B, 05/2016

Adapter Assignment																	
No.	Adapter 1	hose assy #	Adapter 2	RESV	HYD PUMP	AUX PUMP	RW MTR	CONV MTR	CONT VALVE	PS UNIT	ROT ACT	CB MTR	IMP MTR	MB MTR	FILTERRAD	ROT LIFT CYL	Comments:
1	675524	675400	675527	1	2												Reservoir to Propel pump inlet.
2	675506	675401	675505	1		2											Reservoir to Aux pump inlet.
3	675500	675402	675501		1		2										Propel pump drivers side to Propel motor port A.
4	675501	675403	675502		2		1										Propel motor port B to Propel pump passenger side.
5	675528	675404	675524		1		2										Aux pump to 3-spool control valve port IN.
6	675520	675405	675521	2	1												Propel pump to reservoir.
7	675508	675406	675510	2		1											Propel motor to reservoir, case drain.
8	675512	675407	675511		1			2									Aux pump to Steering unit port P.
9																	
10	675552	675409	675519					1									Steering unit to reservoir.
11	675552	675410	675518					1	2								Steering unit L port to port P1 on steering cylinder.
12	675515	675411	675518					1	2								Steering unit R port to port P2 on steering cylinder.
13		675412	675528							1	2						Inlet tee to curb broom out.
14	675524	675413	675528					2		1							Valve port A to curb motor inlet port A.
15	675524	675414	675525					1				2					Control valve outlet to Impeller inlet tee. See hose 13 for details.
16	675523	675415	675523									1	2				From impeller out port to Main broom in port A.
17	675523	675416	675529 / 675526										1	2			From main broom outlet Port B to filler inlet.
18	675524	675417						1						2			From T port on control valve to filter inlet tee. See hose 17.
19	675537	675418	675530											1	2		From filter outlet to Cooler inlet (top of cooler pack).
20	675503	675419	675503		2										1		From cooler outlet (bottom of cooler) to reservoir.
21	675513	675420	675507					1								2	From control valve port C to rod end of rotate cylinder.
22	675507 / 675547	675421	675513					2								1	From piston end of rotate cylinder to control valve port D.
23	675518 / 675550	675422	675513					2									From piston end of lift cylinder to control valve port F.
24	675518	675423	675510		2												From rod end of lift cylinder to reservoir.
27	675508	675426	675510		2								1				From impeller case drain to reservoir.

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PORT LOCATIONS ON VALVE  
BODY 3338213 ARE AS SHOWN



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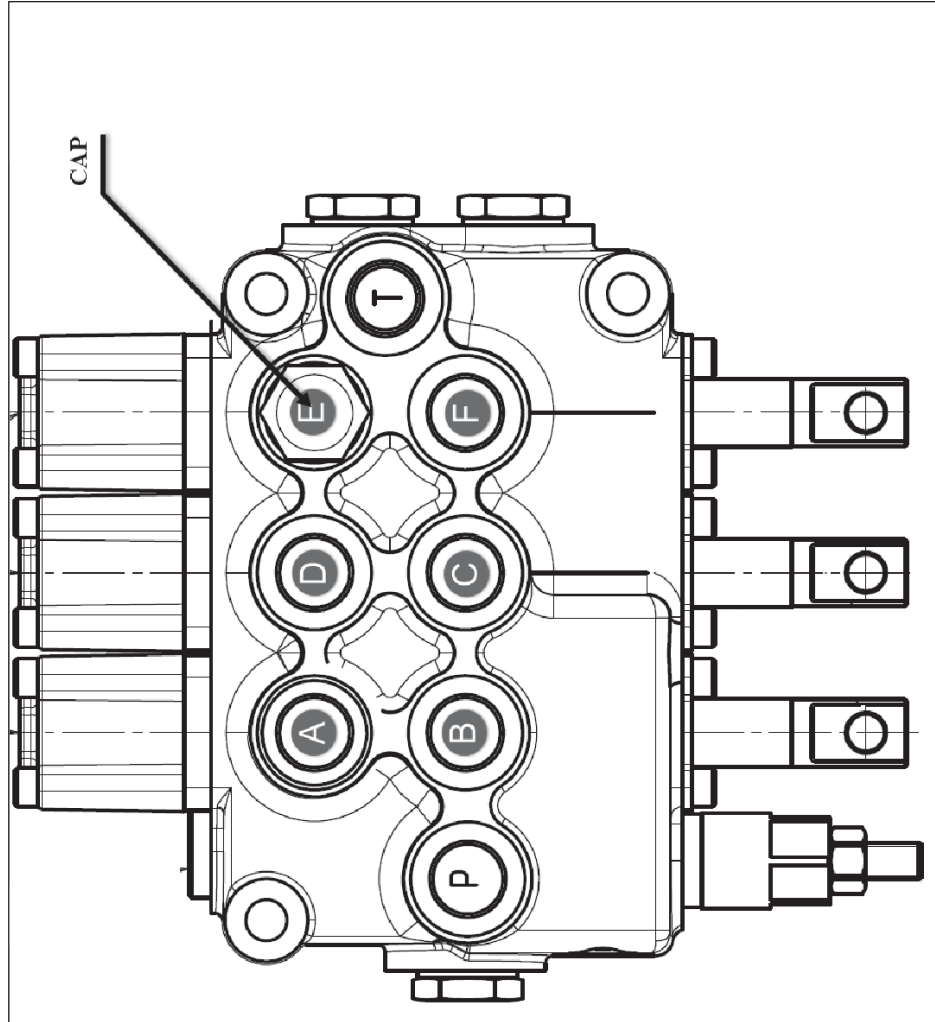


No.	Adapter 1	hose assy #	Adapter 2	Adapter Assignment												Comments:		
				RESV	HYD PUMP	AUX PUMP	RW PUMP	CONTR VALVE	PS UNIT	PS CYL	CB MTR	IMP MTR	MB MTR	FILTER	RAD		ROT CYL	LIFT CYL
1	675524	675400	675527	1	2													Reservoir to Propel pump inlet.
2	675506	675401	675505	1		2												Reservoir to Aux pump inlet.
3	675500	675402	675501		1		2											Propel pump drivers side to Propel motor port A.
4	675501	675403	675502		2		1											Propel motor port B to Propel pump passenger side.
5	675528	675404	675524		1		2											Aux pump to 3-spool control vavle port IN.
6	675520	675405	675521	2	1													Propel pump to reservoir.
7	675508	675406	675510	2		1												Propel motor to reservoir, case drain.
8	675512	675407	675511			1		2										Aux pump to Steering unit port P.
9																		
10	675552	675409	675519	2				1										Steering unit to reservoir.
11	675552	675410	675518					1	2									Steering unit L port to port P1 on steering cylinder.
12	675515	675411	675518					1	2									Steering unit R port to port P2 on steering cylinder.
13	675524	675412	675528					1	2									Inlet tee to curb broom out.
14	675524	675413	675528					1	2									Valve port A to curb motor inlet port A.
15	675525	675414	675524					1										From control valve port B to MB shutoff valve port 2.
16	675523	675415	675523					1	2									From impeller out port to Main broom in port A.
17	675523	675416	675529							1	2							From main broom outlet Port B to filter inlet.
18	675525	675417	675526					1										From T port on control valve to filter inlet tee. See hose 17.
19	675537	675418	675530							1	2							From filter outlet to Cooler inlet (top of cooler pack).
20	675503	675419	675503	2								1	2					From cooler outlet (bottom of cooler) to reservoir.
21	675513	675420	675507					1						2				From control valve port C to rod end of rotate cylinder.
22	675507 / 675547	675421	675513					2						1				From piston end of rotate cylinder to control valve port D.
23	675513	675422	675517					1										From control valve port F to 690120 lift cyl release port 1.
24	675518	675423	675510	2										1				From rod end of lift cylinder to reservoir.
27	675508	675426	675510	2						1								From impeller case drain to reservoir.
28	675508	675422	675518/675550	2														From port 2 of 690120 lift cyl release valve to lift cyl rod end port.
29	675525	675414	675525					1										From control valve port B to impeller motor inlet tee.
30	675524	675414	675525					2										From port 1 of MB shutoff to control valve port T.

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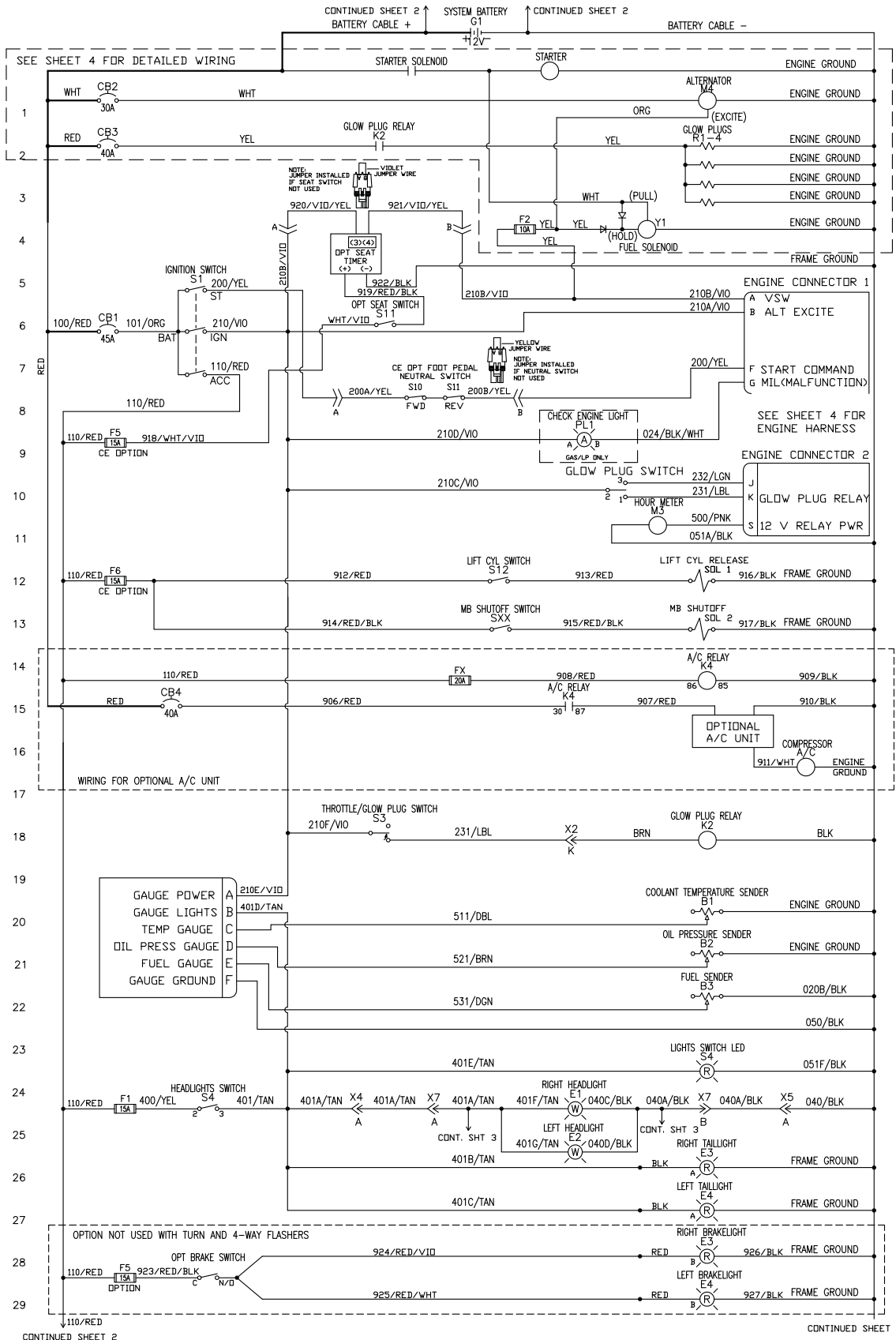


PORT LOCATIONS ON VALVE  
BODY 3338213 ARE AS SHOWN

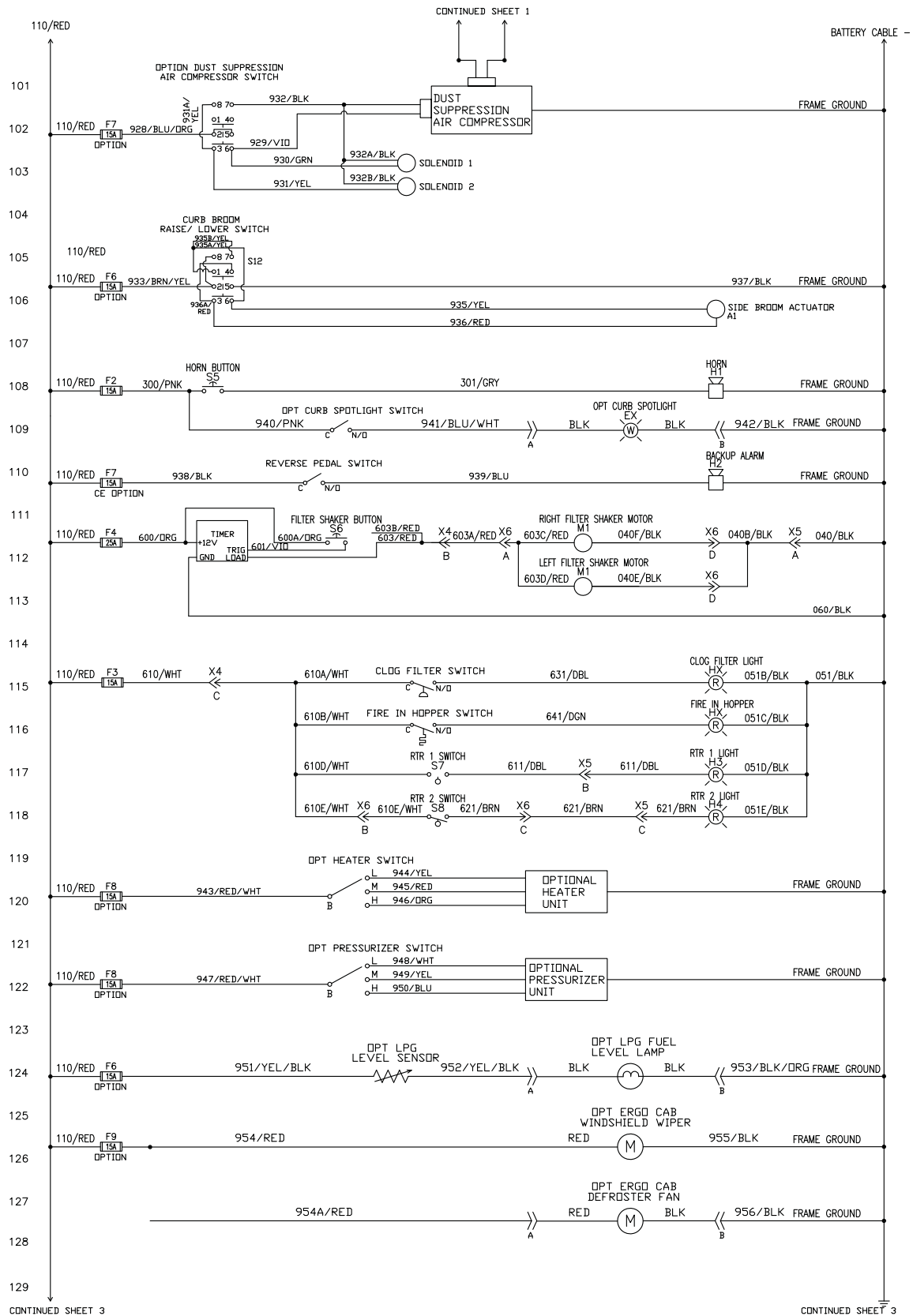


3334846-CE, Rev A, 05/2016, Sheet 1 of 3

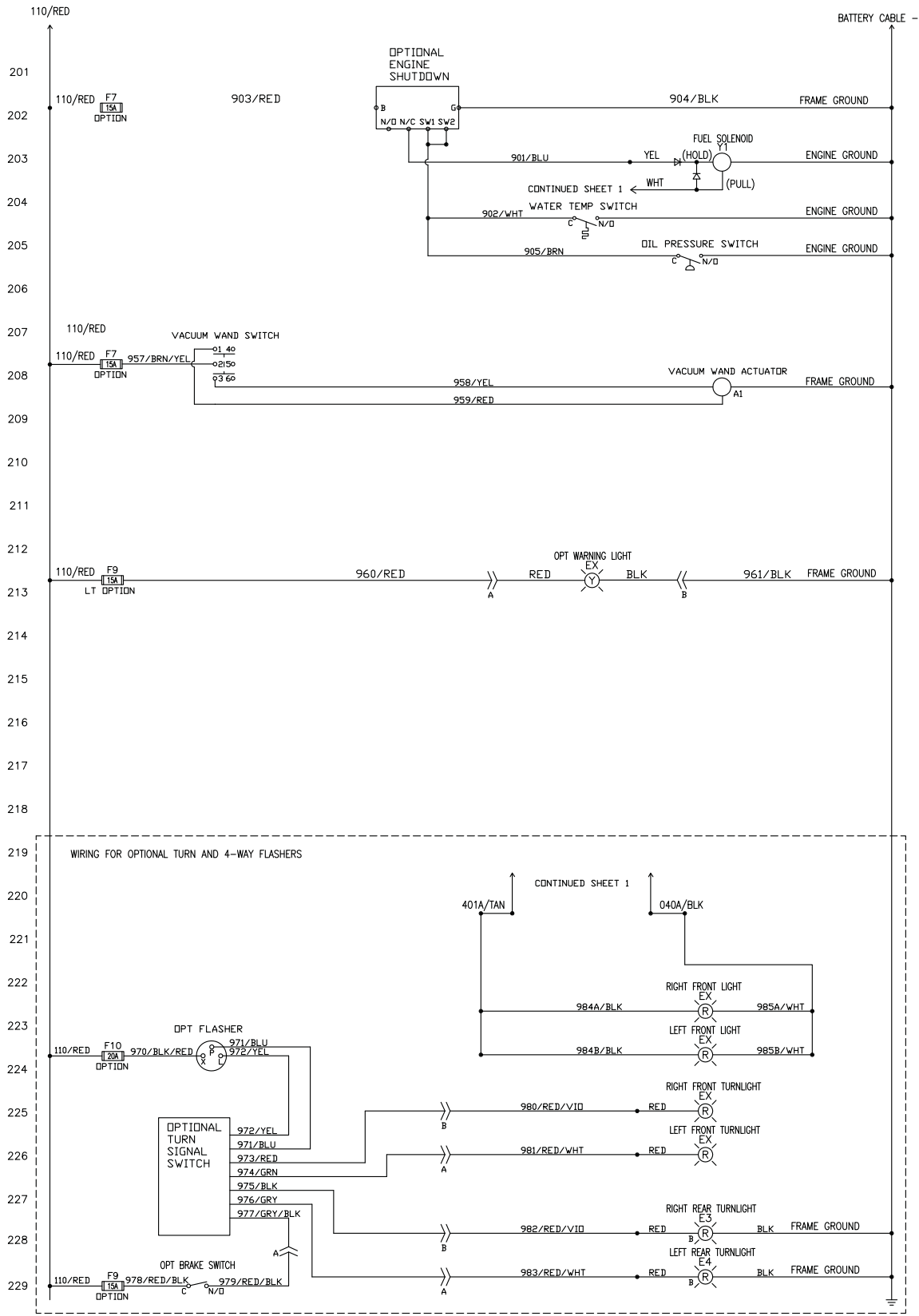
**ELECTRICAL SCHEMATIC WITH KUBOTA V1505 - DIESEL**



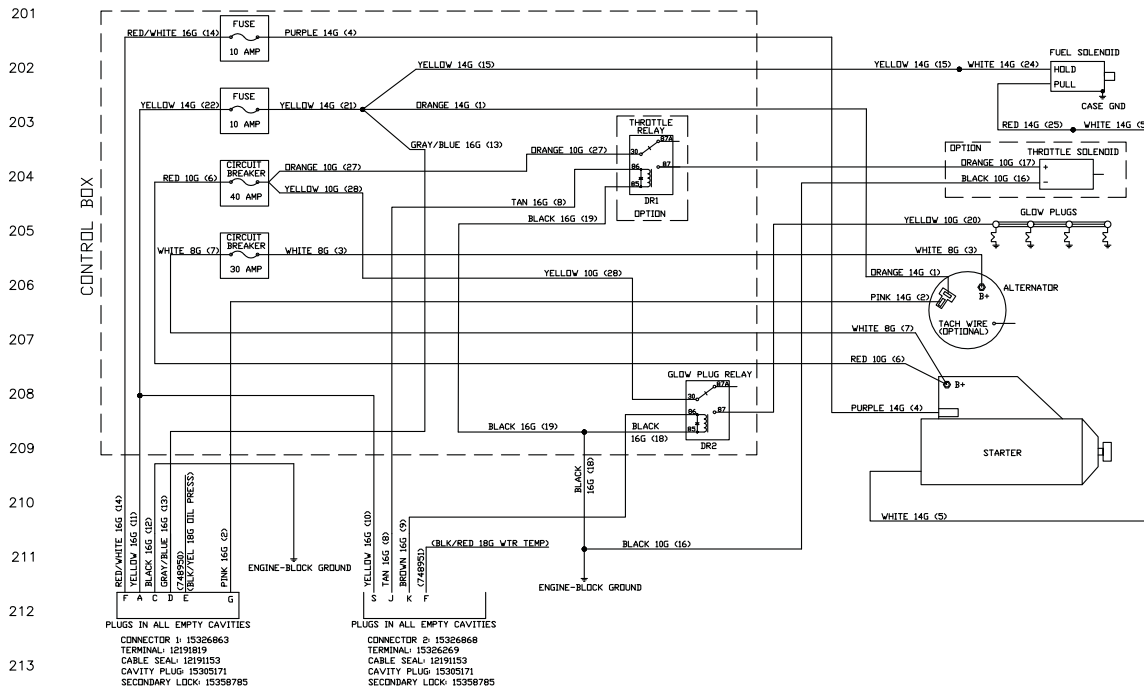
**ELECTRICAL SCHEMATIC WITH KUBOTA V1505 - DIESEL**



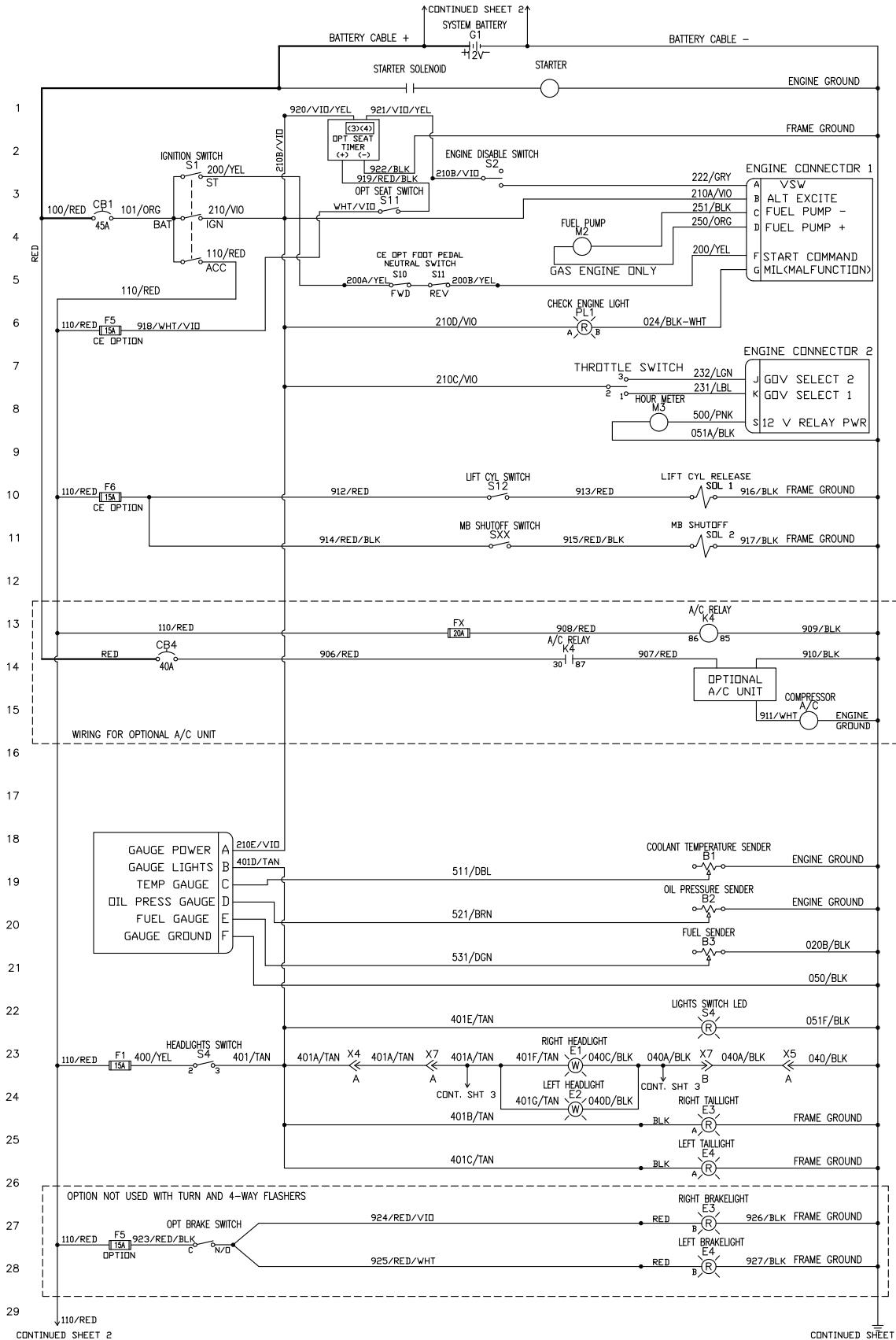
**ELECTRICAL SCHEMATIC WITH KUBOTA V1505 - DIESEL**



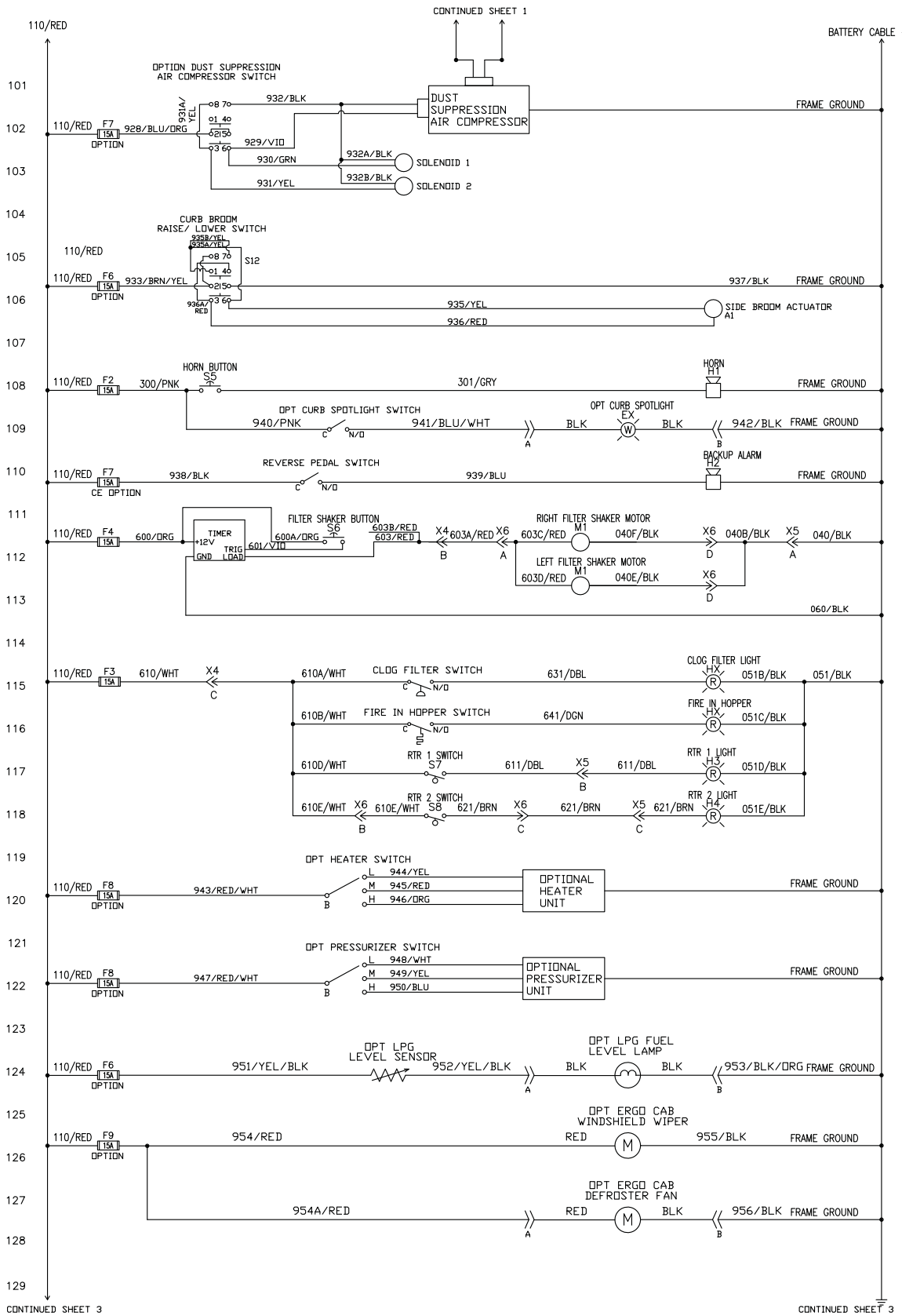
ELECTRICAL SCHEMATIC WITH KUBOTA V1505 - DIESEL



**ELECTRICAL SCHEMATIC WITH KUBOTA WG1605 - GAS & LPG**

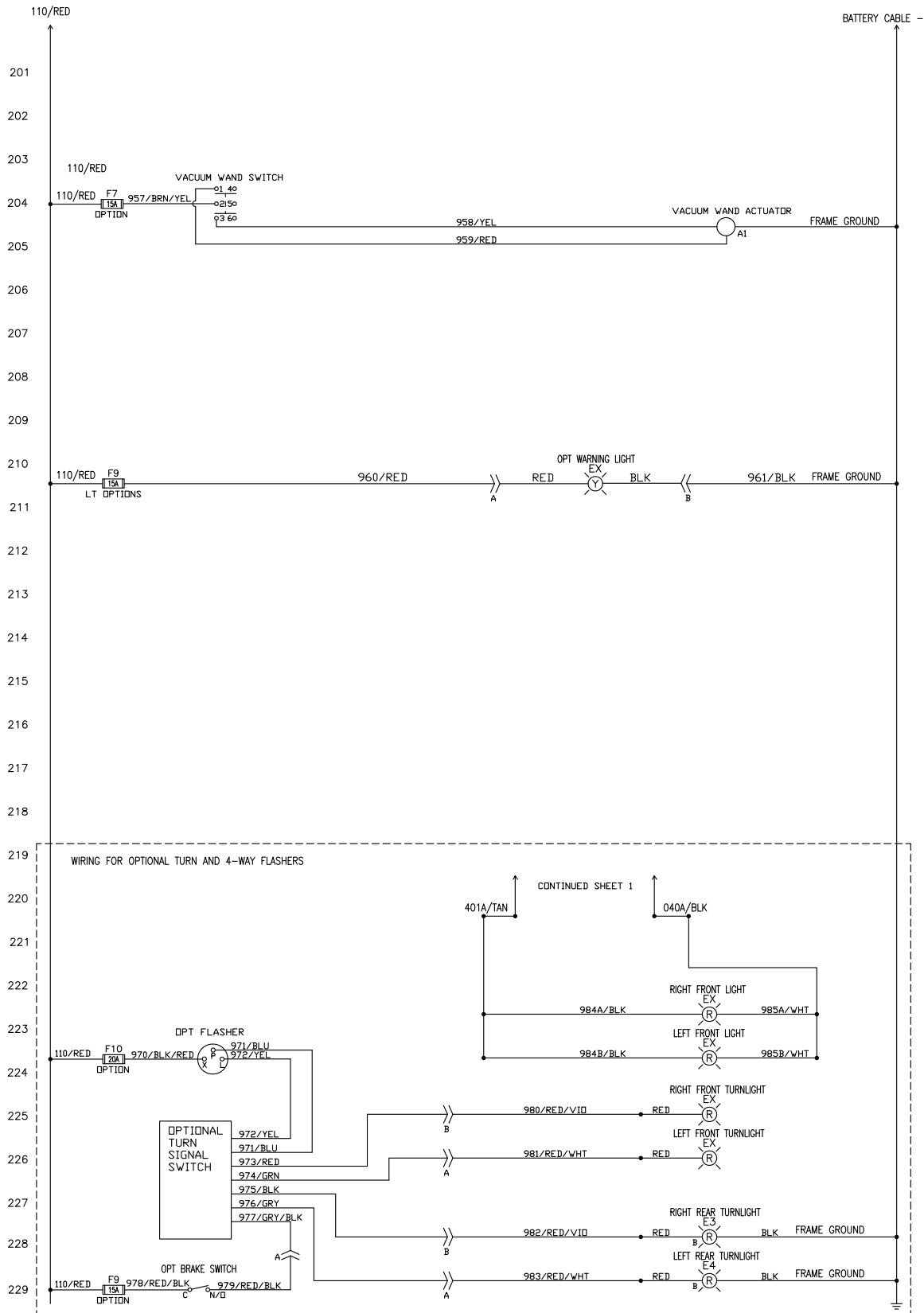


ELECTRICAL SCHEMATIC WITH KUBOTA WG1605 - GAS & LPG





**ELECTRICAL SCHEMATIC WITH KUBOTA WG1605 - GAS & LPG**



**WARRANTY**

**Revision J**  
**Effective January 2014**  
**PowerBoss Made Simple Industrial Limited Warranty**

Minuteman International owner of PowerBoss warrants to the original purchaser/user that the product is free from defects in workmanship and materials under normal use. PowerBoss will, at its option, repair or replace without charge, parts that fail under normal use and service when operated and maintained in accordance with the applicable operation and instruction manuals. All warranty claims must be submitted through and approved by factory authorized repair stations.

This warranty does not apply to normal wear, or to items whose life is dependent on their use and care. Parts not manufactured by PowerBoss are covered by and subject to the warranties and/or guarantees of their manufacturers. Please contact Minuteman International for procedures in warranty claims against these manufacturers.

**Special warning to purchaser** -- Use of replacement parts not manufactured by PowerBoss or its designated licensees, will void all warranties expressed or implied. A potential health hazard exists without original equipment replacement.

All warranted items become the sole property of Minuteman International or PowerBoss or its original manufacturer, whichever the case may be.

PowerBoss disclaims any implied warranty, including the warranty of merchantability and the warranty of fitness for a particular purpose. PowerBoss assumes no responsibility for any special, incidental or consequential damages.

This limited warranty is applicable only in the U.S.A. and Canada, and is extended only to the original user/purchaser of this product. Customers outside the U.S.A. and Canada should contact their local distributor for export warranty policies. PowerBoss is not responsible for costs or repairs performed by persons other than those specifically authorized by PowerBoss. This warranty does not apply to damage from transportation, alterations by unauthorized persons, misuse or abuse of the equipment, use of non-compatible chemicals, or damage to property, or loss of income due to malfunctions of the product. If a difficulty develops with this machine, you should contact the dealer from whom it was purchased.

This warranty gives you specific legal rights, and you may have other rights, which vary from state to state. Some states do not allow the exclusion or limitation of special, incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above exclusions and limitations may not apply to you.

	Travel *	Labor	Parts	Engine	Extended Warranty	Costs
<b>Walk Behind</b>						****
Battery Sweepers	90 Days	12 months	12 months	N/A	N/A	-
IC Sweepers	90 Days	12 months	12 months	Through Eng. Mfg.	N/A	-
Battery Scrubbers	90 Days	24 months	36 months	N/A	N/A	-
<b>Riders</b>						
Battery Scrubbers	90 Days	24 months	36 months or 2000 hr.	N/A	36 months parts + 24 labor (or 3000 Hours)	5%
IC Sweeper/Scrubbers 82 & 90	90 Days	6 months	24 months or 2000 hr.	24 months or 3000 hrs**	36 months parts + 24 months labor (or 3000 Hours) + 180 days travel	5%
I.C. Sweepers 9X, 10X	90 days	6 months	48 months or 3000 hrs.	60 months or 3000 hrs**	48 months parts + 24 months labor (or 3000 Hours) + 180 days travel	5%
NAUTILUS Scrubber	180 Days	24 months	36 months or 2000 hr.	36 months or 2000 hrs**	48 months parts + 24 months labor (or 3000 Hours) + 180 days travel	3%
All Rider, I.C. (excluding APEX series)					<b>Bumper to Bumper</b> 5000 hr max. 48 months parts, 48 months labor, 180 days travel	8%
<b>Exceptions</b>						
Apex Series Sweeper	90 Days	12 months	12 months or 1000 hr.	12 months or 1000 hrs**	24 months parts + 24 months labor (or 2000 Hours)	5%
6X Sweeper	90 Days	6 months	24 months or 2000 hr.	24 months or 2000 hours**	36 months parts + 24 months labor (or 3000 Hours) + 180 day travel	5%

**Tank Bladders** Eight years/ no additional labor  
**Polyethylene plastic tanks** Ten years/ no additional labor  
**Batteries** 0-3 months full replacement, 4-12 prorated credit  
**Chargers** One-year replacement  
**Aftermarket Replacement parts** Ninety days from date of purchase

**\*Two-Hour Cap Per Service Call**

**\*\*Through Engine Manufacturer. See Section 3 of Warranty Manual for Engine Warranty Exceptions**

**\*\*\* Based Upon Dealer's Certification Status:**

**Extended Warranty MUST Be Signed Up Within 30 Days of Delivery to End User  
(Dealer Has 1Year From Receiving Machine To Sign Up For Extended Warranty)**

**\*\*\*All above labor and travel reimbursed at 65% or 75% of the published shop rate.**



***“The Power of Clean”***

**PowerBoss® Is a Full Line Manufacturer of Sweepers and Scrubbers,  
for Industrial Facilities.**

PowerBoss®, Minuteman International, Inc. 14N845 U.S. Route 20 Pingree Grove, Illinois 60140

Phone: 800-323-9420 [www.PowerBoss.com](http://www.PowerBoss.com) email: [tech@powerboss.com](mailto:tech@powerboss.com)

**A Member of the Hako Group**