



PARTS MANUAL



17.5HP Models

Mfg. No.	Description
2690842	EMT175460, 17.5HP 46" Murray Lawn Tractor (2010-2011)
2690959	EMT175460F, 17.5HP 46" Murray Lawn Tractor, FR (2011)

20HP Models

Mfg. No.	Description
2690843	EMT20460, 20HP 46" Murray Lawn Tractor (2010-2011)
2690843-01	EMT20460, 20HP 46" Murray Lawn Tractor (2012)
2690960	EMT20460, 20HP 46" Murray Lawn Tractor, FR (2011)
2690960-01	EMT20460, 20HP 46" Murray Lawn Tractor, FR (2012)

Mower Decks

Mfg. No.	Description
1695809	46" Mower Deck
1695981	46" Mower Deck, FR (2011)

Manual Part No. 1750279

Revision D

Rev. Date: 1/10/2012

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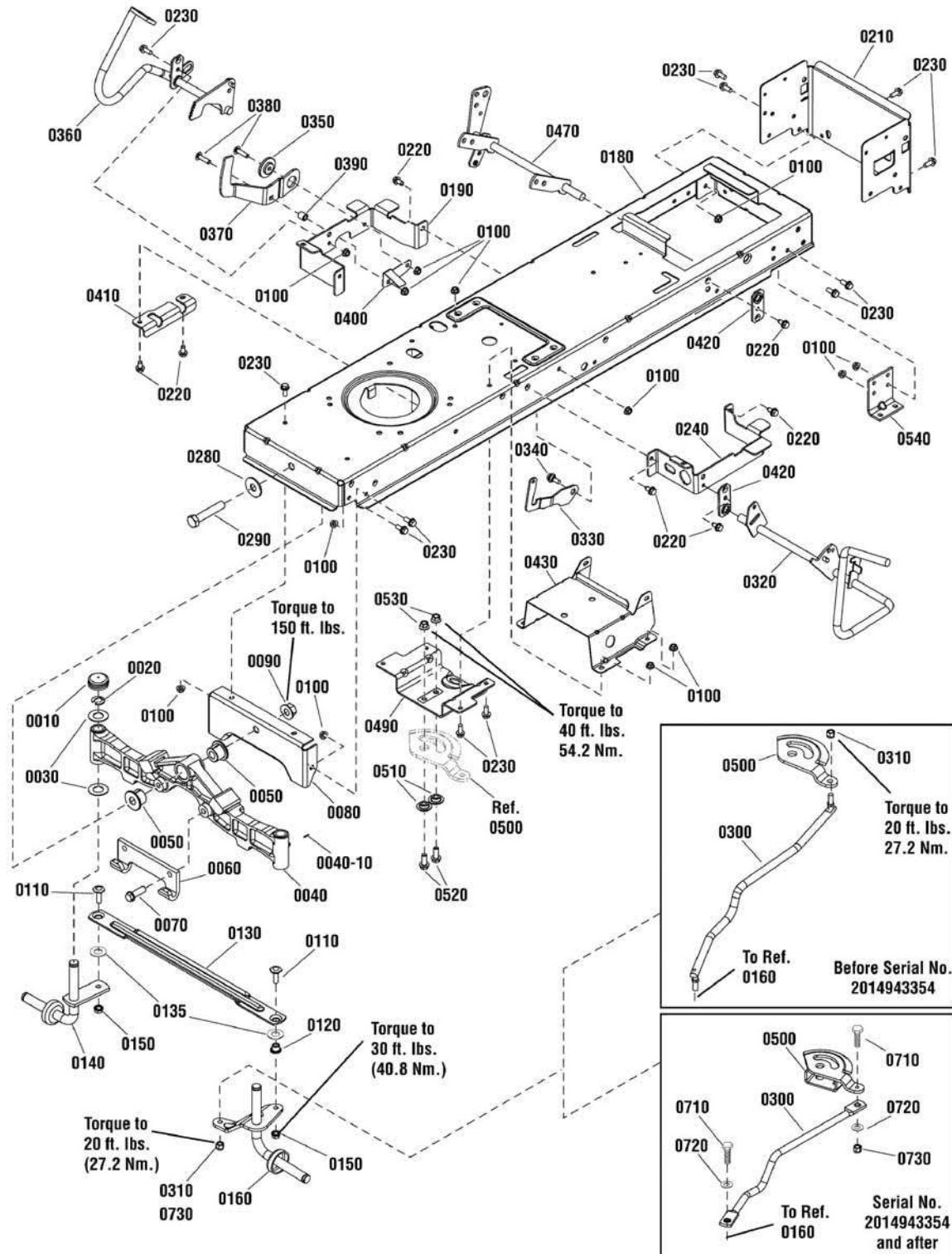
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Frame & Front Axle Group

2986847SN

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



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

- 2690842 - EMT175460
- 2690843 - EMT20460
- 2690843-01 - EMT20460
- 2690959 - EMT175460F
- 2690960 - EMT20460
- 2690960-01 - EMT20460

Frame & Front Axle Group

REF NO	PART NO.	QTY.	DESCRIPTION
0010	1734135SM	2	CAP, Hub
0020	1611710SM	2	RING, Klipping Extension
0030	2860183SM	4	WASHER, 3/4
0040	1728018SM	1	AXLE, Front Iron Casting Machined
0040-10	1704314SM	3	FITTING, Zerk
0050	1730186SM	2	BUSHING, Axle Pivot
0060	1721918ASM	1	HOOK, "J"
0070	1960652SM	2	CAPSCREW, 7/16-14 x 1-1/2
0080	1727902SM	1	PLATE, Axle Support
0090	2860646SM	1	NUT, Hex Flange Two-Way Lock, 5/8-11
0100	1931277SM	24	NUT, Hex, Flange Whizlock, 5/16-18
0110	1960032SM	2	CAPSCREW, Hex Head, 3/8-16 x 1-1/4, .141 Thread G5
0120	1731912SM	2	BUSHING, Powdered Metal
0130	1751964YP	2	TIE ROD (Used on models after S/N: 2014943354)
0130	1728080ASM	1	TIE ROD (Used on models before S/N: 2014943354)
0135	1960703SM	2	WASHER, 5/8 (Used on models after S/N: 2014943354)
0140	1727872ASM	1	SPINDLE & CUP ASSEMBLY, R.H.
0150	1930645SM	2	NUT, Hex, Flange, Locking, 3/8-16
0160	1727873ASM	1	SPINDLE & ARM ASSEMBLY, L.H. (Used on models before S/N: 2014943354)
0160	1751922YP	1	SPINDLE & ARM ASSEMBLY, L.H. (Used on models after S/N: 2014943354)
0180	1738937YP	1	FRAME
0190	1727904SM	1	SUPPORT, Front Footrest R.H.
0210	1738229YP	1	SUPPORT, Rear Frame
0220	1930601SM	9	SCREW, Taptite, 5/16-18 x 5/8
0230	1930591SM	14	CAPSCREW, Hex Head, Flange Whiz Lock, 5/16-18 x 3/4
0240	1727905SM	1	SUPPORT, Front Footrest L.H.
0280	1960035SM	1	WASHER, Flat, 5/8
0290	2860744SM	1	CAPSCREW, Hex Head, 5/8-11 x 3-1/4, G5
0300	1727868SM	1	LINK, Drag (with Ball Joint), 3/8 (Used on models before S/N: 2014943354)
0300	1738051YP	1	LINK, Drag (with Bearing), 5/16 (Used on models after S/N: 2014943354)
0310	1960747SM	2	NUT, Hex Nylock, 3/8-24 (Used on models before S/N: 2014943354)
0320	1736404AYP	1	PEDAL ASSEMBLY, Brake
0330	1735595ASM	1	LATCH, Brake Lock
0340	1729576SM	1	BOLT, Shoulder, 5/16-18 x 1-1/8
0350	1727935SM	1	SPACER, Pivot
0360	1736714AYP	1	PEDAL ASSEMBLY, Forward
0370	1727246SM	1	PEDAL, Reverse
0380	1960223SM	2	BOLT, Carriage, 5/16-18 x 1-1/4
0390	1728024SM	2	SPACER, Foot Pedal
0400	1728025SM	1	ACTUATOR, RMO Switch
0410	1727909SM	1	BRACKET, Pedal Pivot
0420	1727911ASM	2	PLATE, Bearing
0430	1727282SM	1	SUPPORT, Battery

Footnotes

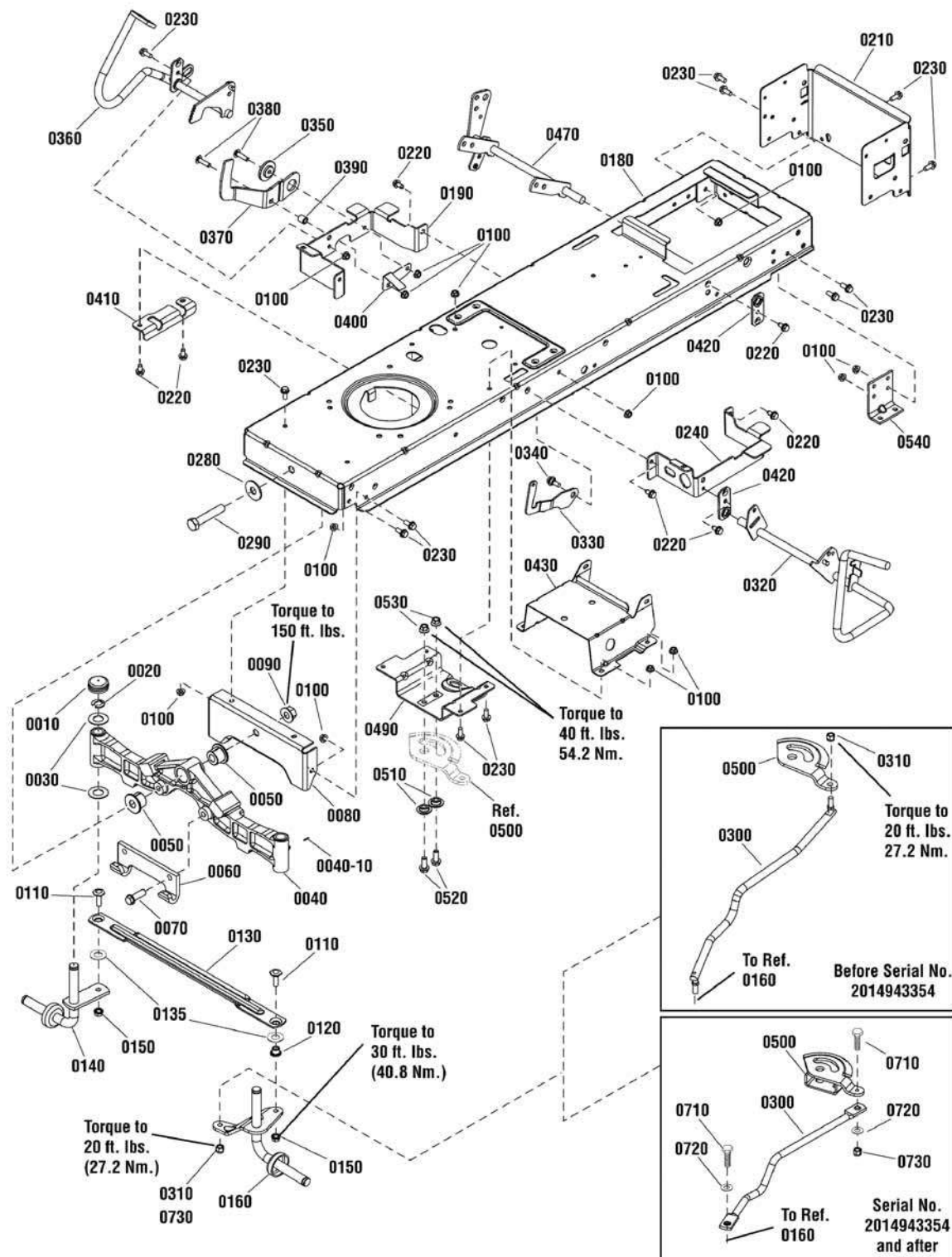
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2690842 - EMT175460
 2690843 - EMT20460
 2690843-01 - EMT20460
 2690959 - EMT175460F
 2690960 - EMT20460

Frame & Front Axle Group

2986847SN

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



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

- 2690842 - EMT175460
- 2690843 - EMT20460
- 2690843-01 - EMT20460
- 2690959 - EMT175460F
- 2690960 - EMT20460
- 2690960-01 - EMT20460

Frame & Front Axle Group

REF NO	PART NO.	QTY.	DESCRIPTION
0500	1728027SM	1	GEAR, Steering (Used on models before S/N: 2014943354)
0500	1751110YP	1	GEAR, Steering (Used on models after S/N: 2014943354)
0510	1728122SM	2	SPACER, Sector Gear
0520	1934654SM	2	SCREW, Hex Flange, Whiz Lock, 3/8-16 x 1
0530	1931211SM	2	NUT, Hex Flange, Whiz Lock, 3/8-16
0540	1727903SM	1	SUPPORT, Transmission
0710	1921977SM	2	CAPSCREW, Hex Head, 5/16-18 x 1-1/4, G5 (Used on models after S/N: 2014943354)
0720	1924874SM	2	WASHER, 5/16 (Used on models after S/N: 2014943354)
0730	1935048SM	2	NUT, Hex Flange, Two Way Lock, 5/16-18 (Used on models after S/N: 2014943354)

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Footnotes

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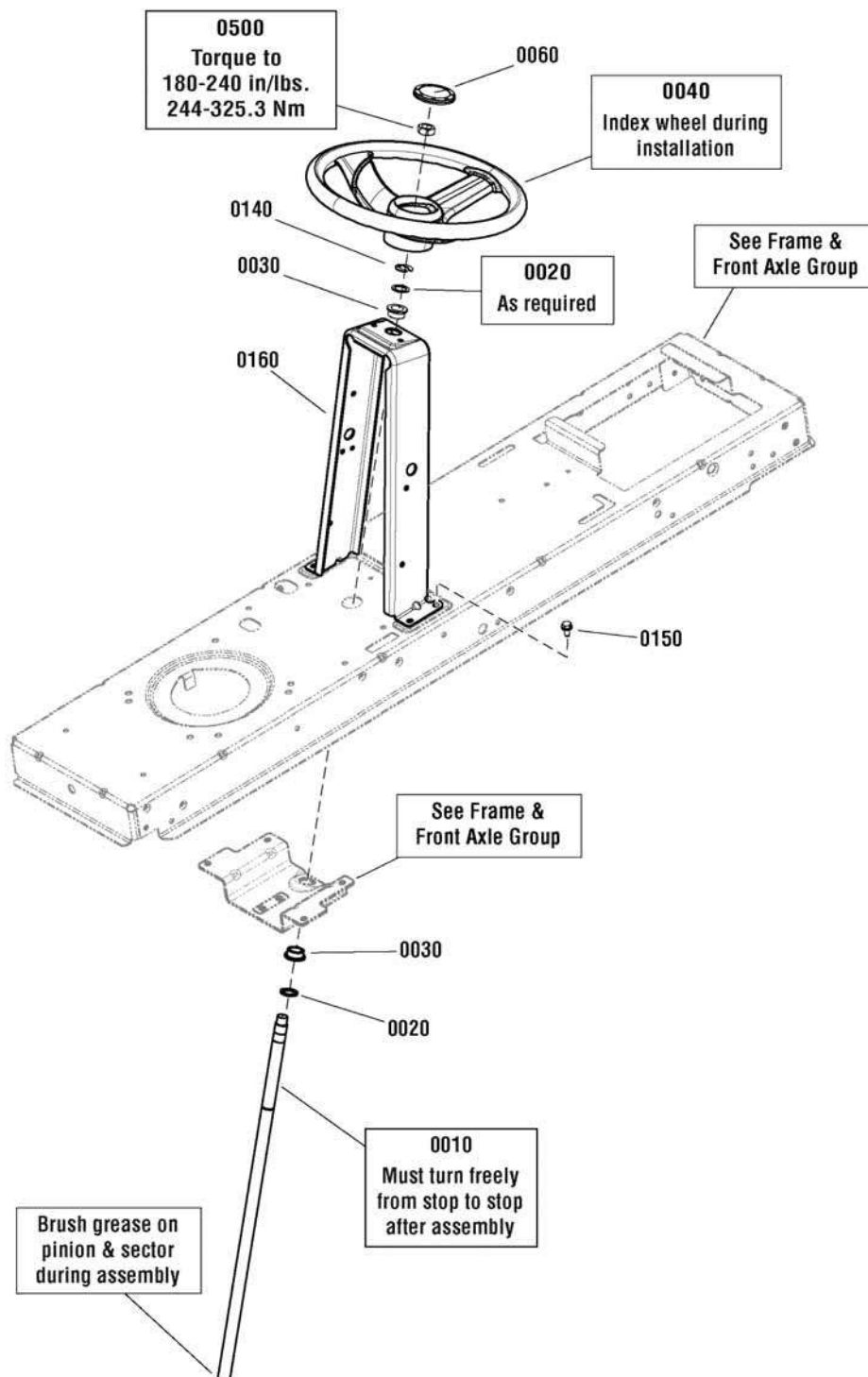
2690842 - EMT175460
2690843 - EMT20460
2690843-01 - EMT20460
2690959 - EMT175460F
2690960 - EMT20460

2690960-01 - EMT20460

Steering Group

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

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

2690842 - EMT175460

2690960-01 - EMT20460

2690843 - EMT20460

2690843-01 - EMT20460

2690959 - EMT175460F

2690960 - EMT20460

Steering Group

REF NO	PART NO.	QTY.	DESCRIPTION
0010	1727813SM	1	SHAFT, Steering
0020	1960114SM	2	WASHER, 3/4
0030	1729665SM	2	BUSHING, Steering, 3/4 ID
0040	1728069SM	1	STEERING WHEEL
0060	1725024SM	1	CAP, Steering Wheel
0140	1611710SM	1	RING, Klipring
0150	1930601SM	4	SCREW, Hex Washer Head, Taptite, 5/16-18 x 5/8
0160	1738935AYP	1	TOWER
0500	1960576SM	1	NUT, Hex Lock, ESNA LIGHT, 5/8-18

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Footnotes

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

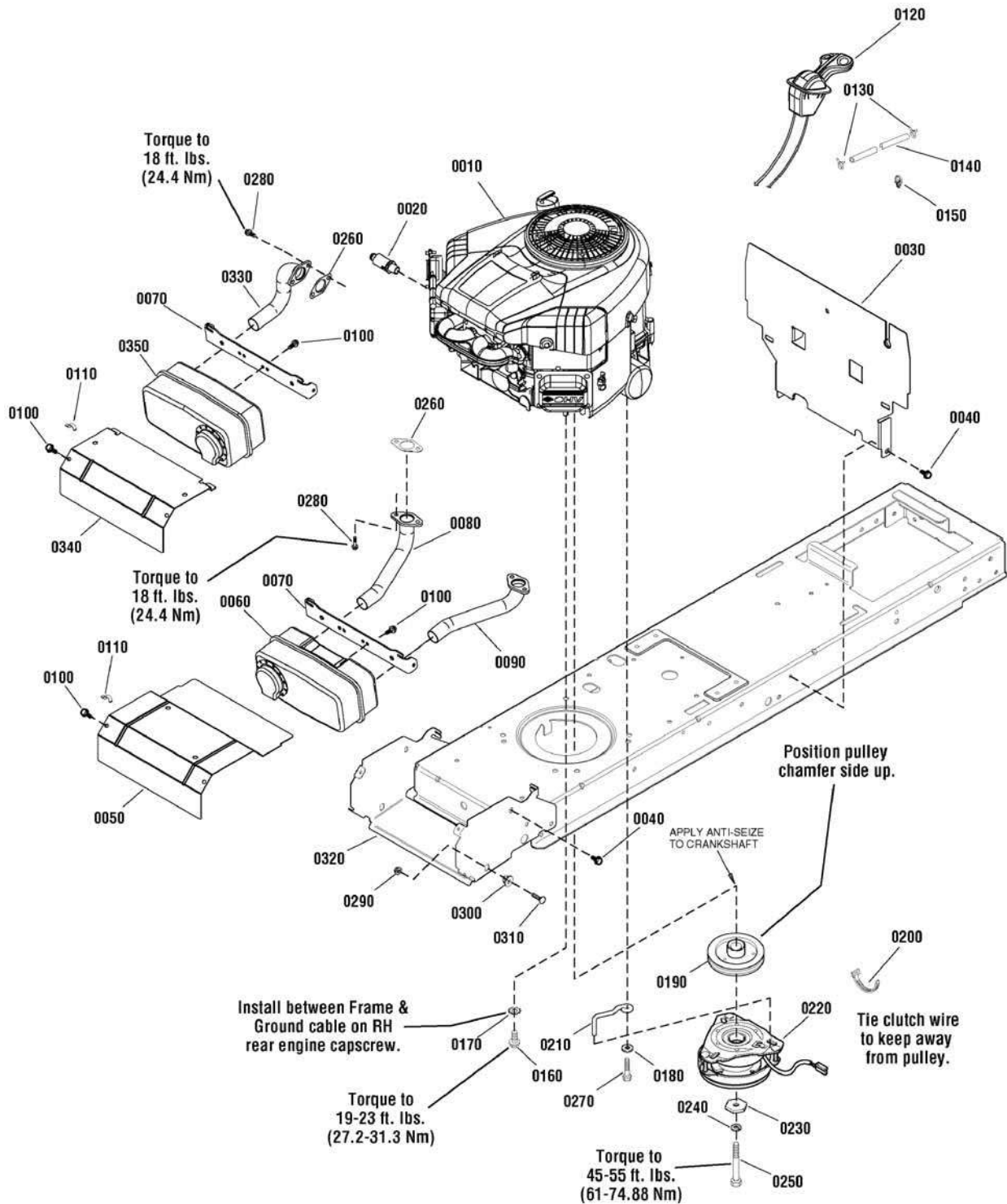
2690842 - EMT175460
2690843 - EMT20460
2690843-01 - EMT20460
2690959 - EMT175460F
2690960 - EMT20460

2690960-01 - EMT20460

Engine Group - 17.5HP & 20HP

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

2988696



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

- 2690842 - EMT175460
- 2690843 - EMT20460
- 2690843-01 - EMT20460
- 2690959 - EMT175460F
- 2690960 - EMT20460
- 2690960-01 - EMT20460

Engine Group - 17.5HP & 20HP

REF NO	PART NO.	QTY.	DESCRIPTION
0010	31G777-0144-B1	1	* ENGINE, 17.5HP Briggs & Stratton, Intek Single (Engine Model: 31G777-0144-B1)
0010	406777-0170-B1	1	* ENGINE, 20HP Briggs & Stratton, Intek Twin (Engine Model: 406777-0170-B1)
0010	406777-5121-B1	1	* ENGINE, 20HP Briggs & Stratton, Intek Twin (Engine Model: 406777-5121-B1)
0020	1717473SM	1	VALVE, Shut Off Oil Drain
0030	1728058SM	1	HEAT SHIELD (Single)
0040	1930601SM	4	SCREW, Hex Washer, Taptit, 5/16-18 x 5/8
0050	1727997SM	1	HEAD SHIELD (Twin)
0060	1727994SM	1	MUFFLER, Twin
0070	1727976SM	1	SUPPORT, Muffler
0080	1727979SM	1	EXHAUST PIPE, R.H.
0090	1727980SM	1	EXHAUST PIPE, L.H.
0100	1925003SM	4	SCREW, Hex Washer, Taptit, 1/4-20 x 1/2
0110	2834683SM	1	WIRE CLIP
0120	1751734YP	1	THROTTLE CONTROL (Single)
0120	1736868YP	1	THROTTLE CONTROL, Choke-A-Matic (Twin)
0130	791850	2	HOSE CLAMP, Fuel
0140	1734993SM	1	HOSE, Fuel, 55 in
0150	1730268SM	2	CLIP-Hose, Black
0160	2827187SM	2/3	SCREW, Hex Washer, Taptit, 3/8-16 x 1 (2 used on 20HP Model, 3 used on 17.5HP model)
0170	2820427SM	1	LOCKWASHER, External Tooth
0180	1924940SM	1	WASHER, 7/8
0190	1732576SM	1	PULLEY & HUB ASSEMBLY, Engine
0200	1701011SM	2	TIE, Self Locking
0210	1737421AYP	1	GUIDE, Belt
0220	1736105SM	1	CLUTCH, Electric
0230	1708264SM	1	WASHER, Hex
0240	1918199SM	1	LOCKWSHER, Spring
0250	1960649SM	1	CAPSCREW, Hex Head, 7/16-20 x 3-1/2
0260	1731214SM	1/2	GASKET, Exhaust
0270	2828635SM	1/2	SCREW, Hex-Head 3/8-16 x 1-3/4
0280	690341	2/4	SCREW, Hex SEMS Lock Washer 5/16-18 x 7/8
0290	1931277SM	2	NUT, Hex Flange, 5/16-18
0300	1728086SM	2	PIVOT, Hood
0310	1931335SM	2	BOLT, Carriage, 5/16-18 x 1
0320	1727982SM	1	SUPPORT, Muffler
0330	1728959SM	1	EXHAUST PIPE
0340	1727996ASM	1	HEAT SHIELD
0350	1727993SM	1	MUFFLER, Briggs & Stratton, Single

Footnotes

Note* To verify your specific engine model, please reference the ID Tag located on your engine. See your local Briggs & Stratton distributor for parts and service.

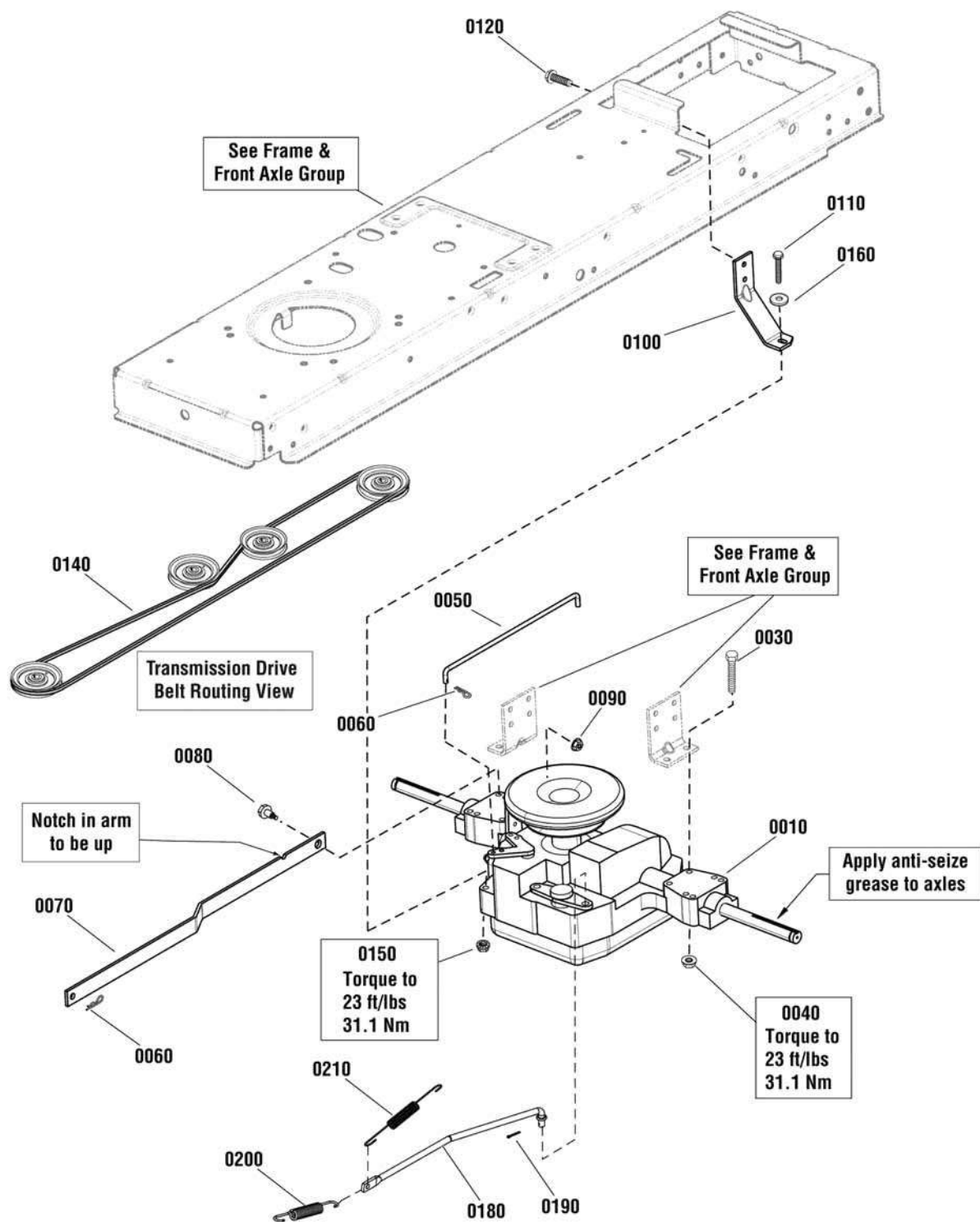
The above parts group applies to the following Mfg. Nos.:

2690842 - EMT175460
 2690843 - EMT20460
 2690843-01 - EMT20460
 2690959 - EMT175460F
 2690960 - EMT20460

Transmission Group

2987060a

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



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- 2690842 - EMT175460
- 2690843 - EMT20460
- 2690843-01 - EMT20460
- 2690959 - EMT175460F
- 2690960 - EMT20460
- 2690960-01 - EMT20460

Transmission Group

REF NO	PART NO.	QTY.	DESCRIPTION
0010	1729588SM	1	TRANSMISSION ASSEMBLY, K46BP
0030	1960586SM	4	SCREW, Hex Head Flange Lock, 5/16-18 x 2-1/2
0040	1931277SM	4	NUT, Hex Flange, Whiz Lock, 5/16-18
0050	1728120SM	1	ROD, Bypass, 11.44 LG
0060	1722460SM	2	PIN, Quick
0070	1727258SM	1	ARM, Control
0080	1732426SM	1	BOLT, Shoulder, 5/16-18 x 1/2
0090	1935048SM	1	NUT, Hex Flange, 5/16-18
0100	1728043SM	1	STRAP, Torque
0110	1922127SM	1	CAPSCREW, Hex Head, 5/16-18 x 1-3/4
0120	1664847SM	1	CAPSCREW, Hex Head, Taptite, 5/16-18 x 3/4
0140	1728008SM	1	V-BELT, Drive Belt, Aramid/Kevlar
0150	1960686SM	1	NUT, Hex Flange, ESNA, 5/16-18
0160	1919381SM	1	WASHER, Plain, 5/16
0180	1727253SM	1	ROD, Brake
0190	1918447SM	1	PIN, Cotter
0200	1731262SM	1	SPRING, Extension, 5-3/8"
0210	1721995SM	1	SPRING, Extension, 6-5/8"

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Footnotes

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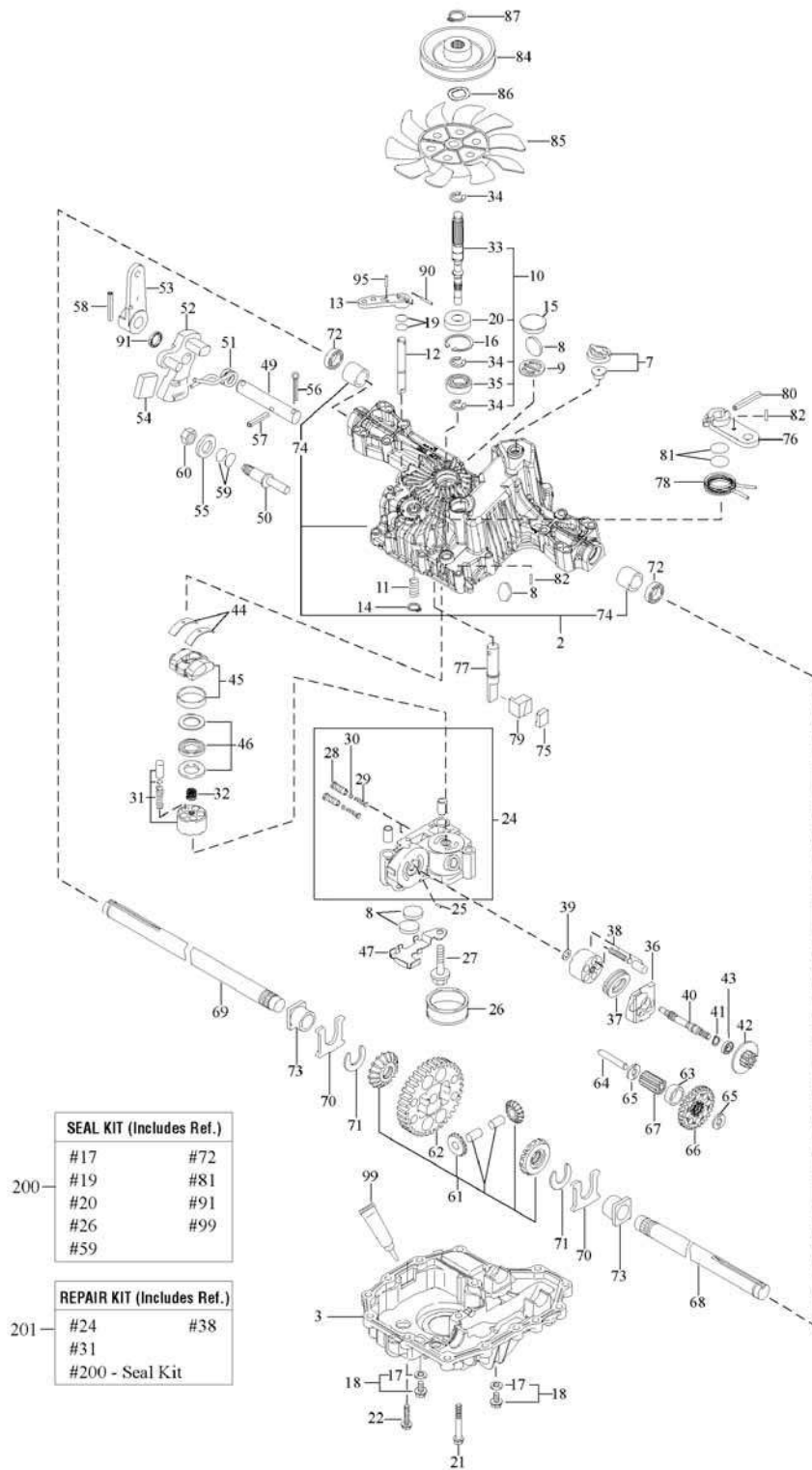
2690842 - EMT175460
2690843 - EMT20460
2690843-01 - EMT20460
2690959 - EMT175460F
2690960 - EMT20460

2690960-01 - EMT20460

Transmission SERVICE PARTS - Tuff Torq K46BP

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

1729588



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

- 2690842 - EMT175460
- 2690843 - EMT20460
- 2690843-01 - EMT20460
- 2690959 - EMT175460F
- 2690960 - EMT20460

Transmission SERVICE PARTS - Tuff Torq K46BP

REF NO	PART NO.	QTY.	DESCRIPTION
1	1729588SM		TRANSMISSION, Tuff Torq K46BP
2	-----		* KIT, Upper Case
3	-----		* LOWER CASE
7	1718052SM		VENT VALVE 15
8	1724279SM		MAGNET
9	-----		* MAGNET HOLDER
10	-----		* PUMP SHAFT/BEARING KIT
11	-----		* SPRING 25
12	1724281SM		BYPASS SHAFT A
13	1720418SM		LEVER, Bypass
14	1718061SM		RING, Snap, 10
15	1724282SM		SEALING CAP 30
16	1708650SM		RING, Snap, C 35
17	1724323YP		SEAL WASHER 8
18	-----		* KIT, Drain Bolt
21	-----		* SCREW, Tapping, 8 * 55
22	1707789SM		SCREW, Tapping, 8 * 30
24	-----		* CENTER CASE E W/BALL IDS SERVICE KIT
25	1718070SM		PIN, 3 * 9.8
26	-----		* FILTER 105
27	1720805SM		BOLT, 10 * 75
28	-----		* IDS VALVE 1.0
29	1724287SM		IDS SPRING
30	-----		* BALL, 3/16
31	-----		* KIT, Cylinder Block (Pump)
32	1724290SM		SPRING
33	1739892YP		PUMP SHAFT
34	1718076SM		E-RING 15
35	1708673SM		BEARING, 6202C3
36	1718077SM		MOTOR HOUSING
37	-----		* THRUST BEARING 51106
38	1718079SM		KIT, Cylinder Block
39	1718084SM		WASHER, 12 * 24 * 1
40	1724943SM		MOTOR SHAFT
41	1708672SM		RING, Snap, S15
42	1724294SM		BRAKE DISC/MOTOR GEAR (11T)
43	-----		* BEARING, 6202 RSR C3
44	1718089SM		THRUST METAL
45	-----		* SWASH PLATE CMP
46	1718086SM		THRUST BEARING K81105
49	-----		* CONTROL SHAFT
50	-----		* FULCRUM
51	-----		* SPRING, Torsion

Footnotes

*Note: See your local authorized dealership for parts and warranty or contact Tuff Torq at www.tufftorqservices.com (U.S. 1-866-572-3441 Int'l 01-423-585-1977)

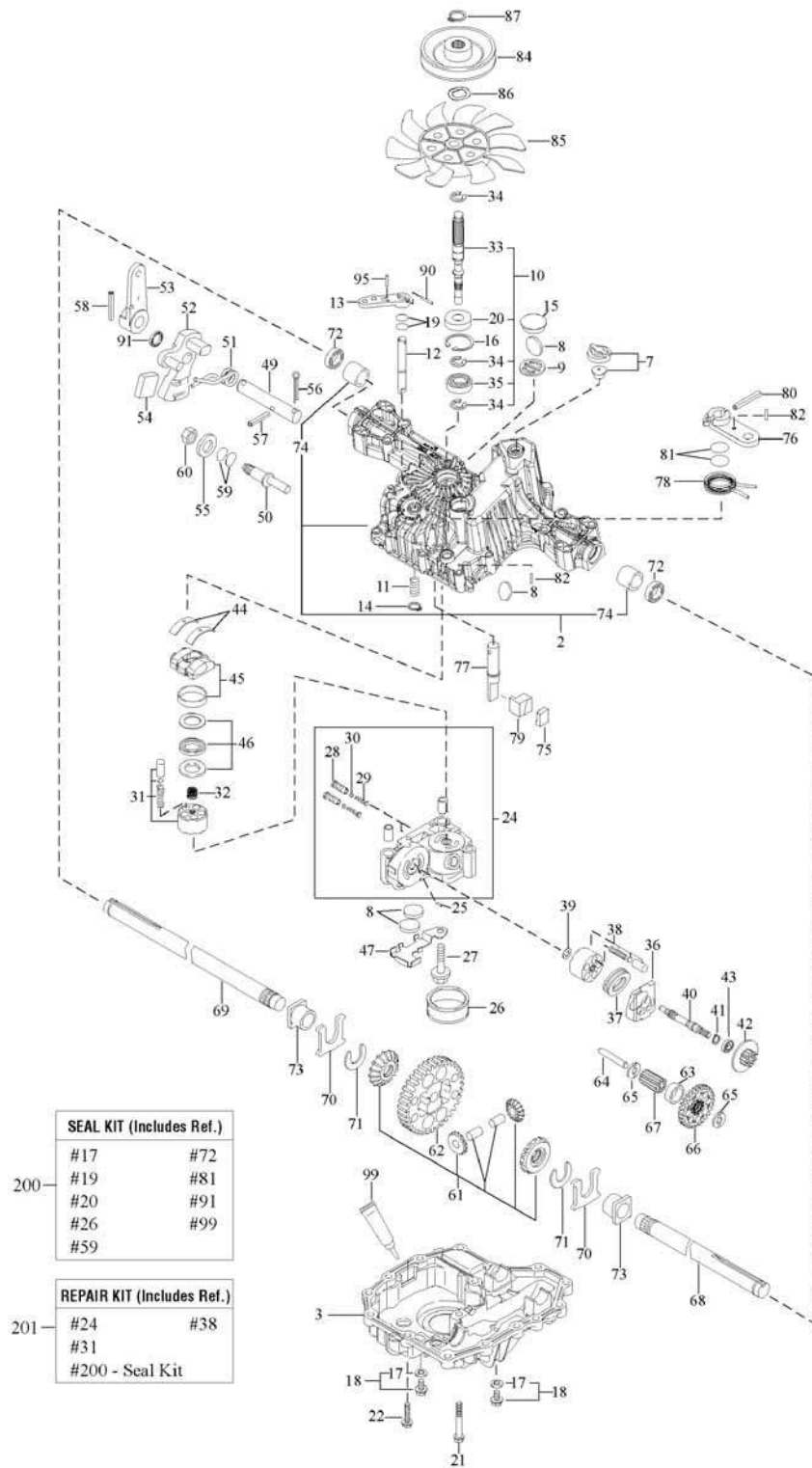
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2690842 - EMT175460
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 2690843-01 - EMT20460
 2690959 - EMT175460F
 2690960 - EMT20460

Transmission SERVICE PARTS - Tuff Torq K46BP

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

1729588



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- 2690960 - EMT20460

Transmission SERVICE PARTS - Tuff Torq K46BP

REF NO	PART NO.	QTY.	DESCRIPTION
54	----		* JERKY PLATE
55	1708689SM		WASHER, 12
56	1724349SM		COTTER PIN, 1/8 * 3/4
57	1724296SM		SPRING PIN 6 * 36
58	1718100SM		ROLL PIN 6 * 40
60	1708692SM		NUT 12
61	----		* KIT, Differential Gear
62	----		* FINAL GEAR (54T)
63	----		* FINAL PINION COLLAR
64	----		* REDUCTION SHAFT
65	1724948SM		WASHER, 12 * 32 * 3.2
66	----		* REDUCTION GEAR (37T)
67	----		* FINAL PINION GEAR (10T)
68	1724303SM		AXLE SHAFT, Left
69	1724304SM		AXLE SHAFT, Right
70	----		* THRUST WASHER
71	1718113SM		RING 17
72	1718111SM		SEAL 19 * 32 * 8
73	1718110SM		BUSHING, 19 * 25
74	----		* BUSHING, 19.05
75	1724305SM		BRAKE SHOE
76	1724306SM		BRAKE LEVER
77	----		* BRAKE SHAFT
78	----		* BRAKE RETURN SPRING
79	1724309SM		BRAKE ACTUATOR
80	1724310SM		SPRING PIN 5 * 32
82	1724311SM		SPRING PIN 4 * 16
84	1732918SM		PULLEY D
85	1724314SM		FAN, White
86	1724315SM		WASHER, Wave
87	1724316SM		SNAP RING
90	----		* SPRING PIN 3.0A * 20
95	----		* SPRING PIN 3.0A * 16
99	----		* SEALANT
200	1739894YP		K46 & T40 SEAL KIT (ALL MODELS)
201	----		* REPAIR KIT K46

Footnotes

*Note: See your local authorized dealership for parts and warranty or contact Tuff Torq at www.tufftorqservices.com (U.S. 1-866-572-3441 Int'l 01-423-585-1977)

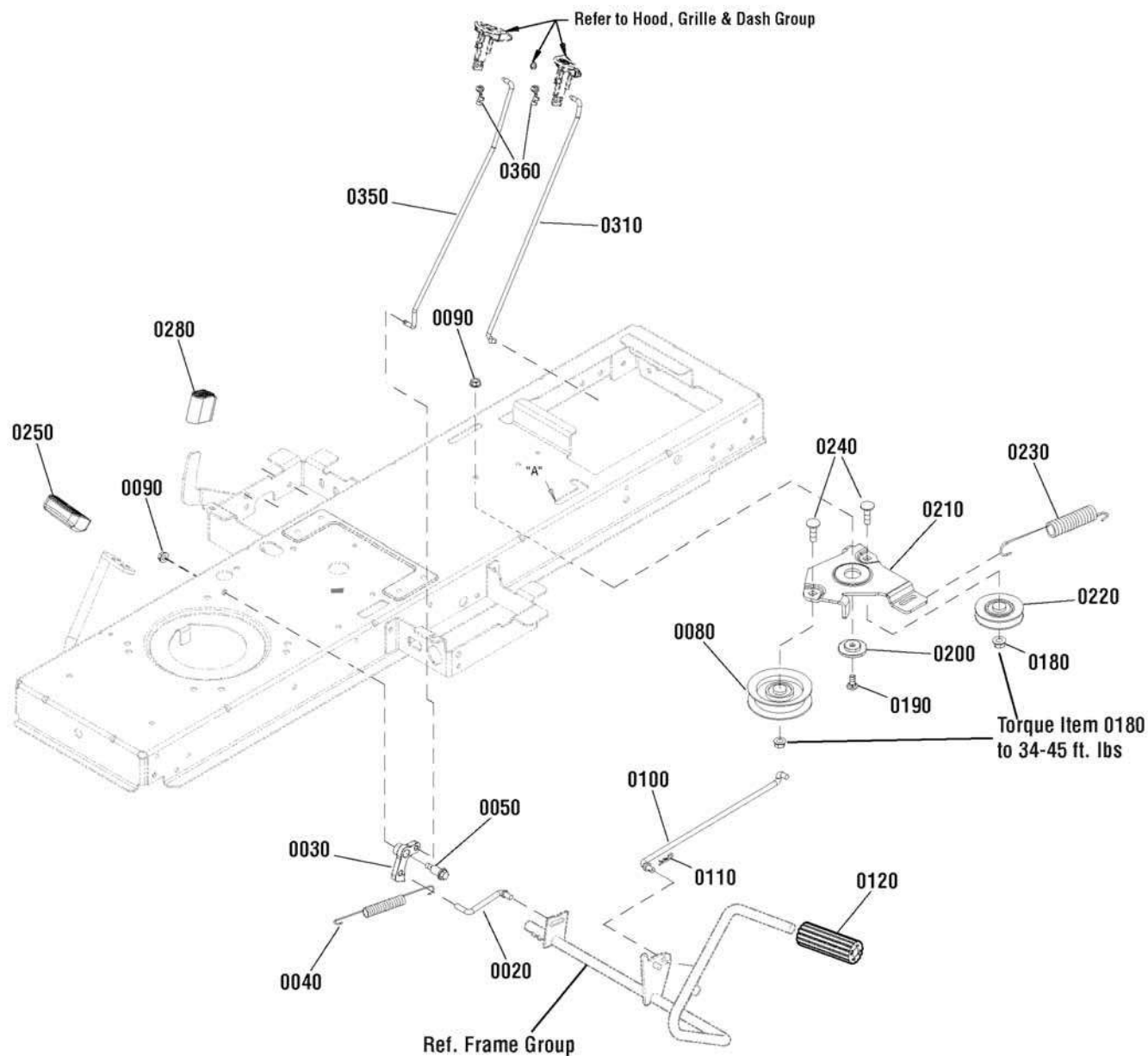
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Controls Group

2986842a

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2690843-01 - EMT20460
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2690960 - EMT20460
2690960-01 - EMT20460

Controls Group

REF NO	PART NO.	QTY.	DESCRIPTION
0020	1727899SM	1	ROD, Cruise Latch, 2.83"
0030	1727897SM	1	LATCH, Cruise Powdered Metal
0040	2159181SM	1	SPRING, Tension, Clutch
0050	1728976SM	1	BOLT, Shoulder, 5/16-18, G5
0080	1728000SM	1	PULLEY, Idler
0090	1931277SM	2	NUT, Hex, Flange Whizlock, 5/16-18
0100	1727254SM	1	ROD, Brake Return, 12-5/8"
0110	1722460SM	1	PIN, Quick
0120	1727261SM	1	PEDAL, Brake Rubber
0180	1960687SM	2	NUT, Hex Flange, ESNA, 3/8-16
0190	1931335SM	1	BOLT, Carriage, 5/16-18 x 1
0200	1727935SM	1	SPACER, Pivot
0210	1727894SM	1	BRACKET, Idler
0220	1728001SM	1	PULLEY, 3 OD Plastic
0230	1729620SM	1	SPRING, Extension 7-1/2"
0240	1931352SM	2	BOLT, Carriage, 3/8-16 x 1-1/2
0250	1721675SM	1	PAD, Foot Pedal Forward
0280	1727259SM	1	PAD, Foot Pedal Reverse
0310	1727267SM	1	ROD, Parking Brake, 16-3/8"
0350	1738760YP	1	ROD, Cruise Latch, 17"
0360	1728111SM	2	CLIP, Linkage, Black

Not for
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Footnotes

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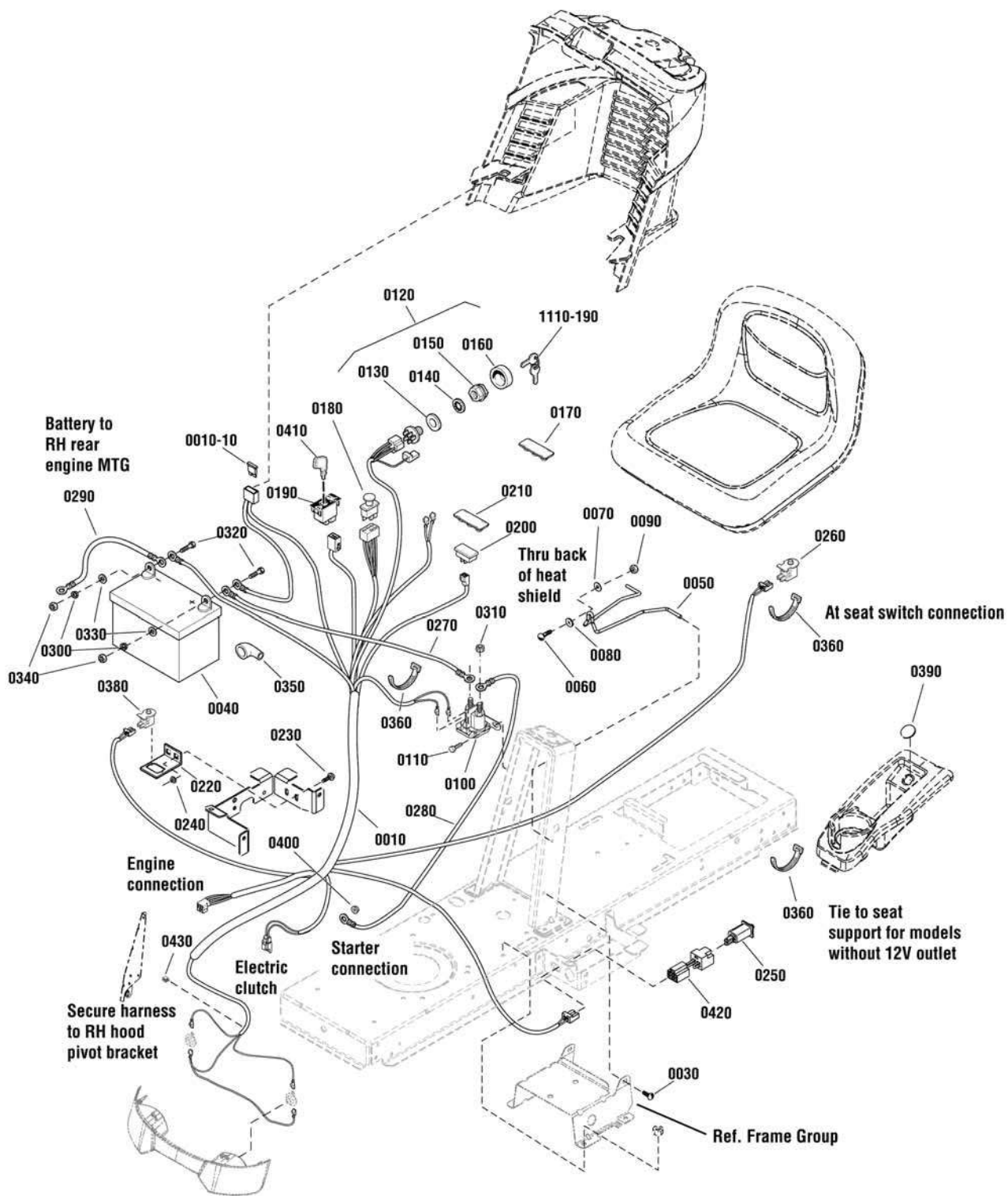
2690842 - EMT175460
2690843 - EMT20460
2690843-01 - EMT20460
2690959 - EMT175460F
2690960 - EMT20460

2690960-01 - EMT20460

Electrical Group

NOTE: Unless noted otherwise,
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specification chart.

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

2690842 - EMT175460

2690960-01 - EMT20460

2690843 - EMT20460

2690843-01 - EMT20460

2690959 - EMT175460F

2690960 - EMT20460

Electrical Group

REF NO	PART NO.	QTY.	DESCRIPTION
0010	1739597YP	1	WIRING HARNESS (Includes Ref. 0010-10)
0010-10	1731957SM	1	FUSE, Wiring Harness
0030	1930601SM	4	CAPSCREW, Hex Washer Head, Taptite, 5/16-18 x 5/8
0040	1685215SM	1	BATTERY, L Post, 12 Volt 6 Cell 340CCA
0050	1730007SM	1	HOLD DOWN, Battery
0060	1931318SM	1	BOLT, Carriage, 1/4-20 x 7/8 G5
0070	1960353SM	1	WASHER, 1/4
0080	1960518SM	1	PUSHNUT, 1/4
0090	1920397SM	1	NUT, Hex Lock, ESNA Light, 1/4-20
0100	1728963SM	1	SOLENOID
0110	1925003SM	2	CAPSCREW, Hex Washer Head, Taptite, 1/4-20 x 1/2
0120	1737853YP	1	SWITCH ASSEMBLY, Ingition (Includes Ref. Nos. 0130, 0140, 0150 & 0160)
0130	2101025SM	1	WASHER, 5/8
0140	1960547SM	1	LOCKWASHER, Internal Tooth
0150	1717549SM	1	NUT, Hex Flange, 5/8-32
0160	1717550SM	1	COVER, Switch
0170	1729993SM	1	PLUG, Hour Meter
0180	1722887SM	1	SWITCH, PTO Push
0190	1726556SM	1	SWITCH, RMO Module Only
0200	1716951SM	1	SWITCH, Headlight
0210	1722611SM	1	PLUG, Hole
0220	1728026SM	1	SUPPORT, RMO Switch
0230	1931333SM	2	BOLT, Carriage, 5/16-18 x 3/4, G5
0240	1931277SM	2	NUT, Hex Flange Whiz Lock Small, 5/16-18
0250	7022886YP	1	SWITCH, Push Button (NO / NC)
0260	7023354YP	1	SWITCH, Push Button (NC)
0270	1716549SM	1	CABLE-# 6 x 10
0280	1721830SM	1	CABLE, # 6 x 25
0290	1713163SM	1	CABLE, # 6 x 26
0300	2816964SM	2	LOCKWASHER, 1/4
0310	2860750SM	2	NUT, Hex, KEPS, 5/16-24
0320	2823341SM	2	CAPSCREW, Hex Head, 1/4-20 x 3/4, G5
0330	2821319SM	2	WASHER, 1/4
0340	2816622SM	2	NUT, Hex, 1/4-20
0350	1677296SM	1	BOOT, Insulator
0360	1701011SM	3	TIE, Self Locking
0380	1732004SM	1	SWITCH, Push Button (NO)
0390	1732007SM	1	PLUG, Hole
0400	1960294SM	1	NUT, Hex Flange Whiz Lock Small, 1/4-20
0410	1726557SM	2	KEY, RMO Module Plastic
0420	1734025SM	1	WIRES & CONNECTORS ASSEMBLY, Jumper
0430	2172434SM	1	CLIP, Wire
1110-190	1737837YP	1	KEYS, Ignition

Footnotes

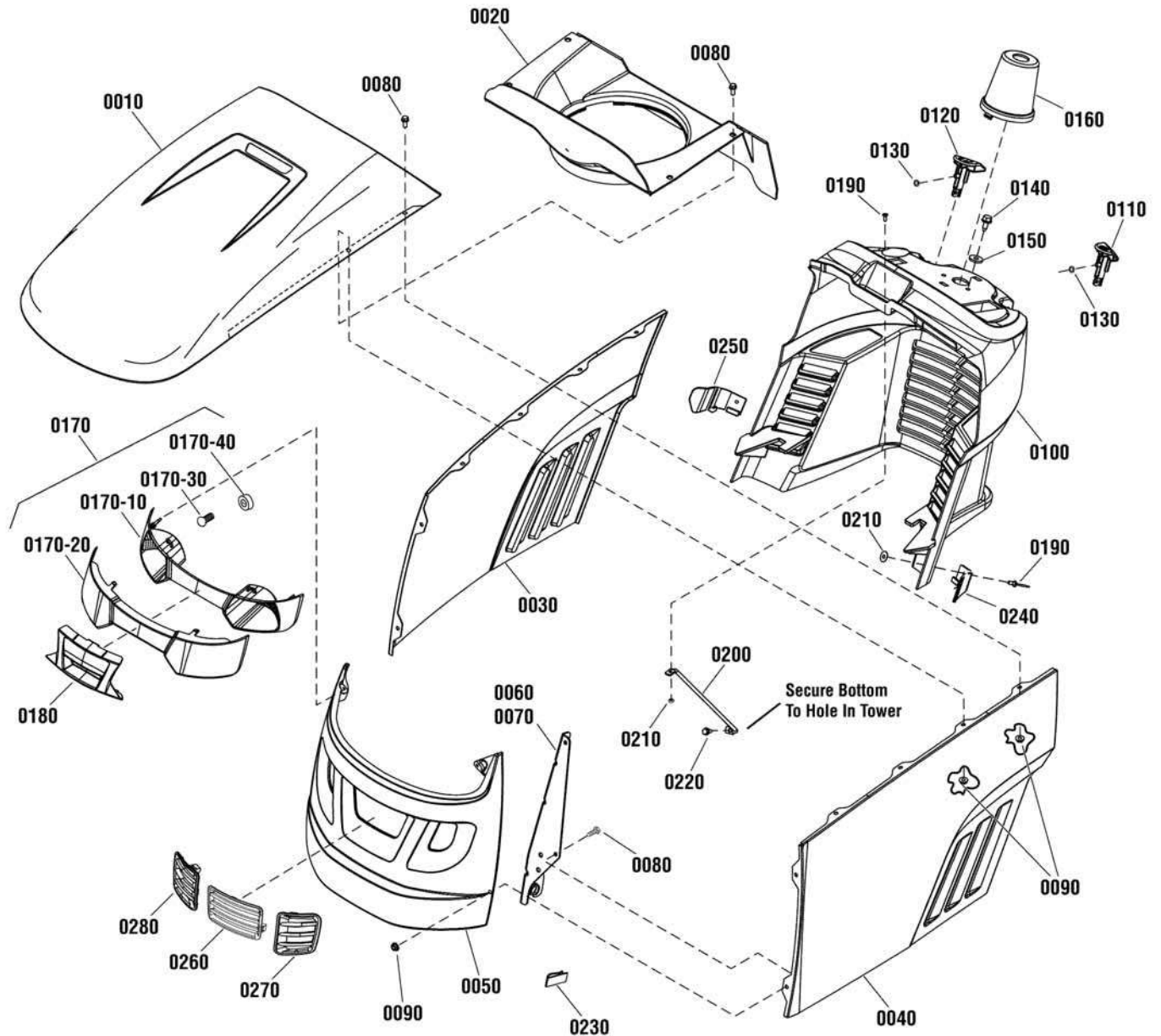
The above parts group applies to the following Mfg. Nos.:

2690842 - EMT175460
 2690843 - EMT20460
 2690843-01 - EMT20460
 2690959 - EMT175460F
 2690960 - EMT20460

Hood, Grille & Dash Group

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

2988697



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

- 2690842 - EMT175460
- 2690843 - EMT20460
- 2690843-01 - EMT20460
- 2690959 - EMT175460F
- 2690960 - EMT20460
- 2690960-01 - EMT20460

Hood, Grille & Dash Group

REF NO	PART NO.	QTY.	DESCRIPTION
0010	1728031BIYP	1	HOOD, With Scoop
0020	7102326YP	1	AIR DUCT, Plenum
0030	1727294BIYP	1	PANEL, Side, R.H.
0040	1727295BIYP	1	PANEL, Side, L.H.
0050	1738914BIYP	1	GRILLE
0060	1727279SM	1	HINGE, Hood, L.H.
0070	1727280SM	1	HINGE, Hood, R.H.
0080	1960295SM	12	CAPSCREW, Hex Flange Whiz Lock, 1/4-20 x 5/8
0090	1930641SM	12	NUT, Hex Flange Whiz Lock Large, 1/4-20
0100	1739105YP	1	CONSOLE
0110	1728089SM	1	KNOB, Brake Lock, Red
0120	1728090SM	1	KNOB, Cruise Lock, Green
0130	1960518SM	2	PUSHNUT, 1/4
0140	1664847SM	2	CAPSCREW, Hex Washer Head, Taptite, 5/16-18 x 3/4
0150	1919381SM	2	WASHER, 5/16
0160	1739106YP	1	COVER
0170	1727296SM	1	HEADLIGHT ASSEMBLY
0170-10	1728973SM	1	REFLECTOR
0170-20	1728974SM	1	LENS, Headlight
0170-30	1677371SM	2	BULB, 1141-12V 21CP
0170-40	1723451SM	2	SOCKET
0180	1728975SM	1	INSERT, Lightbar
0190	1960392SM	3	SCREW, Pan Head Phillips, #10-24 x 1/2
0200	1723123SM	1	ROD, 10"
0210	1933896SM	3	NUT, Nylock, 10-24
0220	1925003SM	1	CAPSCREW, Hex Washer Head, Taptite, 1/4-20 x 1/2
0230	028X83MA	6	S-CLIP
0240	1732030SM	1	GUIDE, Hood, L.H.
0250	1732031SM	1	GUIDE, Hood, R.H.
0260	1741762MA	1	GRILLE, Center
0270	1741763MA	1	GRILLE, L.H.
0280	1741764MA	1	GRILLE, R.H.

Footnotes

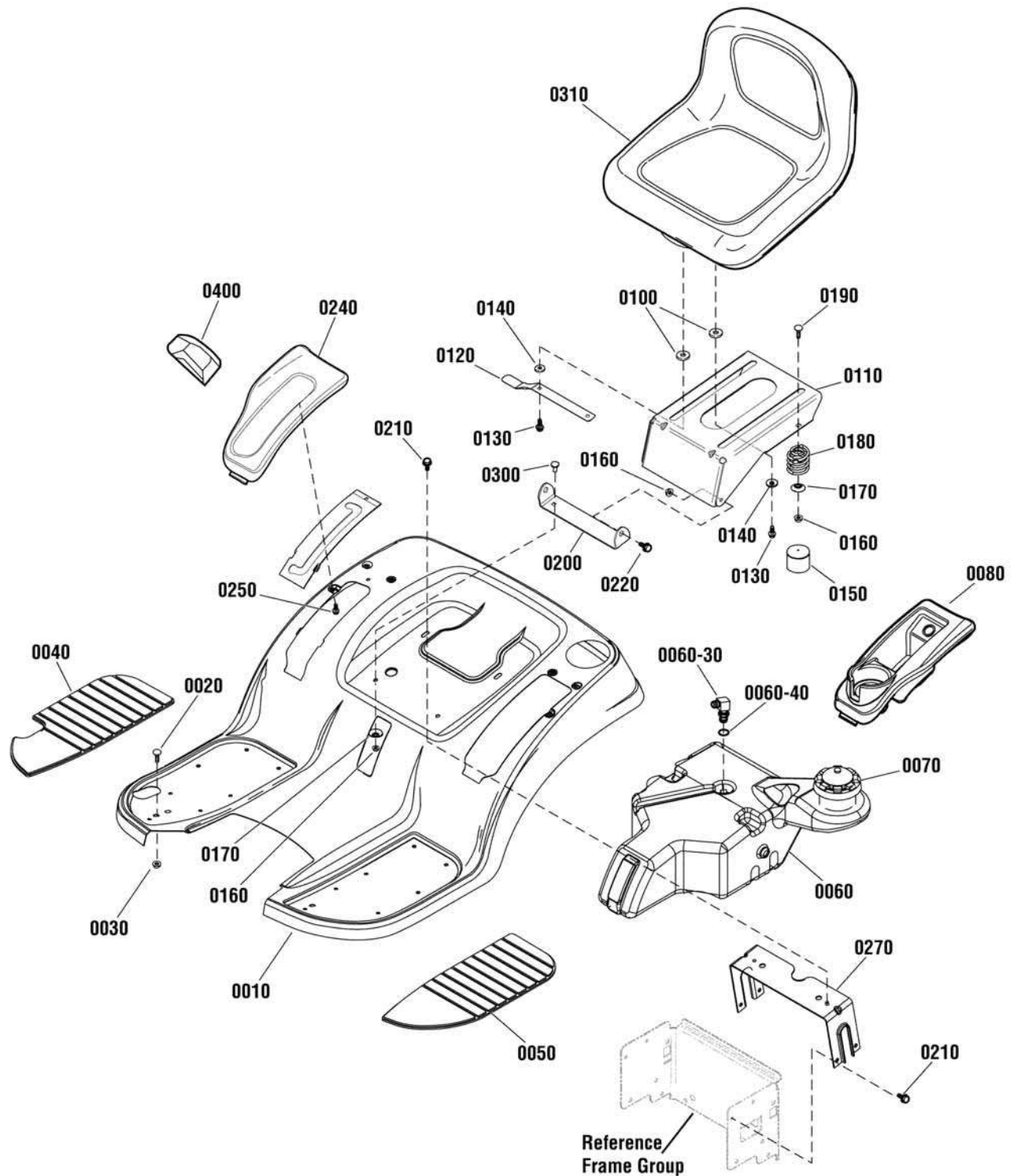
The above parts group applies to the following Mfg. Nos.:

2690842 - EMT175460
2690843 - EMT20460
2690843-01 - EMT20460
2690959 - EMT175460F
2690960 - EMT20460

Seat Deck & Fuel Tank

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

2988698



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

2690842 - EMT175460

2690960-01 - EMT20460

2690843 - EMT20460

2690843-01 - EMT20460

2690959 - EMT175460F

2690960 - EMT20460

Seat Deck & Fuel Tank

REF NO	PART NO.	QTY.	DESCRIPTION
0010	1727264BIYP	1	DECK, Seat
0020	1931333SM	4	BOLT, Carriage, Short Neck, 5/16-18 x 3/4, G5
0030	1931277SM	4	NUT, Hex Flange Whiz Lock Small, 5/16-18
0040	1739014YP	1	PAD, Footrest, R.H.
0050	1739013YP	1	PAD, Footrest, L.H.
0060	1738932YP	1	TANK, Fuel (Includes Ref. Nos. 0060-30 & 0060-40)
0060-30	1674231SM	1	ELBOW FITTING
0060-40	1654930SM	1	BUSHING
0070	5101651SM	1	CAP, Gas
0080	1739536YP	1	POD, L.H.
0100	1731300SM	4	SPACER, 5/16 ID x 1-1/4 OD x 5/16
0110	1727265SM	1	SUPPORT, Seat
0120	1727268SM	1	LATCH, Seat
0130	1960667SM	4	CAPSCREW, Hex Flange Whiz Lock, 5/16-18 x 1
0140	1919381SM	4	WASHER, 5/16
0150	1704724SM	2	COVER, Spring
0160	1960686SM	4	NUT, Hex Flange, ESNA, 5/16-18
0170	1709256SM	4	WASHER, Spring
0180	1704728SM	2	SPRING, Compression
0190	1960282SM	2	BOLT, Carriage, 5/16-18 x 3/4, G5
0200	1727266SM	1	PIVOT, Seat
0210	1930601SM	6	CAPSCREW, Hex Washer Head, Taptite, 5/16-18 x 5/8
0220	1729576SM	2	BOLT, Shoulder, 5/16-18 x 1-1/8 G5
0240	1739538YP	1	POD, R.H.
0250	1960536SM	6	SCREW, Hex Washer Head, Plastite, 1/4 x 1/2
0270	1731310SM	1	SUPPORT, Seat Deck
0300	1931334SM	2	BOLT, Carriage, Short Neck, 5/16-18 x 7/8, G5
0310	1730159SM	1	SEAT, Hi Back
0400	1739056YP	1	GRIP

Footnotes

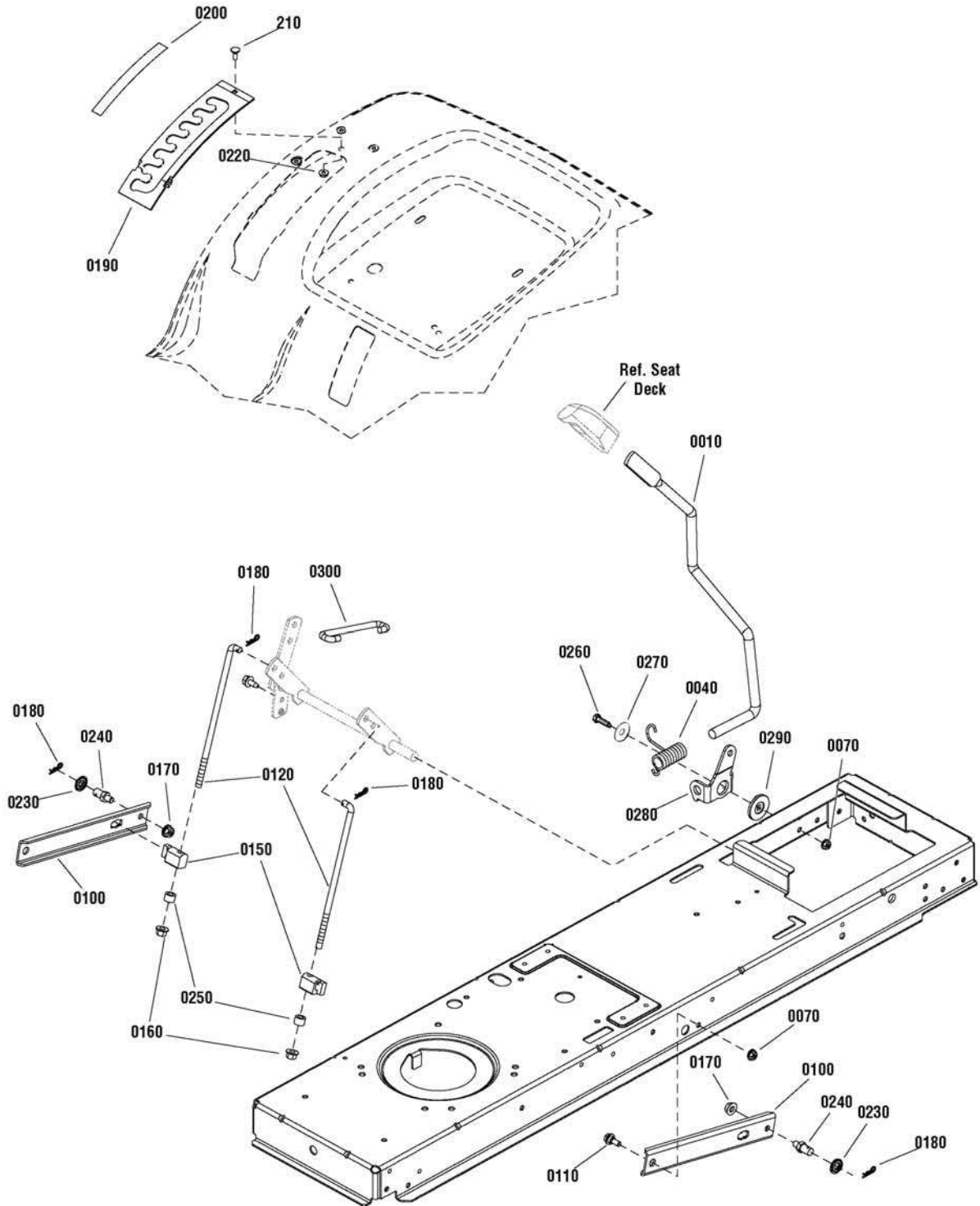
The above parts group applies to the following Mfg. Nos.:

2690842 - EMT175460
 2690843 - EMT20460
 2690843-01 - EMT20460
 2690959 - EMT175460F
 2690960 - EMT20460

Lift Group

2987068a

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



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

2690842 - EMT175460

2690960-01 - EMT20460

2690843 - EMT20460

2690843-01 - EMT20460

2690959 - EMT175460F

2690960 - EMT20460

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Lift Group

REF NO	PART NO.	QTY.	DESCRIPTION
0010	1728070SM	1	ROD, Lift Handle, 17.7"
0040	1729652SM	1	SPRING, Torsion, 2.12 Inch
0070	1931277SM	3	NUT, Hex Flange, 5/16-18
0100	1731417SM	2	ARM, Rear Lift
0110	1732426SM	2	BOLT, Shoulder
0120	1727955SM	2	ROD, Lower Lift, 10.00 LG
0150	1731894SM	2	TRUNNION
0160	1960687SM	2	NUT, Hex Flange, ESNA, 3/8-16
0170	1931211SM	2	NUT, Hex, Flange Lock, 3/8-16
0180	1960074SM	4	CLIP, Spring
0190	1727985SM	1	QUADRANT, Lift Height
0200	1730264SM	1	DECAL, Height Of Cut
0210	1960252SM	1	BOLT, Carriage, 1/4-20 x 5/8, G5
0220	1930641SM	1	NUT, Hex Flange Whiz, 1/4-20
0230	1960170SM	2	WASHER, 1/2
0240	094067MA	2	PIN, Threaded Shoulder
0250	1666294SM	2	SPACER
0260	1921333SM	1	CAPSCREW, Hex Head, 5/16-18 x 1
0270	1960044SM	1	WASHER, Plain, 21/64 x 1-1/4
0280	1728990ASM	1	CLEVIS, Lift
0290	1727935SM	1	SPACER, Pivot, 5/16 ID, 1-3/4 OD
0300	1727954SM	1	ROD, Lift, 5.43 LG

Not for
Reproduction

Footnotes

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

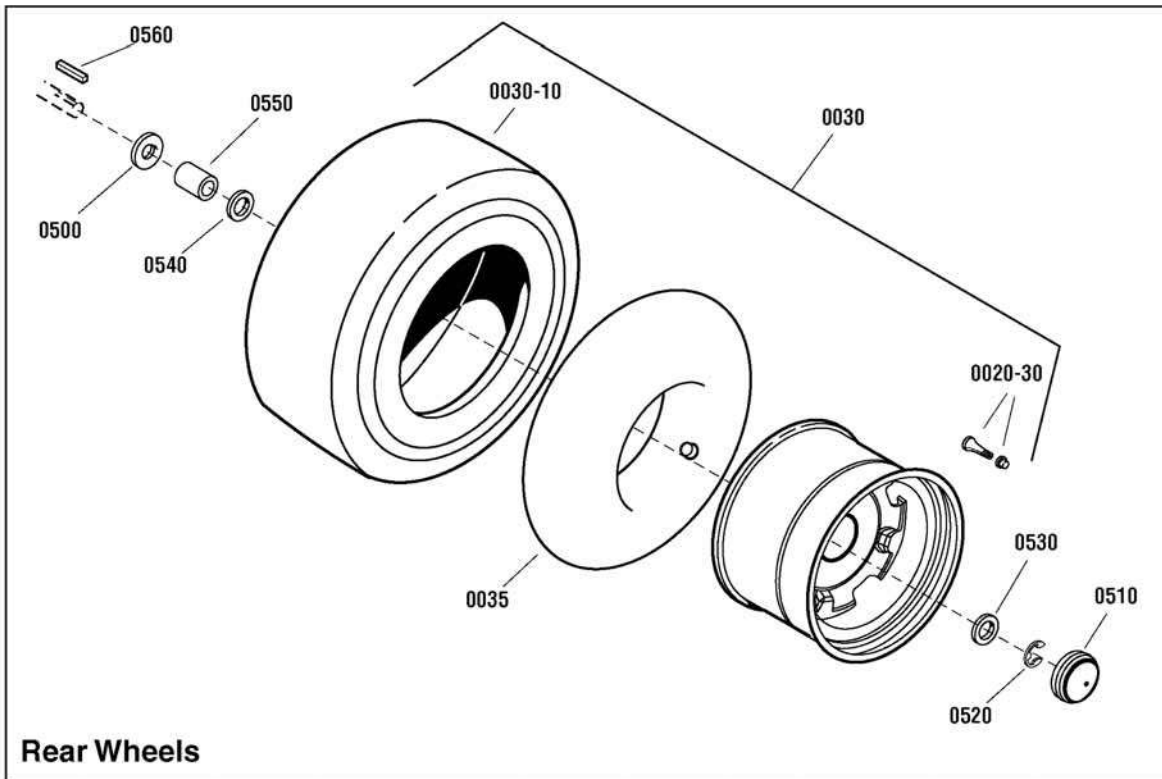
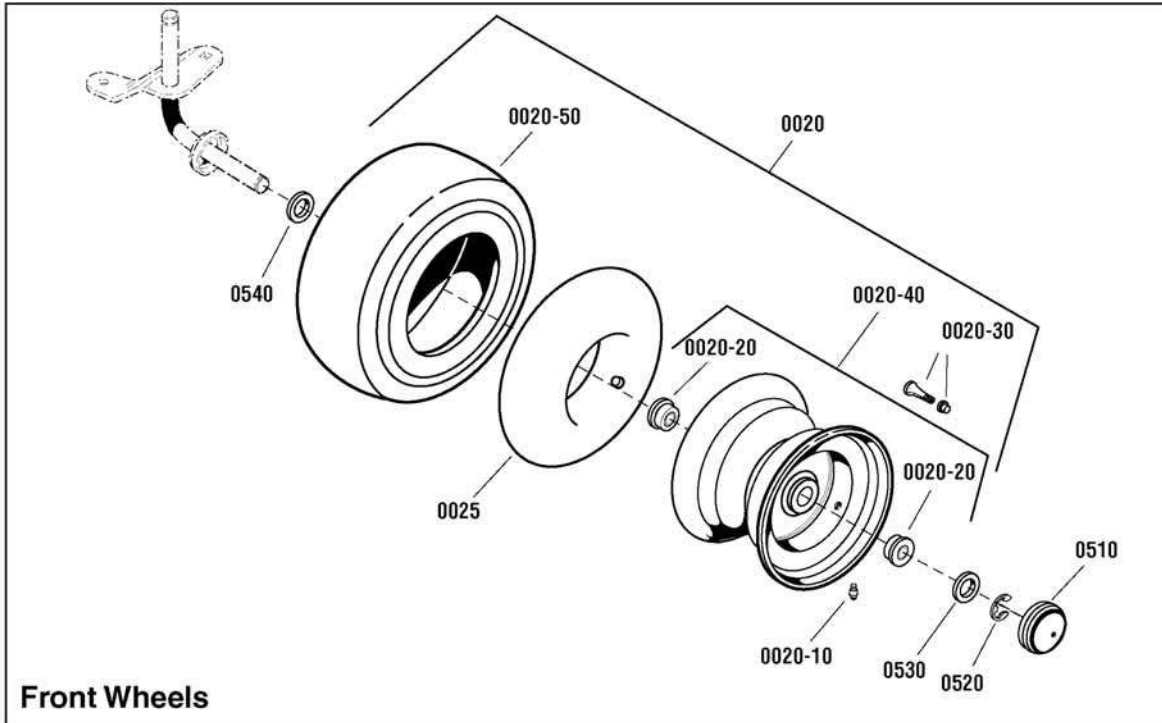
2690842 - EMT175460
2690843 - EMT20460
2690843-01 - EMT20460
2690959 - EMT175460F
2690960 - EMT20460

2690960-01 - EMT20460

Wheels & Tires Group

2989220

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



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

- 2690842 - EMT175460
- 2690843 - EMT20460
- 2690843-01 - EMT20460
- 2690959 - EMT175460F
- 2690960 - EMT20460
- 2690960-01 - EMT20460

Wheels & Tires Group

REF NO	PART NO.	QTY.	DESCRIPTION
0020	1729708SM	2	WHEEL & TIRE ASSEMBLY, Front (Includes Ref. Nos. 0020-10, 0020-20, 0020-30, 0020-40 & 0020-50)
0020-10	2812808SM	1	FITTING, Lube
0020-20	1713167SM	2	BEARING, 3/4 ID x 1.38 OD x 1-1/8"
0020-30	2172353SM	4	VALVE STEM & CAP
0020-40	1726301SM	1	WHEEL & BUSHINGS ASSEMBLY (Includes Ref. Nos. 0020-10 & 0020-20)
0020-50	1731951SM	1	TIRE, Turf Rider, Kenda, 15 x 6.00 - 6
0025	1664090SM	2	TUBE, Tire, Front
0030	7101563YP	2	WHEEL & TIRE ASSEMBLY, 20 x 10.0 - 8, Rear (Includes Ref. Nos. 0020-30 & 0030-10)
0030-10	7101562YP	1	TIRE, 2 Ply, K358, 20 x 10 - 8
0035	2164247SM	2	TUBE, Tire, Rear
0500	2860202SM	2	WASHER, 3/4
0510	094618MA	4	HUB CAP
0520	0011X3MA	4	E-RING, .750D-.050T
0530	17X195MA	4	WASHER, Flat
0540	17X160MA	4	WASHER, Flat, 3/4
0550	1730181SM	2	SPACER, 3/4 ID x 1-1/4 OD x 1-5/8"
0560	021553MA	2	KEY, Square, 3/16

Not for
Reproduction

Footnotes

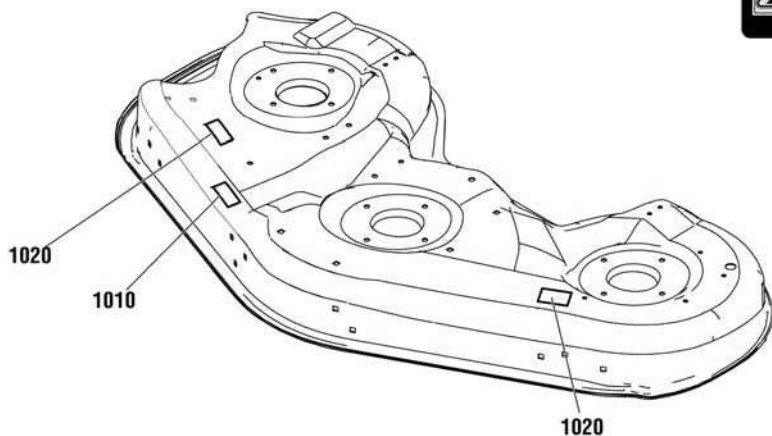
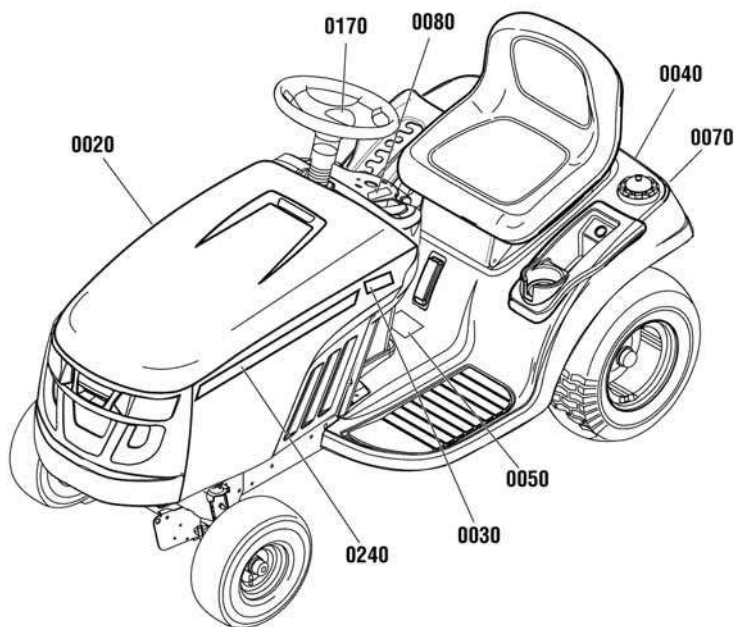
The above parts group applies to the following Mfg. Nos.:

2690842 - EMT175460
2690843 - EMT20460
2690843-01 - EMT20460
2690959 - EMT175460F
2690960 - EMT20460

Decal Group

D2988700

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



0050



0070



0080



1010



0170



0240



0030



0020



0030



1020



0040

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

- 2690842 - EMT175460
- 2690843 - EMT20460
- 2690843-01 - EMT20460
- 2690959 - EMT175460F
- 2690960 - EMT20460

2690960-01 - EMT20460

Decal Group

REF NO	PART NO.	QTY.	DESCRIPTION
0020	1739087YP	1	DECAL, Murray, Right
0030	1751943YP	1	DECAL, EMT175460
0030	1751944YP	1	DECAL, EMT20460
0040	7102205YP	1	DECAL, Murray, Rear
0050	1734027SM	1	DECAL, Tunnel Cover Warnings
0070	1730202SM	1	DECAL, Transmission Tow / Release Lever
0080	1722806SM	1	DECAL, Ignition Switch Symbols
0170	1737167YP	1	DECAL, Steering Wheel
0240	1739088YP	1	DECAL, Murray, Left
1010	1720389SM	2	DECAL, Danger Rotation Blade Symbols
1020	7102782YP	1	DECAL, Deck Width

Not for
Reproduction

Footnotes

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

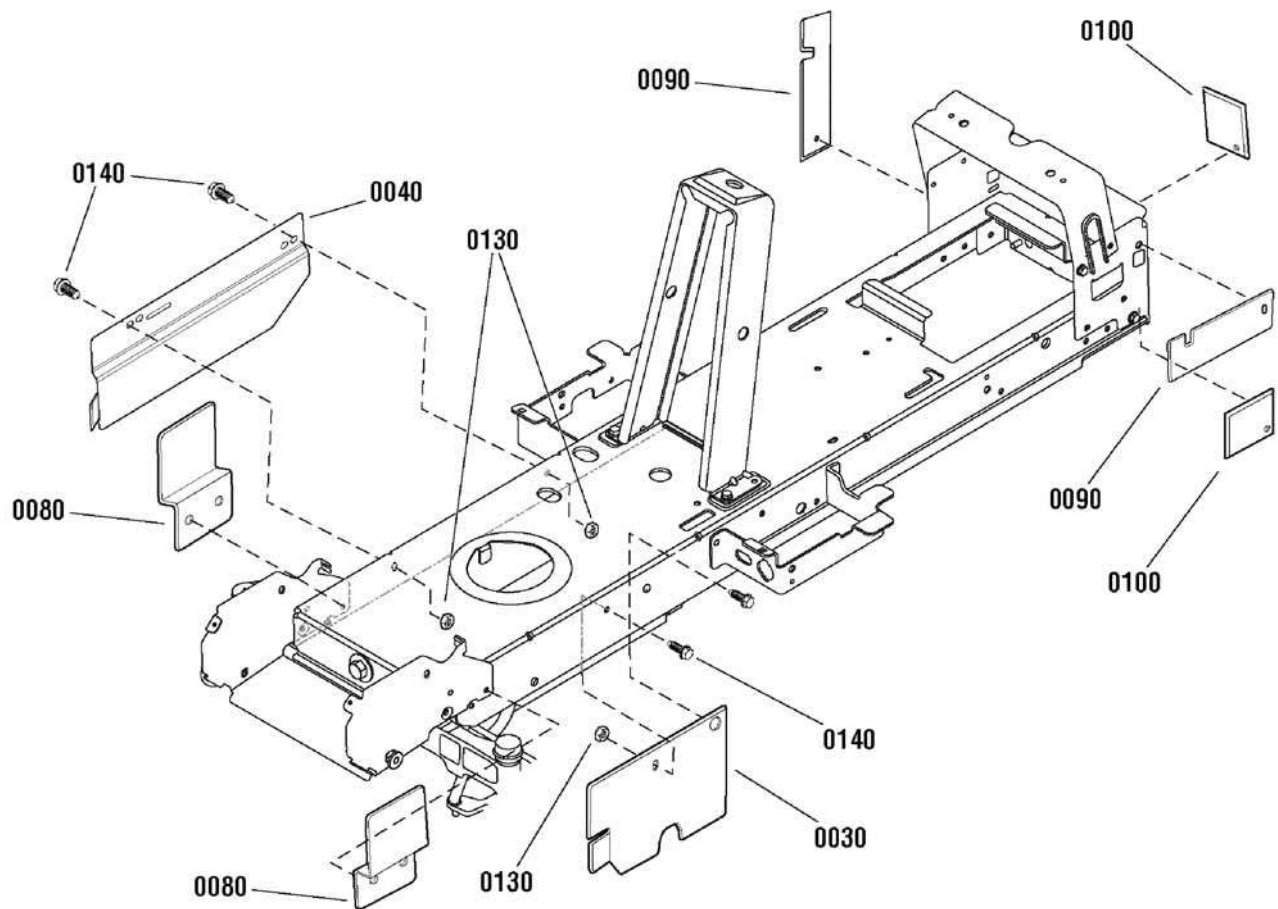
2690842 - EMT175460
2690843 - EMT20460
2690843-01 - EMT20460
2690959 - EMT175460F
2690960 - EMT20460

2690960-01 - EMT20460

French Guard Group

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

2989562



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

2690959 - EMT175460F
2690960 - EMT20460
2690960-01 - EMT20460

French Guard Group

REF NO	PART NO.	QTY.	DESCRIPTION
0030	1738754BMYP	1	GUARD, Clutch
0040	1738755BMYP	1	GUARD, Clutch
0080	1738798BMYP	2	GUARD, Front
0090	1736025BMYP	2	GUARD, Pulley, Rear
0100	1737850BMYP	2	GUARD, Rear
0130	1931277SM	3	NUT, Hex Flange, Whiz Lock, 5/16-18
0140	1925205SM	3	CAPSCREW, Hex Head, 5/16-18 x 5/8, G5

Not for
Reproduction

Footnotes

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

2690959 - EMT175460F

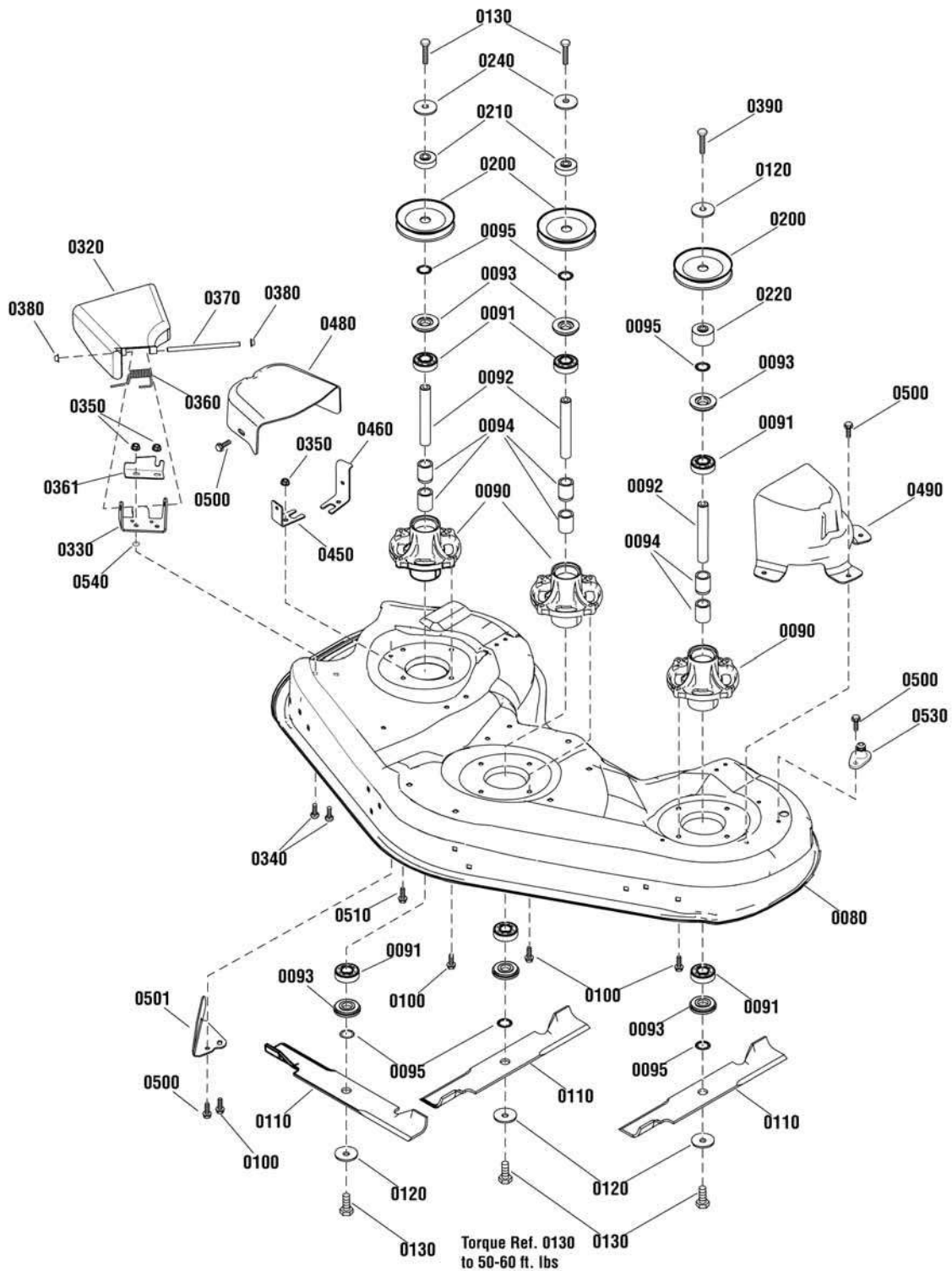
2690960 - EMT20460

2690960-01 - EMT20460

46" Mower Deck - Housing, Arbors & Blade

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

2988701



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

1695809 - 46" Mower	2690959 - EMT175460F
1695981 - 46" Mower	2690960 - EMT20460
2690842 - EMT175460	2690960-01 - EMT20460
2690843 - EMT20460	
2690843-01 - EMT20460	

46" Mower Deck - Housing, Arbors & Blade

REF NO	PART NO.	QTY.	DESCRIPTION
0080	1687625YP	1	HOUSING, 46"
0090	1735573YP	3	HOUSING, Spindle
0091	1735399YP	6	BEARING, Ball, 20mm
0540	1933988SM	2	NUT, Push Pal, 5/16
0092	1735326YP	3	SHAFT, Spindle
0093	1735323YP	6	SHIELD, Arbor
0094	1735328YP	6	SPACER, Bearing
0095	1960766YP	6	RING, Self Locking
0100	1960373SM	10	CAPSCREW, Hex Washer Head, Taptite, 5/16-18 x 1
0110	1739889AYP	3	BLADE, Mower
0120	1656916SM	4	WASHER, Spring
0130	1920676SM	5	CAPSCREW, Hex Head, 7/16-14 x 1, G5
0200	1735686YP	3	PULLEY, Split, 4.6 OD
0210	1735579YP	2	SPACER, Lower Drive
0220	1736445YP	1	SPACER, Pulley
0240	1960769YP	2	WASHER, Belleville
0320	1735447YP	1	DEFLECTOR
0330	1736365AYP	1	PIVOT, Hinge
0340	1931333SM	2	BOLT, Carriage, 5/16-18 x 3/4, G5
0350	1931277SM	4	NUT, Hex Flange Whiz Lock Small, 5/16-18
0360	1736364YP	1	SPRING, Torsion, Deflector
0361	1737359AYP	1	PLATE, Deflector Closeoff
0370	1736366YP	1	ROD, Deflector
0380	7012542YP	2	PUSHNUT, 5/16
0390	1923027SM	1	CAPSCREW, Hex Head, 7/16-14 x 1-3/4 G5
0450	1736518AYP	1	BRACKET, Belt Cover, Front
0460	1736519AYP	1	BRACKET, Belt Cover, Rear
0480	1735752YP	1	COVER, Belt, R.H.
0490	1735750YP	1	COVER, Belt, L.H.
0500	1664847SM	7	CAPSCREW, Hex Washer Head, Taptite, 5/16-18 x 3/4
0501	1737279AYP	1	BAFFLE, Pinchoff
0510	1930600SM	2	CAPSCREW, Hex Washer Head, Taptite, 5/16-18 x 1-1/2
0520	1736898YP	1	CONNECTOR, Washout Port
0530	1735716YP	1	ADAPTER, Washout Port

Footnotes

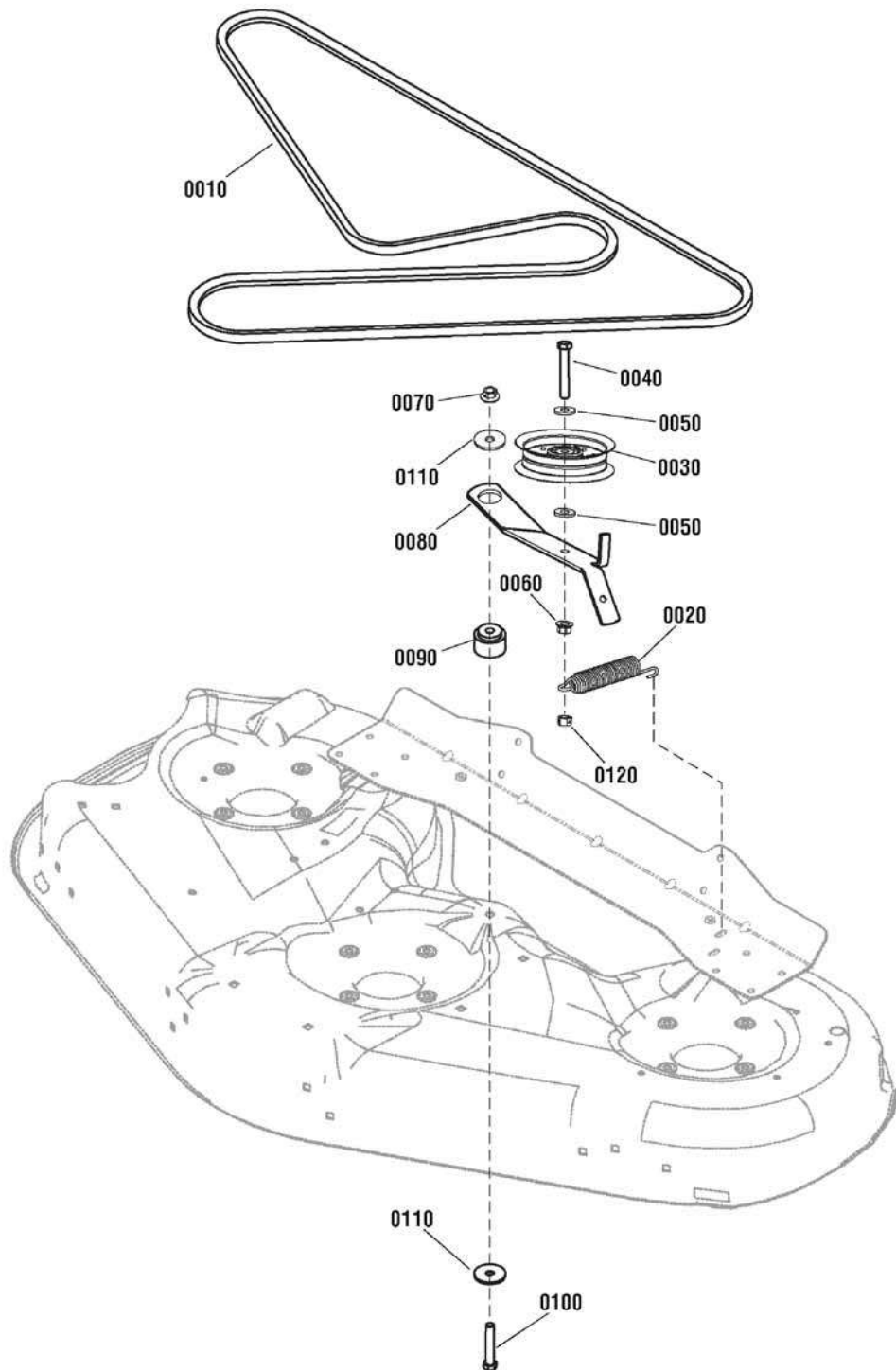
The above parts group applies to the following Mfg. Nos.:

1695809 - 46" Mower	2690959 - EMT175460F
1695981 - 46" Mower	2690960 - EMT20460
2690842 - EMT175460	2690960-01 - EMT20460
2690843 - EMT20460	
2690843-01 - EMT20460	

46" Mower Deck - Clutch Group

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

2988702



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

- | | |
|-----------------------|-----------------------|
| 1695809 - 46" Mower | 2690959 - EMT175460F |
| 1695981 - 46" Mower | 2690960 - EMT20460 |
| 2690842 - EMT175460 | 2690960-01 - EMT20460 |
| 2690843 - EMT20460 | |
| 2690843-01 - EMT20460 | |

46" Mower Deck - Clutch Group

REF NO	PART NO.	QTY.	DESCRIPTION
0010	1732956SM	1	V-BELT, HA, A-Wedge, 118"
0020	1715772SM	1	SPRING, Extension
0030	1736540YP	1	PULLEY, Idler
0040	1933685SM	1	CAPSCREW, Hex Head, 3/8-16 x 2-1/2, G5
0050	1922755SM	2	WASHER, 3/8
0060	1931211SM	1	NUT, Hex Flange Whiz Lock Small, 3/8-16
0070	1960339SM	1	NUT, Hex Flange, MAC Lock Large, 3/8-16
0080	1736551AYP	1	ARM, Idler
0090	1729007SM	1	SPACER, 3/8 OD x 1-1/2 OD x 1
0100	1923701SM	1	CAPSCREW, Hex Head, 3/8-16 x 2 G5
0110	1924356SM	2	WASHER, 3/8
0120	7091585SM	1	NUT, Center Lock Hex, 3/8-16 GR5

Not for
Reproduction

Footnotes

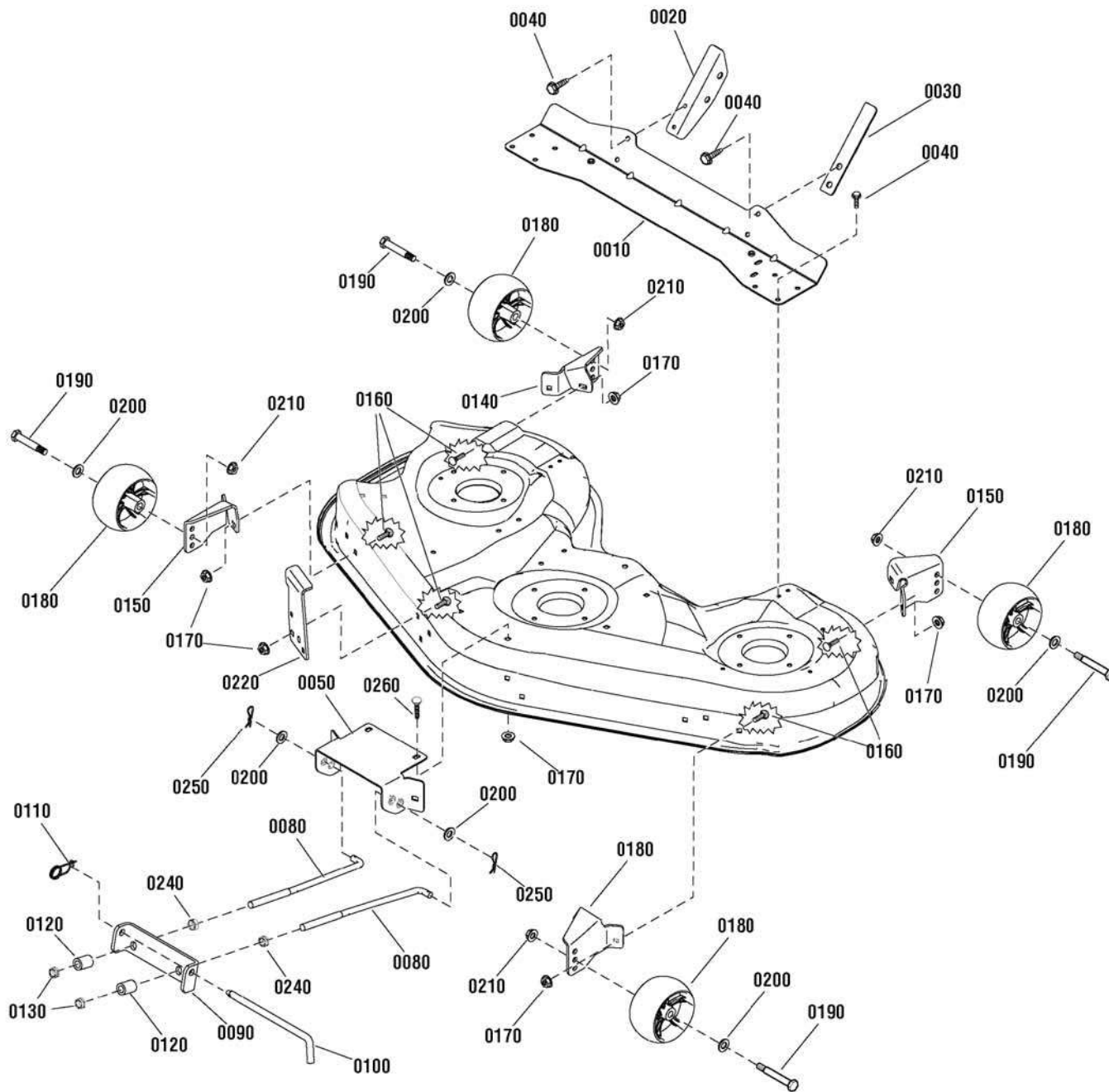
The above parts group applies to the following Mfg. Nos.:

1695809 - 46" Mower	2690959 - EMT175460F
1695981 - 46" Mower	2690960 - EMT20460
2690842 - EMT175460	2690960-01 - EMT20460
2690843 - EMT20460	
2690843-01 - EMT20460	

46" Mower Deck - Support Group

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

2988072



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

1695809 - 46" Mower	2690959 - EMT175460F
1695981 - 46" Mower	2690960 - EMT20460
2690842 - EMT175460	2690960-01 - EMT20460
2690843 - EMT20460	
2690843-01 - EMT20460	

46" Mower Deck - Support Group

REF NO	PART NO.	QTY.	DESCRIPTION
0010	1736070AYP	1	SUPPORT, Rear Cross
0020	1736072AYP	1	BRACKET, Rear Mower Pickup, R.H.
0030	1736073AYP	1	BRACKET, Rear Mower Pickup, L.H.
0040	1664847SM	8	CAPSCREW, Hex Washer Head, Taptite, 5/16-18 x 3/4
0050	1736071AYP	1	HITCH, Front
0080	1736081YP	2	ROD, Front Bail
0090	1737059AYP	1	HANGER, Front Mower
0100	1731414SM	1	ROD, Latch
0110	2176012SM	1	RETAINER, Pin Spring
0120	1679166SM	2	SPACER, 1/2 ID x 7/8OD x 1-1/8
0130	1960379SM	2	NUT, Hex Lock, ESNA Light, 1/2-13
0140	1736074AYP	2	BRACKET, R.H.
0150	1736075AYP	2	BRACKET, L.H.
0160	1931334SM	11	BOLT, Carriage, 5/16-18 x 7/8, G5
0170	1931277SM	13	NUT, Hex Flange Whiz Lock Small, 5/16-18
0180	1736896YP	4	WHEEL, Gauge
0190	1736539YP	4	BOLT, Shoulder, 3/8-16 x 3-7/16
0200	1960170SM	6	WASHER, 1/2
0210	1960687SM	4	NUT, Hex Flange, ESNA, 3/8-16
0220	1736991AYP	1	UP STOP
0240	1913744SM	2	NUT, Hex Jam, 1/2-13
0250	1960074SM	2	CLIP, Hair Pin
0260	1931333SM	2	BOLT, Carriage, 5/16-18 x 3/4, G5

Not for
Reproduction

Footnotes

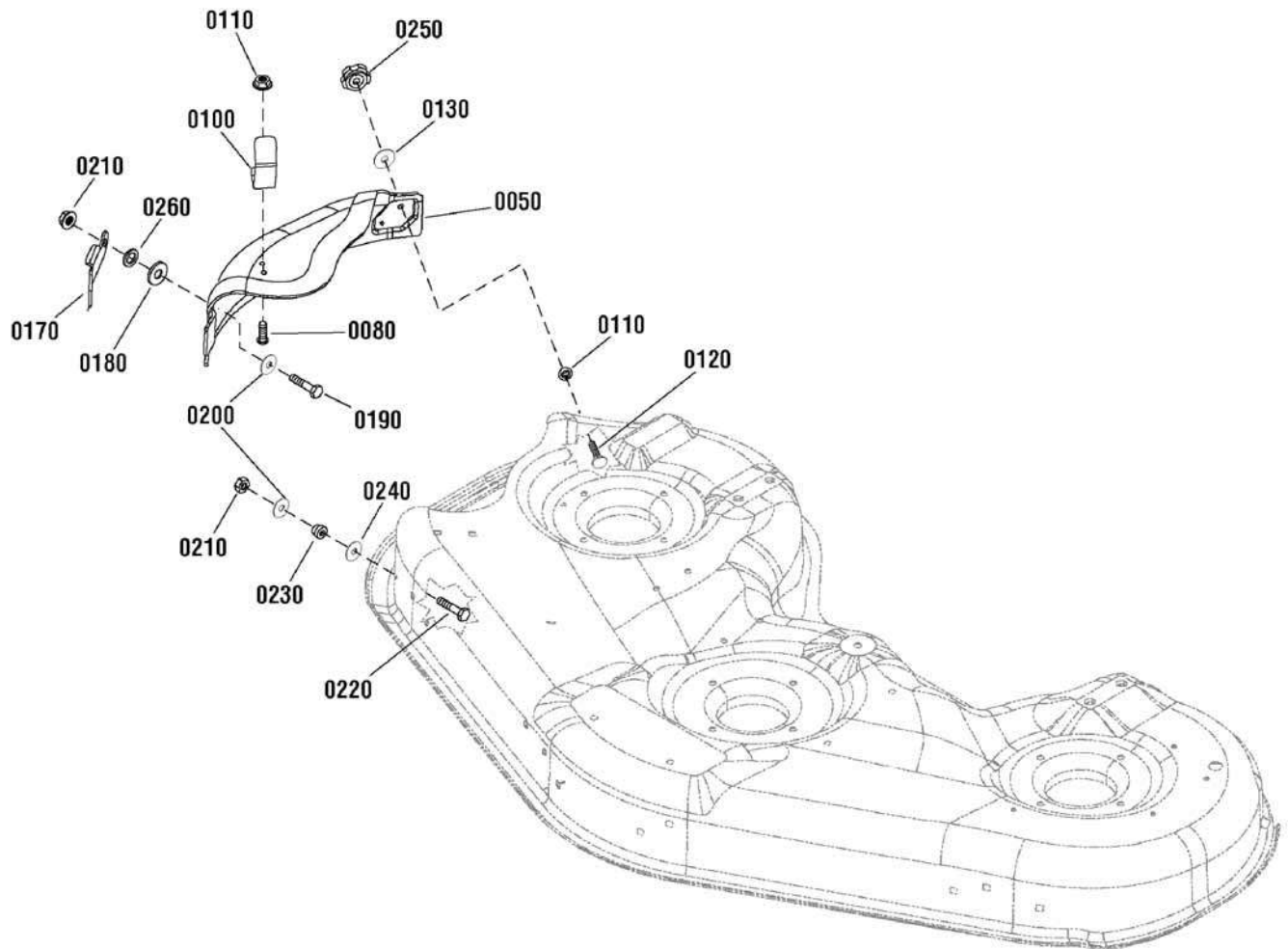
The above parts group applies to the following Mfg. Nos.:

1695809 - 46" Mower	2690959 - EMT175460F
1695981 - 46" Mower	2690960 - EMT20460
2690842 - EMT175460	2690960-01 - EMT20460
2690843 - EMT20460	
2690843-01 - EMT20460	

46" Mower Deck - Mulching Group

2988876

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



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

1695981 - 46" Mower	2690960 - EMT20460
2690842 - EMT175460	2690960-01 - EMT20460
2690843 - EMT20460	
2690843-01 - EMT20460	
2690959 - EMT175460F	

46" Mower Deck - Mulching Group

REF NO	PART NO.	QTY.	DESCRIPTION
0050	1734777YP	1	COVER, Mulching
0080	1960252SM	2	BOLT, Carriage, 1/4-20 x 5/8, G5
0100	1737381AYP	1	BRACKET, Stop
0110	1960685SM	3	NUT, Hex, KEPS, 1/4-20
0120	1960698SM	1	BOLT, Carriage, 1/4-20 x 1, G5
0130	7091627YP	1	WASHER, Flat
0170	1737765AYP	1	LATCH, Boot
0180	1708511SM	1	SPACER, 5/16 ID x 1 OD x 1/4
0190	1921333SM	1	CAPSCREW, Hex Head, 5/16-18 x 1, G5
0200	1960044SM	2	WASHER, 5/16
0210	1960686SM	2	NUT, Hex Flange, ESNA, 5/16-18
0220	1960223SM	1	BOLT, Carriage, 5/16-18 x 1-1/4, G5
0230	1723244SM	1	SPACER, Hydraulic Lift Pivot
0240	1919384SM	1	WASHER, 3/8
0250	1738295YP	1	KNOB, ESNA, 1/4-20
0260	7026257MA	1	WASHER, Wave

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Footnotes

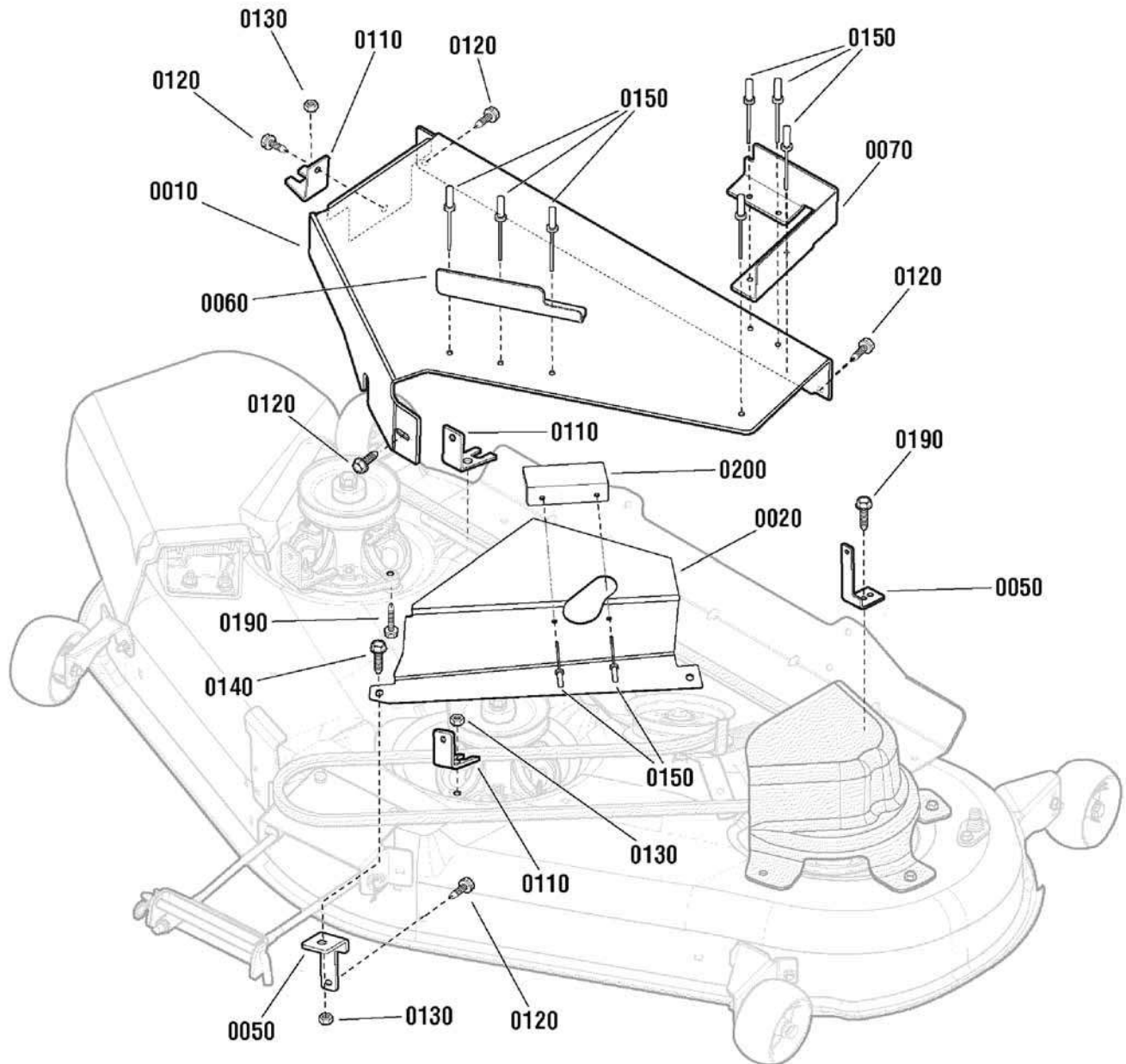
The above parts group applies to the following Mfg. Nos.:

1695981 - 46" Mower	2690960 - EMT20460
2690842 - EMT175460	2690960-01 - EMT20460
2690843 - EMT20460	
2690843-01 - EMT20460	
2690959 - EMT175460F	

46" Mower Deck - French Guard Group

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

2989560



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

- 1695981 - 46" Mower
- 2690959 - EMT175460F
- 2690960 - EMT20460
- 2690960-01 - EMT20460

46" Mower Deck - French Guard Group

REF NO	PART NO.	QTY.	DESCRIPTION
0010	1738752BMYP	1	GUARD, Cover
0020	1738753BMYP	1	GUARD, Belt
0050	1738756BMYP	2	BRACKET, Mounting, Guard
0060	1738757BMYP	1	GUARD, Rear
0070	1738758BMYP	1	GUARD, Rear
0110	1736518BMYP	3	BRACKET, Belt Cover, Front
0120	1924856SM	5	SCREW, Hex Washer Head, Taptite, 5/16-18 x 1/2
0130	1931277SM	3	NUT, Hex Flange, Whiz Lock, 5/16-18
0140	1925205SM	1	CAPSCREW, Hex Head, 5/16-18 x 5/8, G5
0150	1675044SM	9	RIVET, Pop
0190	1930600SM	2	SCREW, Hex Washer Head, Taptite, 5/16-18 x 1-1/2
0200	1752296AYP	1	GUARD, Belt Cover

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Footnotes

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

1695981 - 46" Mower
2690959 - EMT175460F
2690960 - EMT20460
2690960-01 - EMT20460

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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		in/lbs		in/lbs		in/lbs	
	ft/lbs	Nm.	ft/lbs	Nm.	ft/lbs	Nm.	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

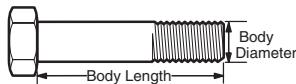
The guides and ruler furnished below are designed to help you select the appropriate hardware.



Nut, M8

Thread Diameter (mm)
Inside Diameter (in)
Threads per inch

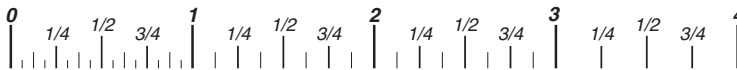
Nut, 1/2-16



Screw, M8- 1.25 x 25

Thread Diameter (mm)
Body Diameter
Distance between threads (mm)
Threads per inch
Body Length (mm)
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*, (*1.25 thread diameter*). 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	No Marks		SAE Grade 5		SAE Grade 8	
	SAE Grade 2		SAE Grade 5		SAE Grade 8	
Size Of Hardware	in/lbs		in/lbs		in/lbs	
	ft/lbs	Nm.	ft/lbs	Nm.	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

Hex Head Capscrew



Washer



Lockwasher

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

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