



Parts Manual

Mfg. No: 5900520

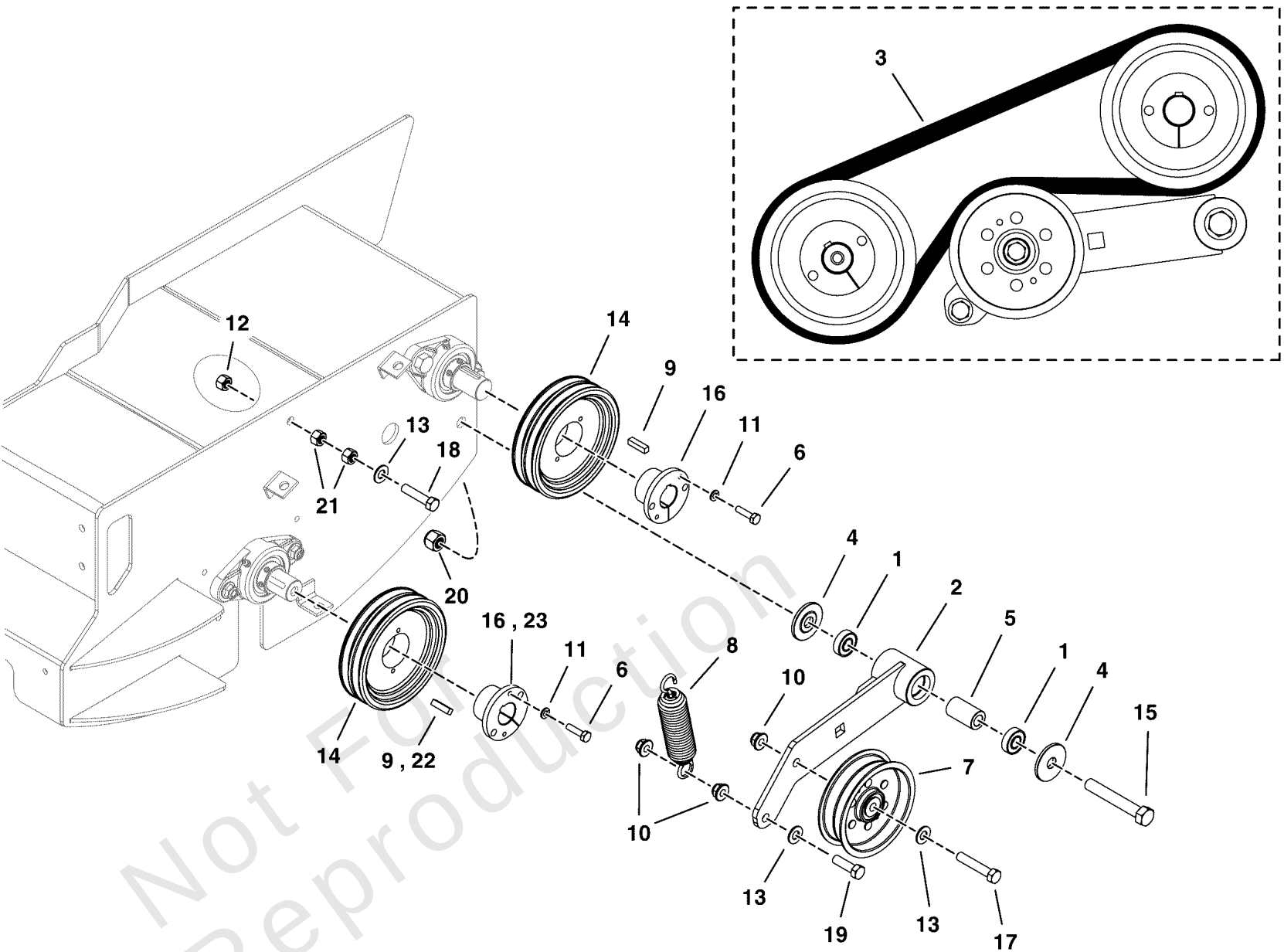
FM Series w/ 48" Rotor - Export
(FM2448CE)

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Belts, Pulleys & Idler Group

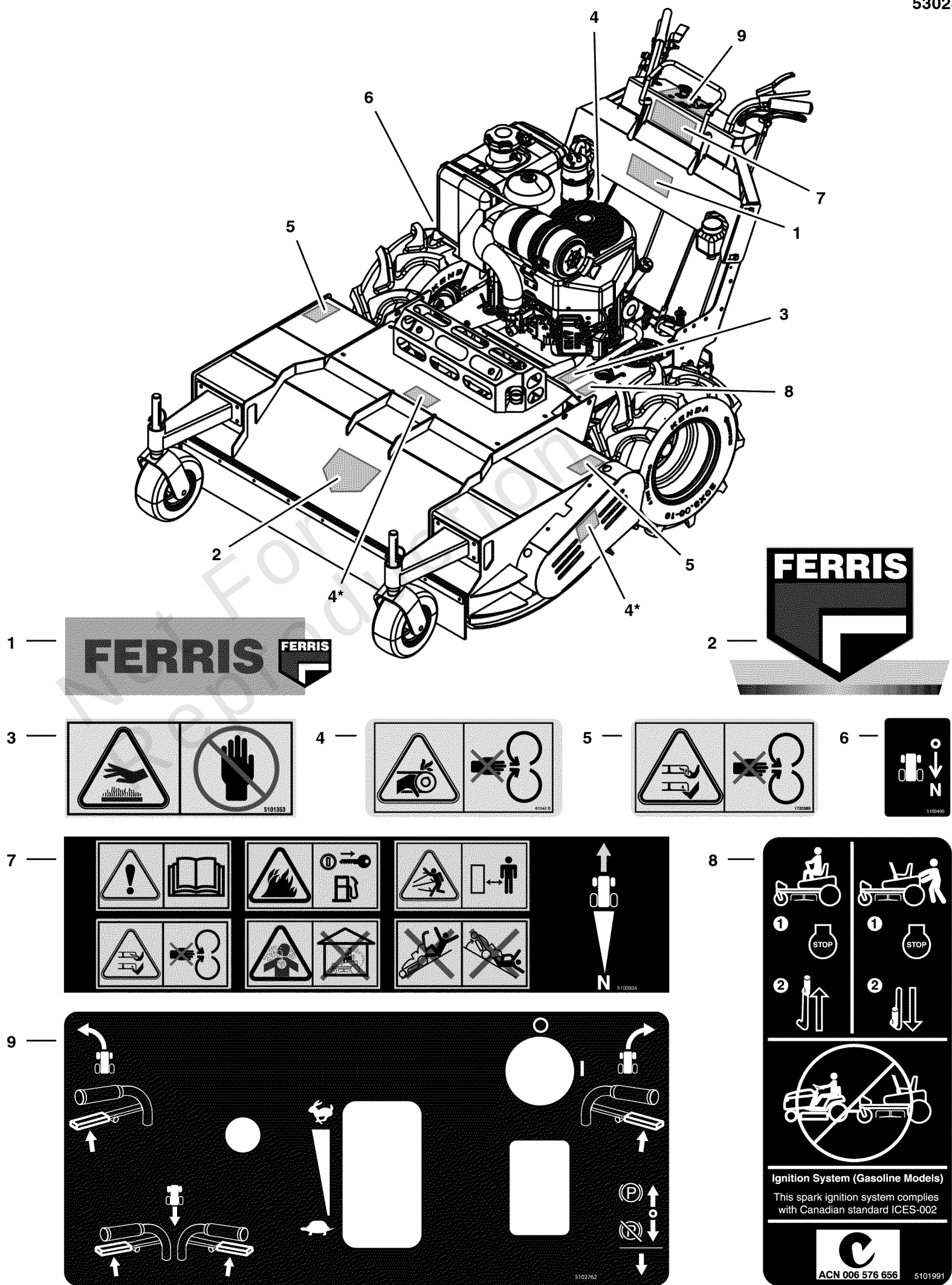
Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5900520



Belts, Pulleys & Idler Group

REF NO	PART NO	QTY	DESCRIPTION
1	7078243	2	BEARING, BALL, AXLE
2	5408717B	1	WELD, IDLER ARM, 8.50, BB - RED
3	5103330	1	BELT, DOUBLE A BANDED, 43"EL, RAW EDGE
4	5103262	2	SPACER, IDLER ARM, 1/2"
5	5103812	1	SPACER, .52 X .84 X 1.53, PM
6	5025010X8	4	BOLT, 1/4-20 X 1" GD5 CZ
7	5102276	1	PULLEY, IDLER, DOUBLE FLGED, 4IN
8	5100633	1	SPRING-EXT, 1.25 ODX5.70LGX.142WR, BLK
9	5025584	1	KEY, 1/4" SQR. X 1-1/4, RD ENDS -(Qty: 2 - S/N: 4000223355 and below)
10	5025394	3	NUT, 3/8-16 HEX NYLOCK FLANGE
11	5025169	4	WASHER, 1/4 LOCK
12	5025100	1	NUT, 3/8-16 HEX SIDE LOCK
13	5025156	3	WASHER, 3/8 SAE
14	5022908	2	PULLEY, GEARBOX INPUT
15	5025017X28	1	BOLT, 1/2-13 X 3-1/2, HEX HD, GD5, CZ (SV)
16	5020819	1	BUSHING, TAPERED HUB -(Qty: 2 - S/N: 4000223355 and below)
17	5025013X16	1	BOLT, 3/8-16 X 2, GD5, CZ
18	5025013X12	1	BOLT, 3/8-16 X 1-1/2" GD5 CZ
19	5025013X10	1	BOLT, 3/8-16 X 1-1/4" GD5 CZ
20	5025056	1	NUT, 1/2-13 HEX NYLON LOCK
21	5025034	2	NUT, 3/8-16 HEX
22	5025663	1	KEY, 8MM X 8MM X 25MM -(S/N: 4000223356 and above)
23	84010859	1	BUSHING -(S/N: 4000223356 and above)



Decals Group

REF NO	PART NO	QTY	DESCRIPTION
1	5022560	1	DECAL, FERRIS TEXT & LOGO
2	5100850	1	DECAL, FERRIS SHIELD
3	5101353	1	DECAL, HAND IN FLAME
4	5061042	3	* DECAL, CE DANGER
5	1720389	2	DECAL-DANGER ROTATING BLADE SYMBOLS
6	5100490	1	DECAL, PEDAL
7	5100934	1	DECAL, CCW, CE
8	5101991	2	DECAL, TRANSAXLE RELEASE
9	5102762	1	DECAL, CONTROL PANEL, WB

Not For
Reproduction

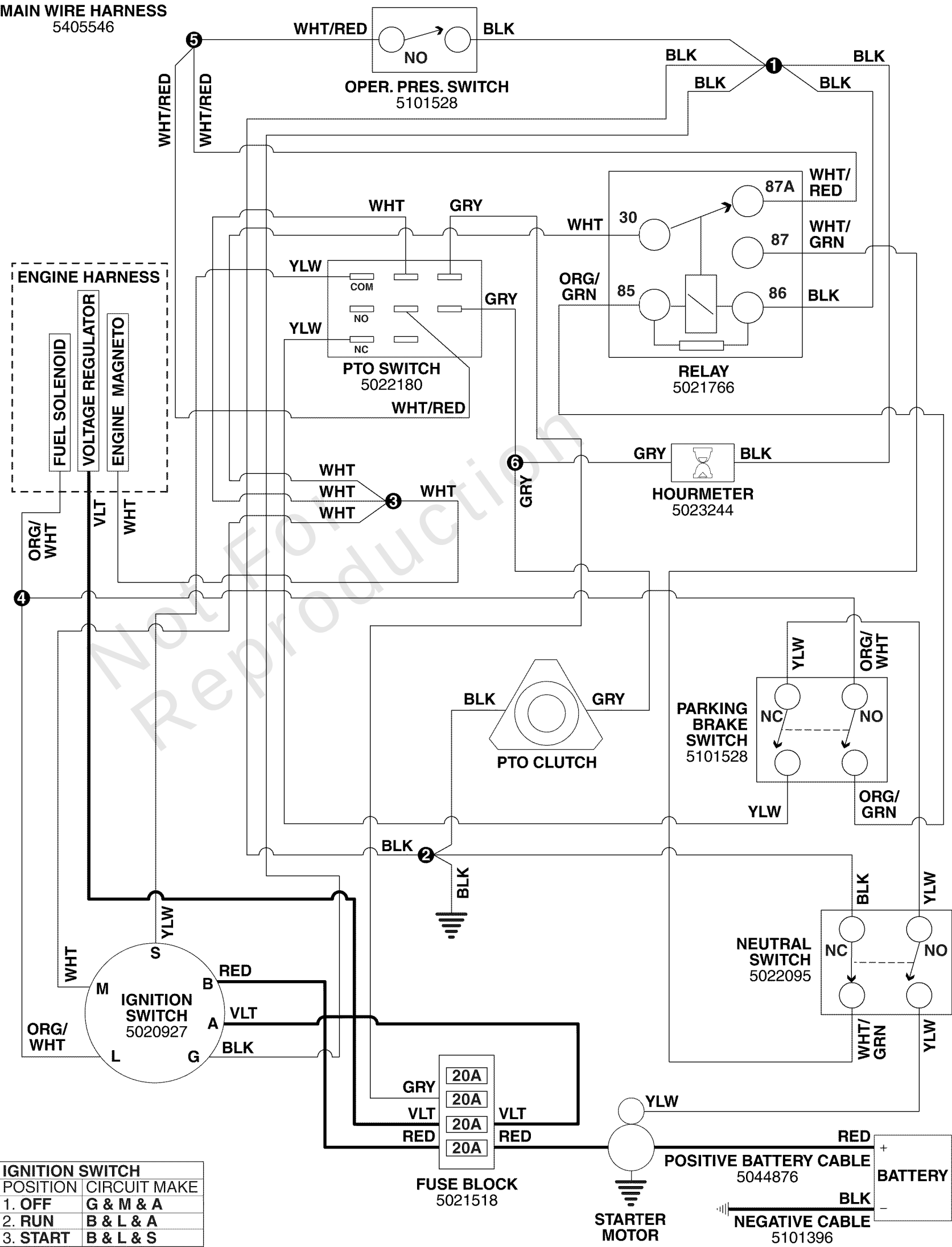
Footnotes:

* LOCATED UNDER THE GUARD

Electrical Schematic - Charging Circuit

Note: Unless noted otherwise, use the standard torque specifications Mfg. No: 5900520

MAIN WIRE HARNESS
5405546



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

Electrical Schematic - Charging Circuit

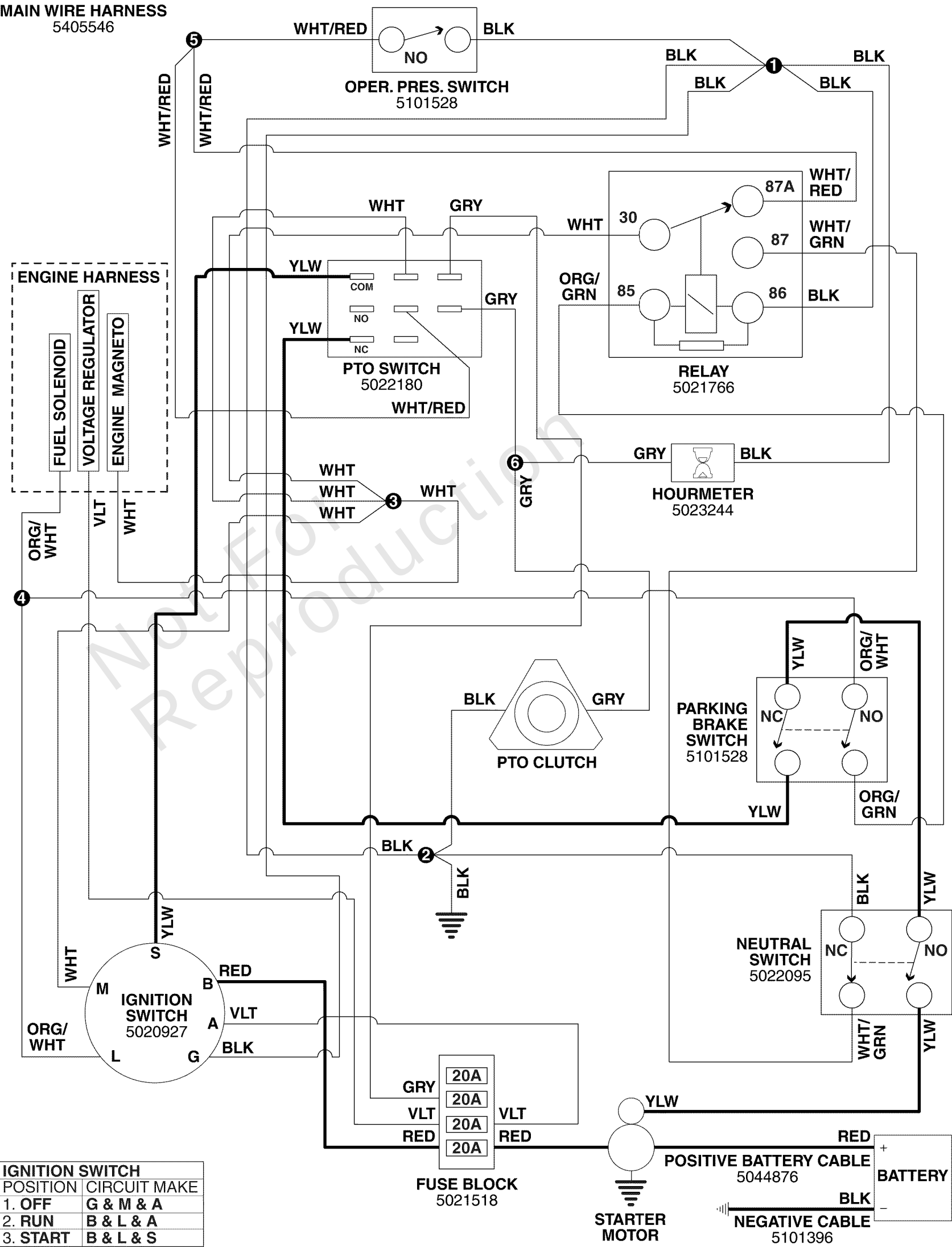
REF NO	PART NO	QTY	DESCRIPTION
5405546	5405546	1	WIRE HARNESS, SW30 KAV ELEC

Not For Reproduction

Electrical Schematic - Cranking Circuit

Note: Unless noted otherwise, use the standard torque specifications Mfg. No: 5900520

MAIN WIRE HARNESS
5405546



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

Electrical Schematic - Cranking Circuit

REF NO	PART NO	QTY	DESCRIPTION
5405546	5405546	1	WIRE HARNESS, SW30 KAV ELEC

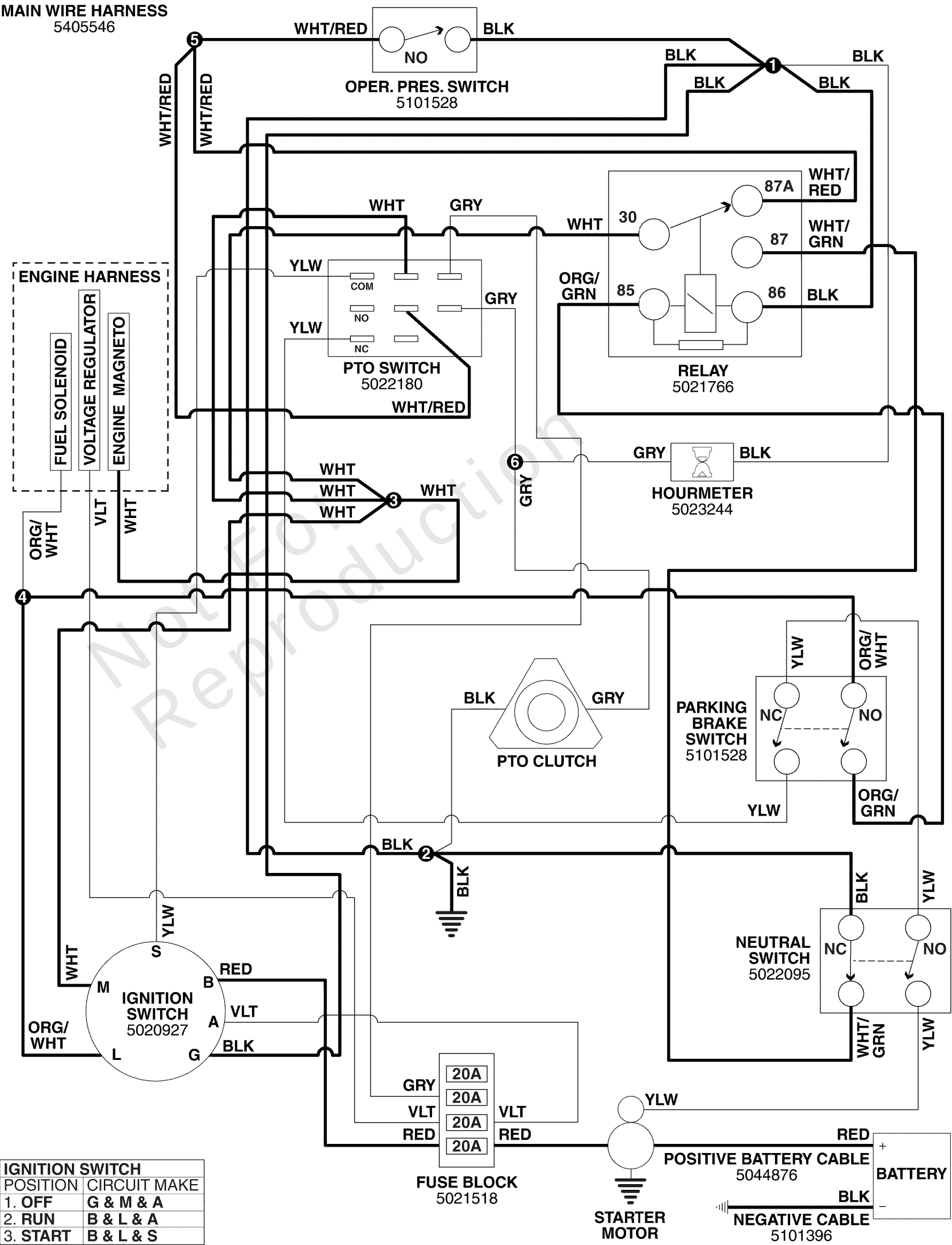
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Electrical Schematic - Ignition / Operator Presence Circuit

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5900520

MAIN WIRE HARNESS
5405546



Electrical Schematic - Ignition / Operator Presence Circuit

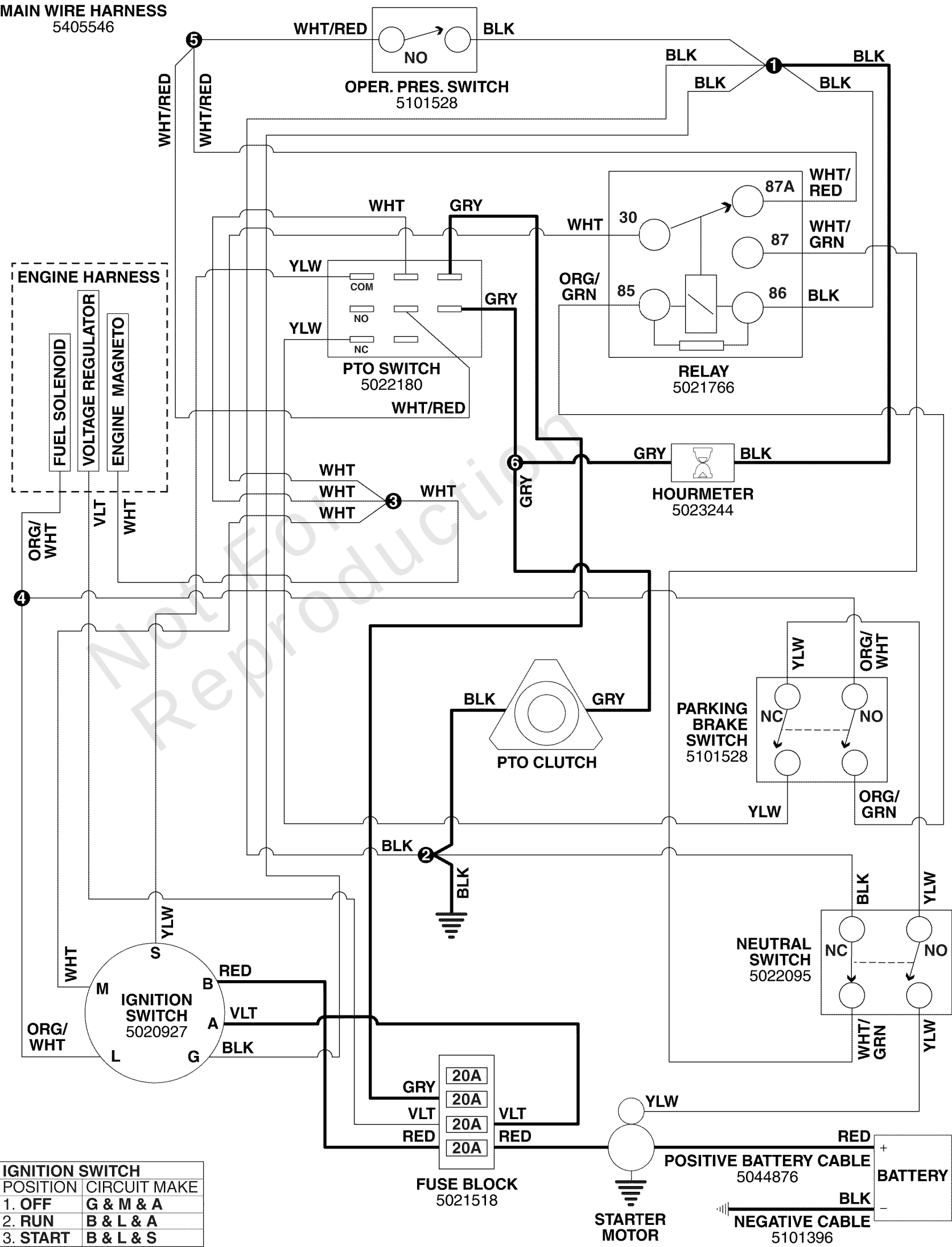
REF NO	PART NO	QTY	DESCRIPTION
5405546	5405546	1	WIRE HARNESS, SW30 KAV ELEC

Not For Reproduction

Electrical Schematic - PTO Clutch Circuit

Note: Unless noted otherwise, use the standard torque specifications Mfg. No: 5900520

MAIN WIRE HARNESS
5405546

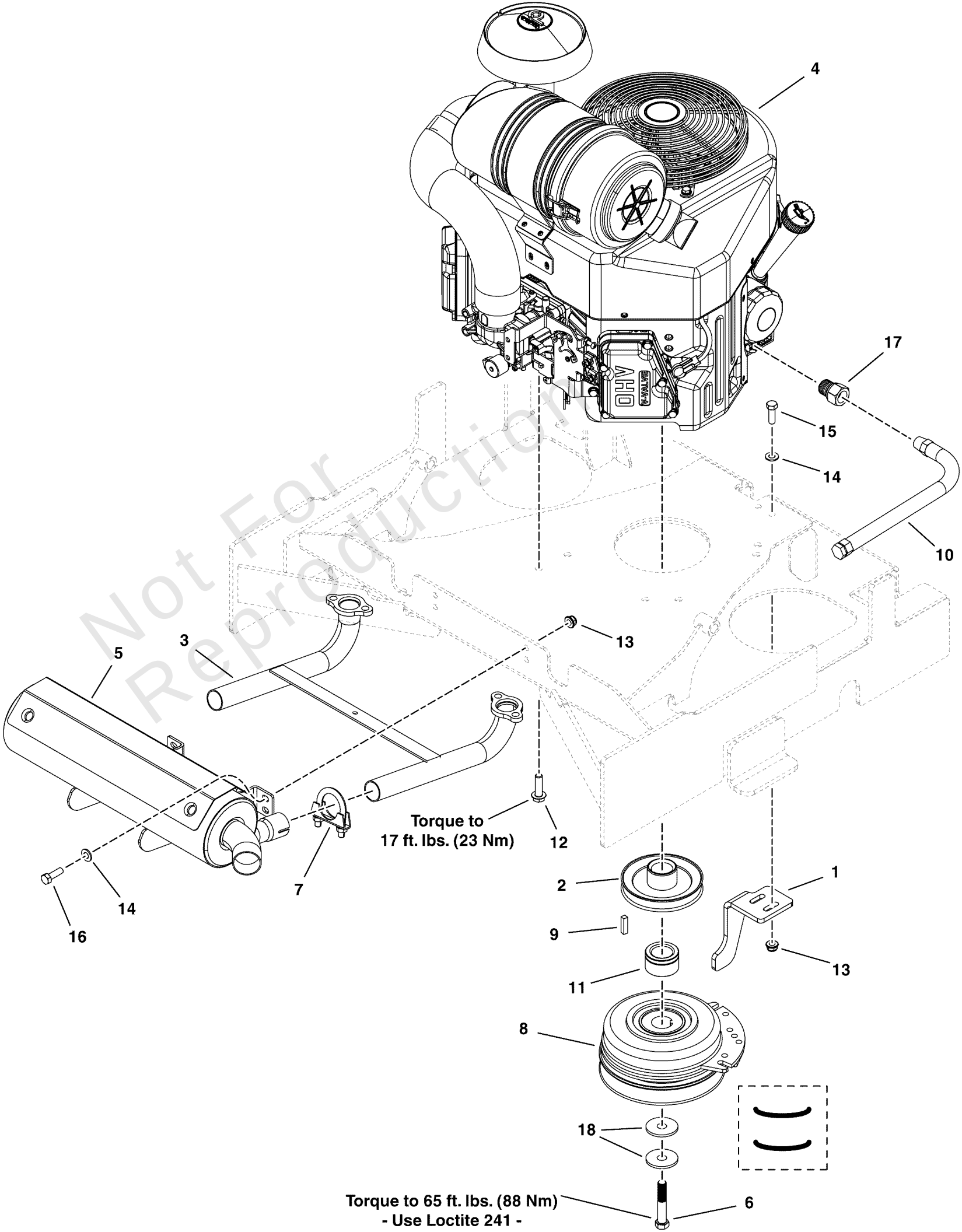


IGNITION SWITCH	
POSITION	CIRCUIT MAKE
1. OFF	G & M & A
2. RUN	B & L & A
3. START	B & L & S

Electrical Schematic - PTO Clutch Circuit

REF NO	PART NO	QTY	DESCRIPTION
5405546	5405546	1	WIRE HARNESS, SW30 KAV ELEC

Not For Reproduction



Engine & PTO Group

REF NO	PART NO	QTY	DESCRIPTION
1	5405281B	1	PLATE, CLUTCH ANCHOR - RED
2	5103446	1	PULLEY, CRANKSHAFT, 4.5DX1.125IDX1.97LG
3	5103312	1	MANIFOLD, KAWA, HOR, SW30
4	-----	1	ENGINE, KAWA, FX730V
5	5103207	1	MUFFLER, KAWA, HORIZONTAL
6	5102866	1	BOLT, CRANKSHAFT, 7/16-20 X 3, GD8
7	5022810	2	CLAMP, EXHAUST EXTENSION
8	5105090	1	* CLUTCH, 5218-134, WARNER
9	5050407X8	1	KEY, 1/4 SQ X 1
10	5048681	1	HOSE, OIL DRAIN
11	5047033	1	SPACER, 1.13 X 1.75 X 1.03, CZ
12	5025532	4	BOLT,HEX FLG,SER GD5 3/8-16X1-1/4PACH CZ
13	5025392	6	NUT, 5/16-18 HEX NYLOCK FLANGE
14	5025155	6	WASHER, 5/16" SAE
15	5025011X10	2	BOLT, 5/16-18 X 1-1/4 GD5 YZ
16	5025011X6	4	BOLT, 5/16-18 X 3/4 GD5
17	5022234	1	ADAPTER-OIL DRAIN
18	5025585	2	BELLEVILLE WASHER 1.1875 X .442 X .089

Footnotes:

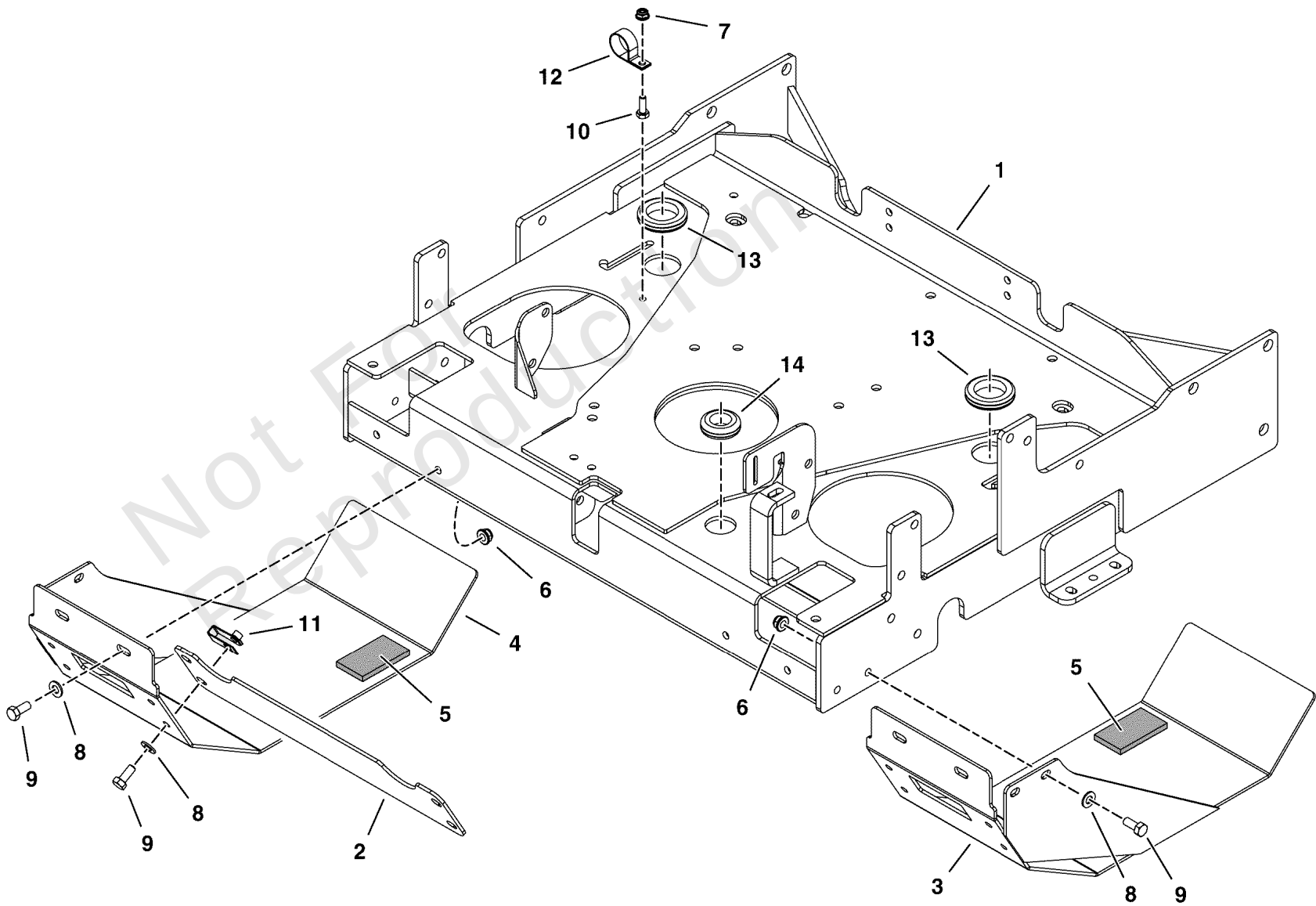
* For models S/N: 2015375705 & Below, when replacing the clutch, the jumper harness (#5403576) is required.

Engine Deck Group

Note: Unless noted otherwise, use the standard torque specifications

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5302871



Engine Deck Group

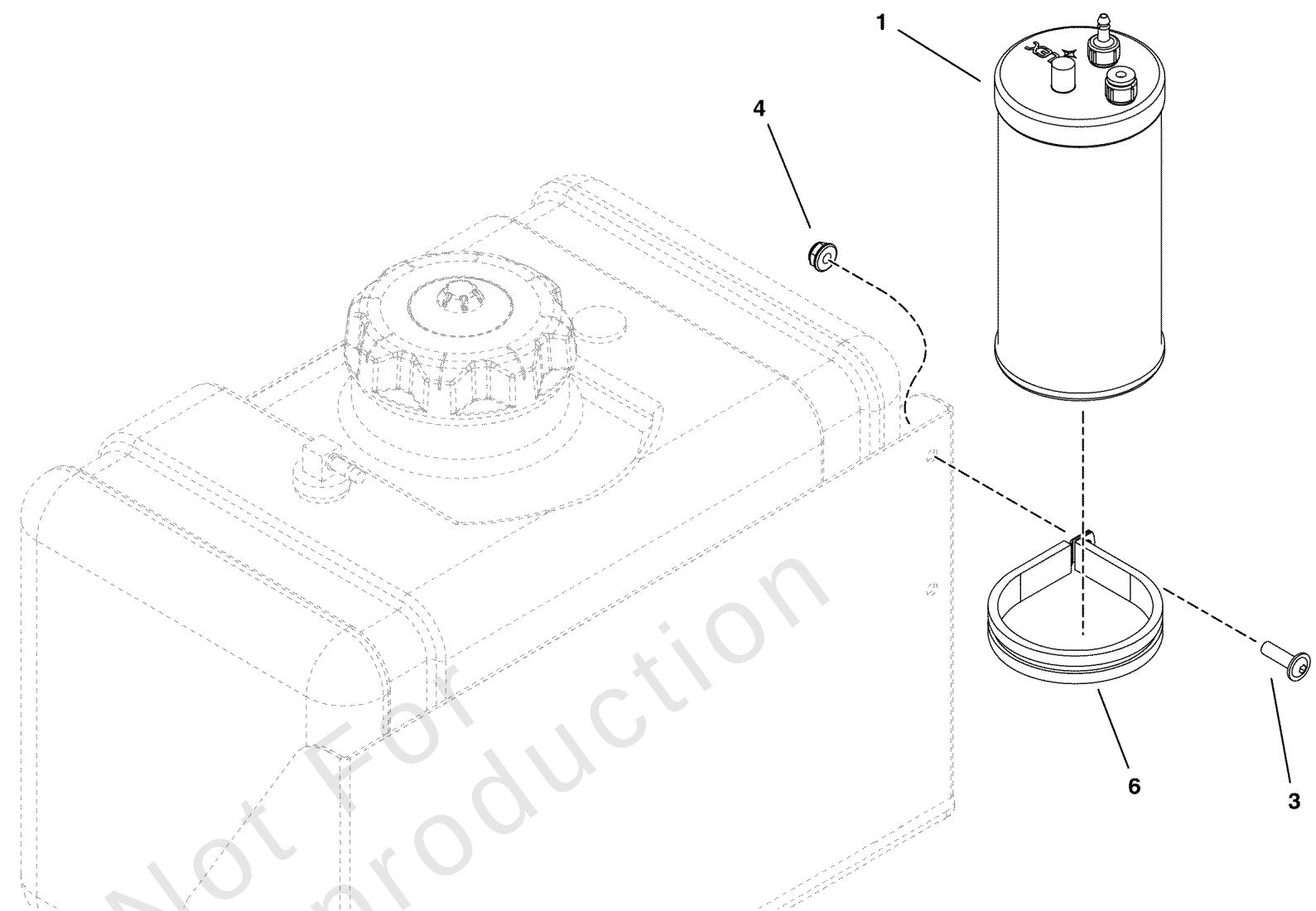
REF NO	PART NO	QTY	DESCRIPTION
1	5408718B	1	WELD, ENGINE DECK, SW30 - RED
2	5405387B	1	PLATE, REAR GUARD, SW30 - RED
3	5405325B	1	WELD, SKID PLATE, RH - RED
4	5405324B	1	WELD, SKID PLATE, LH - RED
5	5101270	2	PAD, RUBBER MOUNT, 1/4 MAT
6	5025392	8	NUT, 5/16-18 HEX NYLOCK FLANGE
7	5025391	1	NUT, 1/4-20 HEX NYLOCK FLANGE
8	5025155	12	WASHER, 5/16" SAE
9	5025011X6	12	BOLT, 5/16-18 X 3/4 GD5
10	5025010X6	1	BOLT, 1/4-20 X 3/4 GD5 YZ
11	5022308	4	BODY CLIP, 5/16-18-7GA MATERIAL
12	5021500	1	CLAMP, VINYL INSULATED
13	5021397	2	GROMMET, 1-1/4
14	5021379	1	GROMMET, 7/8

Evap Canister Group

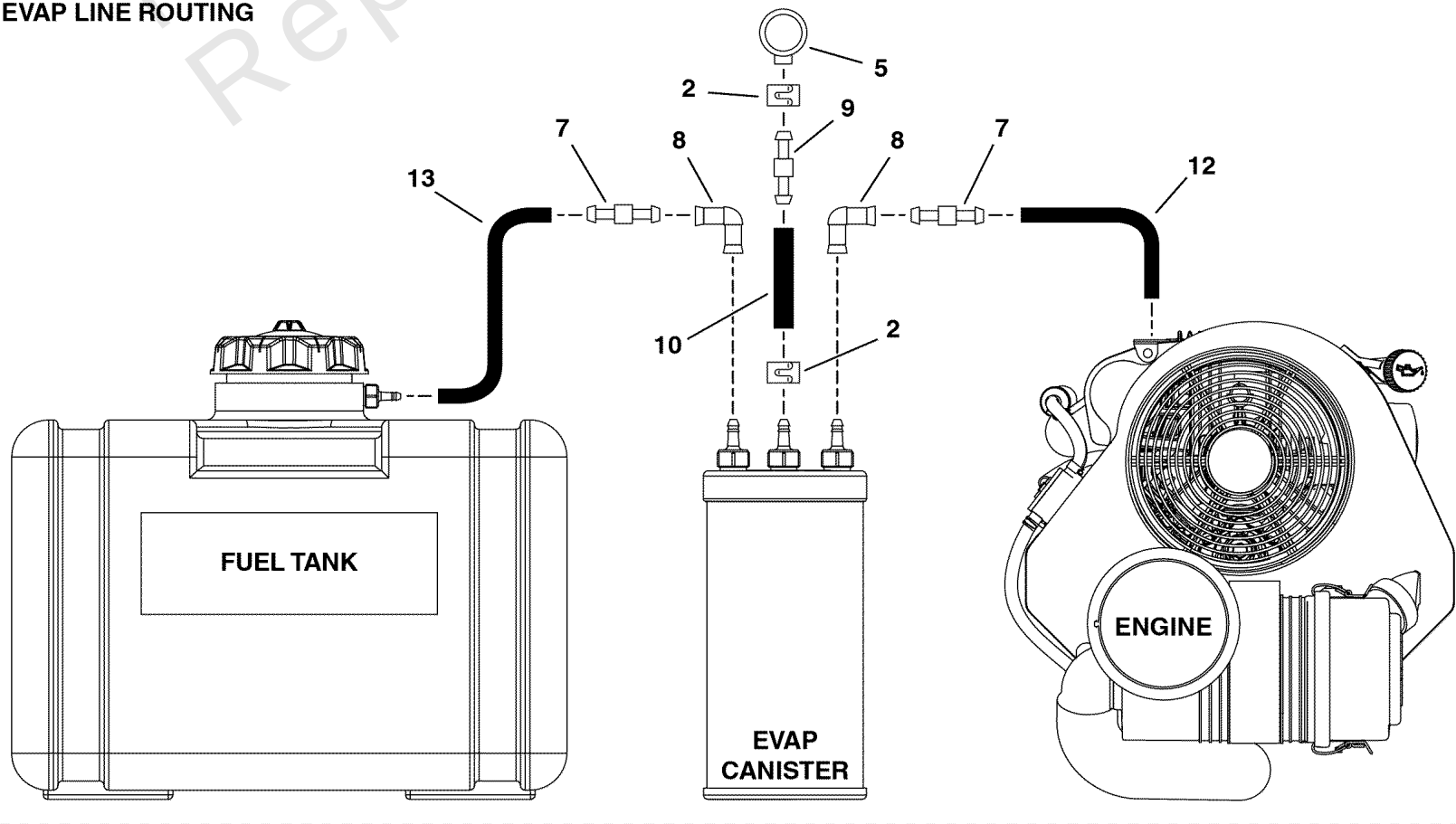
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Mfg. No: 5900520

5302735



EVAP LINE ROUTING



Evap Canister Group

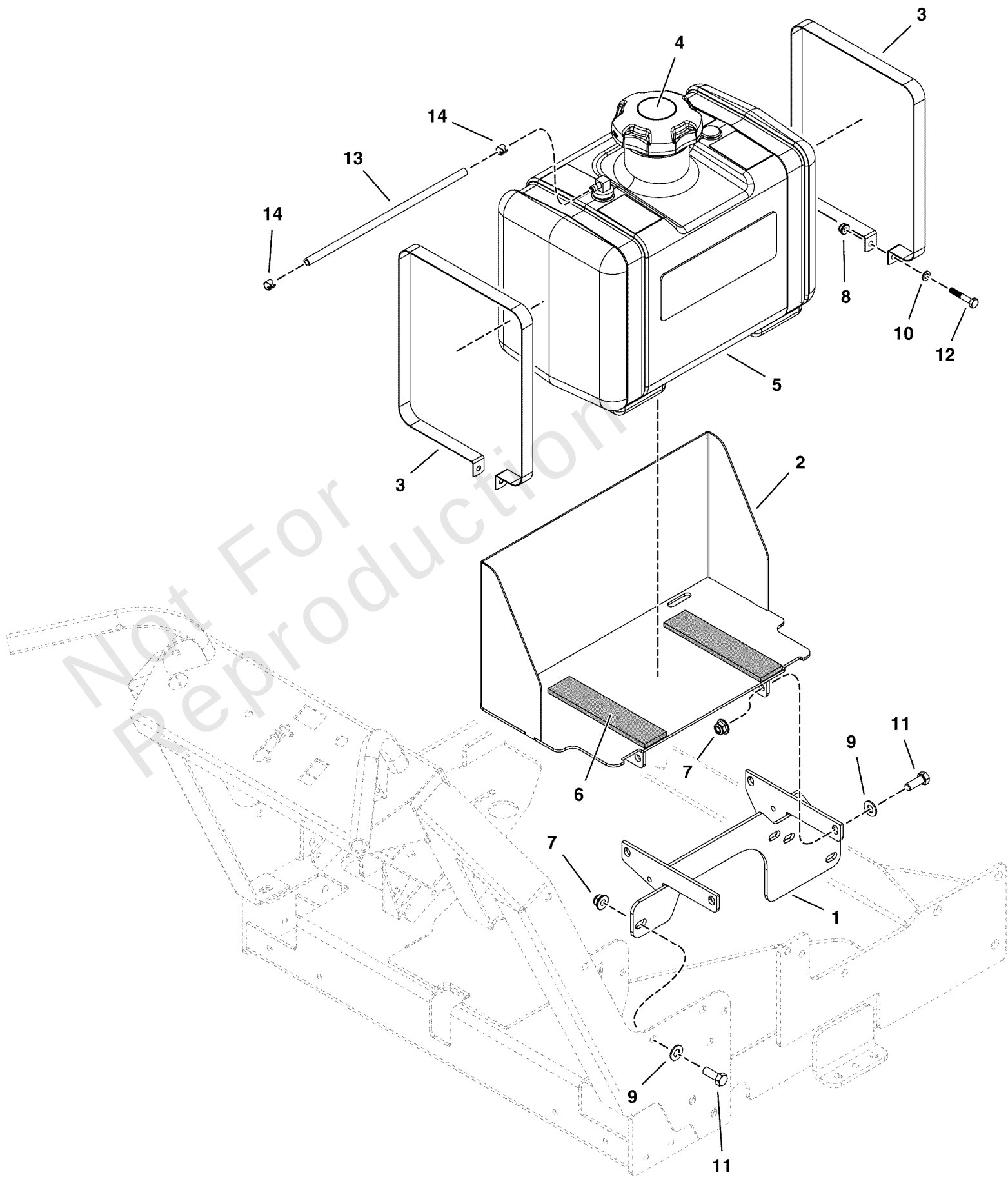
REF NO	PART NO	QTY	DESCRIPTION
1	313036	1	CNSTR, CARB, 6 GAL
2	5023268	2	CLAMP, HOSE
3	5025299X6	2	USE 5106757 - SCREW,1/4-20X3/4, ZINC
4	5025391	2	NUT, 1/4-20 HEX NYLOCK FLANGE
5	1752800	1	DUST FILTER, CANISTER -(SV)
6	5103055	2	CLAMP, 3" ID, CUSHIONED, STAINLESS
7	5103080	1	FITTING, STRAIGHT, 10MMX10MM, PLASTIC
8	5103082	2	FITTING, 90 DEG, 3/16X3/16, SANTOPRENE
9	5103084	2	FITTING, STRAIGHT, 3/16X3/16, PLASTIC
10	5103092	1	HOSE, FORMED, EVAP CANISTER
11	-----	1	DECAL, EPA CERT, WALKS -(Located on frame near Serial Tag)
12	7700552X24	1	HOSE, VAPOR, 5MM ID, 24.00 LG
13	7700552X8	1	HOSE, VAPOR, 5MM ID, 8.00 LG

Fuel Tank & Mount Group

Note: Unless noted otherwise, use the standard torque specifications

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5303028



Fuel Tank & Mount Group

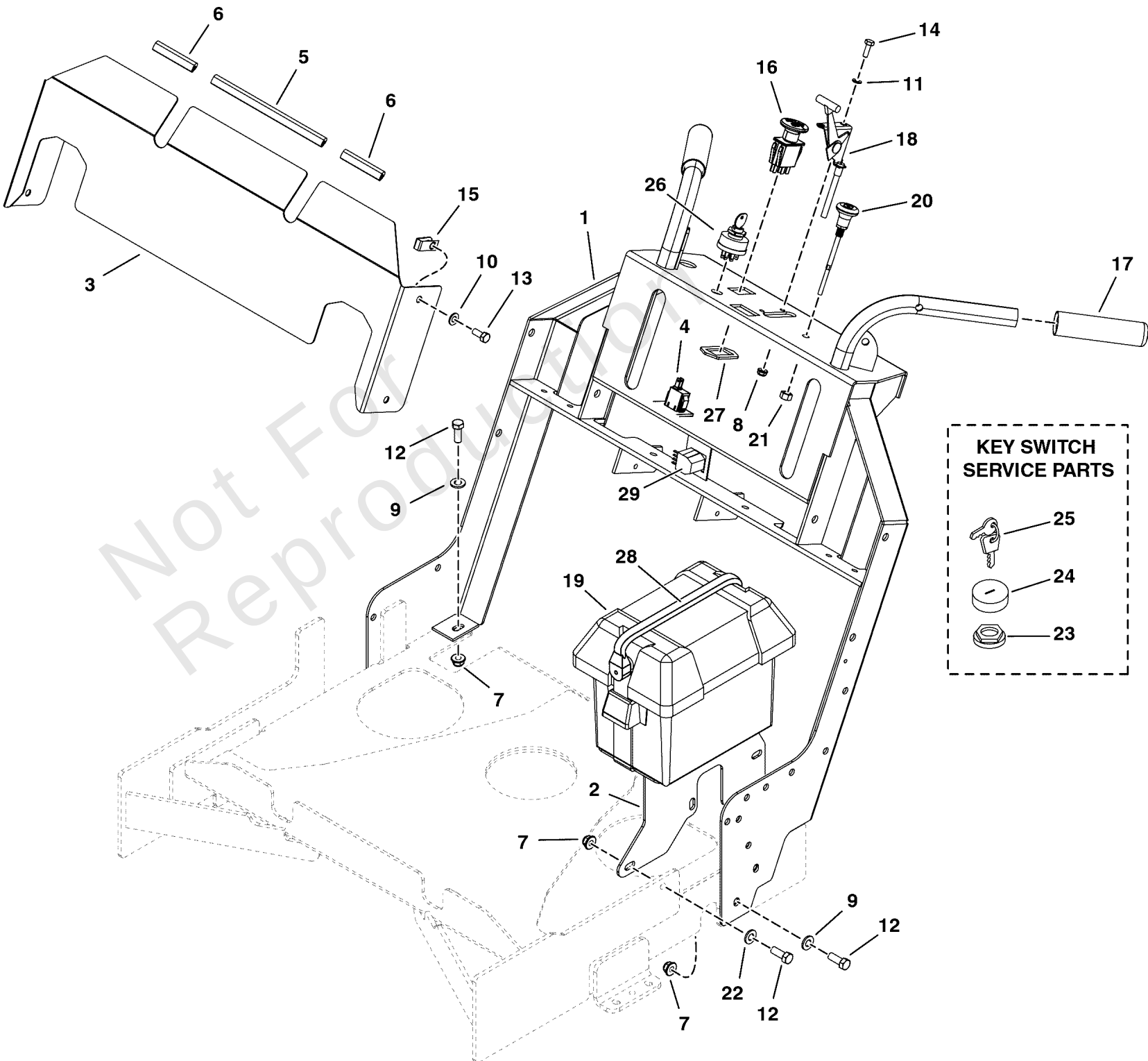
REF NO	PART NO	QTY	DESCRIPTION
1	5409339B	1	WELD, LOWER FUEL TANK MOUNT - RED
2	5409341B	1	WELD, TANK MOUNT, SW20-52-61 - RED
3	5403445A	2	STRAP, FUEL TANK
4	5103005	1	FUEL CAP, 3-1/2", MANAGED VENT OUT, 12"
5	5102833	1	TANK, 5 GAL, W DROP TUBE/VENT
6	5100810	2	PAD, RUBBER MOUNT
7	5025394	7	NUT, 3/8-16 HEX NYLOCK FLANGE
8	5025391	2	NUT, 1/4-20 HEX NYLOCK FLANGE
9	5025156	7	WASHER, 3/8 SAE
10	5025154	2	WASHER, 1/4 SAE
11	5025013X8	8	BOLT, 3/8-16 X 1" GD5 CZ
12	5025010X12	2	BOLT, 1/4-20 X 1-1/2, GD5
13	5050831X12	1	HOSE, 1/4" FUEL, 12.00"
14	93807	2	CLAMP, HOSE, EXTERNAL, 1/2 - RED
15	5102833X1	1	GROMMET -(Grommet for Fuel Tank 5102833)

Handle Bar / Control Panel Group

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5900520

5303029



Handle Bar / Control Panel Group

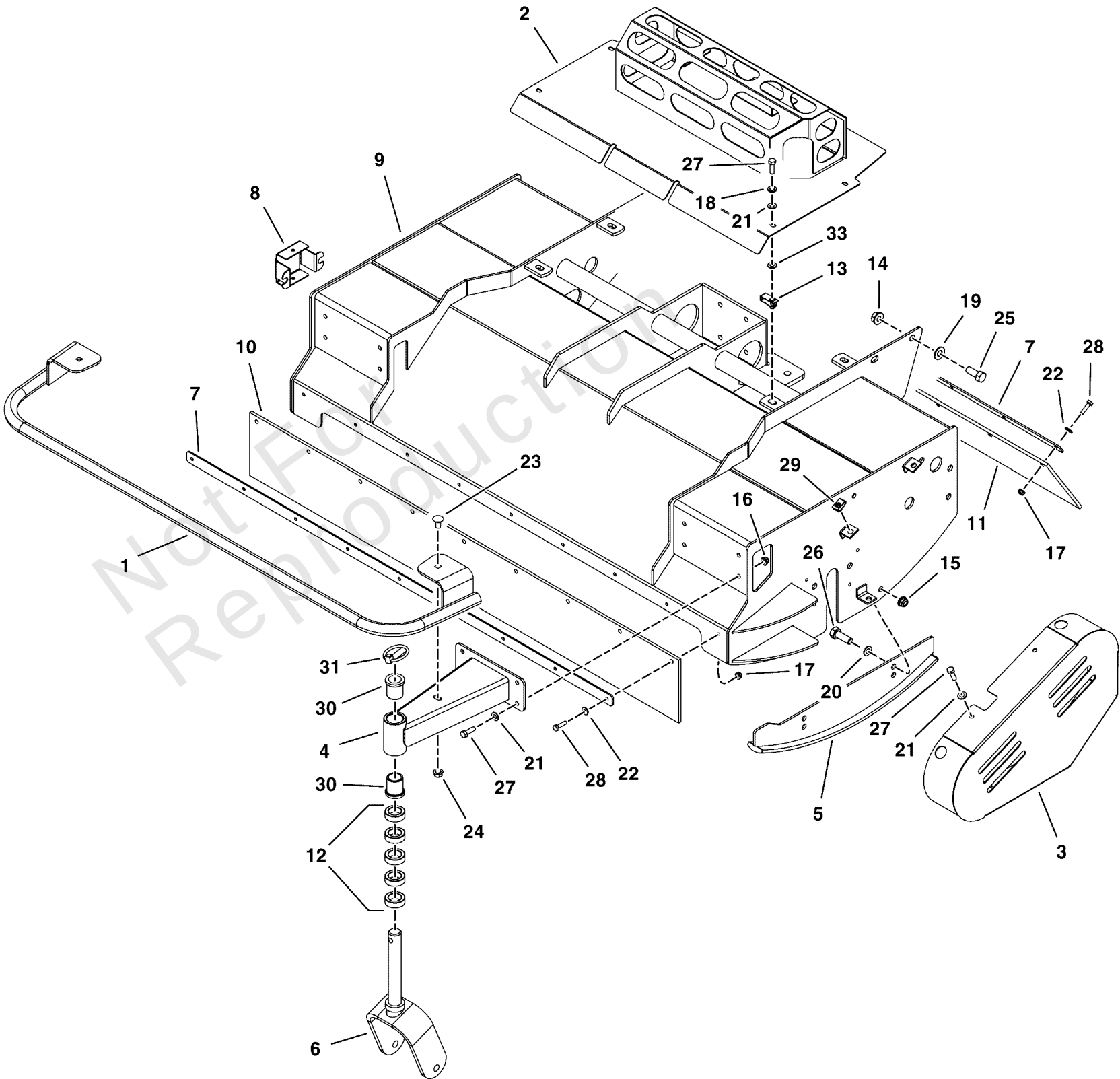
REF NO	PART NO	QTY	DESCRIPTION
1	5409330B	1	WELD, HANDLE BARS, SW30 - RED
2	5406602B	1	WELD, BATTERY MOUNT, SW30-61 - RED
3	5405376B	1	PLATE, HANDLE BAR COVER, SW30 - RED
4	5101216	1	SWITCH, PLUNGER, NC, SINGLE POLE SNAP-IN
5	5050853X8P50	1	BODY MOLDING, 8.50 LONG
6	5050853X3	2	BODY MOLDING, 3" LONG
7	5025394	9	NUT, 3/8-16 HEX NYLOCK FLANGE
8	5025391	2	NUT, 1/4-20 HEX NYLOCK FLANGE
9	5025293	6	WASHER, 3/8 GD.9 FLAT -(SV)
10	5025155	4	WASHER, 5/16" SAE
11	5025154	2	WASHER, 1/4 SAE
12	5025013X8	9	BOLT, 3/8-16 X 1" GD5 CZ
13	5025011X6	4	BOLT, 5/16-18 X 3/4 GD5
14	5025010X6	2	BOLT, 1/4-20 X 3/4 GD5 YZ
15	5022308	4	BODY CLIP, 5/16-18-7GA MATERIAL
16	5022180	1	SWITCH, BLADE ENGAGEMENT
17	5104659	2	GRIP, FOAM, .940" X 4.62" X .187"
18	5104657	1	CABLE, THROTTLE, 43" DETENTED -(Was 5102163)
19	5100688	1	BATTERY BOX, W/ DRAIN HOLE
20	5100184	1	CABLE, CHOKE CONTROL, 43.5"
21	5025309	1	NUT, 3/8-24 HEX JAM
22	5025156	3	WASHER, 3/8 SAE
23	5022791	1	PLASTIC NUT -(SV)
24	5022790	1	COVER, PLASTIC, SNAP ON -(SV)
25	5022789	1	KEY, IGNITION MOLDED SET -(SV)
26	5020927	1	SWITCH, IGNITION, 6 POST
27	5022222	1	RING, SWITCH RETAINER
28	5021670	1	STRAP, RUBBER
29	5101528	1	SWITCH, LOW PRO, NO/NO

Housing, Guards & Caster Group

Note: Unless noted otherwise, use the standard torque specifications

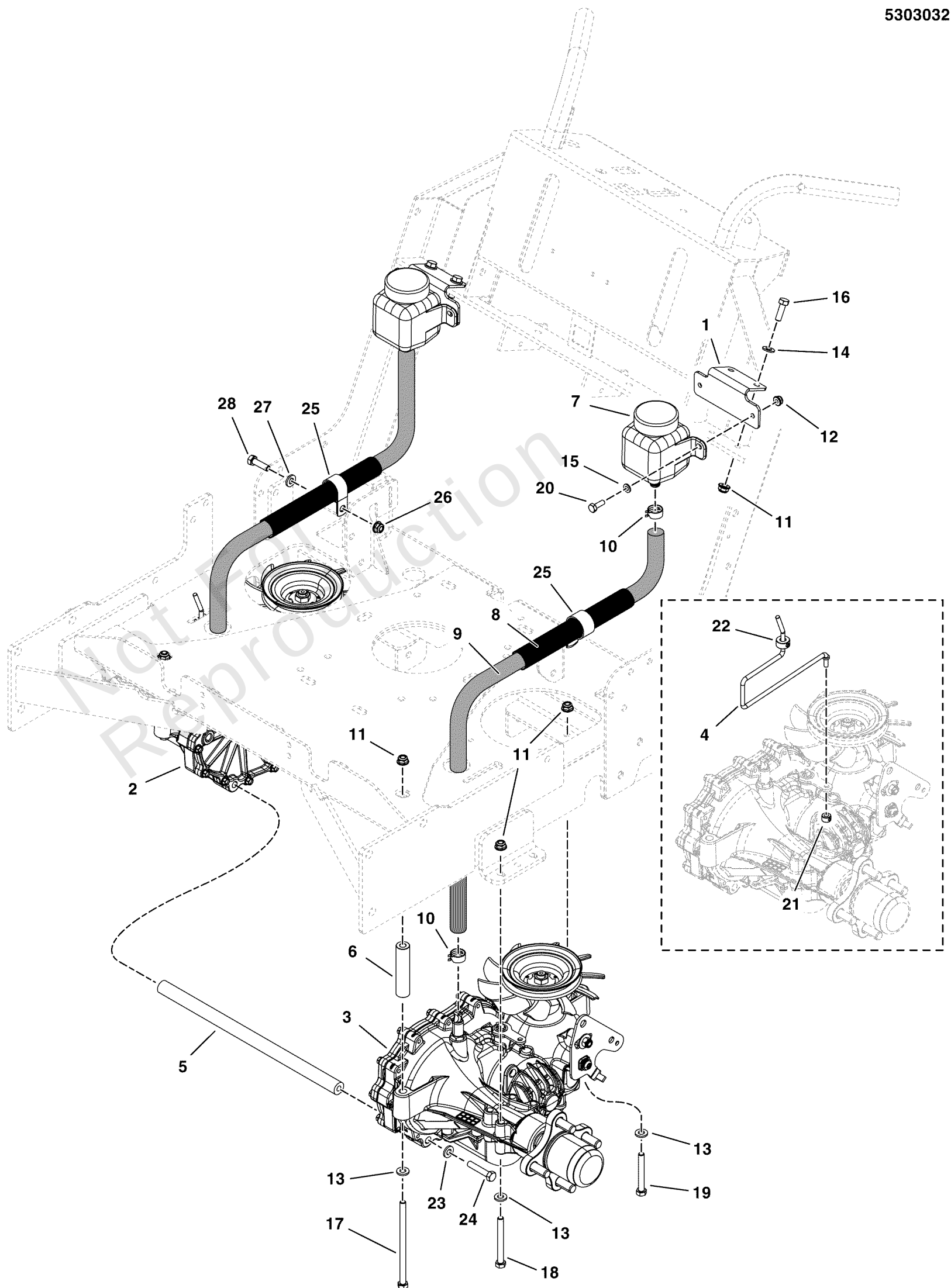
Mfg. No: 5900520

5304120



Housing, Guards & Caster Group

REF NO	PART NO	QTY	DESCRIPTION
1	5409293B	1	WELD, GUARD, BRUSH - RED
2	5409029B	1	WELD, GUARD, MUFFLER, FLAIL - RED -(S/N: 2016714272 & Below)
2	5417163B	1	WELD, GUARD, MUFFLER, FLAIL - RED -(S/N: 2016714273 & Above)
3	5408807B	1	WELD, GUARD, PULLEY - RED
4	5408804B	2	WELD, CASTER ARM, FLAIL - RED
5	5408749B	2	WELD, SKID, FLAIL - RED
6	5408677B	2	WELD, CASTER WHEEL MOUNT - RED
7	5408534B	2	BAR, RUBBER RETAINING - RED
8	5408491B	1	GUARD, BEARING - RED
9	-----	1	WELD, 48-HOOD, FLAIL - RED -(Not a serviceable part.)
10	5103325	1	RUBBER, FRONT SKIRT, 48 FLAIL
11	5103324	1	RUBBER, REAR SKIRT, 48 FLAIL
12	5041476	10	SPACER, 1.02 X 1.56 X .50
13	5025452	4	BODY CLIP, 5/16-18 -1/4 MATERIAL
14	5025396	6	NUT, Hex Flange, Nylock, 1/2-13
15	5025394	4	NUT, 3/8-16 HEX NYLOCK FLANGE
16	5025392	8	NUT, 5/16-18 HEX NYLOCK FLANGE
17	5025391	18	NUT, 1/4-20 HEX NYLOCK FLANGE
18	5025170	4	WASHER, 5/16 LOCK CZ
19	5025158	6	WASHER, 1/2 SAE
20	5025156	4	WASHER, 3/8 SAE
21	5025155	15	WASHER, 5/16" SAE
22	5025154	18	WASHER, 1/4 SAE
23	5025146X6	2	BOLT, 3/8-16 X 3/4, CARRIAGE
24	5025128	2	NUT, 3/8-16 HEX SERRATED FLANGE
25	5025017X10	6	BOLT, 1/2-13 X 1-1/4 GD5 CZ
26	5025013X8	4	BOLT, 3/8-16 X 1" GD5 CZ
27	5025011X8	15	BOLT, 5/16-18 X 1 GD5 YZ
28	5025010X8	18	BOLT, 1/4-20 X 1" GD5 CZ
29	5022308	3	BODY CLIP, 5/16-18-7GA MATERIAL
30	5021541	4	BUSHING, FLANGE
31	5020655	2	PIN, LYNCH, 7/16
32	5020095	2	GREASE FITTING, 1/4-28 -(Not Shown - Located Under Caster Arm)
33	5025498	4	5/16 PUSH-ON NUT RETAINER, STL, CZ



Hydraulic Group

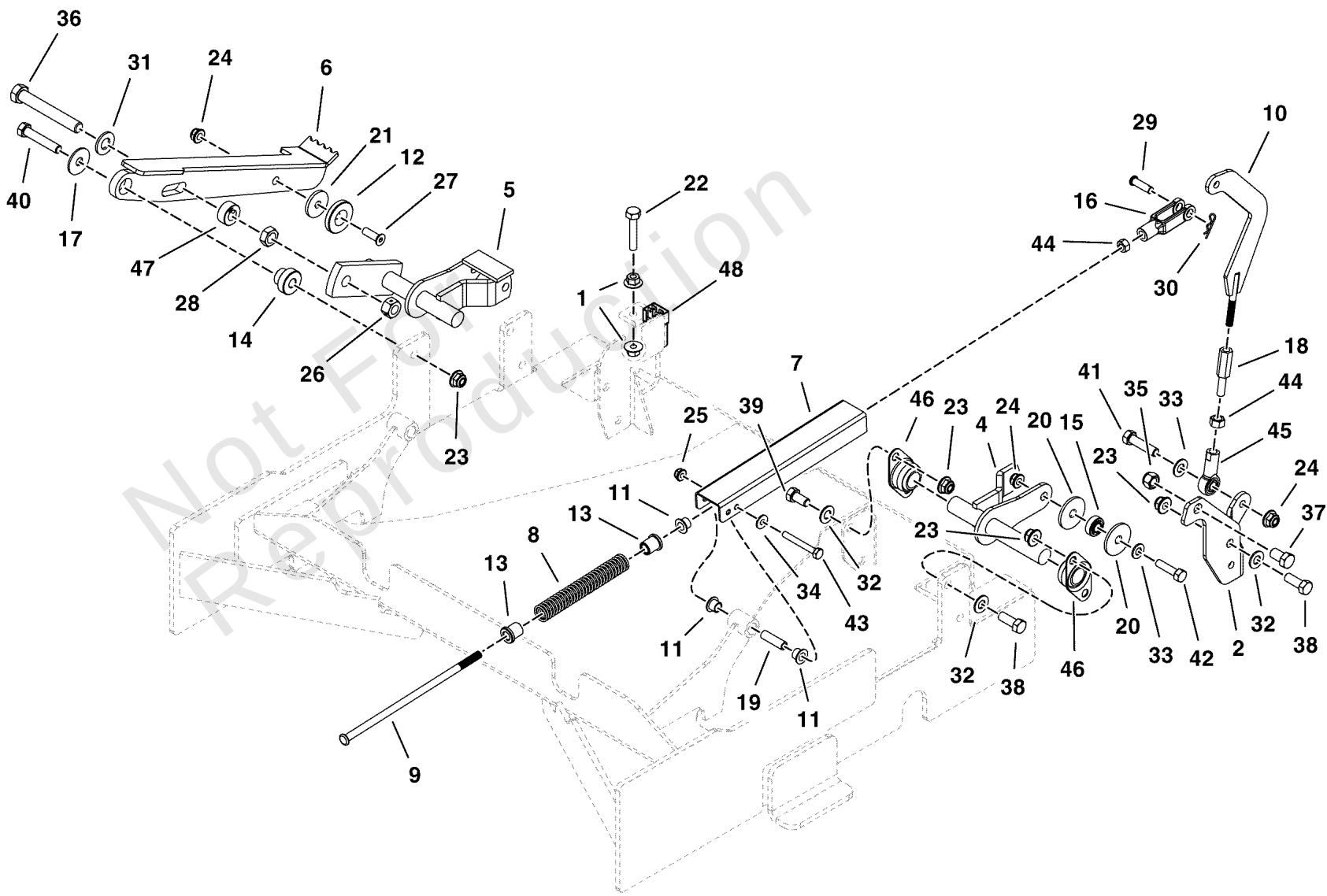
REF NO	PART NO	QTY	DESCRIPTION
1	5405352B	2	PLATE, HYDRO BOTTLE, MOUNT - RED
2	5102810	1	TRANSAXLE, ZT3100, RH(ZJ-KMFE-3C5C-1RLX)
3	5102809	1	TRANSAXLE, ZT3100, LH(ZJ-GMFE-3B5B-1RLX)
4	5102638	2	ROD, HYDRO RELEASE, SW30
5	5103453	1	ROD, HYDRO LINK, 3/8, CZ
6	5101177	2	SPACER, .34 X .75 X 3.27, CZ
7	5100473	2	HYDRO RES. #71328, 350 ml
8	5050862X24	2	WIRE LOOM, 3/4 ID X 24 IN
9	5050857X24	2	HOSE, 1/2" PUSH-ON, 24.00"
10	5025474	4	CLAMP, HOSE, .75 FREE DIA.
11	5025392	12	NUT, 5/16-18 HEX NYLOCK FLANGE
12	5025391	4	NUT, 1/4-20 HEX NYLOCK FLANGE
13	5025292	8	WASHER, 5/16 GD.9 FLAT
14	5025155	4	WASHER, 5/16" SAE
15	5025154	4	WASHER, 1/4 SAE
16	5025011X8	4	BOLT, 5/16-18 X 1 GD5 YZ
17	5025011X48	2	BOLT, 5/16-18 X 6, GD 5, YZ
18	5025011X22	4	BOLT, 5/16-18 X 2-3/4, GD 5, YZ
19	5025011X18	2	BOLT, 5/16-18 X 2-1/4 GD5 YZ
20	5025010X6	4	BOLT, 1/4-20 X 3/4 GD5 YZ
21	5022481	2	COLLAR, 1/4 SET
22	5020047	2	COLLAR, 5/16 SET
23	5025293	2	WASHER, 3/8 GD.9 FLAT
24	5103458	2	BOLT, HEX, 3/8-16 X 2-1/4, GD8, PLAIN
25	5023173	2	CLAMP, HOSE, 1.000 DIA.
26	5025394	1	NUT, 3/8-16 HEX NYLOCK FLANGE
27	5025155	1	WASHER, 5/16" SAE
28	5025013X8	1	BOLT, 3/8-16 X 1" GD5 CZ

Motion Control Group - Lower

Note: Unless noted otherwise, use the standard torque specifications

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5302870



Motion Control Group - Lower

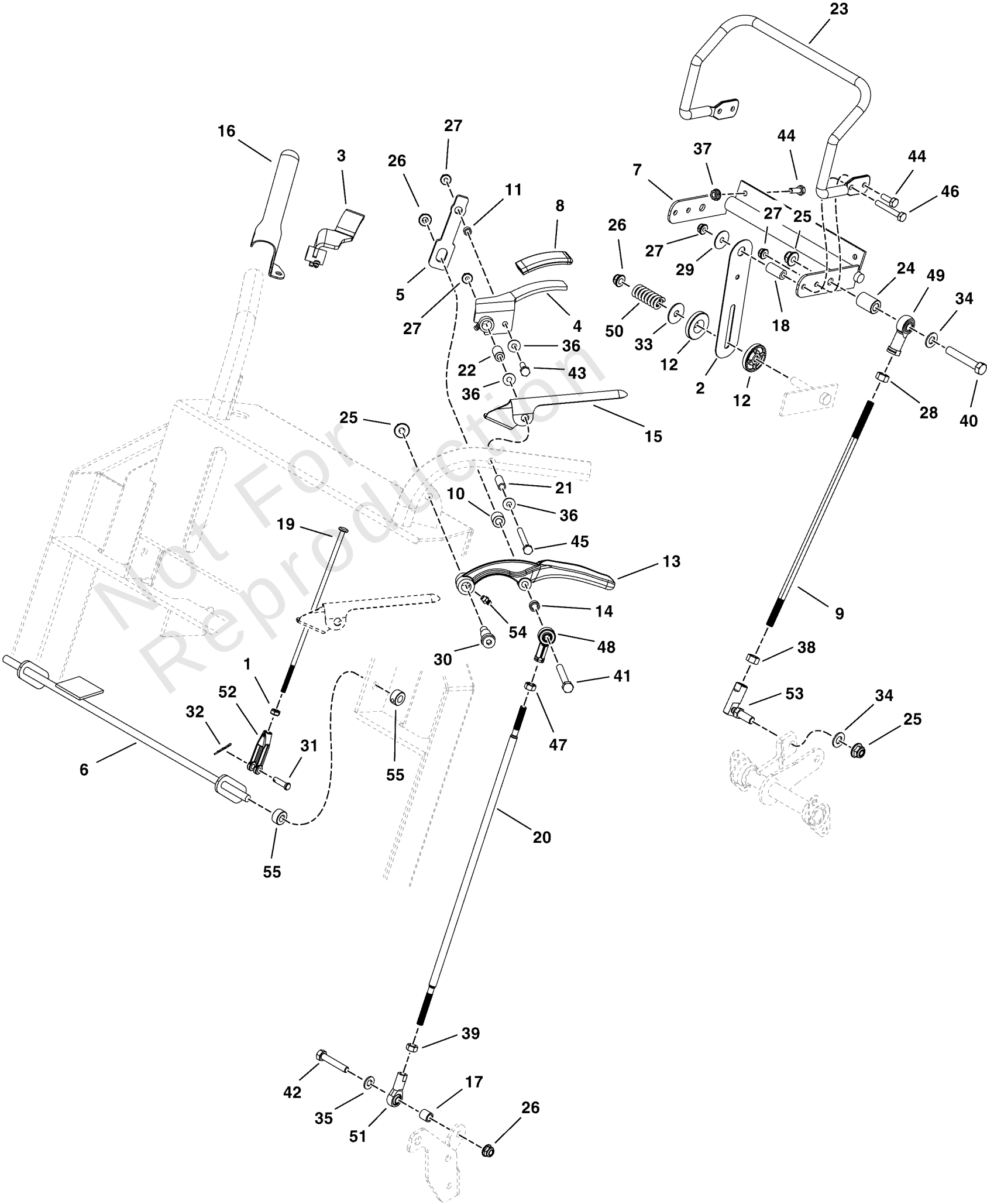
REF NO	PART NO	QTY	DESCRIPTION
1	725338	2	NUT, .31-24 HEX FLG SERRATED LK
2	5409334B	1	PLATE, CONTROL MOUNT, LH - RED
3	5409333B	1	PLATE, CONTROL MOUNT, RH - RED -(Not Shown)
4	5409318B	1	WELD, CONTROL SHAFT, SW30, LH - RED
5	5409260B	1	WELD, CONTROL SHAFT, SW30, RH - RED
6	5409257B	1	WELD, FOOT PEDAL, SW30 - RED
7	5409243B	2	WELD, SPRING HOUSING, SW30 - RED
8	5103441	2	SPRING, COMP. .61 ID X .775 X 7.0 LG,.08
9	5025012X64	2	BOLT, 5/16-24 X 8, GD8, CZ
10	5103434	2	WELD, CONTROL RAMP, WB
11	5102773	6	BUSHING, .38ID X .47 OD X .38L, FL
12	5102701	1	SPACER, .34 X 1.54 X .25 - UHMW
13	5102709	4	BUSHING, .38 X .75 X .75, PLASTIC
14	5102406	1	SPACER, .38 X 1.13 X .781 STEP, CZ
15	5102003	2	BEARING, .375" ID X .875" OD X .341" THK
16	5023323	2	CLEVIS, 5/16-24, STEEL, CLEAR ZINC
17	5025165	1	WASHER, 3/8" Fender
18	5101243	2	ADJUSTER, ROD LINKAGE 5/16-24
19	5101215	2	SPACER, .26 X .38 X 1.250, YZ
20	5100548	4	WASHER, .390 X 1.50 X .109, YZ
21	5044617	1	WASHER, .34 X 1.25 X 10 GA
22	5025538	1	BOLT, 5/16-24 X 1-3/4, FULL THRD, GD5 YZ
23	5025394	11	NUT, 3/8 - 16 HEX NYLOCK FLANGE
24	5025392	3	NUT, 5/16-18 HEX NYLOCK FLANGE NUT
25	5025391	2	NUT, 1/4-20 Hex Nylock Flange
26	5025332	1	NUT, 1/2-13 Hex Side Lock
27	5025594	1	SCREW, 5/16-18 X 1, PHILLIPS HD, BZ
28	5025301	1	NUT, Hex, Jam, 1/2-13
29	5025213X8	2	PIN, CLEVIS, 5/16 X 1, PLATED
30	502506X6	2	COTTER PIN, 5/32 X 3/4
31	5025158	1	WASHER, 1/2 SAE
32	5025156	10	WASHER, 3/8 SAE
33	5025155	2	WASHER, 5/16" SAE
34	5025154	2	WASHER, 1/4 SAE
35	5025044	2	NUT, 7/16-14 HEX TOP LOCK
36	5025017X26	1	BOLT, 1/2-13 X 3-1/4, HEX HD, GD5, CZ (SV)
37	5025015X6	2	BOLT, 7/16-14 X 3/4, GD 5 YZ
38	5025013X8	6	BOLT, 3/8-16 X 1" GD5 CZ
39	5025013X6	4	BOLT, 3/8-16 X 3/4" GD5 CZ
40	5025013X16	1	BOLT, 3/8-16 X 2, GD5, CZ
41	5025011X12	2	BOLT, 5/16-18 X 1-1/2" GD5 YZ
42	5025013X10	2	BOLT, 3/8-16 X 1-1/4" GD5 CZ
43	5025010X16	2	BOLT, 1/4-20 X 2", GD5
44	5023216	4	NUT, Hex Jam, 5/16-24
45	5104493	2	BALL JOINT 5/16-24 RH FEMALE BRONZE RACE
46	5021098	4	BEARING, BRONZE FLANGE, 3/4"
47	5010580	1	COLLAR, 1/2 SET (1/2 SPLIT COLLAR IN MODEL)
48	1717050	1	SWITCH, PLUNGER, N.O./N.C.

Motion Control Group - Upper

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5900520

5302869



Motion Control Group - Upper

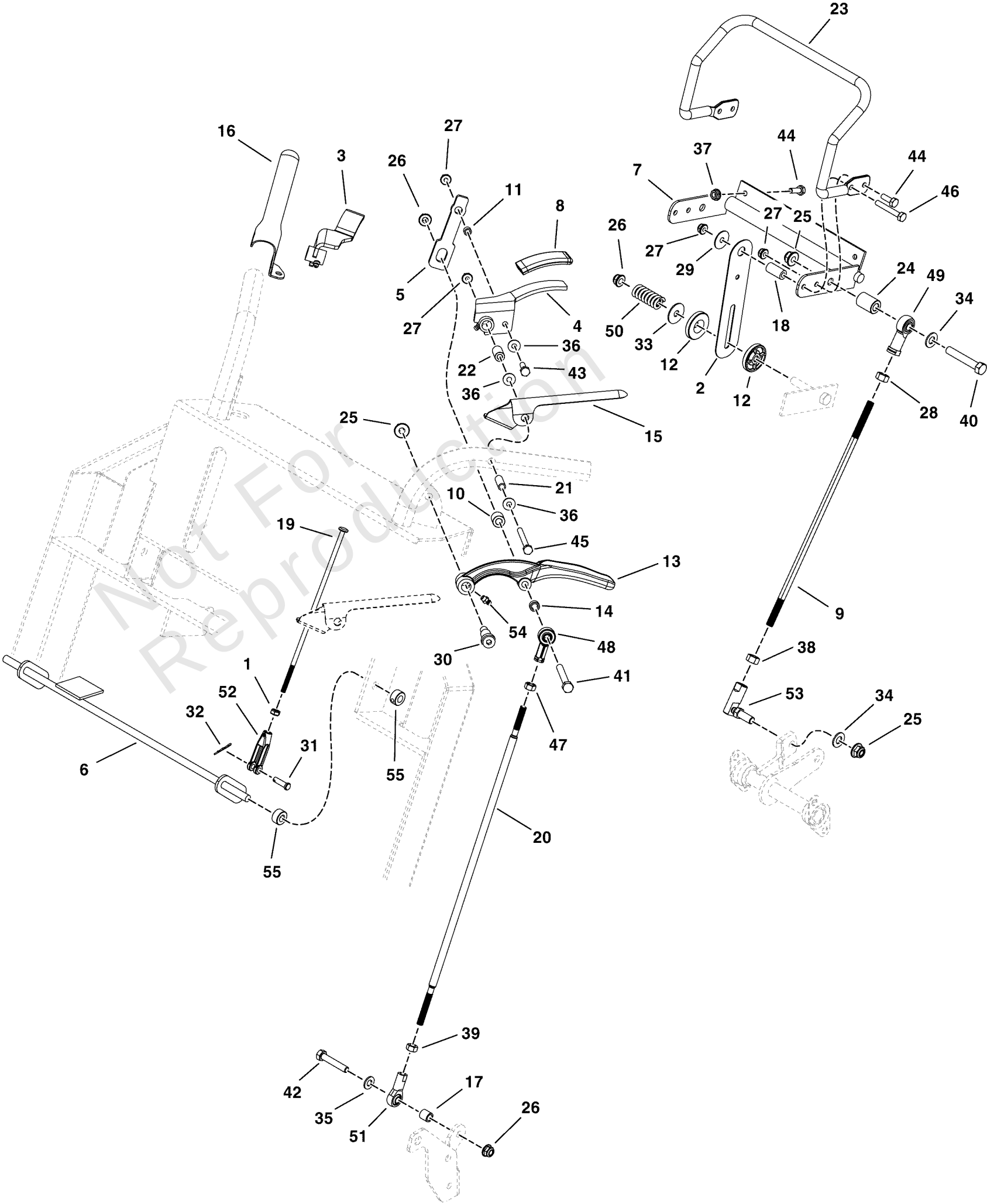
REF NO	PART NO	QTY	DESCRIPTION
1	7090095	2	HN, 1/4F GR5 YZ
2	5409272	1	PLATE, FRICTION CONTROL, SS
3	5408617B	1	WELD, THUMB CONTROL, RH, FLAIL- RED
4	5408616B	1	WELD, THUMB CONTROL, LH, FLAIL - RED
5	5408615AA	2	LINK, THUMB CONTROL - BLACK
6	5405476B	1	WELD, ROD, SWITCH, SW-30 - RED
7	5412891A	1	WELD, SPEED CONTROL, SW35 - BLK
8	5103457	2	GRIP, FOAM, 1/8 X 1.13 X 2.75"
9	5101236	2	ROD, CRUISE CONTROL, SNP PRO WB
10	5103225	2	SPACER, .33 X .625 X .88, STEP, CZ
11	5102813	2	SPACER, .265 X .375 X .25, CZ
12	5102701	2	SPACER, .34 X 1.54 X .25 - UHMW
13	5102556A	2	HANDLE, REVERSING - BLK
14	5102463	2	SPACER, .33 X .50 X .25, CZ
15	5104202A	1	NLA - FLAP, OPS - BLK
16	5104201A	1	NLA - FLAP, OPS - BLK
17	5102148	2	SPACER, .33 X .50 X .50, CZ
18	5101274	1	SPACER, .26 X .50 X 1.00
19	5101242	2	ROD, OPC LINK, SNP PRO WB
20	5103349	2	ROD, 5/16-24 X 33.2 LH-RH, CZ
21	5101215	2	SPACER, .26 X .38 X 1.25, CZ
22	5100832	2	SLEEVE, CRUISE CONTROL ROLLER
23	5100744	1	BAR, SPEED CONTROL, DIPPED
24	5042658	2	SPACER, .39 X .75 X 1.06
25	5025394	6	NUT, 3/8-16 HEX NYLOCK FLANGE
26	5025392	6	NUT, 5/16-18 HEX NYLOCK FLANGE
27	5025391	8	NUT, 1/4-20 HEX NYLOCK FLANGE
28	5025317	2	NUT, 3/8-24 HEX, LH
29	5025288	1	WASHER, 1/4 FENDER
30	5025223	2	BOLT, 3/8-16 X 1, 1/2 SHOULDER
31	5025212X7	2	PIN, CLEVIS, 1/4 X 7/8, PLATED
32	5025211	2	PIN, HAIR, .0585 X 1-1/8, 1/4 EYE, YZ
33	5025164	1	WASHER, 5/16 FENDER
34	5025156	4	WASHER, 3/8 SAE
35	5025155	2	WASHER, 5/16" SAE
36	5025154	8	WASHER, 1/4 SAE
37	5025126	2	NUT, 1/4-20 HEX SERR. FLANGE
38	5025035SM	2	NUT (3/8-24 HEX)
39	5025033	2	NUT, 5/16-24 HEX
40	5025013X18	2	BOLT, 3/8-16 X 2-1/4" GD5 CZ
41	5025011X24	2	BOLT, 5/16-18 X 3 GD5 YZ
42	5025011X14	2	BOLT, 5/16-18 X 1-3/4 GD5 YZ
43	5025010X8	2	BOLT, 1/4-20 X 1" GD5 CZ
44	5025010X6	5	BOLT, 1/4-20 X 3/4 GD5 YZ
45	5025010X24	2	BOLT, 1/4-20 X 3, GD5
46	5025010X14	1	BOLT, 1/4-20 X 1-3/4 GD5 YZ
47	5023212	2	NUT, 5/16-24 HEX, LH
48	5104494	2	BALL JOINT 5/16-24 LH FEMALE BRONZE RACE
49	5022392	2	ROD END, 3/8-24 LH FEMALE
50	5022361	1	SPRING-COMP, .428IDX2.50LGX.154WR, BZ
51	5104493	2	BALL JOINT 5/16-24 RH FEMALE BRONZE RACE

Motion Control Group - Upper

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5900520

5302869



Motion Control Group - Upper

REF NO	PART NO	QTY	DESCRIPTION
52	84007748	2	CLEVIS
53	5020805	2	BALL JOINT, 3/8-24 FEM, STUD
54	5020095	2	GREASE FITTING, 1/4-28 STRAIGHT
55	5010546	2	COLLAR, 3/8 SET

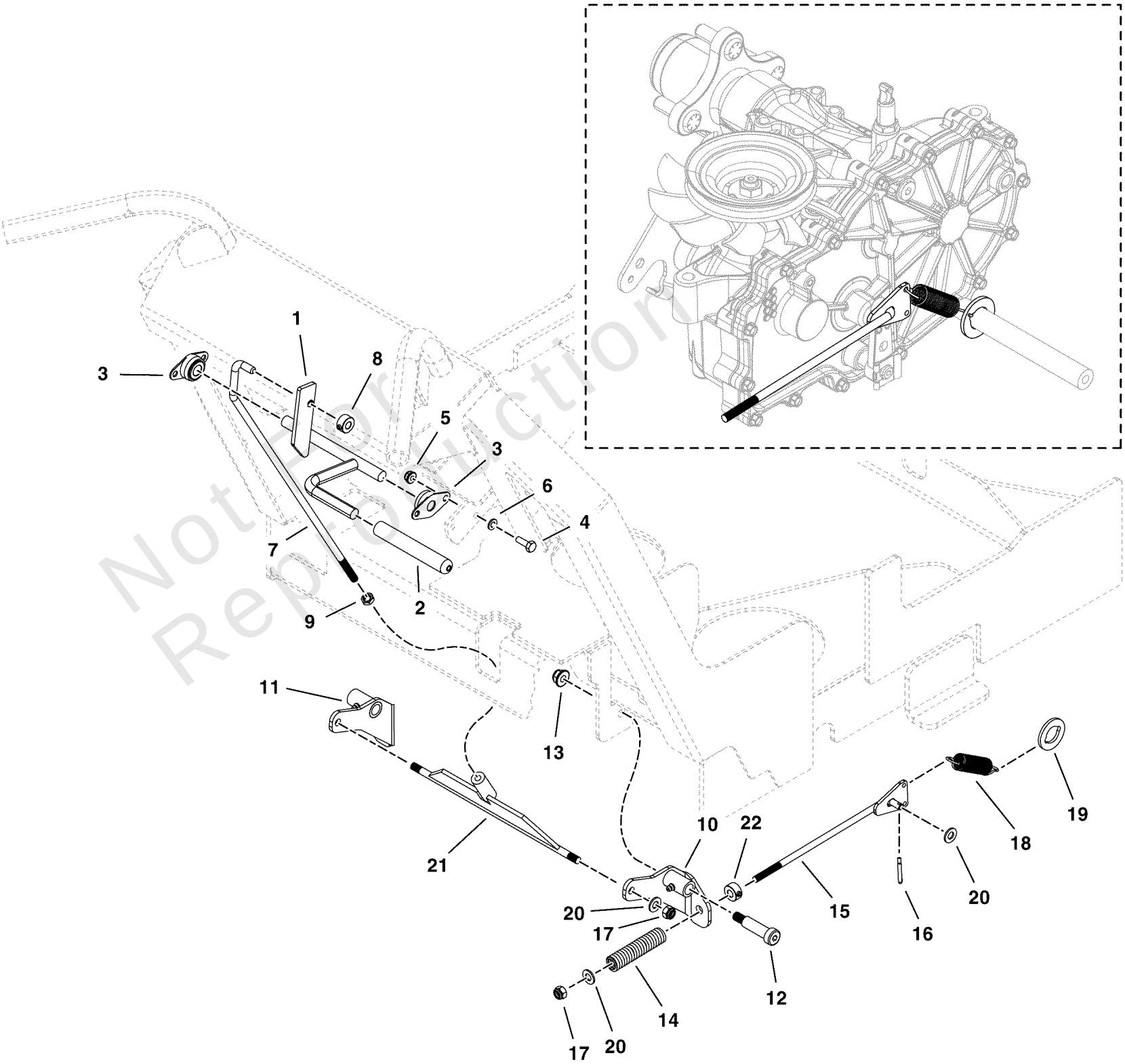
Not For Reproduction

Parking Brake Group

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5900520

5303030



Parking Brake Group

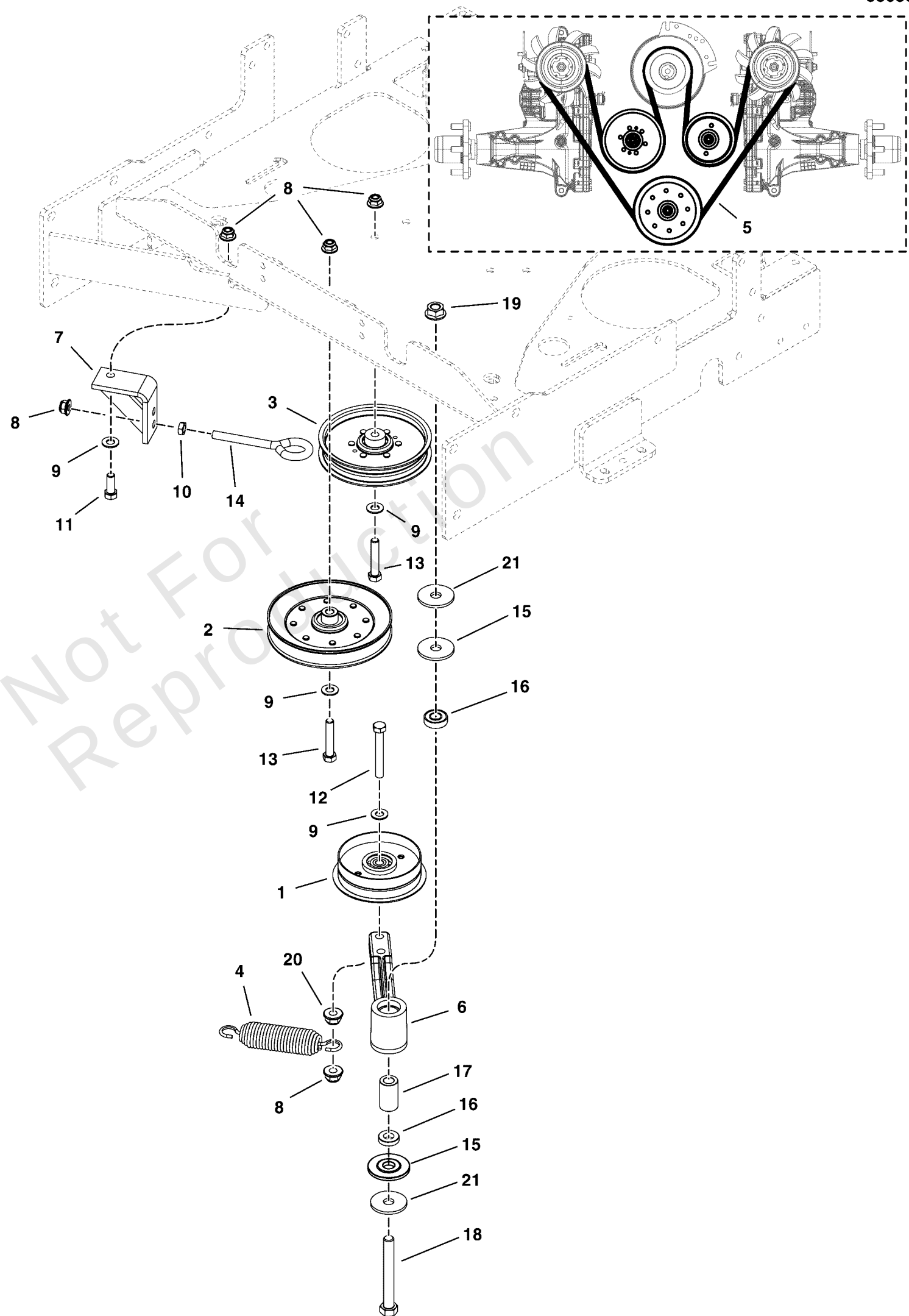
REF NO	PART NO	QTY	DESCRIPTION
1	5405442B	1	WELD, BRAKE SHAFT, SW30 - RED
2	5021880	1	GRIP, FOAM
3	5101123	2	BEARING, 1/2 FLANGED, PLASTIC BALL
4	5025010X6	4	BOLT, 1/4-20 X 3/4 GD5 YZ
5	5025391	4	NUT, 1/4-20 HEX NYLOCK FLANGE
6	5025154	4	WASHER, 1/4 SAE
7	5101116	1	ROD, PULLER ROD
8	5020047	1	COLLAR, 5/16 SET
9	5023216	1	NUT, 5/16-24 JAM
10	5405232B	1	WELD, BRAKE ARM, RH - RED
11	5405231B	1	WELD, BRAKE ARM, LH - RED
12	5025220	2	BOLT-3/8-16 x 1-1/2, 1/2 SHOULDER
13	5025394	2	NUT, 3/8-16 HEX NYLOCK FLANGE
14	5023242	2	SPRING-COMP, .496ID X 3.00LG X .112WR
15	5102010	2	ROD, LOWER BRAKE, SW30
16	5025203X6	2	PIN, COTTER, 1/8 X 3/4
17	5025045	4	NUT, 5/16-24 HEX NYLON LOCK
18	5101339	2	SPRING-EXT, .751 ODX3.281LGX.075WR, BLK
19	5403960	2	WASHER, KEYED, 1-1/2 OD
20	5025155	6	WASHER, 5/16" SAE
21	5102199	1	BRAKE ROD, LOWER CONNECTION, SW30
22	5102997	2	COLLAR, DOUBLE SPLIT, 5/16 CZ

Pump Drive Group

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5900520

5303031



Pump Drive Group

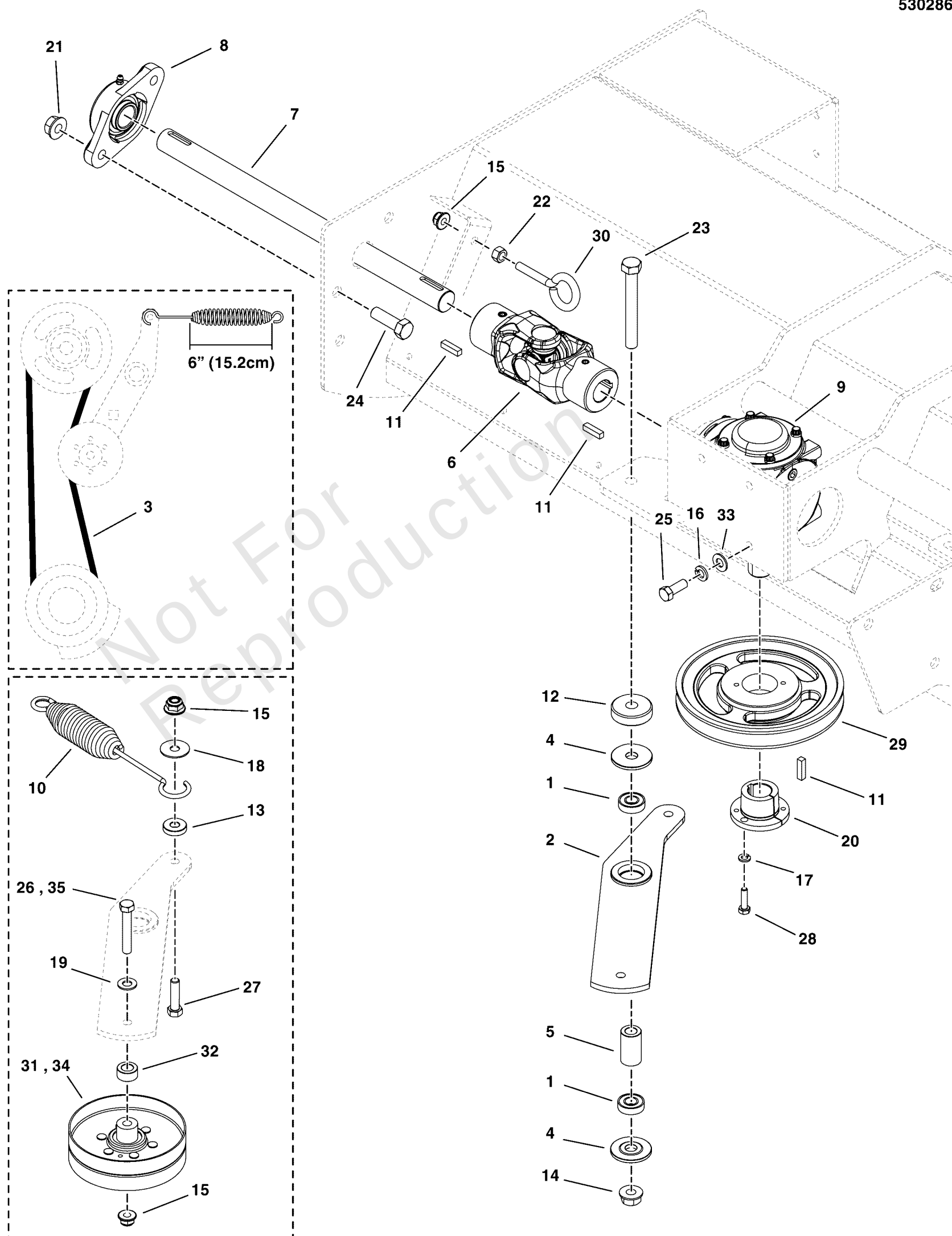
REF NO	PART NO	QTY	DESCRIPTION
1	5102496	1	PULLEY, IDLER, SINGLE FLANGE, 4" OD
2	5102093	1	PULLEY-IDLER-V, 5.83OB, .38ID, .94W, STL
3	5101193	1	PULLEY-IDLER, 5.00OD, .385ID, .75W, STL
4	5100633	1	SPRING-EXT, 1.25 ODX5.70LGX.142WR, BLK
5	5100034	1	BELT, A-SEC, 100.00EL, ARAMID, WRPD
6	5411066	1	ASSM, IDLER ARM, PUMP DRIVE, 1/2ID, CAST -(Includes item #15-17)
7	5045200B	1	WELD, ANCHOR EYEBOLT
8	5025394	5	NUT, 3/8-16 HEX NYLOCK FLANGE
9	5025156	4	WASHER, 3/8 SAE
10	5025084	1	NUT, 3/8-16 HEX JAM
11	5025013X10	1	BOLT, 3/8-16 X 1-1/4" GD5 CZ
12	5025013X20	1	BOLT, 3/8-16 X 2-1/2" GD5 CZ
13	5025013X16	2	BOLT, 3/8-16 X 2, GD5, CZ
14	5023497	1	EYE BOLT, 3/8-16 X 5, 2.88THRD, 1EYE, CZ
15	5103262	2	SPACER, IDLER ARM, 1/2"
16	7078243	2	BEARING, BALL, AXLE
17	5103812	1	SPACER, .52 X .84 X 1.53, PM
18	5025017X32	1	BOLT, 1/2-13 X 4" GD5 CZ
19	5025396	1	NUT, Hex Flange, Nylock, 1/2-13
20	5025128	1	NUT, 3/8-16 HEX SERRATED FLANGE
21	5103282	2	WASHER, .52 X 1.75 X .14, CZ

Rear Drive Group

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5900520

5302865



Rear Drive Group

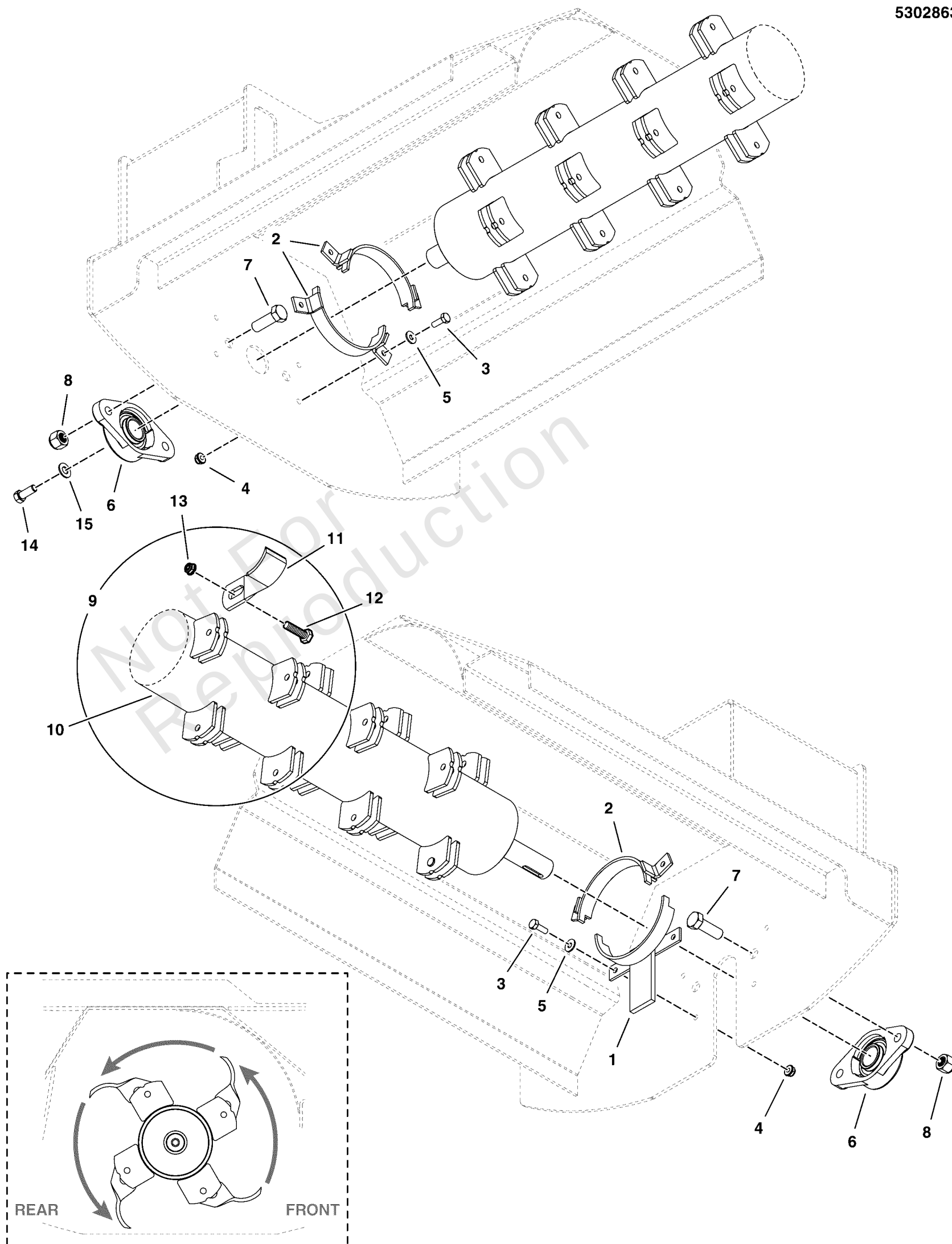
REF NO	PART NO	QTY	DESCRIPTION
1	7078243	2	BEARING, BALL, AXLE
2	5408656B	1	WELD, IDLER ARM, FLAIL - RED
3	5103329	1	BELT, B-SEC, 63.3" EL, LGE ARAMID WRPD
4	5103262	2	SPACER, IDLER ARM, 1/2"
5	5103812	1	SPACER, .52 X .84 X 1.53, PM
6	5103240	1	UNIVERSAL JOINT ASM, 1"
7	5103233	1	SHAFT, 1" DIA X 18.19
8	5103201	1	BEARING, 2 BOLT FLANGE, 1", CAST
9	5101164	1	GEAR BOX, RIGHT ANGLE
10	5100632	1	SPRING, EXTENSION, SWIVEL. LONG HOOK
11	5025584	3	KEY, 1/4" SQR. X 1-1/4, RD ENDS
12	5049183	1	SPACER, .59 X 1.50 X .25
13	5044960	1	SPACER, .39 X 1.00 X .25
14	5025396	1	NUT, Hex Flange, Nylock, 1/2-13
15	5025394	3	NUT, 3/8-16 HEX NYLOCK FLANGE
16	5025170	4	WASHER, 5/16 LOCK CZ
17	5025169	2	WASHER, 1/4 LOCK
18	5025165	1	WASHER-3/8 FENDER
19	5025156	1	WASHER, 3/8 SAE
20	5020819	1	BUSHING, TAPERED HUB
21	5025056	2	NUT, 1/2-13 HEX NYLON LOCK
22	5025034	1	NUT, 3/8-16 HEX
23	5025017X32	1	BOLT, 1/2-13 X 4" GD5 CZ
24	5025017X12	2	BOLT, 1/2-13 X 1-1/2 GD5 CZ
25	5025011X8	4	BOLT, 5/16-18 X 1 GD5 YZ
26	5025013X20	1	BOLT, 3/8-16 X 2-1/2" GD5 CZ -(S/N: 2017033694 & Below)
27	5025013X12	1	BOLT, 3/8-16 X 1-1/2" GD5 CZ
28	5025010X8	2	BOLT, 1/4-20 X 1" GD5 CZ
29	5022794	1	PULLEY, SPINDLE, BH72
30	5021812	1	EYE BOLT, 3/8-16 X 6, 3.0 THREAD
31	5021442	1	PULLEY-IDLER, 5.00OD, .385ID, 1.50W STL -(S/N: 2017033694 & Below)
32	5044960	1	SPACER, .39 X 1.00 X .25 -(S/N: 2017033694 & Below)
33	5025292	4	WASHER, 5/16 F436 FLAT
34	5102276	1	PULLEY, IDLER, DOUBLE FLANGED, 4IN -(S/N: 2017033695 & Above)
35	5025013X16	1	BOLT, 3/8-16 X 2, GD5, CZ -(S/N: 2017033695 & Above)

Rotor & Blades Group

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5900520

5302863



Rotor & Blades Group

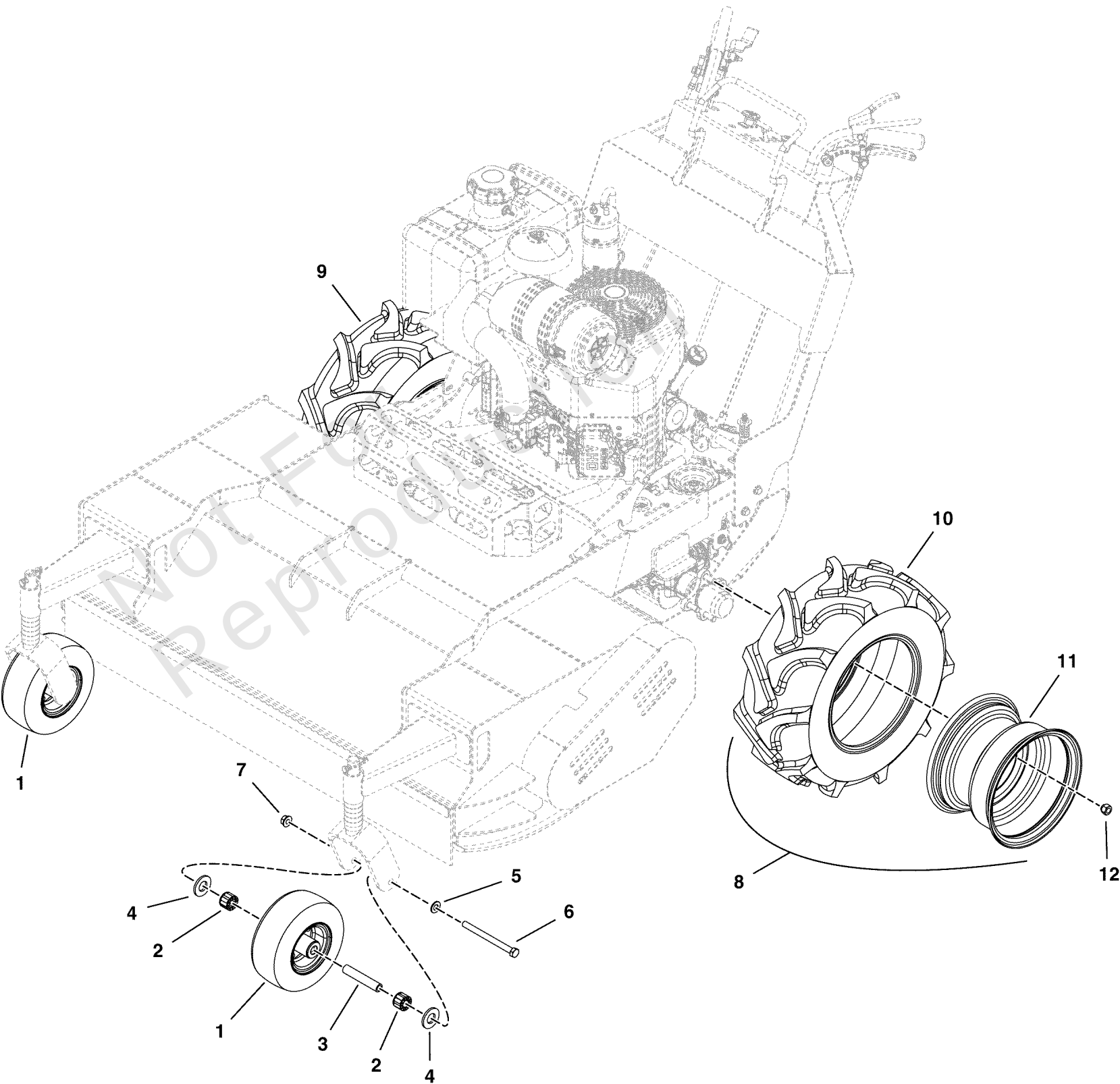
REF NO	PART NO	QTY	DESCRIPTION
1	5408747A	1	WELD, ROTOR GUARD, LH BTM - BLK
2	5408786A	3	WELD, ROTOR GUARD - BLK
3	5025010X6	8	BOLT, 1/4-20 X 3/4 GD5 YZ
4	5025391	8	NUT, 1/4-20 HEX NYLOCK FLANGE
5	5025154	8	WASHER, 1/4 SAE
6	5103201	2	BEARING, 2 BOLT FLANGE, 1", CAST -(S/N: 4000223355 and below)
6	5107775	2	BEARING, 2-BOLT FLANGE, 25MM -(S/N: 4000223356 and above)
7	5025017X12	4	BOLT, 1/2-13 X 1-1/2 GD5 CZ
8	5025056	4	NUT, 1/2-13 HEX NYLON LOCK
9	5104006	1	48" ROTOR ASM. & BAL, FLAIL -(S/N: 4000223355 and below)
9	5107774	1	ROTOR ASSM, 48, FLAIL -(S/N: 4000223356 and above)
10	-----	1	48" ROTOR -(Replace with item #9).
11	5103210	34	CUTTER, FLAIL, 1-3/8 X 3.0, FINISH
12	5025013X10	34	BOLT, 3/8-16 X 1-1/4" GD5 CZ
13	5025100	34	NUT, 3/8-16 HEX SIDE LOCK
14	5025443	1	BOLT, 3/8-16 X 3/4, PLT W/PATCH -(S/N: 4000223355 and below)
14	5025692	1	BOLT, M12 X 1.75 X 25MM, CZ -(S/N: 4000223356 and above)
15	5100548	1	WASHER, .390 X 1.50 X .109, YZ -(S/N: 4000223355 and below)
15	5044913	1	WASHER, .53 X 1.50 X .25 -(S/N: 4000223356 and above)

Wheel & Tire Group

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5900520

5302872



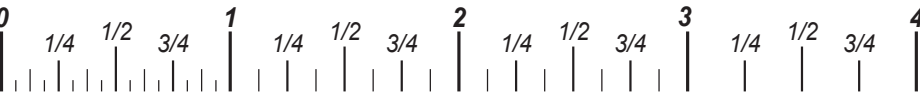
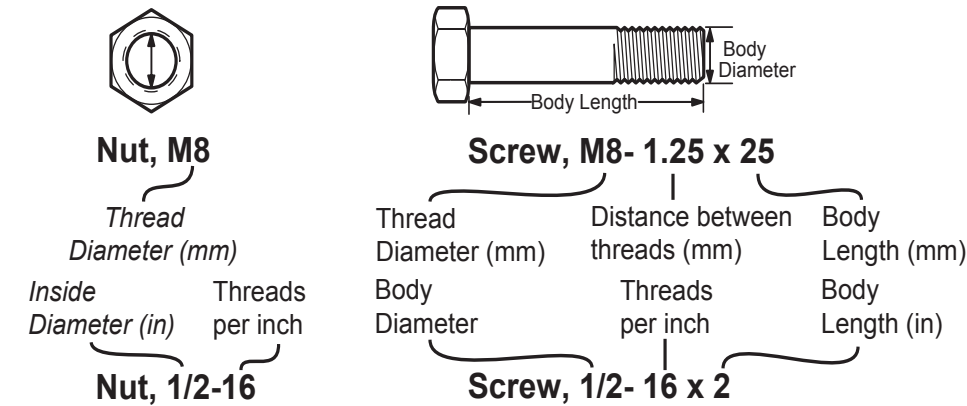
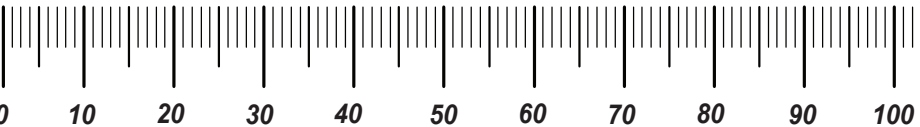
Wheel & Tire Group

REF NO	PART NO	QTY	DESCRIPTION
1	5100790	2	FLAT FREE TIRE ASSY, 9.00 X 3.50 - 4.00
2	5022579	4	BEARING -(SV)
3	5041657	2	AXLE, CASTER WHEEL -(SV)
4	5021043	4	RETAINER, BEARING -(SV)
5	5025158	2	WASHER, 1/2 SAE
6	5025017X48	2	BOLT, 1/2-13 X 6 GD5 YZ
7	5025396	2	NUT, Hex Flange, Nylock, 1/2-13
8	5103328	1	TIRE ASM, 20X8.00-10, LH, LUG BAR
9	5103327	1	TIRE ASM, 20X8.00-10, RH, LUG BAR
10	5103327X1	2	TIRE, 20 X 8.00-10, LUG BAR -(SV)
11	5102329X2	2	WHEEL, 10X7.00 4/4 SOLID F237 2.625 OS -(SV)
12	5020601	8	NUT, 1/2-20, FOR WHEEL BOLT SILVER

Hardware Identification & Torque Specifications

Torque Specification Chart								
FOR STANDARD METRIC MACHINE HARDWARE (Tolerance ± 20%)								
Property Class	 Class 5.6		 Class 8.8		 Class 10.9		 Class 12.9	
Size Of Hardware	in/lbs ft/lbs	Nm.	in/lbs ft/lbs	Nm.	in/lbs ft/lbs	Nm.	in/lbs ft/lbs	Nm.
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

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



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).

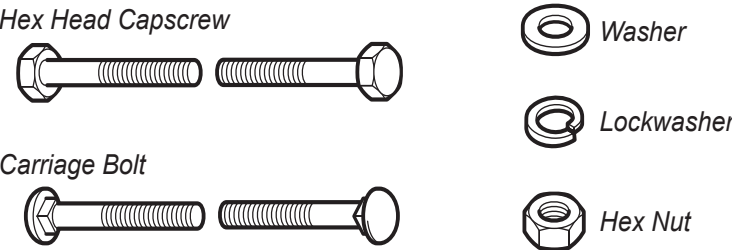
When bolt or capscrew is identified as 1/2 - 16 x 2" (M8 - 1.25 x 50), this means the *Nominal size*, or body diameter is 1/2 inch (8mm metric thread diameter), the second number, 16, represents the *threads per inch*, (*distance between threads*). The final number is the body length of the bolt or screw,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

Torque Specification Chart						
FOR STANDARD MACHINE HARDWARE (Tolerance ± 20%)						
Hardware Grade	 SAE Grade 2		 SAE Grade 5		 SAE Grade 8	
Size Of Hardware	in/lbs ft/lbs	Nm.	in/lbs ft/lbs	Nm.	in/lbs ft/lbs	Nm.
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

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



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

