

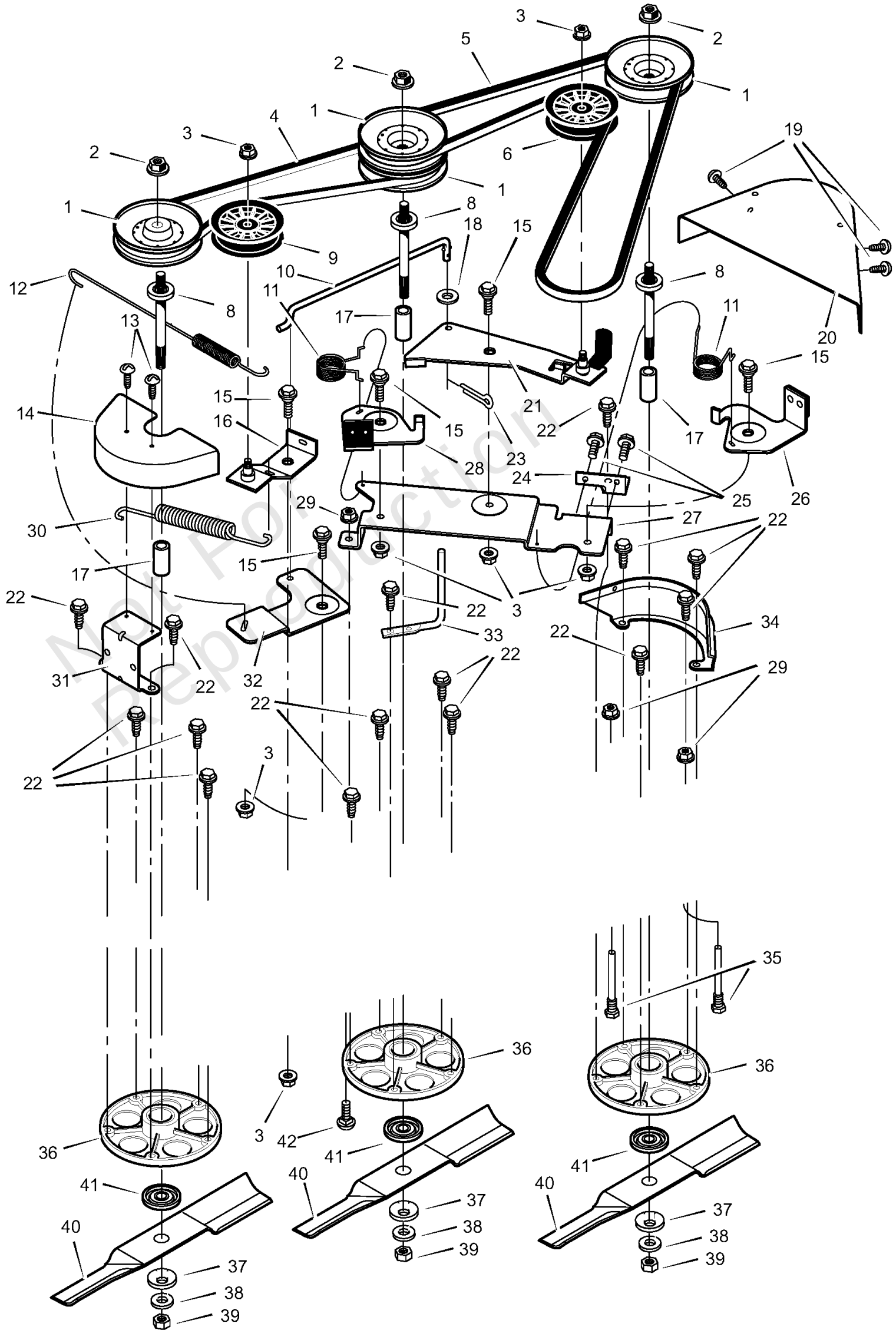


Parts Manual

Mfg. No: 46103A
Garden Tractor (1999)

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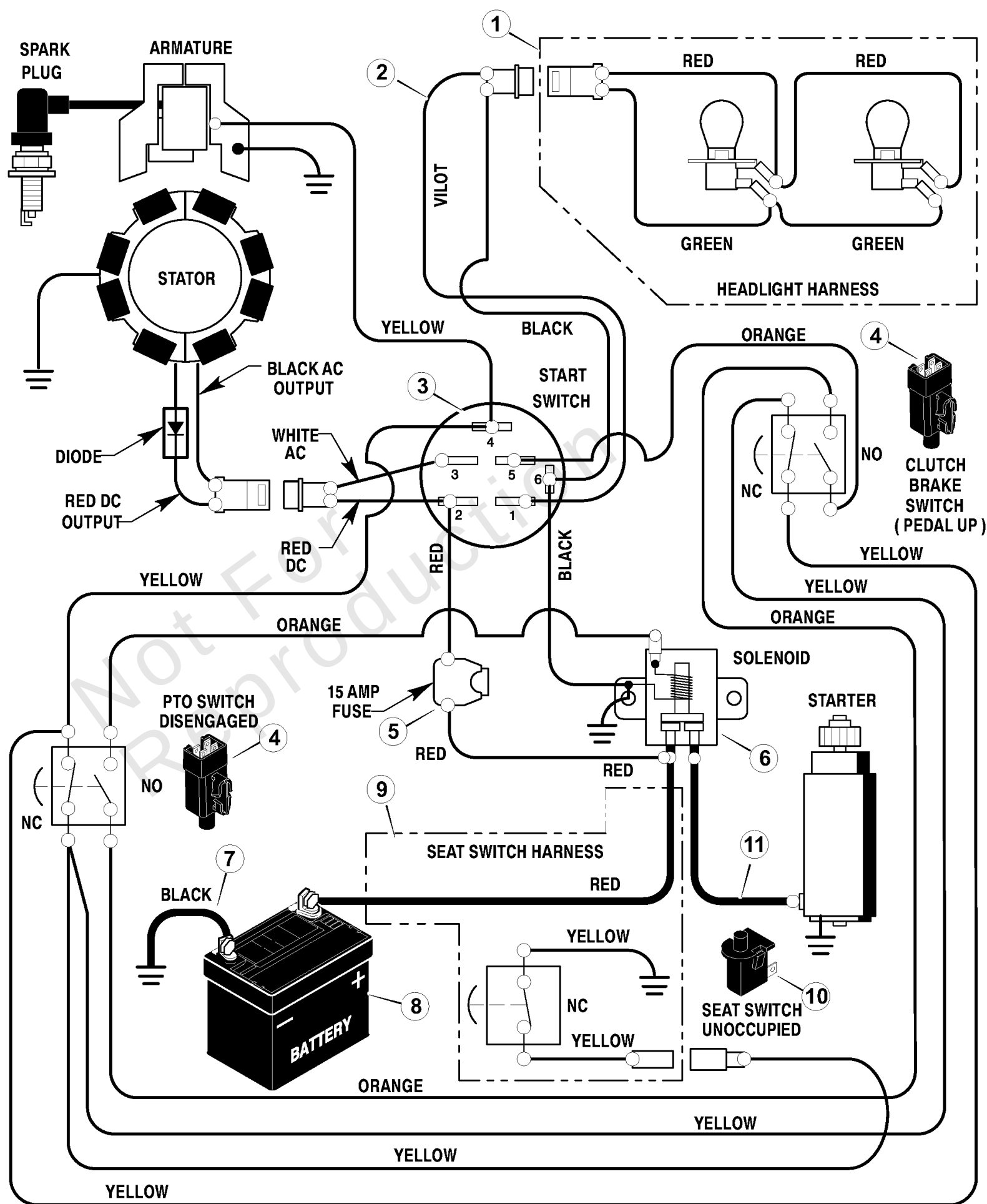
Blade Drive

REF NO	PART NO	QTY	DESCRIPTION
1	094592MA		Pulley
2	15X121		Nut
3	015X84MA		Nut
4	037X66MA		Belt, Secondary
5	037X96MA		Belt, Primary
6	091801		Pulley, Idler
8	094129		Jackshaft
9	091590		Pulley, Idler
10	094606 Z		Link, Bell Crank
11	166X41MA		Spring
12	165X138MA		Spring
13	26X250MA		Screw
14	094607E700		Cover, Right Pulley
15	009X39MA		Bolt, Shoulder
16	094639E700		Arm Assembly, Idler
17	094130MA		Spacer
18	017X47MA		Washer
19	26X277MA		Screw
20	094645E700		Cover, Left Pulley
21	094644E700		Arm Assembly, Idler
22	0025X7MA		Bolt
23	030X20MA		Pin, Cotter
24	094602E700		Bracket, Brake Plate
25	26X249MA		Screw
26	094640E700		Brake Assembly, Left
27	094596E700		Plate, Brake Arm
28	094641E700		Brake Assembly, Center
29	015X79MA		Nut, Flange
30	165X79MA		Spring
31	092140E700		Bracket, Cover
32	094603E700		Bell Crank
33	092116 Z		Guide, Belt
34	690221E700		Bracket, Pulley Cover
35	091754 Z		Guide, Belt
36	092574		Housing, Jackshaft
37	17X166MA		Washer
38	17X165MA		Washer
39	15X100MA		Nut, Blade
40	056631E701MA		SINGLE BLADE
41	092466MA		Adapter, Blade
42	002X53MA		Bolt, Carriage

Electrical System

Note: Unless noted otherwise, use the standard torque specifications

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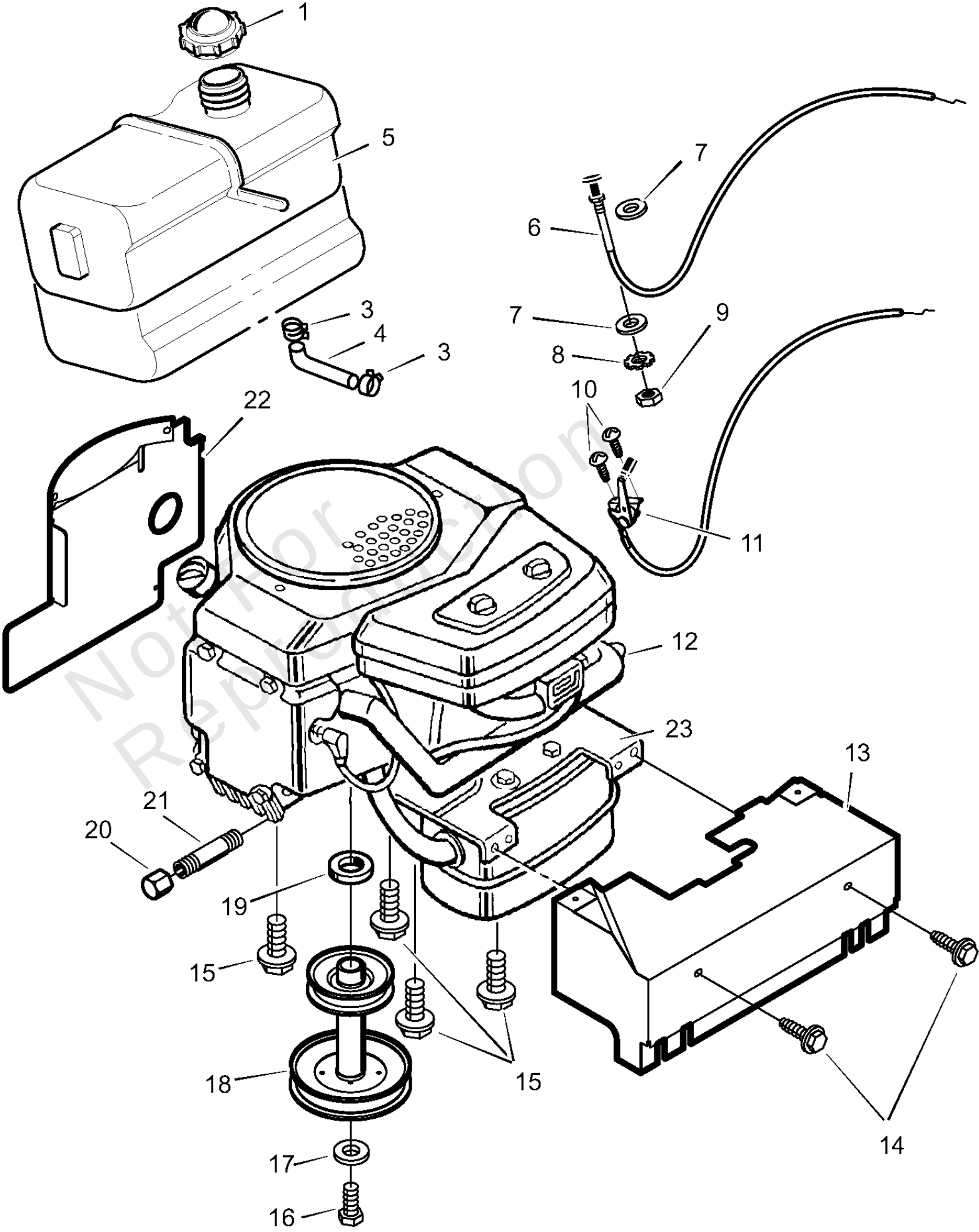
Electrical System

REF NO	PART NO	QTY	DESCRIPTION
1	250X92MA		Harness, Light Wire
--	092372		Socket, Light
--	090084MA		Bulb, Light
2	250X86MA		Harness, Chassis Wire
3	092377MA		Switch, Ignition
--	020729		Key, Ignition
--	091489MA		Nut, Hex
--	091488		Cap, Ignition
4	094136MA		Switch, Limit
5	054212		Fuse
--	407078MA		Holder, Fuse
6	094613		Solenoid
--	26X229MA		Screw, Mounting
--	15X116MA		Locknut
7	024X32MA		Cable, Battery Ground
--	26X213MA		Screw, Ground Cable
8	021075SEMA		Battery
--	002X82MA		Bolt, Carriage
--	014X79MA		Wingnut
9	250X67MA		Harness, Seat Switch Wire
10	094159MA		Switch, Seat Sensor
11	024X31MA		Cable
--	250X90		Harness, AC/DC Jumper

Engine Mount

Note: Unless noted otherwise, use the standard torque specifications

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Engine Mount

REF NO	PART NO	QTY	DESCRIPTION
1	092317MA		FUEL CAP
3	095197MA		Clamp
4	023717		Line, Fuel
5	093148		Tank, Fuel
6	091326		Cable, Choke
7	17X185		Washer
8	0019X8MA		Lockwasher
9	015X33MA		Nut
10	26X201MA		Screw
11	093165MA		Control, Throttle
12	-----		Engine *
13	093191E701		Shield Assembly, Heat
14	26X263MA		SCREW.25-20 S-T
15	0025X7MA		Screw
16	01X140MA		Bolt
17	17X170MA		WASHER.46.97.25 FLAT
18	690225 Z		Pulley, Stack
19	093077MA		Spacer
20	021651		Cap, Oil Drain
21	092279		Pipe, Oil Drain
22	093078E700		Baffle, Rear Heat
23	095198MA		Muffler
--	095200		Liner, Port
--	06X102MA		Bolt, Port Liner
--	095208MA		Gasket

Footnotes:

Note* Parts are available from an engine Authorized Service Center. See "Engines, Gasoline" or "Gasoline Engines" in the yellow pages of the telephone directory.

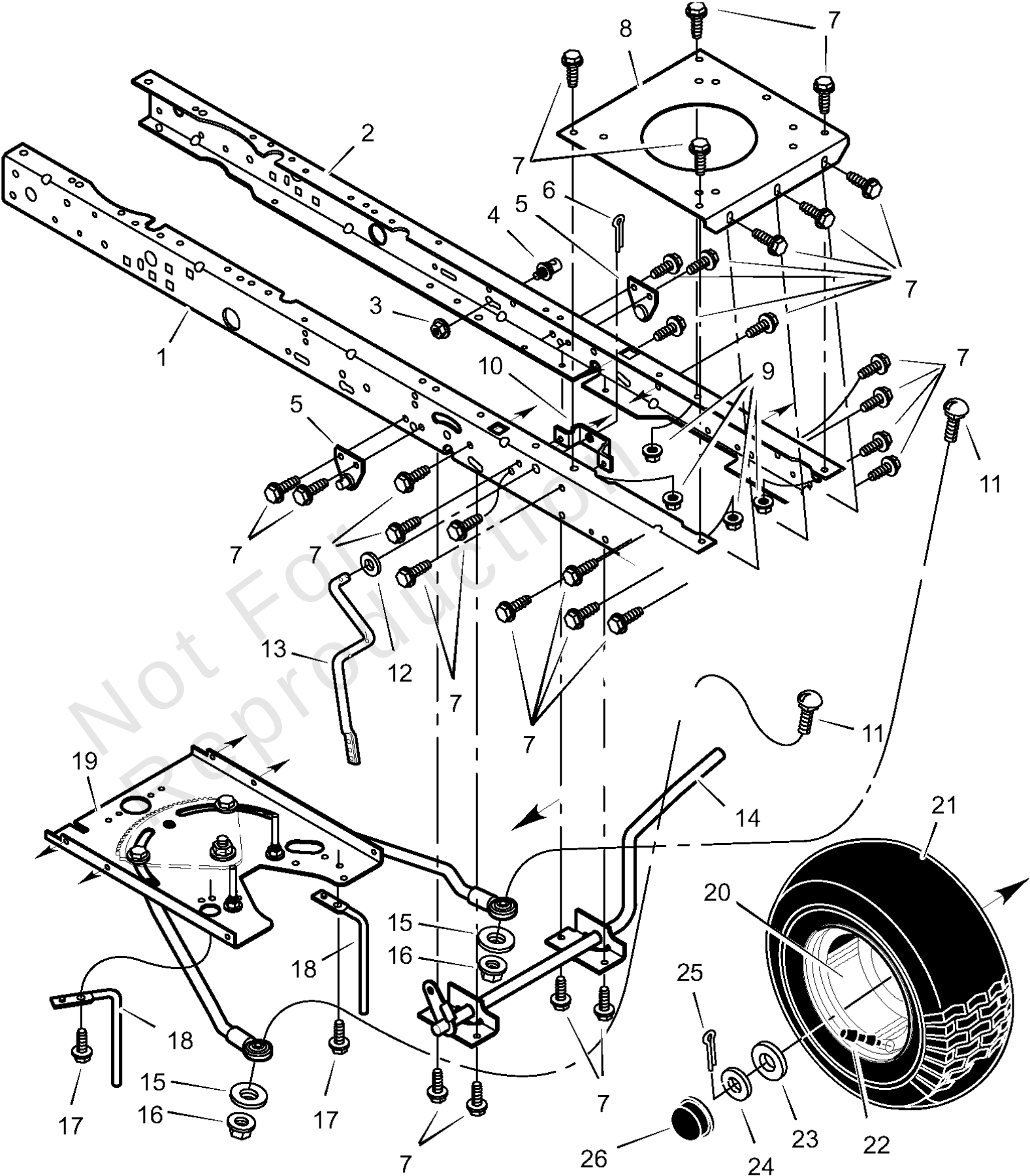
Front Axle

REF NO	PART NO	QTY	DESCRIPTION
1	690067E700		Bracket, Rear Hanger
2	15X118MA		Nut, Flange
3	690210MA		Axle Assembly
4	030X49MA		Pin, Hair
5	017X75MA		Washer
6	093058MA		Bearing, Spindle
7	092530MA		Fitting, Lub
8	690198E700		Hanger, Left Deck
9	26X249MA		Screw
10	01X146MA		Bolt
11	690179E700		Spindle Assembly, Left
12	094007E700		Hanger, Axle
13	690199E700		Hanger, Right Deck
14	690178E700		Spindle Assembly, Right

Front Frame Assembly

Note: Unless noted otherwise, use the standard torque specifications

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Front Frame Assembly

REF NO	PART NO	QTY	DESCRIPTION
1	690206E700		Frame, Right
2	690207E700		Frame, Left
3	015X84MA		Nut, Flange
4	690182MA		Stud, Swivel
5	690406E700		Bracket Assembly, Suspension
6	030X20MA		Pin, Cotter
7	26X249MA		Screw
8	094006E700		Plate, Engine
9	015X88MA		Nut
10	094005E700		Bracket, PTO Crank
11	002X87		Bolt, Carriage
12	017X57MA		Washer
13	094019E700		Crank, PTO
14	094019E700		Lever, Brake/Clutch
15	17X152		Washer
16	015X41MA		Nut
17	025X15MA		Screw
18	690192E700		Guide, Belt
19	-----		Assembly, Steering *
20	092644601		Wheel & Tire Assembly
21	024393MA		Tire *
--	407049MA		Tube
--	093064MA		Bearing, Front Wheel
22	024373MA		VALVE STM&CP,TR41 SE
23	17X194MA		Washer
24	17X114MA		Washer
25	030X49MA		Pin, Cotter
26	094618MA		HUB CAP

Footnotes:

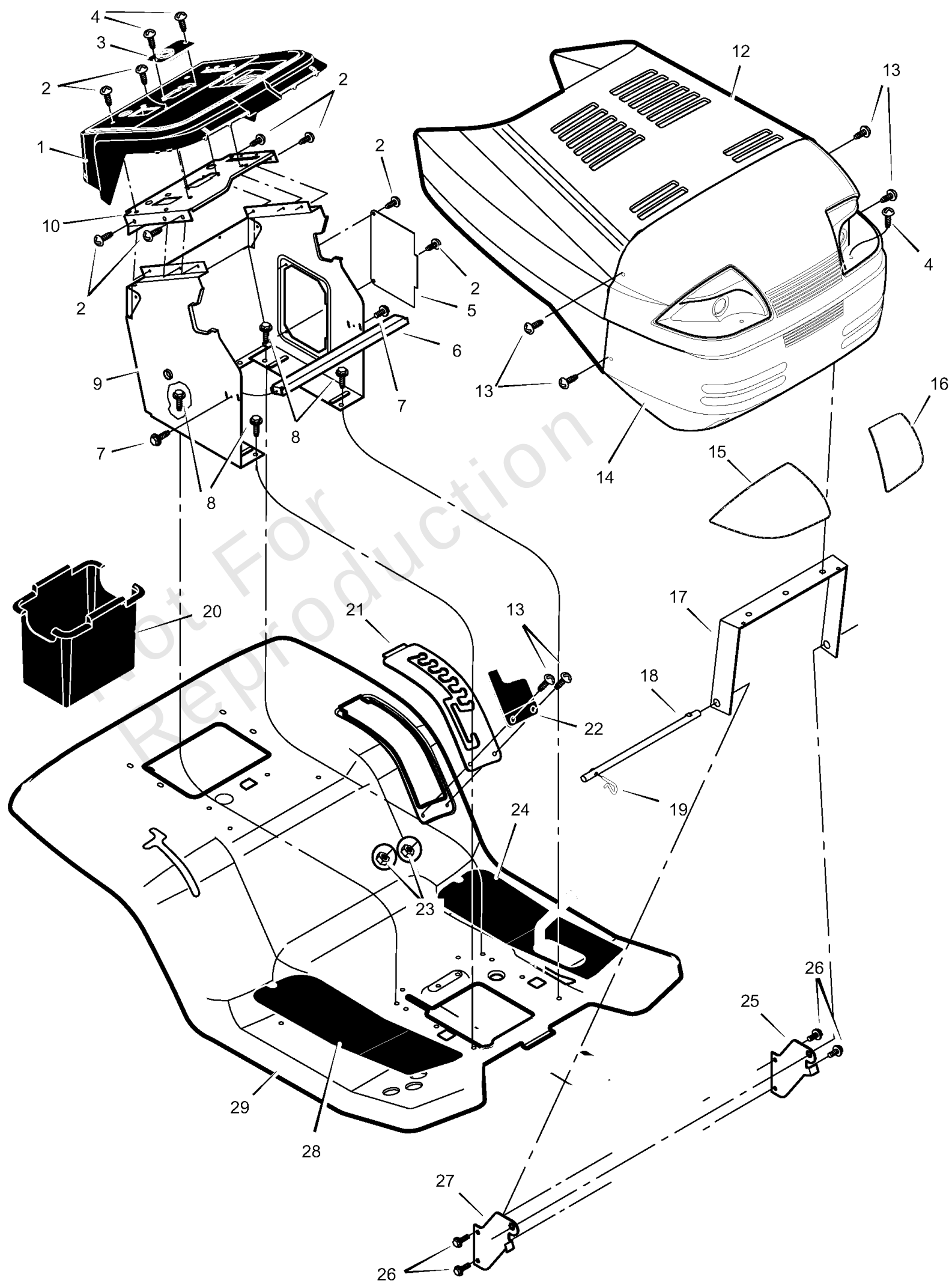
Note* When you order a tire, make sure to give the brand name of the tire so that the tread pattern on the tire will match.

Note* When you order a tire, make sure to give the brand name of the tire so that the tread pattern on the tire will match. See the Sector Gear Repair Parts page.

Hood And Dash

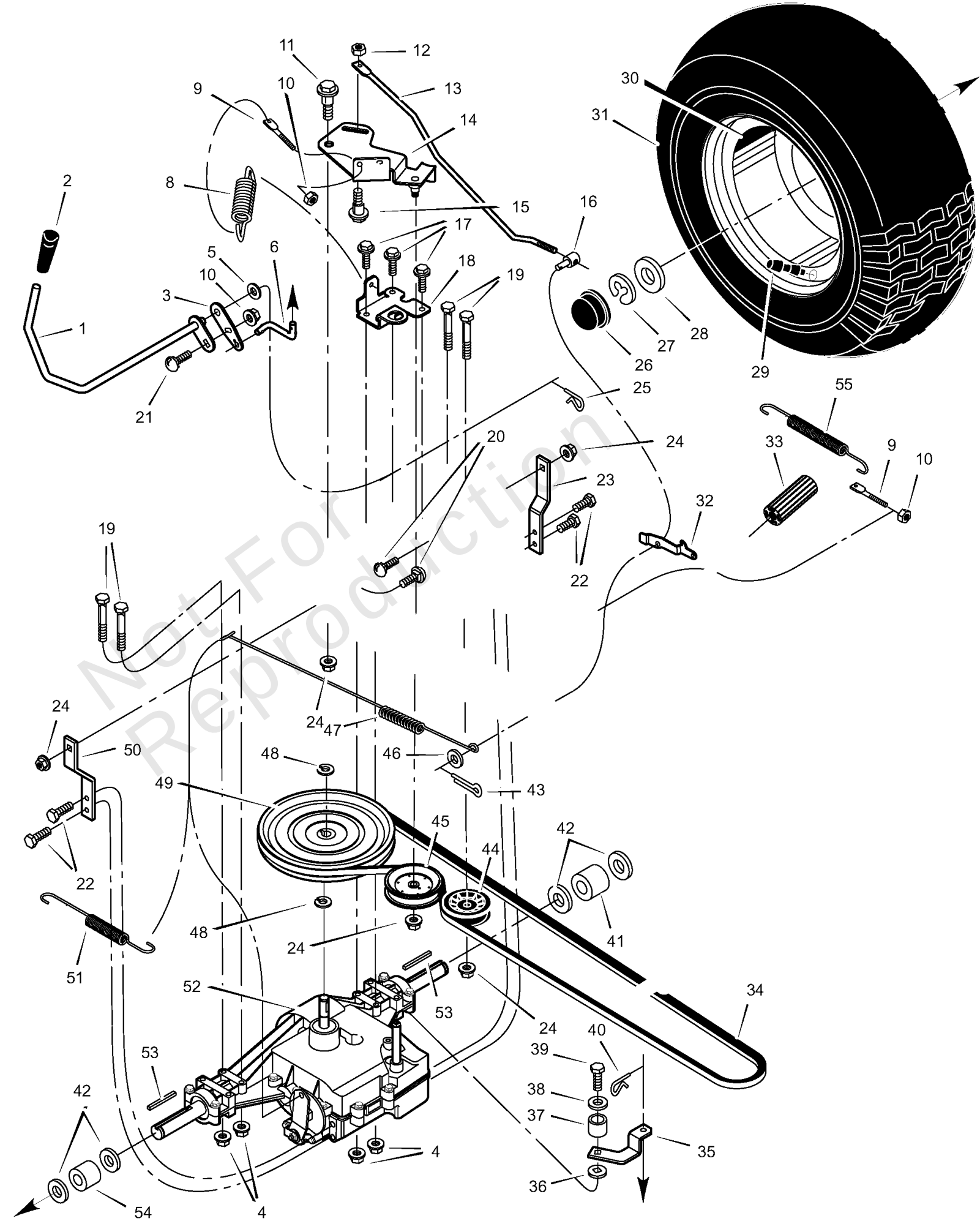
Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 46103A



Hood And Dash

REF NO	PART NO	QTY	DESCRIPTION
1	094223		Dash
2	26X270		Screw
3	094219MA		Bearing, Upper Steering
4	26X239MA		Screw
5	093007E700		Panel, Side Access
6	095081		Channel, Support
7	26X263MA		SCREW.25-20 S-T
8	26X249MA		Screw
9	095082		Support, Dash
10	094221E701MA		Plate, Dash
12	093215E245MA		Hood
13	009X47MA		Bolt, Shoulder
14	092542		Grille -(Includes Lens)
15	092539MA		Lens, Right
16	092540MA		Lens, Left
17	092541MA		Brace, Grille
18	093137 Z		Rod, Pivot
19	0031X4MA		Pin, Hair
20	094069		Container, Battery
21	094194E700		Plate, Lift Detent
22	094680MA		Cover
23	015X81MA		NUT#10-24 MCLEANLOCK
24	094383MA		Mat, Left
25	094213E700		Support, Left Grille
26	26X249MA		Screw
27	094212E700		Support, Right Grille
28	094382MA		Mat, Right
29	095326E245		Deck, Seat
30	44X6285		Decal, Left Hood
--	44X6284		Decal, Right Hood
--	44X7325MA		Decal, Warning



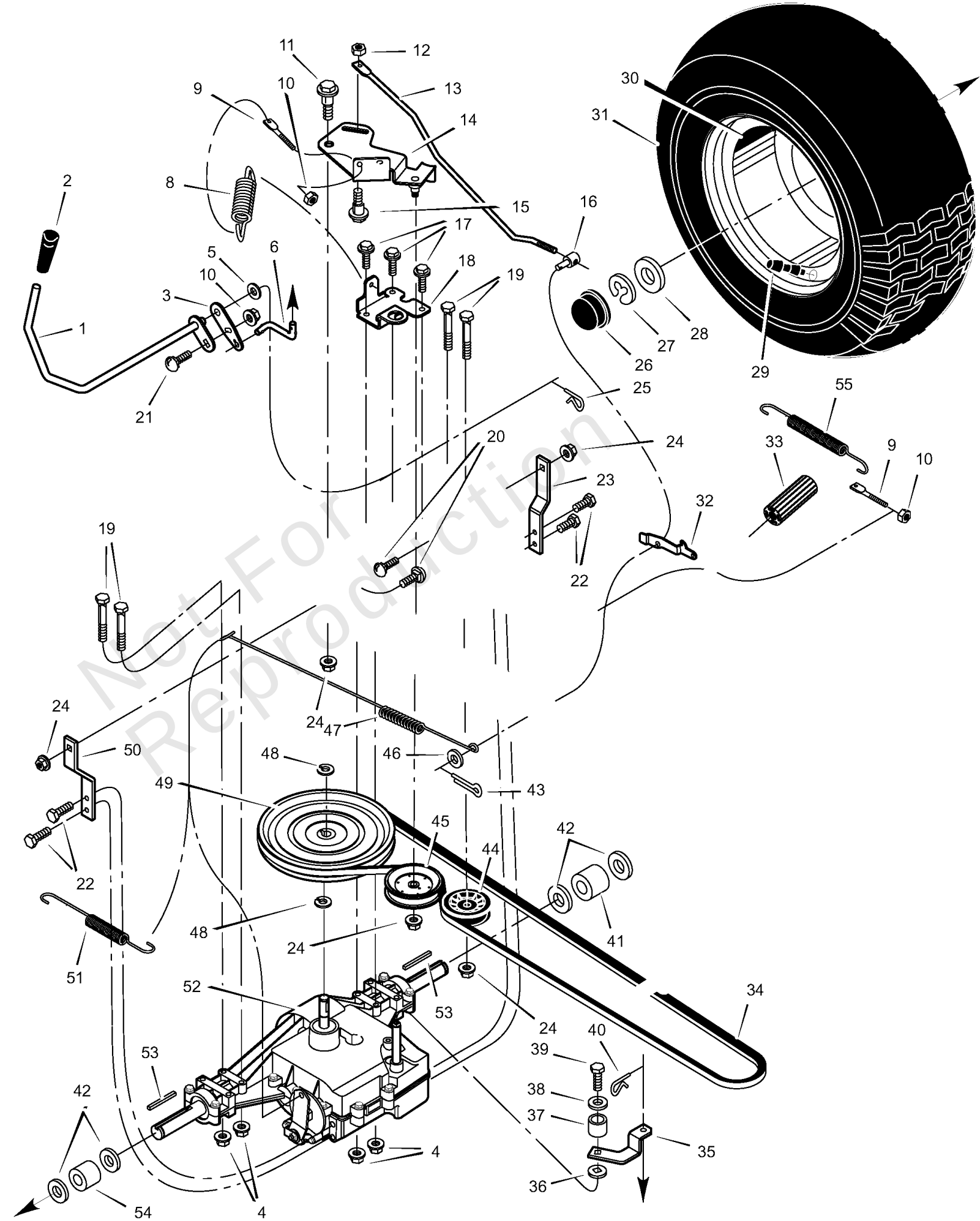
Motion Drive

REF NO	PART NO	QTY	DESCRIPTION
1	690366 Z		Lever, Shift
2	092697MA		Grip
3	690131 Z		Plate, Adjusting
4	015X88MA		Nut
5	17X103MA		Washer
6	690130 Z		Link, Shift
8	165X116MA		Spring, Extension
9	094042ZMA		Stud, Spring
10	015X79MA		Nut
11	009X39MA		Bolt, Shoulder
12	015X89MA		NUT .25-20 FLANGELOCK
13	094041 Z		Rod, Clutch
14	690364 Z		Arm Assembly, Idler
15	009X54MA		Bolt, Shoulder
16	094815ZMA		NUT-ADJUSTING
17	26X249MA		Screw
18	690070E700		Bracket, Spring Mount
19	01X155MA		Bolt
20	002X78		Bolt, Carriage
21	002X53MA		Bolt, Carriage
22	26X216MA		Bolt
23	690081E700		Bracket, Left Torque
24	015X84MA		Nut
25	0031X4MA		Pin, Hair
26	094618MA		HUB CAP
27	011X23MA		E-Ring
28	17X193MA		Washer
29	024373MA		VALVE STM&CP,TR41 SE
30	093263-601		Wheel and Tire
31	091923MA		Tire *
--	407049MA		Tube
32	094045 Z		Latch, Parking Brake
33	021544MA		Pedal
34	037X68MA		Belt, Drive
35	690129 Z		Yoke, Shift
36	17X148MA		Washer, Square
37	091889		Pilot, Support
38	017X38MA		Washer
39	06X105MA		Capscrew
40	0031X6MA		Pin, Hair
41	690213 Z		Spacer, Left
42	17X118 Z		WASHER, 1-1.3 16G FLT
43	030X20MA		Pin, Cotter
44	091178		Pulley, V Idler
45	023339MA		Pulley, Backside Idler
46	17X169MA		Washer
47	165X115MA		Spring, Brake
48	0011X7MA		Ring, Snap

Footnotes:

Note* For information on Replacement Parts see the Central Parts Distributor in your area.

Note* When you order a tire, make sure to give the brand name of the tire so that the tread pattern on the tire will match.



Motion Drive

REF NO	PART NO	QTY	DESCRIPTION
49	690181MA		Pulley, Drive
50	690080E700		Bracket, Right Torque
51	165X92MA		Spring, Extension
52	-----		Transmission *
53	024039MA		Key, Square
54	690214 Z		Spacer, Right
55	165X133MA		Spring, Extension

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Footnotes:

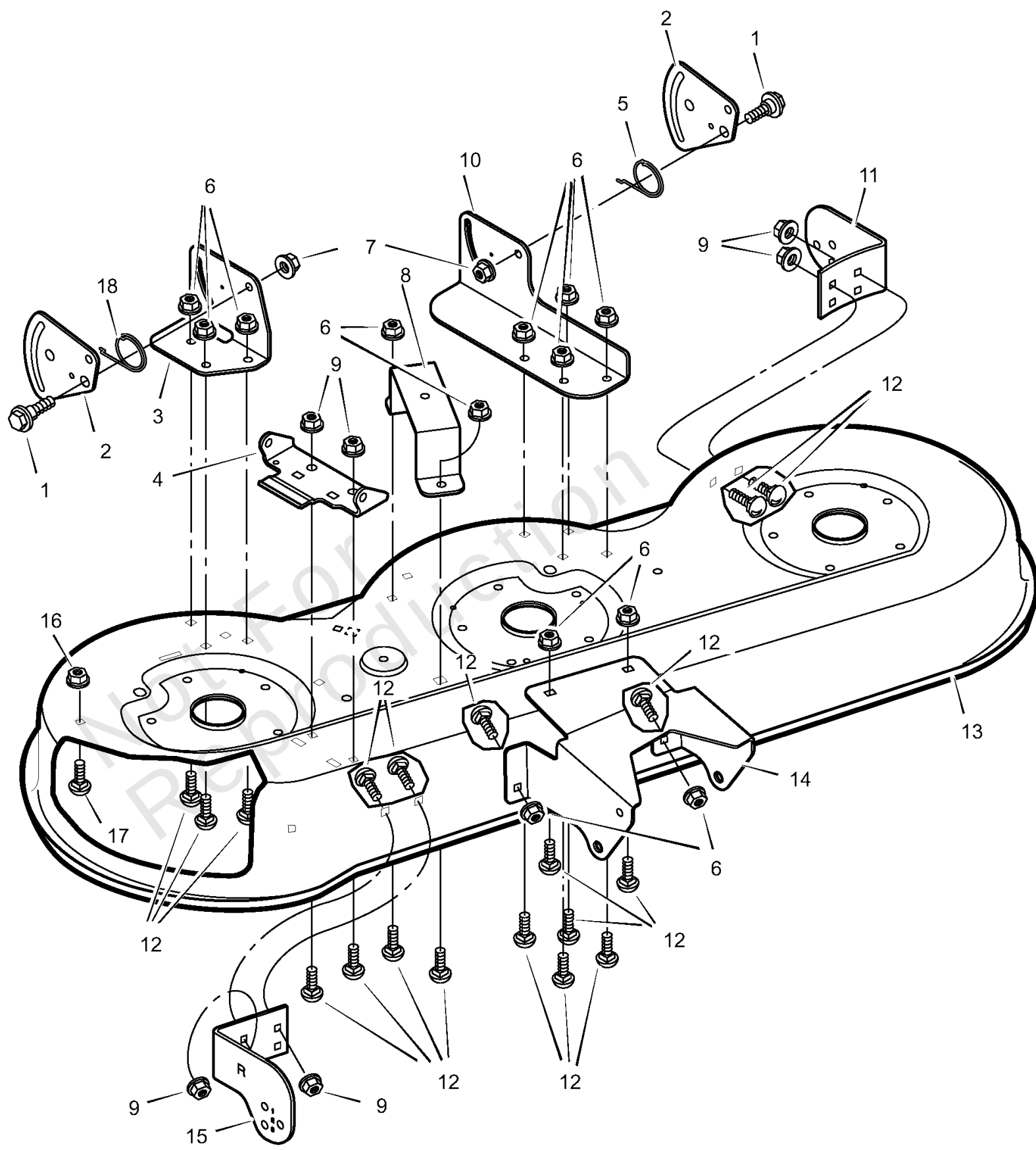
Note* For information on Replacement Parts see the Central Parts Distributor in your area.

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Mower Housing

Note: Unless noted otherwise, use the standard torque specifications

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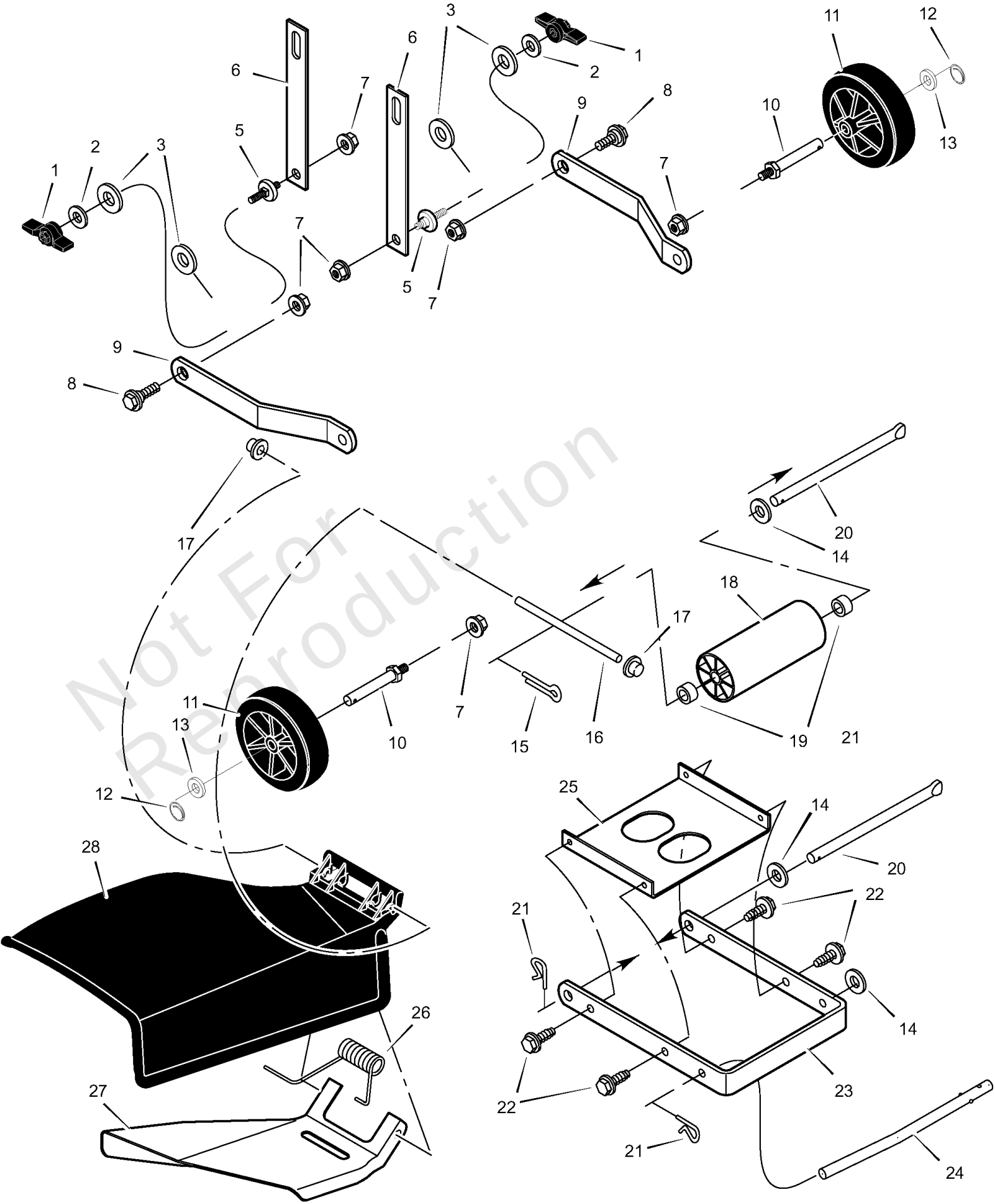
Mower Housing

REF NO	PART NO	QTY	DESCRIPTION
1	009X51MA		BOLT-SHD.38-16X.499D
2	690128E700		Plate, Suspension
3	094598E700		Bracket, Right Rear
4	092014E700		Bracket, Hinge
5	166X43MA		Spring, Left
6	015X79MA		Nut, Flange
7	015X84MA		Nut, Flange
8	094601E700		Bracket, Bell Crank
9	015X88MA		Nut, Flange
10	094600E700MA		Bracket, Left Lifter
11	094919E700		Bracket, Left Gauge Wheel
12	002X53MA		Bolt, Carriage
13	690204E700		Housing, Blade
14	094997SEMA		Bracket, Front Deck
15	094918E700		Bracket, Right Gauge Wheel
16	028X64MA		Retainer
17	002X74MA		Bolt, Carriage
18	166X42MA		Spring, Right

Mower Housing Suspension

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 46103A



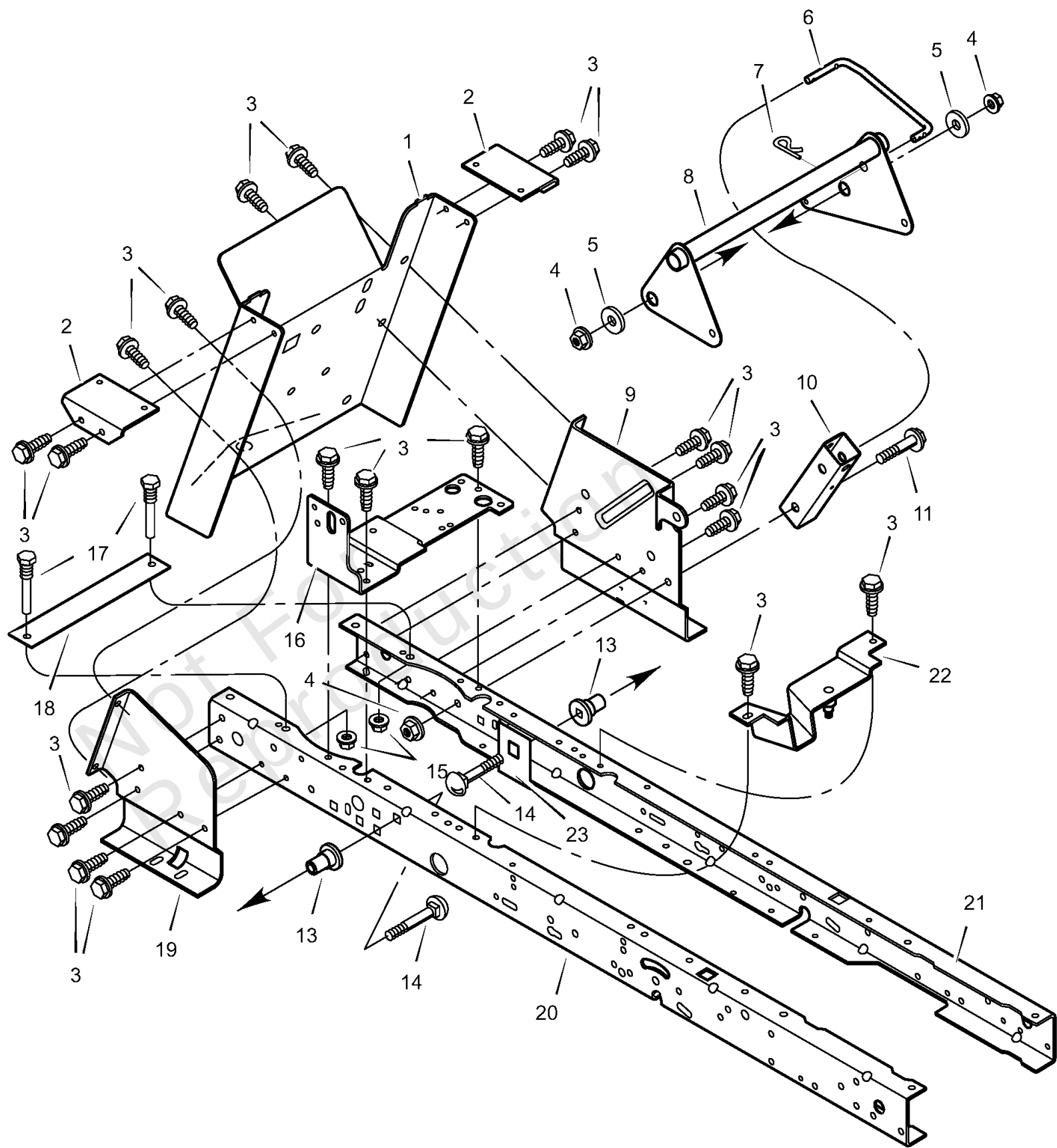
Mower Housing Suspension

REF NO	PART NO	QTY	DESCRIPTION
1	094068MA		Knob
2	017X45 Z		Washer
3	094137MA		FRICTION PAD
5	095194		Pin, Hanger
6	690121E700		Link, Lift
7	015X84MA		Nut, Flange
8	009X52MA		Bolt, Shoulder
9	690184E700		Bracket, Rear Suspension
10	094025MA		BOLT, Gauge Wheel
11	092683MA		Wheel
12	031X11MA		Pin, Hair
13	017X91 Z		Washer
14	17X103MA		Washer
15	030X49MA		Pin, Cotter
16	092159ZMA		Rod, Deflector
17	028X23MA		Push-On Cap
18	092137MA		Roller
19	091925MA		Spacer
20	094996MA		Rod, Deck Suspension
21	0031X4MA		Pin, Hair
22	26X249MA		Screw
23	094765E700		Bracket, Front Suspension
24	094158ZMA		Rod, Hanger
25	094604E700		Stiffener
26	166X34MA		Spring
27	092103E700		Deflector, Inside
28	092100MA		Deflector, Chute

Rear Frame Assembly

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 46103A



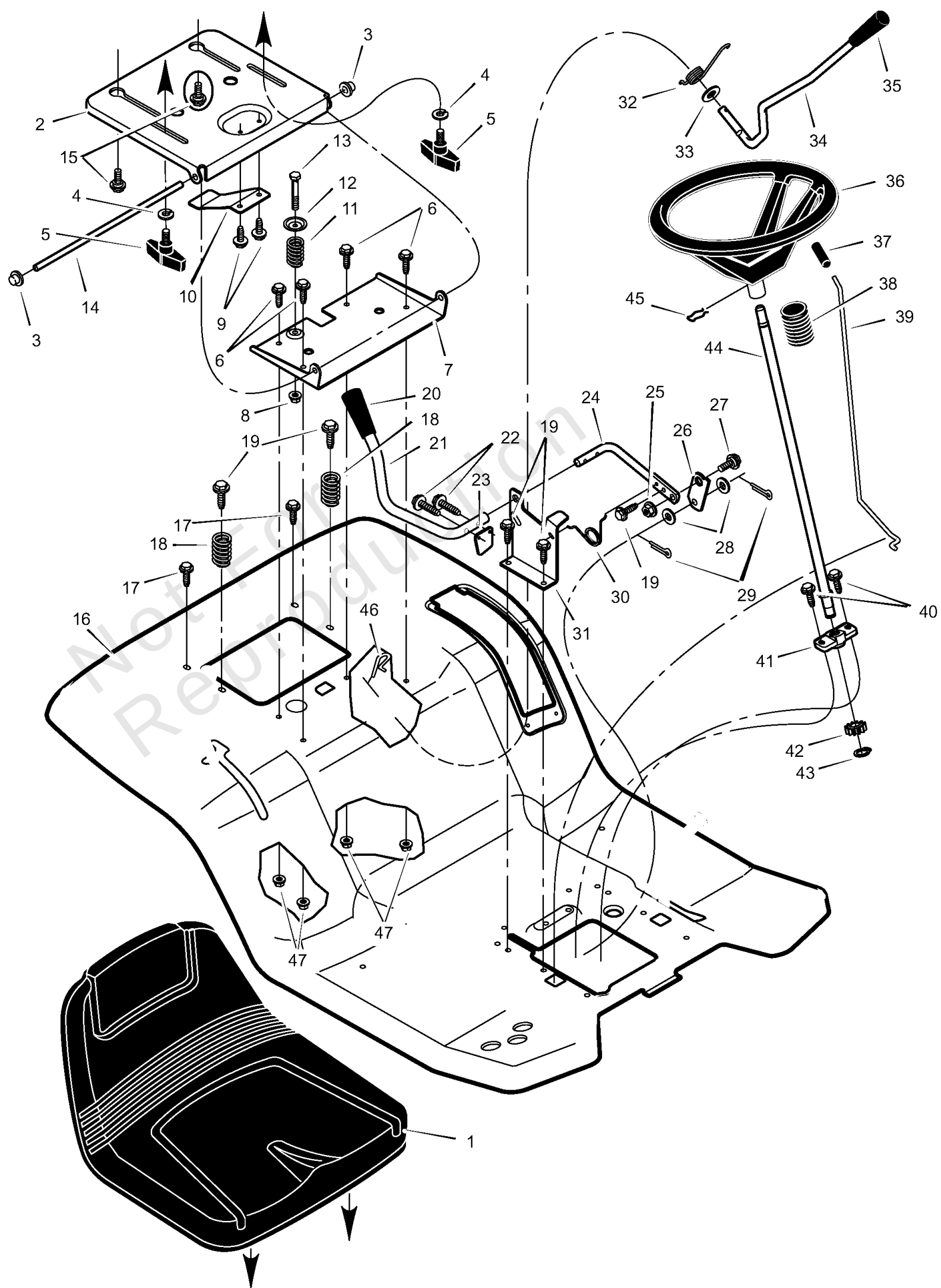
Rear Frame Assembly

REF NO	PART NO	QTY	DESCRIPTION
1	690094E700		Frame, Rear Hitch
2	690077E700		Bracket, Seat Deck
3	26X249MA		Screw
4	015X84MA		Nut, Flange
5	17X168ZMA		Washer
6	690122E700		Link, Lift Handle
7	0031X4MA		Pin, Hair
8	690363E700		Assembly, Lifter
9	690065E700		Bracket, Left Transaxle
10	094015E700		Bracket, Lift Pivot
11	009X53MA		Bolt, Shoulder
13	690151MA		Spacer, Lifter
14	002X85MA		Bolt, Carriage
15	015X79MA		Nut, Flange
16	690166E700		Bracket, Right Shift
17	094384MA		Screw, Guide
18	776101		Plate
19	690064E700		Bracket, Right Transaxle
20	690206E700		Frame, Right
21	690207E700		Frame, Left
22	690365 Z		Bracket, Idler
23	690389E700		Plate, Stiffening

Seat Deck

Note: Unless noted otherwise, use the standard torque specifications

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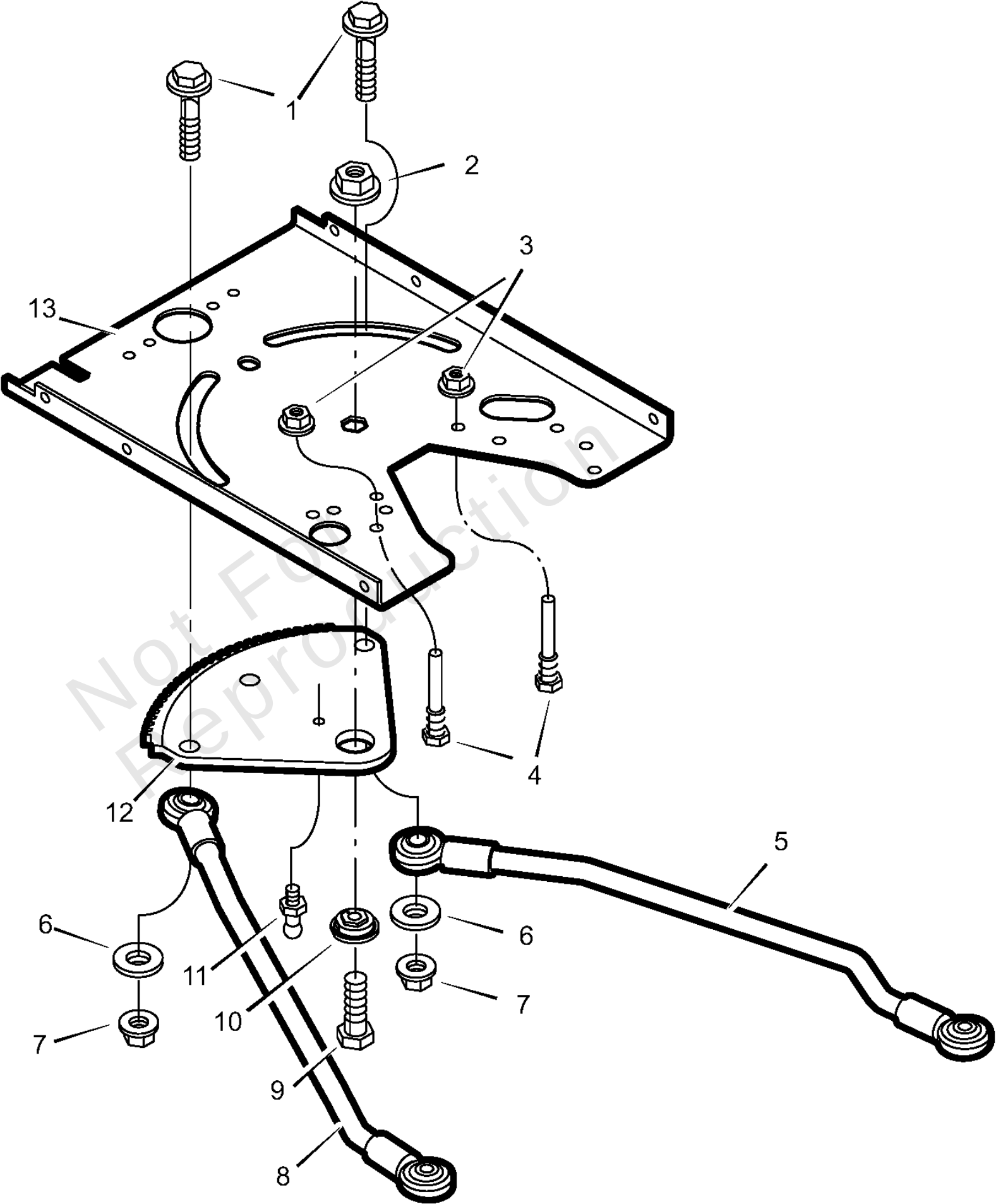
Seat Deck

REF NO	PART NO	QTY	DESCRIPTION
1	094163		Seat
2	094154E700		Support, Seat
3	028X23MA		Push-On Cap
4	017X47MA		Washer
5	094160		Bolt, Wing
6	001X45MA		Bolt
7	094153E700MA		Bracket, Pivot
8	15X123MA		Nut
9	26X229MA		Screw
10	094057MA		Spring, Leaf
11	164X31		Spring
12	094155 Z		Washer, Cup
13	009X55MA		Bolt
14	094156ZMA		Rod, Pivot
15	009X56MA		Bolt, Shoulder
16	095326E235		Deck, Seat
17	26X263MA		SCREW.25-20 S-T
18	164X30MA		Spring
19	26X249MA		Screw
20	092698MA		Grip
21	094217 Z		Handle, PTO
22	0025X3MA		Screw, Hex
23	094022 Z		Paddle, Switch
24	094017 Z		Lever, PTO
25	015X84MA		Nut
26	094004 Z		Link, PTO
27	009X39MA		Shoulder, Bolt
28	017X57MA		Washer
29	030X20MA		Pin, Cotter
30	166X39MA		Spring
31	094018E700		Bracket, PTO
32	166X40MA		Spring
33	17X103MA		Washer
34	690533MA		Handle, Lift
35	092697MA		Grip
36	094591		Wheel, Steering
37	091079MA		Grip
38	054789MA		Bellows
39	095005 Z		Rod, Parking Brake
40	26X267MA		Screw
41	094124MA		Bearing, Lower
42	690183MA		GEAR - PINION
43	011X25MA		E-Ring
44	094127		Shaft, Steering
45	094131MA		Clip, Retainer
46	0031X4MA		Pin, Cotter
47	15X123MA		Nut
--	F-99700		Manual and Parts List

Sector Gear

Note: Unless noted otherwise, use the standard torque specifications

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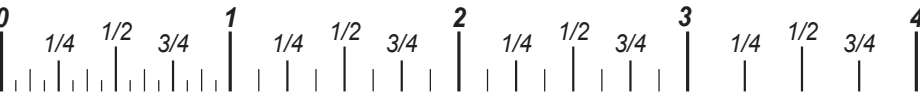
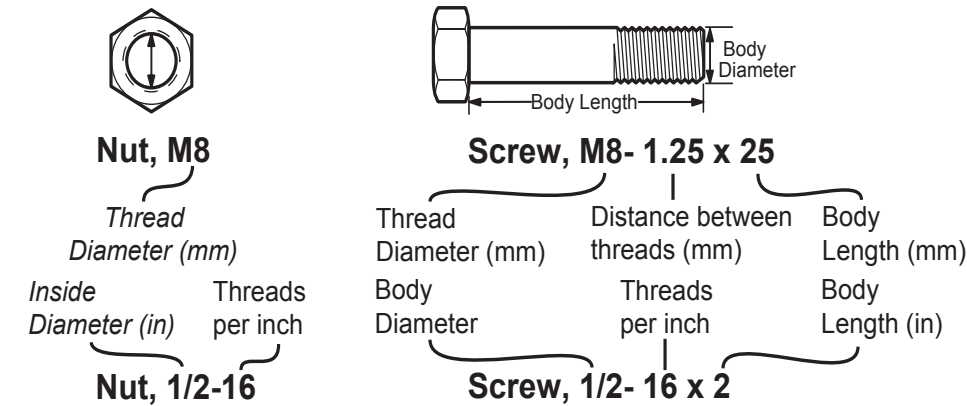
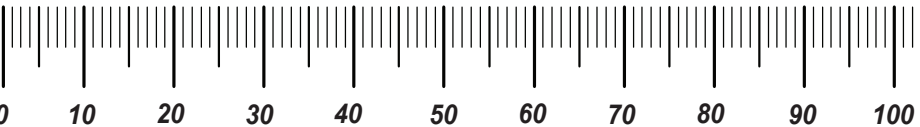
Sector Gear

REF NO	PART NO	QTY	DESCRIPTION
1	009X62MA		Bolt, Shoulder
2	15X113MA		Nut, Lock
3	015X79MA		Nut, Flange
4	094384MA		Guide, Screw
5	690146E700		Link, Left Drag
6	17X168ZMA		Washer
7	015X84MA		Nut, Flange
8	690145E700		Link, Right Drag
9	001X84MA		CAPSCREW, Hex Head, 5/16-18 x 1
10	690180MA		Bearing, Sector Gear
11	092530MA		Fitting, Lub
12	690147E700		Gear, Sector
13	690167E700		Plate, Steering

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).

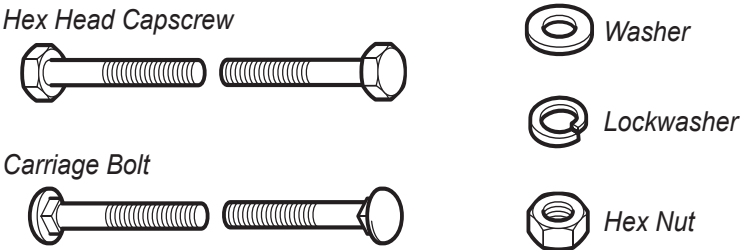
When bolt or capscrew is identified as 1/2 - 16 x 2" (M8 - 1.25 x 50), this means the *Nominal size*, or body diameter is 1/2 inch (8mm metric thread diameter), the second number, 16, represents the *threads per inch*, (*distance between threads*). The final number is the body length of the bolt or screw,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

