



Parts Manual FM Series

Walk Behind Flail Mower



Models: 5901453
Description: FM Series w/ 48" Rotor (FM35BV2648CE)

Briggs and Stratton Power Products Group, LLC.
5375 North Main Street
Munnsville, NY 13409 USA
800-933-6175

5104536
Revision E
Rev. Date: 4/18/16
TP 400-5104536-E-FM-F

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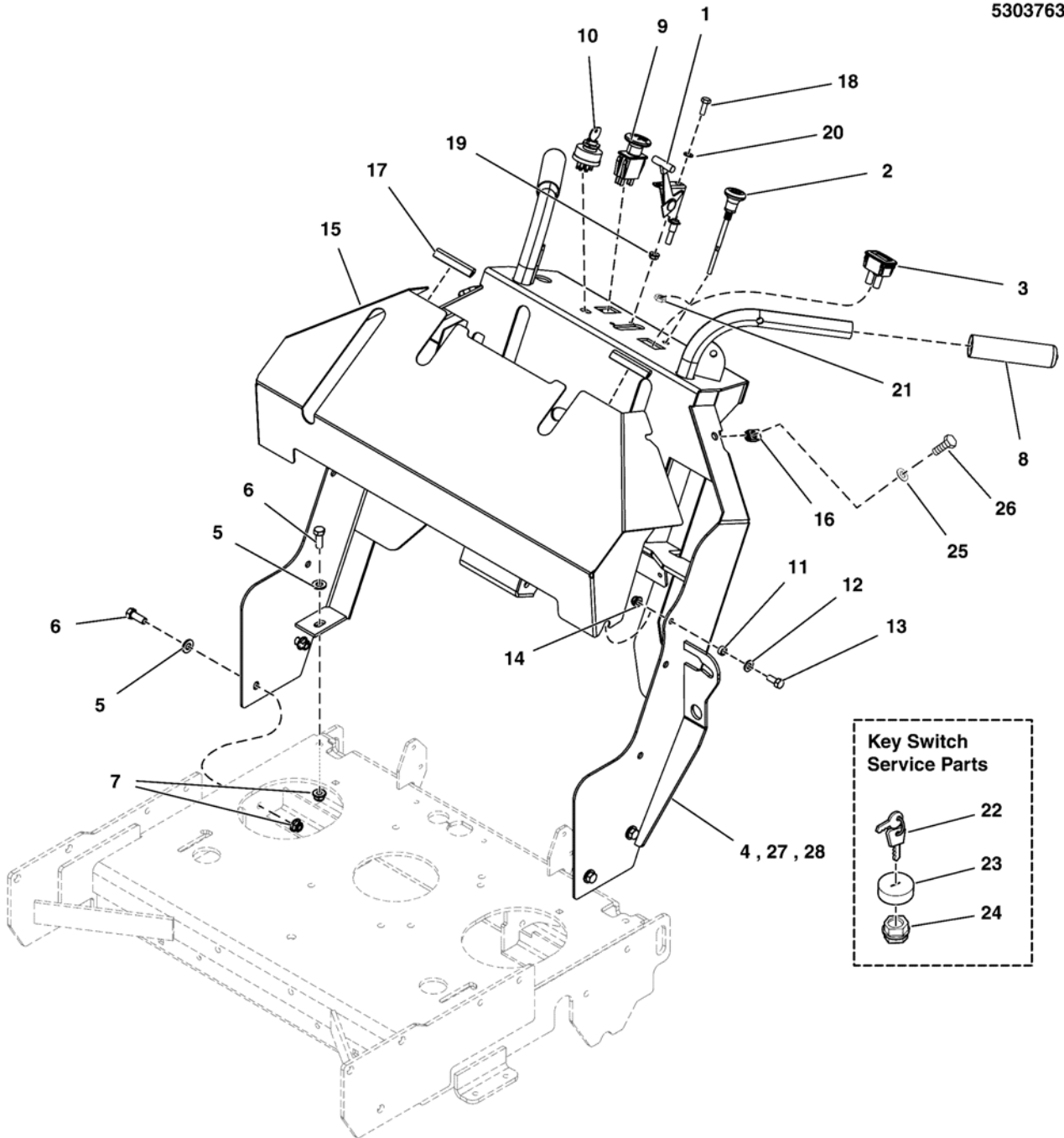
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Handle Bar / Control Group

NOTE: Unless noted otherwise,
use the standard hardware torque
specification chart.

5303763FM



The above parts group applies to the following Mfg. Nos.:
5901453

Handle Bar / Control Group

REF NO	PART NO.	QTY.	DESCRIPTION
1	5104657	1	CABLE, THROTTLE, 43" DETENTED (Was 5102163)
2	5047779	1	CABLE, CHOKE CONTROL, 51 (Z) (Briggs & Stratton Carbureted Models)
3	--	1	* HOUR METER, ASSEMBLE (5409263)
4	5413418B	1	** WELD, HANDLE BARS, F/SW35 - RED (S/N: 2017118253 & Below)
5	5025293	6	WASHER, 3/8 GD.9 FLAT
6	5025013X8	6	BOLT, 3/8-16 X 1 GD5 YZ
7	5025394	6	NUT, 3/8-16 HEX NYLOCK FLANGE
8	5104659	2	GRIP, FOAM, .940" X 4.62" X .187"
9	5104697	1	PTO SWITCH, MOMENTARY, SMALL KNOB
10	5020927	1	SWITCH, IGNITION, 6 POST
11	5102463	2	SPACER, .33 X .50 X .25, CZ
12	5025155	6	WASHER, 5/16 SAE
13	5025011X8	6	BOLT, 5/16-18 X 1 GD5
14	5025392	2	NUT, 5/16-18 HEX NYLOCK FLANGE
15	5600951	1	ASSM, HB GUARD W/DECALS, FW35 - CE
16	5022308	4	BODY CLIP, 5/16-18-7GA MATERIAL
17	5050853X3	2	BLACK BODY MOLDING, 3" LONG
18	5025010X6	2	BOLT, 1/4-20 X 3/4 GD5 YZ
19	5025391	2	NUT, 1/4-20 HEX NYLOCK FLANGE
20	5025154	2	WASHER, 1/4 SAE
21	5025309	1	NUT, 3/8-24 HEX JAM (SV)
22	5022789	1	KEY, IGNITION, SET (SV)
23	5022790	1	COVER (SV)
24	5022791	1	PLASTIC NUT (SV)
25	5025155	1	WASHER, 5/16 SAE (CE Models)
26	5025011X8	1	BOLT, 5/16-18 X 1 GD5 CZ (CE Models)
27	5413924B	1	** WELD, HANDLE BARS, F/SW35 - RED (S/N: 2017118254 - 2017170234)
28	5413682B	1	** WELD, HANDLEBARS, W35, STD - RED (S/N: 2017170235 & Above)

Footnotes

* When replacing this hour meter, please call our service department at 1-800-933-6175

** If replacing order all appropriate decals for handle bar.

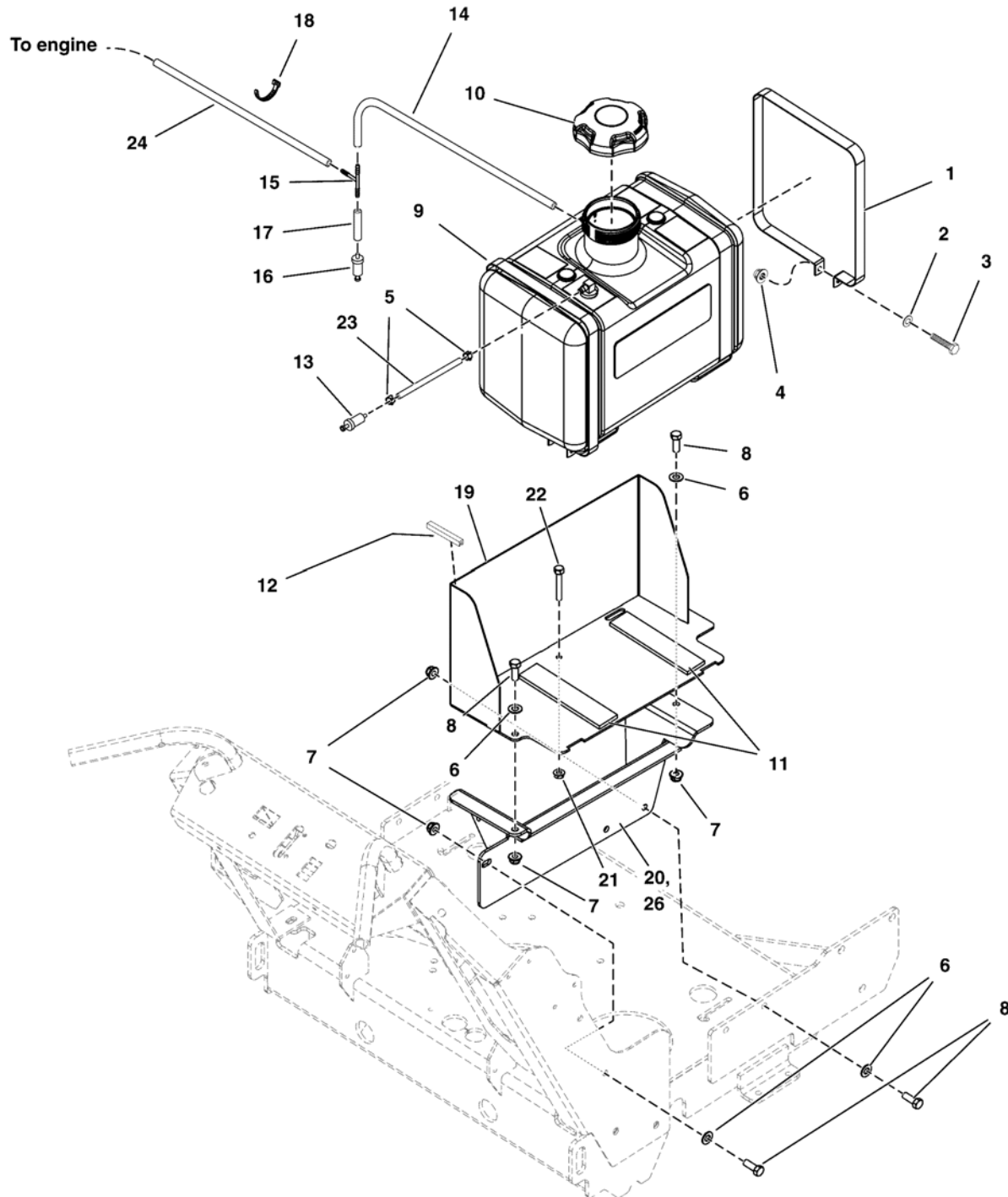
The above parts group applies to the following Mfg. Nos.:

5901453

Fuel Tank & Mount, Fuel Supply, and EVAP Group (No Canister)

NOTE: Unless noted otherwise, use the standard hardware torque specification chart.

5303677
5304020
5304021



The above parts group applies to the following Mfg. Nos.:
5901453

Fuel Tank & Mount, Fuel Supply, and EVAP Group (No Canister)

REF NO	PART NO.	QTY.	DESCRIPTION
1	5403445A	2	STRAP, FUEL TANK - SNP PRO DDS - BLK
2	5025154	2	WASHER, 1/4 SAE
3	5025010X10	2	BOLT, 1/4-20 X 1-1/4, GD5
4	5025391	2	NUT, 1/4-20 HEX NYLOCK FLANGE
5	5020835	2	CLAMP, HOSE, EXTERNAL, 1/2 - RED
6	5025156	5	WASHER, 3/8 SAE
7	5025394	5	NUT, 3/8-16 HEX NYLOCK FLANGE
8	5025013X8	5	BOLT, 3/8-16 X 1 GD5 YZ
9	5102833	1	TANK, 5 GAL, W DROP TUBE/VENT
10	5103005	1	FUEL CAP, 3-1/2", MANAGED VENT OUT, 12"
11	5100810	2	PAD, RUBBER MOUNT
12	5050853X1P25	1	BODY MOLDING, 1.25" LONG
13	5021178X3	1	FUEL FILTER (SV)
14	7700552X15P5	1	HOSE, VAPOR, 5MM ID, 15.50 LG
15	5103062	1	FITTING, 3/16" TEE, BARB TYPE, HDPE
16	794079	1	FILTER, FUEL
17	7700552X4P5	1	HOSE, VAPOR, 5MM ID, 4.50 LG
18	5021030	2	TIE, SELF-LOCKING, 6"
19	5413382A	1	WELD, FUEL TANK MOUNT UPPER, W35 - BLK
20	5413376A	1	WELD, FUEL TANK MOUNT LOWER, W35 - BLK (S/N: 2017170234 & Below)
21	5025127	1	NUT, 5/16-18 HEX SERRATED FLANGE
22	5025055X16	1	BOLT, 5/16-18 X 2 ALL THD
23	5050831X29P5	1	HOSE, 1/4" FUEL, 29.50"
24	7700552X20P5	1	HOSE, VAPOR, 5MMID, 20.50 LG
25	5102833X1	1	GROMMET, FUEL TANK - 5102833 (Grommet for Fuel Tank 5102833)
26	5413950A	1	WELD, FUEL TANK, MOUNT, LOWER, W35 - BLK (S/N: 2017170235 & Above)

Footnotes

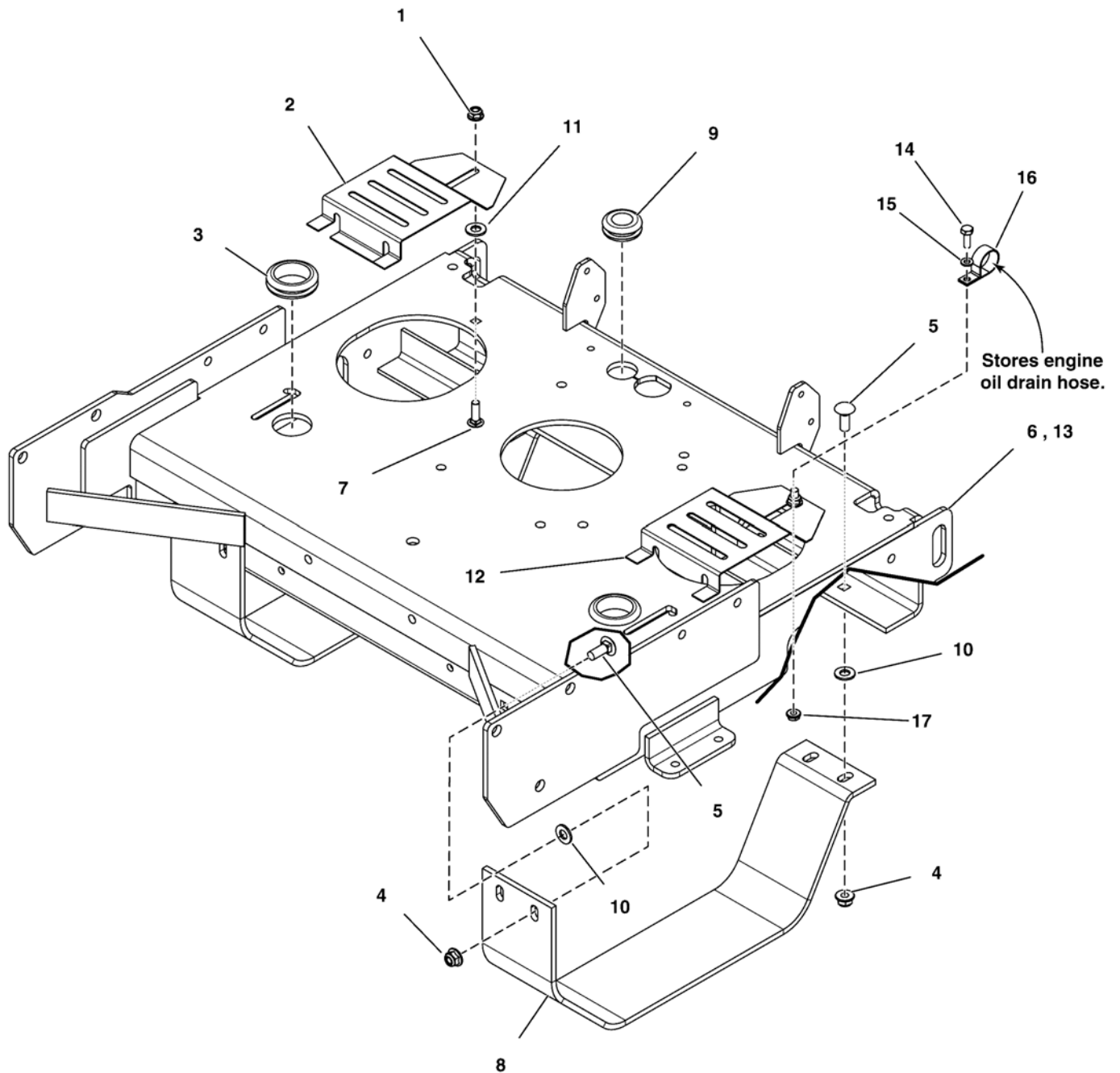
The above parts group applies to the following Mfg. Nos.:

5901453

Engine Deck Group

NOTE: Unless noted otherwise,
use the standard hardware torque
specification chart.

5303679



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5901453

Engine Deck Group

REF NO	PART NO.	QTY.	DESCRIPTION
1	5025392	2	NUT, 5/16-18 HEX NYLOCK FLANGE
2	5412030A	1	PLATE, FAN GUARD - BLK
3	5102677	2	GROMMET, 1-1/2" ID FOR 1/4" METAL
4	5025394	8	NUT, 3/8-16 HEX NYLOCK FLANGE
5	80004497	8	BOLT,3/8-16X1.000,RND HD CRRG,ZINC/CLEAR
6	5411621B	1	WELD, ENGINE DECK, WALK BEHIND - RED (S/N: 2017170234 & Below)
7	5025145X8	2	BOLT, 5/16-18 X 1, CARRIAGE
8	5412069A	2	PLATE, TRANS GUARD, SW30 - BLK
9	5103944	1	GROMMET, 7/8"ID, 1/4" THICK STK
10	5025472	8	3/8 PUSHNUT BOLT RETAINER
11	5025498	2	5/16 PUSH-ON NUT RETAINER, STL, CZ
12	5412600A	1	PLATE, FAN GUARD, BV, LH - BLK
13	5413681B	1	WELD, ENGINE DECK, W35 - RED (S/N: 2017170235 & Above)
14	5025010X6	1	BOLT, 1/4-20 X 3/4 GD5 CZ
15	5025154	1	WASHER, 1/4 SAE
16	5021500	1	CLAMP, VINYL INSULATED, 1.00
17	5025126	1	NUT, 1/4-20 HEX SERR. FLANGE

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Footnotes

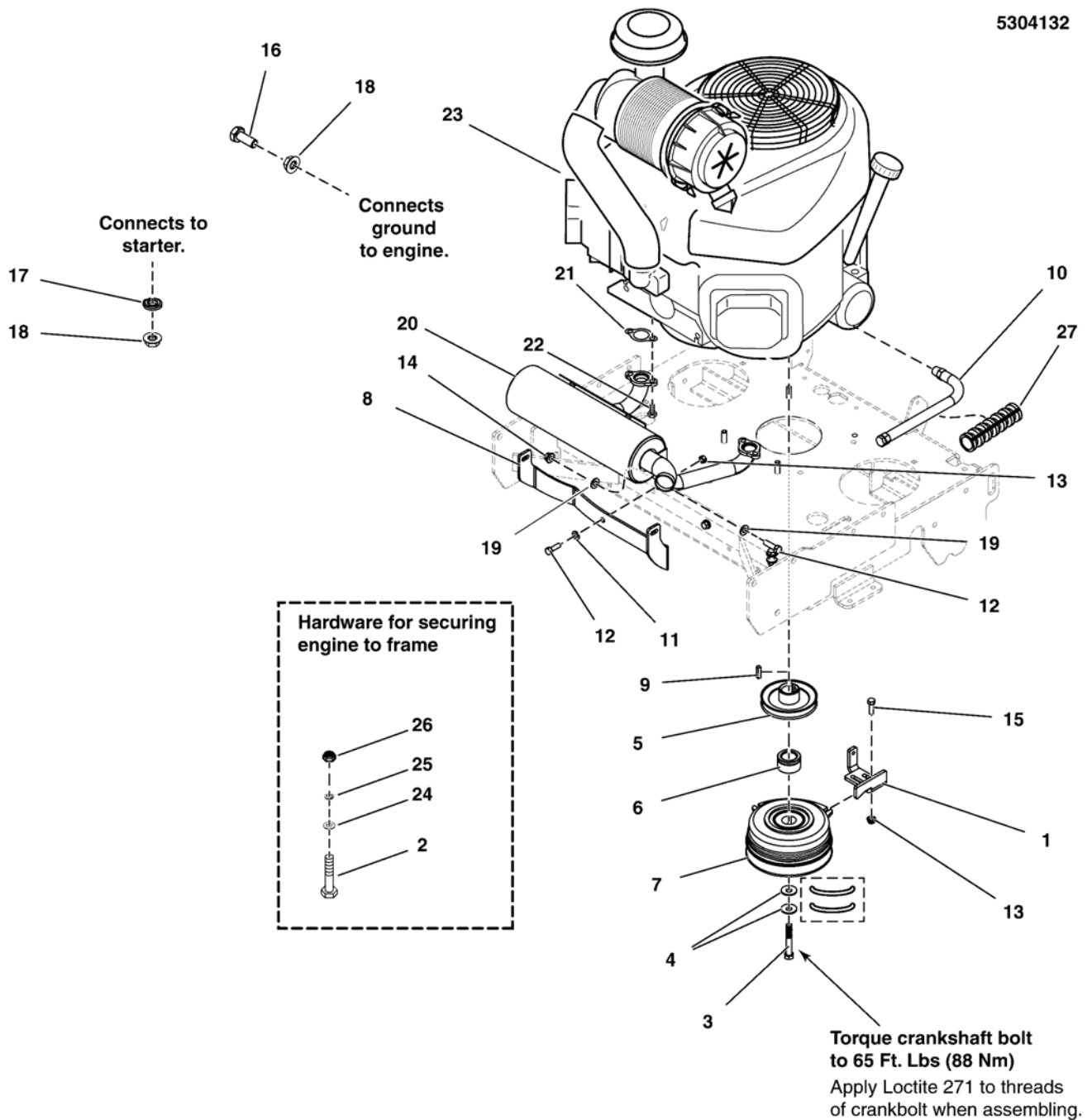
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Engine & PTO Group

NOTE: Unless noted otherwise, use the standard hardware torque specification chart.

5304132



The above parts group applies to the following Mfg. Nos.:

5901453

Engine & PTO Group

REF NO	PART NO.	QTY.	DESCRIPTION
1	5412326A	1	PLATE, CLUTCH ANCHOR - BLK
2	5025025X14	4	BOLT, 5/16-24 X 1-3/4, GD8
3	5102865	1	BOLT, CRANKSHAFT, 7/16-20X2-3/4, GD8
4	5025585	2	BELLEVILLE WASHER 1.1875 X .442 X .089
5	5104236	1	PULLEY, CRANKSHAFT, 1.125ID X 4.50OD, OS
6	5047033	1	SPACER, 1.13 X 1.75 X 1.03, CZ
7	5100084	1	CLUTCH, 5218-221, WARNER
8	5412315A	1	BRACKET, EXHAUST SYSTEM, WALK - BLK
9	5050407X8	1	KEY, 1/4 SQ X 1
10	5048681	1	HOSE, OIL DRAIN
11	5025155	4	WASHER, 5/16 SAE
12	5025011X8	4	BOLT, 5/16-18 X 1 GD5 YZ
13	5025392	4	NUT, 5/16-18 HEX NYLOCK FLANGE
14	80003675	2	NUT, 5/16-18, HEX, CNTR LK, ZINC PHOS/OIL
15	5025145X8	2	BOLT, 5/16-18 X 1" CARRIAGE
16	5025249	1	BOLT, M8-1.25 X 20MM GD8.8
17	5025170	1	WASHER, 5/16 LOCK YZ
18	5025355	2	NUT, M8-1.25 SERR. FLANGE, CZ
19	5025292	4	WASHER, HARD, F436
20	5104306	1	MUFFLER, 26/28, B&S VANG, TWR/WALK (Briggs & Stratton Carbureted Models Only)
21	273485	2	GASKET, EXHAUST
22	94480	4	SCREW-HEX SEMS LOCK WSHR 5/16-18X0.875
23	--	1	ENGINE, B&S, VANGAURD
24	5025155	4	WASHER, 5/16 SAE
25	5025188	4	WASHER, 5/16 INT. TOOTH LOCK
26	5025616	4	NUT, 5/16-24, NYLOCK FLANGE, GD8, CZ
27	5050862X8	1	WIRE LOOM, 3/4 ID X 8.00" LG

Footnotes

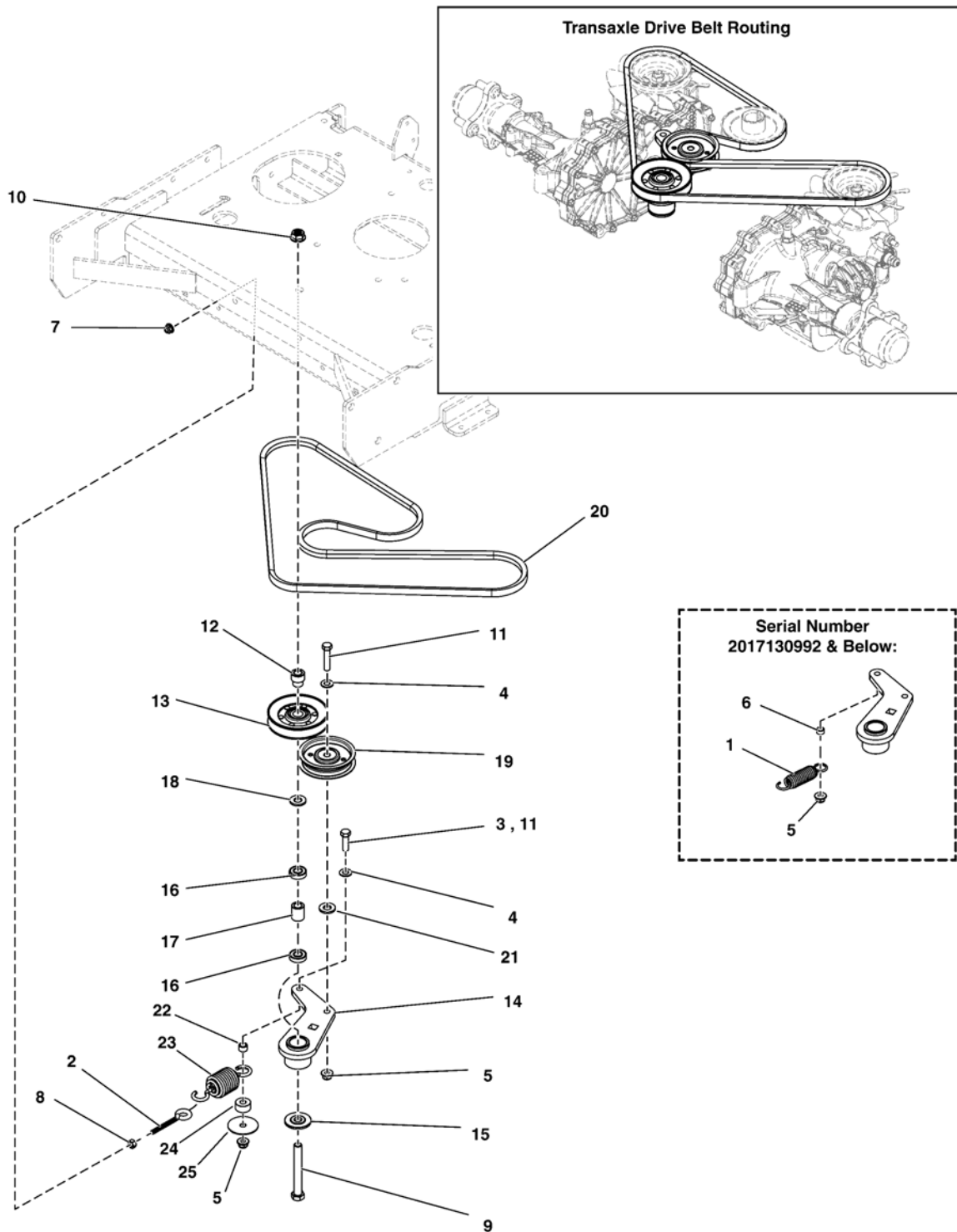
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Transaxle Drive Group

NOTE: Unless noted otherwise, use the standard hardware torque specification chart.

5303682



The above parts group applies to the following Mfg. Nos.:
5901453

Transaxle Drive Group

REF NO	PART NO.	QTY.	DESCRIPTION
1	--	1	REPLACE WITH S/N: 2017130993 & ABOVE COMPONENTS (S/N: 2017130992 & Below)
2	5025141X26	1	EYE BOLT, 5/16-18 X3.5, 2.13THRD, .55EYE, CZ
3	5025013X10	1	BOLT, 3/8-16 X 1-1/4 GD5 (S/N: 2017130992 & Below)
4	5025156	2	WASHER, 3/8 SAE
5	5025394	2	NUT, 3/8-16 HEX NYLOCK FLANGE
6	5041930	1	SPACER, .38 X .50 X .27, CZ (S/N: 2017130992 & Below)
7	5025392	1	NUT, 5/16-18 HEX NYLOCK FLANGE
8	5025032	1	NUT, 5/16-18 HEX
9	5025017X32	1	BOLT, 1/2-13 X 4 GD5 CZ
10	5025396	1	NUT, 1/2-13 HEX NYLOCK FLANGE
11	5025013X16	2	BOLT, 3/8-16 X 2 GD5 (Qty: 1 - S/N: 2017130992 & Below)
12	5104237	1	INSERT, BEARING, .51ID X .90OD X 1.15L
13	5021225	1	PULLEY-IDLER-V, 4.00OB, .669ID, .88W, STL
14	5412073A	1	WELD, IDLER ARM, WALK - BLK
15	5103262	1	SPACER, IDLER ARM, 1/2, PM
16	7078243	2	BEARING, BALL, AXLE
17	5104153	1	SPACER, .52 X .84 X 1.00, PM
18	5104286	1	SPACER, .52 X .88 X .14, HT
19	5104191	1	PULLEY, FLAT IDLER, 3-1/4" FLANGED
20	5104193	1	BELT, A-SEC, COG TYPE, 76.2" EL ARAMID
21	5104937	1	SPACER, .385"ID X .625" OD X .062" THK
22	5103676	1	SPACER, .39 X .55 X .38, PM, CZ (S/N: 2017130993 & Above)
23	5104676	1	SPRING EXT, 1.50ODX4.75LGX.177WR, BLK (S/N: 2017130993 & Above)
24	5046860	1	SPACER, .39 X 1.00 X .50, PM, CZ (S/N: 2017130993 & Above)
25	5025326	1	WASHER, .39 X 2.00 X X .14 (S/N: 2017130993 & Above)

Footnotes

The above parts group applies to the following Mfg. Nos.:

5901453

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, 1/2-13 HEX NYLOCK FLANGE
15	5025394	3	NUT, 3/8-16 HEX NYLOCK FLANGE
16	5025170	4	WASHER, 5/16 LOCK YZ
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 YZ
24	5025017X12	2	BOLT, 1/2-13 X 1-1/2 GD5 YZ
25	5025011X8	4	BOLT, 5/16-18 X 1 GD5 YZ
26	5025013X20	1	BOLT, 3/8-16 X 2-1/2 GD5 YZ (S/N: 2017033694 & Below)
27	5025013X12	1	BOLT, 3/8-16 X 1-1/2 GD5 YZ
28	5025010X8	2	BOLT, 1/4-20 X 1, GD5
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)

Footnotes

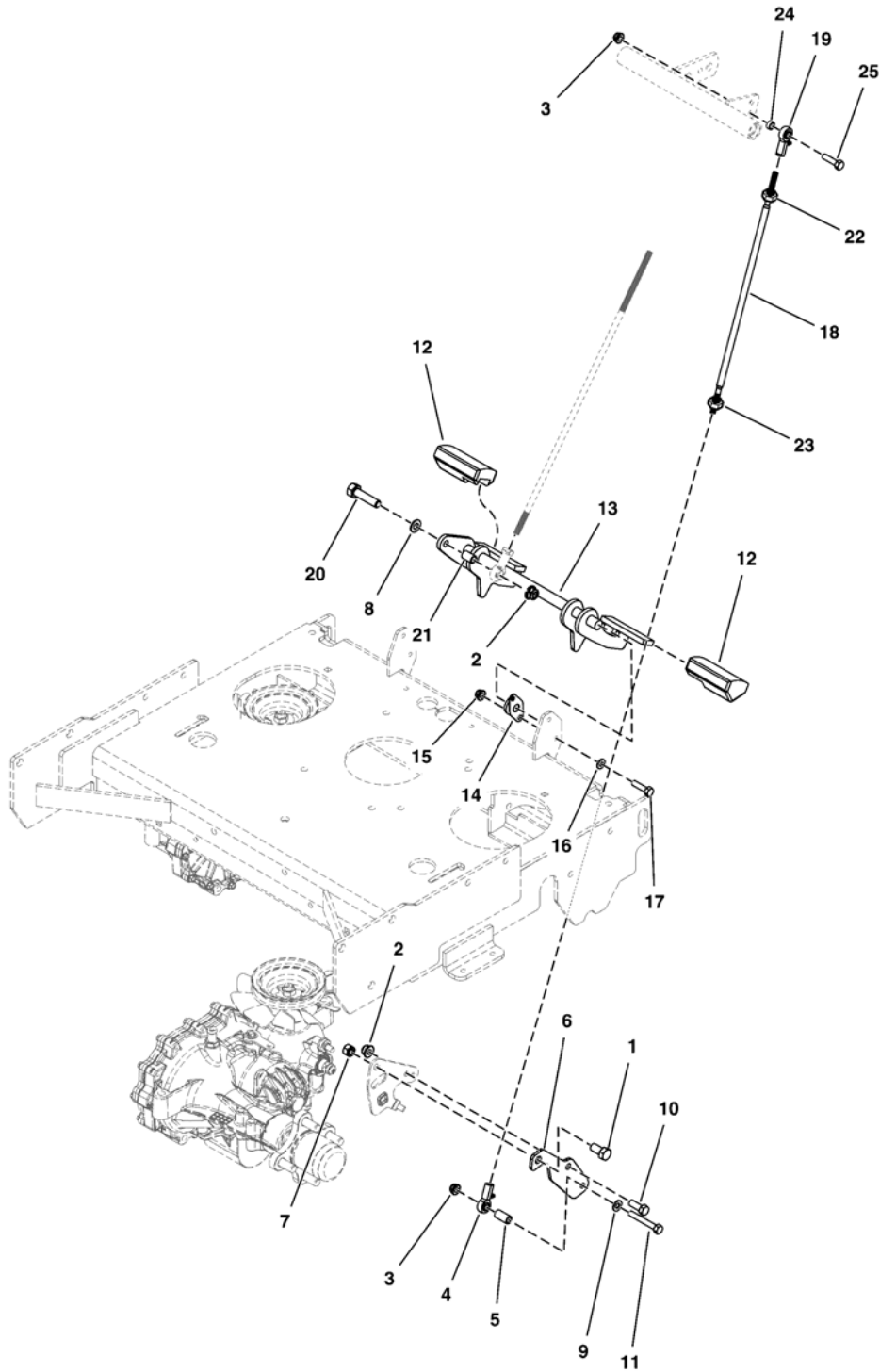
The above parts group applies to the following Mfg. Nos.:

5901453

Motion Control Group - Lower (All Models)

NOTE: Unless noted otherwise,
use the standard hardware torque
specification chart.

5303678L



The above parts group applies to the following Mfg. Nos.:
5901453

Motion Control Group - Lower (All Models)

REF NO	PART NO.	QTY.	DESCRIPTION
1	5025015X8	2	BOLT, 7/16-14 X 1, GD 5 YZ
2	5025394	3	NUT, 3/8-16 HEX NYLOCK FLANGE
3	5025392	4	NUT, 5/16-18 HEX NYLOCK FLANGE
4	5104493	2	BALL JOINT 5/16-24 RH FEMALE BRONZE RACE
5	5102812	2	SPACER, .33 X .51 X 1.00, CZ
6	5412050A	2	PLATE, CONTROL MOUNT, WALK - BLK
7	5025125	2	NUT, 7/16-14 HEX NYLON LOCK
8	5025156	2	WASHER, 3/8 SAE
9	5025155	2	WASHER, 5/16 SAE
10	5025013X8	2	BOLT, 3/8-16 X 1 GD5 YZ
11	5025011X18	2	BOLT, 5/16-18 X 2-1/4 GD5 YZ
12	5104262	2	RUBBER, FOOT PEDAL
13	5412284A	1	WELD, FOOT PEDAL - BLK
14	5104270	2	BEARING, 5/8" FLANGED, PLASTIC BALL
15	5025391	4	NUT, 1/4-20 HEX NYLOCK FLANGE
16	5025154	4	WASHER, 1/4 SAE
17	5025010X5	4	BOLT, 1/4-20 X 5/8 GD5 YZ
18	5104159	2	ROD, 5/16-24 X 15.48, LH-RH, CZ
19	5104494	2	BALL JOINT 5/16-24 LH FEMALE BRONZE RACE
20	5025013X16	1	BOLT, 3/8-16 X 2, GD5, YZ
21	5101640	1	SPACER, .38 X .50 X .50
22	5023212	2	NUT, 5/16-24 HEX, LH
23	5025033	2	NUT, 5/16-24 HEX
24	5102463	2	SPACER, .33 X .50 X .25, CZ
25	5025011X10	2	BOLT, 5/16-18 X 1-1/4 GD5 YZ

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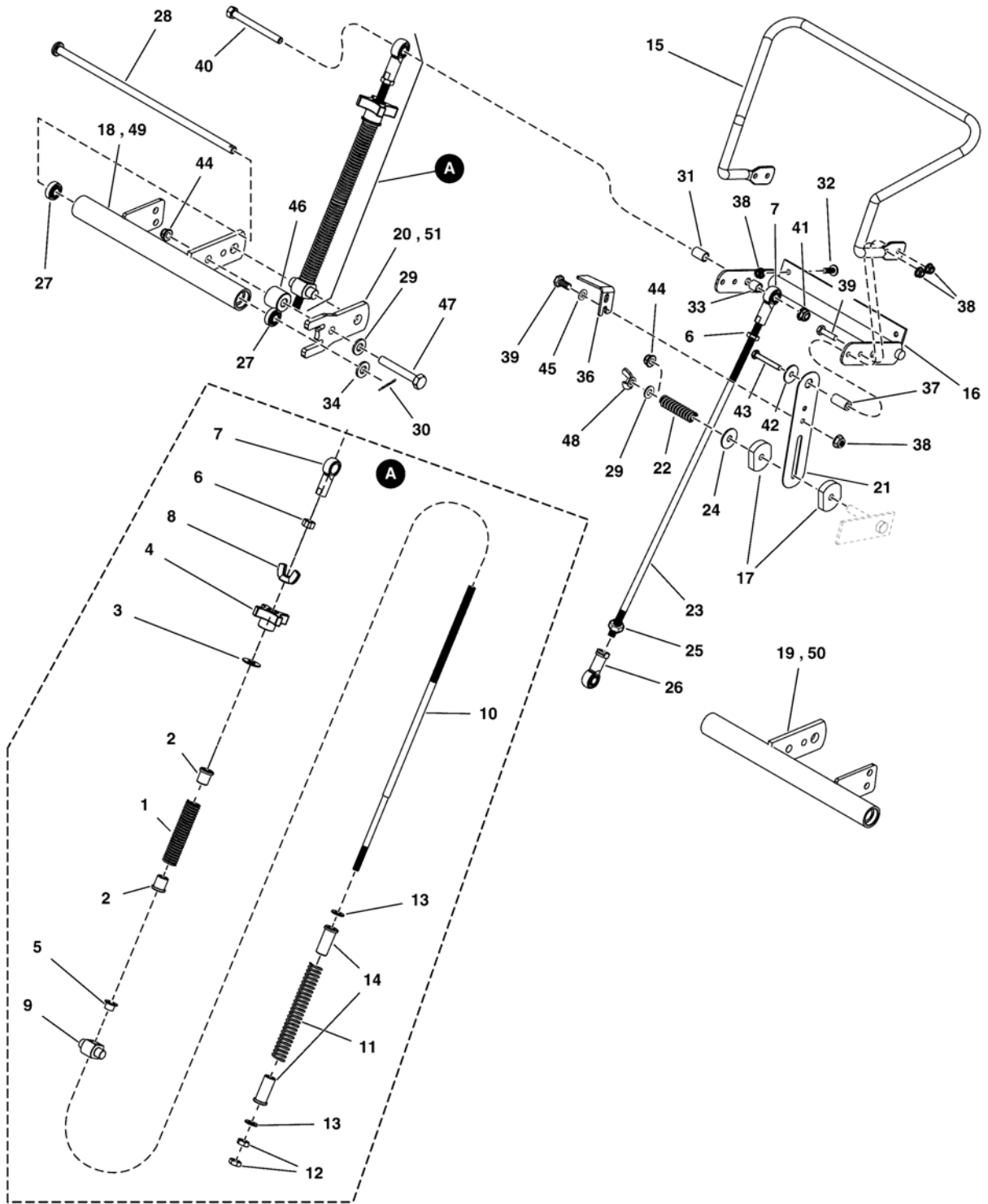
The above parts group applies to the following Mfg. Nos.:

5901453

Motion Control Group - Forward Speed Control Lever and Spring Assemblies

NOTE: Unless noted otherwise, use the standard hardware torque specification chart.

5303783FM



The above parts group applies to the following Mfg. Nos.:
5901453

Motion Control Group - Forward Speed Control Lever and Spring Assemblies

REF NO	PART NO.	QTY.	DESCRIPTION
1	5107374	2	SPRING,COMP,.645IDX8.00LGX.080WR,BLK E-C
2	5104375	4	FLANGED BUSHING, 3/8IDX.63ODX.8125FL
3	5025401	2	WASHER, 3/8 USS
4	5104174	2	KNOB, 4 ARM, 3/8-24
5	5102773	2	BUSHING, .38ID X .47 OD X .38L, FL
6	5025035	3	NUT, 3/8-24 HEX
7	5021683	3	BALL JOINT, 3/8-24 FEMALE
8	5025608	2	WING NUT, 3/8-24, CZ
9	5103022	2	TRUNION, 1/2" POSTS, STAINLESS
10	5104165	2	ROD, 3/8-24 X 16.50,STEP DOWN TO 5/16
11	5104279	2	SPRING, COMP, .60 ID X 5.50 LG, .080W
12	5025032	4	NUT, 5/16-18 HEX
13	5025155	4	WASHER, 5/16 SAE
14	5104161	4	BUSHING, .31IDX.60OD X 1.50L, FL (.75OD)
15	5104216A	1	BAR, SPEED CONTROL - BLK
16	5412891A	1	WELD, SPEED CONTROL, W35 - BLK
17	5104176	2	PAD, T-712 FRICTION MATERIAL
18	5412382A	1	WELD, CENTER PIVOT HUB, RH - WALK - BLK (S/N: 2017170234 & Below)
19	5411616A	1	WELD, CENTER PIVOT HUB, LH - WALK - BLK (S/N: 2017170234 & Below)
20	5411633A	2	TAB, CONTROL PIVOT - BLK (S/N: 2017170234 & Below)
21	5409272	1	PLATE, FRICTION CONTROL, SS
22	5104221	1	SPRING, COMP, .40 X .60 X 2.25, BLACK
23	5104164	1	ROD, 3/8-24, 19.00, LH-RH CZ
24	5025164	1	WASHER, 5/16 FENDER
25	5025317	1	NUT, 3/8-24 HEX, LH
26	5022392	1	BALL JOINT, 3/8-24 FEMALE, LH
27	5102003	4	BEARING, .375" ID X .875" OD X .341" THK
28	5104171	2	ROD, 3/8 X 12, HEADED - CZ
29	5025155	3	WASHER, 5/16 SAE (Qty: 2 - S/N: 2017118253 & Below)
30	5025203X10	2	PIN, COTTER, 1/8 X 1-1/4
31	5047199	2	SPACER, .38 X .50 X .75
32	1960715	2	SCREW-TRUSS HD TORX DR 1/4-20X0.750 T27
33	5101640	1	SPACER, .38 X .50 X .50
34	5025156	2	WASHER, 3/8 SAE
35	5025013X16	1	BOLT, 3/8-16 X 2 GD5 CZ
36	5412363A	1	BRACKET, SWITCH ENGAGEMENT - BLK
37	5101274	1	SPACER, .26 X .50 X 1.00
38	5025391	12	NUT, 1/4-20 HEX NYLOCK FLANGE
39	5025010X6	4	BOLT-1/4-20 X 3/4 GD5 CZ
40	5025013X24	1	BOLT, 3/8-16 X 3 GD5 YZ
41	5025394	2	NUT, 3/8-16 HEX NYLOCK FLANGE

Footnotes

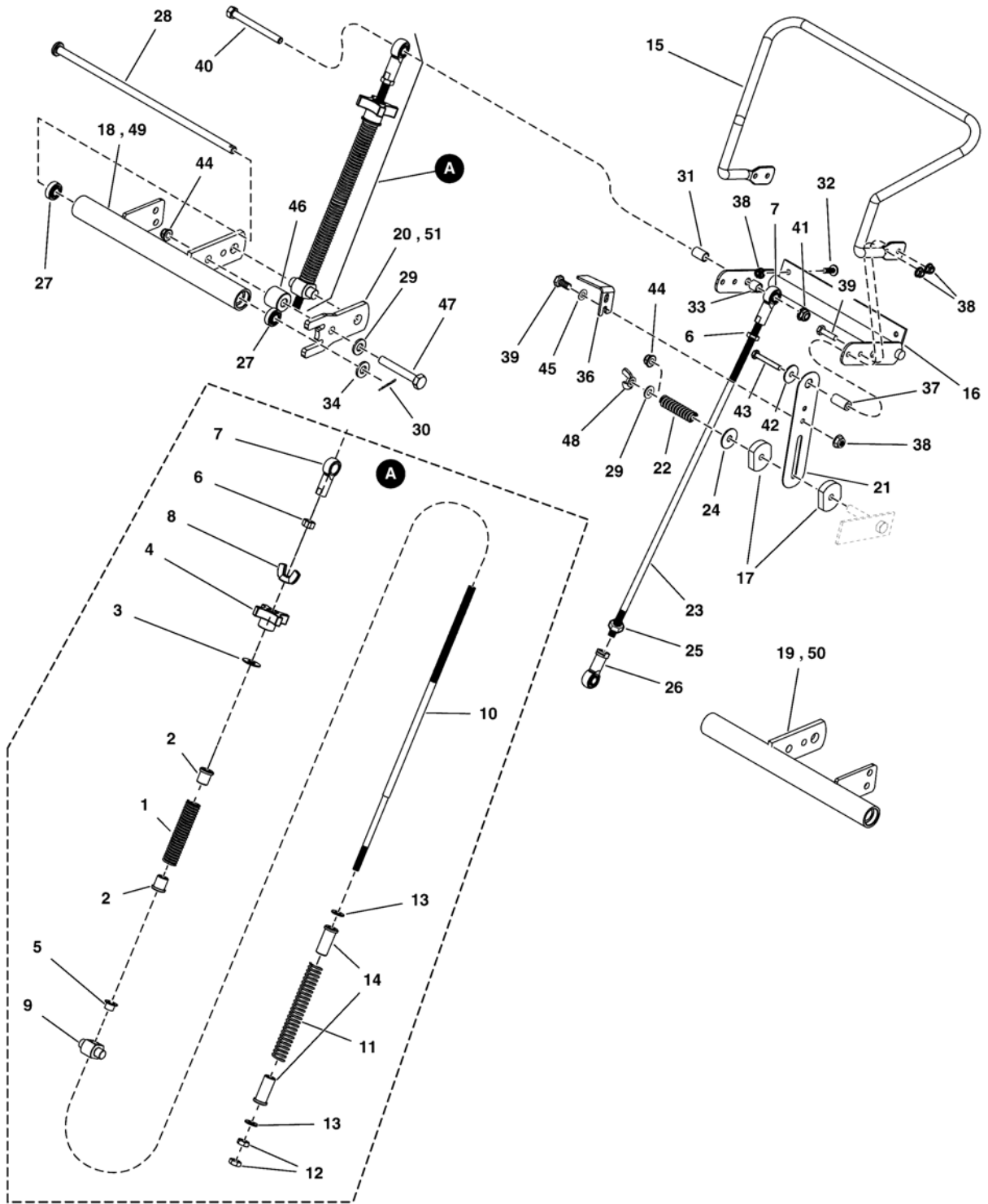
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Motion Control Group - Forward Speed Control Lever and Spring Assemblies

NOTE: Unless noted otherwise, use the standard hardware torque specification chart.

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Motion Control Group - Forward Speed Control Lever and Spring Assemblies

REF NO	PART NO.	QTY.	DESCRIPTION
42	5025288	1	WASHER, 1/4 FENDER
43	5025010X16	1	BOLT, 1/4-20 X 2 GD5 CZ
44	5025392	2	NUT, 5/16-18 HEX NYLOCK FLANGE (Qty: 3 - S/N: 2017118253 & Below)
45	5025154	2	WASHER, 1/4 SAE
46	5104351	2	SPACER, .33 X 1.00 X .88, CZ
47	5025011X16	2	BOLT, 5/16-18 X 2 GD5
48	5025529	1	WING NUT, 5/16-18, CZ (S/N: 2017118254 & Above)
49	5414183A	1	WELD, W35 CONTROL PIVOT, RH - BLK (S/N: 2017170235 & Above)
50	5414184A	1	WELD, W35 CONTROL PIVOT, LH - BLK (S/N: 2017170235 & Above)
51	5414411A	2	TAB, PIVOT, W35 - BLK (S/N: 2017170235 & Above)

Not for
Reproduction

Footnotes

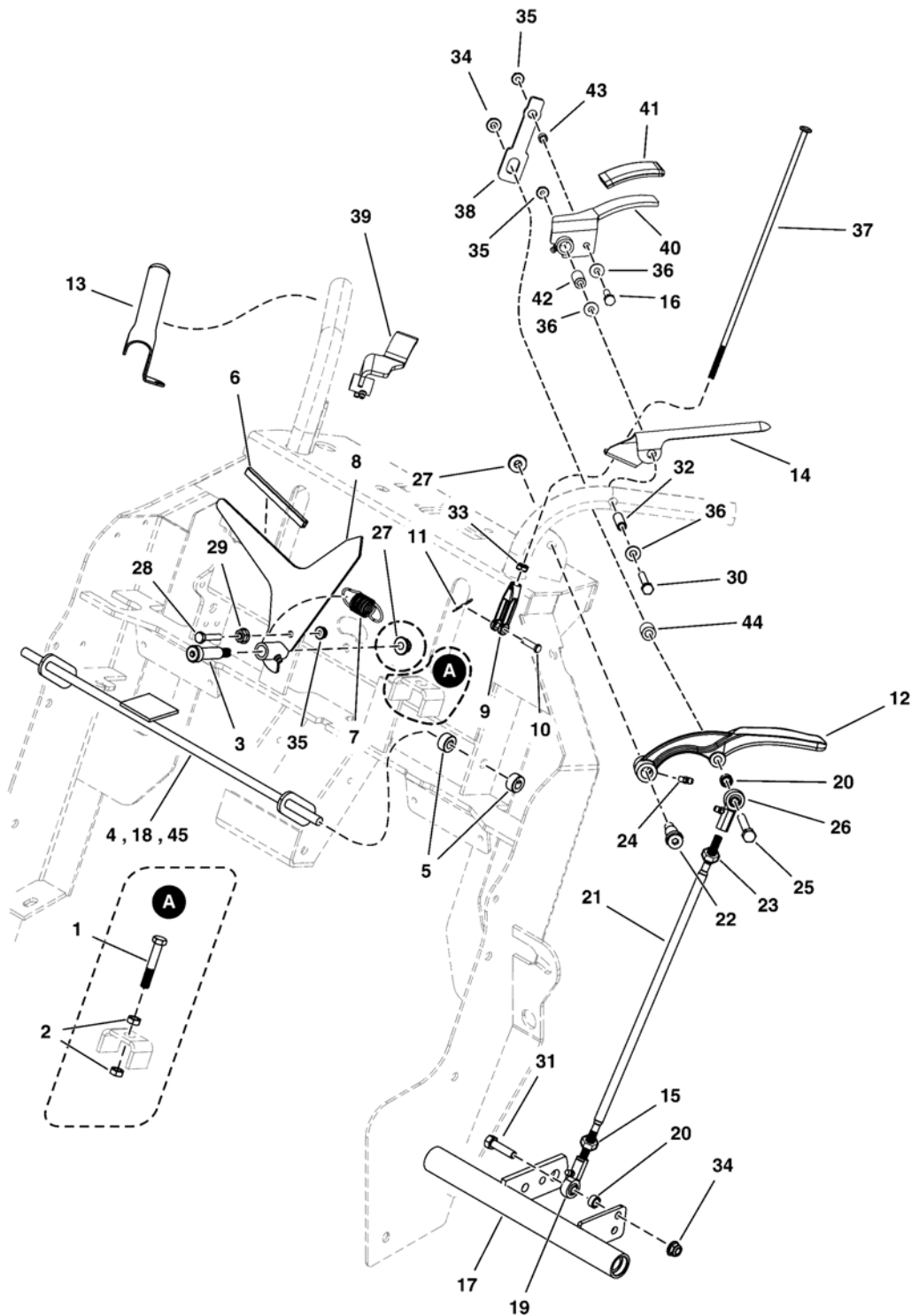
The above parts group applies to the following Mfg. Nos.:

5901453

Motion Control Group - Drive Levers & Operator Presence

NOTE: Unless noted otherwise, use the standard hardware torque specification chart.

5303783UFM



The above parts group applies to the following Mfg. Nos.:
5901453

Motion Control Group - Drive Levers & Operator Presence

REF NO	PART NO.	QTY.	DESCRIPTION
1	5025426	1	BOLT, 1/2-20 X 2-1/2, FLT
2	5025089	2	NUT, 1/2-20 HEX JAM
3	5025220	1	BOLT-3/8-16 x 1-1/2, 1/2 SHOULDER
4	5412020A	1	WELD, OPC ROD, WALK - BLK (S/N: 2017118253 & Below)
5	5010546	2	COLLAR, 3/8 SET
6	5104568	1	U-CHANNEL, RPVC #6236 X 4"
7	5010213	1	SPRING-EXT, .740 ODX2.025LGX.072WR, BLK
8	5413413A	1	WELD, SPEED INDICATOR, LOCK OUT - BLK
9	5021104	2	CLEVIS, 1/4-28, PLASTIC
10	5025212X7	2	PIN, CLEVIS, 1/4 X 7/8, PLATED
11	5025203X10	2	PIN, COTTER, 1/8 X 1-1/4
12	5102556A	2	HANDLE, REVERSING - BLK
13	5104201A	1	FLAP, OPS - BLK
14	5104202A	1	FLAP, OPS - BLK
15	5023212	2	NUT, 5/16-24 HEX, LH
16	5025010X8	2	BOLT, 1/4-20 X 1" GD5
17	--	-	SEE MOTION CONTROL GROUP - FORWARD SPEED CONTROL LEVER AND SPRING ASSEMBLIES
18	5413926A	1	WELD, OPC ROD, WALK - BLK (S/N: 2017118254 - 2017170235)
19	5104494	2	BALL JOINT 5/16-24 LH FEMALE BRONZE RACE
20	5102463	4	SPACER, .33 X .50 X .25, CZ
21	5104159	2	ROD, 5/16-24 X 15.48, LH-RH, CZ
22	5025223	2	BOLT, 3/8-16 X 1, 1/2 SHOULDER
23	5025033	2	NUT, 5/16-24 HEX
24	5020095	2	GREASE FITTING, 1/4-28 STRAIGHT
25	5025011X24	2	BOLT, 5/16-18 X 3" GD5
26	5104493	2	BALL JOINT 5/16-24 RH FEMALE BRONZE RACE
27	5025394	3	NUT, 3/8-16 HEX NYLOCK FLANGE
28	5025010X10	1	BOLT, 1/4-20 X 1-1/4, GD5
29	5025126	1	NUT, 1/4-20 HEX SERR. FLANGE
30	5025010X24	2	BOLT, 1/4-20 X 3" GD5
31	5025011X10	2	BOLT, 5/16-18 X 1-1/4, GD5
32	5101215	2	SPACER, .26 X .38 X 1.25, CZ
33	7090095	2	HN, 1/4F GR5 YZ
34	5025392	4	NUT, 5/16-18 HEX NYLOCK FLANGE
35	5025391	5	NUT, 1/4-20 HEX NYLOCK FLANGE
36	5025154	6	WASHER, 1/4 SAE
37	5101242	2	ROD, OPC LINK, SNP PRO WB
38	5408516A	2	LINK, THUMB CONTROL
39	5408617A	2	WELD, THUMB CONTROL, RH - BLK
40	5408616A	1	WELD, THUMB CONTROL, LH - BLK
41	5103457	2	GRIM, FOAM, 1/8" X 1.13" X 2.75"

Footnotes

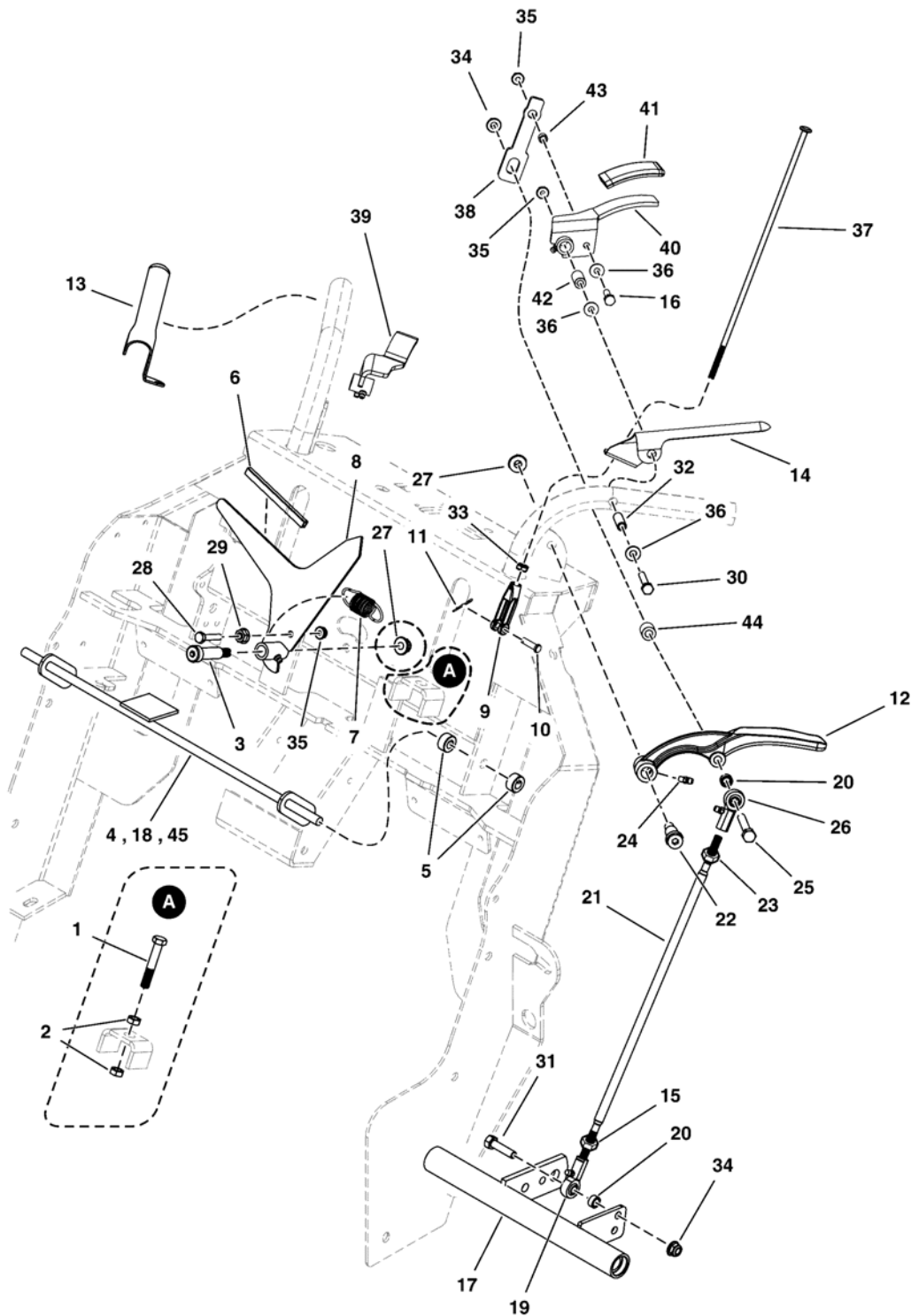
The above parts group applies to the following Mfg. Nos.:

5901453

Motion Control Group - Drive Levers & Operator Presence

NOTE: Unless noted otherwise, use the standard hardware torque specification chart.

5303783UFM



The above parts group applies to the following Mfg. Nos.:
5901453

Motion Control Group - Drive Levers & Operator Presence

REF NO	PART NO.	QTY.	DESCRIPTION
42	5100832	2	SLEEVE CRUISE CONTROL, ROLLER
43	5102813	2	SPACER, .265 X .375 X .250, CZ
44	5103225	2	SPACER, .33 X .625 X .88, STEP, CZ
45	5414516A	1	WELD, OPC ROD, WALKBEHIND - BLK (S/N: 2017170235 & Above)

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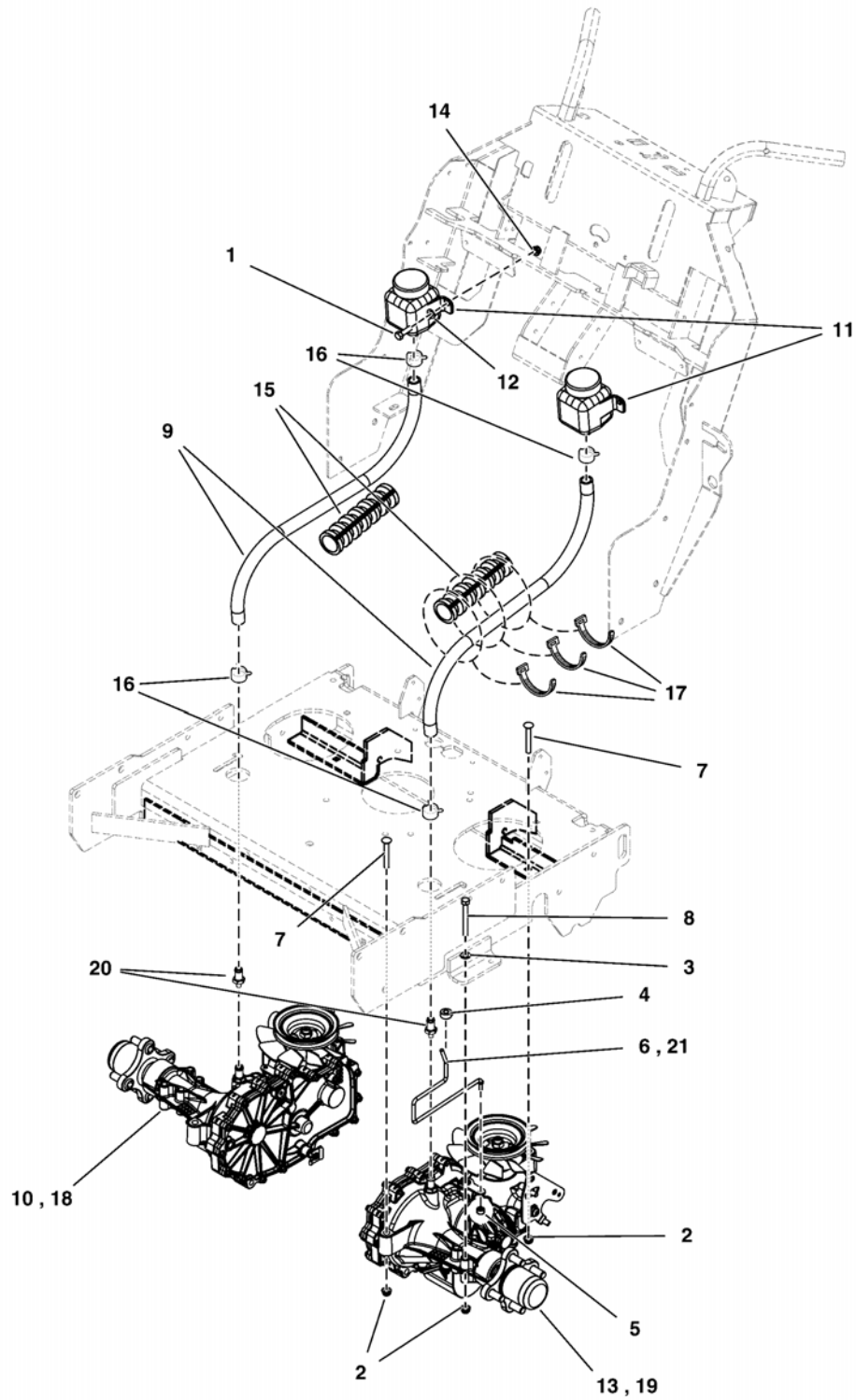
Footnotes

The above parts group applies to the following Mfg. Nos.:
5901453

Hydraulic Group

NOTE: Unless noted otherwise,
use the standard hardware torque
specification chart.

5303683
5304264



The above parts group applies to the following Mfg. Nos.:
5901453

Hydraulic Group

REF NO	PART NO.	QTY.	DESCRIPTION
1	5025010X6	4	BOLT, 1/4-20 X 3/4 GD5 YZ
2	5025392	8	NUT, 5/16-18 HEX NYLOCK FLANGE
3	5025155	4	WASHER, 5/16 SAE
4	5020047	2	COLLAR, 5/16 SET
5	5022481	2	COLLAR, 1/4 SET
6	5102638	2	ROD, HYDRO RELEASE, SW30 (S/N: 2017170234 & Below)
7	5025145X18	4	BOLT, 5/16-18 X 2-1/4, CARRIAGE, GD5, CZ
8	5025011X22	4	BOLT, 5/16-18 X 2-3/4, GD 5, YZ
9	5050857X24	2	HOSE, 1/2" PUSH-ON, 24.00"
10	5102810	1	TRANSAXLE, ZT3100, RH(ZJ-KMFE-3B5C-1RLX) (S/N: 2017170234 & Below)
11	5100473	2	HYDRO RES. #71328, 350 ml
12	5025154	4	WASHER, 1/4 SAE
13	5102809	1	TRANSAXLE, ZT3100, LH(ZJ-GMFE-3B5B-1RLX) (S/N: 2017170234 & Below)
14	5025391	4	NUT, 1/4-20 HEX NYLOCK FLANGE
15	5050862X20	2	WIRE LOOM, 3/4 ID X 20 IN
16	5025474	4	CLAMP, HOSE, .75 FREE DIA.
17	5100772	6	TIE, SELF LOCKING, 15"
18	5104706	1	TRANSAXLE, ZT3100, RH, ZL-KMFE-3L5C-1PXX (S/N: 2017170235 & Above)
19	5104707	1	TRANSAXLE, ZT3100, LH, ZL-GMFE-3L5B-1PXX (S/N: 2017170235 & Above)
20	5103687	2	FITTING, #6 O-RING 1/2 HOSE BARB, STRAIGHT
21	5104532	2	ROD, HYDRO RELEASE, WALKS (S/N: 2017170235 & Above)

Not for
Reproduction

Footnotes

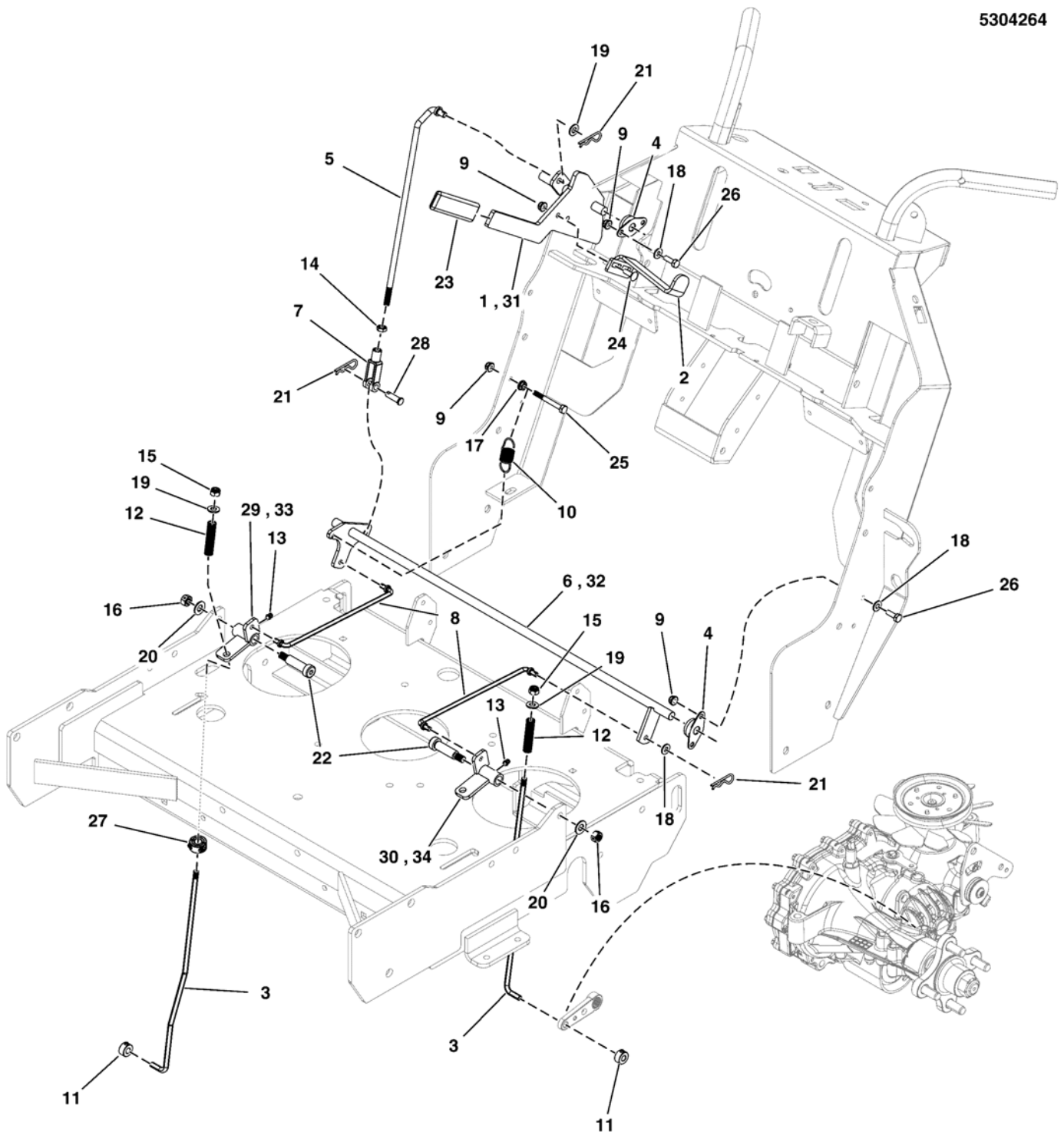
The above parts group applies to the following Mfg. Nos.:

5901453

Parking Brake Group - S/N: 2017170235 & Above

NOTE: Unless noted otherwise,
use the standard hardware torque
specification chart.

5304264



The above parts group applies to the following Mfg. Nos.:
5901453

Parking Brake Group - S/N: 2017170235 & Above

REF NO	PART NO.	QTY.	DESCRIPTION
1	5413689A	1	WELD, BRAKE HANDLE, W35 - BLK (S/N: 2017307155 & Below)
2	5413241A	1	PLATE, NEUTRAL LOCKOUT - BLK
3	5104496	2	ROD, BRAKE CTRL, LOWER, SW25/FW25
4	5101123	4	BEARING, 1/2 FLANGED, PLASTIC BALL
5	5104641	1	ROD, PARKING BRAKE, W35, UPPER
6	5413955A	1	WELD, CROSS SHAFT, W35 BRAKE - BLK (S/N: 2017307155 & Below)
7	5023323	1	CLEVIS, 5/16-24, STEEL, CLEAR ZINC
8	5104642	2	ROD, PARKING BRAKE, W35, UPPER
9	5025391	11	NUT, 1/4-20 HEX NYLOCK FLANGE
10	5010213	1	SPRING-EXT, .740 ODX2.025LGX.072WR, BLK
11	5020047	2	COLLAR, 5/16 SET
12	5020637	2	SPRING-COMP, .375IDX2.75LGX.054WR, SS
13	5021637	2	GREASE FITTING, PRESS, SHORT (S/N: 2017215296 & Below)
14	5023216	1	NUT, 5/16-24 JAM
15	5025045	2	NUT, 5/16-24 HEX NYLON LOCK
16	5025100	2	NUT, 3/8-16 HEX SIDE LOCK
17	5025126	1	NUT, 1/4-20 HEX SERR. FLANGE
18	5025154	12	WASHER, 1/4 SAE
19	5025155	3	WASHER, 5/16 SAE
20	5025156	2	WASHER, 3/8 SAE
21	5025211	6	PIN, HAIR, .0585 X 1-1/8, 1/4 EYE, CZ
22	5025220	2	BOLT-3/8-16 x 1-1/2, 1/2 SHOULDER
23	5025510	1	GRIP, FOAM, 1/4 X 1 X 4.1
24	80003518	2	BOLT, 1/4-20X0.750,GR5,STD NECK,SQ,ZC/CL
25	5025010X18	1	BOLT, 1/4-20 X 2-1/4 GD5 CZ
26	5025010X6	8	BOLT, 1/4-20 X 3/4 GD5 CZ
27	5104748	2	COLLAR, DOUBLE SPLIT, 7MM
28	5025213X8	1	PIN, CLEVIS, 5/16 X 1, PLATED
29	5413961A	1	WELD, BRAKE PIVOT, RH, W35 - BLK (S/N: 2017307155 & Below)
30	5413962A	1	WELD, BRAKE PIVOT, LH, W35 - BLK (S/N: 2017307155 & Below)
31	5414624A	1	WELD, HANDLE, W35 PARKING BRAKE - BLK (S/N: 2017307156 & Above)
32	5414628A	1	WELD, BRAKE ROD, W35 - BLK (S/N: 2017307156 & Above)
33	5414630A	1	WELD, BRAKE PIVOT, W35 - RH - BLK (S/N: 2017307156 & Above)
34	5414631A	1	WELD, BRAKE PIVOT, W35 - LH - BLK (S/N: 2017307156 & Above)

Footnotes

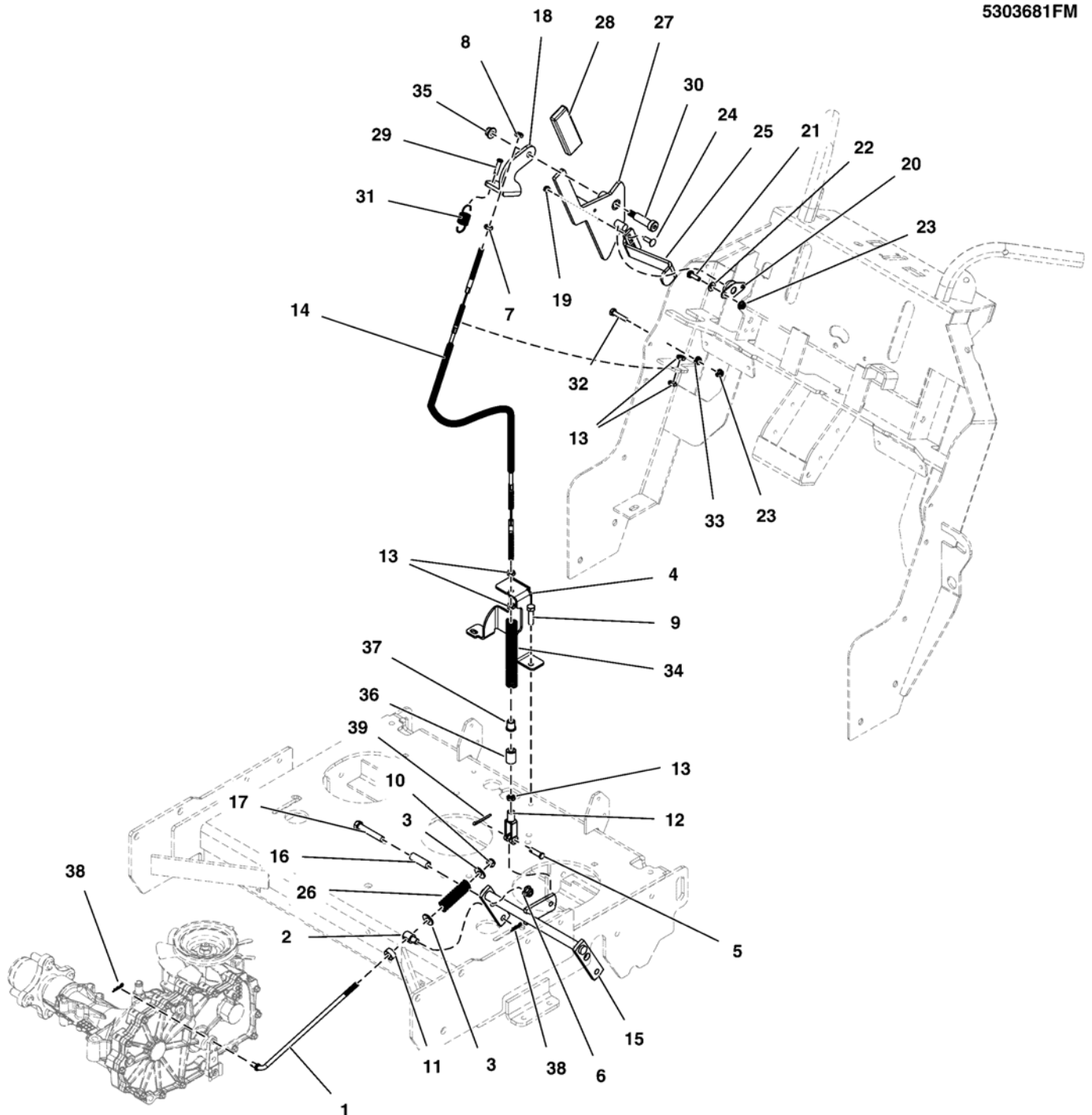
The above parts group applies to the following Mfg. Nos.:

5901453

Parking Brake Group - S/N: 2017170234 & Below

NOTE: Unless noted otherwise,
use the standard hardware torque
specification chart.

5303681FM



The above parts group applies to the following Mfg. Nos.:
5901453

Parking Brake Group - S/N: 2017170234 & Below

REF NO	PART NO.	QTY.	DESCRIPTION
1	5104241	2	ROD, BRAKE, SW35
2	5045947	2	ADJUSTER, BRAKE LINKAGE
3	5025337	4	WASHER, 5/16 USS
4	5412304A	1	WELD, BRAKE CABLE MOUNT - BLK
5	5025213X8	1	PIN, CLEVIS, 5/16 X 1, PLATED
6	5025394	2	NUT, 3/8-16 HEX NYLOCK FLANGE
7	5025032	1	NUT, 5/16-18 HEX
8	5025057	1	NUT, 5/16-18 HEX NYLON LOCK
9	5025059X6	2	BOLT, 5/16-18 X 3/4, SELF TAPPING
10	5025045	2	NUT, 5/16-24 HEX NYLON LOCK
11	5020047	2	COLLAR, 5/16 SET
12	5023323	1	CLEVIS, 5/16-24, STEEL, CLEAR ZINC
13	5023216	5	NUT, 5/16-24 JAM (Qty: 4 included with parking brake cable)
14	5104276	1	CABLE, PARKING BRAKE, 31" (787.9 cm)
15	5412303A	1	WELD, BRAKE PIVOT - BLK
16	5044992	2	SPACER, .38 X .50 X 1.56
17	5025013X18	2	BOLT, 3/8-16 X 2-1/4 GD5 YZ
18	5412150A	1	PLATE, OVER CENTER LINK
19	5025391	2	NUT, 1/4-20 HEX NYLOCK FLANGE
20	5101123	2	BEARING, 1/2 FLANGED, PLASTIC BALL
21	5025010X6	4	BOLT, 1/4-20 X 3/4 GD5 YZ
22	5025154	4	WASHER, 1/4 SAE
23	5025391	5	NUT, 1/4-20 HEX NYLOCK FLANGE
24	80003518	2	BOLT, 1/4-20X0.750, GR5, STD NECK, SQ, ZC/CL
25	5413241A	1	PLATE, NEUTRAL LOCKOUT - BLK
26	5022398	2	SPRING, COMP .480X.067X2.75
27	5413674A	1	WELD, BRAKE HANDLE, F/SW35 - BLK
28	5025510	1	GRIP, FOAM, 1/4 X 1 X 4.1
29	5025212X8	1	PIN, CLEVIS, 1/4 X 1, PLATED
30	5025220	1	BOLT-3/8-16 x 1-1/2, 1/2 SHOULDER
31	5010213	1	SPRING-EXT, .740 ODX2.025LGX.072WR, BLK
32	5025010X10	1	BOLT, 1/4-20 X 1-1/4, GD5
33	5025126	1	NUT, 1/4-20 HEX SERR. FLANGE
34	5021494	1	SPRING-COMP, .600ID X 5.50LG X .080WR
35	5025100	1	NUT, 3/8-16 HEX SIDE LOCK
36	5042134	1	SPACER, .32 X .75 X 1.06, PM
37	5102709	1	BUSHING, .38 X .75 X .75, PLASTIC
38	5025211	1	PIN, HAIR, .0585 X 1-1/8, 1/4 EYE, YZ
39	5025203X10	4	PIN, COTTER, 1/8 X 1-1/4

Footnotes

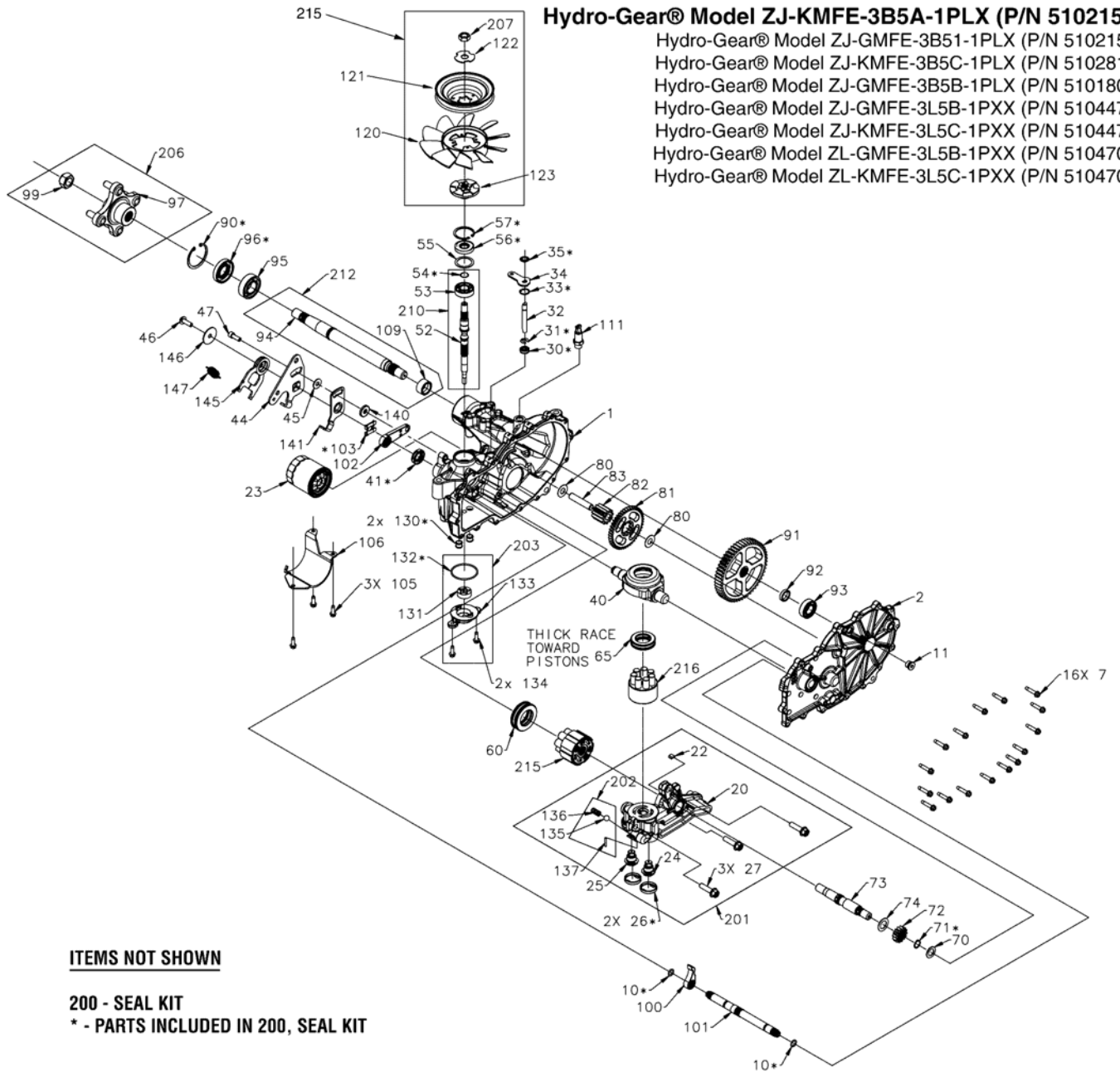
The above parts group applies to the following Mfg. Nos.:

5901453

Transaxle SERVICE PARTS - ZT3100

NOTE: Unless noted otherwise,
use the standard hardware torque
specification chart.

5102154



The above parts group applies to the following Mfg. Nos.:
5901453

Transaxle SERVICE PARTS - ZT3100

REF NO	PART NO.	QTY.	DESCRIPTION
23	5101026X1	1	OIL FILTER
41	5101026X2	1	SEAL, LIP, 18 X 32 X 7
56	5100161X3	1	OUTPUT SHAFT SEAL, 17X40X7, HR #51161
57	5101026X4	1	RING, RET 2.06 INT
95	5101026X5	1	BEARING BALL, 1.0 X 52 X 15 OPEN 6205M
96	5101026X16	1	SEAL, LIP, AXLE, #53699
120	5101024X1	1	FAN
121	5101024X2	1	PULLEY, HG #53804
121	5102154X1	1	PULLEY, 4.5 INCH, HG #52364
122	5102914	1	WASHER, SLOTTED
123	5101024X3	1	HUB
200	5101026X8	1	KIT SEAL
203	5101026X12	1	KIT, CHARGE PUMP, ZT2800, ZT3100
207	5102916	1	NUT
210	5101026X9	1	KIT, INPUT SHAFT
215	5102809X1	1	KIT, FAN AND PULLEY (72134)
311	5103382	1	HUB, ASM, TRANS #71446

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Reproduction

Footnotes

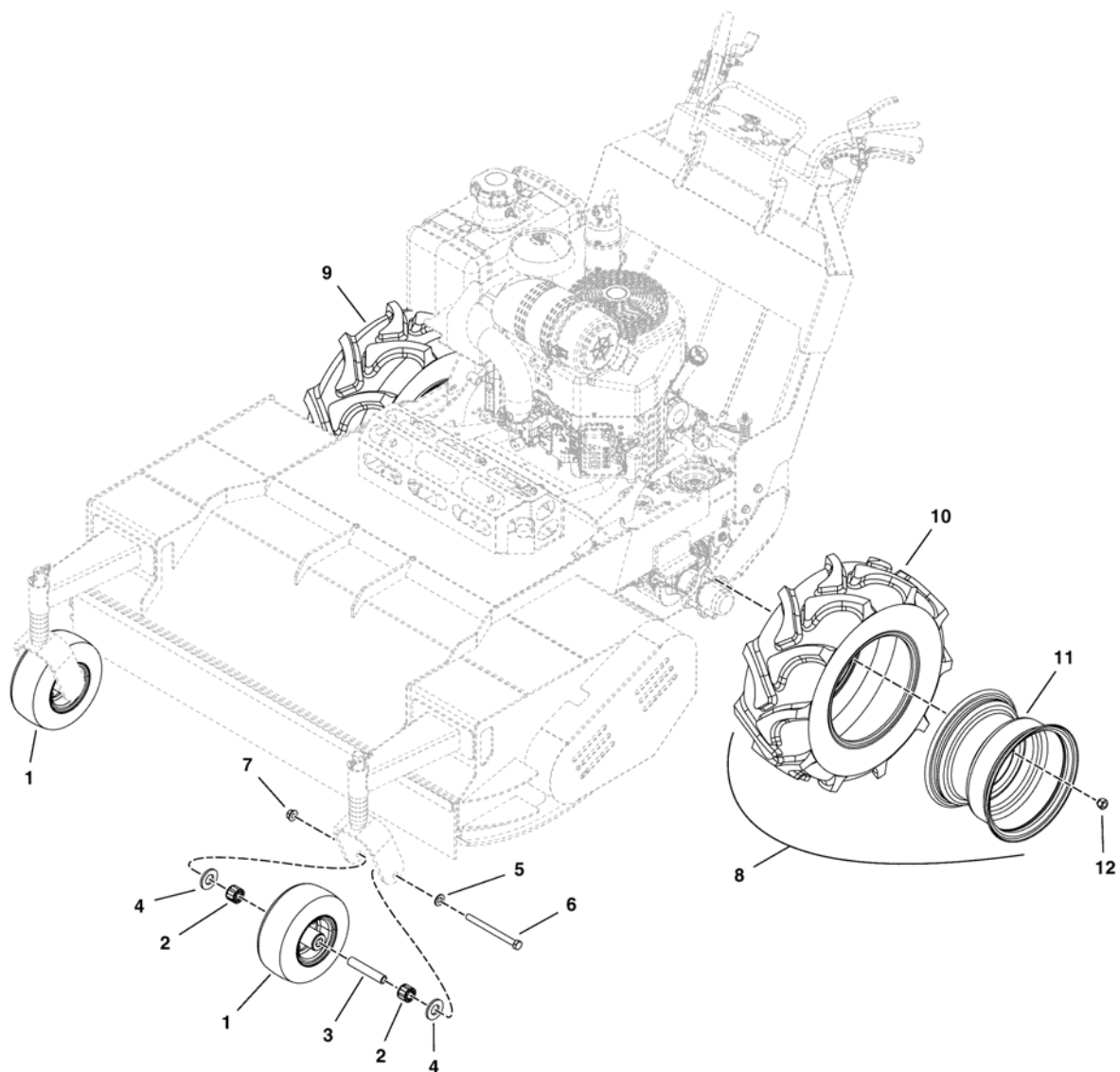
The above parts group applies to the following Mfg. Nos.:

5901453

Wheel & Tire Group

NOTE: Unless noted otherwise, use the standard hardware torque specification chart.

5302872



The above parts group applies to the following Mfg. Nos.:

5901453

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, 1/2-13 HEX NYLOCK FLANGE
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

Not for
Reproduction

Footnotes

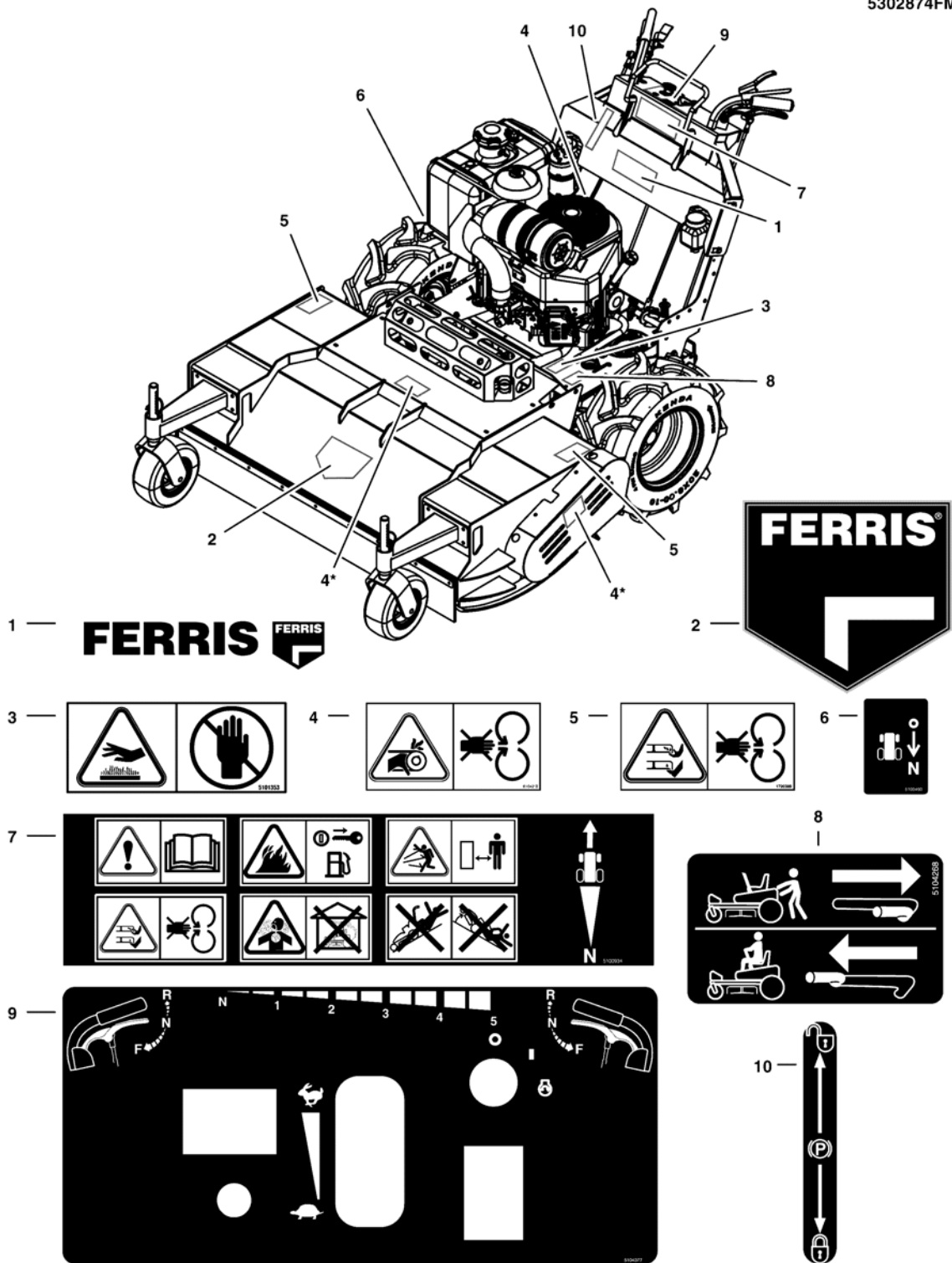
The above parts group applies to the following Mfg. Nos.:

5901453

Decals Group

NOTE: Unless noted otherwise, use the standard hardware torque specification chart.

5302874FM



The above parts group applies to the following Mfg. Nos.:
5901453

Decals Group

REF NO	PART NO.	QTY.	DESCRIPTION
1	5022560	1	DECAL, FERRIS TEXT & LOGO
2	5104767	1	DECAL, FERRIS LOGO, XL
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	5104268	2	DECAL, TRANSAXLE RELEASE, WB
9	5104566	1	DECAL, DASH PANEL, WKB, MAN/ELEC START
10	5102628	1	DECAL, PARKING BRAKE SYMBOLS

Not for
Reproduction

Footnotes

* LOCATED UNDER THE GUARD

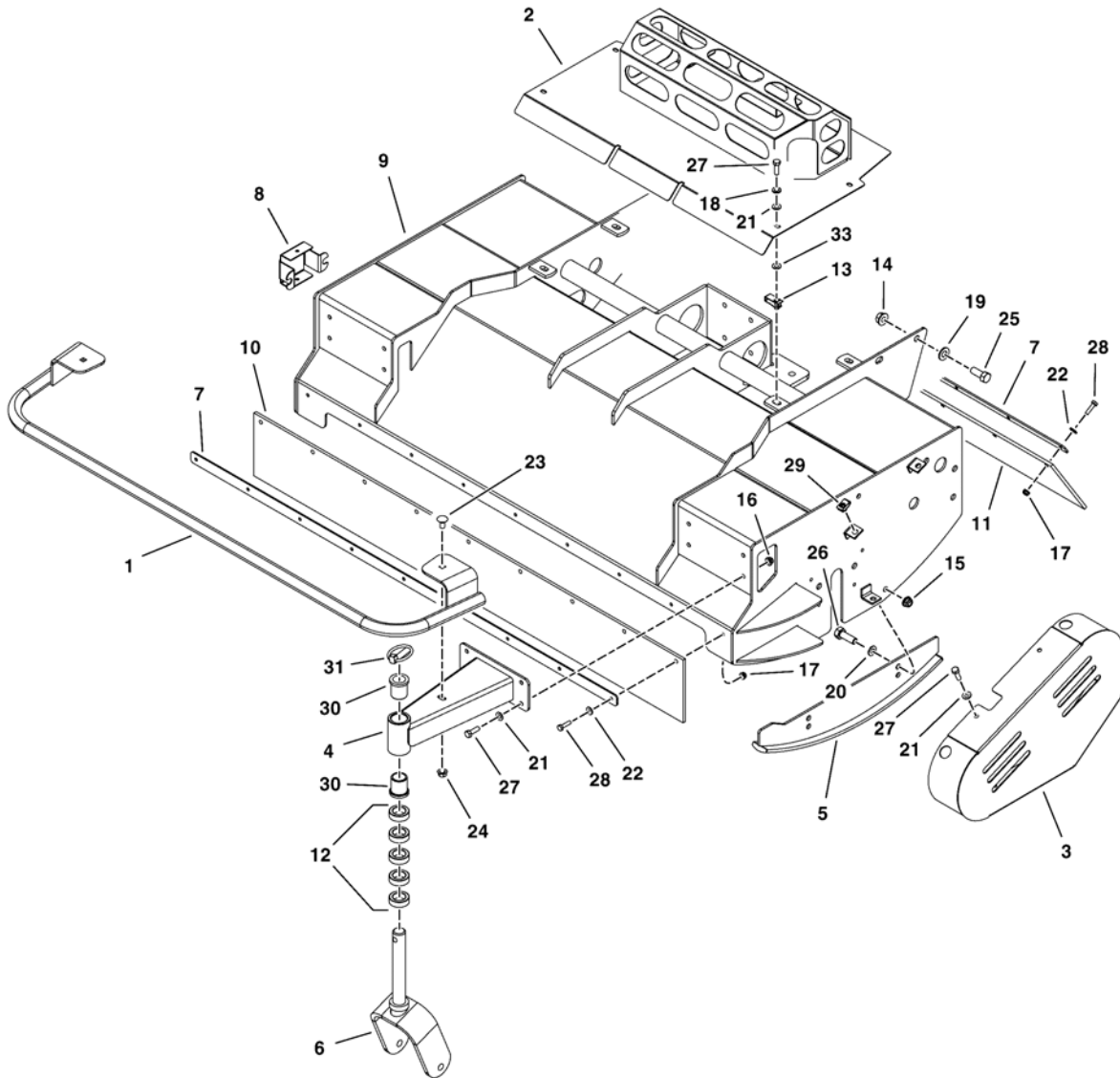
The above parts group applies to the following Mfg. Nos.:

5901453

Housing, Guards & Caster Group

NOTE: Unless noted otherwise,
use the standard hardware torque
specification chart.

5304120



The above parts group applies to the following Mfg. Nos.:

5901453

Housing, Guards & Caster Group

REF NO	PART NO.	QTY.	DESCRIPTION
1	5409293B	1	WELD, GUARD, BRUSH - RED
2	5413641B	1	WELD, GUARD, MUFFLER, FLAIL - RED
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	5408485B	1	WELD, 48-HOOD, FLAIL - RED
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, 1/2-13 HEX NYLOCK FLANGE
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 YZ
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 YZ
26	5025013X8	4	BOLT, 3/8-16 X 1 GD5 YZ
27	5025011X8	15	BOLT, 5/16-18 X 1 GD5 YZ
28	5025010X8	18	BOLT, 1/4-20 X 1, GD5
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

Footnotes

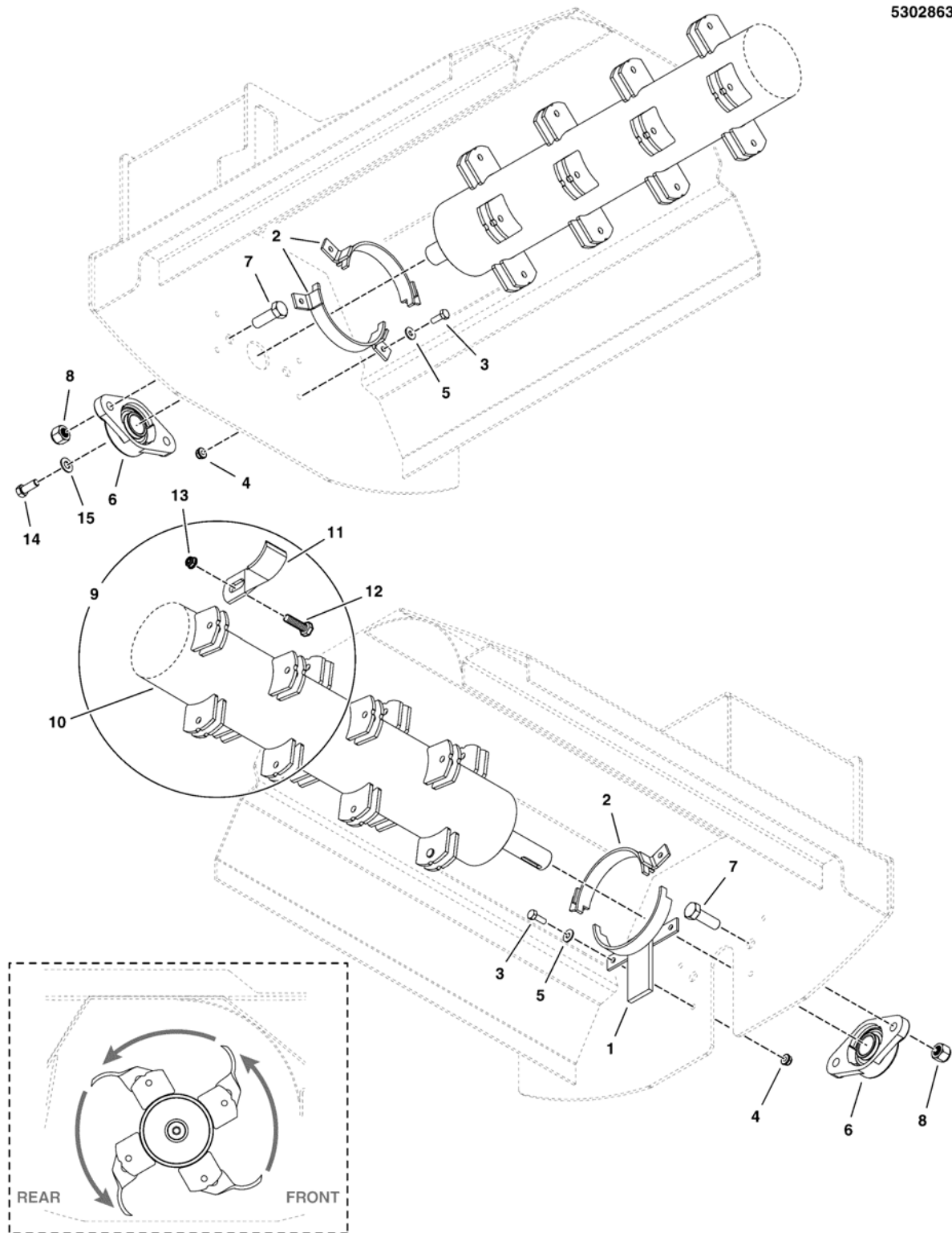
The above parts group applies to the following Mfg. Nos.:

5901453

Rotor & Blades Group

NOTE: Unless noted otherwise,
use the standard hardware torque
specification chart.

5302863



The above parts group applies to the following Mfg. Nos.:

5901453

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
7	5025017X12	4	BOLT, 1/2-13 X 1-1/2 GD5 YZ
8	5025056	4	NUT, 1/2-13 HEX NYLON LOCK
9	5104006	1	48" ROTOR ASM. & BAL, FLAIL
10	-	1	48" ROTOR (Replace with part #5104006)
11	5103210	34	CUTTER, FLAIL, 1-3/8 X 3.0, FINISH
12	5025013X10	34	BOLT, 3/8-16 X 1-1/4 GD5 YZ
13	5025100	34	NUT, 3/8-16 HEX SIDE LOCK
14	5025443	1	BOLT, 3/8-16 X 3/4, PLT W/PATCH
15	5100548	1	WASHER, .390 X 1.50 X .109, YZ

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Reproduction

Footnotes

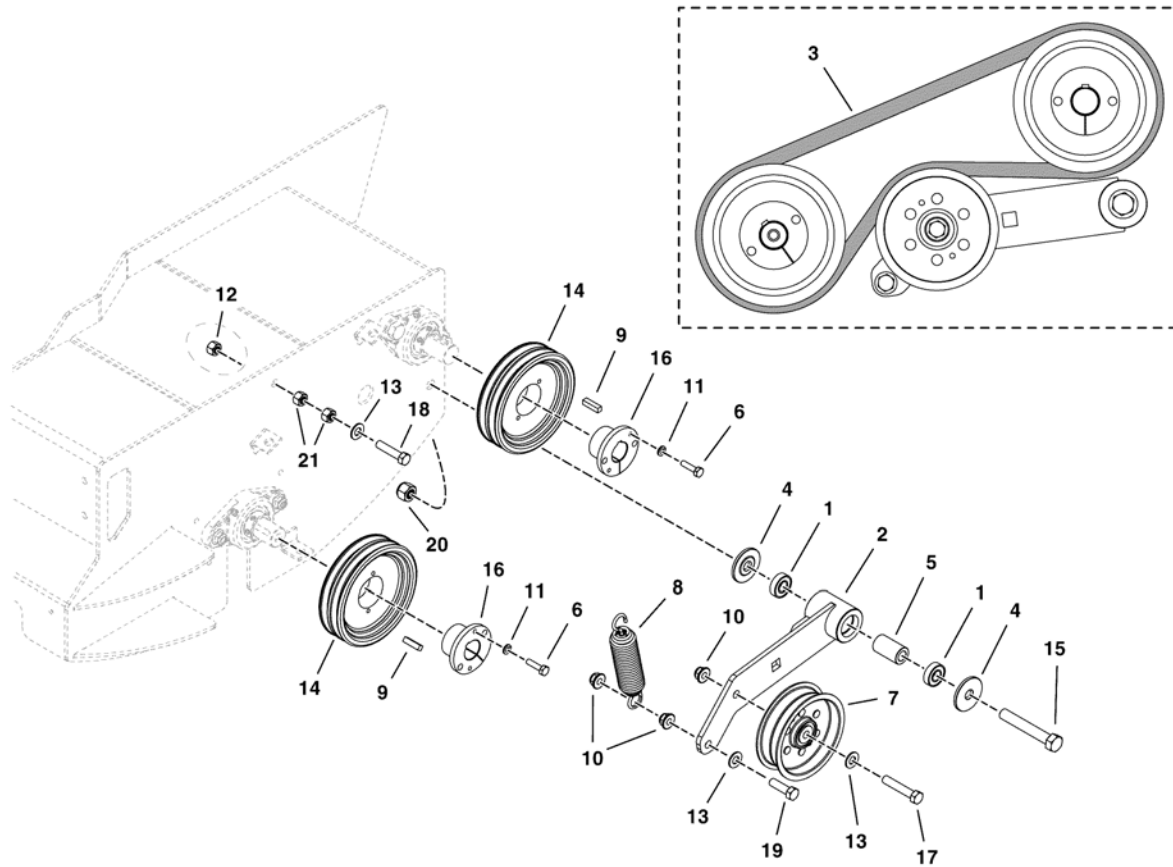
The above parts group applies to the following Mfg. Nos.:

5901453

Belts, Pulleys & Idler Group

NOTE: Unless noted otherwise,
use the standard hardware torque
specification chart.

5302866



The above parts group applies to the following Mfg. Nos.:
5901453

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
7	5102276	1	PULLEY, IDLER, DOUBLE FLGED, 4IN
8	5100633	1	SPRING-EXT, 1.25 ODX5.70LGX.142WR, BLK
9	5025584	2	KEY, 1/4" SQR. X 1-1/4, RD ENDS
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 GD5 YZ
16	5020819	2	BUSHING, TAPERED HUB
17	5025013X16	1	BOLT, 3/8-16 X 2 GD5 YZ
18	5025013X12	1	BOLT, 3/8-16 X 1-1/2 GD5 YZ
19	5025013X10	1	BOLT, 3/8-16 X 1-1/4 GD5
20	5025056	1	NUT, 1/2-13 HEX NYLON LOCK
21	5025034	2	NUT, 3/8-16 HEX

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Footnotes

The above parts group applies to the following Mfg. Nos.:

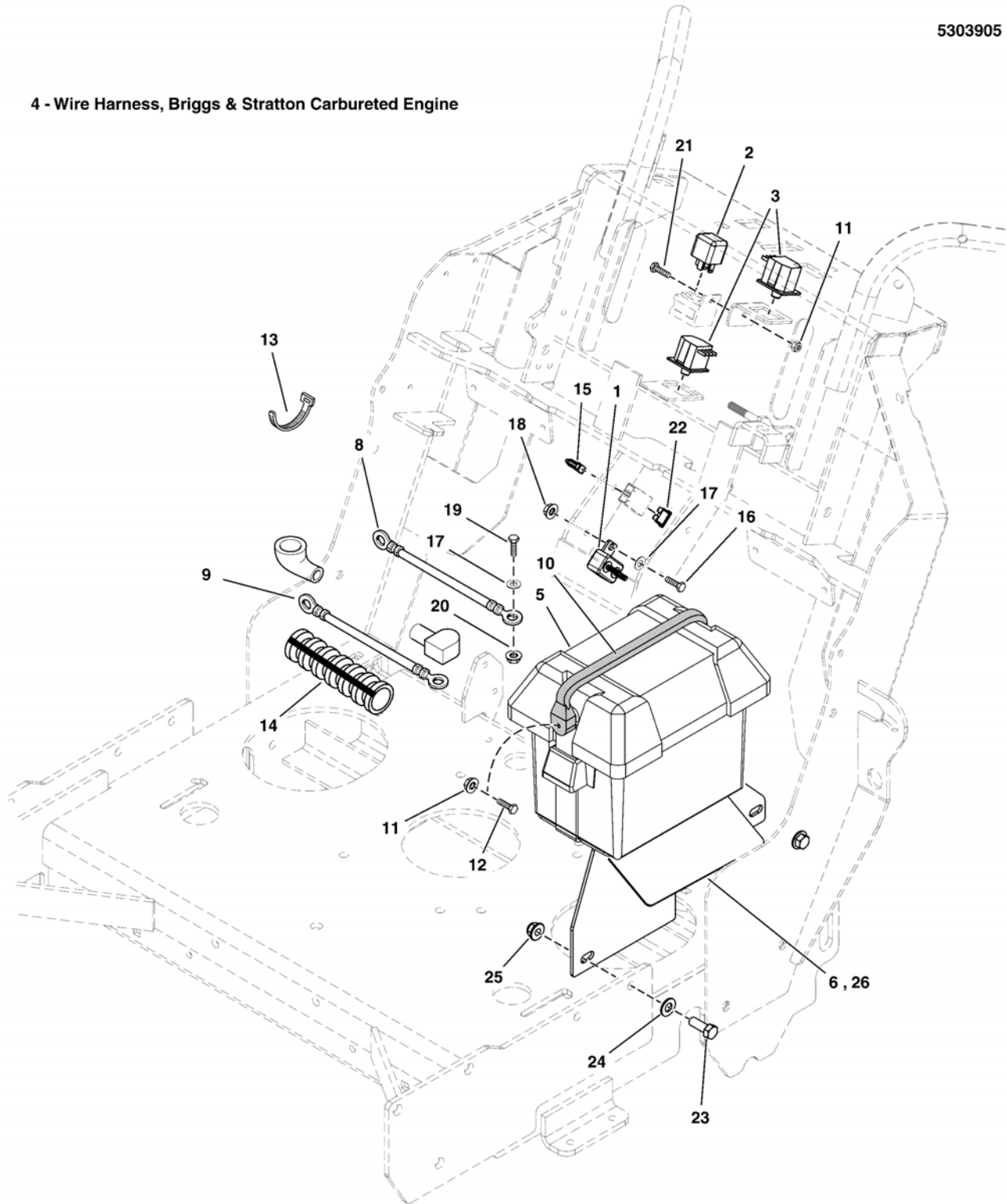
5901453

Electrical Group

NOTE: Unless noted otherwise,
use the standard hardware torque
specification chart.

5303905

4 - Wire Harness, Briggs & Stratton Carbureted Engine



The above parts group applies to the following Mfg. Nos.:
5901453

Electrical Group

REF NO	PART NO.	QTY.	DESCRIPTION
1	1665238	1	BREAKER-CIRCUIT 12VOLT 20AMPS W/TAB
2	5021766	1	RELAY, 12V, 40A
3	5101280	2	SWITCH, LOW PROF, NC/NO
4	5413416	1	WIRE HARNESS, SW35, BV, NO BRAKE (Briggs & Stratton Carbureted Models)
5	5100688	1	BATTERY BOX, W/ DRAIN HOLE
6	5412210A	1	WELD, BATTERY MOUNT, SW35 - BLK (S/N: 2017170234 & Below)
7	-	1	BATTERY, WET (BCIU1, 350 CCA)
8	5101396	1	BATTERY CABLE, NEG, 30, 1/4-5/16
9	5044876	1	BATTERY CABLE, POS, 35, 1/4-5/16
10	5021670	1	STRAP, RUBBER
11	5025271	3	NUT, #10-24 HEX NYLON LOCK
12	5025270	2	SCREW, #10-24 X 1 RS, CZ
13	5021029	8	TIE, SELF-LOCKING, 12"
14	5050927X27	1	WIRE LOOM, 3/8 ID X 27" LONG
15	5103761	1	FIR TREE MOUNT, PACKARD
16	5025010X6	1	BOLT, 1/4-20 X 3/4 GD5 YZ
17	5025154	3	WASHER, 1/4 SAE
18	5025391	1	NUT, 1/4-20 HEX NYLOCK FLANGE
19	5025010X5	2	BOLT-1/4-20 X 5/8 GD5 YZ
20	5025126	2	NUT, 1/4-20 HEX SERR. FLANGE
21	5025179X4	1	SCREW, #10-24 X 1/2 ROUND PHILLIPS
22	5101935	1	FUSE, ATO-15 (15 AMP) (SV)
23	5025013X8	2	BOLT, 3/8-16 X 1 GD5 YZ
24	5025156	2	WASHER, 3/8 SAE
25	5025394	2	NUT, 3/8-16 HEX NYLOCK FLANGE
26	5413945A	1	WELD, BATTERY MOUNT, W35 - BLK (S/N: 2017170235 & Above)

Footnotes

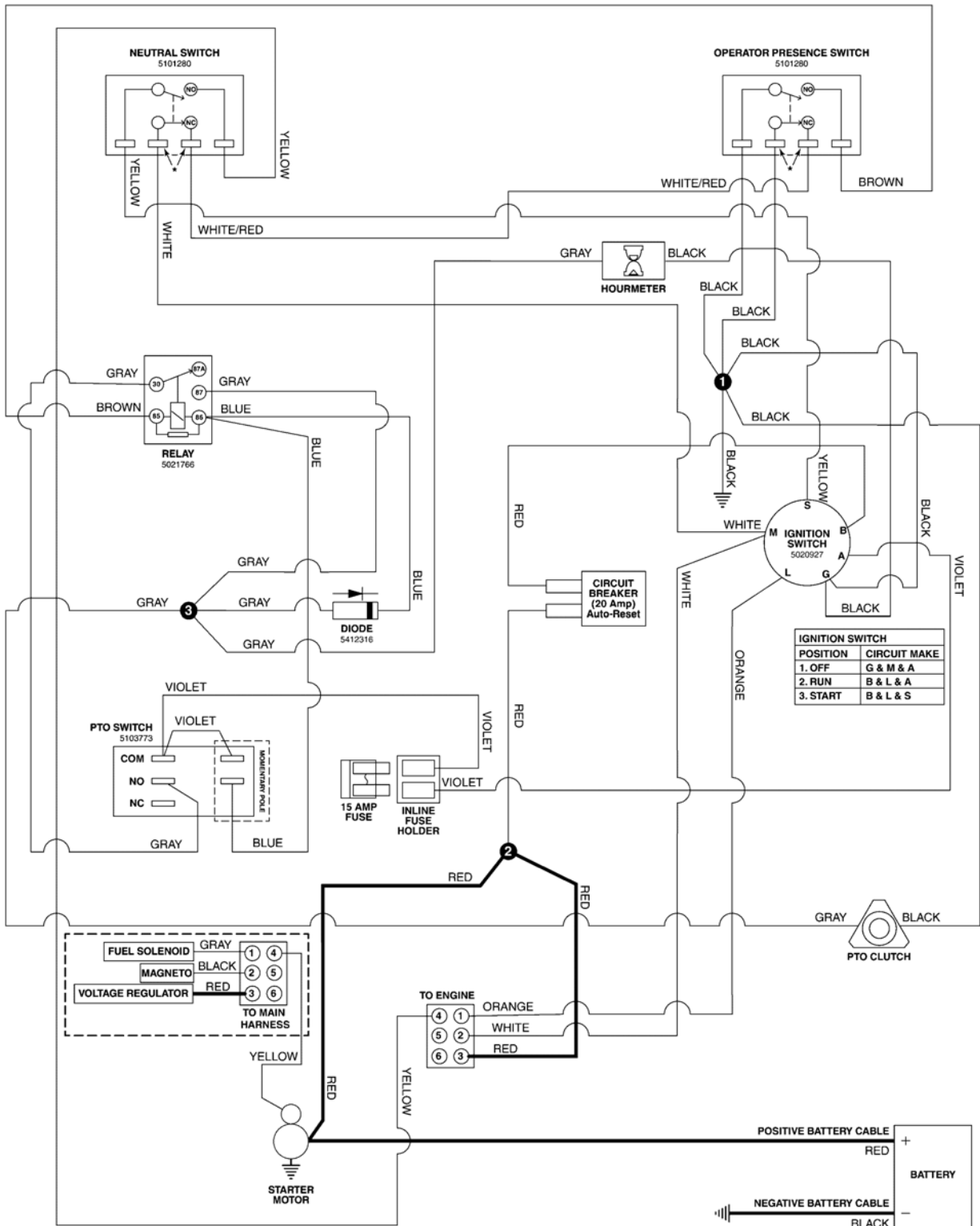
The above parts group applies to the following Mfg. Nos.:

5901453

Electrical Schematic - Charging Circuit B&S BV

Main Wire Harness
5413416

*This switch uses a "shorting" connector. When the connector is unplugged, the terminals going to the identified pole will have continuity. 5413416C



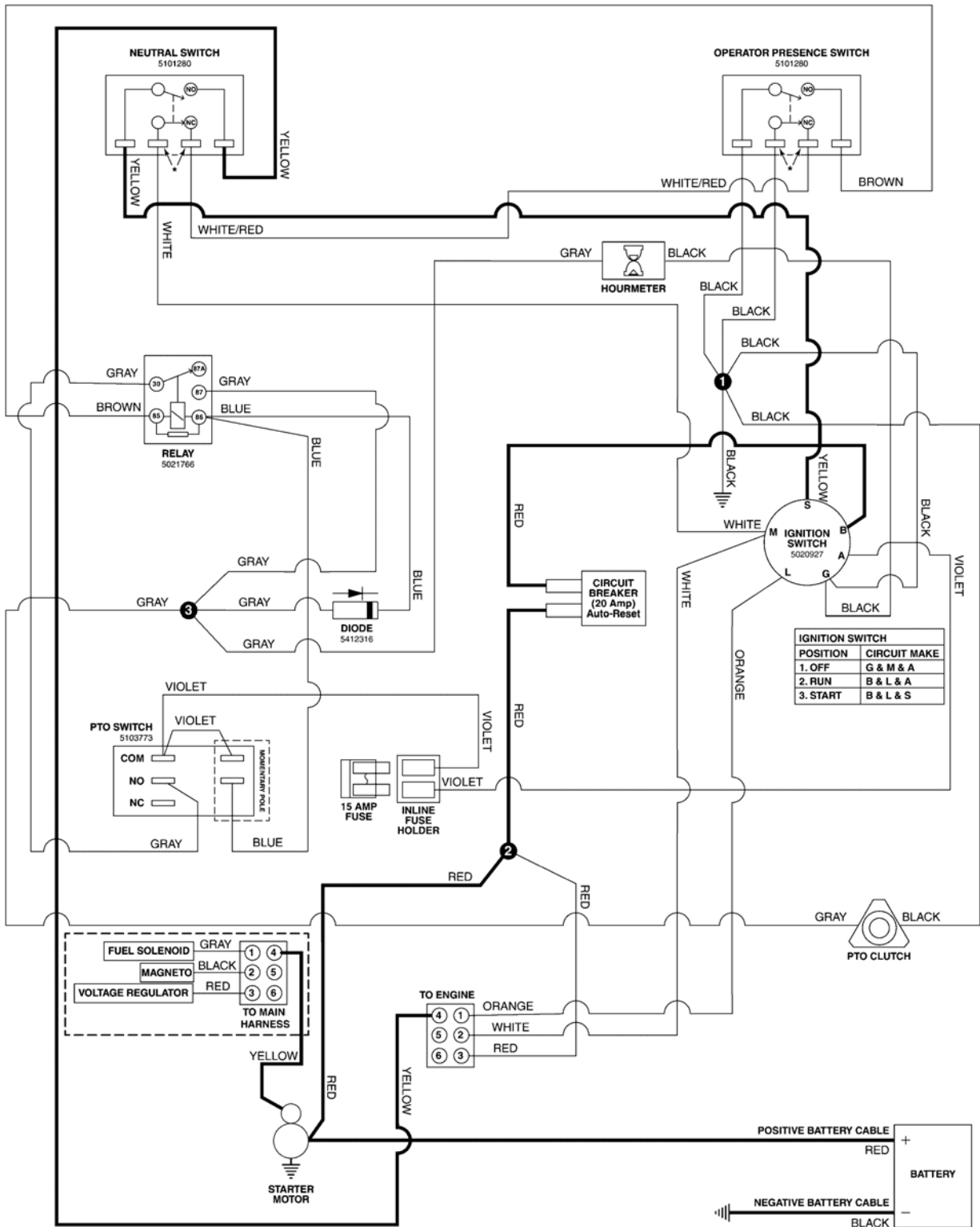
The above parts group applies to the following Mfg. Nos.:

5901453 - F

Electrical Schematic - Cranking Circuit B&S BV

Main Wire Harness
5413416

*This switch uses a "shorting" connector. When the connector is unplugged, 5413416R the terminals going to the identified pole will have continuity.



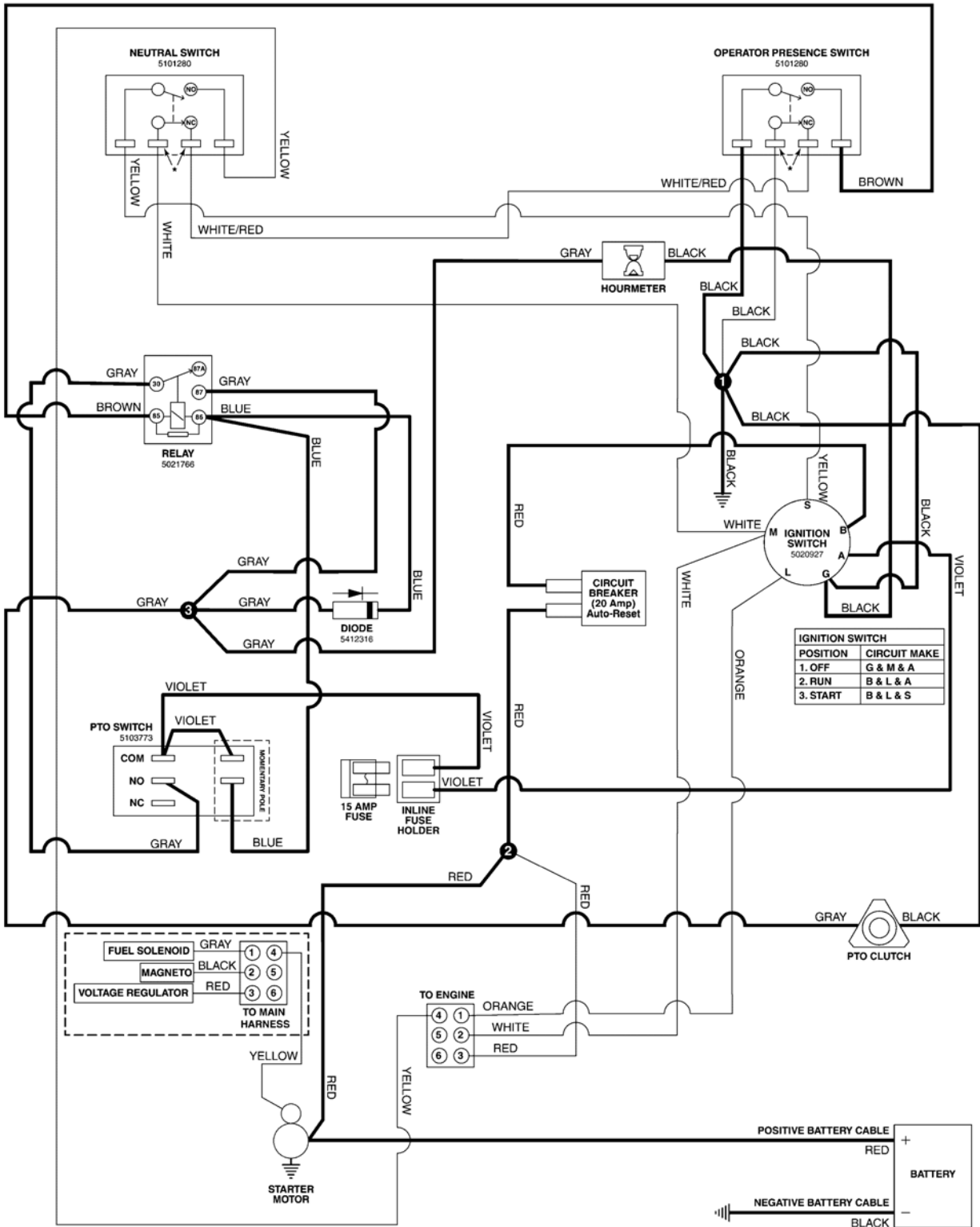
The above parts group applies to the following Mfg. Nos.:
5901453 - F

Electrical Schematic - PTO Op. Pres. Circuit B&S BV

5413416P

Main Wire Harness
5413416

*This switch uses a "shorting" connector. When the connector is unplugged, the terminals going to the identified pole will have continuity.



The above parts group applies to the following Mfg. Nos.:

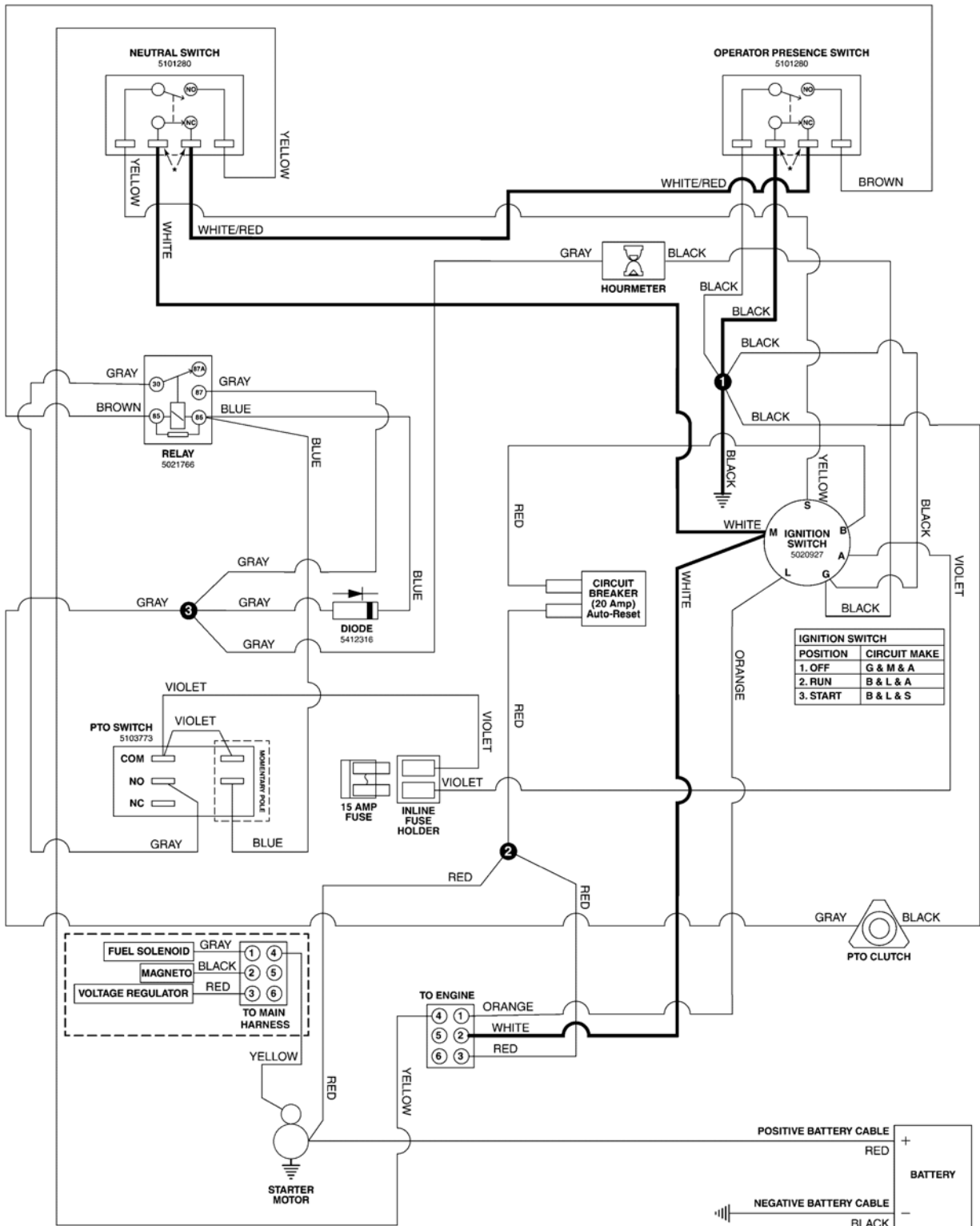
5901453 - F

Electrical Schematic - Engine Op. Pres. Circuit B&S BV

5413416E

Main Wire Harness
5413416

*This switch uses a "shorting" connector. When the connector is unplugged, the terminals going to the identified pole will have continuity.



The above parts group applies to the following Mfg. Nos.:

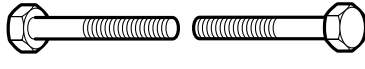
5901453 - F

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Hardware Identification & Torque Specifications

Common Hardware Types

Hex Head Capscrew



Washer



Lockwasher



Carriage Bolt



Hex Nut

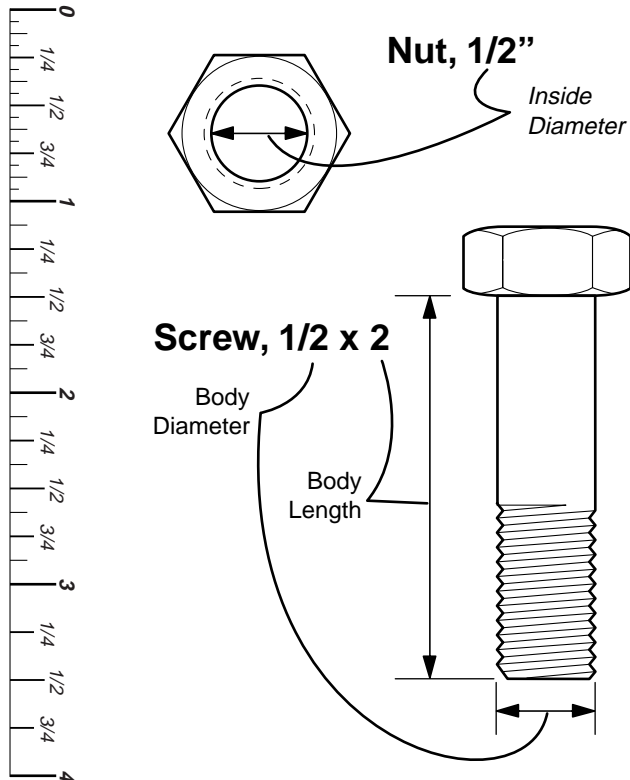


Standard Hardware Sizing

When a washer or nut is identified as $1/2''$, this is the *Nominal size*, meaning the *inside diameter* is $1/2$ inch; if a second number is present it represents the *threads per inch*

When bolt or capscrew is identified as $1/2 - 16 \times 2''$, this means the *Nominal size*, or *body diameter* is $1/2$ inch; the second number represents the *threads per inch* (16 in this example, and the final number is the *body length* of the bolt or screw (in this example 2 inches long).

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



Torque Specification Chart

FOR STANDARD MACHINE HARDWARE (Tolerance $\pm 20\%$)

Hardware Grade	No Marks SAE Grade 2		SAE Grade 5		SAE Grade 8	
	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	27	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

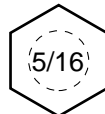
NOTES

- 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.

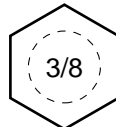
Wrench & Fastener Size Guide



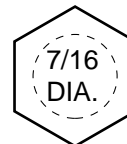
$1/4''$ Bolt or Nut
Wrench— $7/16''$



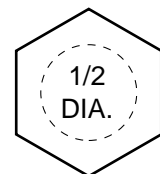
$5/16''$ Bolt or Nut
Wrench— $1/2''$



$3/8''$ 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— $3/4''$

Parts Manual FM Series

Walk Behind Flail Mower

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