



Parts Manual

Mfg. No: 1693044
413H, 12HP Hydro

1691986 - Dump Cart, 6.5 Cu. Ft.....	
1690819 - Dethatcher, Lawn 35".....	
1692125 - Cart, Dump (10 Cu. Ft.).....	
1692149 - Catcher, Clean Sweep Twin, 30".....	
1692150 - Catcher, Clean Sweep Twin, 34".....	
1692470 - Grass Mulcher Kit, 34".....	
1692544 - 30" Mower Deck.....	
1692546 - 34" Mower Deck.....	
1691837SM - Weight, Front Counter.....	

Not For
Reproduction

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Decals

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 1693044

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

Diagram of a riding mower with callouts 1 through 21. Callout 1 points to the seat. Callouts 2 and 3 point to the steering wheel. Callouts 4 and 5 point to the seat backrest. Callout 6 points to the seat cushion. Callout 7 points to the seat base. Callouts 8 and 9 point to the seat frame. Callouts 10 and 11 point to the seat base. Callouts 12 and 13 point to the seat base. Callouts 14 and 15 point to the seat base. Callouts 16 and 17 point to the seat base. Callouts 18 and 19 point to the seat base. Callouts 20 and 21 point to the seat base.

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Decals

REF NO	PART NO	QTY	DESCRIPTION
1	1717692SM	2	DECAL, Icon (11G, 13H, 14H)
2	-----	1	DECAL, Decibel, Export Only
3	1708880SM	1	DECAL, Throttle/Choke
3	1714435SM	1	DECAL, Throttle/Choke
4	1708927	1	DECAL, USA -(Seat Back)
5	1708926SM	1	DECAL, Logo, AGCO Allis -(411G, 412H, 413H, 414H)
6	1708904	1	DECAL, Seat Deck Stripe, RH -(Early Model - 412H)
6	1713964	1	DECAL, Seat Deck Stripe, RH -(Early Model - 11G, 13H)
6	1722558SM	1	DECAL, Seat Deck Stripe, RH -(411G)
6	1716125SM	1	DECAL, Seat Deck Stripe, RH -(2411G)
6	1716126SM	1	DECAL, Seat Deck Stripe, RH -(2414H)
6	1717717	1	DECAL, Seat Deck Stripe, RH -(Hydro 400 Series)
7	1708903	1	DECAL, Seat Deck Stripe, LH -(Early Model - 412H)
7	1713965	1	DECAL, Seat Deck Stripe, LH -(Early Model - 11G, 13H)
7	1722557SM	1	DECAL, Seat Deck Stripe, LH -(411G)
7	1716126SM	1	DECAL, Seat Deck Stripe, LH -(2411G)
7	1717718	1	DECAL, Seat Deck Stripe, LH -(Hydro 400 Series)
7	1717727	1	DECAL, Seat Deck Stripe, LH -(2414H)
8	1708918SM	1	DECAL, Transmission Release -(Hydro models only)
9	1708639SM	1	DECAL, Belt & Blade Replacement
10	1720454SM	1	DECAL, Touch-up Paint -(11G, 13H, 14H, 411G, 412H, 413H, 414H)
10	1717449	1	DECAL, Touch-up Paint -(2411G, 2414H)
11	-----	1	I.D. PLATE
12	1722769SM	1	DECAL, "CORONET" -(Early Model - 11G, 13H, 411G, 412H)
13	1713962SM	1	DECAL, Model, Coronet, 12 - 5 Speed
13	1713963	1	DECAL, Model, Coronet, 12 - Hydro
13	1714448	1	DECAL, Model, Coronet, 13 - Hydro -(Early Model)
13	1716120	1	DECAL, Model, Coronet, 11 - 5 Speed -(Early Model)
13	1717689SM	1	DECAL, Model, Coronet, 11 - 5 Speed
13	1722778SM	1	DECAL, Model, Coronet, 13 - Hydro
13	1717691SM	1	DECAL, Model, Coronet, 14 - Hydro
14	1709933SM	1	DECAL, CE -(Export Models Only)
15	1715636	1	DECAL, Power Mass -(Export Models Only)

Footnotes:

Note:* Not a serviceable part.
Note:* Not a serviceable part.

Decals

Note: Unless noted otherwise, use the standard torque specifications Mfg. No: 1693044

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

Diagram of a riding mower with callouts 1 through 21. Callout 1 points to the seat. Callouts 2 and 3 point to the steering wheel. Callouts 4 and 5 point to the seat backrest. Callout 6 points to the seat cushion. Callout 7 points to the seat base. Callouts 8 and 9 point to the seat frame. Callouts 10 and 11 point to the seat base. Callouts 12 and 13 point to the seat base. Callouts 14 and 15 point to the seat base. Callouts 16 and 17 point to the seat base. Callouts 18 and 19 point to the seat base. Callouts 20 and 21 point to the seat base.

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Decals

REF NO	PART NO	QTY	DESCRIPTION
16	1713490SM	1	DECAL, Operating Instructions
17	1704276SM	1	DECAL-DANGER DO NOT P
18	-----	1	DECAL, OPEI
19	1722786SM	1	DECAL, Cutting Width - 34"
20	1722785SM	1	DECAL, Cutting Width - 30"
21	1704277SM	1	DECAL, Danger, Chute In Place

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Footnotes:

Note:* Not a serviceable part.

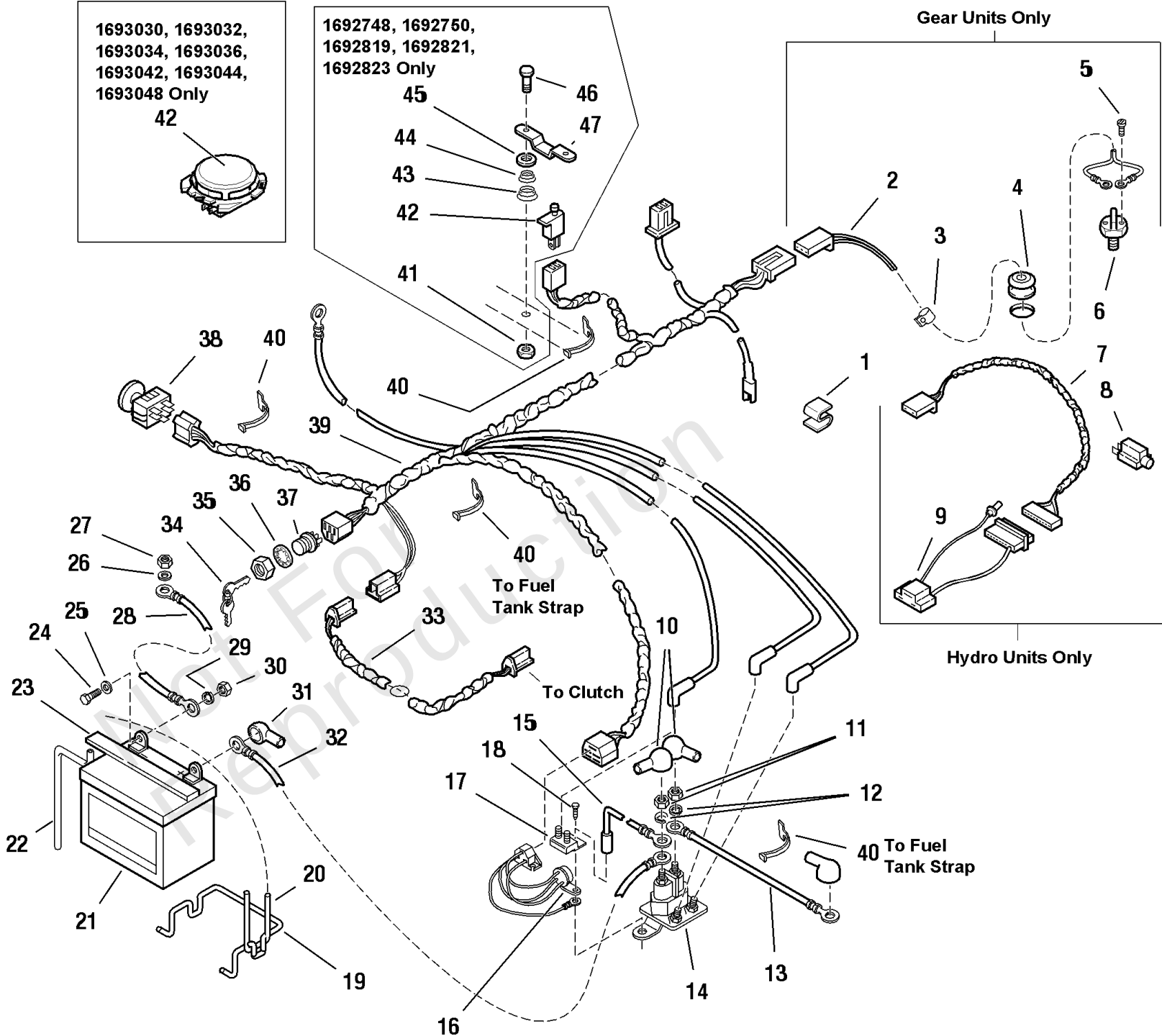
Note:* Not a serviceable part.

Electrical Group - Briggs & Stratton Models

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 1693044

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



Electrical Group - Briggs & Stratton Models

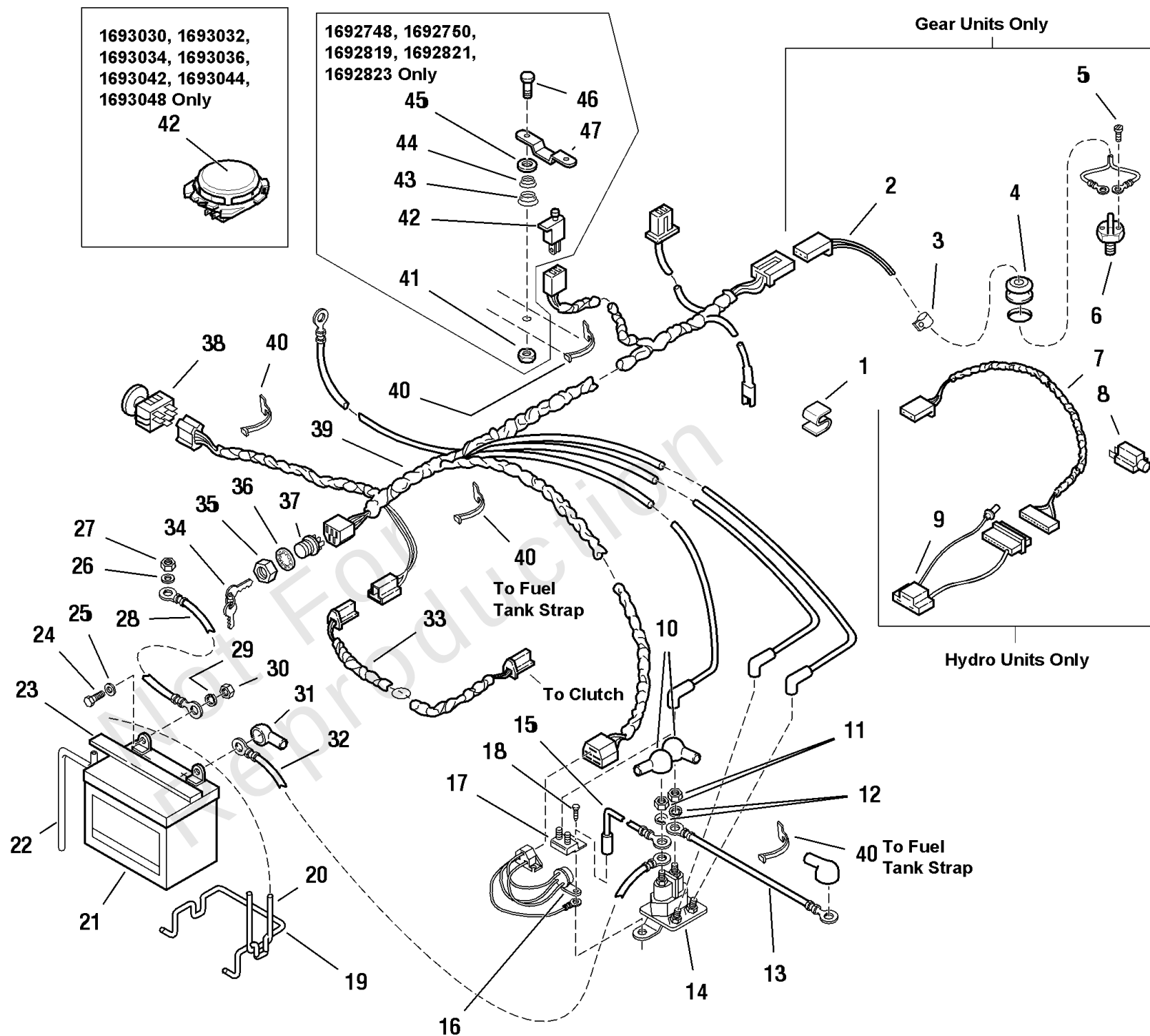
REF NO	PART NO	QTY	DESCRIPTION
1	1715956SM	1	CLIP
2	1708644SM	1	WIRE ASSY., Neutral Switch -(Gear Models)
3	1704873SM	2	CLAMP, WIRE, .312DIA -(1692748, 1692750, 1692819, 1692821, & 1692823 Only)
3	1704873SM	1	CLAMP, WIRE, .312DIA
4	1676648SM	1	GROMMET
5	1929477SM	2	SCREW, Taptite, #10-20 x 5/8 -(Gear Models)
6	1708558SM	1	SWITCH, Neutral -(Gear Models)
7	1709250SM	1	WIRE ASSY, Neutral Switch -(Hydro Models)
8	1701580SM	1	SWITCH, Neutral Start -(Hydro Models)
9	1713637SM	1	ADAPTOR PLUG, Engine -(Hydro Models)
10	2122023SM	3	COVER, Terminal
11	2820263SM	2	NUT, Hex, 5/16-24
12	1917356SM	2	LOCKWASHER, 5/16
13	1709088SM	1	CABLE, Solenoid to Starter
14	1686981SM	1	SOLENOID
15	1665237SM	1	WIRE ASSY.
16	1713642SM	1	MODULE, Interlock
17	1665238SM	1	BREAKER-CIRCUIT
18	1925003SM	2	SCREW, Hex, Flange, Taptite, 1/4-20 x 1/2
19	1667805SM	1	BRACE, Battery
20	1665872SM	1	STRAP, Battery
21	1685215SM	1	BATTERY,12V
22	1612103SM	1	TUBE, Vent
23	1704581	1	VENT CAP, Battery
24	1923341SM	2	CAPSCREW, Hex Hd., 1/4-20 x 3/4
25	1921319SM	2	WASHER, Plain
26	1920427SM	1	LOCKWASHER, External Tooth, 3/8
27	1916950SM	1	NUT, Hex, 3/8-16
28	1713163SM	1	CABLE, Battery, Ground
29	1916964SM	2	LOCKWASHER, 1/4
30	1916622SM	2	NUT, Hex, 1/4-20
31	1709086SM	1	BOOT, Insulator
32	1603618SM	1	CABLE, Battery to Solenoid
33	1708882SM	1	WIRE ASSY., PTO Clutch
34	1714054SM	2	KEY-IGNITIOM W/PLASTI
35	1714055SM	1	ADAPTER, Nut
36	1960547SM	1	LOCKWASHER-INTERNAL
37	1686734SM	1	IGNITION SWITCH -(Including Ref 34 & 36)
38	1716332SM	1	SWITCH, PTO, Electric Clutch
39	1713499SM	1	WIRING HARNESS
40	1701011SM	4	TIE, Self-Locking
41	1919438SM	2	NUT, Hex, Nylon Lock, 5/16-18 -(1692748, 1692750, 1692819, 1692821, & 1692823 Only)
42	1732004SM	1	SWITCH-PUSH BUTTON -(1692748, 1692750, 1692819, 1692821, & 1692823 Only)

Electrical Group - Briggs & Stratton Models

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 1693044

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



Electrical Group - Briggs & Stratton Models

REF NO	PART NO	QTY	DESCRIPTION
42	1714320SM	1	SWITCH, Seat -(1693030, 1693032, 1693034, 1693036, 1693042, 1693044, 693048 Only)
43	2153010SM	2	SPRING, Tension
44	2161176SM	2	SPRING
45	1924940SM	2	WASHER, Flat, 13/32 x 7/8 x 5/64
46	1922127SM	2	SCREW, Hex Head Cap, 5/16-18 x 1 3/4
47	1708552SM	1	PLATE, Seat Actuator

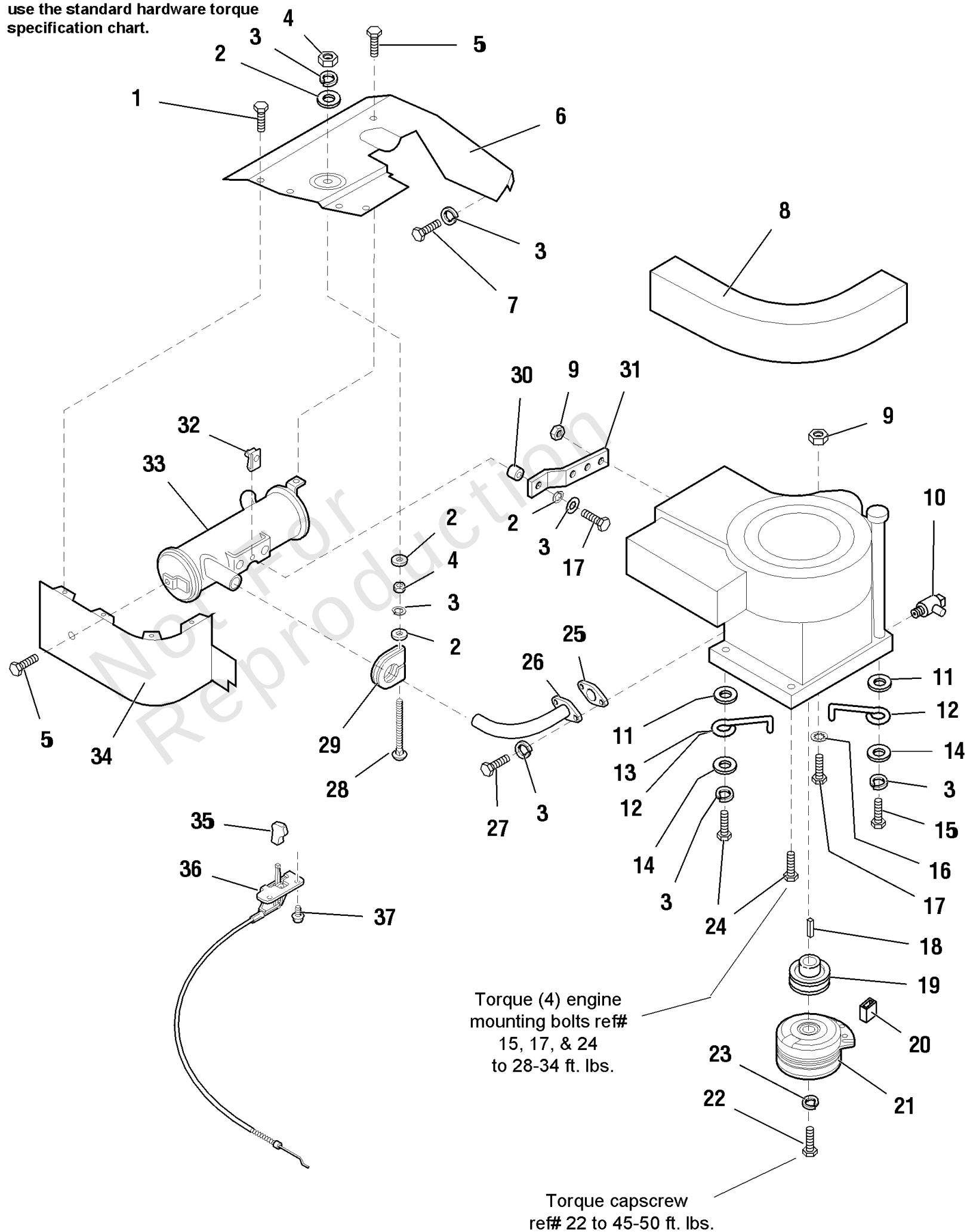
Not For Reproduction

Engine Group - Briggs & Stratton Models

Note: Unless noted otherwise, use the standard torque specifications

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Engine Group - Briggs & Stratton Models

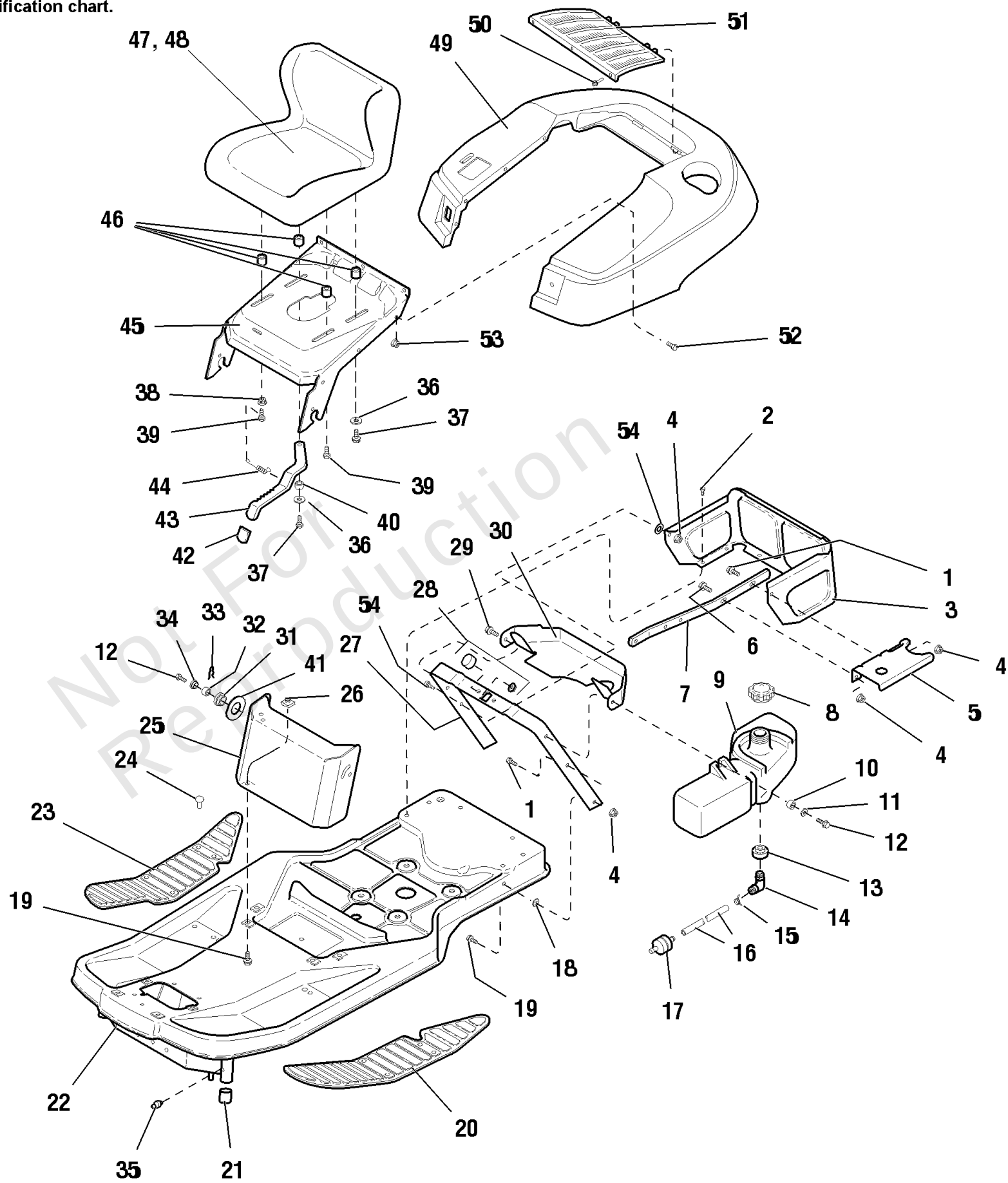
REF NO	PART NO	QTY	DESCRIPTION
1	1923735SM	4	SCREW, Self-Tapping, #10-16 x 3/8
2	1919326SM	4	WASHER, 5/16
3	1917356SM	8	LOCKWASHER, 5/16
4	1917372SM	2	NUT, Hex, 5/16-18
5	1924856SM	2	SCREW, Hex, Taptite, 5/16-18 x 1/2
6	1708420SM	1	DUCT, R.H., Top
7	1921332SM	1	CAPSCREW, 5/16-18 x 3/4
8	1709055SM	1	SEAL, Air Inlet
9	1931277SM	3	NUT, Flange, Whiz-Lock, 5/16-18
10	1708405SM	1	VALVE, Shut-Off
11	1933263SM	2	WASHER, Plain
12	1704419SM	2	BELT STOP -(Hydro Models)
12	1704419SM	1	BELT STOP, Rear -(Gear Models)
13	2158499SM	1	BELT STOP, Front -(Gear Models)
14	1922755SM	2	WASHER, Plain, 3/8
15	2860361SM	1	SCREW, Taptite, 3/8-16 x 2
16	1935255SM	1	NUT, SPEED, 5/16-18 L
17	1933689SM	1	SCREW, 5/16-18 x 1-1/2, Hex Flange, Whiz Lock
18	2171241SM	1	KEY, Hi-Pro -(All Models)
19	1706450SM	1	PULLEY, Engine -(Gear Models)
19	1709218SM	1	PULLEY, Engine -(Hydro Models)
20	1708537SM	1	SLEEVE, Clutch Anchor
21	1686882SM	1	CLUTCH, Electric
22	1960370SM	1	CAPSCREW, 7/16-20 x 2-1/2
23	1918199SM	1	LOCKWASHER, 7/16
24	1930598SM	2	SCREW, Taptite, 3/8-16 x 1-1/2
25	1650670SM	1	GASKET, Muffler
26	1708421SM	1	PIPE, Exhaust
27	1936228SM	2	SCREW, Socket Hd., 5/16-18 x 3/4
28	1960748SM	1	CARRIAGE BOLT, 5/16-18 x 3-1/4
29	1676183SM	1	CLAMP, Muffler
30	2157081SM	1	SPACER
31	1708715ASM	1	SUPPORT, Muffler
32	1935255SM	1	NUT, SPEED, 5/16-18 L
33	1708416SM	1	MUFFLER ASSY.
34	1708581SM	1	DUCT, L.H.
35	1713846SM	1	KNOB, Throttle
36	1714040SM	1	THROTTLE CONTROL ASSY.
37	1960536SM	2	SCREW, HEX WSHR HD PL
?38	1708442SM	1	STOP, Throttle -(Not Pictured, Export Models Only)

Frame & Fuel System - Later 11HP Gear, 12HP Hydro, & 13HP Hydro

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 1693044

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



Frame & Fuel System - Later 11HP Gear, 12HP Hydro, & 13HP Hydro

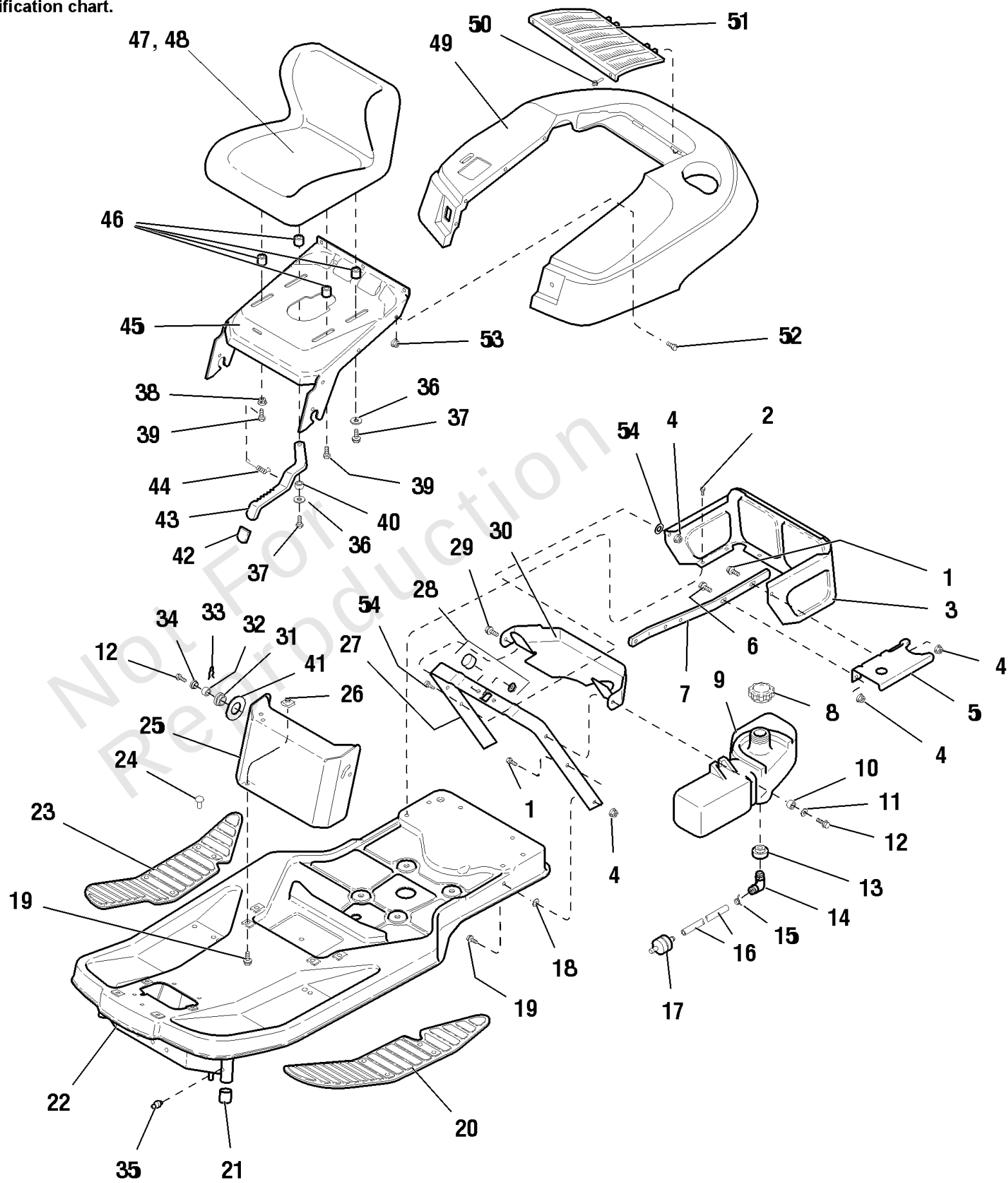
REF NO	PART NO	QTY	DESCRIPTION
1	703570	2	CAPSCREW, Hex Head, 5/16-18 x 1 1/4
2	1925003SM	6	SCREW, Hex Hd., Taptite, 1/4-20 x 1/2
3	1715962ASM	1	SHROUD, Rear -(All Except 1693030, 1693032, & 1693042)
3	1718298SM	1	SHROUD, Rear -(1693030, 1693032, & 1693042 Only)
4	1931277SM	7	NUT, Hex, Flange, Whizlock, 5/16-18
5	1726558SM	1	SUPPORT, Fuel Tank
6	1931333SM	1	CARRIAGE BOLT, 5/16-18 x 3/4
7	1708362ASM	1	STRAP, Fuel Tank, Brace
8	1714020SM	1	CAP, Fuel Tank, Vented
9	1687036SM	1	TANK, Fuel
10	1710437SM	1	SPACER, 21/64 x 1/2 x 21/64
11	1924940SM	1	WASHER, Plain, 13/32 x 7/8 x 5/64
12	1960373SM	3	SCREW, Taptite, 5/16-18 x 1
13	1654930SM	1	BUSHING, Rubber
14	1674231SM	1	ELBOW
15	2860112SM	2	CLAMP, Hose
16	1718678SM	1	HOSE, Fuel Line
17	2173206SM	1	FILTER, Fuel
18	1933988SM	2	PAL NUT, 5/16
19	1930591SM	8	CAPSCREW, Hex Hd., Whizlock, 5/16-18 x 3/4
20	1708525SM	1	PAD, Foot Rest, LH
21	2176440SM	4	BUSHING-0.765IDX
22	1660007SM	1	FRAME ASSY. -(Incl. Ref. No. 2)
23	1708524SM	1	PAD, Foot Rest, RH
24	1704351SM	14	FASTENER
25	1727685	1	PANEL, Front -(1693030, 1693032, 1693042 Only)
25	1718376A	1	PANEL, Front -(All Except 1693030, 1693032, 1693042)
26	1935255SM	4	NUT, SPEED, 5/16-18 L
27	1726563	1	SUPPORT, "U", Seat
28	1715970SM	2	BUMPER, Rubber
29	1924856SM	1	SCREW, Hex Hd., Taptite, 5/16 x 1/2
30	1708725ASM	1	DUCT, Air Inlet
31	1704626SM	2	SPACER, Plastic
32	1705249SM	2	SPACER
33	1704628SM	2	PIN, Quick
34	1705248SM	2	PIVOT, Hood
35	2821133SM	2	FITTING, Lube
36	1919381SM	4	WASHER, Plain
37	1930591SM	2	CAPSCREW, Hex Hd., 5/16-18
38	1917372SM	1	NUT, 5/16-18
39	1921977SM	2	CAPSCREW, Hex Head, 5/16-18 x 1 1/4
40	1703900SM	1	SPACER
41	2860208SM	2	WASHER, 1"
42	1708881SM	1	CAP, Black, Vinyl
43	1708509SM	1	ADJUSTER, Seat
44	1667286SM	1	SPRING, Extension
45	1725531	1	SUPPORT, Seat -(1693030, 1693032, 1693042 Only)

Frame & Fuel System - Later 11HP Gear, 12HP Hydro, & 13HP Hydro

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 1693044

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



Frame & Fuel System - Later 11HP Gear, 12HP Hydro, & 13HP Hydro

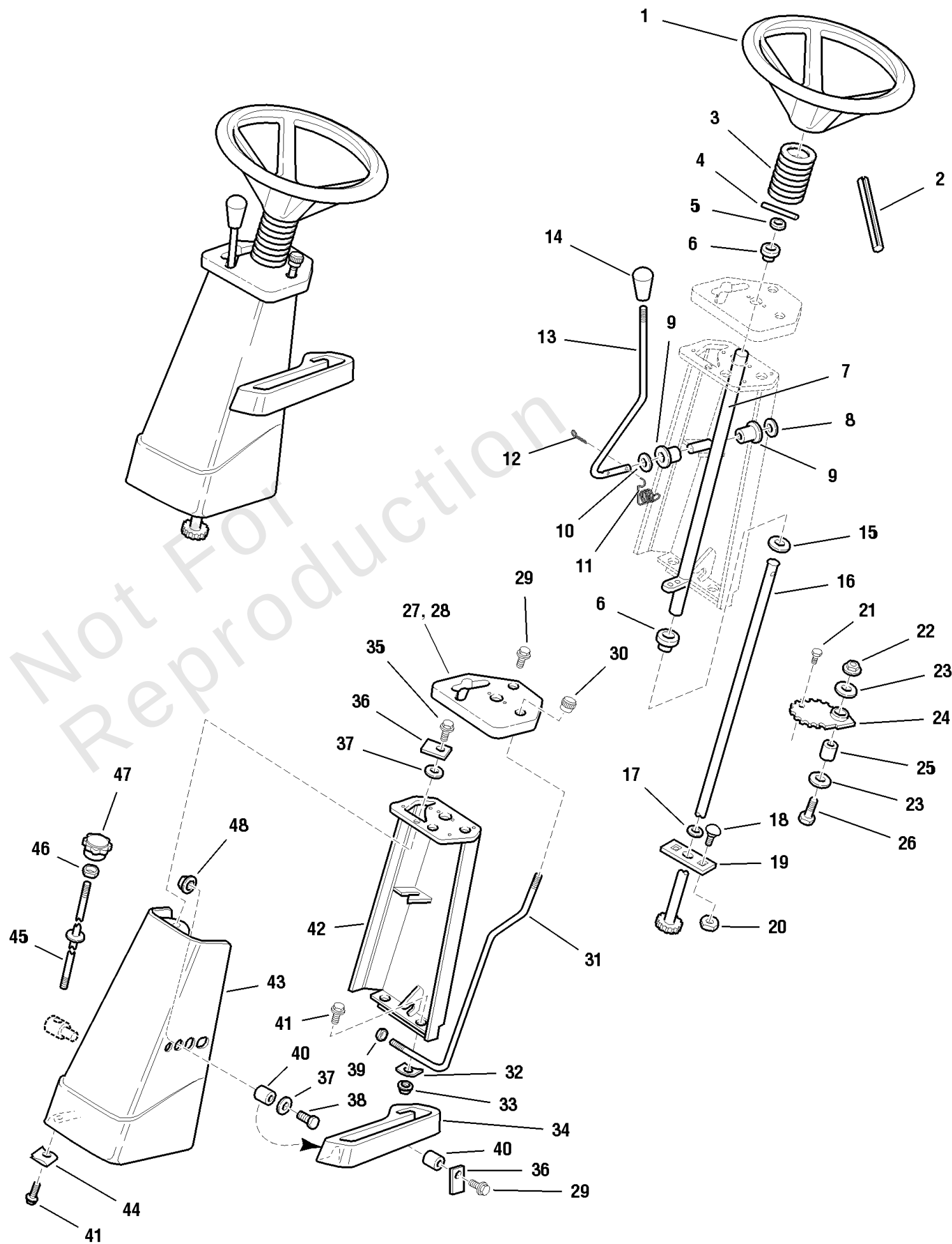
REF NO	PART NO	QTY	DESCRIPTION
45	1725531	1	SUPPORT, Seat -(All Except 1693030, 1693032, 1693042)
46	1708511SM	4	SPACER
47	1713839SM	1	SEAT ASSY.
48	1714482	1	COVER, Seat, Black
49	1686638SM	1	DECK, Seat, Orange
49	1726649SM	1	DECK, Seat, Red
50	1673320SM	3	RIVET
51	1708504SM	1	SCREEN, Seat Deck Top
52	1960295SM	8	SCREW, Hex Whiz Lock
53	1930642SM	8	NUT, Flange, 1/4-20
54	1919381SM	5	WASHER, 5/16

Front Column & Dash

Note: Unless noted otherwise, use the standard torque specifications

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



Front Column & Dash

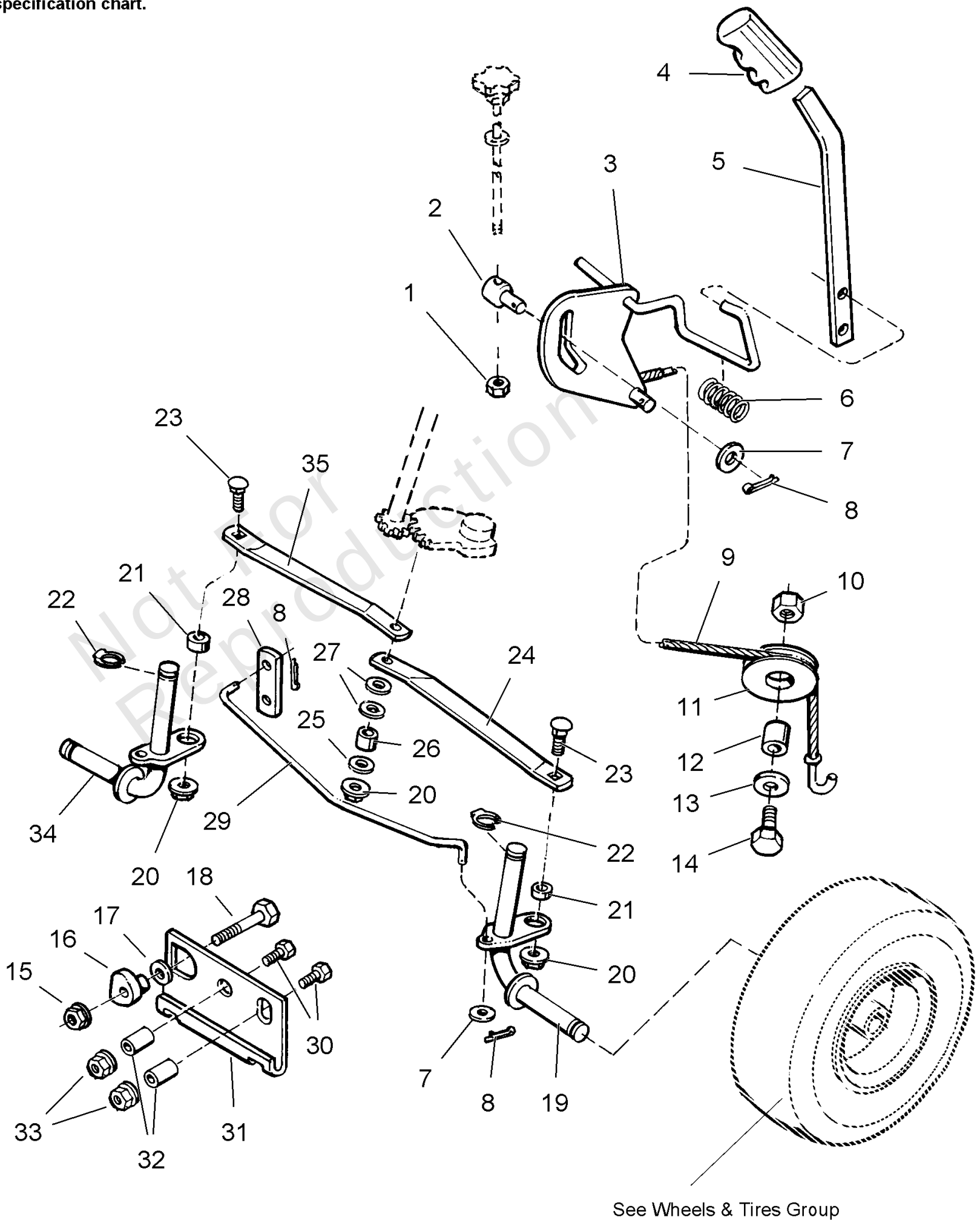
REF NO	PART NO	QTY	DESCRIPTION
1	1713841SM	1	STEERING WHEEL ASSY. -(Incl. Ref. Nos. 26 & 50)
2	1960540SM	1	ROLL PIN, .188 x 1
3	1678381SM	1	TUBE, Steering
4	2816001SM	1	PIN-SPRING .188 X 1.0
5	1960160SM	3	WASHER, Plain, 49/64 x 1-1/16 x 5/64
6	2176440SM	2	BUSHING-0.765IDX
7	1709229SM	1	TUBE ASSY., Shift
8	1960170SM	1	WASHER, Plain
9	1704428SM	2	BUSHING
10	1924361SM	1	WASHER, Plain, 17/32 x 1-1/4 x 7/64
11	1707424SM	1	SPRING, Torsion
12	1918447SM	2	COTTER PIN
13	1707375SM	1	ROD, Shift
14	1713843SM	1	KNOB, Rod, Shift
15	1960114SM	1	WASHER, Plain, 11/32 x 1 x 1/8
16	1706014SM	1	SHAFT ASSY., Steering
17	2173668SM	1	WASHER, Plain
18	1931350SM	2	BOLT, RD HD SH SQ NK
19	1703508ASM	1	PLATE, Steering Mounting
20	1928352SM	2	NUT, Hex, 3/8-16
21	1921221SM	1	CAPSCREW, Hex Hd., 5/16-18 x 1-1/2
22	1960339SM	1	NUT, Hex, Flange Lock, 3/8-16
23	1924356SM	3	WASHER, 13/32 x 1-1/2 x 1/8
24	1708426SM	1	GEAR, Steering
25	1666332SM	1	SPACER
26	1923701SM	1	CAPSCREW, Hex Hd., 3/8-16 x 2
27	1714081SM	1	DASH, Hydro
28	1714082SM	1	DASH, Gear
29	1925592SM	3	SCREW, Hex, Flange, Taptite, 1/4-20 x 3/4
30	1713855SM	1	KNOB, Rod, Parking Brake
31	1707057SM	1	ROD, Parking Brake
32	1933988SM	2	PUSH NUT, 5/16
33	1931277SM	2	NUT, Hex, Flange, Whizlock, 5/16-18
34	1708965SM	1	QUADRANT, Lift
35	1925003SM	3	SCREW, Hex, Flange, Taptite, 1/4-20 x 1/2
36	1709075SM	2	CLAMP
37	1921319SM	2	WASHER, Plain, 1/4
38	1924009SM	2	CAPSCREW, Hex, 1/4-20 x 7/8
39	1930642SM	1	NUT, Hex, Flange, 1/4-20
40	1678392SM	3	SPACER, 17/64 x 3/8 x 21/64
41	1930591SM	6	SCREW, Hex, Whizlock, 5/16-18 x 3/4
42	1708990ASM	1	SUPPORT, Steering
43	1708267CSM	1	SHROUD, Front (Orange)
44	1935255SM	4	NUT, SPEED, 5/16-18 L
45	1708971SM	1	ROD, Lift Height
46	1917421SM	2	NUT, Hex, Jam, 1/4-20
47	1713857SM	1	KNOB, Rod, Lift Height
48	1930641SM	2	NUT, Hex, Flange, Whizlock, 1/4-20

Steering & Lift

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 1693044

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



Steering & Lift

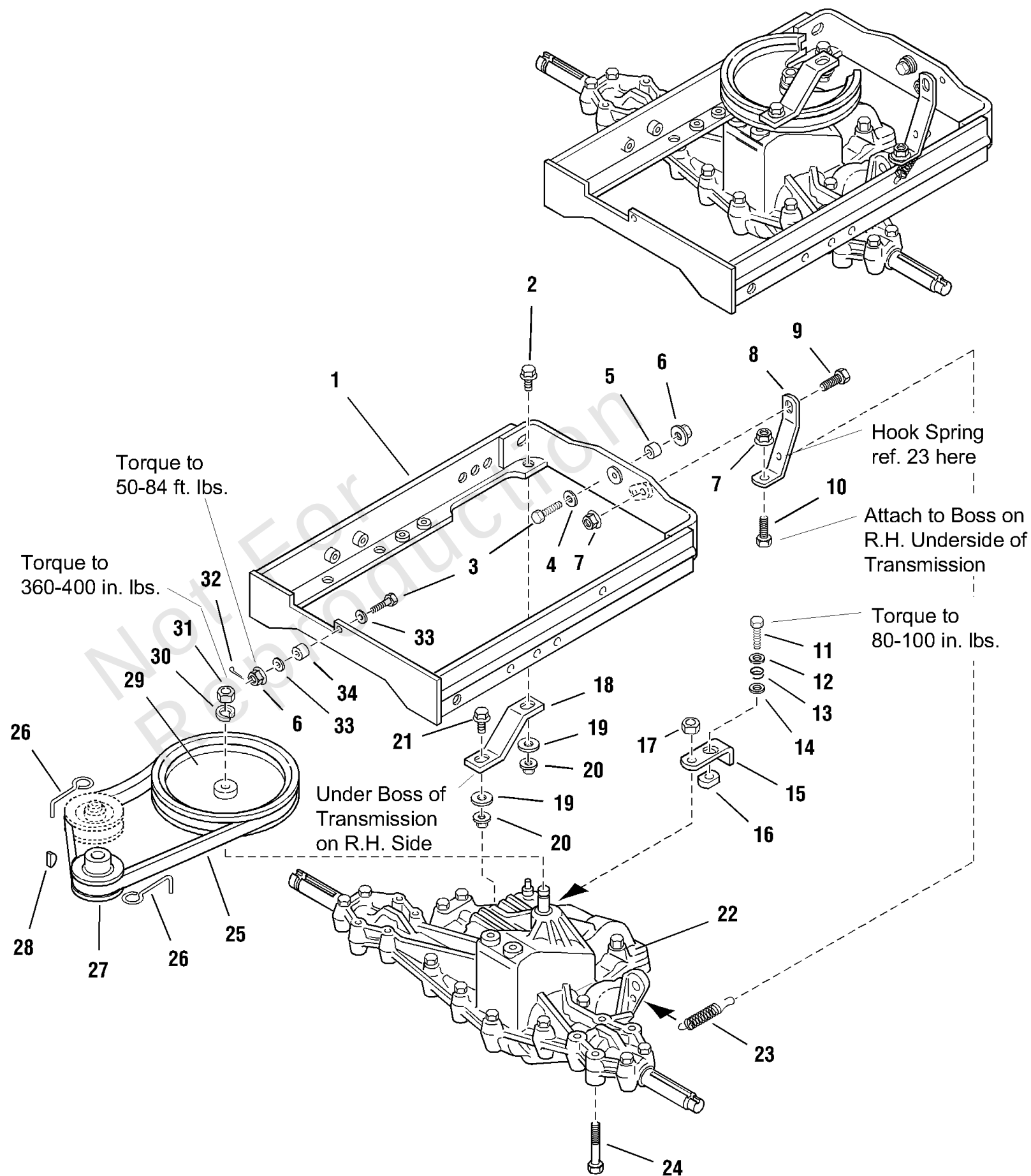
REF NO	PART NO	QTY	DESCRIPTION
1	1930645SM	1	NUT, Hex, 3/8-16
2	2108512SM	1	PIVOT
3	1708955ASM	1	ARM ASSY., Lift
4	1708966SM	1	GRIP, Lever
5	1708557ASM	1	LEVER, Lift
6	1708884SM	1	SPRING, Compression
7	1924940SM	3	WASHER, Plain, 13/32 x 7/8 x 5/64
8	1918447SM	3	COTTER PIN, 3/32 x 3/4
9	1708556SM	1	CABLE ASSY., Lift
10	1919439SM	1	NUT, Hex, Esna Lock, 3/8-16
11	1708559SM	1	PULLEY, Lift
12	1708973SM	1	BUSHING
13	1924356SM	1	WASHER, Plain, 13/32 x 1-1/2 x 1/8
14	1921969SM	1	CAPSCREW, Hex Hd., 3/8-16 x 1-1/2
15	1930645SM	1	NUT, Hex, Flange Lock, 3/8-16
16	1708514SM	1	ECCENTRIC
17	1922755SM	1	WASHER, Plain, 13/32 x 7/8 x 1/8
18	1921971SM	1	CAPSCREW, Hex Hd., 3/8-16 x 1-3/4
19	1706011SM	1	SPINDLE ASSY., LH
20	1935048SM	3	NUT, Hex, Flange Lock, 5/16-18
21	1960236SM	2	SPACER
22	1704420SM	2	KLIP RING
23	1931335SM	2	BOLT, Carriage, Short Neck, 5/16-18 x 1
24	1708501ASM	1	TIE ROD, LH
25	1919381SM	1	WASHER, Plain, 11/32 x 1 x 1/8
26	1710703SM	1	SPACER, 3/8 x 1/2 x 5/8
27	1960170SM	2	WASHER, Plain
28	1708516ASM	1	LEVER
29	1708521SM	1	ROD, Hitch
30	1920328SM	2	CAPSCREW, Hex, 1/2-13 x 1-1/2
31	1709237ASM	1	HITCH, Hook
32	1709235SM	2	BUSHING
33	1930644SM	2	NUT-HEX FLANGE 1/2-1
34	1706019SM	1	SPINDLE ASSY., RH
35	1708500ASM	1	TIE ROD, RH

Transmission & Carrier - Hydro-Gear 311-0500 Models

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 1693044

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



Transmission & Carrier - Hydro-Gear 311-0500 Models

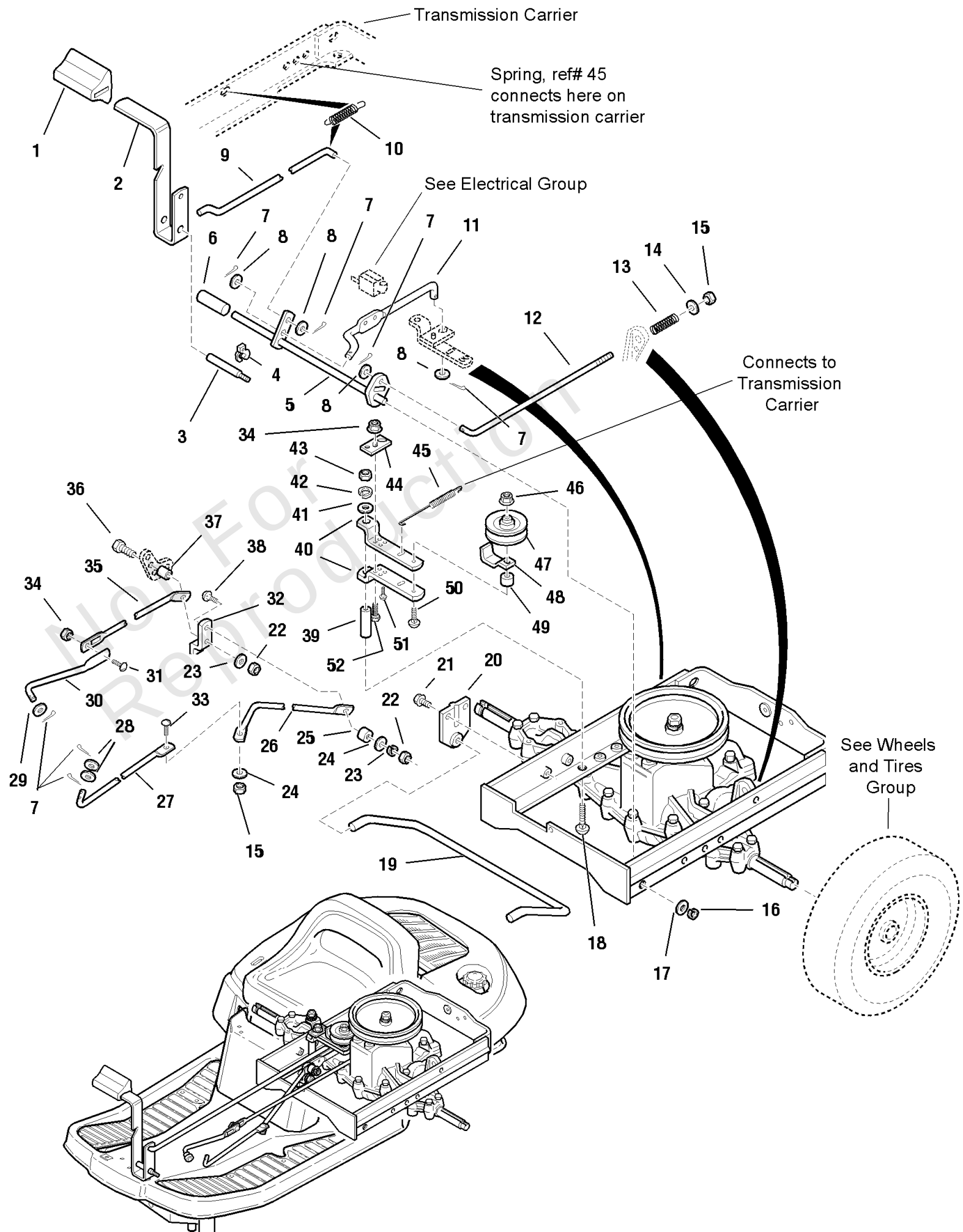
REF NO	PART NO	QTY	DESCRIPTION
1	1687051SM	1	CARRIER ASMY W/BUSHIN
2	1930591SM	1	SCREW, Hex, Whizlock, 5/16-18 x 3/4
3	1921176SM	2	CAPSCREW, Hex Hd., 1/2-13 x 1-1/4
4	1924361SM	1	WASHER, Plain, 17/32 x 1-1/4 x 5/64
5	1719725SM	1	BUSHING, Rear
6	1930644SM	2	NUT-HEX FLANGE 1/2-1
7	1927557SM	2	NUT, Hex, Flange Whiz, 5/16-18
8	1709216SM	1	STRAP, Torque
9	1931332SM	1	CARRIAGE BOLT, 5/16-18 x 5/8
10	1935159SM	1	CAPSCREW, Hex, 5/16-18 x 2-1/4
11	1960509SM	1	SCREW, Taptite, #10-24 x 1-1/4
12	1960151SM	1	WASHER, Plain, 1/4 x 1-1/4 x 5/64
13	2157127SM	1	SPRING
14	2860210SM	1	WASHER, Plain, 13/32 x 1-1/4 x 1/16
15	1709271SM	1	LEVER, Release
16	1709901SM	1	SPACER
17	1920397SM	1	NUT, Hex, Lock, 1/4-20
18	1713441SM	1	STRAP, Torque
19	1919381SM	2	WASHER, 5/16
20	1935048SM	2	NUT, Flange, 2-Way Lock, 5/16-18
21	1933689SM	1	SCREW, 5/16-18 x 1-1/2, Hex Flange, Whiz Lock
22	1686615SM	1	TRANSMISSION, Hydro -(See "Transmission Service Parts - Hydro-Gear 311-0500" ill. parts list for service parts)
23	2159106SM	1	SPRING, Return
24	2860478SM	4	SCREW, Taptite, 5/16-18 x 2-1/4
25	1709323SM	1	V-BELT
26	1704419SM	2	BELT STOP
27	1709218SM	1	PULLEY, Engine
28	2171241SM	1	KEY, Hi-Pro
29	1709213SM	1	PULLEY, Transmission
30	1916966SM	1	LOCKWASHER, Spring, 1/2
31	1919262SM	1	NUT, Hex, Jam, 1/2-20
32	1923500SM	1	COTTER PIN, 1/8 x 1-1/2
33	1654565SM	2	WASHER, Belleville, 1/2
34	1719683SM	1	BUSHING, Front

Transmission Controls - Hydro-Gear 311-0500 Models

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 1693044

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



Transmission Controls - Hydro-Gear 311-0500 Models

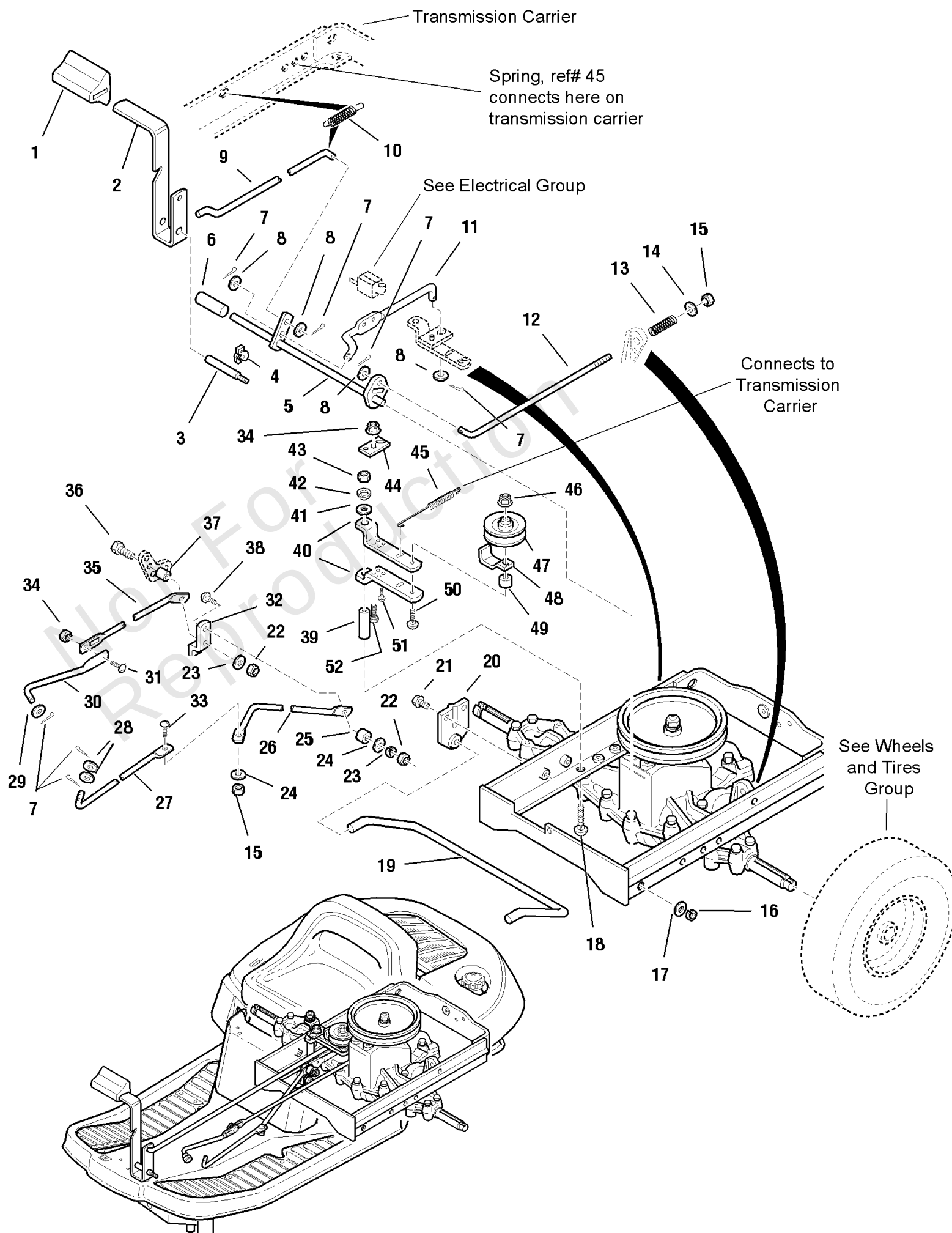
REF NO	PART NO	QTY	DESCRIPTION
1	1704849SM	1	PAD, Pedal
2	1723348	1	LEVER, Clutch
3	1708409SM	1	PIVOT, Brake
4	1708554SM	1	KLIP RING, 3/4
5	1709231SM	1	PIVOT SHAFT ASSY.
6	1709850SM	1	TUBE
7	1918447SM	6	COTTER PIN, 7/64 x 3/4
8	1919326SM	3	WASHER, 5/16
9	1706260SM	1	ROD, Clutch, Front
10	2159106SM	1	SPRING, Return
11	1709220SM	1	ROD, Clutch, Rear
12	1709224SM	1	ROD, Brake
13	1709097SM	1	SPRING, Compression
14	1960044SM	1	WASHER-0.312(0.33IDX1
15	1919438SM	2	NUT, Hex, Lock, 5/16-18
16	1703805SM	1	KLIPRING, 1/2
17	1924361SM	1	WASHER, Plain
18	1931342SM	1	CARRIAGE BOLT, 5/15-18 x 2-3/4
19	1708366SM	1	TORSION BAR
20	1708367SM	2	BRACKET, Torsion Bar
21	1924856SM	4	SCREW, Taptite, 5/16-18 x 1/2
22	1917372SM	2	NUT, Hex, 5/16-18
23	1917356SM	2	LOCKWASHER, 5/16
24	1919381SM	2	WASHER, Plain, 5/16
25	1710437SM	1	SPACER
26	1709223SM	1	ROD, Control
27	1709228SM	1	ROD, Shift, Front
28	1924359SM	2	WASHER, Plain, 1/2 x 1 x 1/32
29	1924940SM	1	WASHER, Plain, 13/32 x 7/8 x 5/64
30	1709217SM	1	ROD, Return, Front
31	1931318SM	1	CARRIAGE BOLT, 1/4-20 x 7/8
32	1709226SM	1	LEVER, Control
33	1960223SM	1	BOLT-RD HD SH SQ NK 5
34	1930641SM	3	NUT, Hex, Flange Whiz, 1/4-20
35	1709244SM	1	ROD, Return, Rear
36	1922127SM	1	SCREW, Hex Head Cap, 5/16-18 x 1 3/4
37	1709227SM	1	SPACER
38	1960223SM	1	BOLT-RD HD SH SQ NK 5
39	1709345SM	1	SPACER, Pivot
40	1709221SM	2	CLEVIS, Idler Bracket
41	1919326SM	1	WASHER, 5/16
42	1917356SM	1	LOCKWASHER, 5/16
43	1917372SM	1	NUT, Hex, 5/16-18
44	1709222SM	1	PLATE
45	1666759SM	1	SPRING
46	1960251SM	1	NUT, Hex, Jam, Lock, 3/8-16
47	1668827SM	1	PULLEY, Idler
48	1708352ASM	1	GUARD, Spring
49	1674440SM	1	SPACER, 25/64 x 5/8 x 11/16
50	1931355SM	1	CARRIAGE BOLT, 3/8-16 x 2-1/4
51	1927429SM	1	SCREW, Taptite, 1/4-20 x 5/8

Transmission Controls - Hydro-Gear 311-0500 Models

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 1693044

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



Transmission Controls - Hydro-Gear 311-0500 Models

REF NO	PART NO	QTY	DESCRIPTION
52	1923341SM	1	CAPSCREW, Hex, 1/4-20 x 3/4

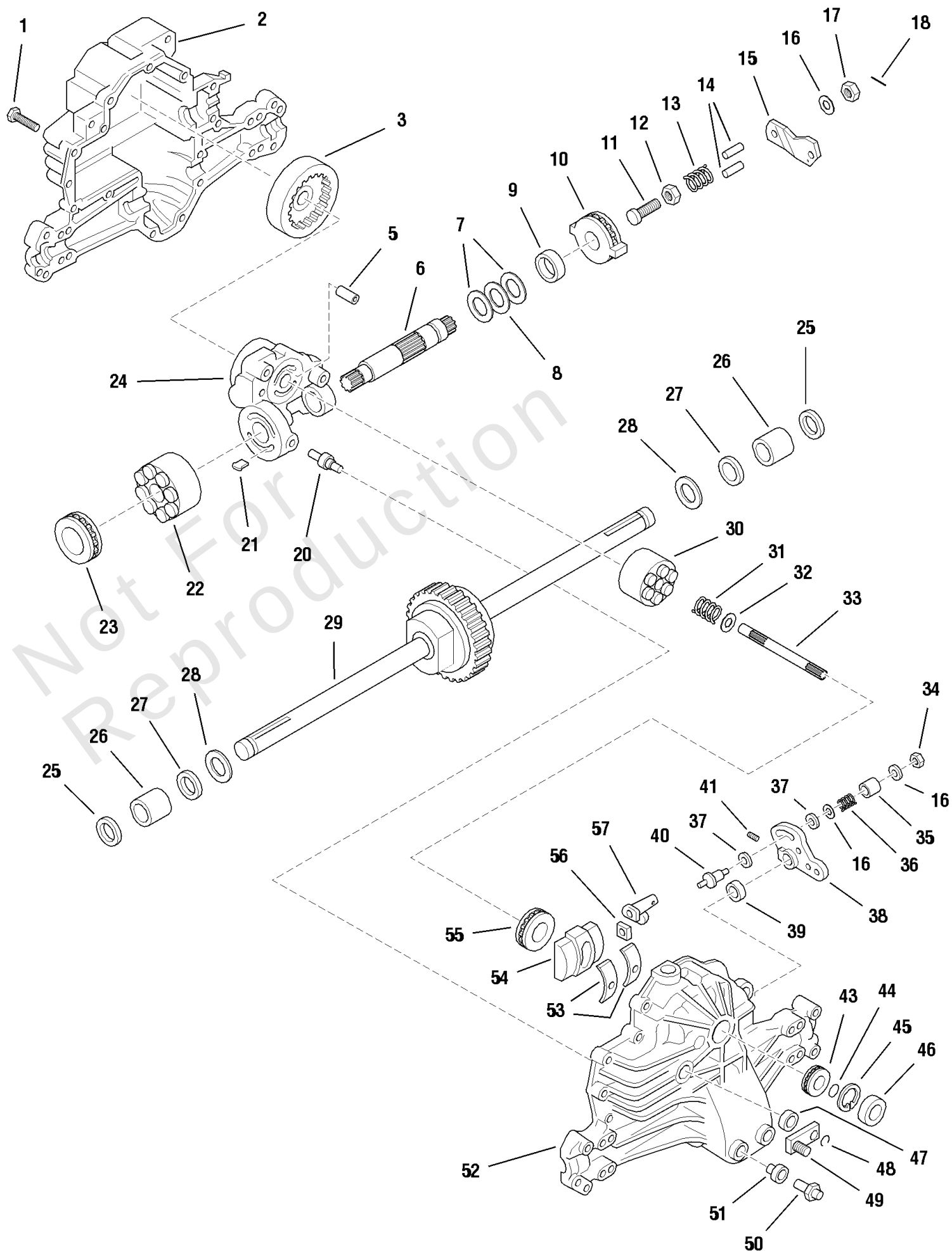
Not For Reproduction

Transmission SERVICE PARTS - Hydro-Gear 311-0500 Models

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 1693044

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



Transmission SERVICE PARTS - Hydro-Gear 311-0500 Models

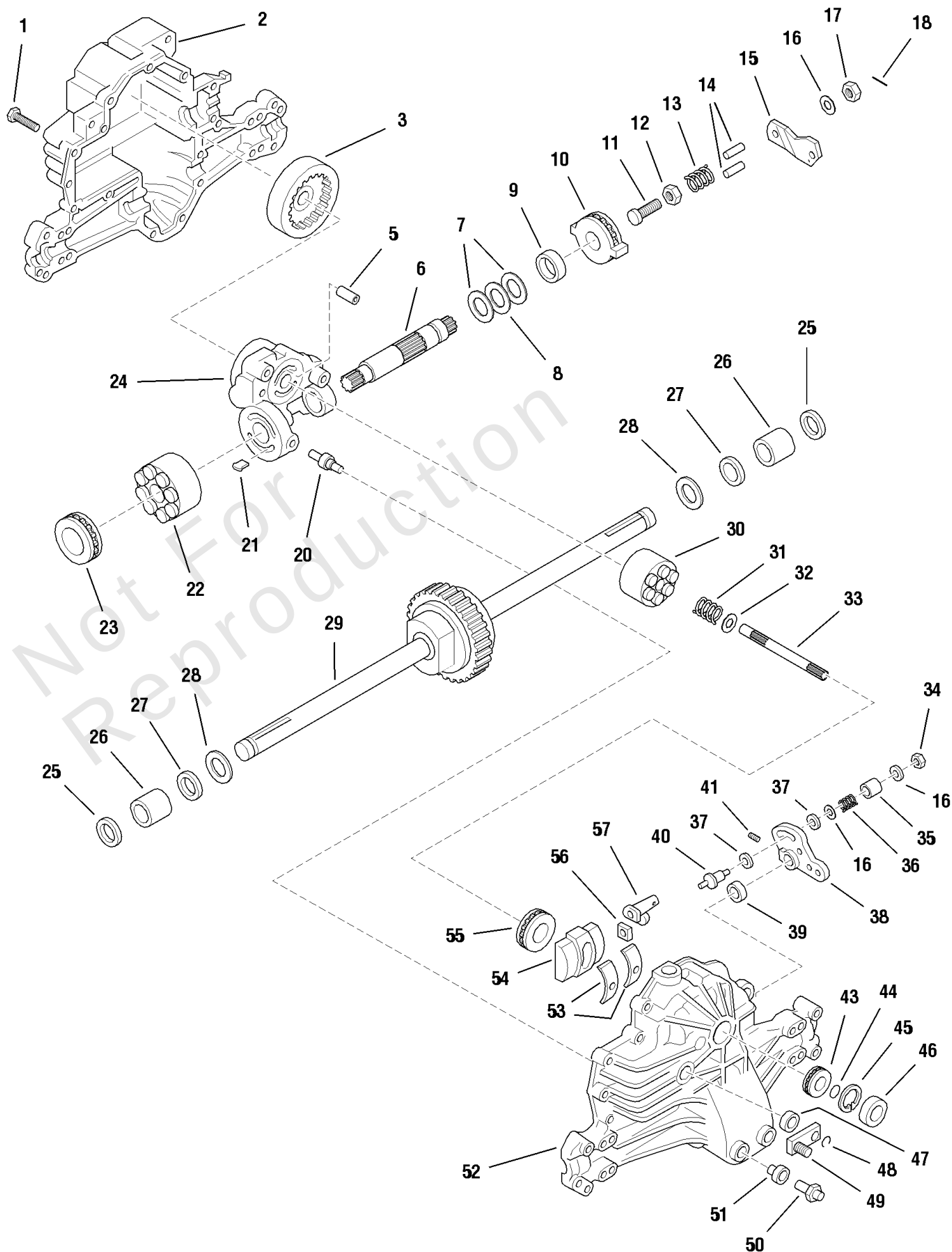
REF NO	PART NO	QTY	DESCRIPTION
1	1715164SM	21	BOLT, 1/4-20 x 1-3/8
2	1715182SM	1	HOUSING, Lower
3	1715157SM	1	OIL FILTER ELEMENT
5	1715165SM	2	PIN
6	1715149SM	1	SHAFT, Motor
7	1715156SM	2	WASHER
8	1715155SM	1	RING, Retaining
9	1715154SM	1	SEAL-LIP .26 x .42 x .8
10	1715159SM	1	BRAKE ROTOR/STATOR KIT
11	1715158SM	1	BOLT, 5/16-18 x 1-3/4
12	1709919SM	1	NUT, Hex, Lock, 5/16-24
13	1714808SM	1	COMPRESSION SPRING
14	1709915SM	2	PIN-ACTUATING
15	1709916SM	1	ARM-ACTUATING
16	1924874SM	3	WASHER, 7/16 x 7/8 x 1/16
17	1714431SM	1	CASTLE NUT, 5/16-24
18	1918447SM	1	COTTER PIN
20	1715152SM	1	ACTUATOR-BYPASS
21	1715233SM	1	BYPASS PLATE
22	1715276SM	1	BLOCK-CYLINDER (MOTOR) ASSY.
23	1715274SM	1	BEARING, Thrust .42 x .68 x .16
24	1715797SM	1	CENTER SECTION ASSEMBLY
25	1715170SM	2	SEAL, Wiper
26	1715181SM	2	SLEEVE BEARING
27	1715162SM	2	SEAL 3/4 x 1-1/4 x 1/4
28	1715180SM	2	WASHER-3/4 x 1.5 x .13
29	1715179SM	1	DIFFERENTIAL ASSEMBLY
30	1715146SM	1	BLOCK-CYLINDER PUMP ASSY.
31	1715171SM	1	SPRING, Block
32	1715172SM	1	WASHER, Block Thrust
33	1715163SM	1	SHAFT, Input
34	1715178SM	1	NUT-HEX LOCK 5/16-24
35	1714740SM	1	SPACER
36	1714739SM	1	SPRING
37	1714737SM	2	PUCK, Dampener
38	1714738SM	1	ARM, Control
39	1709908SM	1	SEAL-LIP
40	1714741SM	1	STUD, 5/16-24
41	1709910SM	1	SET SCREW
43	1715142SM	1	BEARING, Shaft Ball
44	1715141SM	1	RING-WIRE, Retaining
45	1706174SM	1	RING, Retaining
46	1706173SM	1	SEAL-LIP
47	1709921SM	1	SEAL-LIP 1.0 x .25 x .7
48	1709922SM	1	RING, Retaining
49	1709907SM	1	ARM-BYPASS
50	1709905SM	1	BREATHER ASSY.
51	1654930SM	1	BUSHING-VENT
52	1715183SM	1	UPPER HOUSING ASSEMBLY
53	1715143SM	2	BEARING, Cradle
54	1715145SM	1	SWASHPLATE, Variable

Transmission SERVICE PARTS - Hydro-Gear 311-0500 Models

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 1693044

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



Transmission SERVICE PARTS - Hydro-Gear 311-0500 Models

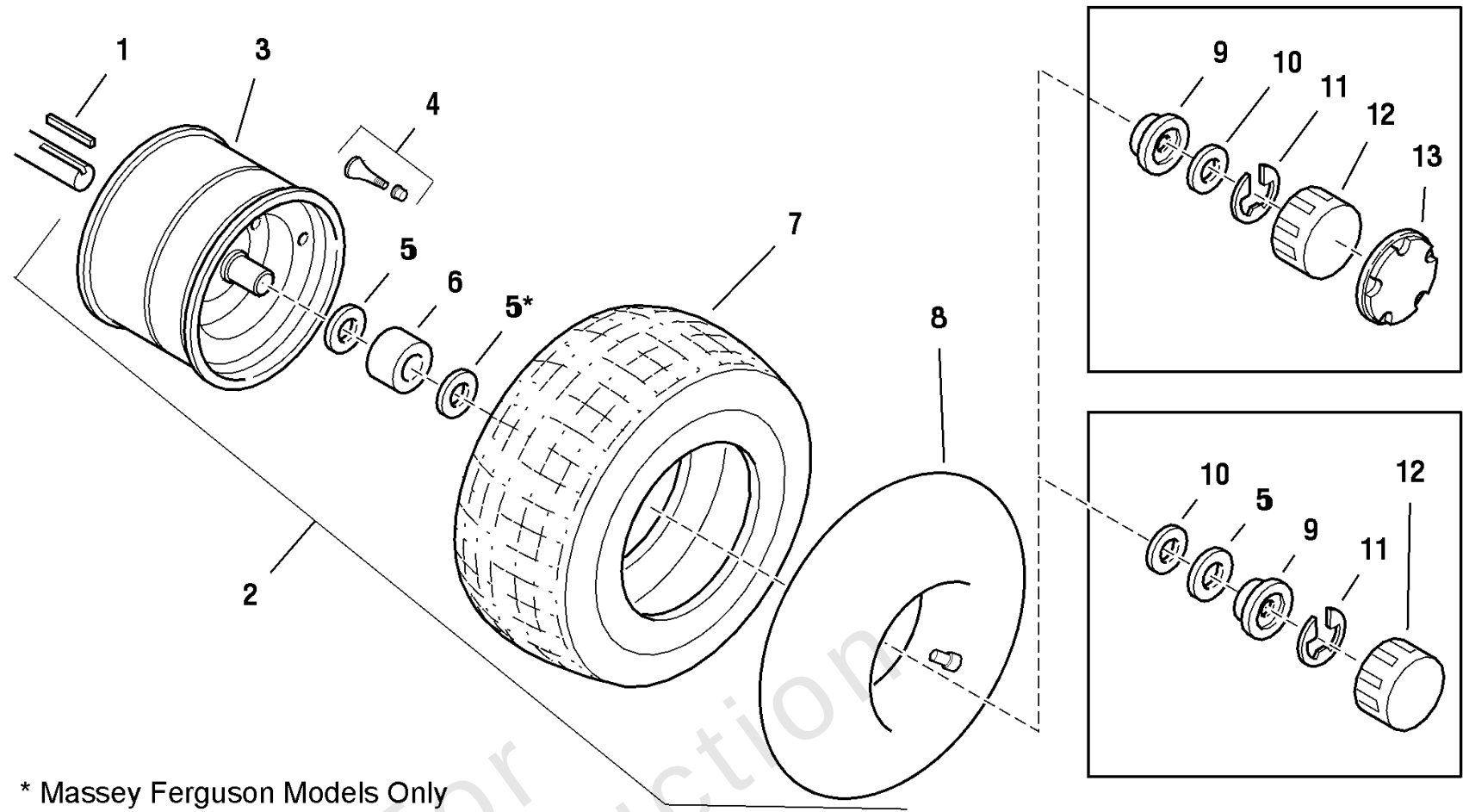
REF NO	PART NO	QTY	DESCRIPTION
55	1715144SM	1	BEARING, Thrust .30 x .52 x .13
56	1715148SM	1	GUIDE-SLOT
57	1715147SM	1	ARM, Trunnion

Not For Reproduction

Wheels & Tires

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 1693044



* Massey Ferguson Models Only

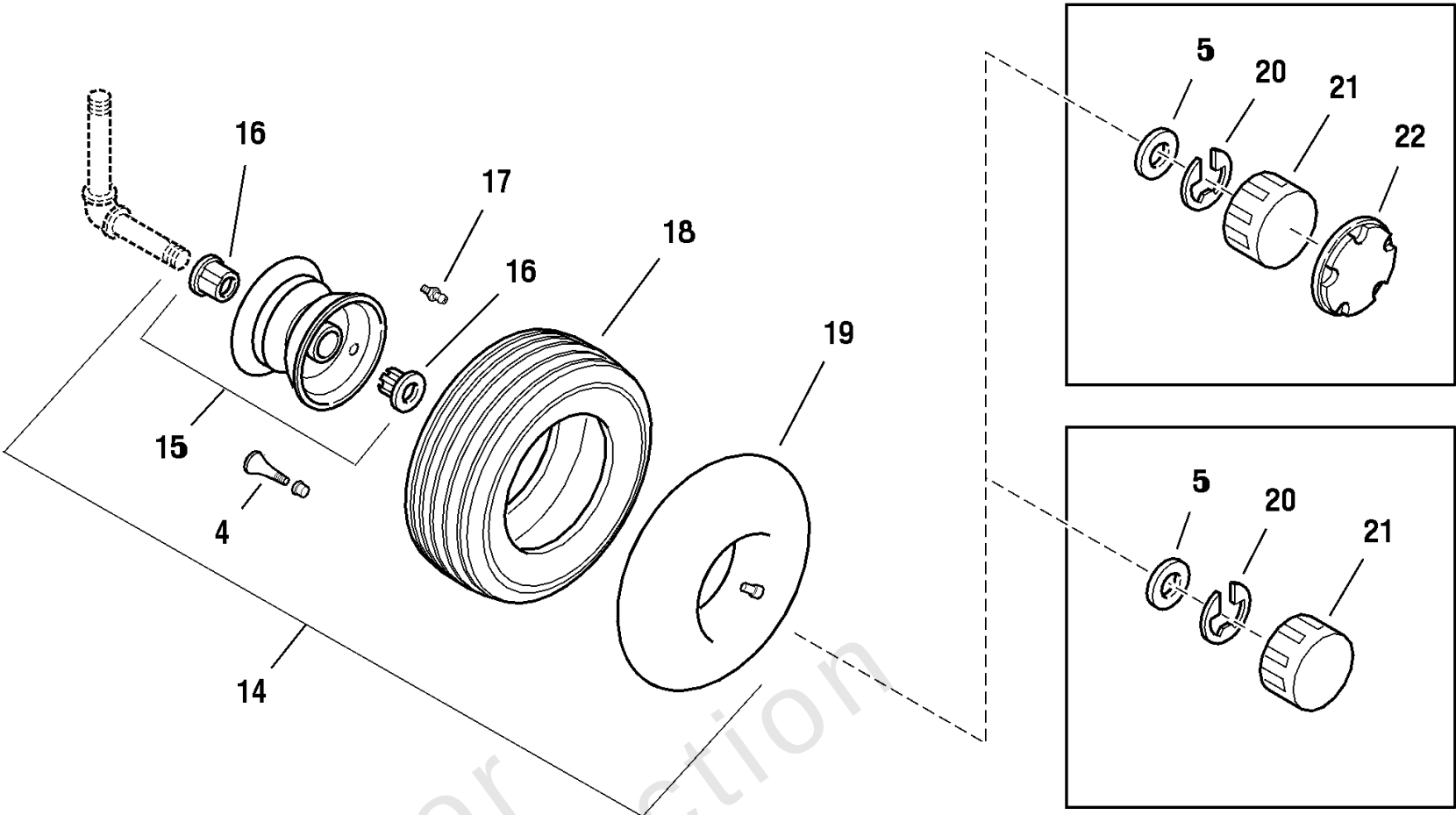
Wheels & Tires

REF NO	PART NO	QTY	DESCRIPTION
1	1729279SM	2	KEY, Square, 3/16 x 3/16 x 1-1/2 long
2	1723171SM	2	REAR WHEEL & TIRE ASSY. -(Incl. Ref. Nos. 1, 2, 8 & 10)
3	1709385SM	2	REAR WHEEL ASSY., Metallic Gray
4	2172353SM	4	VALVE STEM & CAP
5	2860202SM	14	WASHER, 3/4 -(Qty. 10 used on hydro models)
6	1663180SM	A/R	SPACER -(Hydro models only)
7	1709381SM	2	TIRE, Rear Wheel, 16 X 6.50-8
8	2164247SM	2	TUBE, Rear Wheel
9	1701435SM	2	RETAINER, Cap
10	1960114SM	2	WASHER, 3/4 I.D. x 1-1/16 O.D. x 1/16 Thk.
11	2827794SM	2	KLIPRING, .75 Dia Shaft
12	1676519SM	2	CAP, Threaded
13	1714926SM	2	HUB CAP, Scalloped, 8"

Wheels & Tires (Front)

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 1693044



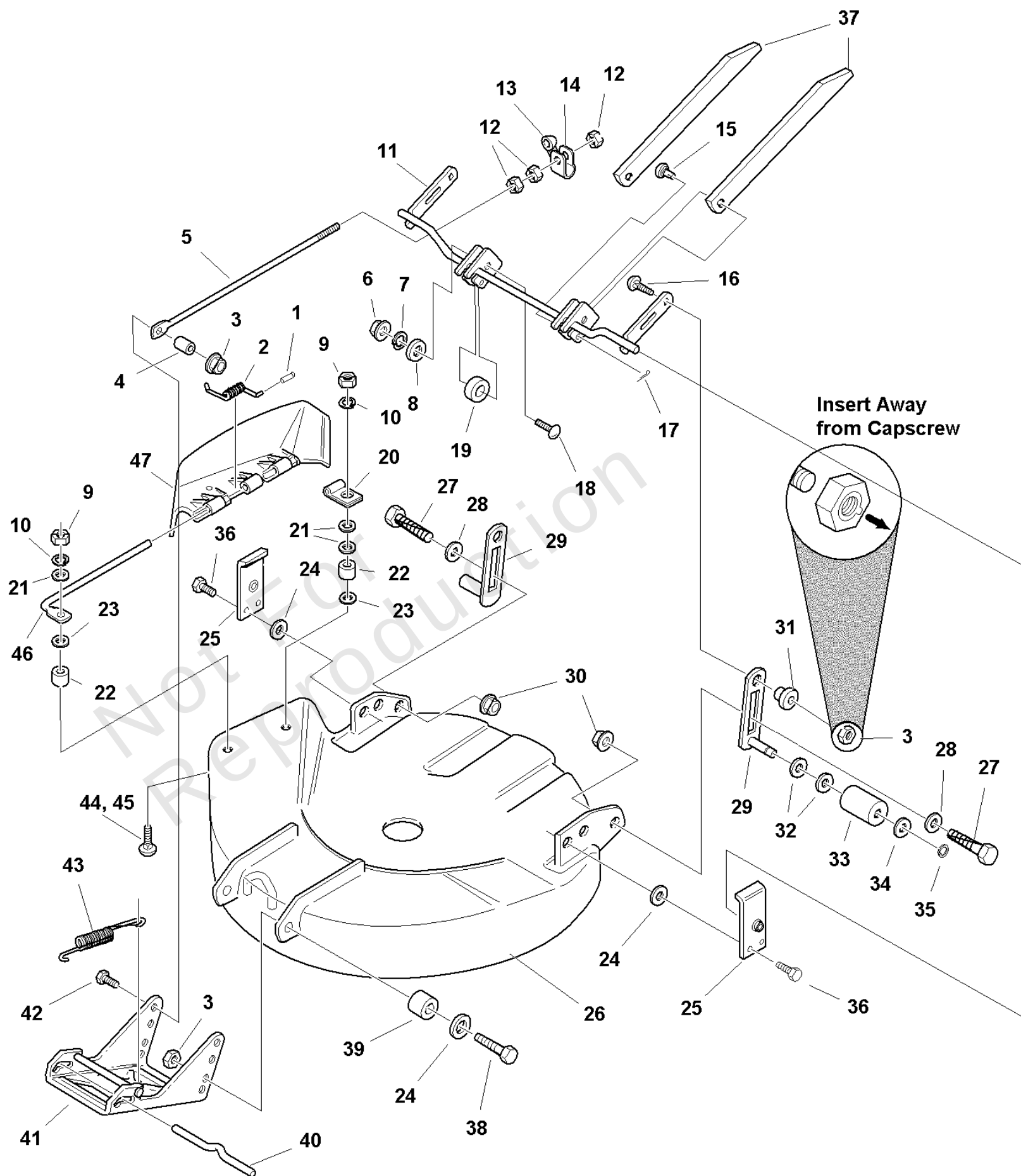
Wheels & Tires (Front)

REF NO	PART NO	QTY	DESCRIPTION
?1	1729279SM	2	KEY, Square, 3/16 x 3/16 x 1-1/2 long
4	2172353SM	4	VALVE STEM & CAP
5	2860202SM	14	WASHER, 3/4 -(Qty. 10 used on hydro models)
?6	1663180SM	A/R	SPACER -(Hydro models only)
?8	2164247SM	2	TUBE, Rear Wheel
?9	1701435SM	2	RETAINER, Cap
14	1723170SM	2	FRONT WHEEL & TIRE ASSY.,13 x 5.00-6, Metallic Gray -(Incl. Ref. Nos. 1, 4, 6 & 8)
15	1709383SM	2	FRONT WHEEL ASSY.,13 x 5.00-6, Metallic Gray -(Incl. Ref. No. 9)
16	1713167SM	4	BUSHING, Metal, 7-21/32 I.D.
17	2812808SM	2	Grease Fitting
18	1709376SM	2	TIRE, Front Wheel, 13 x 5.00-6
19	1664090SM	2	TUBE, Front Wheel, 4.10/3.50 x 6
20	1611710SM	2	KLIP RING
21	1673333SM	2	CAP, Threaded
22	1714925SM	2	HUB CAP, 6", Scalloped

30" Mower Deck - Housing, Hitch & Height Adjustment

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 1693044



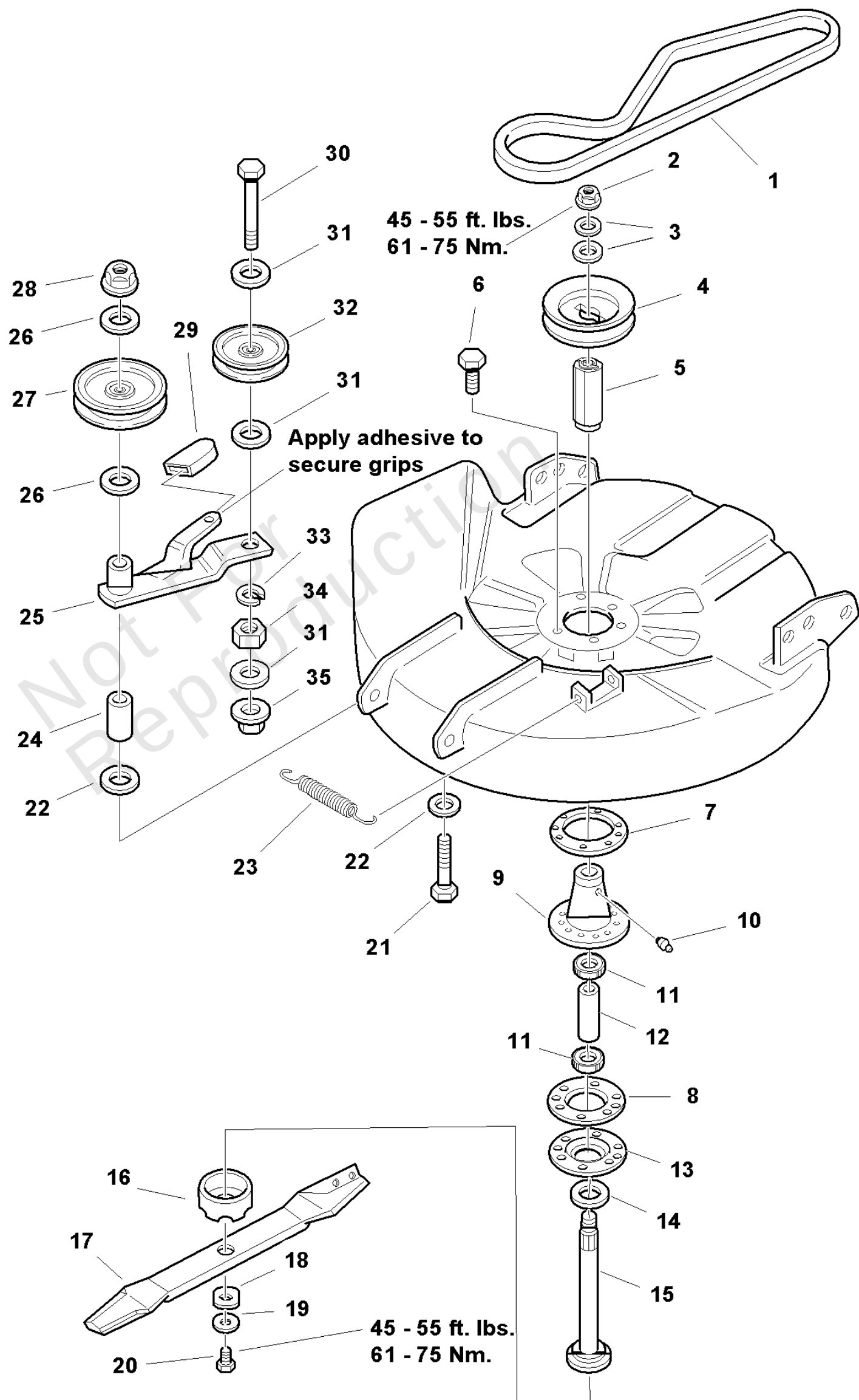
30" Mower Deck - Housing, Hitch & Height Adjustment

REF NO	PART NO	QTY	DESCRIPTION
1	1723323SM	1	CAP, Spring End
2	7101082SM	1	SPRING, Torsion
3	2860681SM	5	NUT, Hex Flange, 3/8-16
4	1611705SM	1	SPACER-0.385IDX0
5	1707300SM	1	ROD, Adjustment
6	1917372SM	2	NUT, Hex, 5/16-18
7	1917356SM	2	LOCKWASHER, 5/16
8	1919326SM	2	WASHER, 5/16
9	1920397SM	2	NUT, Hex, 1/4-20 ESNA
11	1707540ASM	1	ARM ASSEMBLY, Mower
12	1913744SM	3	NUT, Hex Jam, 1/2-13
13	1671260SM	1	SPACER
14	1707280ASM	1	TRUNNION
15	1733568SM	2	PIN-RND HD DRILLED .3
16	1931352SM	2	BOLT, Carriage, Short Neck, 3/8-16 x 1-1/2
17	1960074SM	2	CLIP, HAIR PIN .093DI
18	1960223SM	2	BOLT-RD HD SH SQ NK 5
19	1704716SM	2	SPACER
20	1704873SM	1	CLAMP, WIRE, .312DIA
21	1921319SM	3	WASHER, Plain (1 Required for Export)
22	1700692SM	2	SPACER (Export)
23	1960518SM	2	PUSHNUT, 1/4
24	1924940SM	6	WASHER, Flat, 3/8
25	1708250ASM	2	PLATE, Pivot Support
26	1685670SM	1	HOUSING ASSEMBLY, 30" (Orange)
26	1687157SM	1	HOUSING ASSEMBLY, 30" (Red)
26	1687135SM	1	HOUSING ASSEMBLY, 30" (Black)
27	2172622SM	2	BOLT, Shoulder, 3/8-16 X 1.34, 1/2 Shoulder
28	1924361SM	2	WASHER, Flat
29	1708519ASM	2	SUPPORT ASSEMBLY, Roller
30	1928352SM	2	NUT, Hex, Flange, Whizlock, 3/8-16
31	1704082SM	2	NUT, Hex Adjusting, 11/16
32	1924366SM	4	WASHER, 5/8
33	1668487SM	2	ROLLER
34	1960020SM	2	WASHER, Plain, 21/32
35	2153124SM	2	RING, Retaining
36	1664847SM	4	CAPSCREW, Taptite, 5/16-18 x 3/4
37	1709209ASM	2	BAR, Mower Transport
38	1921968SM	2	CAPSCREW, Hex, 3/8-16 x 1-3/8
39	2157081SM	2	SPACER
40	1715759SM	1	ROD, 3/8 x 8
41	1707432ASM	1	HITCH ASSEMBLY
42	1921210SM	1	CAPSCREW, Hex Head, 3/8-16 x 1
43	2156302SM	1	SPRING, Extension
44	1931317SM	2	CARRIAGE BOLT, 1/4-20 x 3/4
45	1931320SM	2	CARRIAGE BOLT, 1/4-20 x 1-1/4 (Export)
46	1664947SM	1	ROD, Deflector
47	1705449SM	1	DEFLECTOR, Plastic

30" Mower Deck - Drive & Arbor

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 1693044



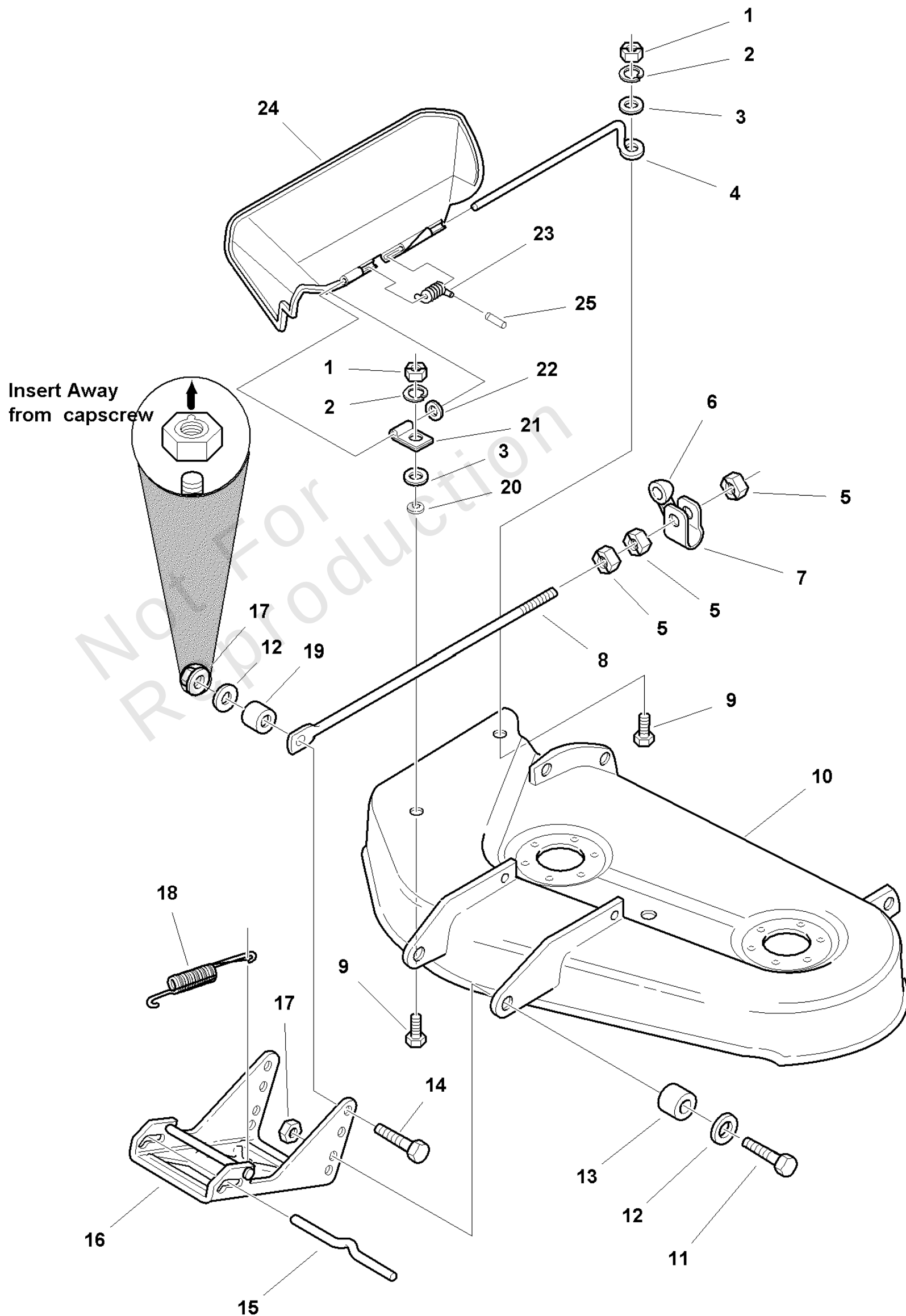
30" Mower Deck - Drive & Arbor

REF NO	PART NO	QTY	DESCRIPTION
1	1719746SM	1	V-BELT
2	1714419SM	1	NUT, Hex Flange, 9/16-18
3	1713675SM	2	WASHER, Bellville .56ID x 1.34 OD x .05T
4	1713092SM	1	PULLEY
5	1713613SM	1	HUB, Pulley, 1-3/16
6	1960373SM	6	CAPSCREW, Hex Head, Taptite, 5/16-18 x 1
7	1677274ASM	1	ADAPTER, Arbor
8	1707335SM	1	GASKET, Foam
9	1713338ASM	1	HOUSING ASSEMBLY, Arbor Bottom, w/Lube Fitting -(Includes Ref. No. 10)
10	1704314SM	1	LUBE FITTING, .250 DR
11	1705897SM	2	BEARING, BALL 11/16X1
12	1732543SM	1	SPACER
13	1713199ASM	1	COVER, Arbor Housing
14	1713619SM	1	WASHER, Cupped
15	1713609SM	1	SHAFT, Arbor, 5-53/64"
16	1713196SM	1	SHIELD, Grass, Lower
17	1664019ASM	1	BLADE, Mower, 30"
18	1713089SM	1	WASHER, Hex
19	1656916SM	1	WASHER, SPRING 0.475I
20	2823471SM	1	CAPSCREW, Hex Head, 7/16-14 x 1, GR 8
21	1923903SM	1	CAPSCREW, Hex Head, 3/8-16 x 3
22	1924356SM	2	WASHER, Flat, 3/8 x 1-1/2 x 1/8
23	1715435SM	1	SPRING, EXTENSION, 1.
24	1669105SM	1	SPACER
25	1708562SM	1	LEVER ASSEMBLY
26	1924940SM	2	WASHER, Plain, 3/8
27	1707435SM	1	PULLEY ASSEMBLY Idler, Fixed, 6" Dia.
28	1928352SM	1	NUT, Hex, Whizlock, 3/8-16
29	1708966SM	1	GRIP, Lever
30	1923701SM	1	CAPSCREW, Hex Head, 3/8-16 x 2
31	1922755SM	3	WASHER, 13/32 x 1 x 1/8
32	1704926SM	1	IDLER PULLEY, Backside
33	1916965SM	1	LOCKWASHER, 3/8
34	1916950SM	1	NUT, Hex, 3/8
35	1928731SM	1	NUT, Hex, Lock, 3/8-16

34" Mower Deck - Housing, Hitch & Deflector

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 1693044



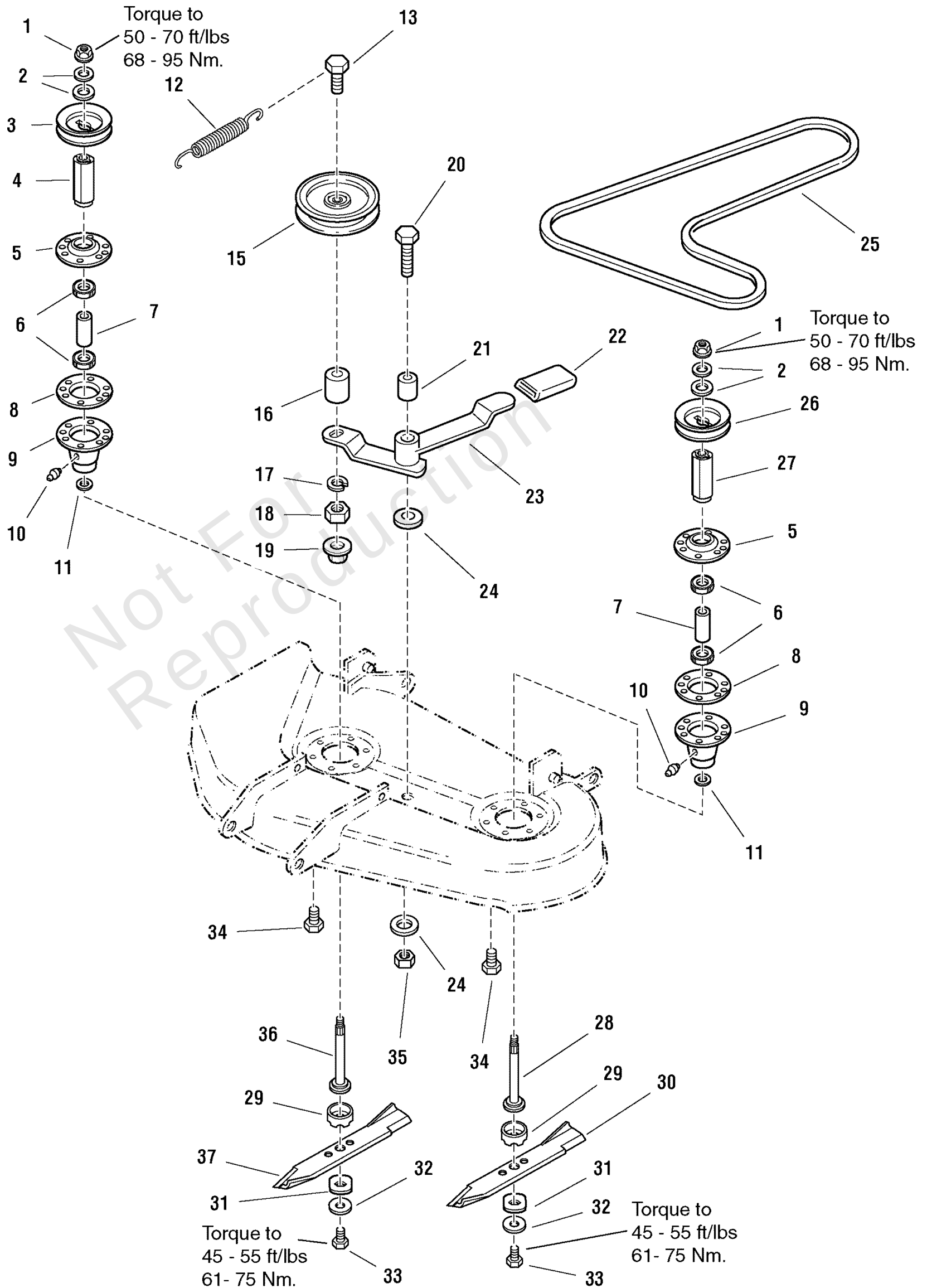
34" Mower Deck - Housing, Hitch & Deflector

REF NO	PART NO	QTY	DESCRIPTION
1	1916622SM	2	NUT, Hex, 1/4-20
3	1960353SM	2	WASHER, Flat, 17/64 x 27/32 x 1/8
4	1706709SM	1	ROD-.283DIA 11.65LG D
5	1913744SM	3	NUT, Hex Jam, 1/2-13
6	1671260SM	1	SPACER
7	1707280ASM	1	TRUNNION
8	1707300SM	1	ROD, Adustment
9	1931318SM	2	CARRIAGE BOLT, 1/4-20 X 7/8
10	1685672SM	1	HOUSING ASSEMBLY, 34" (Orange)
10	1687137SM	1	HOUSING ASSEMBLY, 34" (Black)
11	1921968SM	2	CAPSCREW, Hex, 3/8-16 x 1-3/8
12	1924940SM	3	WASHER, Flat, 3/8
13	2157081SM	2	SPACER
14	1921210SM	1	CAPSCREW, Hex Head, 3/8-16 x 1
15	1715759SM	1	ROD, 3/8 x 8
16	1707432ASM	1	HITCH ASSEMBLY
17	2860681SM	3	NUT, Hex Flange, 3/8-16
18	2156302SM	1	SPRING
19	1611705SM	1	SPACER-0.385IDX0
20	1960518SM	1	PUSHNUT
21	1704873SM	1	CLAMP, WIRE, .312DIA
22	1919326SM	1	WASHER, 5/16
23	1723938SM	1	SPRING
24	1705449SM	1	DEFLECTOR, Plastic
25	1723323SM	1	CAP, Spring End

34" Mower Deck - Drive & Arbor

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 1693044



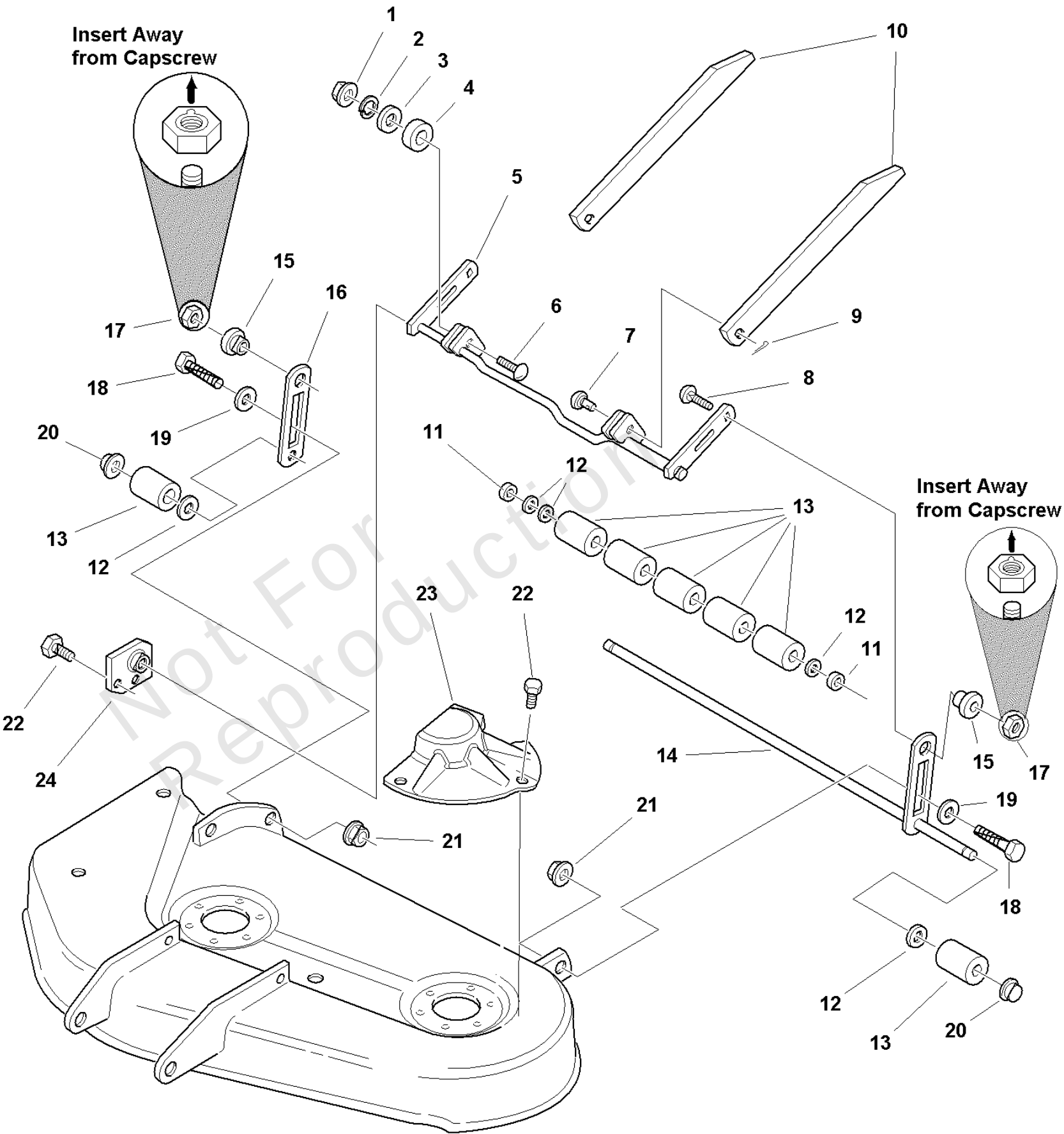
34" Mower Deck - Drive & Arbor

REF NO	PART NO	QTY	DESCRIPTION
1	1714419SM	2	NUT, Hex, Flange, 9/16-18
2	1713675SM	4	WASHER, Bellville .56ID x 1.34 OD x .05T
3	1713091SM	1	PULLEY, 5"
4	1713614SM	1	HUB, Pulley, 1-35/64"
5	1713199ASM	2	COVER, Arbor Housing ASSEMBLY
6	1705897SM	4	BEARING, BALL 11/16X1
7	1732543SM	2	SPACER
8	1707335SM	2	GASKET, Foam
9	1713338ASM	2	HOUSING ASSEMBLY, Arbor Bottom, w/Lube Fitting -(Includes Ref. No. 10)
10	1704314SM	2	LUBE FITTING, .250 DR
11	1713619SM	2	WASHER
12	2164213SM	1	SPRING
13	1921972SM	1	CAPSCREW, 3/8-16 x 2-1/2
15	1704926SM	1	PULLEY, Idler, Backside
16	1667812SM	1	SPACER
17	1916965SM	1	LOCKWASHER, 3/8
18	1916950SM	1	NUT, Hex, 3/8-16
19	1930645SM	1	NUT, Hex, Flange, Lock, 3/8-16
20	1928957SM	1	CAPSCREW, Hex Head, 3/8-16 x 2-3/4
21	1657242SM	1	SPACER
22	1708966SM	1	GRIP, Lever
23	1708561SM	1	LEVER ASSEMBLY
24	1924356SM	2	WASHER, Flat, 3/8
25	1723391SM	1	V-BELT
26	1713090SM	1	PULLEY, 3-3/4"
27	1713613SM	1	HUB, Pulley, 1-3/16"
28	1713609SM	1	SHAFT, Arbor, 5-53/64"
29	1713196SM	2	SHIELD, Grass, Lower
30	1706737ASM	1	BLADE, 14-27/64"
31	1713089SM	2	WASHER, Hex
32	1656916SM	2	WASHER, SPRING 0.475I
33	2823471SM	2	CAPSCREW, Hex Head, 7/16-14 x 1-1/4, GR 8
34	1664847SM	12	CAPSCREW Taptite, 5/16-18 x 3/4
35	1928352SM	1	NUT, Hex, 3/8-16
36	1713610SM	1	SHAFT, Arbor, 6-33/64"
37	1706738ASM	1	BLADE, MOWER, 19-7/8

34" Mower Deck - Height Adjustment

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 1693044



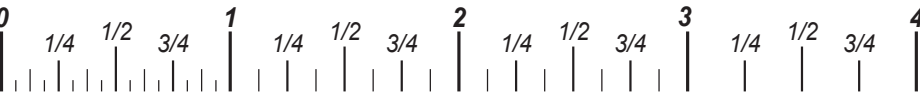
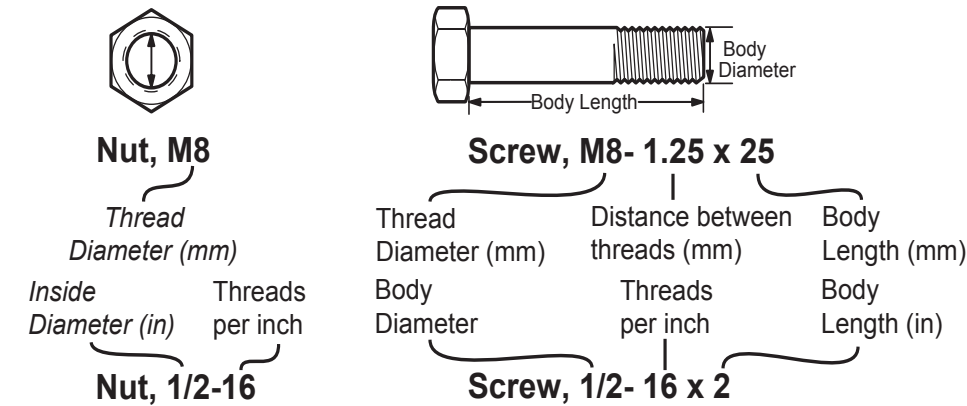
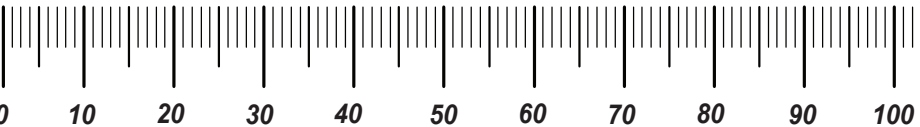
34" Mower Deck - Height Adjustment

REF NO	PART NO	QTY	DESCRIPTION
1	1917372SM	1	NUT, Hex, 5/16-18
2	1917356SM	2	LOCKWASHER, 5/16
3	1919326SM	2	WASHER, 5/16
4	1704716SM	2	SPACER
5	1707286ASM	1	ARM ASSEMBLY
6	1960223SM	2	BOLT-RD HD SH SQ NK 5
7	1733568SM	2	PIN-RND HD DRILLED .3
8	1931352SM	2	BOLT, Carriage, Short Neck, 3/8-16 x 1-1/2
9	1960074SM	2	CLIP, HAIR PIN .093DI
10	1709209ASM	2	BAR, Mower Transport
11	1602946SM	2	SPACER, .66 ID
12	1924366SM	5	WASHER, 5/8
13	1668513SM	7	ROLLER, .652 ID, 2.50 OD, 4.10 LG
14	1686682SM	1	SHAFT ASSEMBLY, Roller (Includes Ref. 20)
15	1704082SM	2	NUT, Hex Adjusting, 11/16
16	1708520ASM	1	PLATE, Support, RH
17	2860681SM	2	NUT, Hex Flange, 3/8-16
18	2172622SM	2	BOLT, Shoulder, 3/8-16 X 1.34, 1/2 Shoulder
19	1924361SM	2	WASHER, Flat, 1/2
20	1960520SM	2	NUT, Push, 5/8
21	1928352SM	2	NUT, Flange Lock, 3/8
22	1664847SM	5	CAPSCREW, Taptite, 5/16-18 x 5/8
23	1707567SM	1	COVER, Arbor
24	1708564ASM	1	PLATE, Support

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).

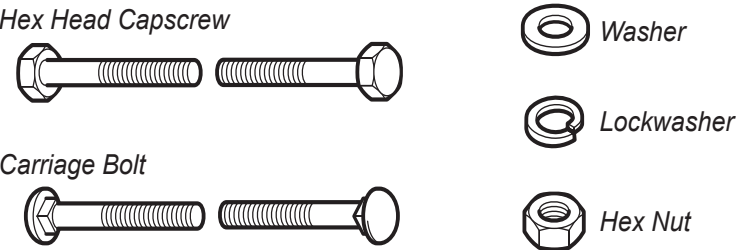
When bolt or capscrew is identified as 1/2 - 16 x 2" (M8 - 1.25 x 50), this means the *Nominal size*, or body diameter is 1/2 inch (8mm metric thread diameter), the second number, 16, represents the *threads per inch*, (*distance between threads*). The final number is the body length of the bolt or screw,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

