



Parts Manual

Mfg. No: 5901004
1000Z Series w/ 48" Mower Deck
(1000ZKAV21/48)

5046764 - 48" 2-Bag System (1000Z Series).....
5047600 - 48" 3-Bag System (1000Z Series).....

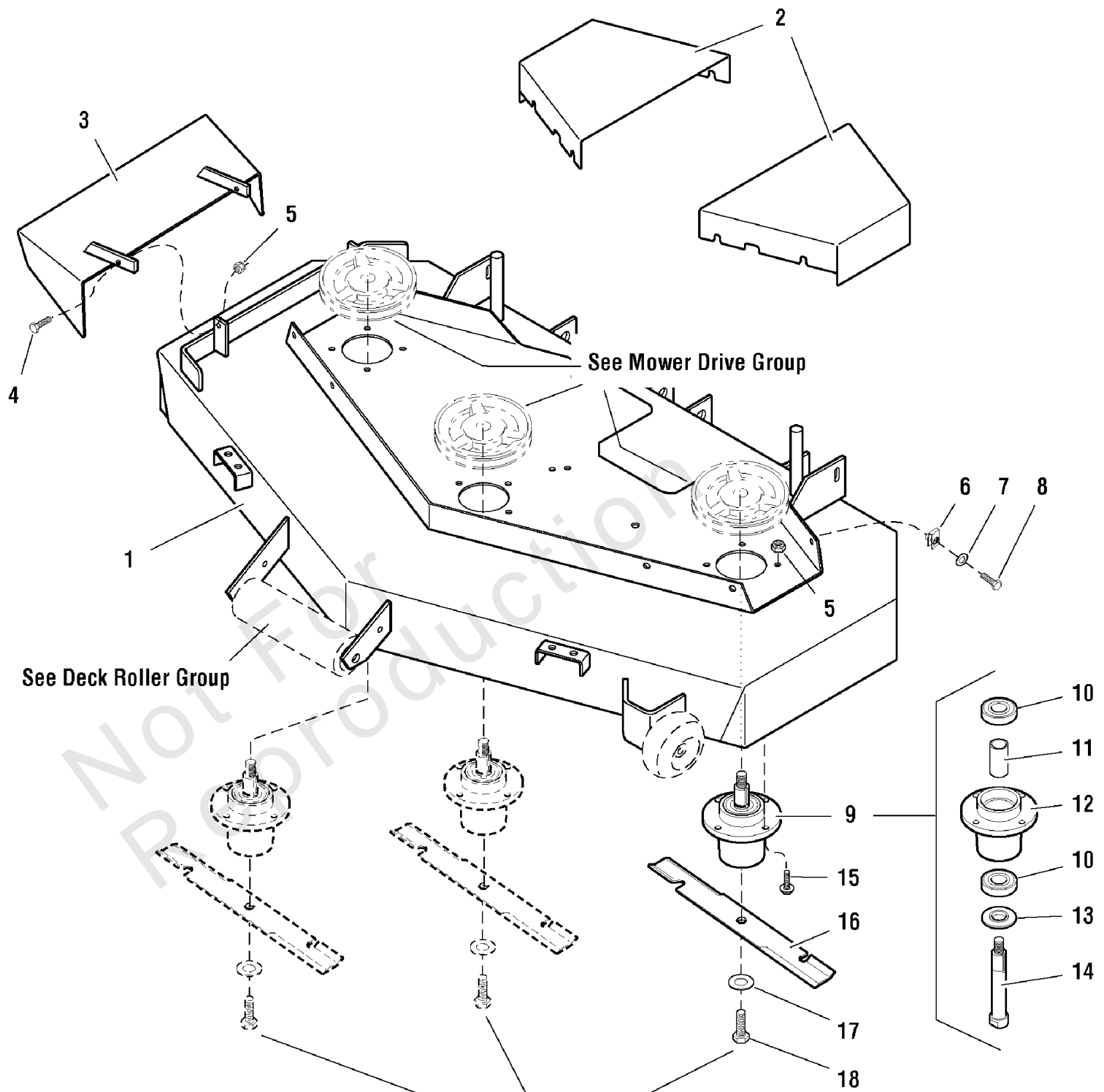
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48" & 52" Mower Deck - Housing, Covers, Spindles & Blades - S/N: 2898 and below

Note: Unless noted otherwise, use the standard torque specifications

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Torque Capscrews
to 70 Ft. Lbs.
(95 Nm)

48" & 52" Mower Deck - Housing, Covers, Spindles & Blades - S/N: 2898 and below

REF NO	PART NO	QTY	DESCRIPTION
1	5647065	1	DECK SHELL W/DECALS, 48" -(Includes safety decals)
1	6647098	1	DECK SHELL W/DECALS, 52" -(Includes safety decals)
2	5047129B	2	MOWER HOUSING GUARD
3	5046445B	1	DISCHARGE CHUTE
4	5025011X8	2	BOLT, 5/16-18 X 1" GRD5 YZ
5	5025057	14	NUT, Hex, Nylon Locking, 5/16-18
6	5022308	6	BODY CLIP, 5/16-18-7GA MATERIAL
7	5025155	6	WASHER, 5/16" SAE
8	5025011X6	6	BOLT, 5/16-18 X 3/4 GD5
9	5046363	3	* SPINDLE ASSEMBLY, Complete -(Includes Ref No. 10 - 14)
10	5046363X5	6	USE 61095
11	5046363X4	3	USE 61095
12	5046363X1	3	USE 61095
13	5046363X3	3	USE 61095
14	5046363X2	3	USE 61095
15	5023156	12	BOLT, Flange Head, 5/16-18 x 1-1/4
16	5020843S	1	BLADE SET, 48 DECK (SET OF 3 BLADES)
16	5021227S	1	BLADE, 18" (SET OF THREE)(SV)
17	5025159	3	WASHER, 5/8" USS
18	5025320X14	3	BOLT, 5/8-11 X 1-3/4 GD8

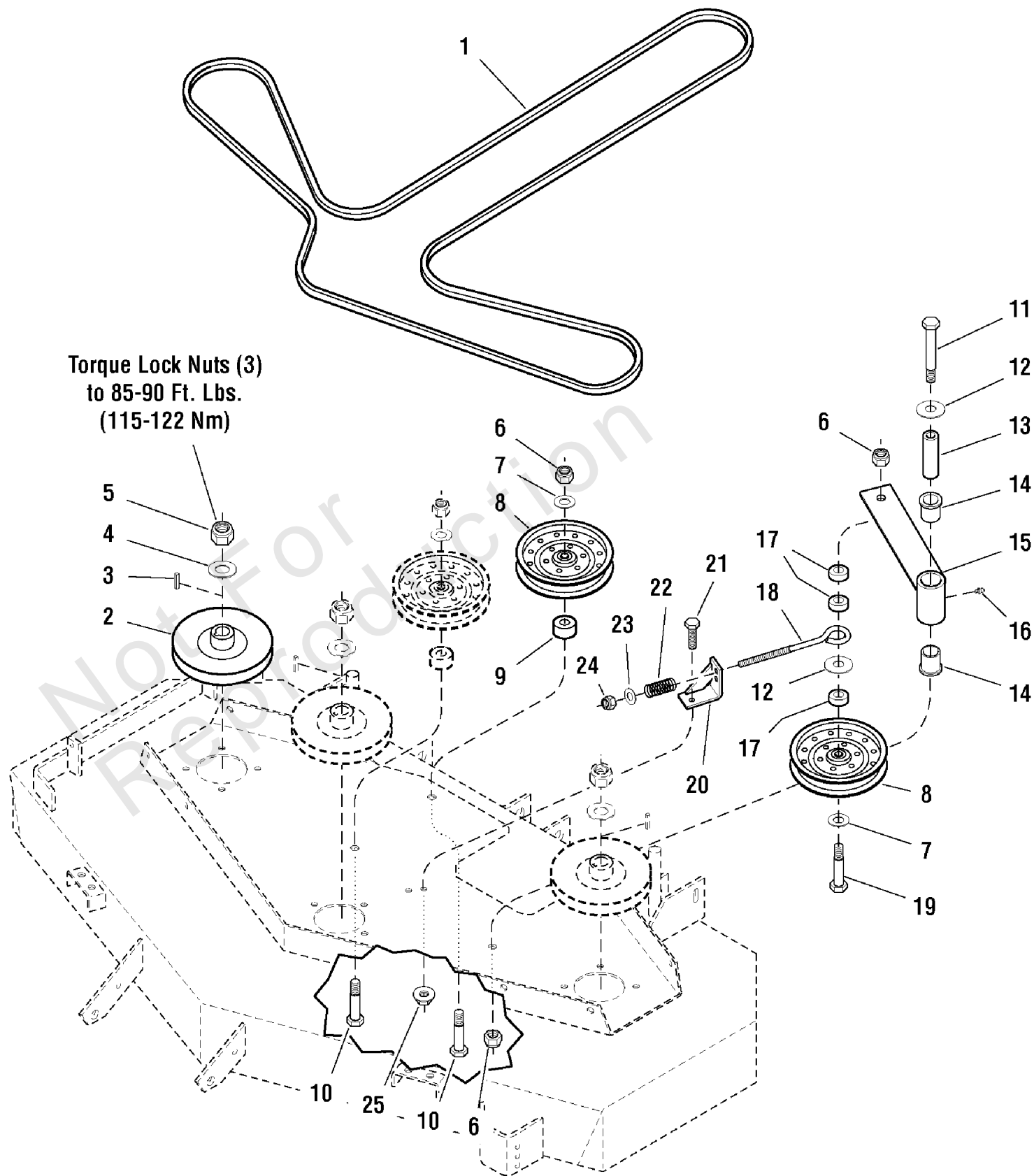
Footnotes:

* When replacing spindle you must also order 5025406 - Qty (1) & 5025405 - Qty(1)

48" & 52" Mower Deck - Pulleys, Belts & Idler Arm - S/N: 2898 and below

Note: Unless noted otherwise, use the standard torque specifications

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**Torque Lock Nuts (3)
to 85-90 Ft. Lbs.
(115-122 Nm)**

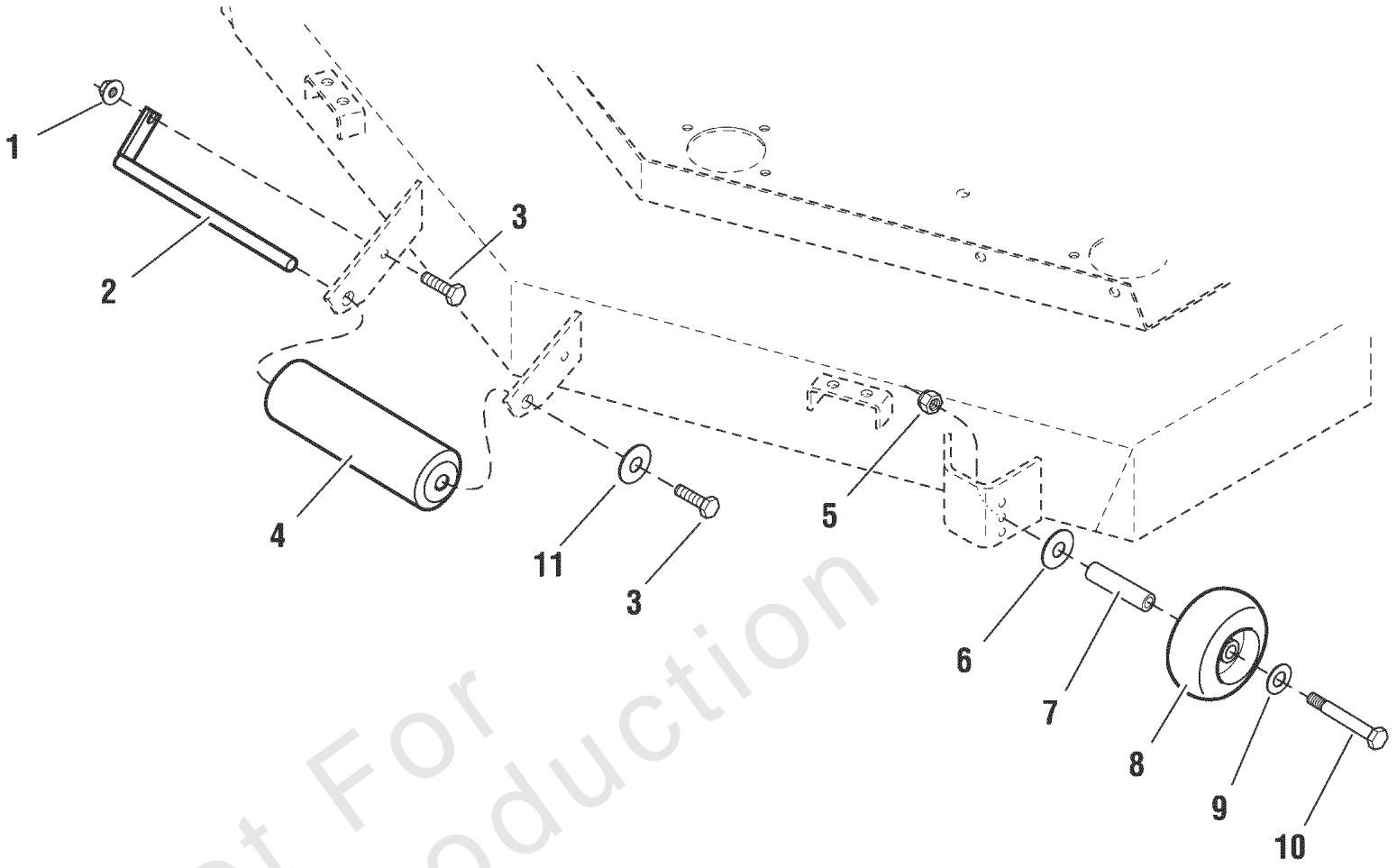
48" & 52" Mower Deck - Pulleys, Belts & Idler Arm - S/N: 2898 and below

REF NO	PART NO	QTY	DESCRIPTION
1	5022667	1	BELT (48" Deck)
1	5103587	1	BELT, 5V, 150.90"EL, ARAMID, WRPD, RC
2	5022622	3	PULLEY, Spindle, Gold -(48" Deck, S/N: 1500 & below)
2	5023175	3	PULLEY, 5.540OB X .985ID, SINGLE B-SEC -(48" Deck, S/N: 1501 & above)
2	5022721	3	PULLEY, Spindle, Gold -(52" Deck S/N: 1500 & below)
2	5023178	3	PULLEY, 6.122 OD X .98 BORE -(52" Deck, S/N: 1501 & above)
3	5050407X10	3	KEY, 1/4 SQ. X 1-1/4
4	5025318	3	WASHER, Spring
5	5025319	3	NUT, 5/8-18 Hex Nylon Lock
6	5025056	4	NUT, 1/2-13 HEX NYLON LOCK
7	5025158	3	WASHER, 1/2 SAE
8	-----	3	Replace with: Pulley #5104717 & Debris Shield #5105145 -*If not present, order 5025158 - washer and 5101103 - shield.
9	5047142	2	SPACER, .52 x 1.25 x .70
10	5025017X24	2	BOLT, 1/2-13 X 3" GD5 CZ
11	5025017X36	1	BOLT, 1/2-13 x 4-1/2
12	5025150	2	WASHER, 1/2" USS
13	5045022	1	SPACER, .52 x 1.00 x 3.50
14	5021541	2	BUSHING, FLANGE
15	5407343	1	ASSM, IDLER ARM -(Includes Bushings & grease fittings.)
16	5020095	1	GREASE FITTING
17	5045023	3	SPACER, .52 x 1.00 x .44
18	5021811	1	EYEBOLT, 3/8" x 8"
19	5025017X28	1	BOLT, 1/2-13 X 3-1/2, HEX HD, GD5, CZ (SV)
20	5045200B	1	SPRING ANCHOR
21	5025013X8	1	BOLT, 3/8-16 X 1" GD5 CZ
22	5021680	1	SPRING, Compression -(48" Deck, S/N: 101-200 / 52" Deck, S/N: 101-250)
22	5022788	1	SPRING, Compression -(48" Deck S/N: 201 & above / 52" Deck S/N: 251 & above)
23	5025156	1	WASHER, 3/8 SAE
24	5025096	1	NUT, 3/8-16 HEX NYLON LOCK
25	5025128	1	NUT, 3/8-16 Hex Serrated Flange

48" & 52" Mower Deck - Rollers - S/N: 2898 and below

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901004



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48" & 52" Mower Deck - Rollers - S/N: 2898 and below

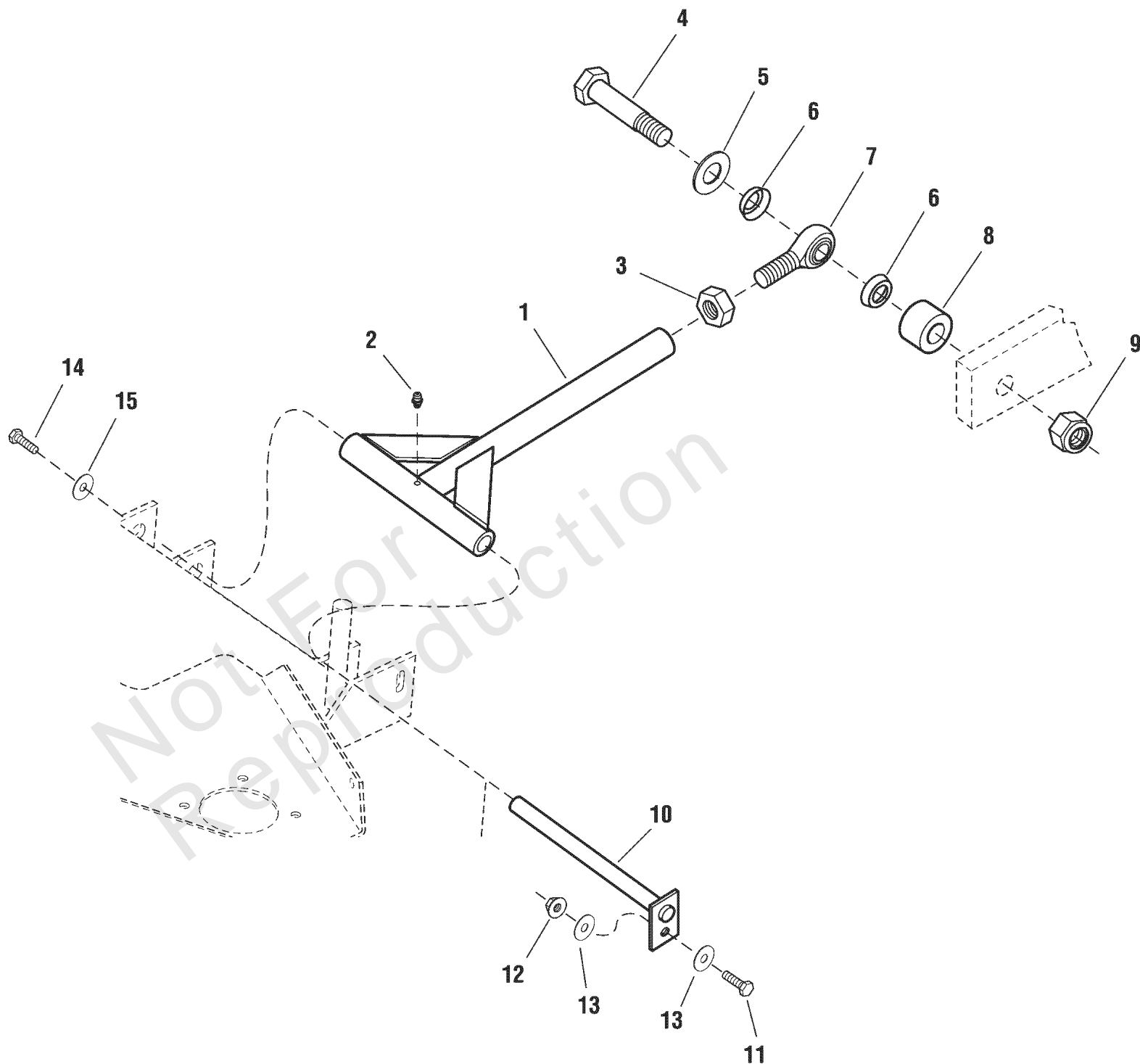
REF NO	PART NO	QTY	DESCRIPTION
1	5025128	1	NUT, 3/8-16 Hex Serrated Flange
2	5041655A	1	USE 5105755 - WELD, BRKT,ROLLER PIN,BLK
3	5025013X8	2	BOLT, 3/8-16 X 1" GD5 CZ
4	5020785	1	ROLLER
5	5025096	1	NUT, 3/8-16 HEX NYLON LOCK
6	5025305	1	WASHER, 3/8 x 1-3/4
7	5045992	1	SPACER, .39 x .63 x 2.56
8	1716353	1	GAUGE WHEEL
9	5025156	1	WASHER, 3/8 SAE
10	5025013X28	1	BOLT, 3/8-16 X 3-1/2" GD5 CZ
11	5100548	1	WASHER, .390 X 1.50 X .109 YZ

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48", 52" & 61" Mower Deck - Rear Mount Bars - S/N: 2898 and below

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901004



48", 52" & 61" Mower Deck - Rear Mount Bars - S/N: 2898 and below

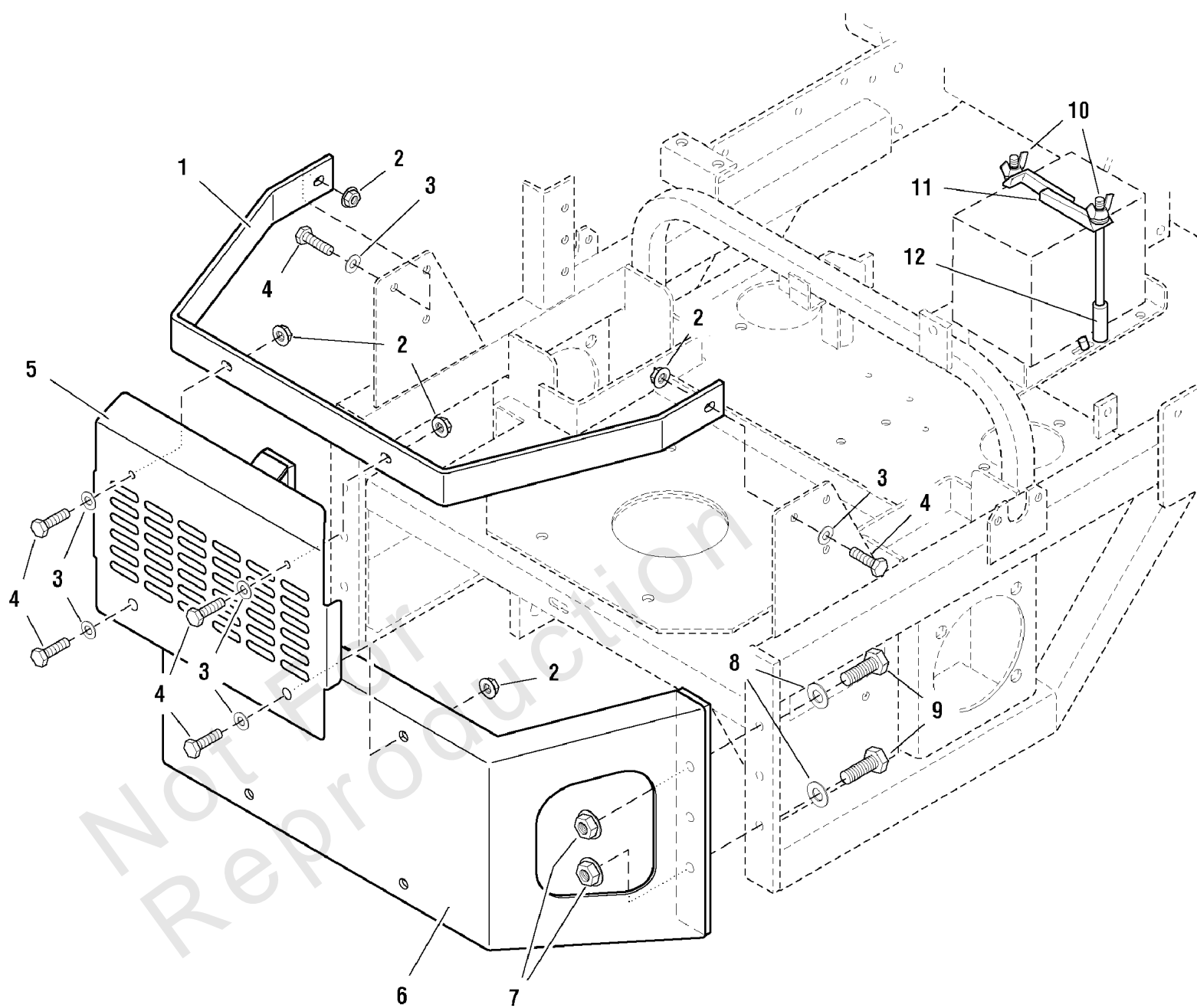
REF NO	PART NO	QTY	DESCRIPTION
1	5045009B	2	ASSM, DECK PUSHER BAR
2	5020095	2	GREASE FITTING
3	5025093	2	NUT, 3/4-16 Hex Jam
4	5025265X32	2	BOLT, 3/4-16 x 4
5	5025160	2	WASHER, 3/4 SAE
6	5022111	4	ROD END SEAL
7	5022039	2	BALL JOINT, 3/4-16 Male
8	5046093	2	SPACER, .75 x 1.50 x 1.00
9	5025284	2	NUT, 3/4-16 Hex Nylon Lock
10	5045037A	2	NLA - WELD, DECK MOUNT SHAFT - BLK
11	5025013X10	2	BOLT, 3/8-16 X 1-1/4" GD5 CZ
12	5025096	2	NUT, 3/8-16 HEX NYLON LOCK
13	5025156	4	WASHER, 3/8 SAE
14	5025013X8	2	BOLT, 3/8-16 X 1" GD5 CZ
15	5100548	2	WASHER, .390 X 1.50 X .109 YZ

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Bumper Group - Rear (Early Models)

Note: Unless noted otherwise, use the standard torque specifications

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Bumper Group - Rear (Early Models)

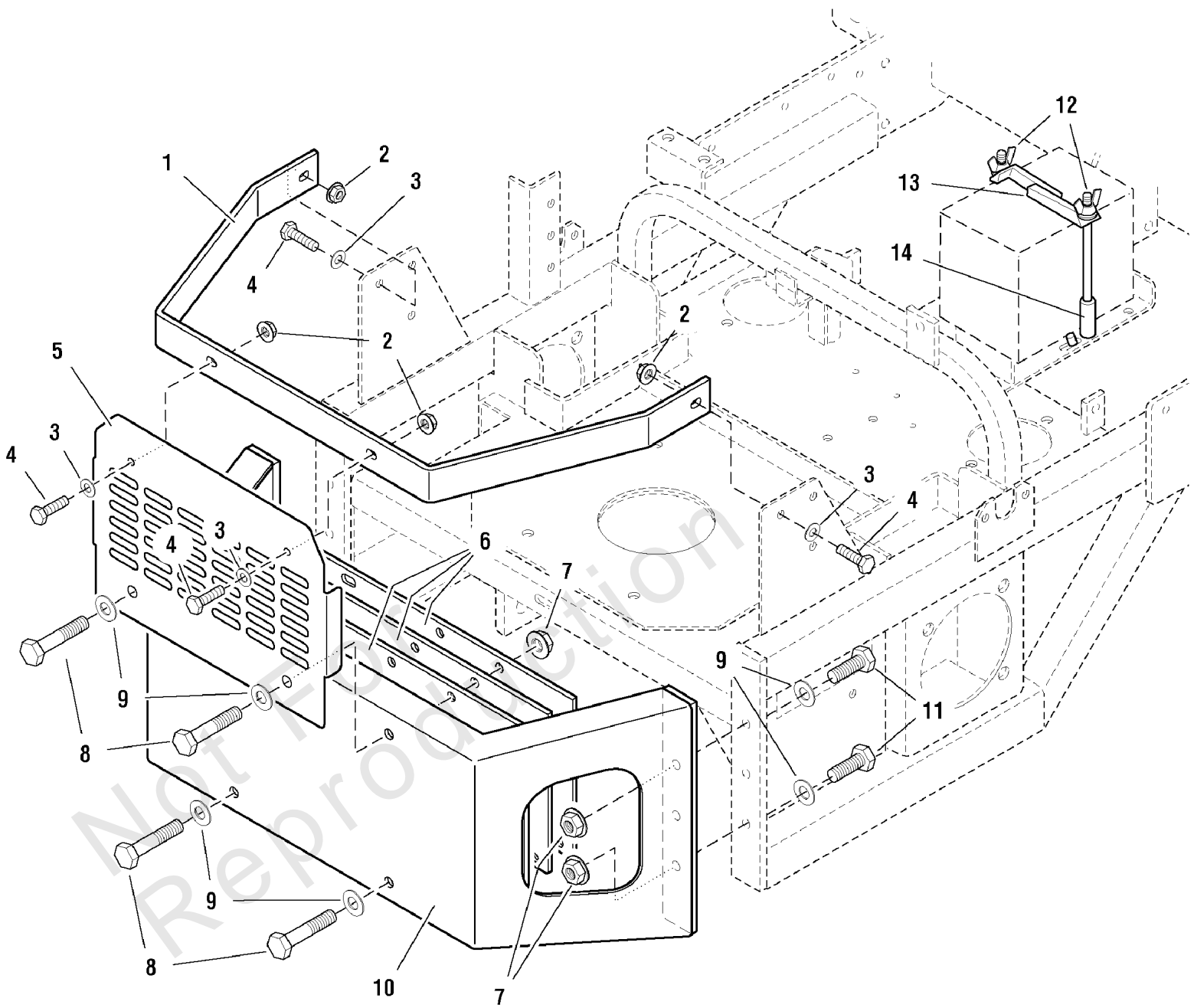
REF NO	PART NO	QTY	DESCRIPTION
1	5047114B	1	BUMPER BAR
2	5025139	6	NUT, 5/16-18 HEX SERRATED FLANGE (LARGE)
3	5025155	6	WASHER, 5/16" SAE
4	5025011X8	6	BOLT, 5/16-18 X 1 GD5 YZ
5	5047071B	1	BUMPER SHIELD
6	5047115B	1	BUMPER
7	5025128	4	NUT, 3/8-16 Hex Serrated Flange
8	5025156	4	WASHER, 3/8 SAE
9	5025013X10	4	BOLT, 3/8-16 X 1-1/4" GD5 CZ
10	5022596	2	BATTERY HOLDDOWN BOLT
11	5022595	1	BATTERY HOLDDOWN
12	5050831X3	2	1/4" Fuel Line, 3" Long

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Bumper Group - Rear- See S/N Note in Drawing

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901004



Bumper Group - Rear- See S/N Note in Drawing

REF NO	PART NO	QTY	DESCRIPTION
1	5049142B	1	BUMPER BAR -(Refer to Note: *)
2	5025139	6	NUT, 5/16-18 HEX SERRATED FLANGE (LARGE)
3	5025155	6	WASHER, 5/16" SAE
4	5025011X8	6	BOLT, 5/16-18 X 1 GD5 YZ
5	5049147B	1	BUMPER SHIELD
6	5047485B	3	COUNTERWEIGHT -(27HP, 61" model only)
7	5025128	4	NUT, 3/8-16 Hex Serrated Flange
8	5025013X12	4	BOLT, 3/8-16 X 1-1/2" GD5 CZ
9	5025156	8	WASHER, 3/8 SAE
10	5047851B	1	BUMPER
11	5025013X10	4	BOLT, 3/8-16 X 1-1/4" GD5 CZ
12	5022596	2	BATTERY HOLDDOWN BOLT
13	5022595	1	BATTERY HOLDDOWN
14	5050831X3	2	1/4" Fuel Line, 3" Long

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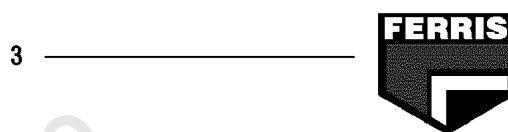
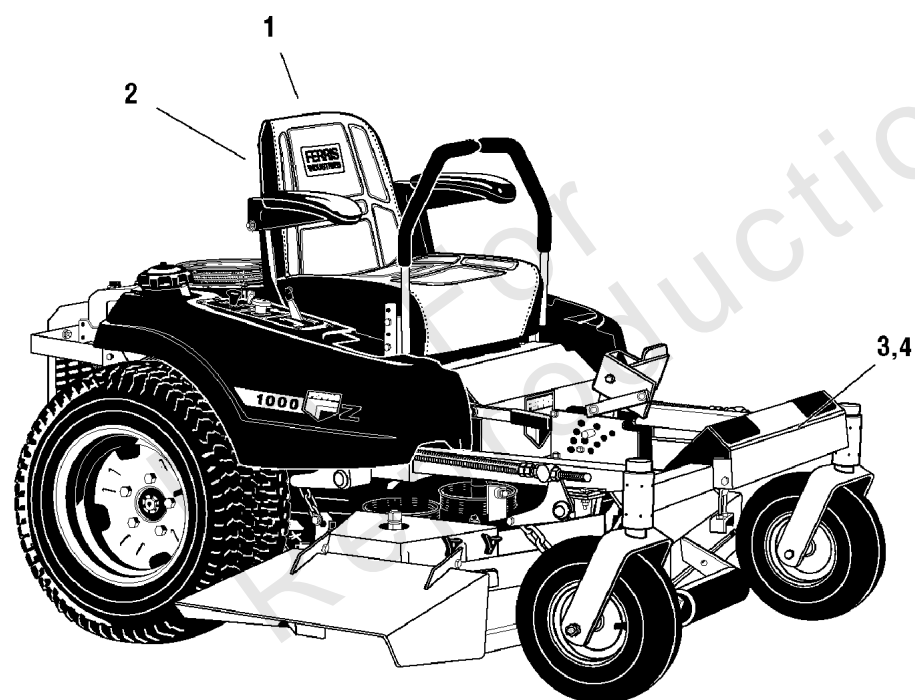
Footnotes:

Note: * This group applies to the following models: 1000ZKAV21/48 - S/N: 1501 to 2898; 1000zKAV23/52 - S/N: 1046 to 2898; and 1000ZKAV23/61 - S/N: 866 to 2898.

Decal - Brand & Model - S/N: 2898 and below

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901004



Decal - Brand & Model - S/N: 2898 and below

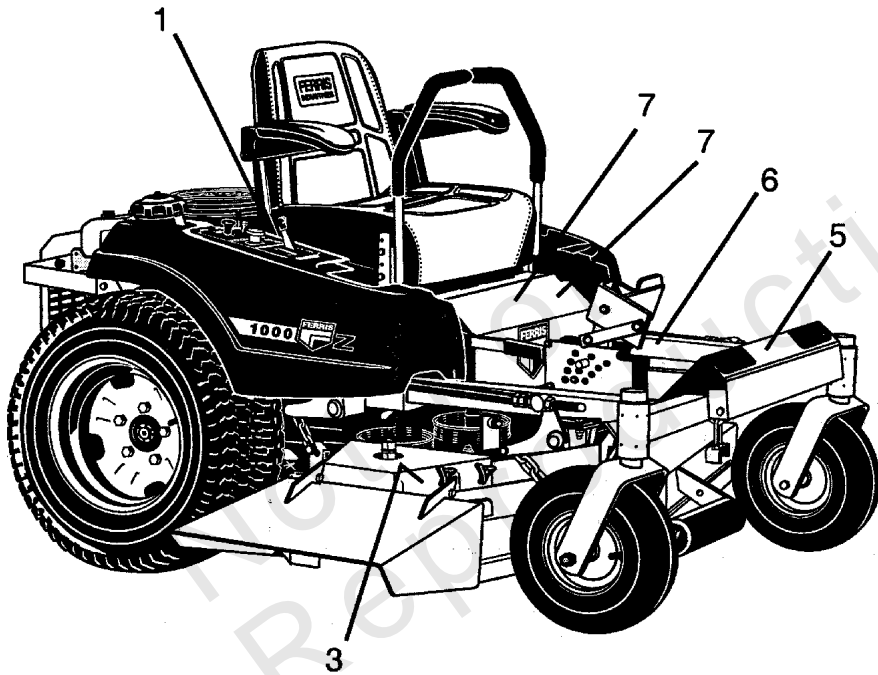
REF NO	PART NO	QTY	DESCRIPTION
1	5022227	1	DECAL, Ferris Logo, 6-3/8" -(Located on back of seat)
2	5022229	1	DECAL, Number One In Reliability -(Located on back of seat)
3	5022556	1	DECAL, Ferris Logo, 5" -(All models except 27HP)
4	5022560	1	DECAL, FERRIS TEXT & LOGO -(27HP model only)


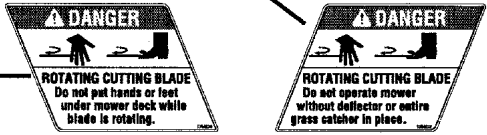
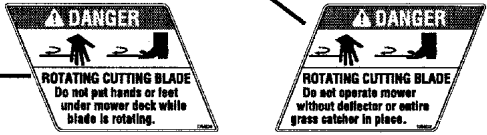
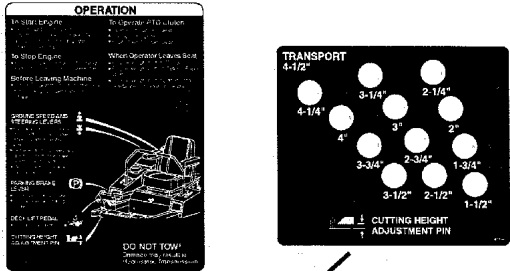


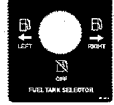



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Decal - Safety & Operation - S/N: 2898 and below

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901004



- 1 
- 2 
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Key Switch	Charge Circuit	PTO Clutch	Auxiliary
20A	20A	20A	20A
- 12 
- 13 **48" 52" 61"**
- 14 
- 15 

Decal - Safety & Operation - S/N: 2898 and below

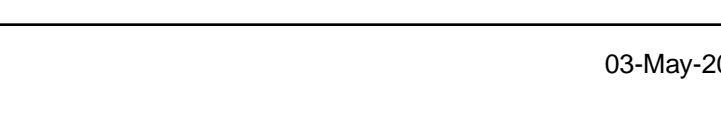
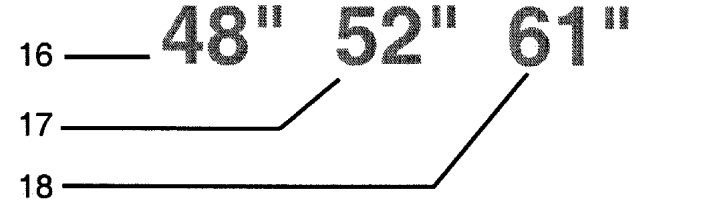
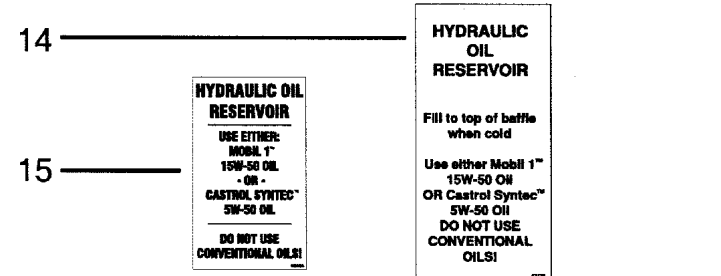
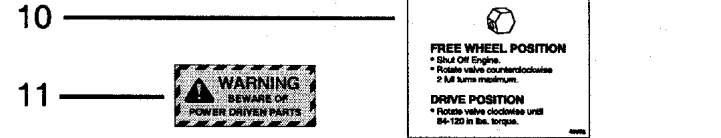
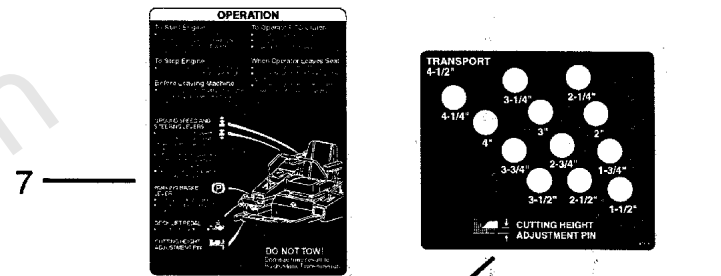
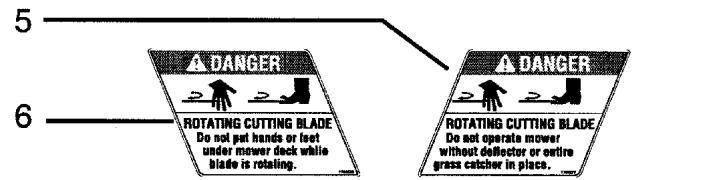
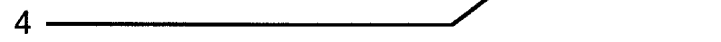
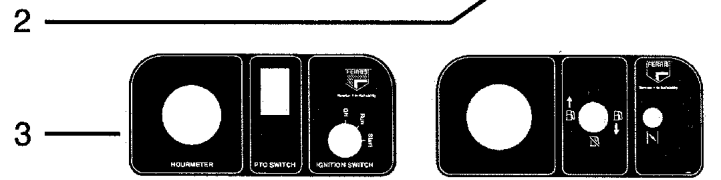
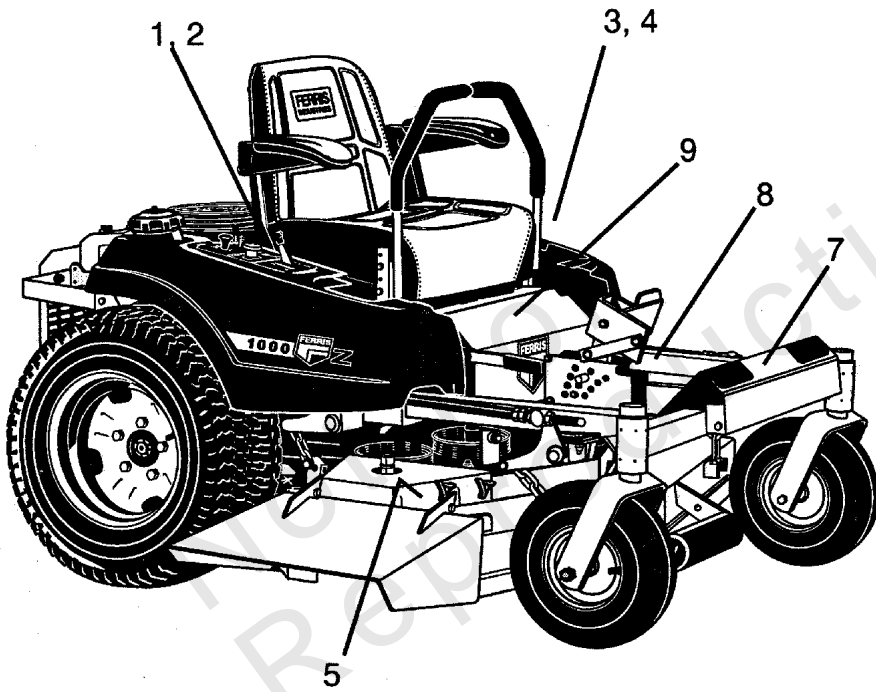
REF NO	PART NO	QTY	DESCRIPTION
1	5049199	1	DECAL, Control Panel
2	1704277	1	DECAL, Danger (Chute In Place)
3	1704276	1	DECAL, Danger (Hand Under Deck)
4	5045559	1	DECAL, Operation
5	5047138	1	DECAL, Lift Plate
6	5047171	1	DECAL, Safety/Instruction
7	5049148	1	DECAL, Fuel Selector
8	5045562	2	DECAL, Hydro Release Valve
9	5103184	1	DECAL, Warning -(on top of mower deck)
10	5048454	1	DECAL, Oil Reservoir
11	5046503	1	DECAL, Fuse Location
12	5046481	2	DECAL, Caution Fan
13	5022811	1	DECAL, 48
14	5022812	1	DECAL, 52
15	5022813	1	DECAL, 61"

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Decal - Safety & Operation (Early Models)

Note: Unless noted otherwise, use the standard torque specifications

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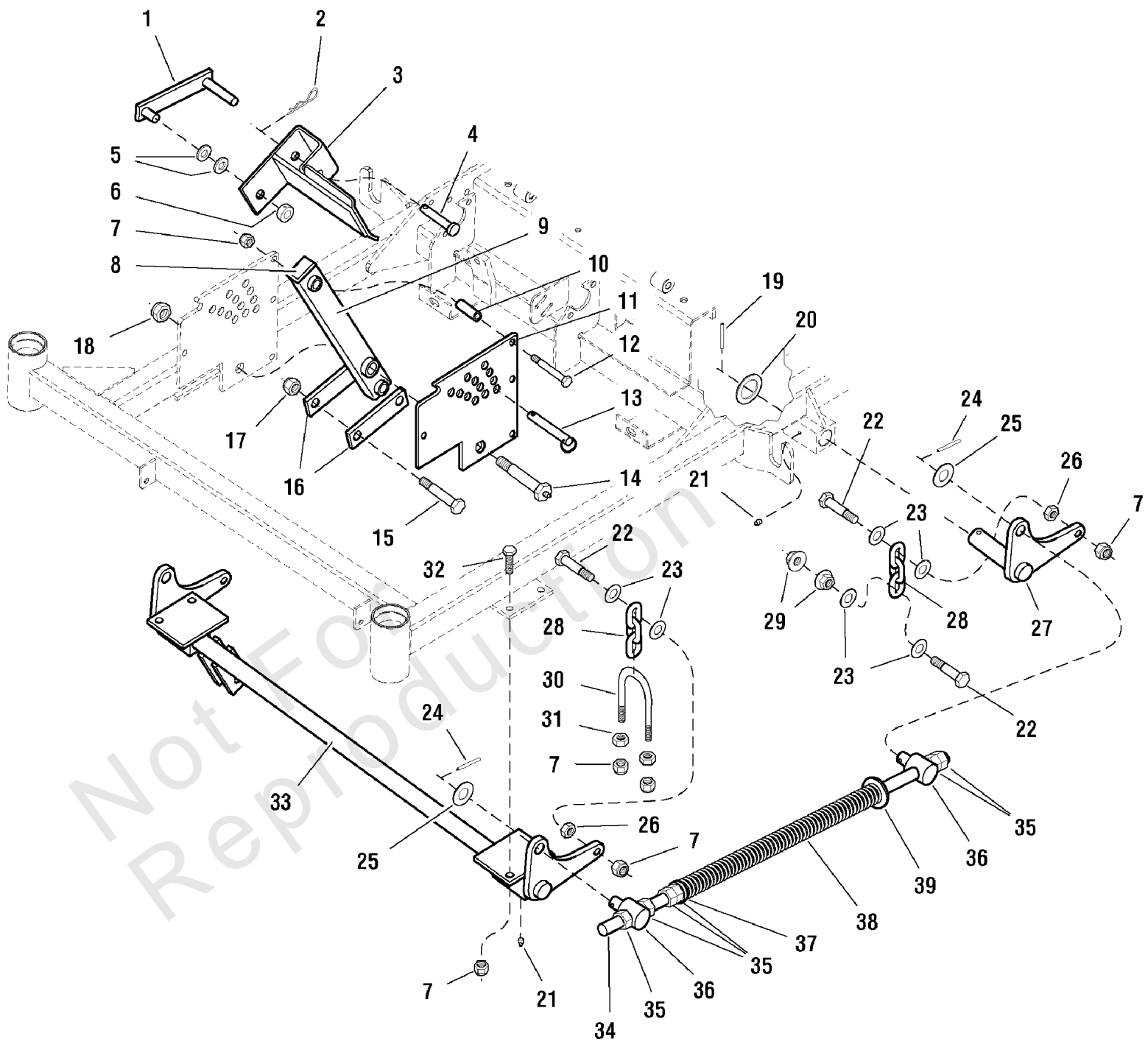
Decal - Safety & Operation (Early Models)

REF NO	PART NO	QTY	DESCRIPTION
1	5047141	1	DECAL, Control Panel-RH -(Kawasaki 48", S/N: 101-1310 / 52", S/N: 101-919 / 61", 101-690)
2	5047861	1	DECAL, Control Panel-RH -(Kawasaki 48", S/N: 1311-1500 / 52", S/N: 920-1045 / 61", S/N: 691-865)
3	5046469	1	DECAL, Control Panel-LH -(Kawasaki 48", S/N: 101-1310 / 52", S/N: 101-919 / 61", S/N: 101-690)
4	5047863	1	DECAL, Control Panel-LH -(Kawasaki 48", S/N: 1311-1500 / 52", S/N: 920-1045 / 61", S/N: 691-865)
5	1704277	1	DECAL, Danger (Chute In Place)
6	1704276	1	DECAL, Danger (Hand Under Deck)
7	5045559	1	DECAL, Operation
8	5047138	1	DECAL, Lift Plate
9	5047171	1	DECAL, Safety/Instruction
10	5045562	2	DECAL, Hydro Release Valve
11	5103184	1	DECAL, Warning -(on top of mower deck)
12	5046481	2	DECAL, Caution Fan
13	5046503	1	DECAL, Fuse Location
14	5047175	1	DECAL, Oil Reservoir -(steel tank)
15	5048454	1	DECAL, Oil Reservoir -(plastic tank)
16	5022811	1	DECAL, 48
17	5022812	1	DECAL, 52
18	5022813	1	DECAL, 61"

Deck Lift Group - S/N: 2898 and below

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901004



Deck Lift Group - S/N: 2898 and below

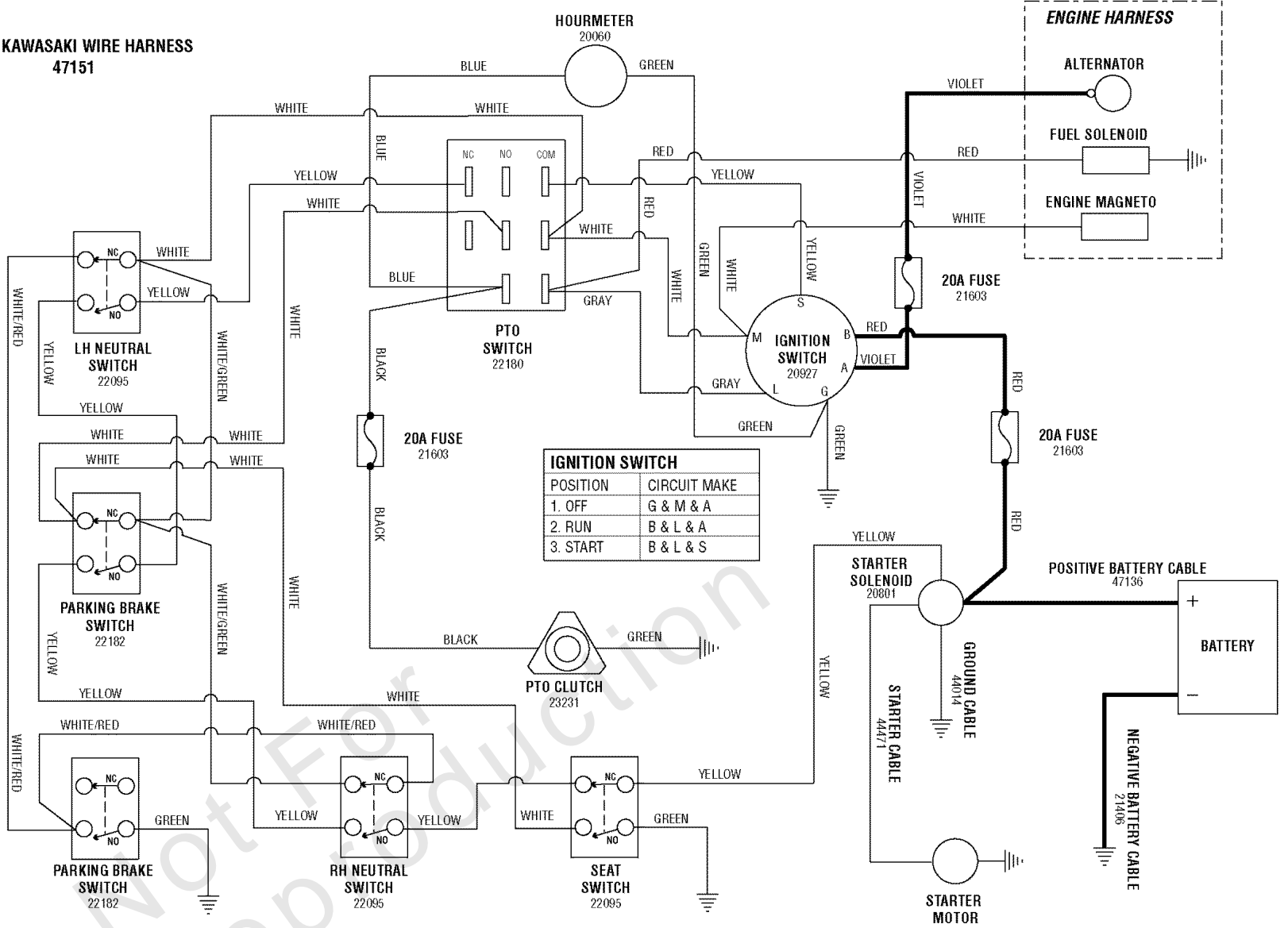
REF NO	PART NO	QTY	DESCRIPTION
1	5044999B	1	DECK LIFT LOCK
2	5025210	1	HAIRPIN CLIP
3	5045058B	1	WELD, DECK LIFT PEDAL
3	5044875	1	PEDAL SAFETY WALK -(Not Shown)
4	5022044	1	PIN, Clevis, 1/2 x 2-1/2
5	5025158	2	WASHER, 1/2 SAE
6	5023241	1	COLLAR, Split, 1/2
7	5025096	16	NUT, 3/8-16 HEX NYLON LOCK
8	5022097	1	CAP
9	5044987B	1	ARM, Deck Lift Pivot
10	5044992	4	SPACER, .38 x .50 x 1.56
11	5047043B	1	DECK HEIGHT PLATE
12	5025013X22	4	BOLT, 3/8-16 X 2-3/4" GD5 CZ
13	5023082	1	PIN, 1/2 x 3-1/2 w/ Lanyard
14	5044993	1	LIFT PIVOT BOLT
15	5025018X24	1	BOLT, 1/2-20 x 3
16	5047105B	2	LINK, Deck Lift
17	5025098	2	NUT, Hex, Nylon Lock, 1/2-20
18	5025282	1	NUT, 5/8-11 Hex Jam Nylon Lock
19	5025516	2	PIN, Roll, 3/16 x 1-1/2
20	5021253	2	SHIM
21	5020095	4	GREASE FITTING
22	5025013X14	6	BOLT, 3/8-16 X 1-3/4" GD5 CZ
23	5025156	12	WASHER, 3/8 SAE
24	5022366	4	PIN, Spring, 3/16 x 1-1/4
25	5025281	4	WASHER, 5/8" SAE
26	5025084	2	NUT, 3/8-16 HEX JAM
27	5045449B	1	DECK LIFT PIVOT - LH
27	5045450B	1	DECK LIFT PIVOT - RH -(Not Shown)
28	5050878X3	4	CHAIN, 3 LINKS
29	5025128	4	NUT, 3/8-16 Hex Serrated Flange
30	5025325	2	U-BOLT
31	5025034	4	NUT, 3/8-16 Hex
32	5025013X10	2	BOLT, 3/8-16 X 1-1/4" GD5 CZ
33	5045451B	1	DECK LIFT SHAFT & MOUNT ASSEMBLY
34	5045446	2	SPRING ROD
35	5025040	12	NUT, 5/8-11 Hex
36	5045447	4	SPRING ROD PIVOT
37	5041477	2	SPACER, .63 x 1.06 x .23
38	5022668	2	SPRING, Deck Lift
39	5025159	2	WASHER, 5/8" USS

Electrical Schematic - Charging Circuit (KAV21/48, S/N: 101-1310, KAV23/52, S/N:

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901004

1000Z KAWASAKI WIRE HARNESS
47151



Electrical Schematic - Charging Circuit (KAV21/48, S/N: 101-1310, KAV23/52, S/N:

REF NO	PART NO	QTY	DESCRIPTION
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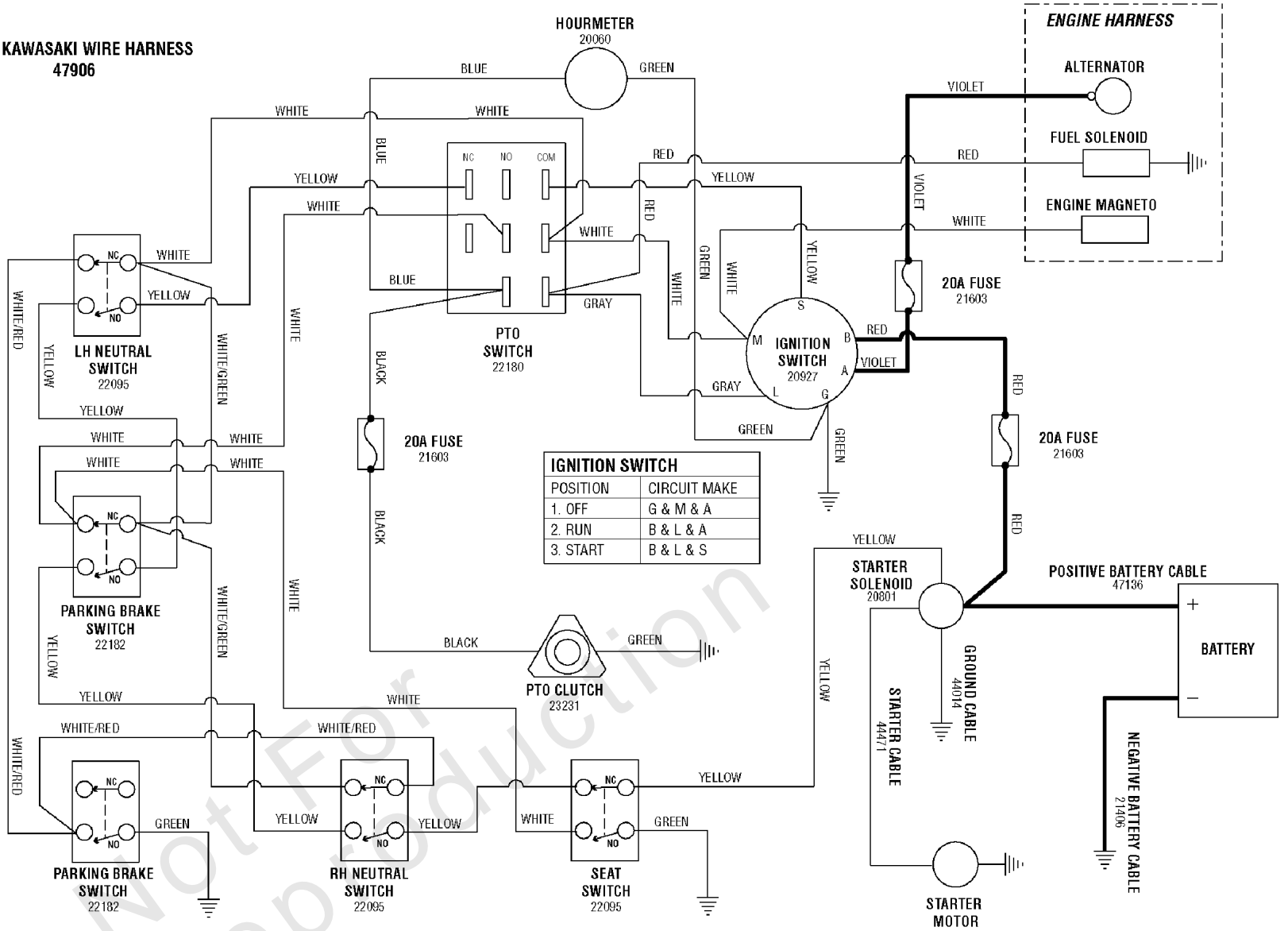
Not For Reproduction

Electrical Schematic - Charging Circuit (KAV21/48, S/N: 1311-1425, KAV23/52, S/N:

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901004

1000Z KAWASAKI WIRE HARNESS
47906



Electrical Schematic - Charging Circuit (KAV21/48, S/N: 1311-1425, KAV23/52, S/N:

REF NO	PART NO	QTY	DESCRIPTION
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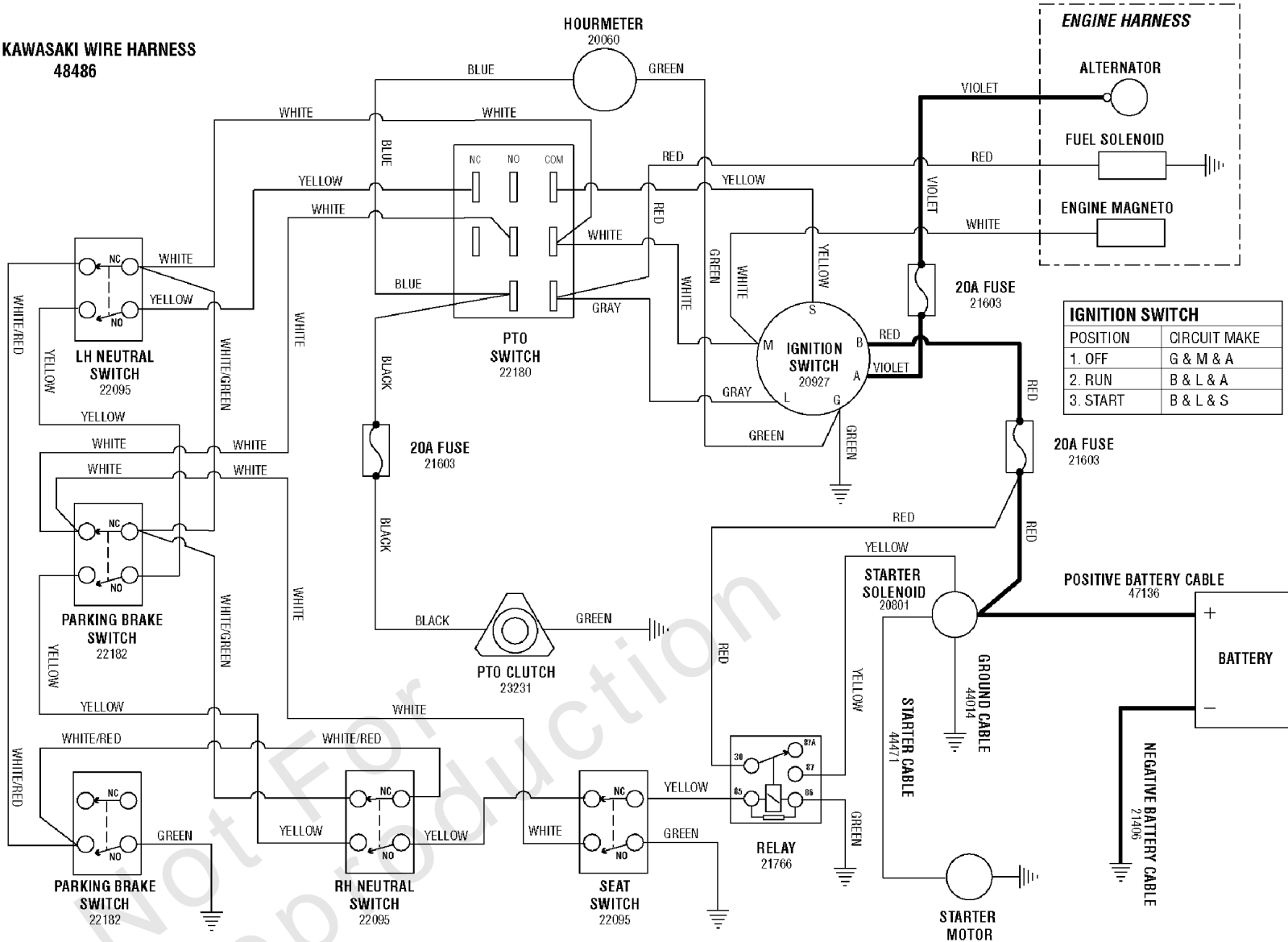
Not For Reproduction

Electrical Schematic - Charging Circuit (KAV21/48, S/N: 1426-1500, KAV23/52, S/N:

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901004

1000Z KAWASAKI WIRE HARNESS
48486



Electrical Schematic - Charging Circuit (KAV21/48, S/N: 1426-1500, KAV23/52, S/N:

REF NO	PART NO	QTY	DESCRIPTION
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Not For Reproduction

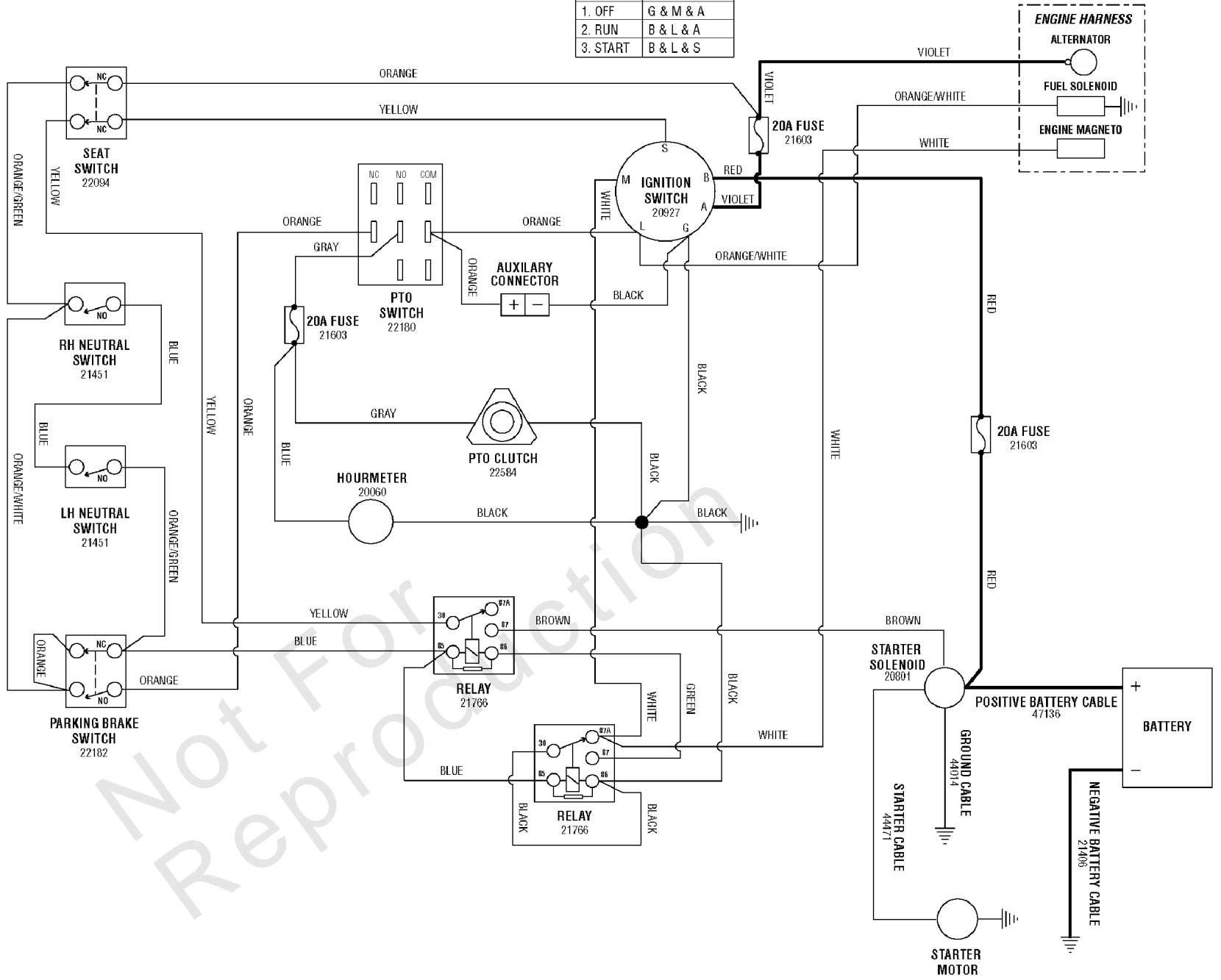
Electrical Schematic - Charging Circuit (KAV21/48, S/N: 1501 & above, KAV23/52, S/N:

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901004

1000Z KAWASAKI WIRE HARNESS
49067

IGNITION SWITCH	
POSITION	CIRCUIT MAKE
1. OFF	G & M & A
2. RUN	B & L & A
3. START	B & L & S



Electrical Schematic - Charging Circuit (KAV21/48, S/N: 1501 & above, KAV23/52, S/N:

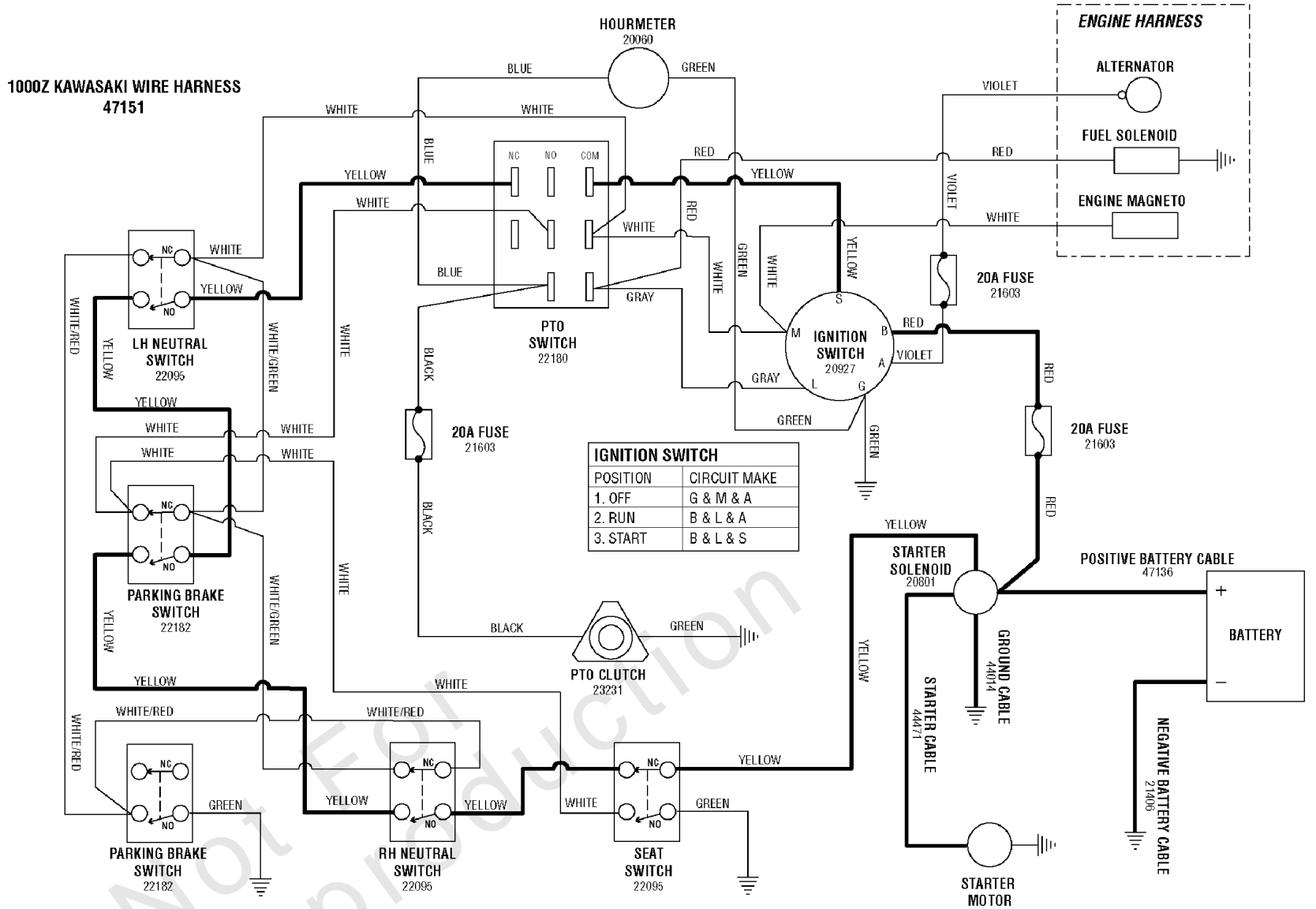
REF NO	PART NO	QTY	DESCRIPTION
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Not For Reproduction

Electrical Schematic - Cranking Circuit (KAV21/48, S/N: 101-1310, KAV23/52, S/N:

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901004



Electrical Schematic - Cranking Circuit (KAV21/48, S/N: 101-1310, KAV23/52, S/N:

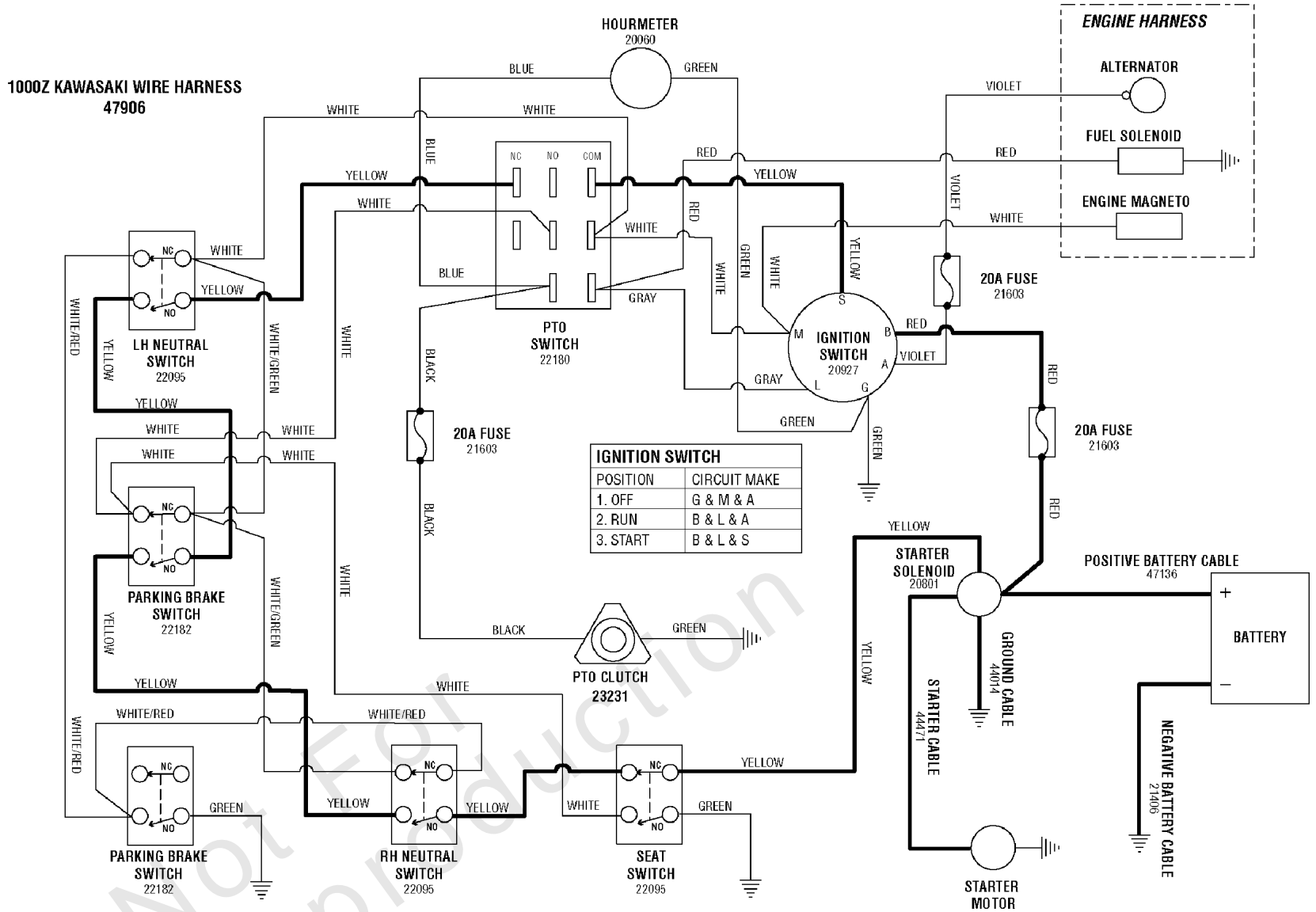
REF NO	PART NO	QTY	DESCRIPTION
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Not For Reproduction

Electrical Schematic - Cranking Circuit (KAV21/48, S/N: 1311-1425, KAV23/52, S/N:

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901004



Electrical Schematic - Cranking Circuit (KAV21/48, S/N: 1311-1425, KAV23/52, S/N:

REF NO	PART NO	QTY	DESCRIPTION
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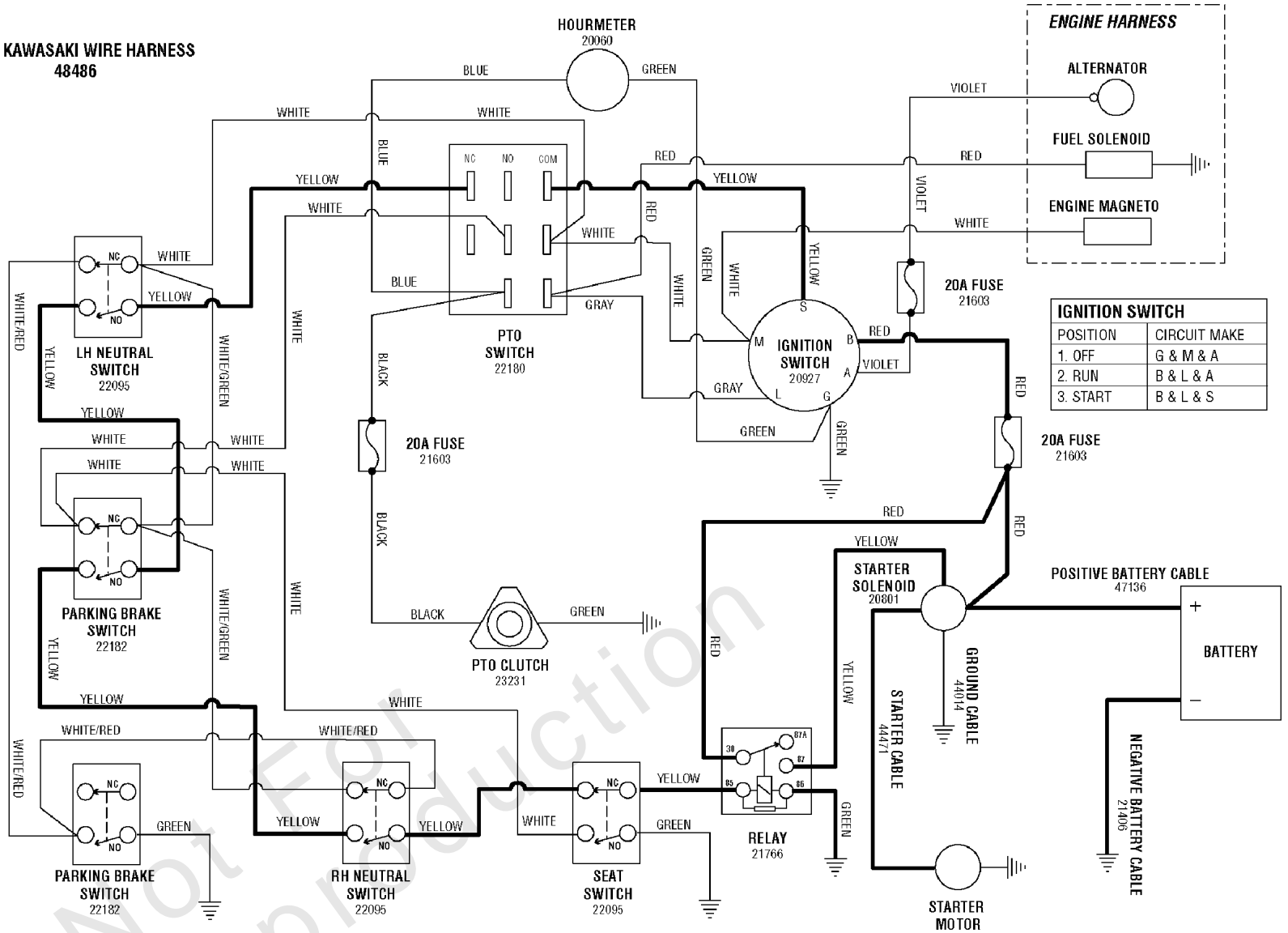
Not For Reproduction

Electrical Schematic - Cranking Circuit (KAV21/48, S/N: 1426-1500, KAV23/52, S/N:

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901004

1000Z KAWASAKI WIRE HARNESS
48486



Electrical Schematic - Cranking Circuit (KAV21/48, S/N: 1426-1500, KAV23/52, S/N:

REF NO	PART NO	QTY	DESCRIPTION
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Not For Reproduction

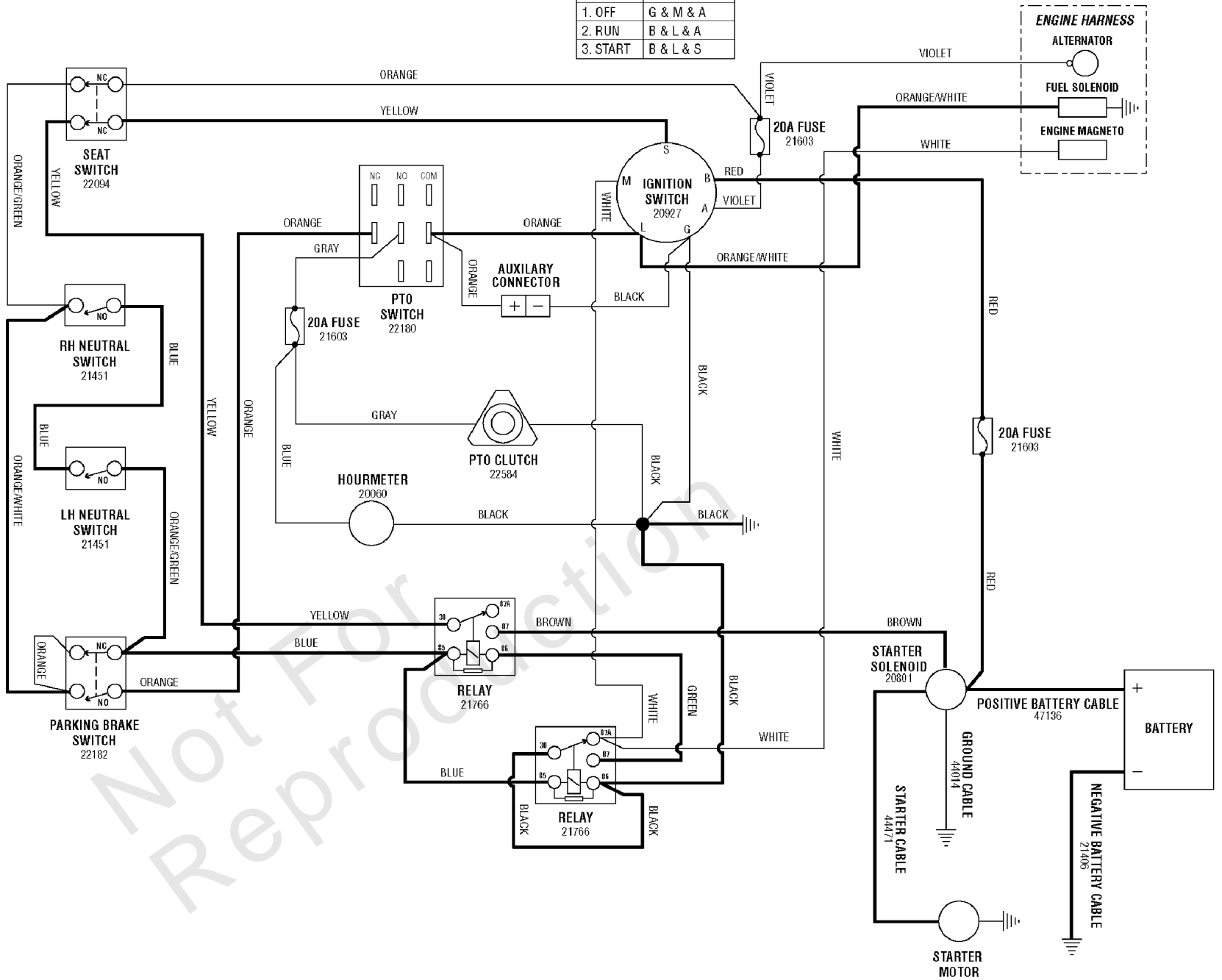
Electrical Schematic - Cranking Circuit (KAV21/48, S/N: 1501 & above, KAV23/52, S/N:

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901004

1000Z KAWASAKI WIRE HARNESS
49067

IGNITION SWITCH	
POSITION	CIRCUIT MAKE
1. OFF	G & M & A
2. RUN	B & L & A
3. START	B & L & S



Electrical Schematic - Cranking Circuit (KAV21/48, S/N: 1501 & above, KAV23/52, S/N:

REF NO	PART NO	QTY	DESCRIPTION
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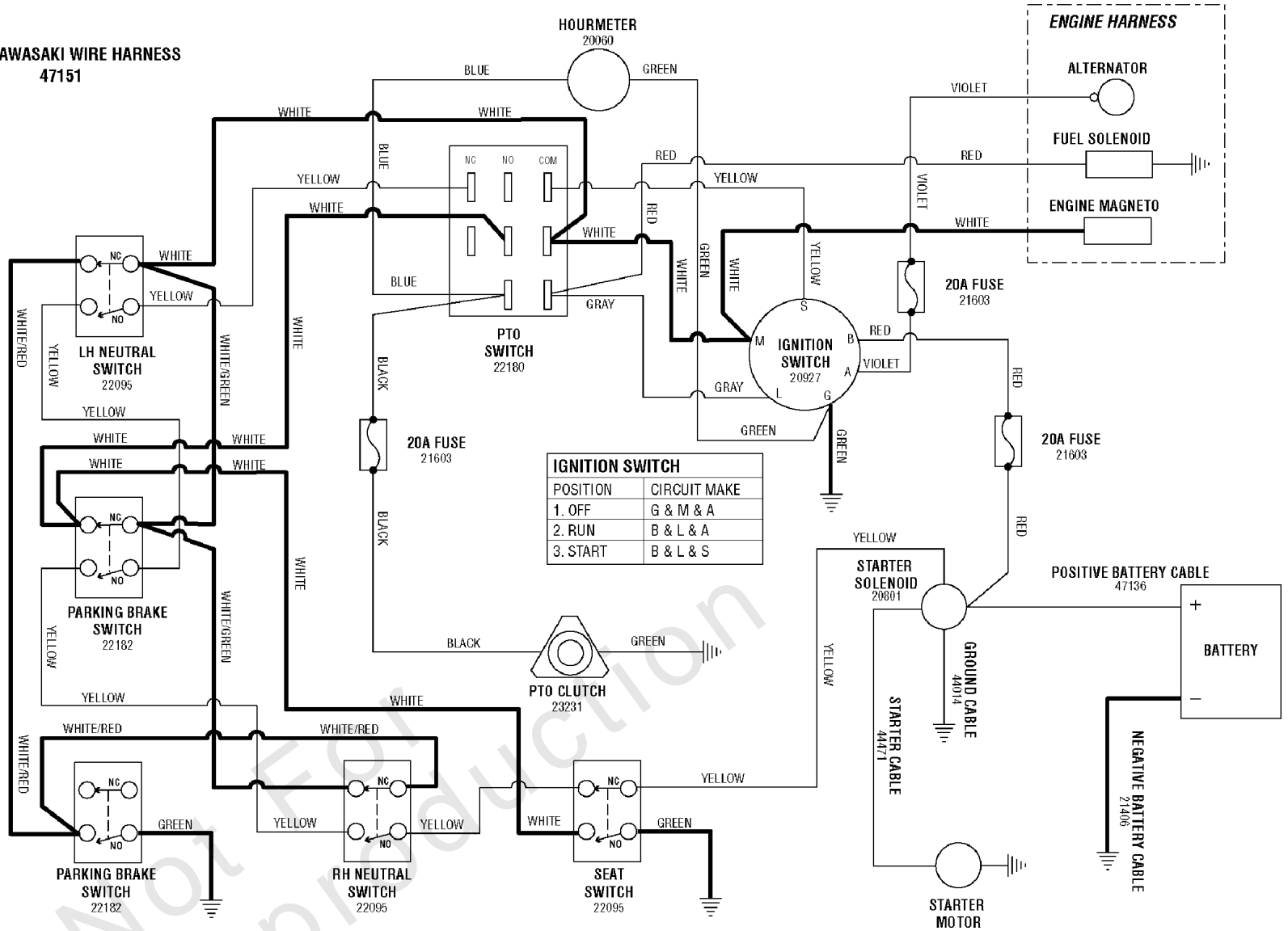
Not For Reproduction

Electrical Schematic - Ignition Grounding Circuit/Operator Presence (KAV21/48, S/N:

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901004

1000Z KAWASAKI WIRE HARNESS
47151



Electrical Schematic - Ignition Grounding Circuit/Operator Presence (KAV21/48, S/N:

REF NO	PART NO	QTY	DESCRIPTION
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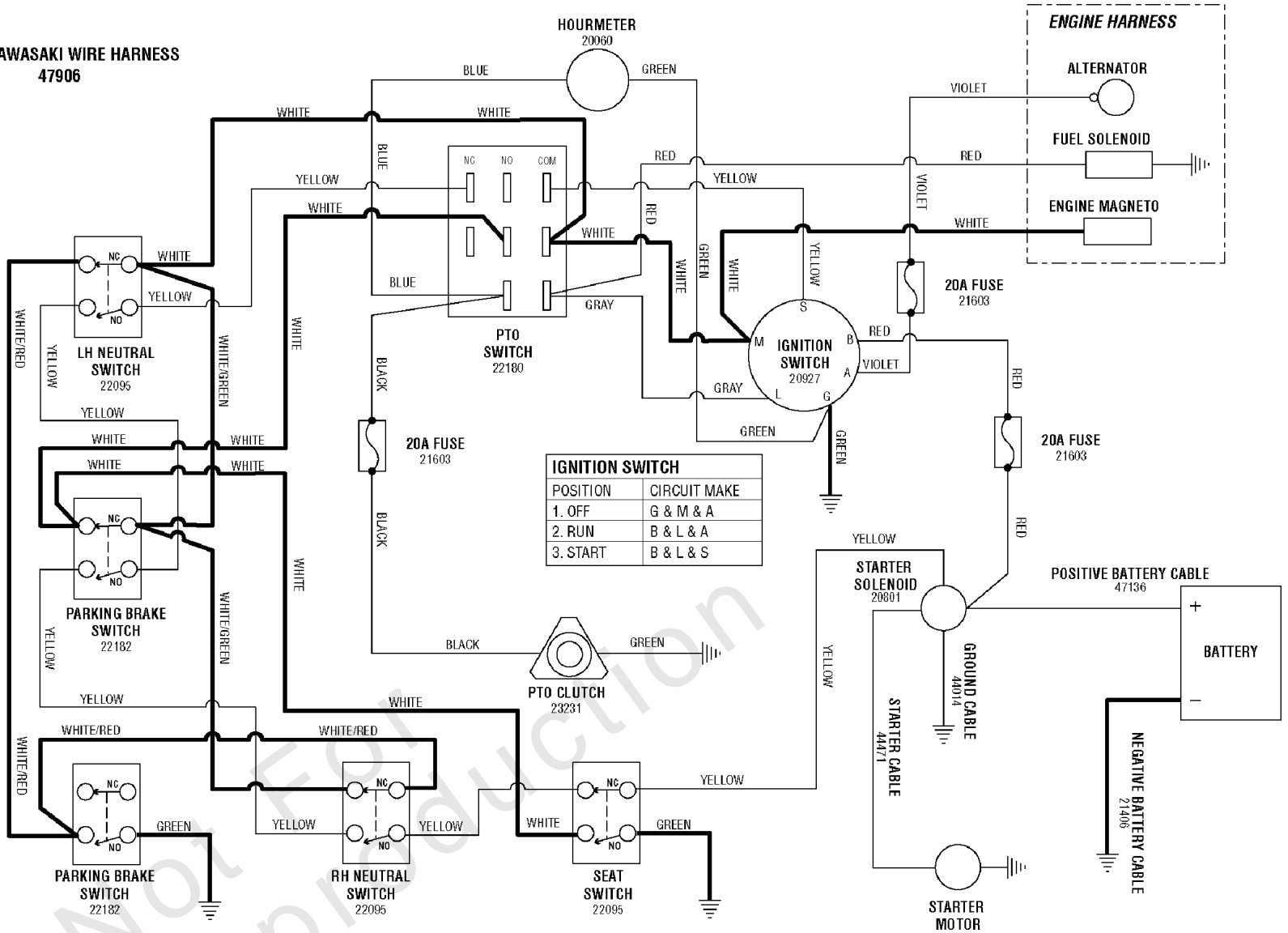
Not For Reproduction

Electrical Schematic - Ignition Grounding Circuit/Operator Presence (KAV21/48, S/N:

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901004

1000Z KAWASAKI WIRE HARNESS
47906



Electrical Schematic - Ignition Grounding Circuit/Operator Presence (KAV21/48, S/N:

REF NO	PART NO	QTY	DESCRIPTION
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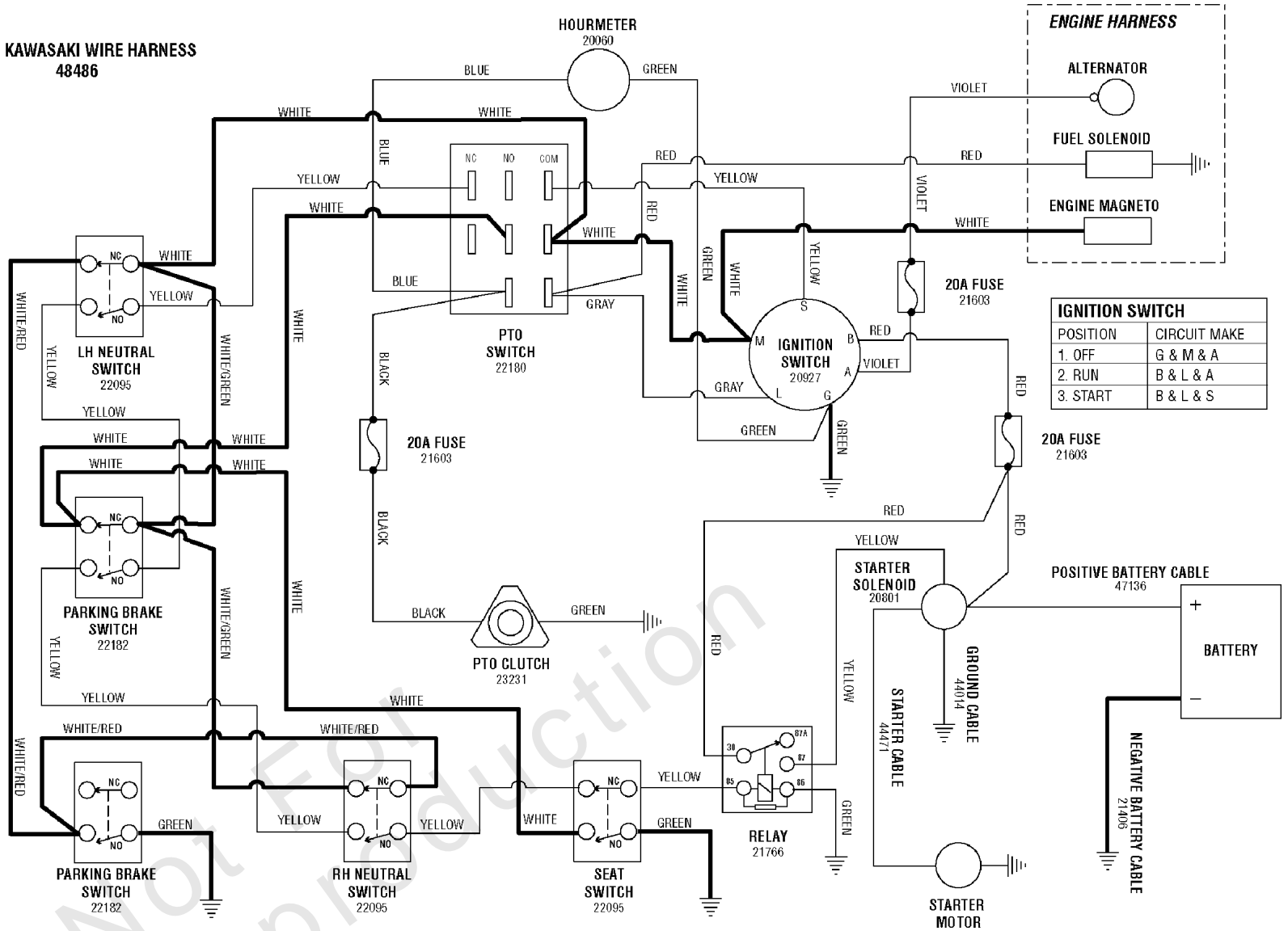
Not For Reproduction

Electrical Schematic - Ignition Grounding Circuit/Operator Presence (KAV21/48, S/N:

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901004

1000Z KAWASAKI WIRE HARNESS
48486



Electrical Schematic - Ignition Grounding Circuit/Operator Presence (KAV21/48, S/N:

REF NO	PART NO	QTY	DESCRIPTION
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Not For Reproduction

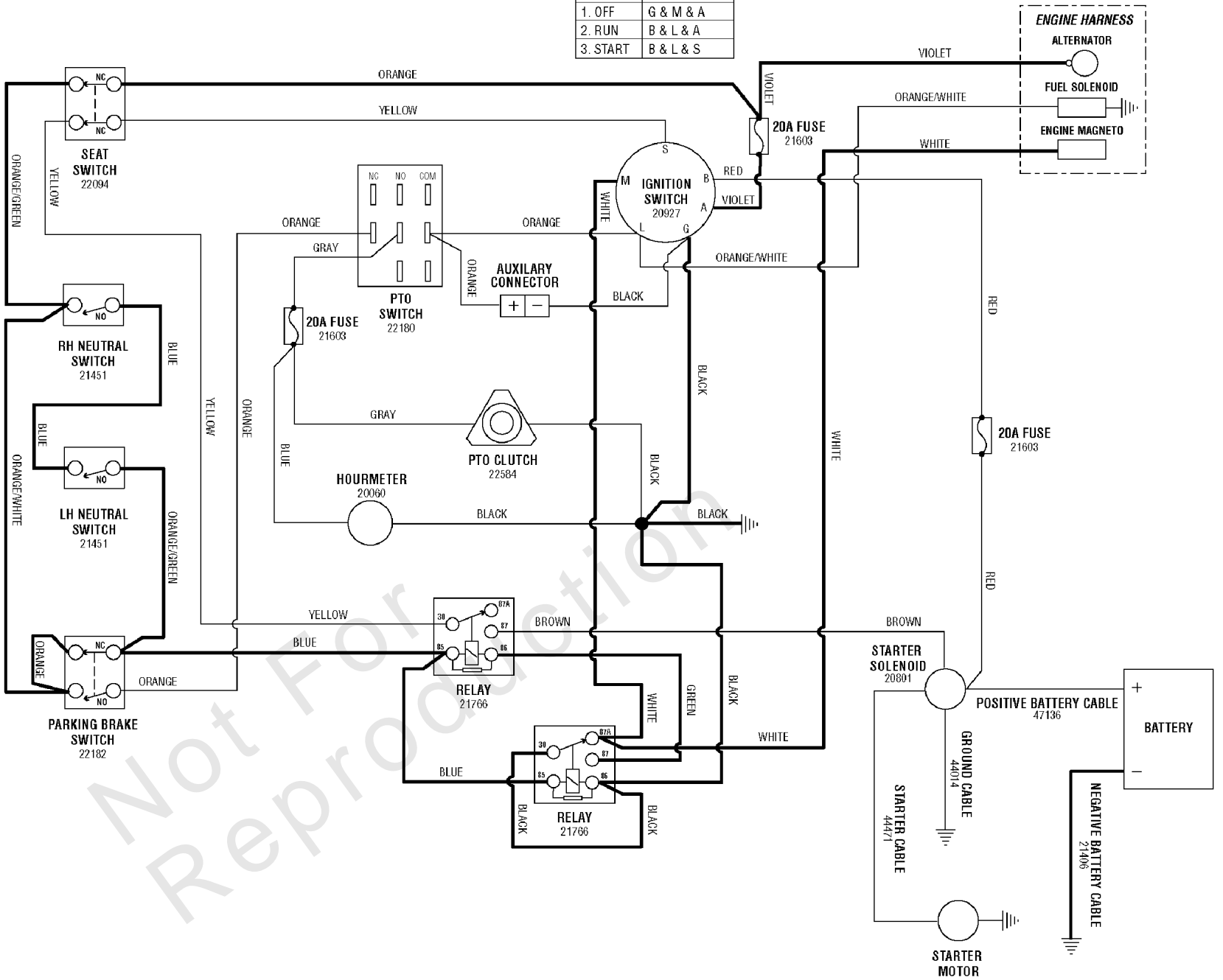
Electrical Schematic - Ignition Grounding Circuit/Operator Presence (KAV21/48, S/N: 1501)

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901004

1000Z KAWASAKI WIRE HARNESS
49067

IGNITION SWITCH	
POSITION	CIRCUIT MAKE
1. OFF	G & M & A
2. RUN	B & L & A
3. START	B & L & S



Electrical Schematic - Ignition Grounding Circuit/Operator Presence (KAV21/48, S/N: 1501)

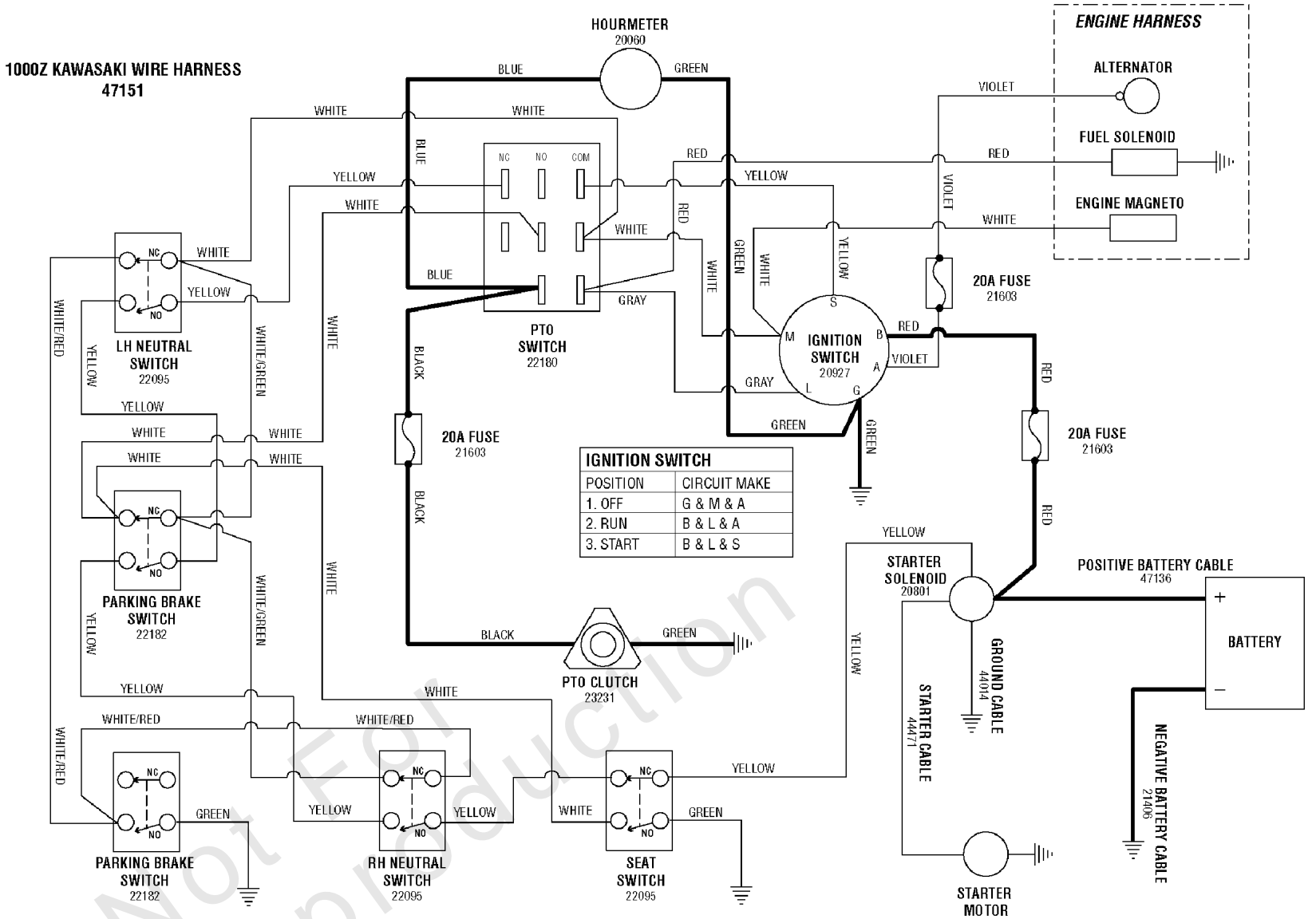
REF NO	PART NO	QTY	DESCRIPTION
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Not For Reproduction

Electrical Schematic - PTO Clutch Circuit (KAV21/48, S/N: 101-1310, KAV23/52, S/N:

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901004



Electrical Schematic - PTO Clutch Circuit (KAV21/48, S/N: 101-1310, KAV23/52, S/N:

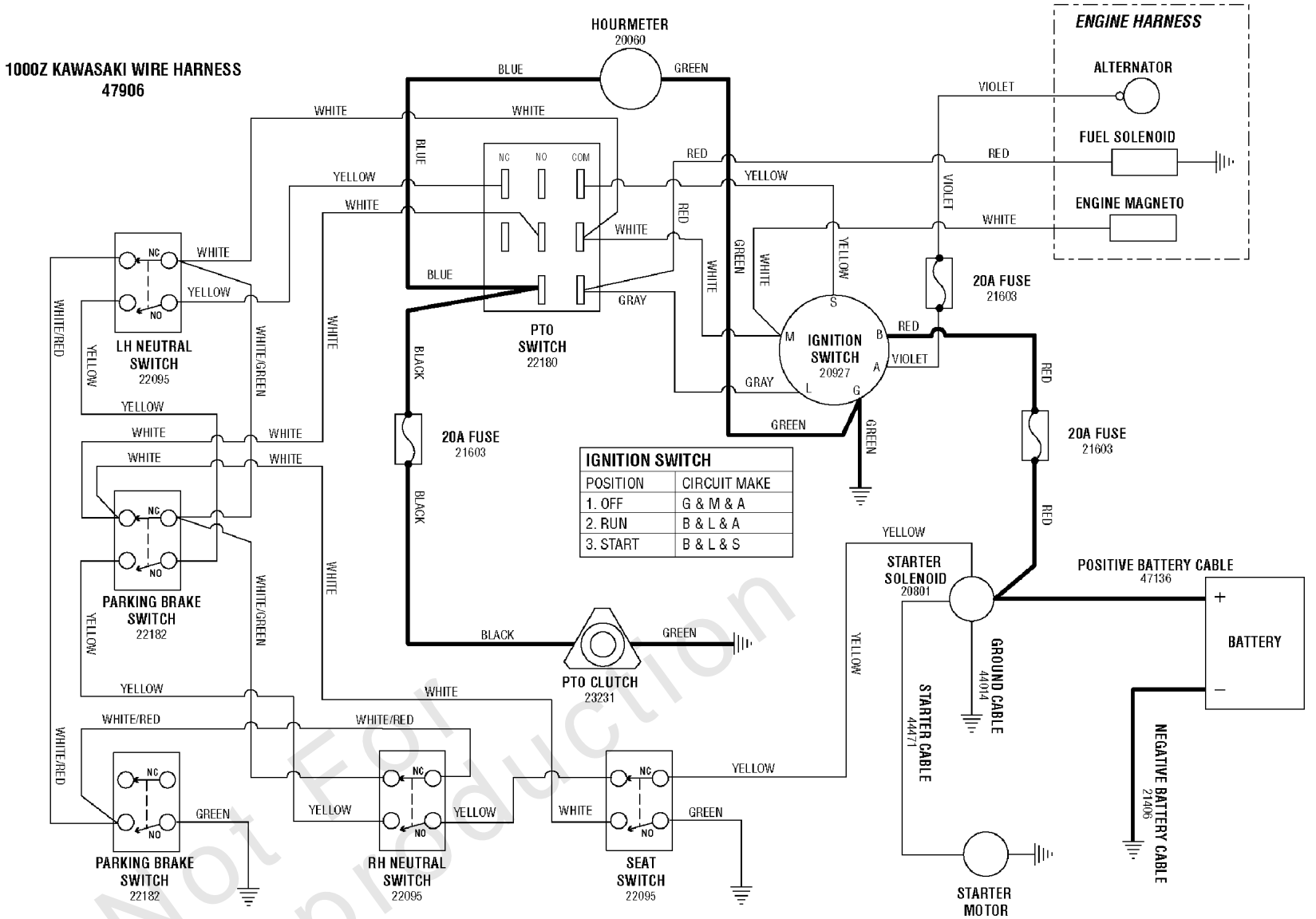
REF NO	PART NO	QTY	DESCRIPTION
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Not For Reproduction

Electrical Schematic - PTO Clutch Circuit (KAV21/48, S/N: 1311-1425, KAV23/52, S/N:

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901004



Electrical Schematic - PTO Clutch Circuit (KAV21/48, S/N: 1311-1425, KAV23/52, S/N:

REF NO	PART NO	QTY	DESCRIPTION
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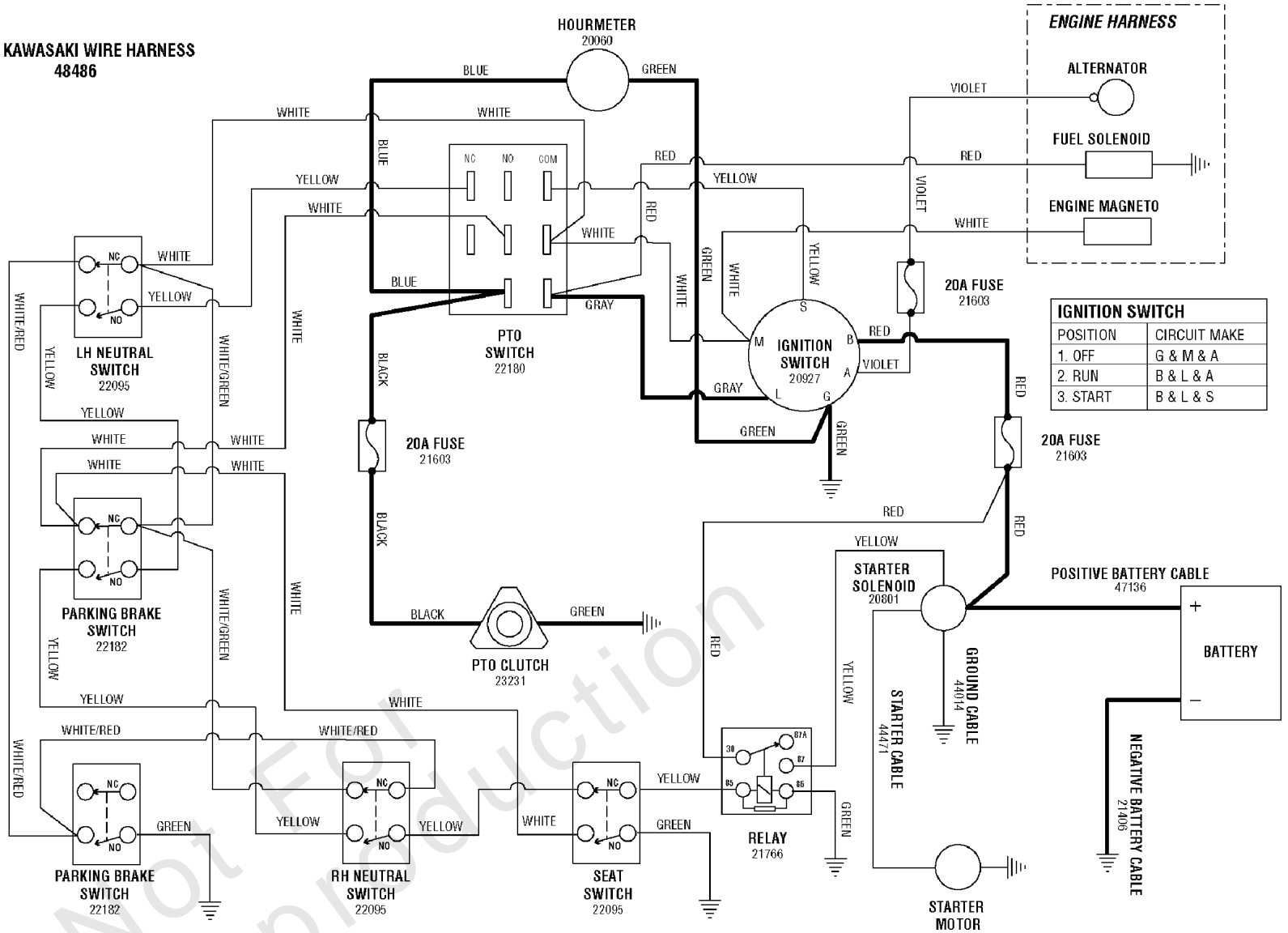
Not For Reproduction

Electrical Schematic - PTO Clutch Circuit (KAV21/48, S/N: 1426-1500, KAV23/52, S/N:

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901004

1000Z KAWASAKI WIRE HARNESS
48486



Electrical Schematic - PTO Clutch Circuit (KAV21/48, S/N: 1426-1500, KAV23/52, S/N:

REF NO	PART NO	QTY	DESCRIPTION
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Not For Reproduction

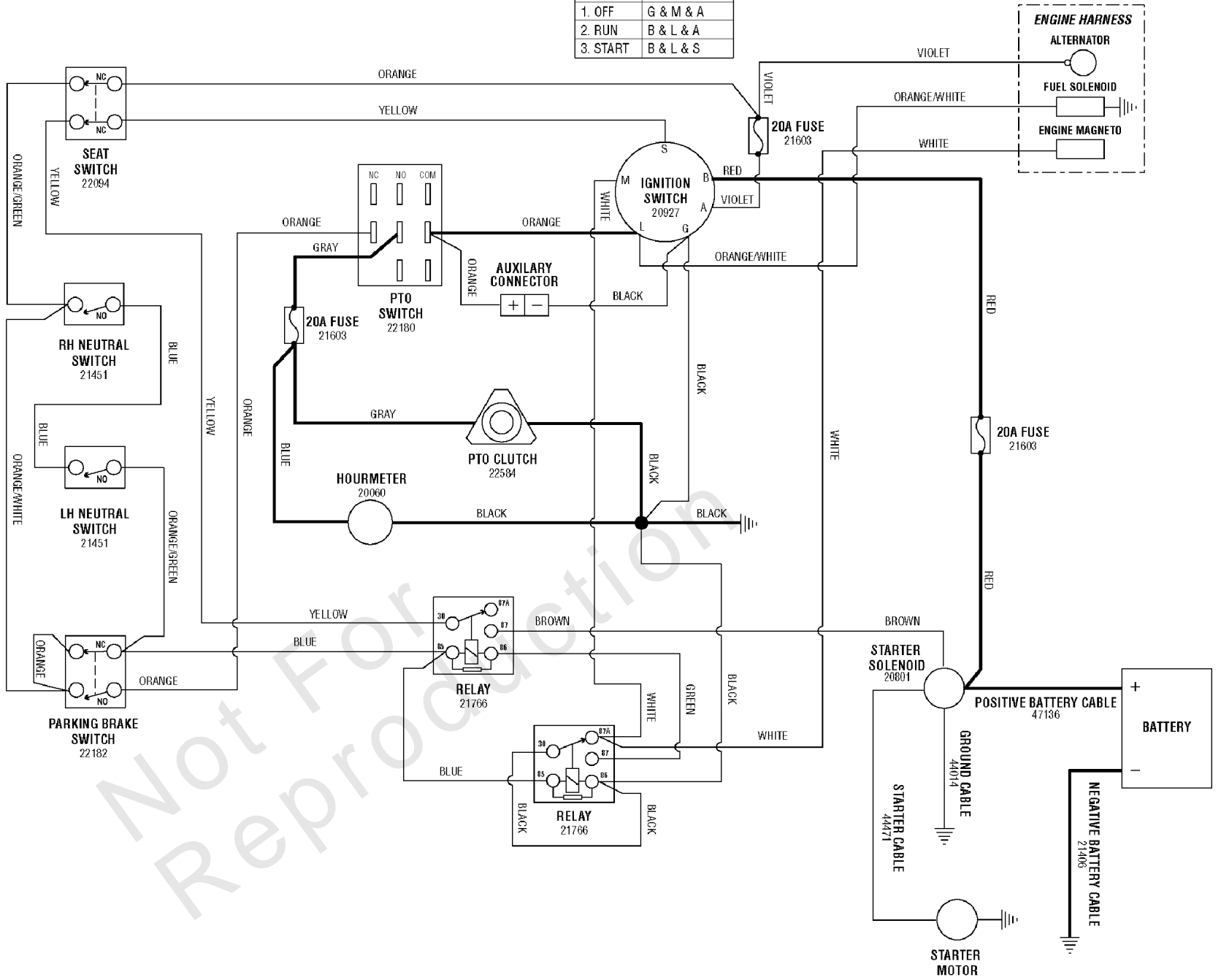
Electrical Schematic - PTO Clutch Circuit (KAV21/48, S/N: 1501 & above, KAV23/52, S/N:

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901004

1000Z KAWASAKI WIRE HARNESS
49067

IGNITION SWITCH	
POSITION	CIRCUIT MAKE
1. OFF	G & M & A
2. RUN	B & L & A
3. START	B & L & S



Electrical Schematic - PTO Clutch Circuit (KAV21/48, S/N: 1501 & above, KAV23/52, S/N:

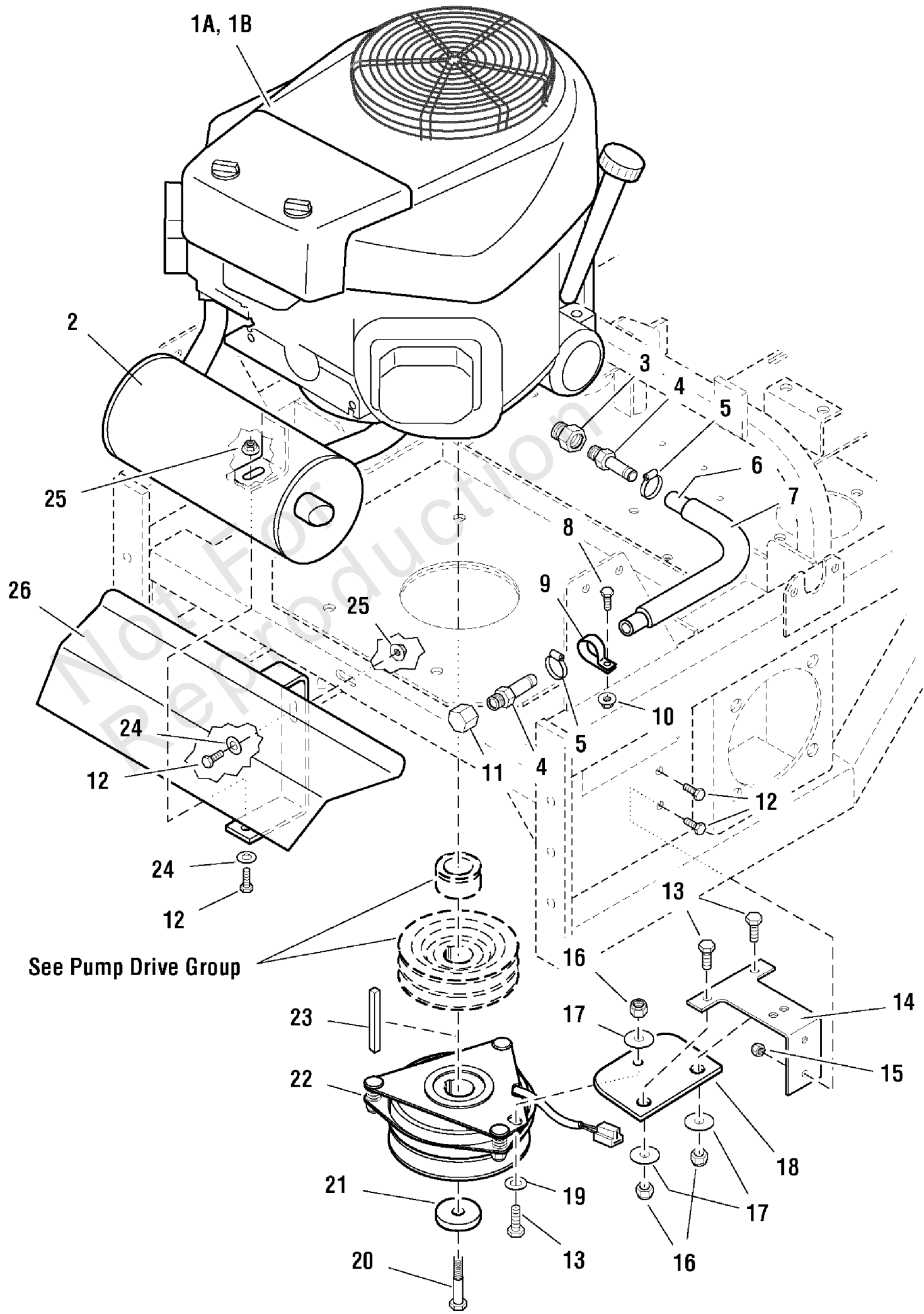
REF NO	PART NO	QTY	DESCRIPTION
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Not For Reproduction

Engine & PTO Group - Kawasaki (Early Models)

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901004



Engine & PTO Group - Kawasaki (Early Models)

REF NO	PART NO	QTY	DESCRIPTION
1a	-----	1	* ENGINE, Kawasaki (Model FH641V)
1b	-----	1	* ENGINE, Kawasaki (Model FH680V)
1b	5021178X3	1	* FUEL FILTER
1b	5021334X1	1	* OIL FILTER (49065-2078)
1b	-----	1	* FOAM PRE-CLEANER (11013-7009)
1b	-----	1	* AIR FILTER (11013-7010)
2	5022647	1	MUFFLER
3	5022234	1	ADAPTER, Oil Drain
4	5021372	2	FITTING, 3/8NPT-1/2" Hose, Straight
5	5021392	2	CLAMP, #6 Hose
6	5050857X9	1	HOSE, 9"
7	5050862X7	1	WIRE LOOM, 7"
8	5025010X6	1	BOLT, 1/4-20 x 3/4
9	5021500	1	CLAMP, Vinyl
10	5025126	1	NUT, 1/4-20 HEX SERR. FLANGE
11	5021466	1	CAP, 3/8 NPT
12	5025011X6	4	BOLT, 5/16-18 X 3/4 GD5
13	5025013X8	3	BOLT, 3/8-16 X 1" GD5 CZ
14	5047134B	1	CLUTCH ANCHOR
15	5025057	2	NUT, 5/16-18 Hex Nylon Lock
16	5025096	3	NUT, 3/8-16 HEX NYLON LOCK
17	5025165	3	WASHER, 3/8" Fender
18	5043636	1	CLUTCH ANCHOR PAD
19	5025156	1	WASHER, 3/8 SAE
20	5044853	1	CRANKSHAFT BOLT, 7/16 x 2
21	5045475	1	SPACER, .45 x 1.88 x .38
22a	5023231	1	ELECTRIC CLUTCH -(Model FH641V)
22b	5023232	1	ELECTRIC CLUTCH -(Model FH680V)
23	5050407X28	1	KEY, 1/4 SQ. X 3-1/2
24	5025155	2	WASHER, 5/16" SAE
25	5025127	2	NUT, 5/16-18 HEX SERRATED FLANGE (SMALL)
26	5046487B	1	MUFFLER SUPPORT

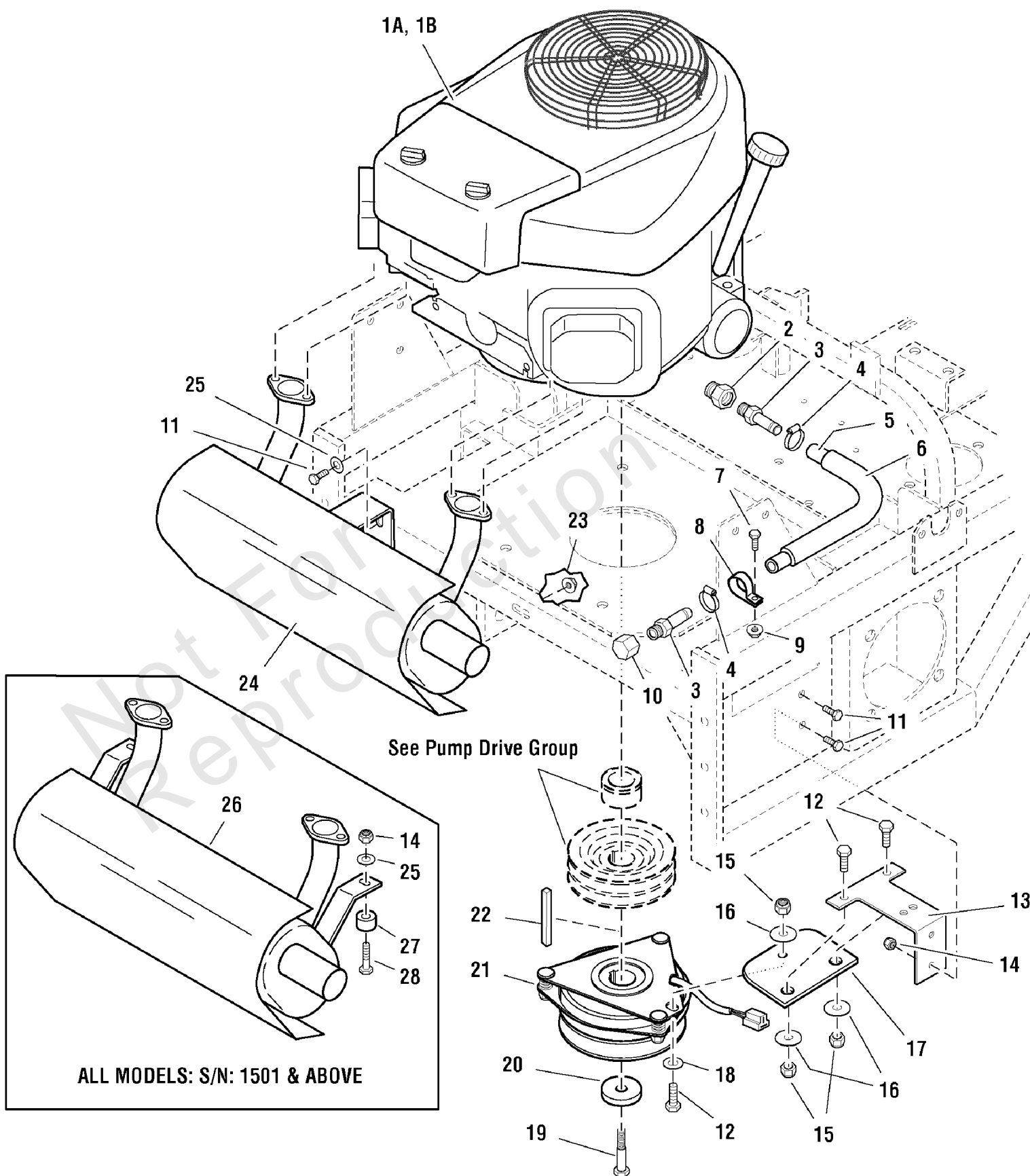
Footnotes:

- See your local Kawasaki engine dealer for parts & service.

Engine & PTO Group - Kawasaki (Later Models)

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901004



Engine & PTO Group - Kawasaki (Later Models)

REF NO	PART NO	QTY	DESCRIPTION
1a	-----	1	* ENGINE, Kawasaki (Model FH641V)
1b	-----	1	* ENGINE, Kawasaki (Model FH680V)
1b	5021178X3	1	FUEL FILTER (SV)
1b	5021334X1	1	FILTER,OIL,KAWA FX751,801,851,921,100
1b	-----	1	* FOAM PRE-CLEANER (11013-7009)
1b	-----	1	* AIR FILTER (11013-7010)
2	5022234	1	ADAPTER, Oil Drain
3	5021372	2	FITTING, 3/8NPT-1/2" Hose, Straight
4	5021392	2	CLAMP, #6 HOSE, STAINLESS
5	5050857X9	1	HOSE, 9"
6	5050862X7	1	WIRE LOOM, 3/4" ID, 7" LONG
7	5025010X6	1	BOLT, 1/4"-20 X 3/4" GD5 YZ
8	5021500	1	CLAMP, VINYL INSULATED, 1.00
9	5025126	1	NUT, 1/4-20 HEX SERR. FLANGE
10	5021466	1	CAP, 3/8" NPT
11	5025011X6	3	BOLT, 5/16-18 X 3/4 GD5
12	5025013X8	3	BOLT, 3/8-16 X 1" GD5 CZ
13	5047134B	1	CLUTCH ANCHOR
14	5025057	4	NUT, Hex, Nylon Locking, 5/16-18
15	5025096	3	NUT, 3/8-16 HEX NYLON LOCK
16	5025165	3	WASHER, 3/8" Fender
17	5043636	1	CLUTCH ANCHOR PAD
18	5025156	1	WASHER, 3/8 SAE
19	5044853	1	BOLT, CRANKSHAFT, 7/16" X 2"
20	5045475	1	SPACER, .45 x 1.88 x .38
21	5023231	1	ELECTRIC CLUTCH -(Model FH641V)
21	5023232	1	ELECTRIC CLUTCH -(Model FH680V)
22	5050407X28	1	KEY, 1/4" SQ. X 3-1/2"
23	5025127	1	NUT, 5/16-18 HEX SERRATED FLANGE (SMALL)
24	5022953	1	NLA - USE 5100975 (1), 5025057 (2), 5025155 (2), 5043815 (2) & 5025011X12 (2)
25	5025155	2	WASHER, 5/16" SAE
26	5100975	1	MUFFLER, 21HP-25HP KAWASAKI ENGINES
27	5043815	2	SPACER, .39 X 1.00 X .75, CZ
28	5025011X12	2	BOLT, 5/16-18 X 1-1/2" GD5 YZ

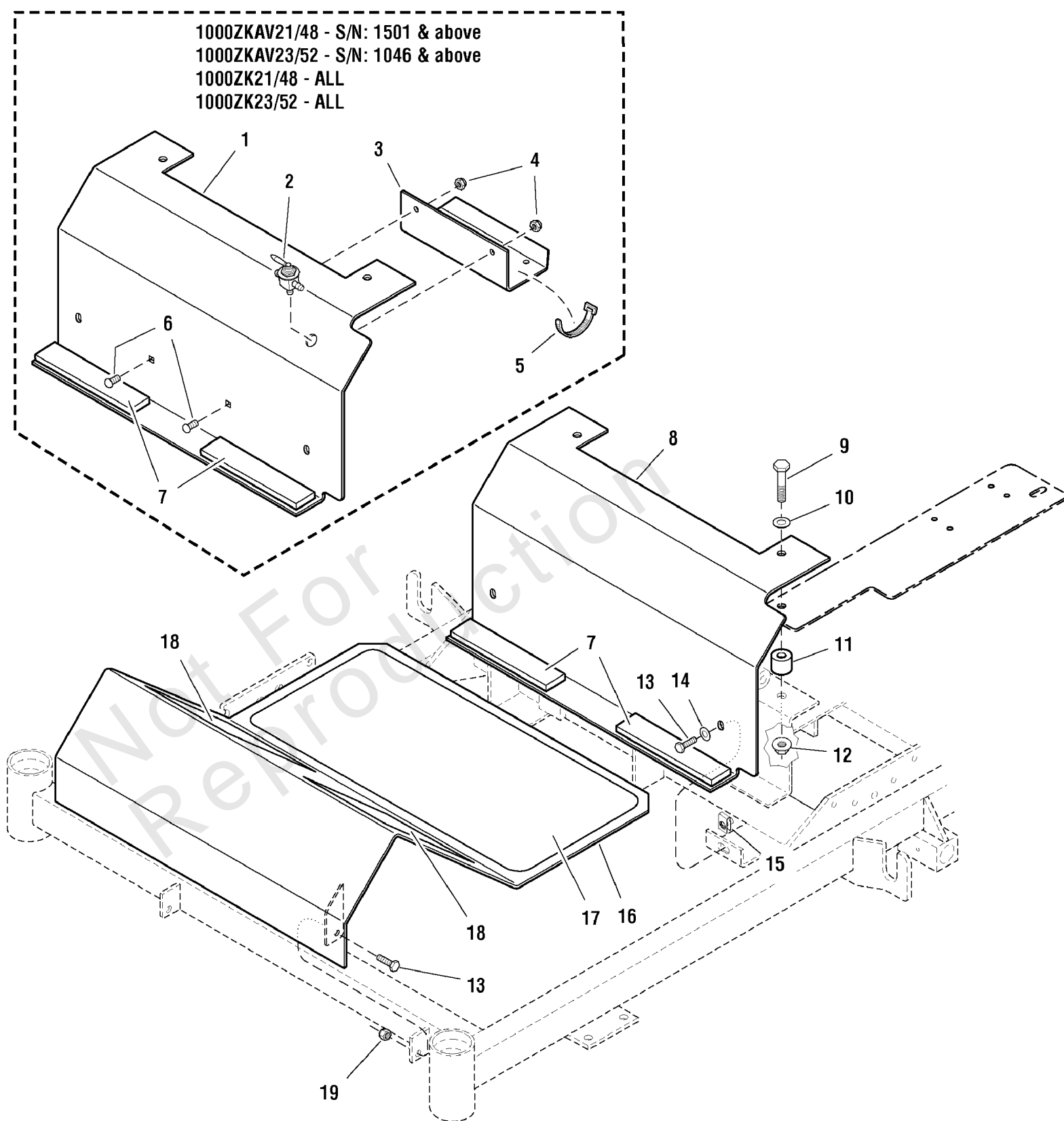
Footnotes:

- See your local Kawasaki engine dealer for parts & service.

Floor Pan & Brake Cover Group - S/N: 2898 and below

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901004



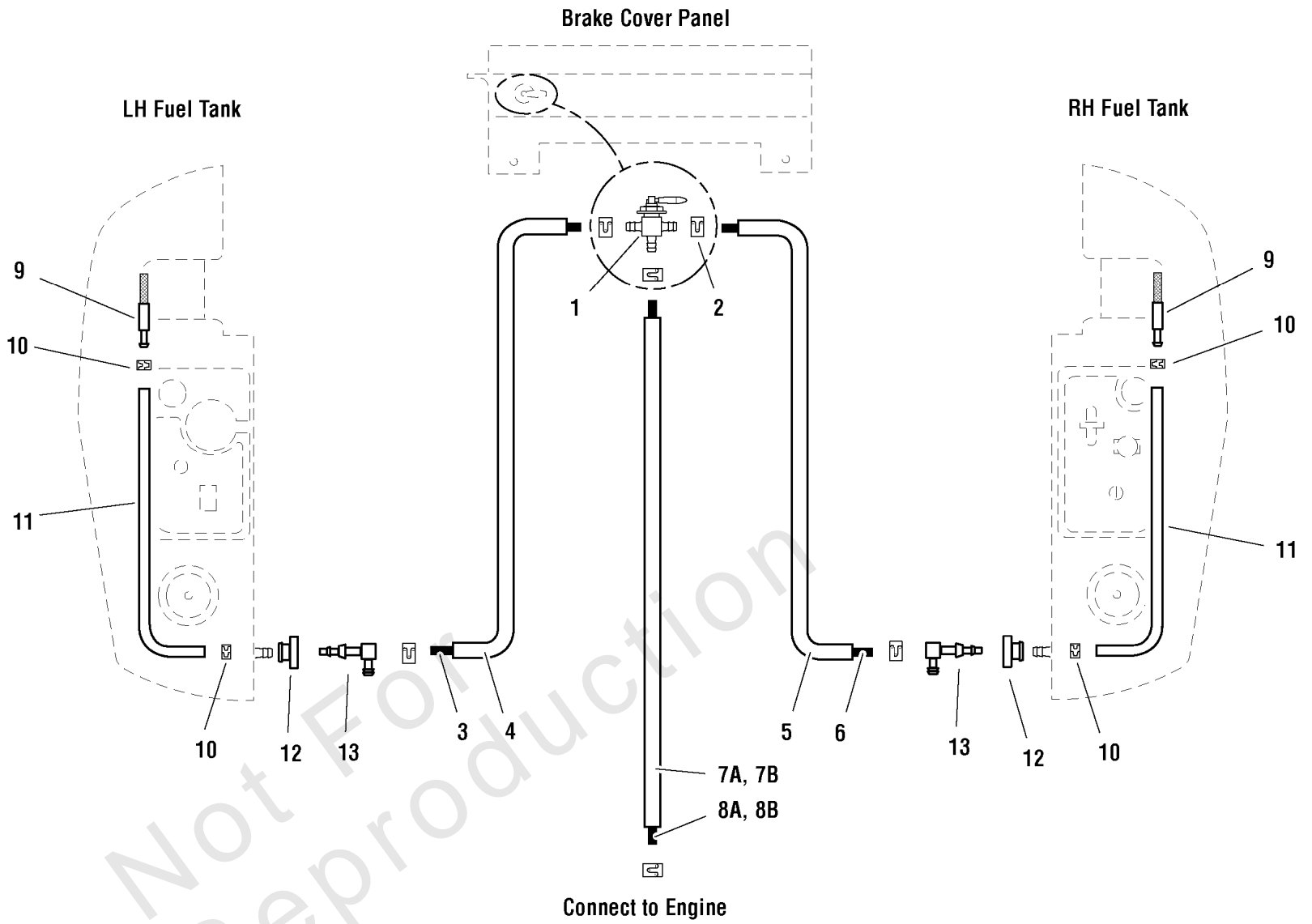
Floor Pan & Brake Cover Group - S/N: 2898 and below

REF NO	PART NO	QTY	DESCRIPTION
19	5021102	2	SPRING, COMPRESSION
20	-----	4	HHCS, 1/4-20 X 0.625, GR5, ZINC/CLEAR
21	5025154	4	WASHER, 1/4 SAE
22	5403486B	2	BRACKET, SWITCH MOUNT - RED
23	5025126	4	NUT, 1/4-20 HEX SERR. FLANGE
24	5403180B	2	PLATE, NEUTRAL LOCK - RED
25	5100940	2	DAMPENER, CONTROL,#(P6709/P3610)
26	5100941	4	BALL STUD, 5/16 X .50,# PC-477-2)
27	5021499	2	BEARING, FLANGE
28	5047004A	2	MOUNT, CONTROL ARM - BLK -(9.0" Total Length, 4 Adjustment Holes)
29	5101381	2	ROD, HYDRO CONTROL, OUTFRONT
30	5025096	4	NUT, 3/8-16 HEX NYLON LOCK
31	5025011X8	4	BOLT, 5/16-18 X 1 GD5 YZ
32	5025170	4	WASHER, 5/16 LOCK CZ
33	5025327	4	BOLT, 3/8-16 X 1-1/4 SHCS
34	5025013X14	4	BOLT, 3/8-16 X 1-3/4" GD5 CZ
35	5025127	8	NUT, 5/16-18 HEX SERRATED FLANGE (SMALL)
36	5025394	10	NUT, 3/8-16 HEX NYLOCK FLANGE
37	5025055X16	2	BOLT, 5/16-18 X 2 GD5 TFL

Fuel Supply Hose & Tank Replacement Parts Group - See S/N Note in Drawing

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901004



Fuel Supply Hose & Tank Replacement Parts Group - See S/N Note in Drawing

REF NO	PART NO	QTY	DESCRIPTION
1	5022030	1	VALVE, Fuel Shut Off -(Refer to Note: *)
2	93807	6	CLAMP, Hose
3	5050831X68	1	1/4" Fuel Line, 68" Long
4	5050833X66	1	WIRE LOOM, 66"
5	5050833X58	1	WIRE LOOM, 58"
6	5050831X60	1	1/4" Fuel Line, 60" Long
7A	5050833X45	1	WIRE LOOM, 45" -(Kohler)
7B	5050833X58	1	WIRE LOOM, 58" -(Kawasaki)
8A	5050831X47	1	HOSE, 1/4" FUEL, 47.00" -(Kohler)
8B	5050831X60	1	1/4" Fuel Line, 60" Long -(Kawasaki)
9	-----	2	SEE HOSE ASSEMBLY
10	-----	4	SEE HOSE ASSEMBLY
11	5101217	2	ASSM, FUEL HOSE, 20" -(Includes clamp & filter)
12	1726400	2	BUSHING-FUEL TANK RED RUBBER
13	5023061	2	ELBOW FITTING

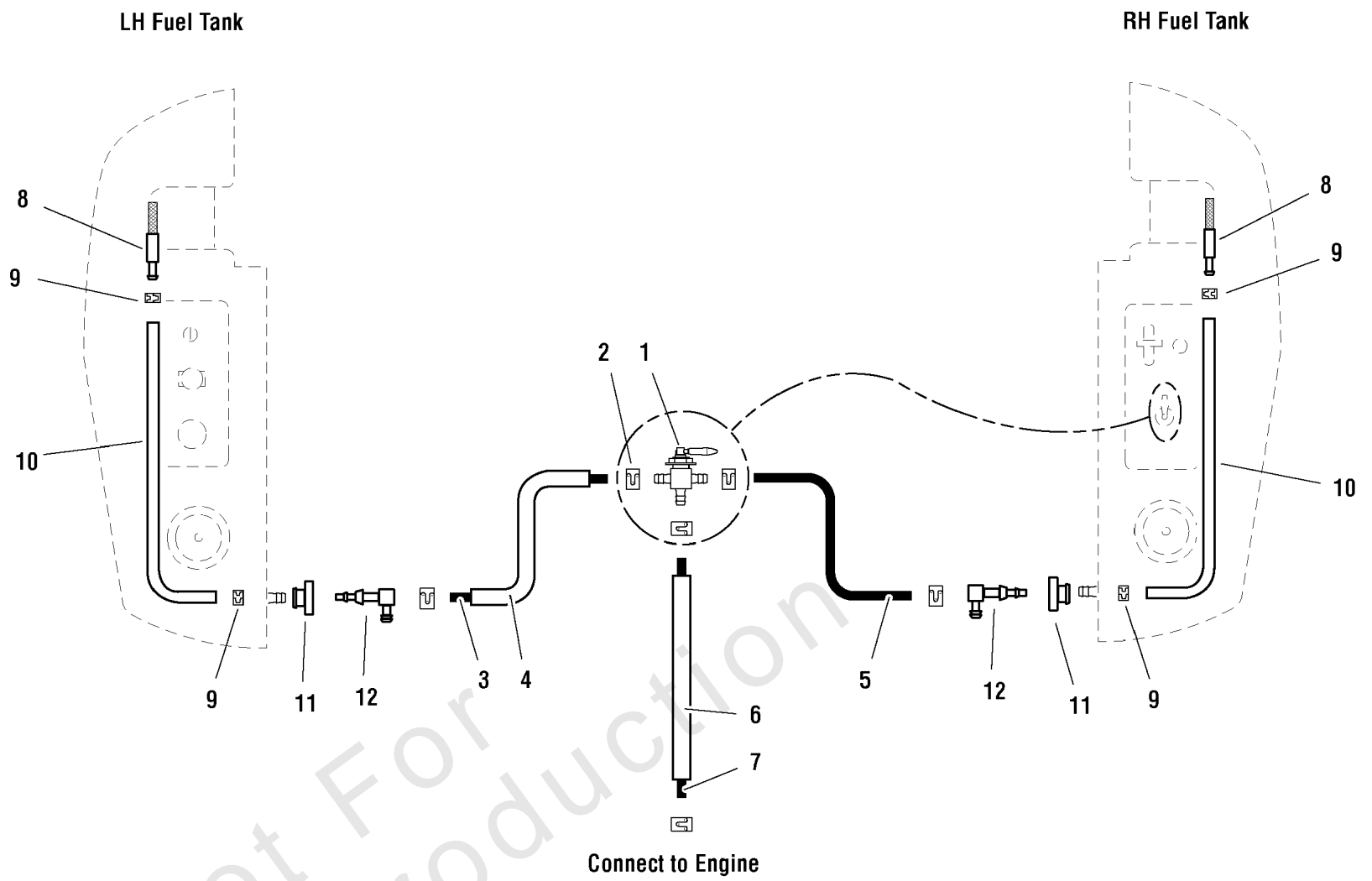
Footnotes:

Note: * This group applies to the following models: 1000ZKAV21/48 - S/N: 1501 to 2898; 1000zKAV23/52 - S/N: 1046 to 2898; and 1000ZKAV23/61 - S/N: 866 to 2898.

Fuel Supply Hose & Tank Replacement Parts Group (Early Models)

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901004



Fuel Supply Hose & Tank Replacement Parts Group (Early Models)

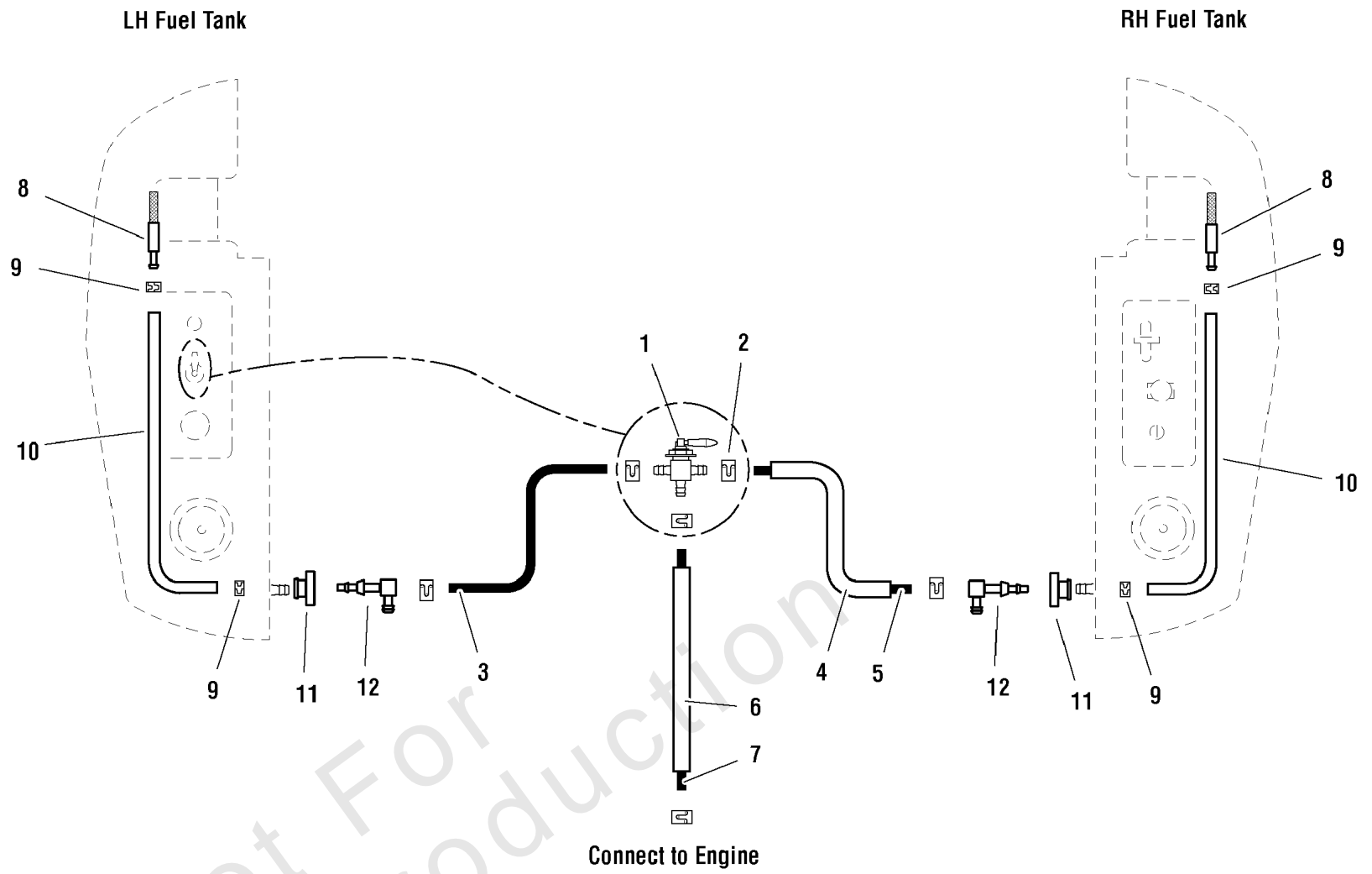
REF NO	PART NO	QTY	DESCRIPTION
1	5022030	1	VALVE, Fuel Shut Off
2	93807	6	CLAMP, Hose
3	5050831X45	1	1/4" Fuel Line, 45" Long
4	5050833X43	1	WIRE LOOM, 43"
5	5050831X6P5	1	1/4" Fuel Line, 6-1/2" Long
6	5050833X40	1	WIRE LOOM, 40"
7	5050831X42	1	1/4" Fuel Line, 42" Long
8	-----	2	SEE HOSE ASSEMBLY
9	-----	4	SEE HOSE ASSEMBLY
10	5101217	2	ASSM, FUEL HOSE, 20" -(Includes clamp & filter)
11	1726400	2	BUSHING-FUEL TANK RED RUBBER
12	5023061	2	ELBOW FITTING

Not For Reproduction

Fuel Supply Hose & Tank Replacement Parts Group (Middle Models)

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901004



Fuel Supply Hose & Tank Replacement Parts Group (Middle Models)

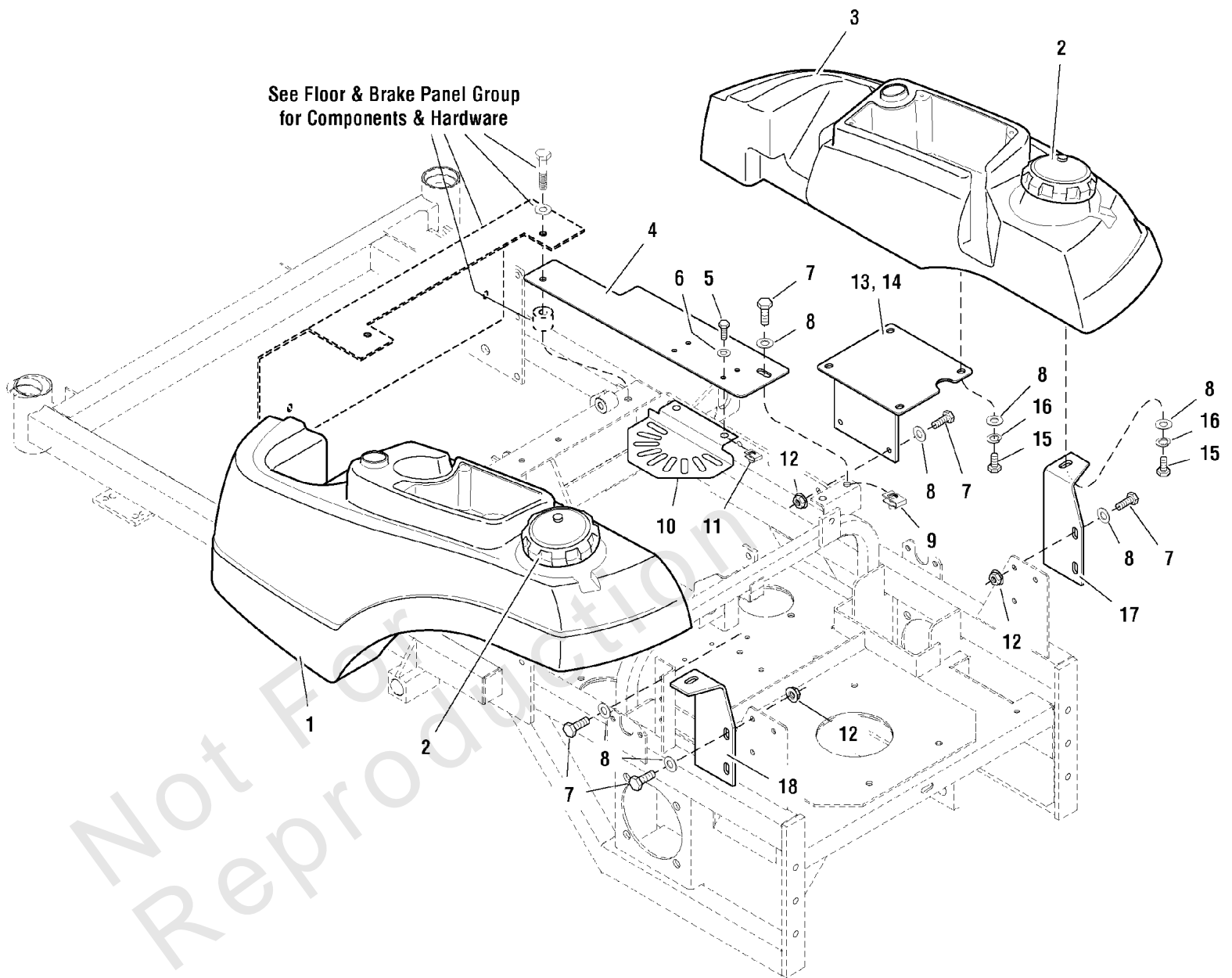
REF NO	PART NO	QTY	DESCRIPTION
1	5022030	1	VALVE, Fuel Shut Off
2	93807	6	CLAMP, Hose
3	5050831X7P5	1	1/4" Fuel Line, 7-1/2" Long
4	5050833X34	1	WIRE LOOM, 34"
5	5050831X36	1	1/4" Fuel Line, 36" Long
6	5050833X46	1	WIRE LOOM, 46"
7	5050831X48	1	1/4" Fuel Line, 48" Long
8	-----	2	SEE HOSE ASSEMBLY
9	-----	4	SEE HOSE ASSEMBLY
10	5300047	2	ASSM, FUEL HOSE, 26 -(Includes clamps & filter)
11	1726400	2	BUSHING-FUEL TANK RED RUBBER
12	5023061	2	ELBOW FITTING

Not For Reproduction

Fuel Tank & Mount Group - See S/N Note in Drawing

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901004



Fuel Tank & Mount Group - See S/N Note in Drawing

REF NO	PART NO	QTY	DESCRIPTION
1	5049115	1	FUEL TANK, 1000Z, LH -(Refer to Note: *)
1	5046273	1	Filler Neck
2	5022158	2	CAP, FUEL TANK, 3-1/2 NECK
3	5049116	1	FUEL TANK, 1000Z, RH
3	5046273	1	Filler Neck
4	5047073B	2	COVER, Fan Shield Mount
5	5025010X6	4	BOLT, 1/4-20 x 3/4
6	5025154	4	WASHER, 1/4 SAE
7	5025011X8	12	BOLT, 5/16-18 X 1 GD5 YZ
8	5025155	22	WASHER, 5/16" SAE
9	5022308	2	BODY CLIP, 5/16-18-7GA MATERIAL
10	5046645B	2	FAN SHIELD
11	5022665	4	BODY CLIP, 1/4-20
12	5025127	10	NUT, 5/16-18 HEX SERRATED FLANGE (SMALL)
13	5047149B	1	FUEL TANK MOUNT-RH
14	5047133B	1	FUEL TANK MOUNT-LH
15	5025011X6	10	BOLT, 5/16-18 X 3/4 GD5
16	5025170	10	WASHER, 5/16 LOCK CZ
17	5047167B	1	BRACKET, Fuel Tank Support-RH
18	5047166B	1	BRACKET, Fuel Tank Support-LH

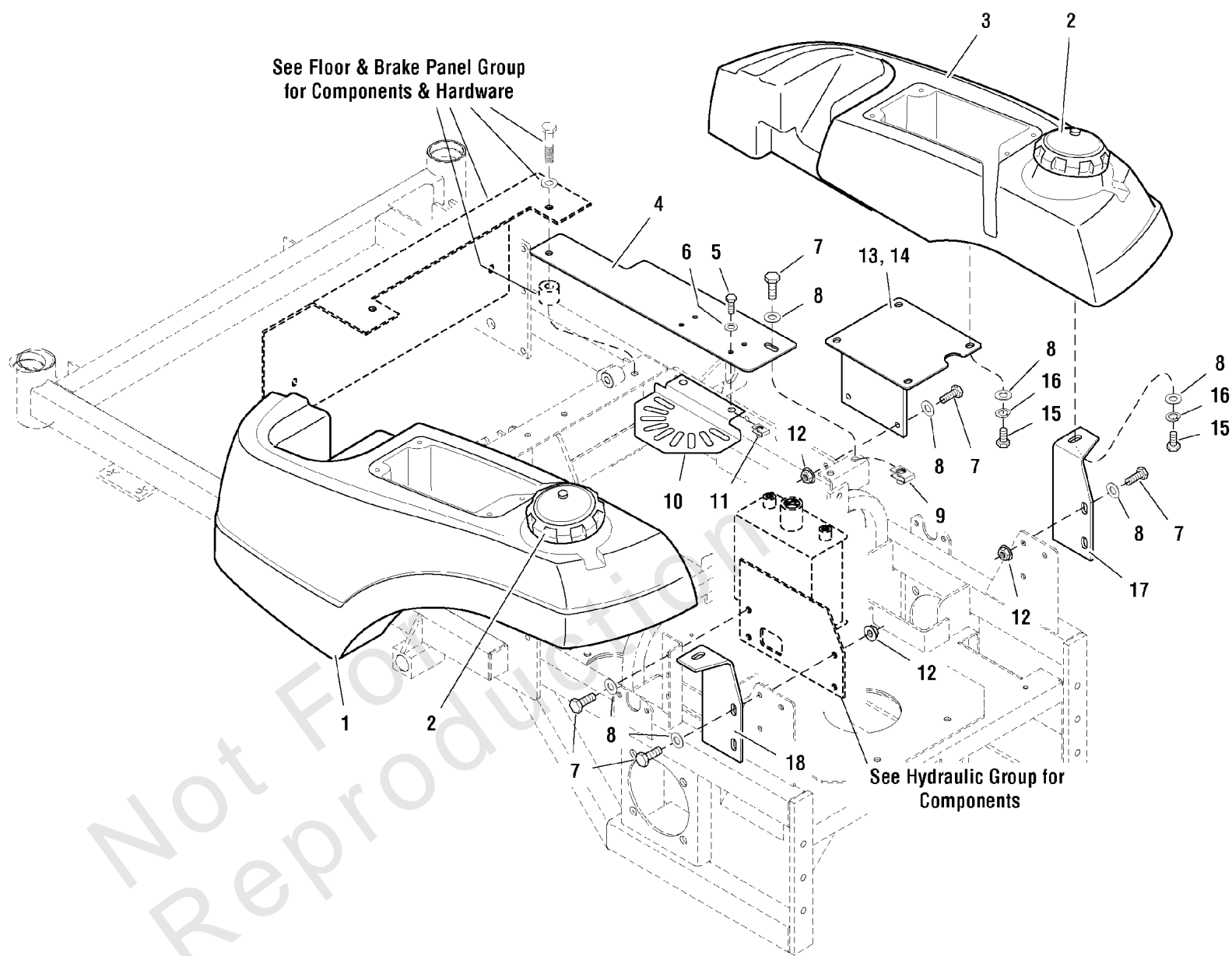
Footnotes:

Note: * This group applies to the following models: 1000ZKAV21/48 - S/N: 1501 to 2898; 1000zKAV23/52 - S/N: 1046 to 2898; and 1000ZKAV23/61 - S/N: 866 to 2898.

Fuel Tank & Mount Group (Early Models)

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901004



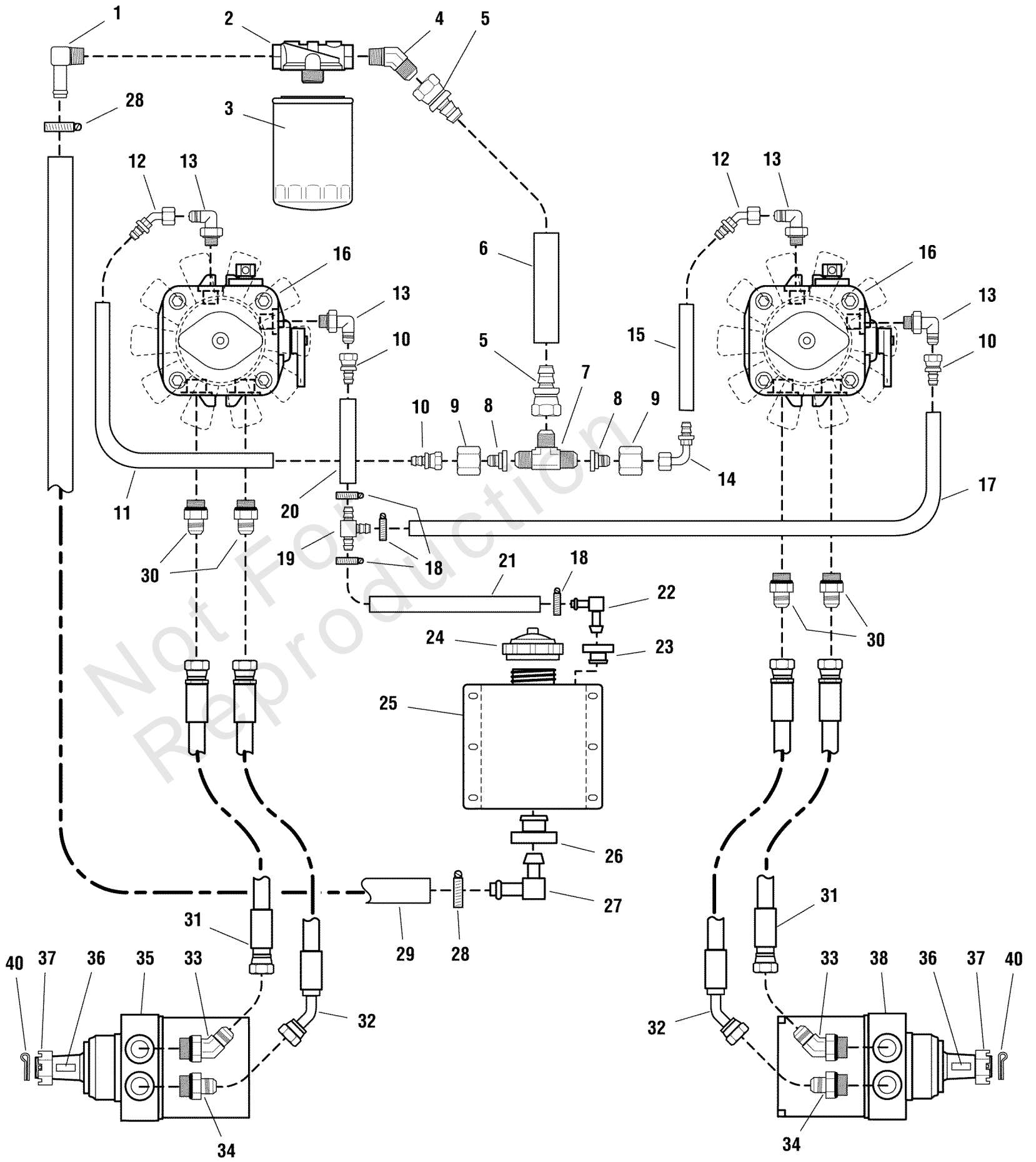
Fuel Tank & Mount Group (Early Models)

REF NO	PART NO	QTY	DESCRIPTION
1	5047118	1	FUEL TANK, 1000Z, LH
1	5046273	1	Filler Neck
2	5022158	2	CAP, FUEL TANK, 3-1/2 NECK
3	5047117	1	FUEL TANK, 1000Z, RH
3	5046273	1	Filler Neck
4	5047073B	2	COVER, Fan Shield Mount
5	5025010X6	4	BOLT, 1/4-20 x 3/4
6	5025154	4	WASHER, 1/4 SAE
7	5025011X8	12	BOLT, 5/16-18 X 1 GD5 YZ
8	5025155	22	WASHER, 5/16" SAE
9	5022308	2	BODY CLIP, 5/16-18-7GA MATERIAL
10	5047148B	2	FAN SHIELD -(48" Model, S/N: 101-440 / 52" Model, S/N: 101-340)
10	5046645B	2	FAN SHIELD -(48" Model, S/N: 441 & above / 52" Model, S/N: 341 & above / 61" Model - All)
11	5022665	4	BODY CLIP, 1/4-20
12	5025127	10	NUT, 5/16-18 HEX SERRATED FLANGE (SMALL)
13	5047149B	1	FUEL TANK MOUNT-RH
14	5047133B	1	FUEL TANK MOUNT-LH
15	5025011X6	10	BOLT, 5/16-18 X 3/4 GD5
16	5025170	10	WASHER, 5/16 LOCK CZ
17	5047167B	1	BRACKET, Fuel Tank Support-RH
18	5047166B	1	BRACKET, Fuel Tank Support-LH

Hydraulic Group - See S/N Note in Drawing

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901004



Hydraulic Group - See S/N Note in Drawing

REF NO	PART NO	QTY	DESCRIPTION
1	5021233	1	FITTING, 1/2" NPT, 90 Deg. -(Refer to Note: *)
2	5021356	1	FILTER HEAD
3	5021357X1	1	FILTER, HYDRAULIC, SERVICE PART (PKG)
4	5022720	1	FITTING, 1/2" NPT, 45 Deg.
5	5022719	2	FITTING, Straight Swivel
6	5050933X7P5	1	HOSE, Hydraulic, 7-1/2"
7	5022718	1	FITTING, Tee
8	5022716	2	ADAPTER, Tee
9	5022717	2	NUT, Adapter
10	5022713	3	FITTING, Straight Swivel
11	5050860X13P75	1	HOSE, Hydraulic, 13-3/4"
12	5022714	2	FITTING, 45 Deg. Swivel
13	5022712	4	FITTING, O-Ring, 90 Deg.
14	5022715	1	FITTING, 90 Deg. Swivel
15	5050860X6P75	1	HOSE, Hydraulic, 6-3/4"
16	5022571	2	HYDRAULIC PUMP, 10CC, w/ FAN
16	5022571X1	2	HUB & FAN KIT
17	5050860X16P5	1	HOSE, Hydraulic, 16-1/2"
18	5021392	4	CLAMP, #6 Hose
19	5022920	1	FITTING, TEE, 3/8" Hose
20	5050860X6	1	HOSE, Hydraulic, 6"
21	5050860X17P5	1	HOSE, Hydraulic, 17-1/2"
22	5023118	1	FITTING, Elbow, 3/8"
23	5023120	1	GROMMET
24	5023191	1	CAP, Hydraulic Oil Only
25	5048111	1	HYDRAULIC OIL RESERVOIR, Complete -(Includes Ref. No. 22, 23, 26 & 27)
26	5023121	1	GROMMET
27	5023119	1	FITTING, Elbow, 5/8"
28	5021164	2	CLAMP, #10 Hose
29	5050933X18	1	HOSE, Hydraulic, 18"
30	5022633	4	FITTING, O-Ring Adapter
31	5102094	2	HOSE ASSEMBLY, (21), HP, ST X ST
32	5022710	2	HYDRAULIC HOSE ASSEMBLY, 25"
33	5022709	2	FITTING, O-Ring, 45 Deg.
34	5022634	2	FITTING, O-Ring Adapter
35	5022974L	1	HYDRAULIC WHEEL MOTOR-LEFT, Complete -(Includes Ref No. 36 & 37)
36	5022042X2	2	KEY
37	5022042X3	2	NUT, CASTLE, 1-20
38	5022974R	1	HYDRAULIC WHEEL MOTOR-RIGHT, Complete -(Includes Ref No. 36 & 37)
40	5025203X16	2	PIN, COTTER, 1/8" X 2"

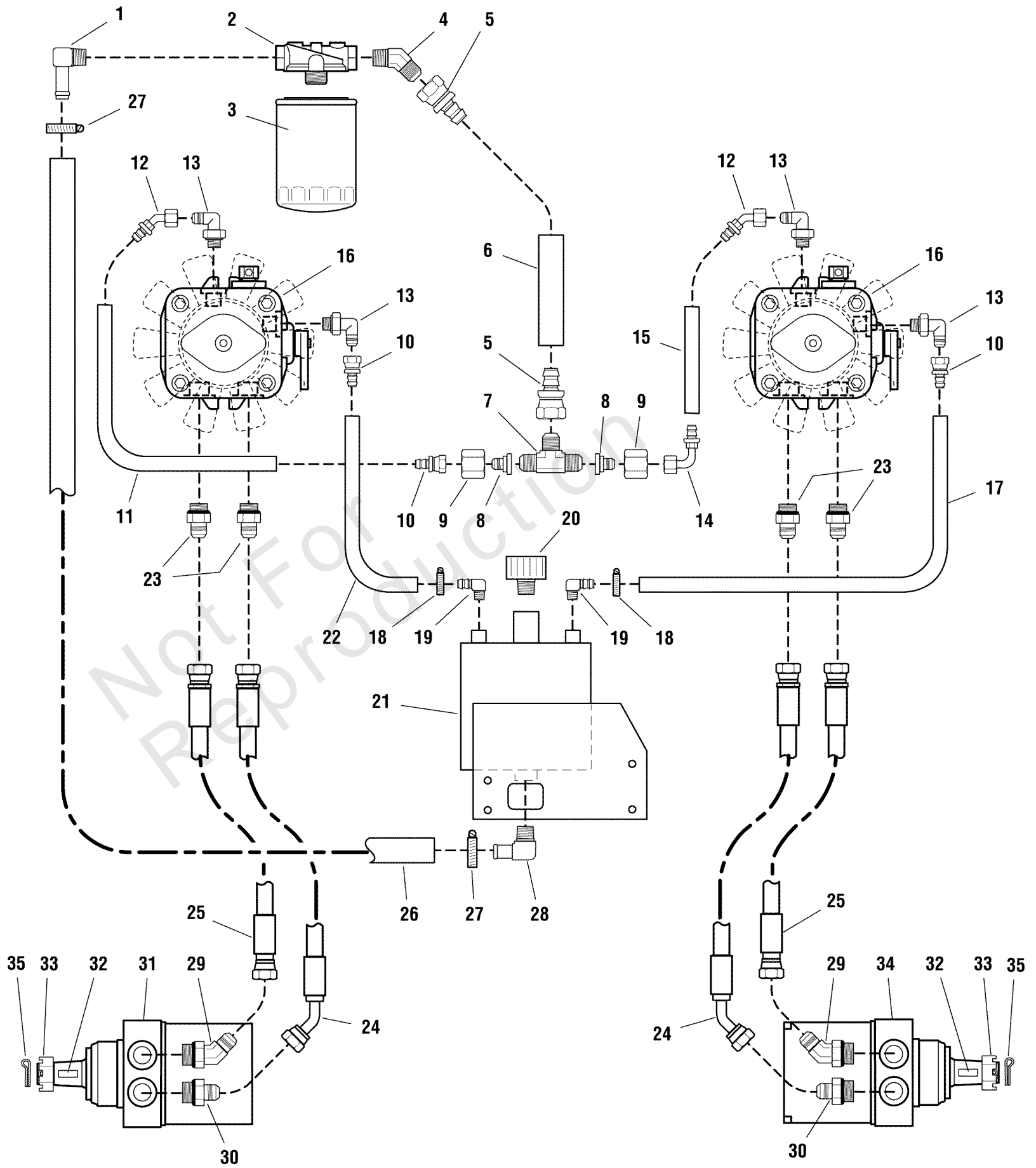
Footnotes:

Note: * This group applies to the following models: 1000ZKAV21/48 - S/N: 1501 to 2898; 1000zKAV23/52 - S/N: 1046 to 2898; and 1000ZKAV23/61 - S/N: 866 to 2898.

Hydraulic Group (Early Models)

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901004



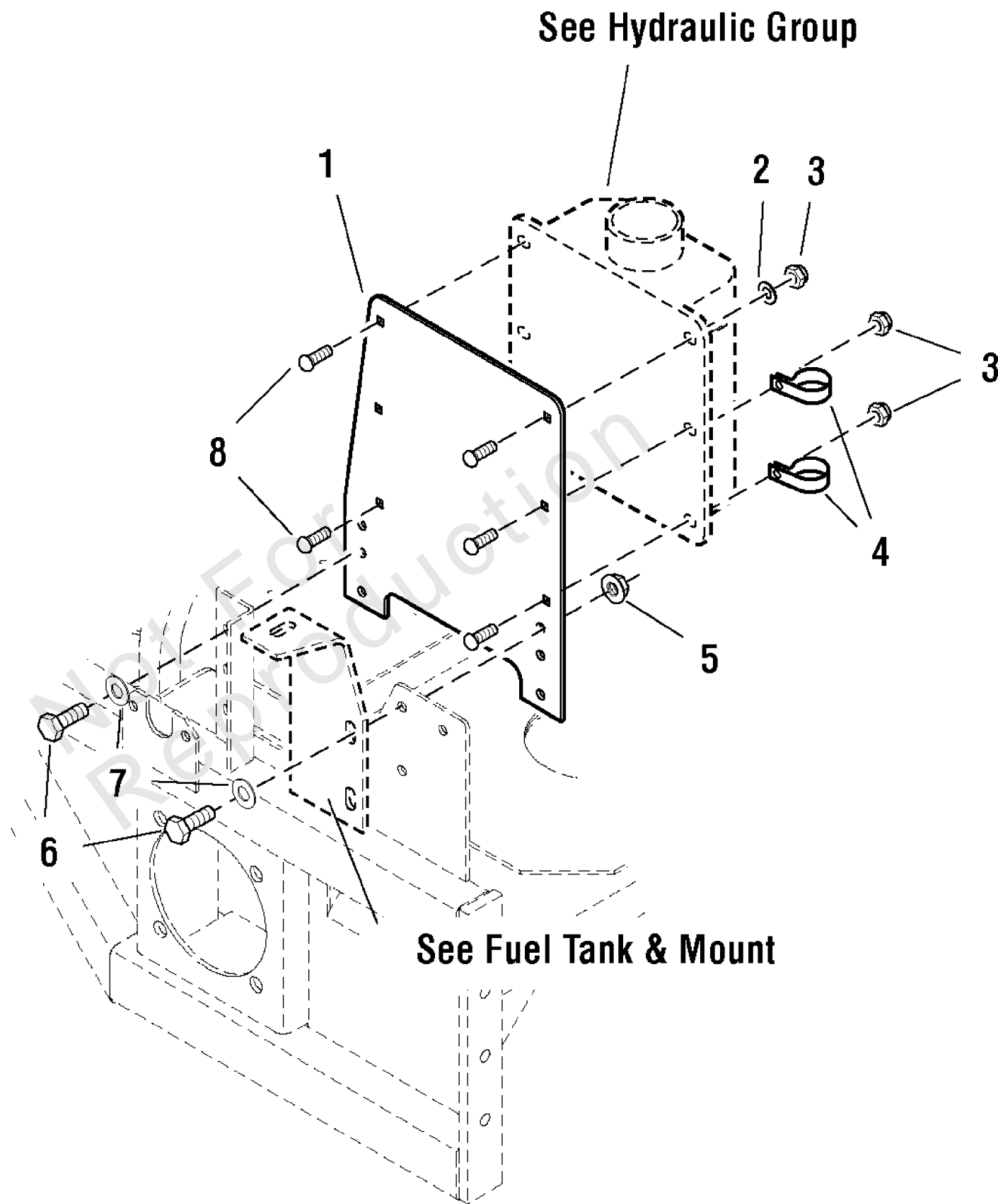
Hydraulic Group (Early Models)

REF NO	PART NO	QTY	DESCRIPTION
1	5021233	1	FITTING, 1/2" NPT, 90 Deg.
2	5021356	1	FILTER HEAD
3	5021357X1	1	FILTER, HYDRAULIC, SERVICE PART (PKG)
4	5022720	1	FITTING, 1/2" NPT, 45 Deg.
5	5022719	2	FITTING, Straight Swivel
6	5050933X7P5	1	HOSE, Hydraulic, 7-1/2"
7	5022718	1	FITTING, Tee
8	5022716	2	ADAPTER, Tee
9	5022717	2	NUT, Adapter
10	5022713	3	FITTING, Straight Swivel
11	5050860X13P75	1	HOSE, Hydraulic, 13-3/4"
12	5022714	2	FITTING, 45 Deg. Swivel
13	5022712	4	FITTING, O-Ring, 90 Deg.
14	5022715	1	FITTING, 90 Deg. Swivel
15	5050860X6P75	1	HOSE, Hydraulic, 6-3/4"
16	5022571	2	HYDRAULIC PUMP, 10CC, w/ FAN
16	5022571X1	2	HUB & FAN KIT
17	5050860X29	1	HOSE, Hydraulic, 29"
18	5021392	2	CLAMP, #6 Hose
19	5022708	2	FITTING, 1/4" NPT, 90 Deg.
20	5022705	1	BREATHER, FILTER
21	5047108B	1	HYDRAULIC RESERVOIR
22	5050860X20	1	HOSE, Hydraulic, 20"
23	5022633	4	FITTING, O-Ring Adapter
24	5022710	2	HYDRAULIC HOSE ASSEMBLY, 25"
25	5102094	2	HOSE ASSEMBLY, (21), HP, ST X ST
26	5050933X16P5	1	HOSE, Hydraulic, 16-1/2"
27	5021164	2	CLAMP, #10 Hose
28	5022707	1	FITTING, 1/2" NPT, 90 Deg.
29	5022709	2	FITTING, O-Ring, 45 Deg.
30	5022634	2	FITTING, O-Ring Adapter
31	5022662L	1	HYDRAULIC WHEEL MOTOR-LEFT, Complete -(Includes Ref No. 32 & 33)
32	5022042X2	2	KEY
33	5022042X3	2	NUT, CASTLE, 1-20
34	5022662R	1	HYDRAULIC WHEEL MOTOR-RIGHT, Complete -(Includes Ref No. 32 & 33)
35	5025203X16	2	PIN, COTTER, 1/8" X 2"

Hydro Tank Mount Group - S/N: 2898 and below

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901004



Hydro Tank Mount Group - S/N: 2898 and below

REF NO	PART NO	QTY	DESCRIPTION
1	5048351B	1	PLATE, Tank Mount -(Refer to Note: *)
2	5025154	3	WASHER, 1/4 SAE
3	5025095	5	NUT, 1/4-20 HEX NYLON LOCK
4	5021500	2	CLAMP, Vinyl
5	5025127	4	NUT, 5/16-18 HEX SERRATED FLANGE (SMALL)
6	5025011X8	4	BOLT, 5/16-18 X 1 GD5 YZ
7	5025155	4	WASHER, 5/16" SAE
8	80003518	5	BOLT, 1/4-20X0.750,GR5,STD NECK,SQ,ZC/CL

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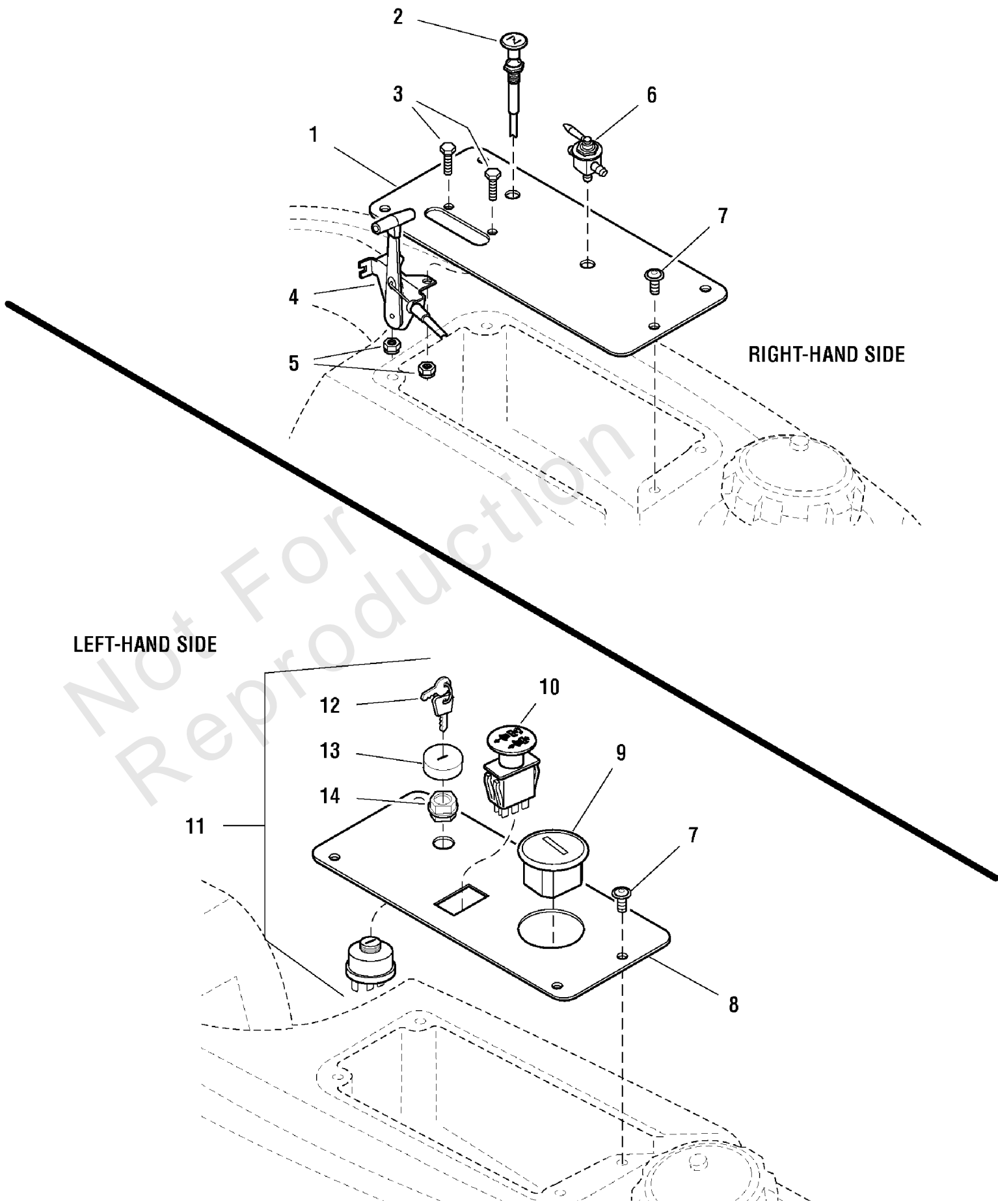
Footnotes:

Note: * This group applies to the following models: 1000ZKAV21/48 - S/N: 1501 to 2898; 1000zKAV23/52 - S/N: 1046 to 2898; and 1000ZKAV23/61 - S/N: 866 to 2898.

Instrument & Control Panel Group (Early Models)

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901004



Instrument & Control Panel Group (Early Models)

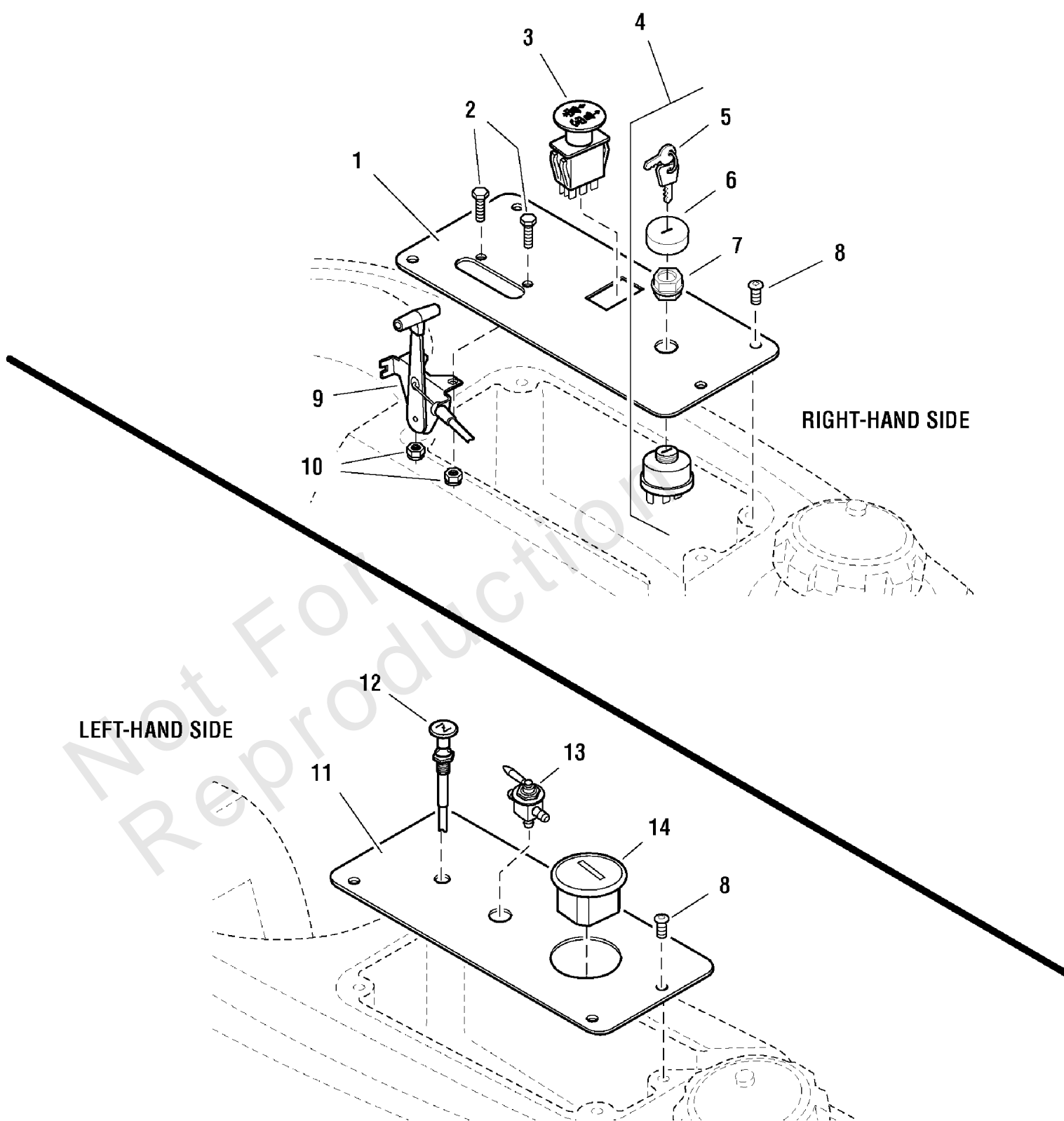
REF NO	PART NO	QTY	DESCRIPTION
1	5047140B	1	PANEL, Control - RH
2	5047143	1	CABLE, Choke Control
3	5025010X6	2	BOLT, 1/4-20 x 3/4
4	5020811	1	CABLE, Throttle, 38"
5	5025126	2	NUT, 1/4-20 HEX SERR. FLANGE
6	5022030	1	VALVE, Fuel Shut Off
7	5025299X4	8	SCREW, Allen Head, 1/4-20 x 1/2
8	5046492B	1	PANEL, Control-LH
9	5020060	1	HOUR METER
10	5022180	1	SWITCH, BLADE ENGAGEMENT
11	5020927	1	SWITCH, IGNITION, 6 POST -(Includes Ref No. 12 - 14)
12	5022789	1	KEY, IGNITION MOLDED SET
13	5022790	1	COVER, PLASTIC, SNAP ON
14	5022791	1	PLASTIC NUT

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Instrument & Control Panel Group (Middle Models)

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901004



Instrument & Control Panel Group (Middle Models)

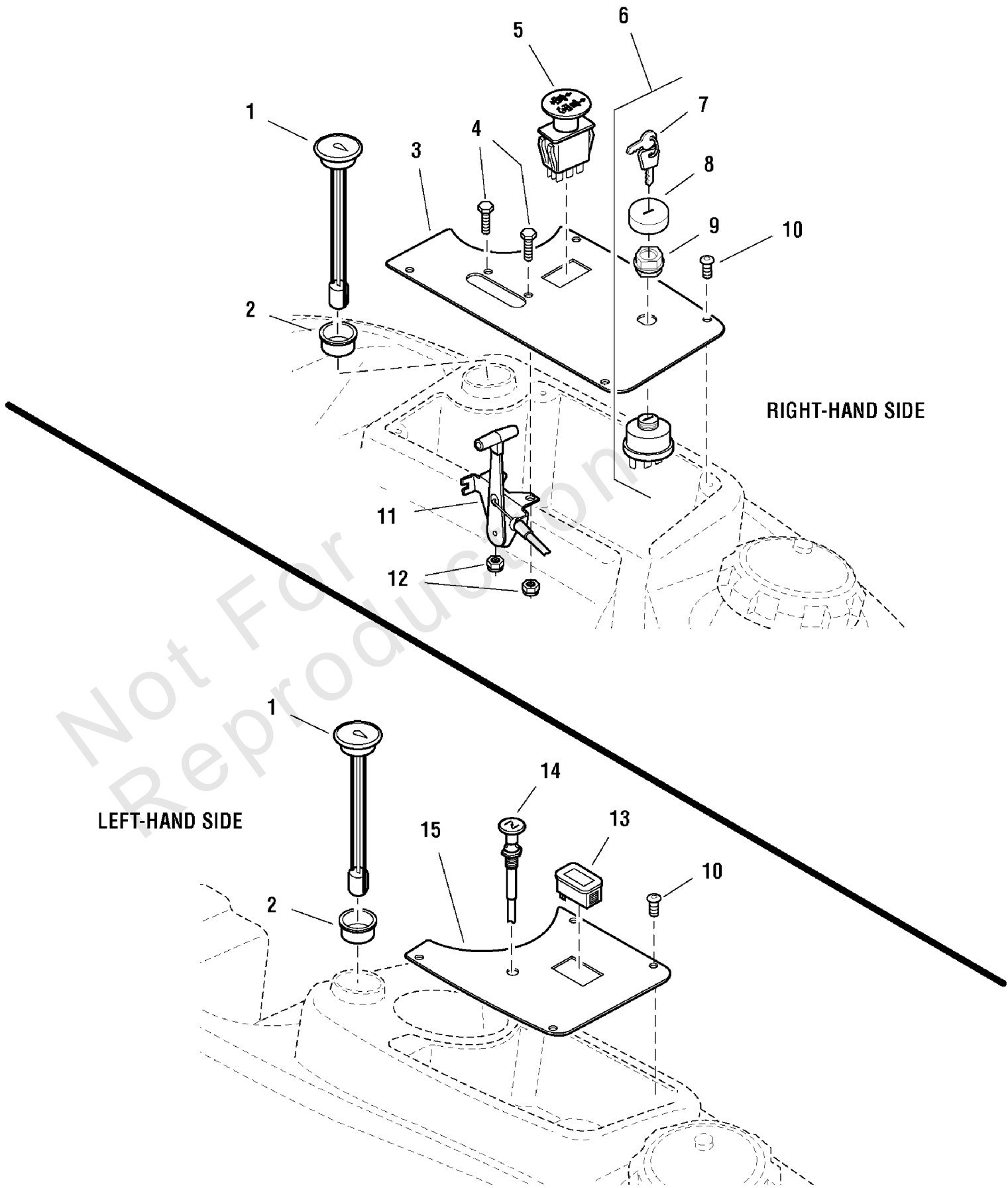
REF NO	PART NO	QTY	DESCRIPTION
1	5047858B	1	CONTROL PANEL-RH
2	5025010X6	2	BOLT, 1/4-20 x 3/4
3	5022180	1	SWITCH, BLADE ENGAGEMENT
4	5020927	1	SWITCH, IGNITION, 6 POST -(Includes Ref No. 5 - 7)
5	5022789	1	KEY, IGNITION MOLDED SET
6	5022790	1	COVER, PLASTIC, SNAP ON
7	5022791	1	PLASTIC NUT
8	5025299X4	8	SCREW, Allen Head, 1/4-20 x 1/2
9	5020811	1	CABLE, Throttle, 38"
10	5025126	2	NUT, 1/4-20 HEX SERR. FLANGE
11	5047860B	1	CONTROL PANEL-LH
12	5047779	1	CABLE, Choke Control
13	5022030	1	VALVE, Fuel Shut Off
14	5020060	1	HOUR METER

Not For Reproduction

Instrument & Control Panel Group- See S/N Note in Drawing

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901004



Instrument & Control Panel Group- See S/N Note in Drawing

REF NO	PART NO	QTY	DESCRIPTION
1	5022917	2	GAUGE, FUEL, 12 -(Refer to Note: *)
2	5022917X1	2	GROMMET
3	5049109A	1	CONTROL PANEL-RH
4	5025010X6	2	BOLT, 1/4-20 x 3/4
5	5022180	1	SWITCH, BLADE ENGAGEMENT
6	5020927	1	SWITCH, IGNITION, 6 POST -(Includes Ref No. 7 - 9)
7	5022789	1	KEY, IGNITION MOLDED SET
8	5022790	1	COVER, PLASTIC, SNAP ON
9	5022791	1	PLASTIC NUT
10	5025299X4	8	SCREW, Allen Head, 1/4-20 x 1/2
11	5020811	1	CABLE, Throttle, 38"
12	5025126	2	NUT, 1/4-20 HEX SERR. FLANGE
13	5023244	1	HOURMETER, Digital
14	5023239	1	CABLE, Choke Control, 39-1/2"
15	5049108A	1	CONTROL PANEL-LH

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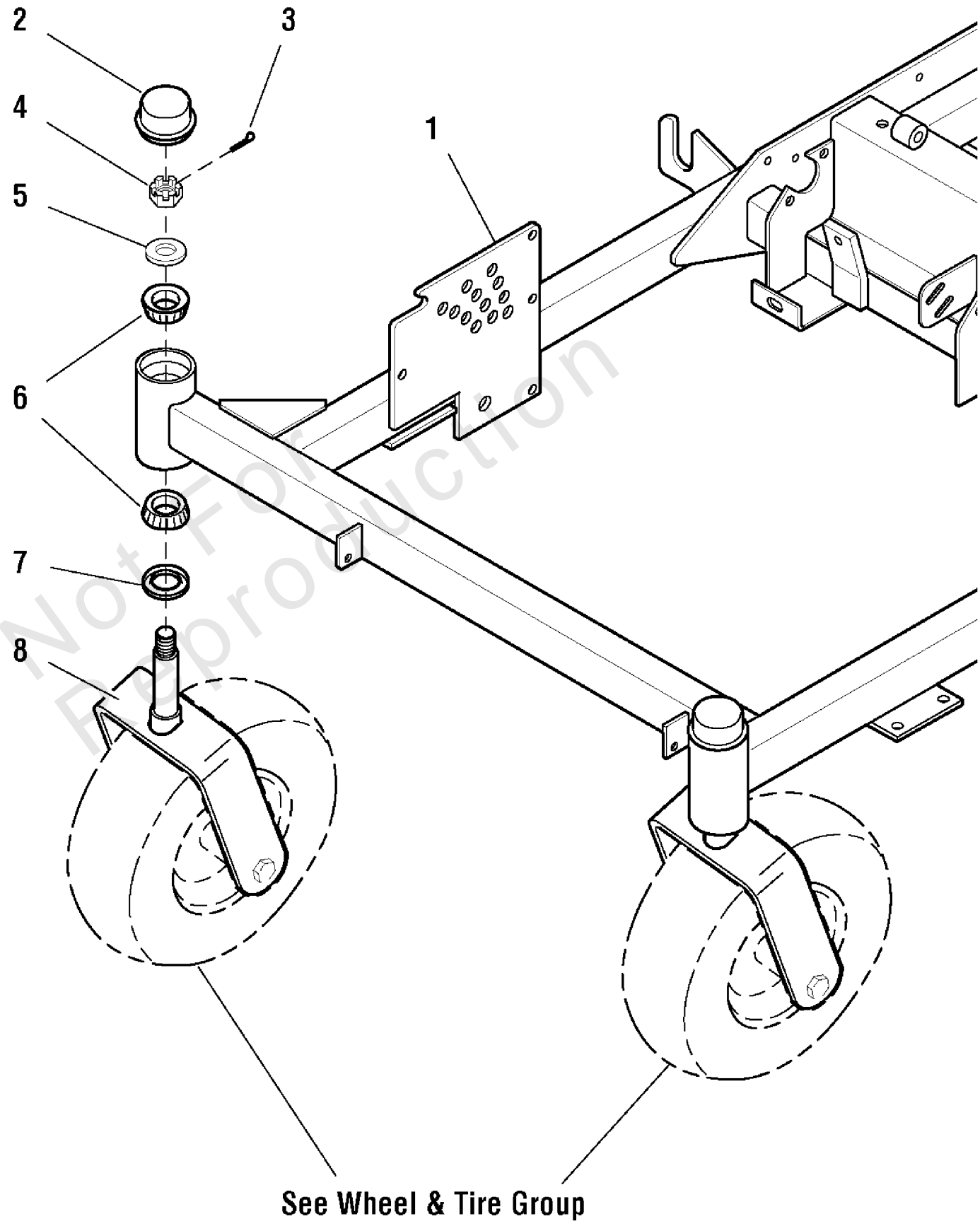
Footnotes:

Note: * This group applies to the following models: 1000ZKAV21/48 - S/N: 1501 to 2898; 1000zKAV23/52 - S/N: 1046 to 2898; and 1000ZKAV23/61 - S/N: 866 to 2898.

Main Frame Group - S/N: 2898 and below

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901004



Main Frame Group - S/N: 2898 and below

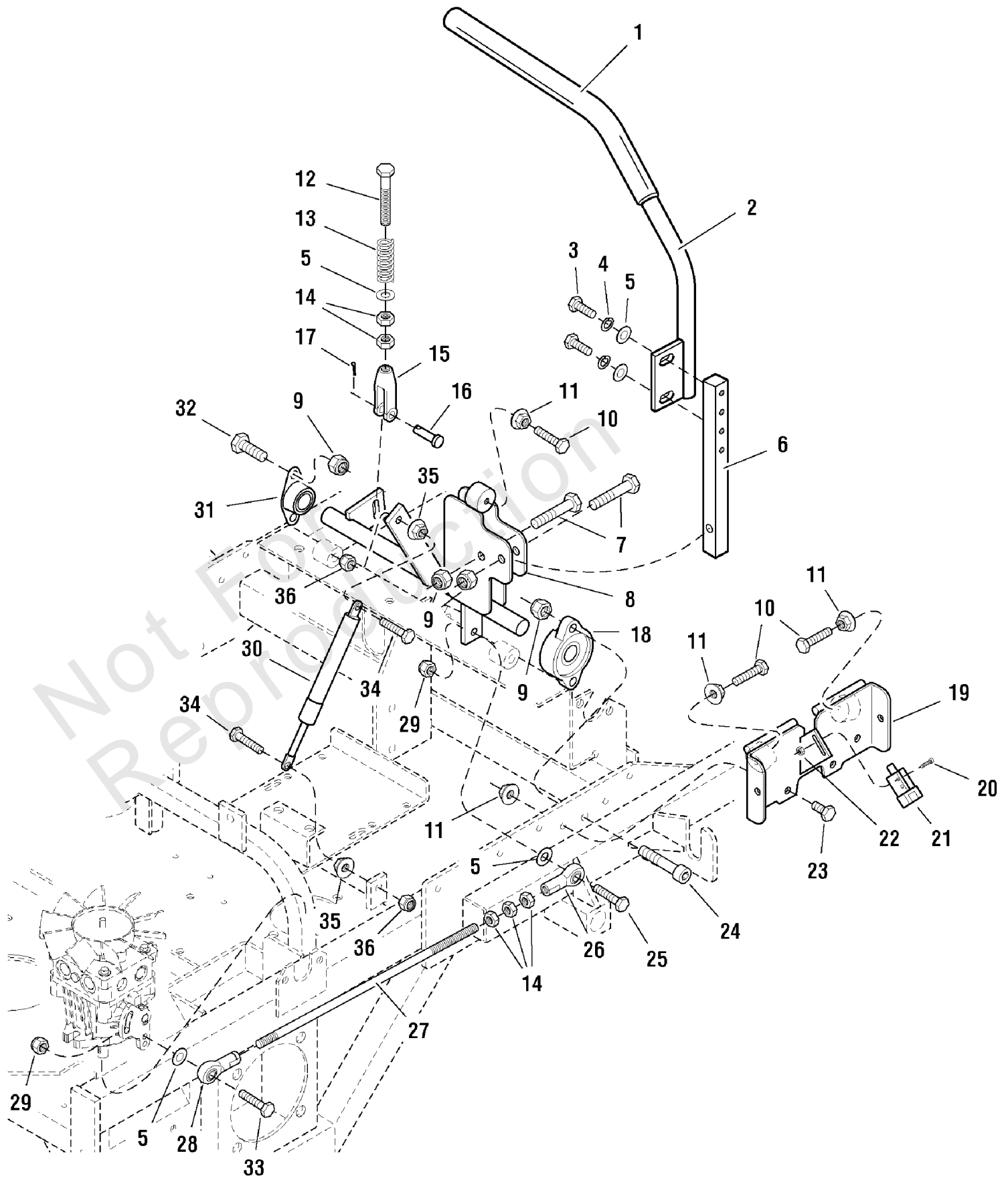
REF NO	PART NO	QTY	DESCRIPTION
1	5047007B	1	MAIN FRAME
2	5021073	2	CAP
3	5025203X10	2	PIN, COTTER, 1/8 X 1-1/4
4	5025104	2	NUT, Hex, Slotted, 3/4-16
5	5025160	2	WASHER, 3/4 SAE
6	5020884	4	BEARING, Tapered Roller
7	5021072	2	SEAL, GREASE
8	5047049B	2	CASTER YOKE

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Motion Control Group - S/N: 2898 and below

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901004



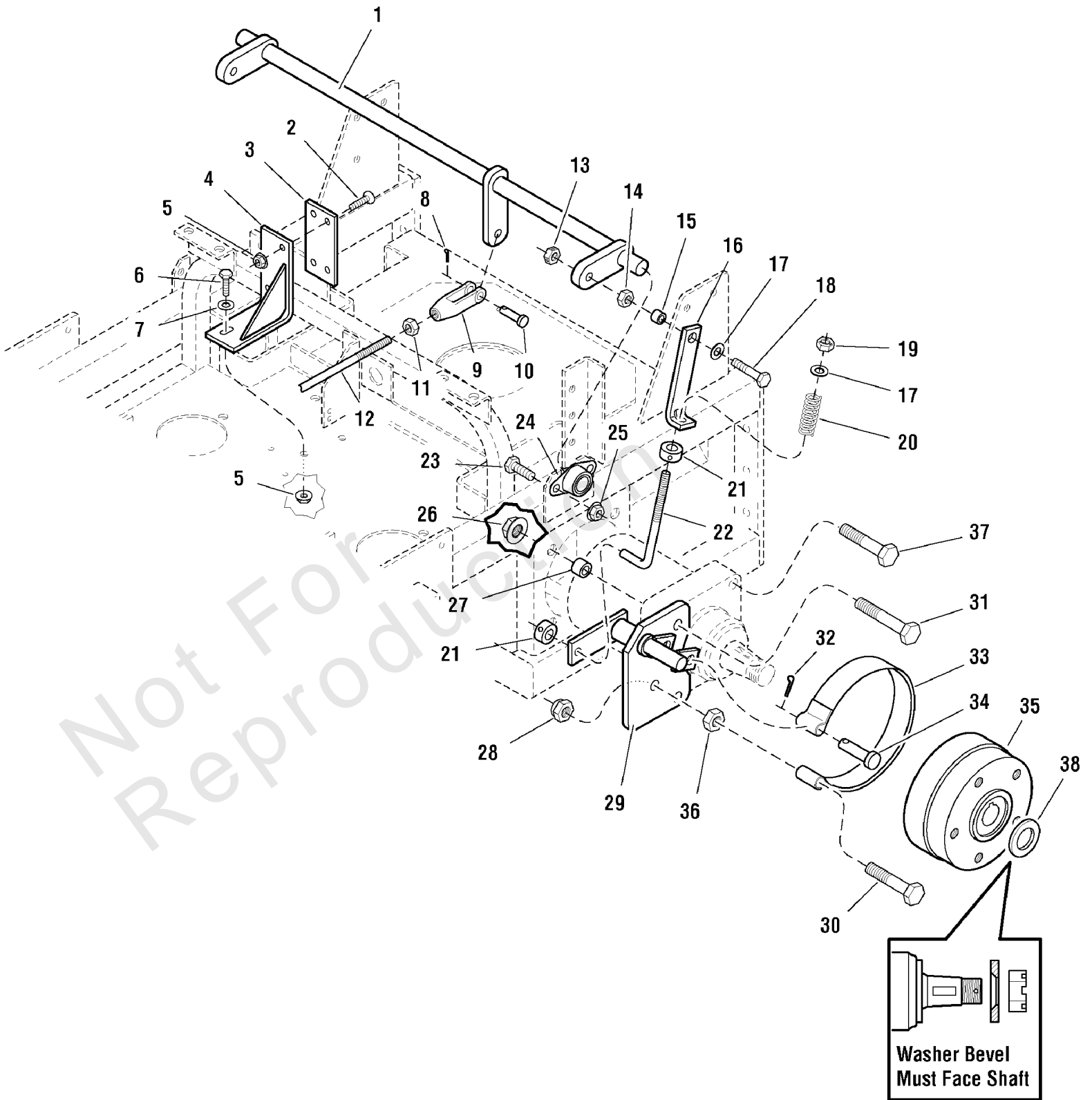
Motion Control Group - S/N: 2898 and below

REF NO	PART NO	QTY	DESCRIPTION
1	5022068	2	GRIP, Foam
2	5601285	1	KIT, HANDLE BAR REPLACE, L/R -(Kit includes handles and grips for both sides of the unit.)
2	5601285	1	KIT, HANDLE BAR REPLACE, L/R -(Not Shown)(Kit includes handles and grips for both sides of the unit.)
3	5025011X8	4	BOLT, 5/16-18 X 1 GD5 YZ
4	5025170	4	WASHER, 5/16 LOCK CZ
5	5025155	10	WASHER, 5/16" SAE
6	5047004A	2	MOUNT, CONTROL ARM - BLK -(9.0" Total Length, 4 Adjustment Holes)
7	5025013X14	4	BOLT, 3/8-16 X 1-3/4" GD5 CZ
8	5047045B	1	CONTROL SHAFT-RH
8	5047044B	1	CONTROL SHAFT-LH -(Not Shown)
9	5025096	10	NUT, 3/8-16 HEX NYLON LOCK
10	5025055X14	2	BOLT, 5/16-18 x 1-3/4 TFL
11	5025127	10	NUT, 5/16-18 HEX SERRATED FLANGE (SMALL)
12	5047137	2	REVERSE RETURN BOLT
13	5022645	2	SPRING, Compression
14	5025033	10	NUT, 5/16-24 Hex
15	5020979	2	CLEVIS, 5/16-24, Plastic
16	5025213X8	2	CLEVIS PIN, 5/16 x 1
17	80002736	2	PIN, 3/32 X 0.750, COT, ZINC/CLEAR
18	5021499	2	BEARING, Flange
19	5047081B	1	NEUTRAL LOCK BRACKET-RH
19	5047080B	1	NEUTRAL LOCK BRACKET-LH -(Not Shown)
20	5025179X4	4	SCREW, #10-24 x 1/2
21	-----	2	SWITCH (see electrical group)
22	5025029	4	NUT, #10-24 Hex
23	5025011X8	8	BOLT, 5/16-18 X 1 GD5 YZ
24	5025327	4	BOLT, Allen Head, 3/8-16 x 1-1/4
25	5025011X10	2	BOLT, 5/16-18 x 1-1/4
26	5104493	2	BALL JOINT 5/16-24 RH FEMALE BRONZE RACE
27	5047102	2	HYDRO CONTROL ROD
28	5104494	2	BALL JOINT 5/16-24 LH FEMALE BRONZE RACE
29	5025057	4	NUT, 5/16-18 Hex Nylon Lock
30	5022978	2	DAMPENER
31	5021098	2	BEARING, Flange
32	5025013X8	2	BOLT, 3/8-16 X 1" GD5 CZ
33	5025011X9	2	BOLT, 5/16-18 x 1-1/8
34	5025335	4	BOLT, M8 x 35MM
35	5025355	4	NUT, M8-1.25 Hex Serrated Flange
36	5025354	4	NUT, M8-1.25 Hex Nylon Lock

Parking Brake Group - Lower - S/N: 2898 and below

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901004



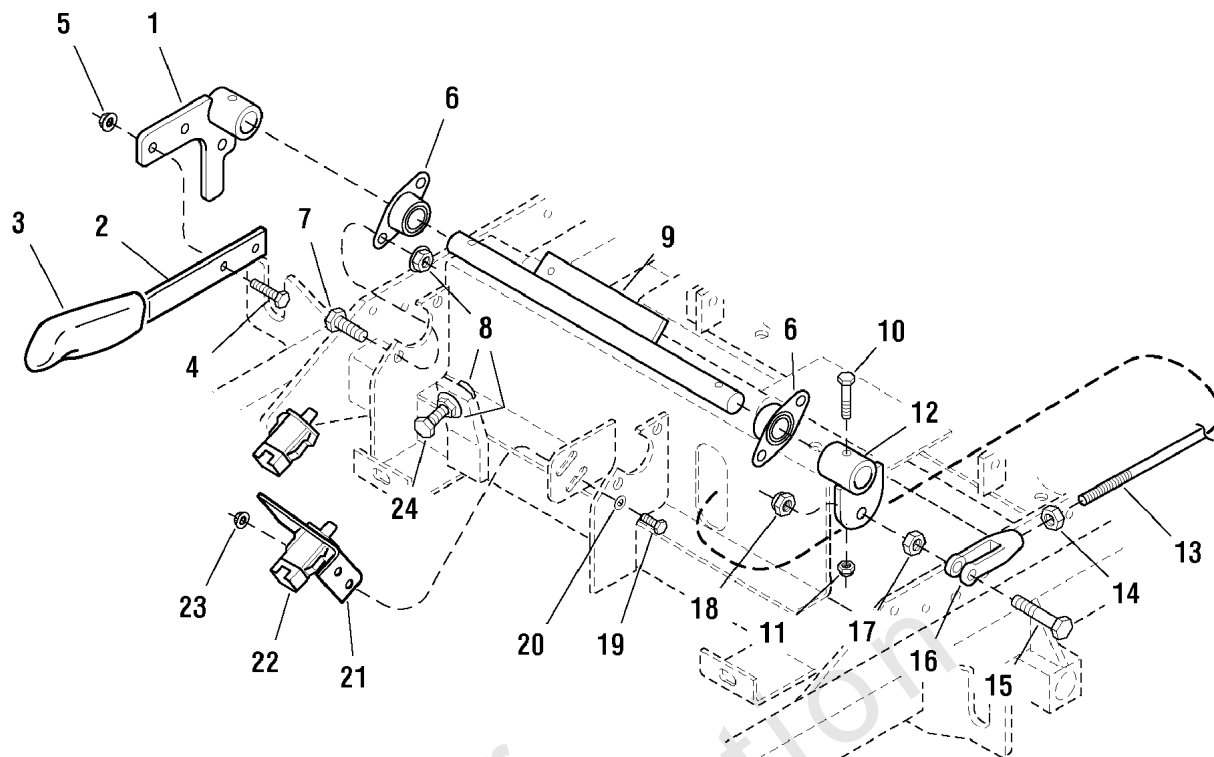
Parking Brake Group - Lower - S/N: 2898 and below

REF NO	PART NO	QTY	DESCRIPTION
1	5047128B	1	BRAKE CROSS SHAFT
2	5025594	2	SCREW, 5/16-18 X 1 PHILLIPS HD, BZ -(Was 5025303)
3	5045990	1	FRICITION PLATE
4	5047153B	1	SUPPORT, Brake Shaft
5	5025127	4	NUT, 5/16-18 HEX SERRATED FLANGE (SMALL)
6	5025011X8	2	BOLT, 5/16-18 X 1 GD5 YZ
7	5025155	2	WASHER, 5/16" SAE
8	80002736	1	PIN, 3/32 X 0.750, COT, ZINC/CLEAR
9	5021171	1	CLEVIS, 3/8-24, Plastic
10	5025214X8	1	CLEVIS PIN, 3/8 x 1
11	5025035	1	NUT, 3/8-24 Hex
12	5047119	1	BRAKE CONNECTING ROD
13	5025100	2	NUT, 3/8-16 Hex Side Lock
14	5025034	2	NUT, 3/8-16 Hex
15	5041930	2	SPACER, .38 x .50 x .27
16	5047084A	2	LINK, BRAKE LOCK - BLK
17	5025156	4	WASHER, 3/8 SAE
18	5025013X12	2	BOLT, 3/8-16 X 1-1/2" GD5 CZ
19	5025046	2	NUT, 3/8-16 Hex Top Lock
20	5022361	2	SPRING, Compression
21	5010546	4	COLLAR, 3/8" Set
22	5047091	2	ROD, Brake Adjustment
23	5025013X6	4	BOLT, 3/8-16 X 3/4" GD5 CZ
24	5021098	2	BEARING, Flange
25	5025128	4	NUT, 3/8-16 Hex Serrated Flange
26	5025387	8	NUT, 1/2-20 Hex Flange Lock
27	5047027	8	SPACER, .51 X .75 X .56
28	5025056	2	NUT, 1/2-13 HEX NYLON LOCK
29	5047089B	1	BRAKE BAND SHAFT-LH
29	5047090B	1	BRAKE BAND SHAFT-RH -(Not Shown)
30	5025017X24	2	BOLT, 1/2-13 X 3" GD5 CZ
31	5025018X28	4	BOLT, 1/2-20 x 3-1/2
32	5025202X10	2	COTTER PIN, 3/16" x 1-1/4"
33	5022607	2	BRAKE BAND
34	5025328X16	2	CLEVIS PIN, 1/2 x 2
35	5047052	2	BRAKE HUB
36	5025038	2	NUT, 1/2-13 Hex
37	5025018X24	4	BOLT, 1/2-20 x 3
38	5023249	2	WASHER, 1 x 2

Parking Brake Group - Upper - S/N: 2898 and below

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901004



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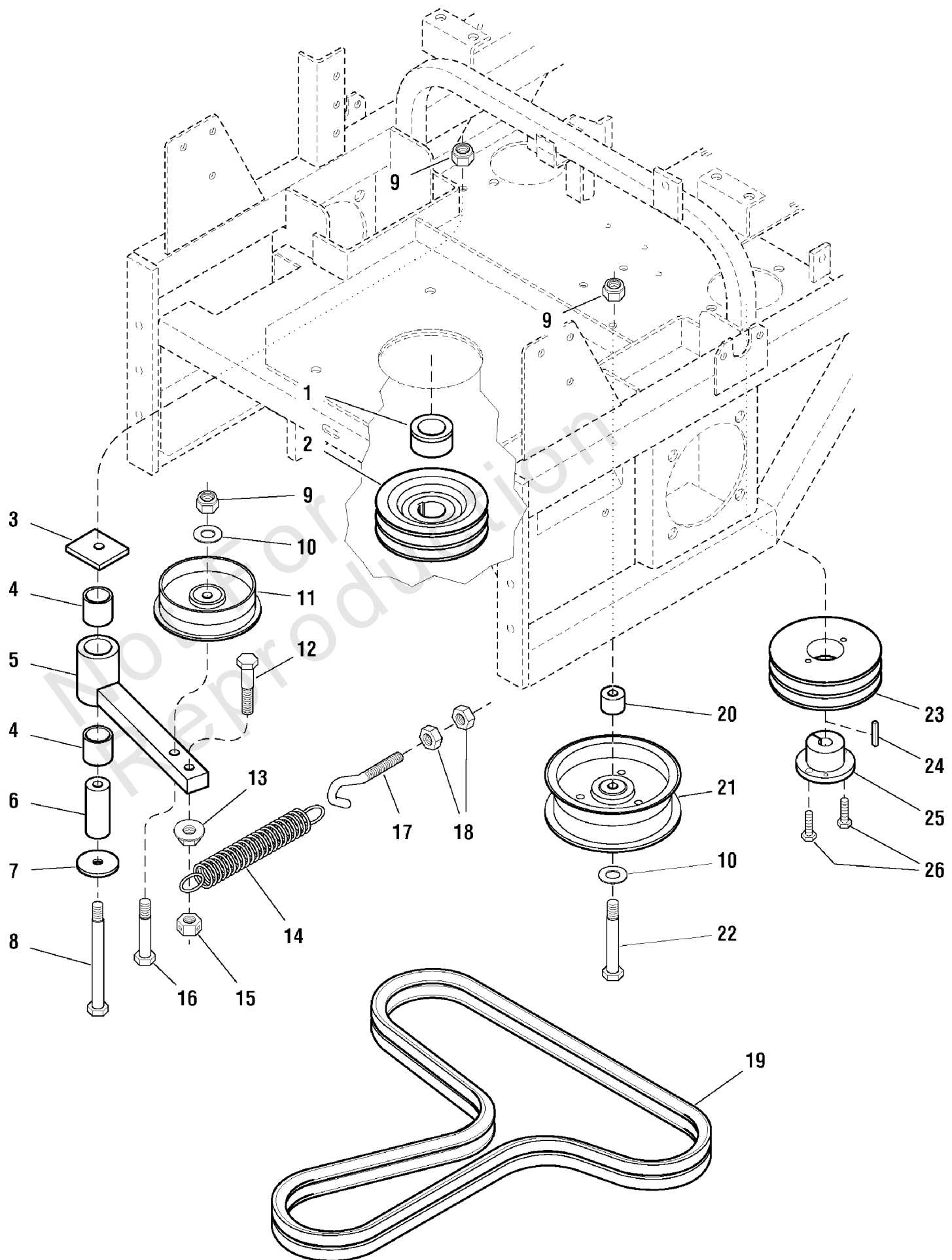
Parking Brake Group - Upper - S/N: 2898 and below

REF NO	PART NO	QTY	DESCRIPTION
1	5045616B	1	BRAKE HANDLE MOUNT
2	5045619B	1	BRAKE HANDLE
3	1722302	1	GRIP
4	5025011X8	2	BOLT, 5/16-18 X 1 GD5 YZ
5	5025127	2	NUT, 5/16-18 HEX SERRATED FLANGE (SMALL)
6	5021098	2	BEARING, Flange
7	5025013X6	4	BOLT, 3/8-16 X 3/4" GD5 CZ
8	5025128	6	NUT, 3/8-16 Hex Serrated Flange
9	5047083B	1	BRAKE HANDLE SHAFT
10	5025010X14	2	BOLT, 1/4-20 x 1-3/4
11	5025095	2	NUT, 1/4-20 HEX NYLON LOCK
12	5045618A	1	PIVOT, LINKAGE MOUNT WELDMENT - BLK
13	5047119	1	BRAKE CONNECTING ROD
14	5025035	1	NUT, 3/8-24 Hex
15	5025013X16	1	BOLT, 3/8-16 X 2, GD5, CZ
16	5021171	1	CLEVIS, 3/8-24, Plastic
17	5025034	1	NUT, 3/8-16 Hex
18	5025096	1	NUT, 3/8-16 HEX NYLON LOCK
19	5025010X6	2	BOLT, 1/4-20 x 3/4
20	5025154	2	WASHER, 1/4 SAE
21	5045621B	1	SWITCH MOUNT BRACKET
22	-----	*	SWITCH (see electrical group)
23	5025126	2	NUT, 1/4-20 HEX SERR. FLANGE
24	5025058X14	1	BOLT, 3/8-16 x 1-3/4 TFL

Pump Drive Group - S/N: 2898 and below

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901004



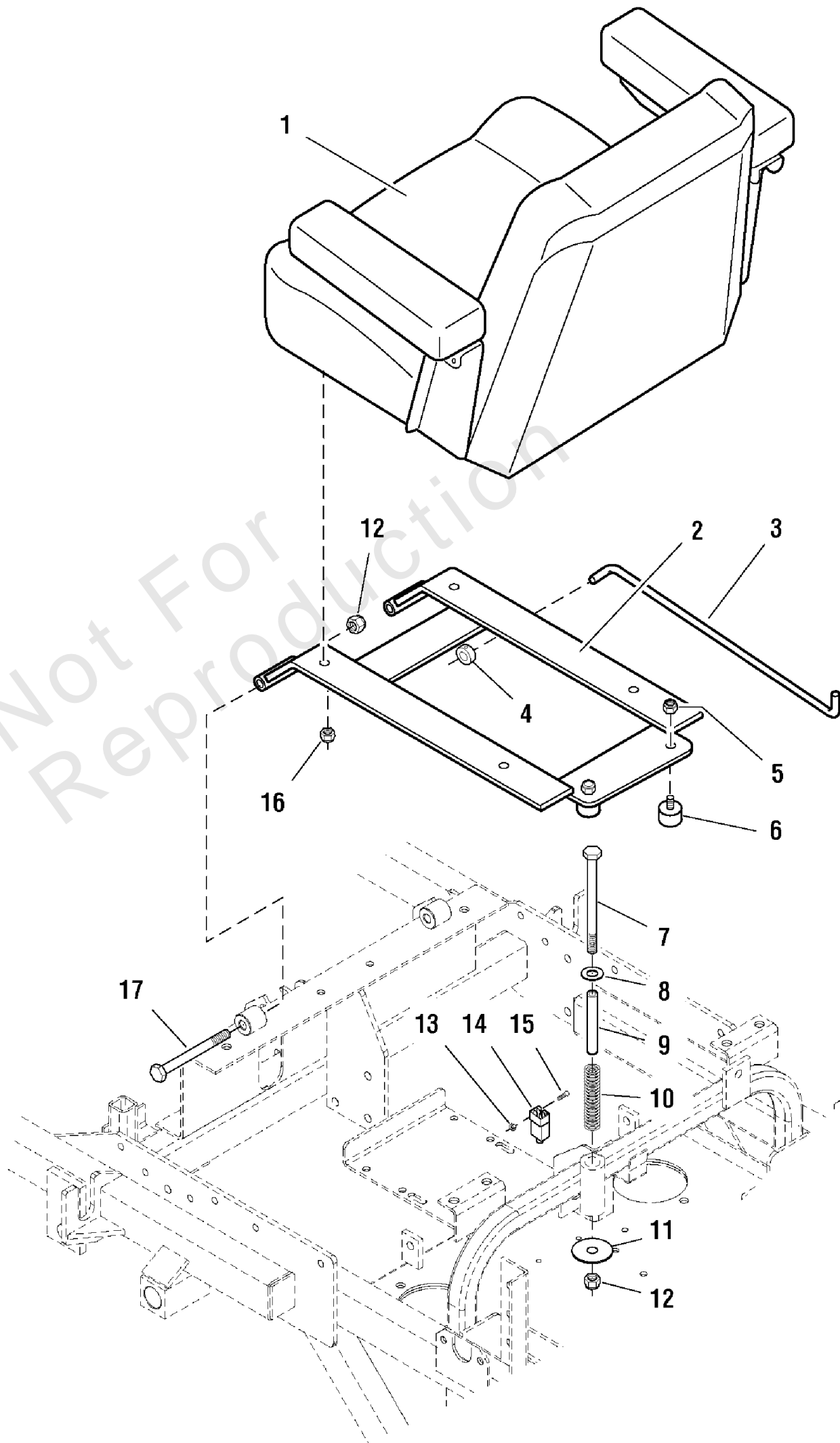
Pump Drive Group - S/N: 2898 and below

REF NO	PART NO	QTY	DESCRIPTION
1	5047033	1	SPACER, 1.13 x 1.75 x 1.03
2	5047075	1	CRANKSHAFT PULLEY
3	5045090	1	SPACER, Idler Pivot
4	5022157	2	BUSHING, Brass
5	5046430A	1	WELD, ARM, PUMP DRIVE IDLER - BLK
6	5102004	1	SPACER, .39 X 1.00 X 2.55, SS
7	5025305	1	WASHER, 3/8 x 1-3/4
8	5025013X32	1	BOLT, 3/8-16 X 4" GD5 CZ
9	5025096	3	NUT, 3/8-16 HEX NYLON LOCK
10	5025156	2	WASHER, 3/8 SAE
11	5103808	1	PULLEY, Idler (Single Flange)
12	5025013X14	1	BOLT, 3/8-16 X 1-3/4" GD5 CZ
13	5025128	1	NUT, 3/8-16 Hex Serrated Flange
14	5022847	1	SPRING, Extension, Swivel End
15	5025100	1	NUT, 3/8-16 Hex Side Lock
16	5025013X18	1	BOLT, 3/8-16 X 2-1/4" GD5 CZ
17	5025321	1	SCREW HOOK, 3/8-16 x 4-1/4
18	5025034	2	NUT, 3/8-16 Hex
19	5022314	1	BELT, Pump Drive (set of 2)
20	5046446	1	SPACER, .39 x 1.00 x .79
21	5022620	1	PULLEY, Idler
22	5025013X22	1	BOLT, 3/8-16 X 2-3/4" GD5 CZ
23	5022586	2	PULLEY, Pump Drive
24	5023254	2	KEY, 5MM SQ. x 25MM w/ Round Ends
25	5022587	2	BUSHING, Tapered Hub
26	5025010X8	4	BOLT, 1/4-20 X 1" GD5 CZ

Seat & Mount Group - S/N: 2898 and below

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901004



Seat & Mount Group - S/N: 2898 and below

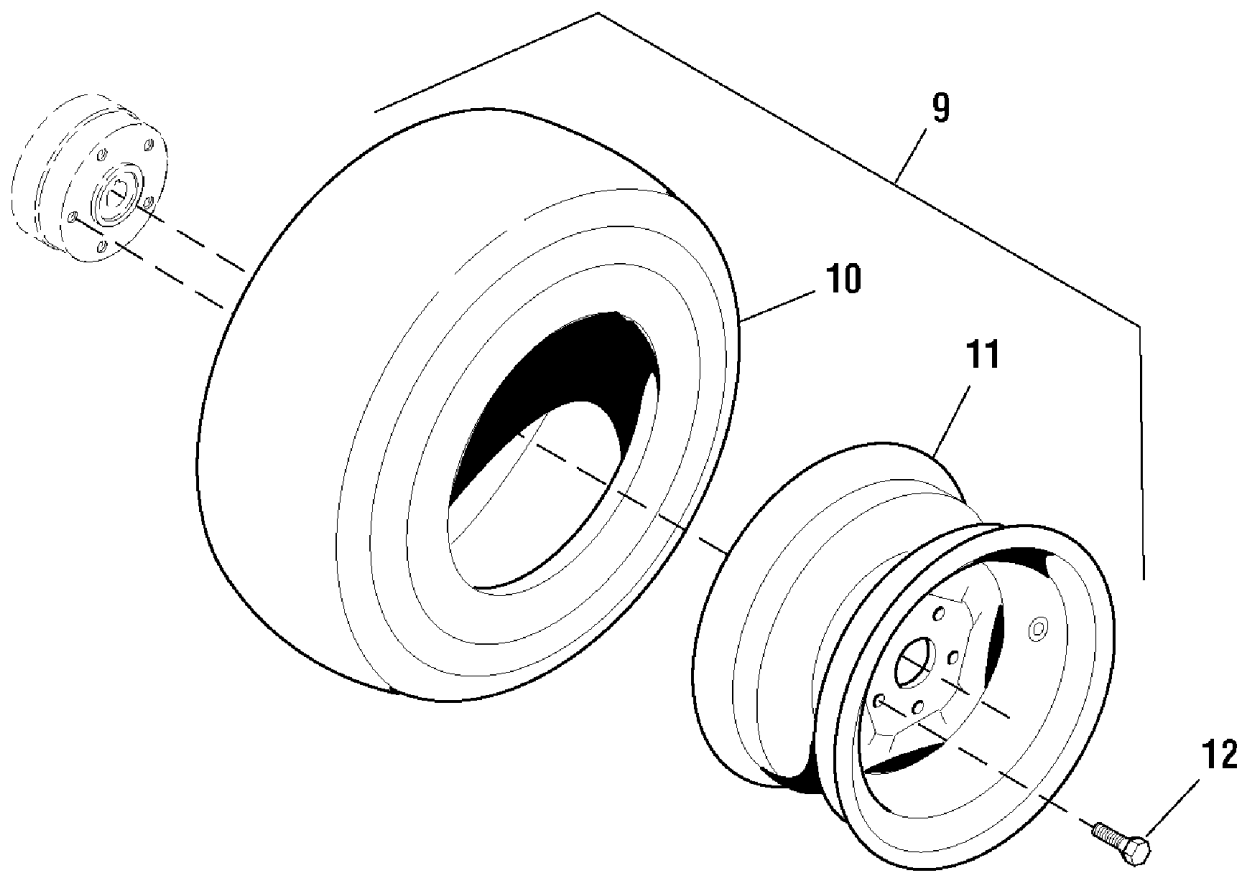
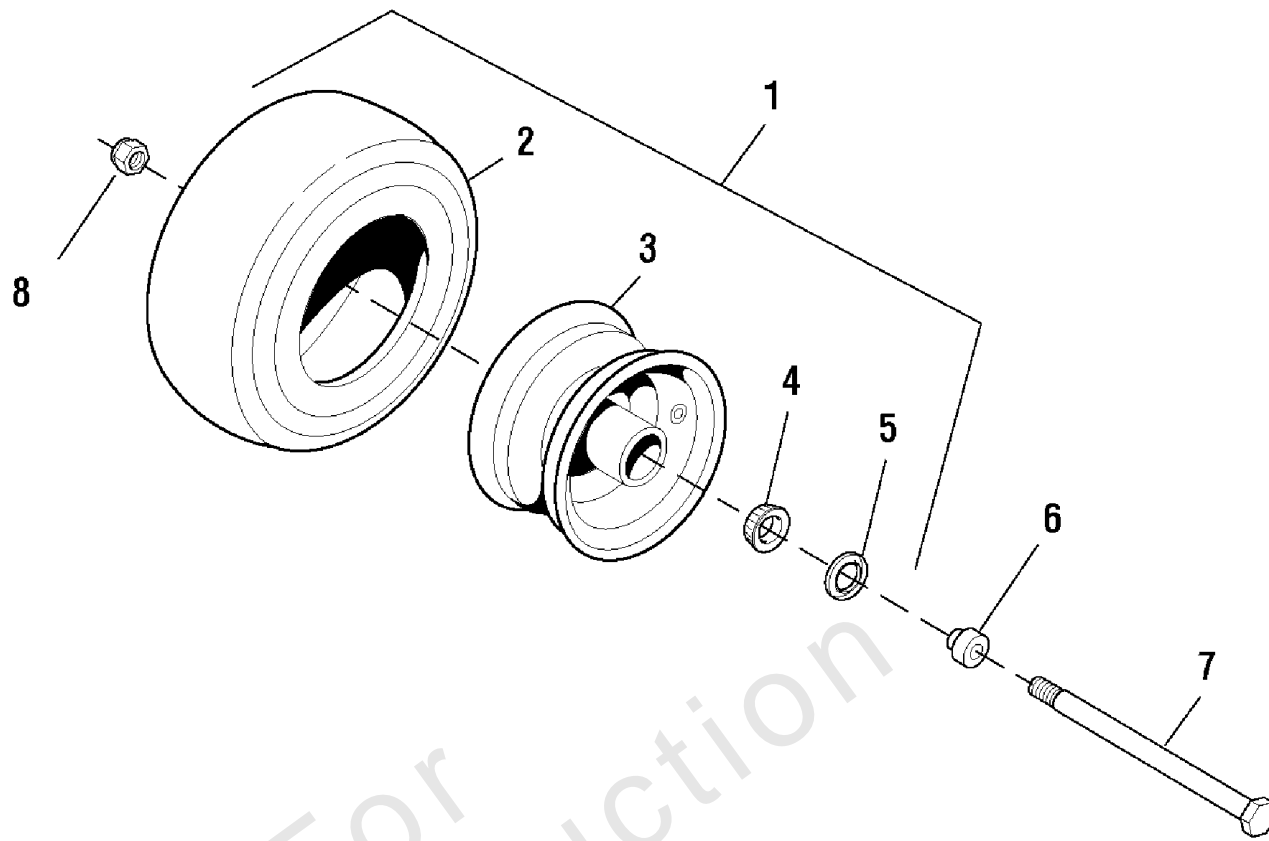
REF NO	PART NO	QTY	DESCRIPTION
1	5022031	1	SEAT, GRAY, NO LOGO, CMPT
1	5022031X2	1	SEAT BOTTOM (EVC 907)
1	5022031X4	1	CUSHION, Back, Gray
1	5022440	2	ARM REST, Black
1	5020930X3	1	SEAT ADJUSTER RAILS (set of 2)
2	5047744B	1	WELD, SEAT MOUNT
3	5046470	1	SEAT STOP ROD
4	5020047	1	COLLAR, 5/16" Set
5	5025095	2	NUT, 1/4-20 HEX NYLON LOCK
6	5022673	2	RUBBER BUMPER
7	5025013X48	1	BOLT, 3/8-16 X 6" GD5 CZ
8	5025156	1	WASHER, 3/8 SAE
9	5046586	1	SPACER, .38 x .50 x 5.06
10	5022798	1	SPRING, Compression
11	5025326	1	WASHER, 3/8 x 2
12	5025096	3	NUT, 3/8-16 HEX NYLON LOCK
13	5025029	2	NUT, #10-24 Hex
14	-----	1	SWITCH (see electrical group)
15	5025270	2	SCREW, #10-24 X 1 RS, CZ
16	5025057	4	NUT, 5/16-18 Hex Nylon Lock
17	5025013X32	2	BOLT, 3/8-16 X 4" GD5 CZ
18	5100636	1	SPRING, EXTENSION, SEAT ADJUSTMENT (YEL OR BLK) -(SV)(Not an illustrated part.) (2" Total unstretched length)

Not For Production

Tire & Wheel Group - S/N: 2898 and below

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901004



Not For
Reproduction

Tire & Wheel Group - S/N: 2898 and below

REF NO	PART NO	QTY	DESCRIPTION
1	5022631S	2	WHEEL & TIRE ASSEMBLY, 13 x 5.0 x 6, Complete -(Includes Ref No. 2 - 5 & 13)
2	5022029X1	2	TIRE, Front, 13 x 5.0 x 6
3	5022631SX1	2	WHEEL ASSEMBLY, for 13 x 5.0 x 6 Tire, Complete -(Includes Ref No. 4 & 5)
4	5022631SX2	4	BEARING, Tapered Roller -(2 per tire)
5	5022631SX3	4	SEAL, GREASE -(2 per tire)
6	5047103	4	ADAPTER, CASTER AXLE, CZ -(2 per tire)
7	5025017X60	2	BOLT, 1/2-13 x 7-1/2
8	5025056	2	NUT, 1/2-13 HEX NYLON LOCK
9	5022646S	2	WHEEL & TIRE ASSEMBLY, 23 x 9.5 x 12, Complete -(Includes Ref No. 10 & 11)
10	5022646SX1	2	TIRE, Rear, 23 x 9.5 x 12
11	5022646SX2	2	WHEEL ASSEMBLY, for 23 x 9.5 x 12 Tires
12	5022215	10	WHEEL LUG, 1/2 x 1-5/8
13	5022631SX4	2	BEARING, RACE -(Not Shown)

Not For Reproduction

Hardware Identification & Torque Specifications

Torque Specification Chart								
FOR STANDARD METRIC MACHINE HARDWARE (Tolerance ± 20%)								
Property Class	5.6		8.8		10.9		12.9	
	Class 5.6		Class 8.8		Class 10.9		Class 12.9	
Size Of Hardware	in/lbs	Nm.	in/lbs	Nm.	in/lbs	Nm.	in/lbs	Nm.
	ft/lbs		ft/lbs		ft/lbs		ft/lbs	
M3	5.88	.56	13.44	1.28	19.2	1.80	22.92	2.15
M4	13.44	1.28	30.72	2.90	43.44	4.10	52.56	4.95
M5	26.4	2.50	60.96	5.75	5.97	8.10	7.15	9.7
M6	44.64	4.3	7.3	9.9	10.3	14	12.1	16.5
M7	5.2	7.1	12.1	16.5	16.9	23	19.9	27
M8	7.7	10.5	17.7	24	25	34	29	40
M10	15	21	35	48	50	67	59	81
M12	26	36	61	83	86.2	117	103	140
M14	42	58	101	132	136	185	162	220
M16	64	88	147	200	210	285	250	340
M18	89	121	202	275	287	390	346	470
M20	126	171	290	390	405	550	486	660
M22	169	230	390	530	559	745	656	890
M24	217	295	497	375	708	960	840	1140
M27	320	435	733	995	1032	1400	1239	1680
M30	435	590	995	1350	1401	1900	1681	2280
M33	590	800	1349	1830	1902	2580	2278	3090
M36	759	1030	1740	2360	2441	3310	2935	3980
M39	988	1340	2249	3050	3163	4290	3798	5150

Torque Specification Chart						
FOR STANDARD MACHINE HARDWARE (Tolerance ± 20%)						
Hardware Grade	No Marks		SAE Grade 5		SAE Grade 8	
	SAE Grade 2		SAE Grade 5		SAE Grade 8	
Size Of Hardware	in/lbs	Nm.	in/lbs	Nm.	in/lbs	Nm.
	ft/lbs		ft/lbs		ft/lbs	
8-32	19	2.1	30	3.4	41	4.6
8-36	20	2.3	31	3.5	43	4.9
10-24	27	3.1	43	4.9	60	6.8
10-32	31	3.5	49	5.5	68	7.7
1/4-20	66	7.6	8	10.9	12	16.3
1/4-28	76	8.6	10	13.6	14	19.0
5/16-18	11	15.0	17	23.1	25	34.0
5/16-24	12	16.3	19	25.8	29	34.0
3/8-16	20	27.2	30	40.8	45	61.2
3/8-24	23	31.3	35	47.6	50	68.0
7/16-14	30	40.8	50	68.0	70	95.2
7/16-20	35	47.6	55	74.8	80	108.8
1/2-13	50	68.0	75	102.0	110	149.6
1/2-20	55	74.8	90	122.4	120	163.2
9/16-12	65	88.4	110	149.6	150	204.0
9/16-18	75	102.0	120	163.2	170	231.2
5/8-11	90	122.4	150	204.0	220	299.2
5/8-18	100	136	180	244.8	240	326.4
3/4-10	160	217.6	260	353.6	386	525.0
3/4-16	180	244.8	300	408.0	420	571.2
7/8-9	140	190.4	400	544.0	600	816.0
7/8-14	155	210.8	440	598.4	660	897.6
1-8	220	299.2	580	788.8	900	1,244.0
1-12	240	326.4	640	870.4	1,000	1,360.0

The guides and ruler furnished below are designed to help you select the appropriate hardware.

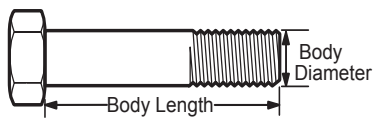


Nut, M8

Thread Diameter (mm)

Inside Diameter (in) Threads per inch

Nut, 1/2-16



Screw, M8- 1.25 x 25

Thread Diameter (mm) Distance between threads (mm) Body Length (mm)

Body Diameter Threads per inch Body Length (in)

Screw, 1/2- 16 x 2



Standard Hardware Sizing

When a washer or nut is identified as 1/2" (M8), this is the *Nominal size*, meaning the *inside diameter* is 1/2 inch (8mm metric thread diameter); if a second number is present it represents the *threads per inch* (distance between threads).

When bolt or capscrew is identified as 1/2 - 16 x 2" (M8 - 1.25 x 50), this means the *Nominal size*, or body diameter is 1/2 inch (8mm metric thread diameter), the second number, 16, represents the *threads per inch*, (*distance between threads*). The final number is the body length of the bolt or screw, 2 inches (50mm).

NOTES

- These torque values are to be used for all hardware excluding: locknuts, self-tapping screws, thread forming screws, sheet metal screws and socket head setscrews.
- Recommended seating torque values for locknuts:
 - for prevailing torque locknuts - use 65% of grade 5 torques.
 - for flange whizlock nuts and screws - use 135% of grade 5 torques.
- Unless otherwise noted on assembly drawings, all torque values must meet this specification.

Common Hardware Types

Hex Head Capscrew



Washer



Carriage Bolt



Hex Nut

Wrench & Fastener Size Guide

1/4" Bolt or Nut Wrench—7/16"	5/16" Bolt or Nut Wrench—1/2"	3/8" Bolt or Nut Wrench—9/16"	7/16" Bolt or Nut Wrench (Bolt)—5/8" Wrench (Nut)—11/16"	1/2" Bolt or Nut Wrench—3/4"
M6 Bolt or Nut Wrench—10mm	M8 Bolt or Nut Wrench—13mm	M10 Bolt or Nut Wrench—17mm	M12 Bolt or Nut Wrench—19mm	M14 Bolt or Nut Wrench—22mm

