

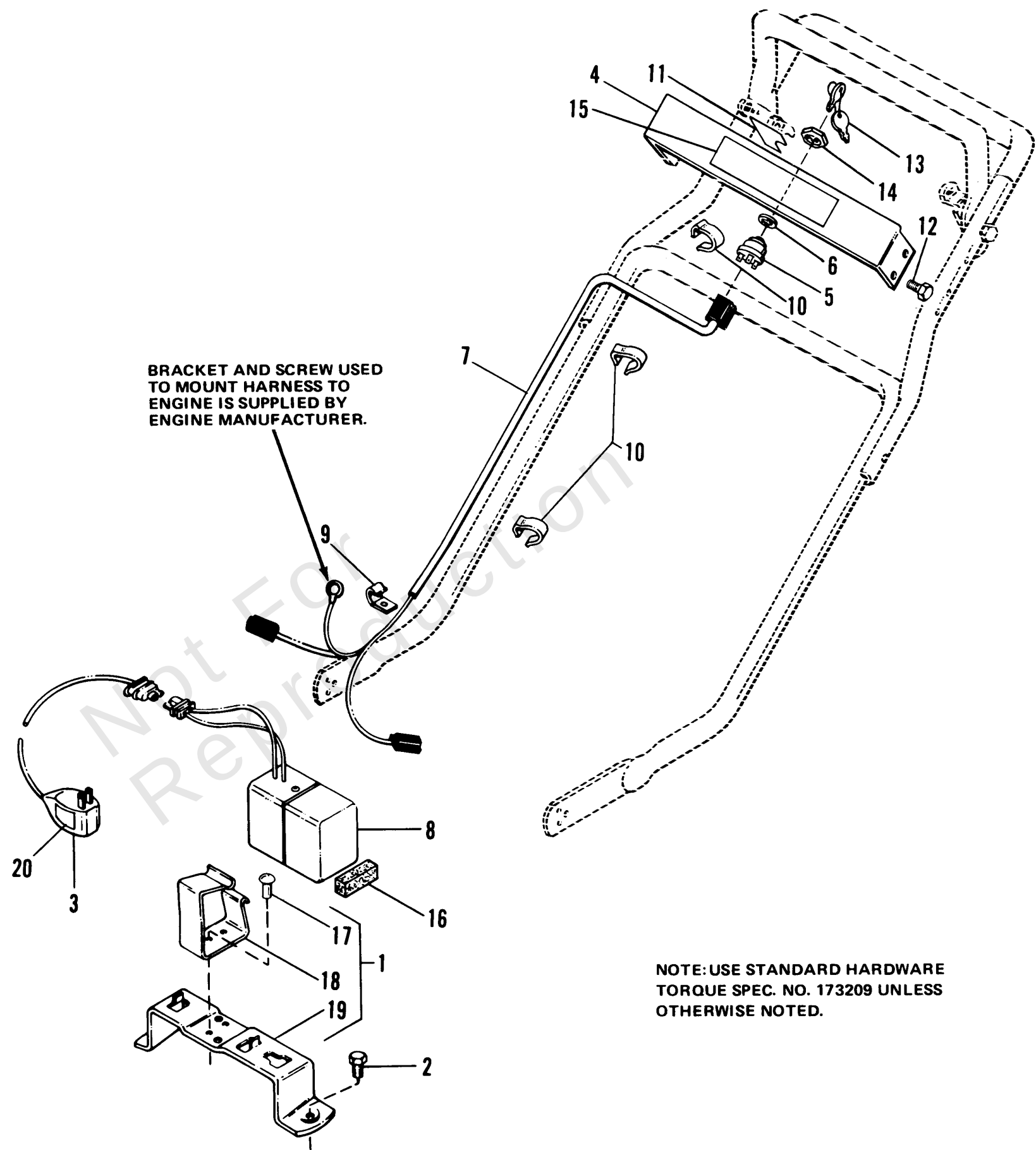


Parts Manual

Mfg. No: 1690279
1021, 21" Self Propelled Mower (ES)

Model Components	Page
Electrical Group.	4
Engine, Housing & Shroud Group.	6
Handle Group.	8
Wheel & Height Adjusters.	12
Torque Specification Chart.	14

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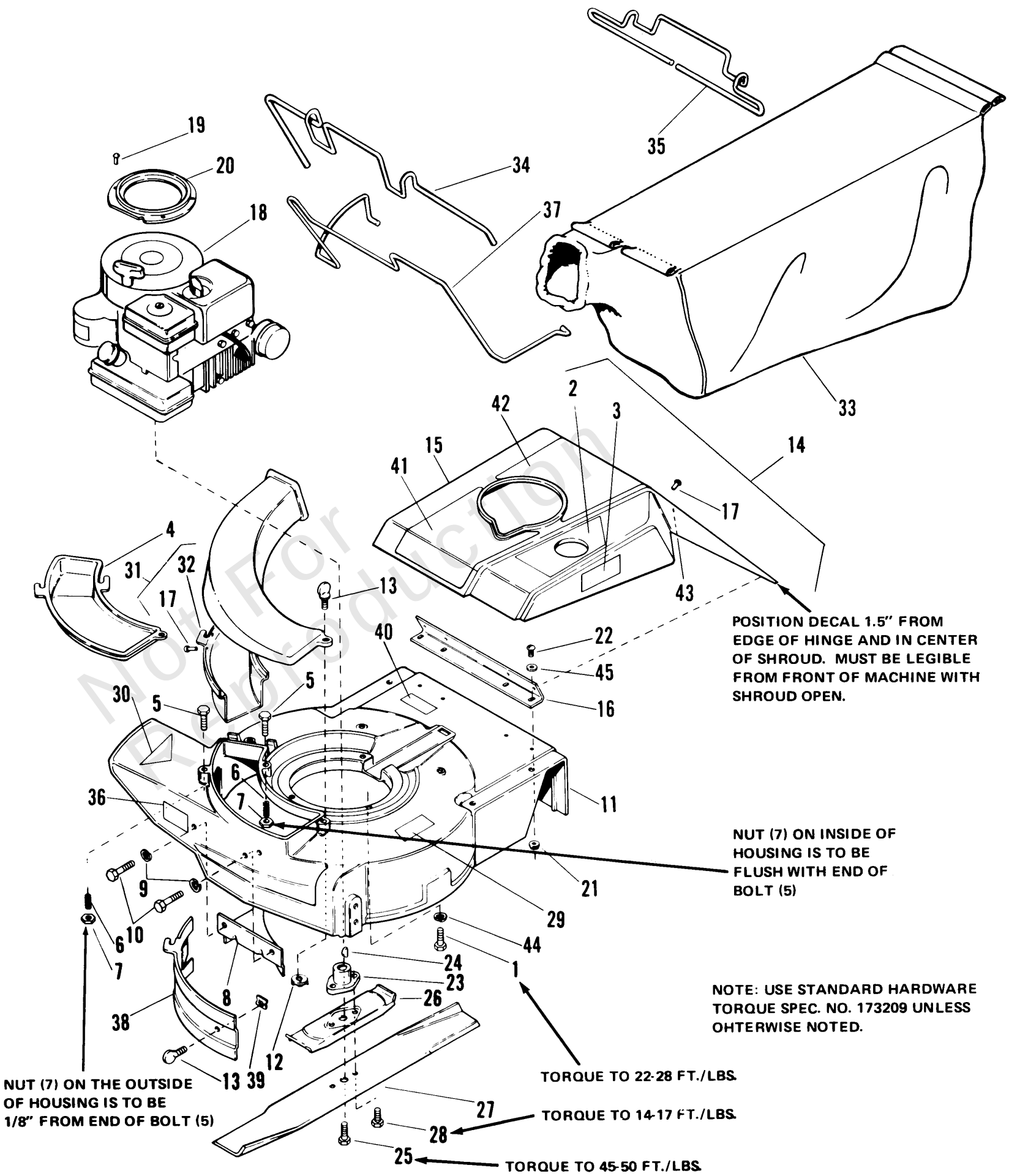
Electrical Group

REF NO	PART NO	QTY	DESCRIPTION
1	170014	1	SUPPORT ASSY, Battery
2	2829000	2	SCREW, Taptite, 1/4-20 x 3/8
3	170046	1	CHARGER, Battery
4	1657544	1	SWITCH, Mfg. Panel
5	2122201SM	1	KEY, Switch
6	928636	1	LOCKWASHER, Internal
7	1657558	1	HARNESS ASSY
8	1656590	1	BATTERY
9	108811	1	CLAMP, Cable
10	2108812	3	CLIP, Harness
11	1608527	1	DECAL, Ignition
12	2827428	4	SCREW, Taptite, 1/4-20 x 3/8
13	1717163SM	1	KEY-IGNITION INDAK
14	122235	1	NUT, Hex, Special
15	1657492	1	DECAL, Simplicity Electric Start
16	1656657	1	PAD
17	2828707SM	2	RIVET, Pop
18	170298	1	CLIP, Spring, Battery
19	170299	1	SUPPORT, Battery
20	1651724	1	DECAL, Caution

Engine, Housing & Shroud Group

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 1690279



Engine, Housing & Shroud Group

REF NO	PART NO	QTY	DESCRIPTION
1	2828635SM	3	SCREW-HEX WSHR HD TAP
2	1657165	1	DECAL, Caution
3	1657164	2	DECAL, 1021
4	171645	1	PLATE, Cover
5	2172429	2	SCREW, Special
6	171651	2	SPRING
7	2823358	2	NUT, Hex, Full, Lock, 1/4-20
8	175703	1	GUARD ASSY, Stone
9	2816964SM	2	LOCKWASHER, 1/4
10	2808295	2	CAPSCREW, Hex, 1/4-20 x 1/2
11	176069	1	HOUSING, 21"
12	108699	1	NUT, Speed, Special, 1/4-20
13	2828694	2	SCREW, Wing, 1/4-20 x 5/8
14	108760	1	SHROUD ASSY (Inc. Ref. Nos. 15, 16, 17)
15	-----	1	SHROUD
16	108763	1	HINGE
17	2828706	10	RIVET, 3/16 x 5/16
18	-----	1	ENGINE, 3.5 HP Briggs & Stratton.
19	928708	4	RIVET, Pop, 3/32 x .337
20	108777	1	SUPPORT, Ring
21	2828919	4	NUT & WASHER ASSY, No. 10-32
22	2830531	4	CAPSCREW, Hex Hd., No. 10-32
23	108716	1	ADAPTOR, Blade
24	2810224SM	1	KEY, Woodruff, No. 6
25	2822128	1	CAPSCREW, Hex, 3/8-24 x 1-1/2
26	108704	1	STIFFNER, Blade
27	108700	1	BLADE, 21"
28	928697	2	SCREW, 5/16-18 x 1
29	1608220	1	DECAL, Instructions
30	-----	1	DECAL, OPEI
31	1657256	1	CHUTE ASSY
32	171643	1	DEFLECTOR
33	1657134	1	GRASS BAG
34	1657414	1	SUPPORT, Bag, Front
35	1657152	1	SUPPORT, Bag, Rear
36	170488	1	DECAL, Numerial, 21"
37	1657554	1	ROD, Support Bag
38	171644	1	BAFFLE
39	2828705	1	NUT, Speed, 1/4-20
40	-----	1	I.D. PLATE
41	1657166	1	DECAL, Shroud
42	1657167	1	DECAL, Shroud
43	1657638	1	DECAL, Speed Control
44	2820427SM	3	LOCKWASHER, Ext. Tooth, 3/8
45	2817380	4	WASHER, Plain, 3/16

Footnotes:

Note:* Not a serviceable part.

Note:* Not a servicable part.

Note:* See your local Briggs & Stratton distributor for parts & service.

Note:* Not serviced seperately, order complete Shroud Assembly.

Handle Group

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 1690279

STEP 1

HANDLES TO BE PLACED IN HIGH POSITION ON HANDLE BRACKET, USING HOLE AS SHOWN.

STEP 2

INSTALL BELT (REF. NO. 17) INTO DIAMETER GROOVE OF PULLEY (REF. NO. 36).

STEP 3

ADJUST THE TURNBUCKLE ON THE CLUTCH ROD LINK SO THAT THERE IS 1/16" CLEARANCE BETWEEN THE LEFT-HAND DRIVE ROLLER AND TIRE.

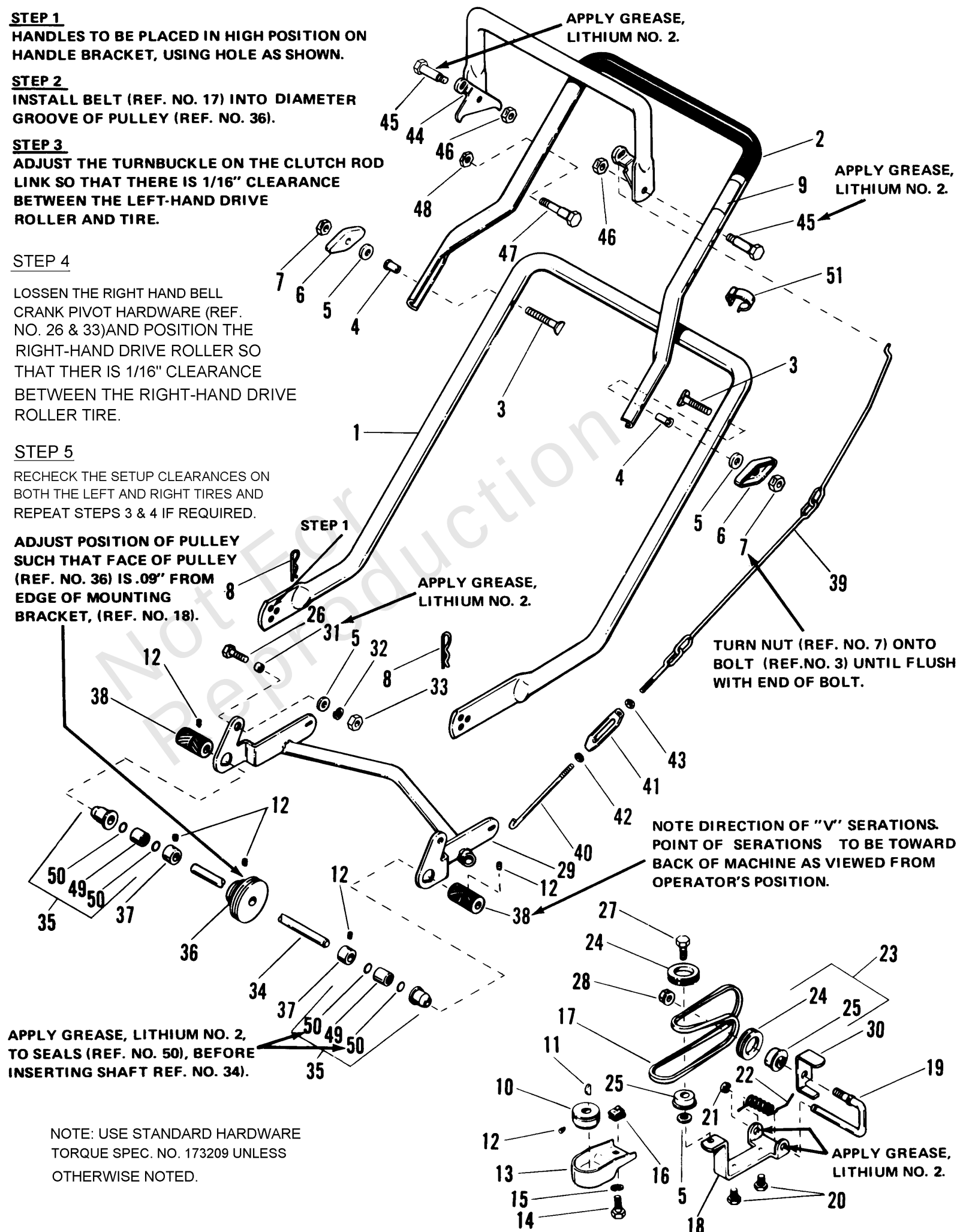
STEP 4

LOSSEN THE RIGHT HAND BELL CRANK PIVOT HARDWARE (REF. NO. 26 & 33) AND POSITION THE RIGHT-HAND DRIVE ROLLER SO THAT THERE IS 1/16" CLEARANCE BETWEEN THE RIGHT-HAND DRIVE ROLLER TIRE.

STEP 5

RECHECK THE SETUP CLEARANCES ON BOTH THE LEFT AND RIGHT TIRES AND REPEAT STEPS 3 & 4 IF REQUIRED.

ADJUST POSITION OF PULLEY SUCH THAT FACE OF PULLEY (REF. NO. 36) IS .09" FROM EDGE OF MOUNTING BRACKET, (REF. NO. 18).



Handle Group

REF NO	PART NO	QTY	DESCRIPTION
1	1657151	1	HANDLE, Lower
2	1657150	1	HANDLE, Upper
3	108778	2	BOLT, Curved Hd.
4	1657535	2	EYELET, Simpson
5	2817377	4	WASHER, Plain
6	2108848	2	NUT, Wing
7	2823362	2	LOCKNUT, Hex, Full, 5/16-18
8	1918196SM	2	CLIP, Spring
9	1608221	1	DECAL, Handle
10	1657515	1	PULLEY, Engine
11	2805121SM	1	KEY, Woodruff No. 5
12	2828734	6	SETSCREW, 5/16-18 x 1/4
13	1657181	1	COVER, Pulley
14	2821958	1	CAPSCREW, Hex, 1/4-20 x 1/2
15	2816964SM	1	LOCKWASHER, 1/4
16	2817867	1	NUT, Tinn., 1/4-20
17	1657284SM	1	BELT
18	1657247	1	BRACKET, Idler Support
19	108693	1	U-BOLT
20	2829000	2	SCREW, Taptite
21	108698	1	RING, Retaining
22	2108729SM	1	SPRING, Idler
23	2108730SM	2	PULLEY ASSY (Inc. Ref. Nos. 24, 25)
24	2108730SM	2	PULLEY, Idler
25	-----	2	BEARING, Idler
26	2106772	1	SCREW, Special, 5/16-18 x 1
27	2829783	1	SCREW, Taptite, 1/4-20 x 1
28	2830642	1	LOCKNUT, Flange, 1/4-20
29	1657259	1	BELLCRANK ASSY
30	1657175	1	LEVER
31	2156150SM	1	SPACER
32	1917356SM	1	LOCKWASHER, 5/16
33	1917372SM	1	NUT, Hex, Full, 5/16-18
34	108666	1	SHAFT, Driver
35	108667	2	BEARING & RETAINER ASSY
36	1657180	1	PULLEY, Drive
37	1729282SM	2	COLLAR, Set
38	108664	2	DRIVER, Wheel
39	1657245	1	ROD, Clutch
40	108669	1	ROD, Engaging, Lower
41	2108775SM	1	TURNBUCKLE
42	2816621	1	NUT, Hex, Full, No. 10-24
43	2828704SM	1	NUT, Hex, Full, No. 10-24
44	1653231	1	HANDLE ASSY, Engaging
45	108734	2	BOLT, Shoulder
46	2828698	2	LOCKNUT, Hex Jam, 5/16-18
47	108757	1	STOP, Handle
48	2829001	1	LOCKNUT, Hex, Flange, 5/16-18

Footnotes:

Note:* Not serviced separately, order complete Pulley Assembly.

Handle Group

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 1690279

STEP 1

HANDLES TO BE PLACED IN HIGH POSITION ON HANDLE BRACKET, USING HOLE AS SHOWN.

STEP 2

INSTALL BELT (REF. NO. 17) INTO DIAMETER GROOVE OF PULLEY (REF. NO. 36).

STEP 3

ADJUST THE TURNBUCKLE ON THE CLUTCH ROD LINK SO THAT THERE IS 1/16" CLEARANCE BETWEEN THE LEFT-HAND DRIVE ROLLER AND TIRE.

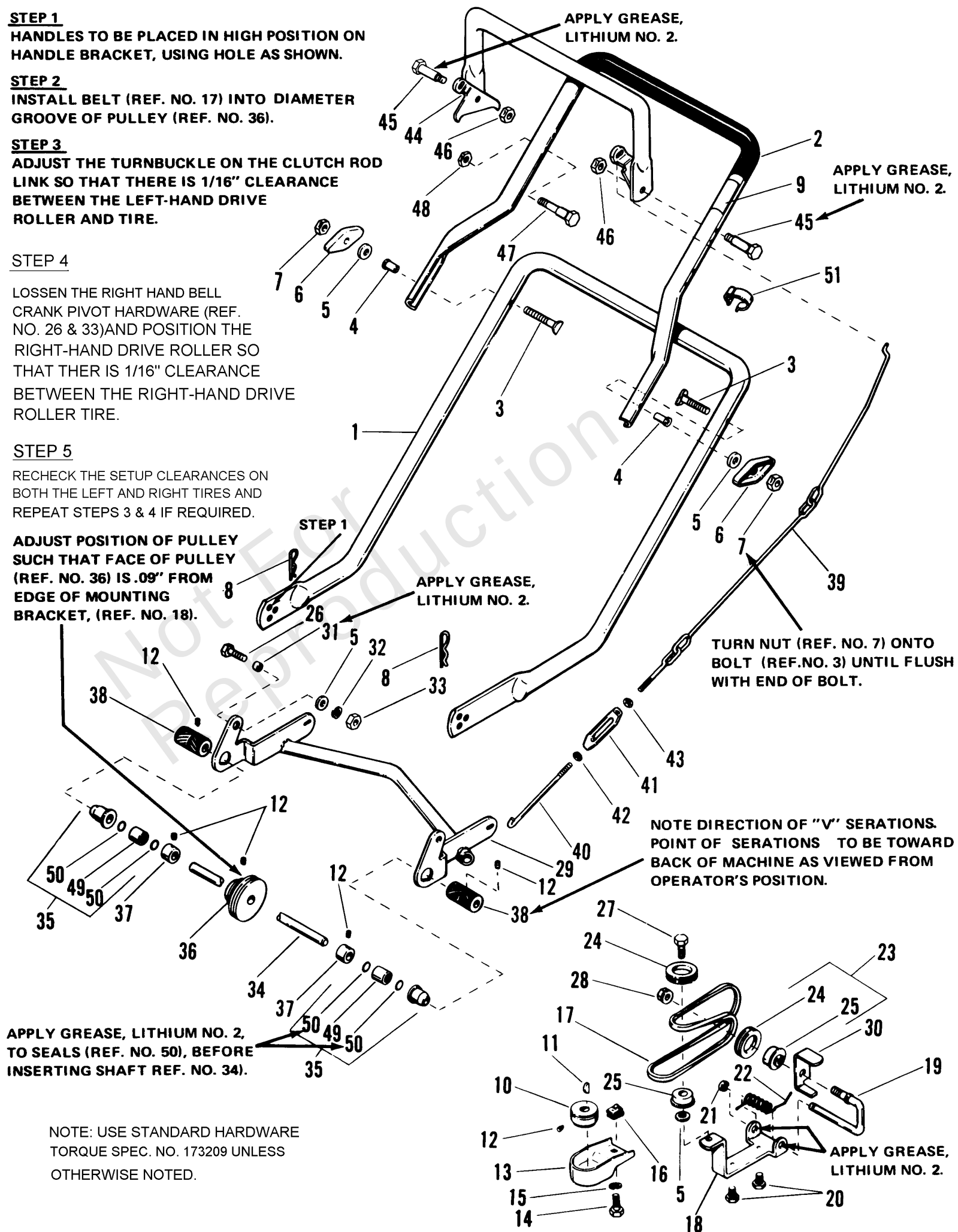
STEP 4

LOOSEN THE RIGHT HAND BELL CRANK PIVOT HARDWARE (REF. NO. 26 & 33) AND POSITION THE RIGHT-HAND DRIVE ROLLER SO THAT THERE IS 1/16" CLEARANCE BETWEEN THE RIGHT-HAND DRIVE ROLLER TIRE.

STEP 5

RECHECK THE SETUP CLEARANCES ON BOTH THE LEFT AND RIGHT TIRES AND REPEAT STEPS 3 & 4 IF REQUIRED.

ADJUST POSITION OF PULLEY SUCH THAT FACE OF PULLEY (REF. NO. 36) IS .09" FROM EDGE OF MOUNTING BRACKET, (REF. NO. 18).



Handle Group

REF NO	PART NO	QTY	DESCRIPTION
49	108654	2	BEARING, Needle
50	108696	4	SEAL, Grease
51	2108812	1	CLAMP,

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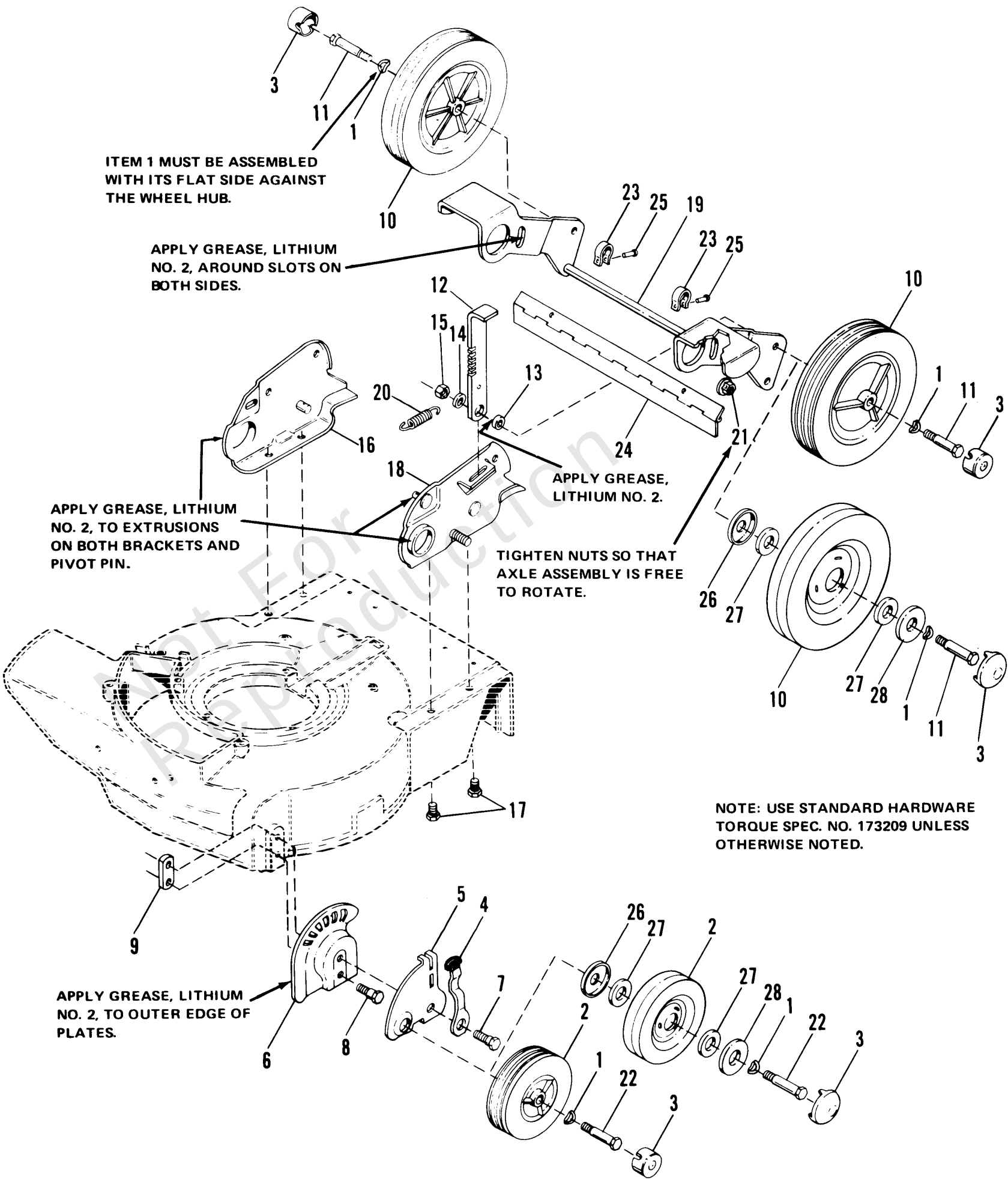
Footnotes:

Note:* Not serviced seperately, order complete Pulley Assembly.

Wheel & Height Adjusters

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 1690279



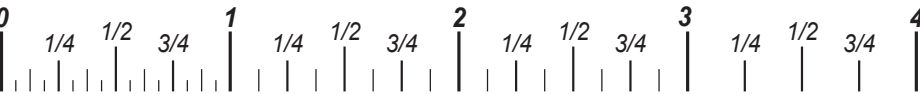
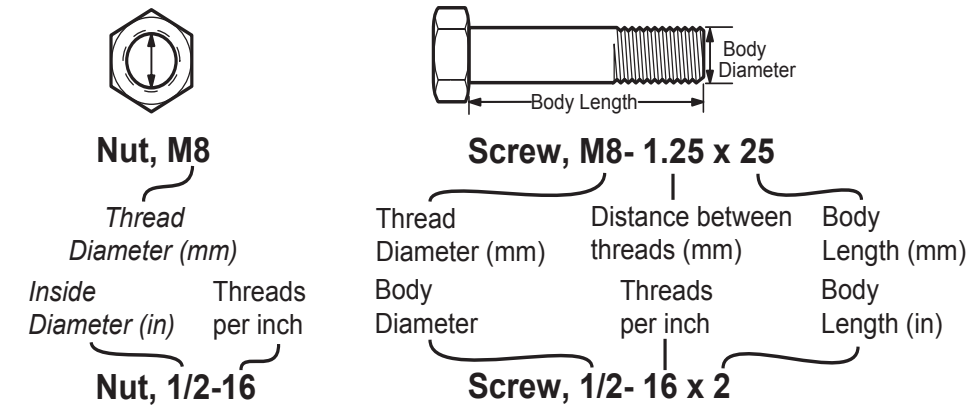
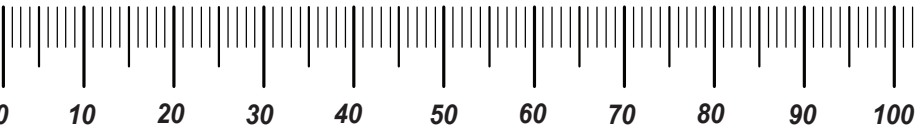
Wheel & Height Adjusters

REF NO	PART NO	QTY	DESCRIPTION
1	2170157SM	4	WASHER, Special
2	108702	2	WHEEL, 6" Front -FOR USE ONLY WITH MFG. NO. 1690278 & 1690279.
2	170153	2	WHEEL, 6" Front -FOR USE ONLY WITH MFG. NO. 1690277.
3	108783	4	CAP, Hub -FOR USE ONLY WITH MFG. NO. 1690278 & 1690279.
3	170156	4	CAP, Hub -FOR USE ONLY WITH MFG. NO. 1690277.
4	108641	2	SPRING, Height Adj.
5	108639	2	ADJUSTER, Height, Front
6	108640	2	PLATE, Adjuster
7	108711	2	BOLT, Shoulder
8	2821965	2	CAPSCREW, Hex, 3/8-16 x 3/4
9	108697	2	NUT, Pilot Twin
10	108701	2	WHEEL, 10" -FOR USE ONLY WITH MFG. NO. 1690278 & 1690279.
10	172109	2	WHEEL, 10" -FOR USE ONLY WITH MFG. NO. 1690277.
11	2108765SM	2	BOLT-WHEEL 3/8-16X2.7 -FOR USE ONLY WITH MFG. NO. 1690278 & 1690279.
11	2170135SM	2	BOLT, Wheel -FOR USE ONLY WITH MFG. NO. 1690277.
12	108638	1	ADJUSTER, Height Rear
13	105184	1	SPACER
14	2817642	1	WASHER, Plain, 5/16
15	2823428	2	LOCKNUT, Hex, Full, 5/16-18
16	1657154	1	BRACKET ASSY, R.H.
17	2829000	4	SCREW, Taptite, 1/4-20 x 3/8
18	1657155	1	BRACKET ASSY, L.H.
19	176115	1	PLATE & TUBE ASSY
20	170264	1	SPRING
21	2829001	2	LOCKNUT, Hex, Flange, 5/16-18
22	108764	2	BOLT, Front Wheel
23	175164	2	CLAMP
24	175212	1	HINGE, 21" Mower
25	2828706	2	RIVET, Tubular
26	108827	4	SEAL, Housing -FOR USE ONLY WITH MFG. NO. 1690278 & 1690279.
27	1609088	8	SEAL, Wheel -FOR USE ONLY WITH MFG. NO. 1690278 & 1690279.
28	108820	4	SEAL, Housing -FOR USE ONLY WITH MFG. NO. 1690278 & 1690279.

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).

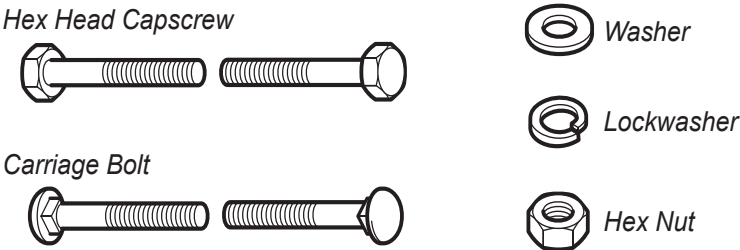
When bolt or capscrew is identified as 1/2 - 16 x 2" (M8 - 1.25 x 50), this means the *Nominal size*, or body diameter is 1/2 inch (8mm metric thread diameter), the second number, 16, represents the *threads per inch*, (*distance between threads*). The final number is the body length of the bolt or screw,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

