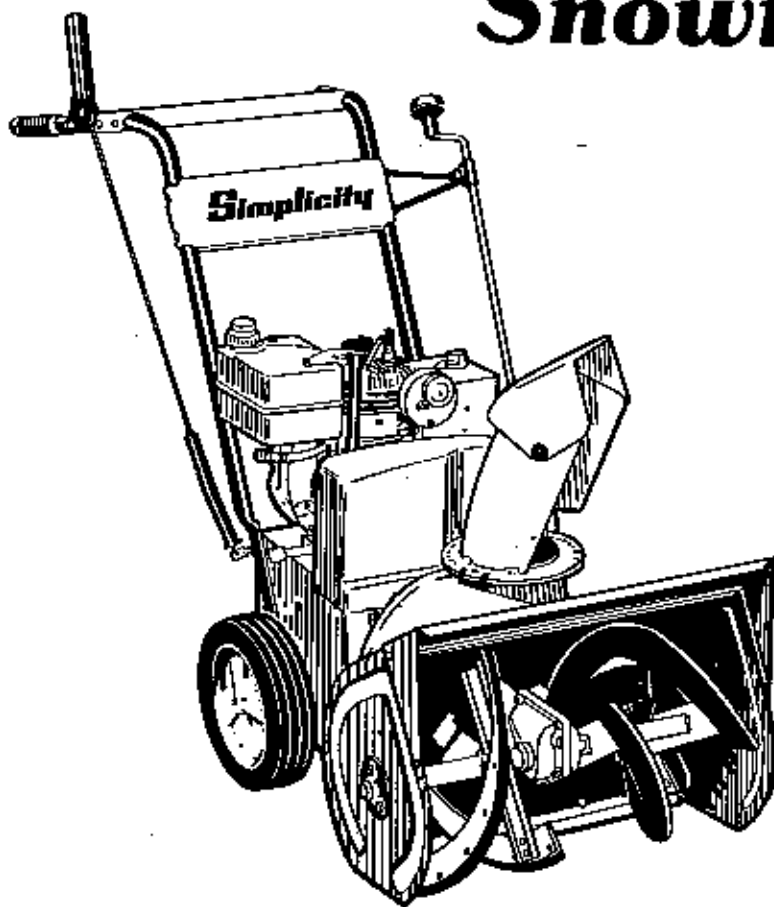


Parts Manual Model 450 Snowthrower



TP-1104-03
PRINTED IN U.S.A.
9/88

3.5 H.P., 2-STAGE, 20" SNOWTHROWER

MFG. NO. 1691172

MFG. NO. 1691364

MFG. NO. 1691416

MFG. NO. 1691417

Simplicity

Product Identification:

When ordering parts, keep your products serial number and manufacturer's number in mind. Variations may occur in a part between early and later model products, causing the product serial number to be listed in the parts description whenever these variations occur.

Record your I.D. numbers here for quick, future reference.

Product Mfg. No. _____ S/N _____ Mower Mfg. No. _____ S/N _____

Attention:

Standard torques appear in a chart at the end of the manual, while important individual torques are given on specific parts drawings.

CRITICAL and MAJOR notations point out important facts or instructions which relate to personal safety and proper machine operation. Any CRITICAL notation **C** which may appear in this book, pinpoints characteristics which, if not properly followed, can create a safety hazard. Any MAJOR notation **M** which may appear in this book, marks characteristics which, if not properly followed, may result in operating failure, shortened product life, or greatly reduced quality of the unit.

For your convenience, assembly notes are included in parts drawings to assist in repair and assembly of unit.

NOTE: Specifications may change without notice.

SIMPLICITY PRODUCTS FOR THE PROPER CARE OF EQUIPMENT
 These genuine *Simplicity* products will help the owner extend the life of his equipment.

OILS - SPECIFICALLY BLENDED OF HIGH QUALITY BASE OILS & ADDITIVES.

Special Worm Gear (Rollcut) Oil for use in all tillers and snowthrowers with worm gear auger drive. Required for protection of brass gears and mating parts. **Case of 12 Quarts, Part #1685100, Individual Quarts 118065.**

Multi-Purpose Hydraulic/Transmission Oil for use in most hydraulic applications, and hydrostatic and gear transmissions. Specific *Simplicity* applications: All hydrostatic transmissions, all bevel gear cases, all Broadmoor, Landlord, Sovereign, 4000, 6000, 7000 transmissions (except Peerless Gear Transmissions). (Not used in SunStar tractor transmission.) **Case of 12 Quarts, Part #1685516, 2½ Gallon Container, Part #1685539.**

2-Cycle Engine Oil, a premium lubricant for all 2-cycle air-cooled engines. **Case of 12 Part #1685517.**

SAE 5W 30 SF/CD Cold Weather Engine Oil for use in all four cycle and diesel engines at 30° temp. and under. **Case of 12 Quarts, Part # 1685576.**

SAE 15W40 SF/CD Engine Oil for gas and diesel engines, warm weather; see engine manufacturer recommendations. **Case of 12 Quarts, Part #1685554.**

Grease Gun Kit has 12" flexible hose to get into tight spots with ease. Kit contains: gun and 1-8 oz. tube of grease, **Part #1685510.** For replacement tube, order **Part # 103077.**

Pneumatic Tire Seal, seals all leaks including bead leaks and punctures up to 3/16 inch diameters. Prevents flats for tread life of tire. Available in following amounts:

- Case of 12 - 11 Oz. Tubes **1685537**
- Case of 24 - 11 Oz. Tubes **1685525**
- 5 Gallon Pail **1685527**

Touch-Up Paint keeps equipment in showroom condition.

Spray Cans	Quarts	Daubbers 12/Ctn.
*Simplicity Orange - 103262 (12 cans/1685179)	1685037	1685520 - Mixed (6 Simp. Orange, 6 White)
**Classic Orange - 1685558 (12 cans/1685559)	1685560	1685562 - Mixed (6 Classic Orange, 6-White)
White 103049 (12 cans/1685178)	1685032	1685562 - Mixed (6-Classic Orange, 6-White) 1685520 - Mixed (6-Simp. Orange, 6-White)
Black - 1685551 (12 Cans/1685552)	N.A.	N.A.

*For 1977 thru early 1986 products.
 **For products produced after 12/1/85.

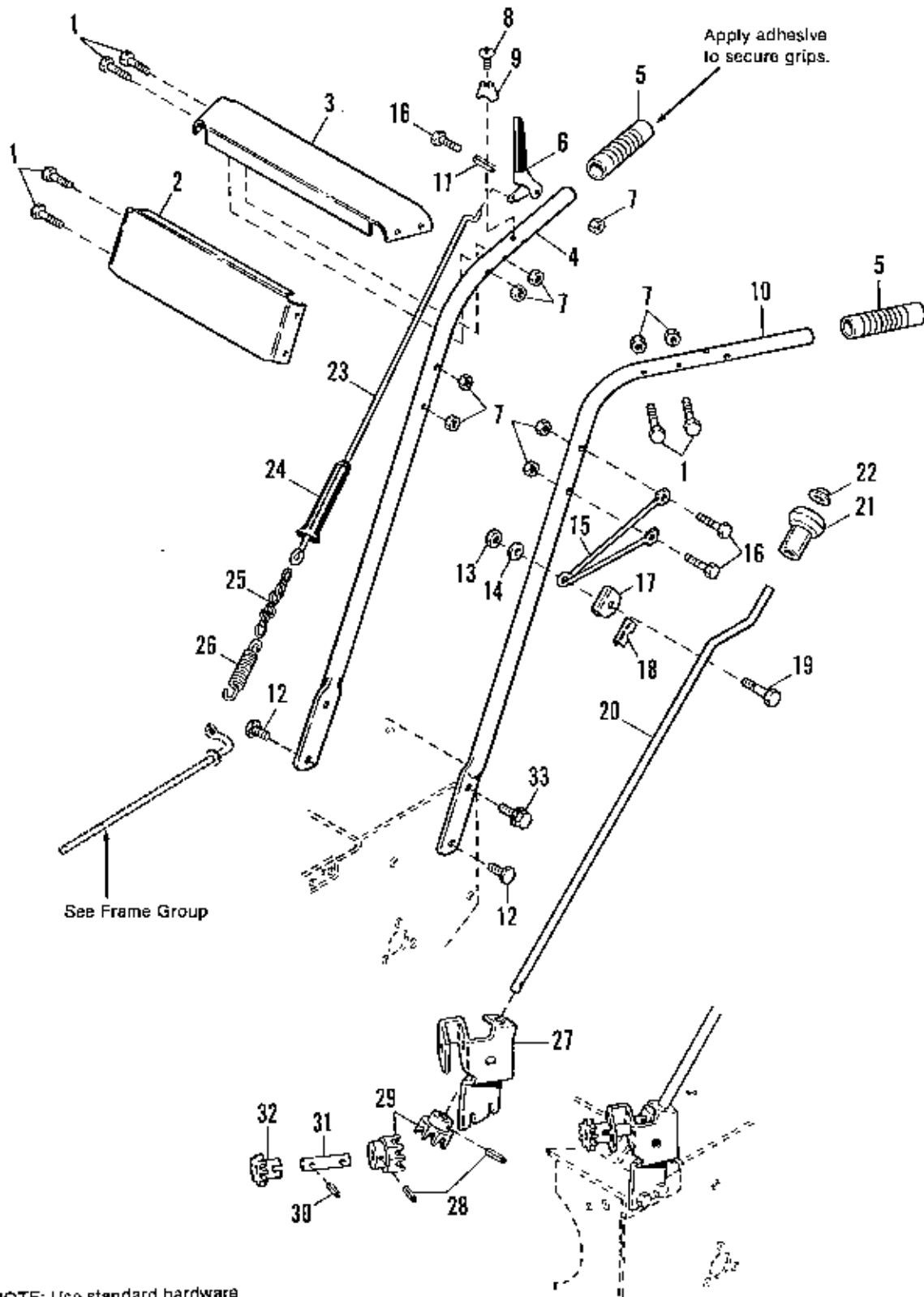
Simplicity Designer Seat Covers are double stitched, easy care vinyl. Keeps new seats new, makes worn seats look new.

- Small Cover for 4000, 5000, & 6100 Tractors **1685540**
- Large Cover for 6200, 7000 & 9000 Tractors **1685541**
- SunStar Seat Cover **1685577**

Extend Equipment Life - Use Only Genuine *Simplicity* Parts

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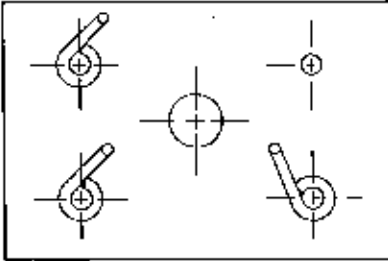
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Handles, Clutch Lever & Rod, Chute Controls	
FRAME GROUP	4
Frame, Belt Guard, Idler Assembly, Pan & Supports	
ENGINE GROUP	6
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STANDARD HARDWARE TORQUE SPECIFICATIONS CHART	Inside Back Cover



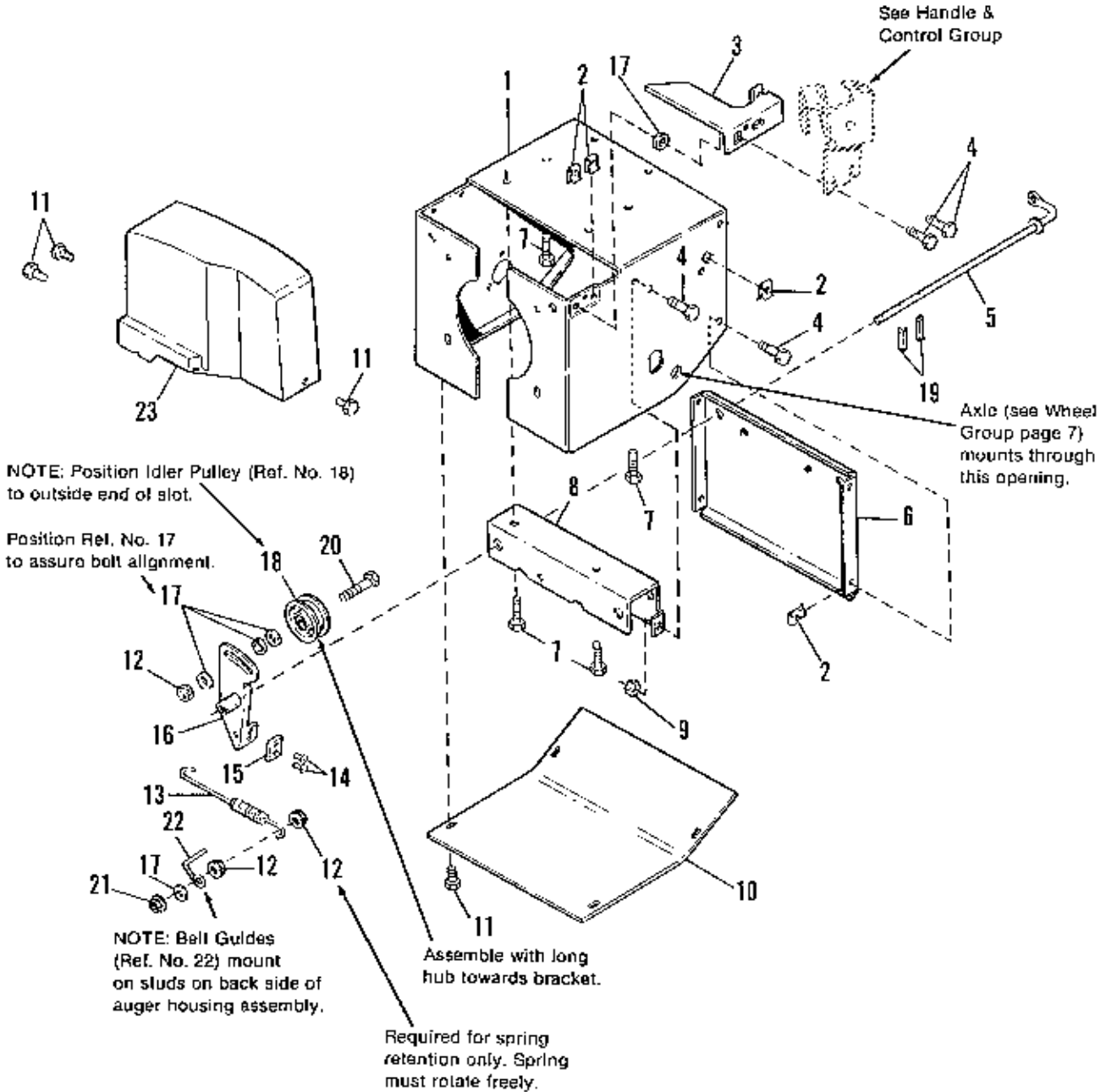
NOTE: Use standard hardware torque spec. chart unless otherwise noted.

Ref. No.	Part No.	Qty.	Description
1	1921961	6	CAPSCREW, Hex, 1/4-20 x 1-1/4
2	1674178	1	HANDLE PANEL, Lower
3	1674177	1	HANDLE PANEL, Upper
4	1678939	1	HANDLE, Tube, R.H.
5	1676954	2	GRIP, Handle
6	1679227	1	CLUTCH LEVER ASSY., R.H.
7	1923368	9	NUT, Centerlock, 1/4-20
8	1927426	1	SCREW, Thd. Cutting Pan Hd. #10-24
9	1676444	1	BUMPER, Clutch Lever
10	1678938	1	HANDLE, Tube, L.H.
11	1674580	1	SPACER, Clutch Lever
12	1930591	2	SCREW, Hex Flange Whizlock, 5/16-18 x 3/4
13	1923362	1	NUT, Hex, Centerlock, 5/16-18
14	1919326	1	WASHER, 5/16
15	1676390	1	BRACKET, Control Rod
16	1922837	3	CAPSCREW, Hex, 1/4-20 x 1-1/2
17	1677355	1	GUIDE, Adj. Rod
18	121175	1	LINER, Adj. Rod Guide
19	1921221	1	CAPSCREW, Hex, 5/16-18 x 1-1/2
20	1668189	1	ROD, Chute Control
21	1668190	1	KNOB, Spout Rotator
22	1960093	1	PALNUT
23	1676451	1	ROD, Clutch
24	1676486	1	SLEEVE, Vinyl, Clutch Rod
25	1676452	1	CHAIN, Clutch Rod
26	1676450	1	SPRING, Clutch Rod
27	1676325	1	SUPPORT, Gear, Spout Rotator
28	918168	2	PIN, Roll, 1/8 x 3/4
29	1668188	2	GEAR, Universal
30	1926228	1	PIN, Spring, 5/32 x 1
31	1700886	1	ROD, Chute, Lower
32	1674329	1	SPROCKET, Chute
33	1930595	2	SCREW, Hex Flange Whizlock, 5/16-18 x 1-1/4

Operator's view of location of belt stops.



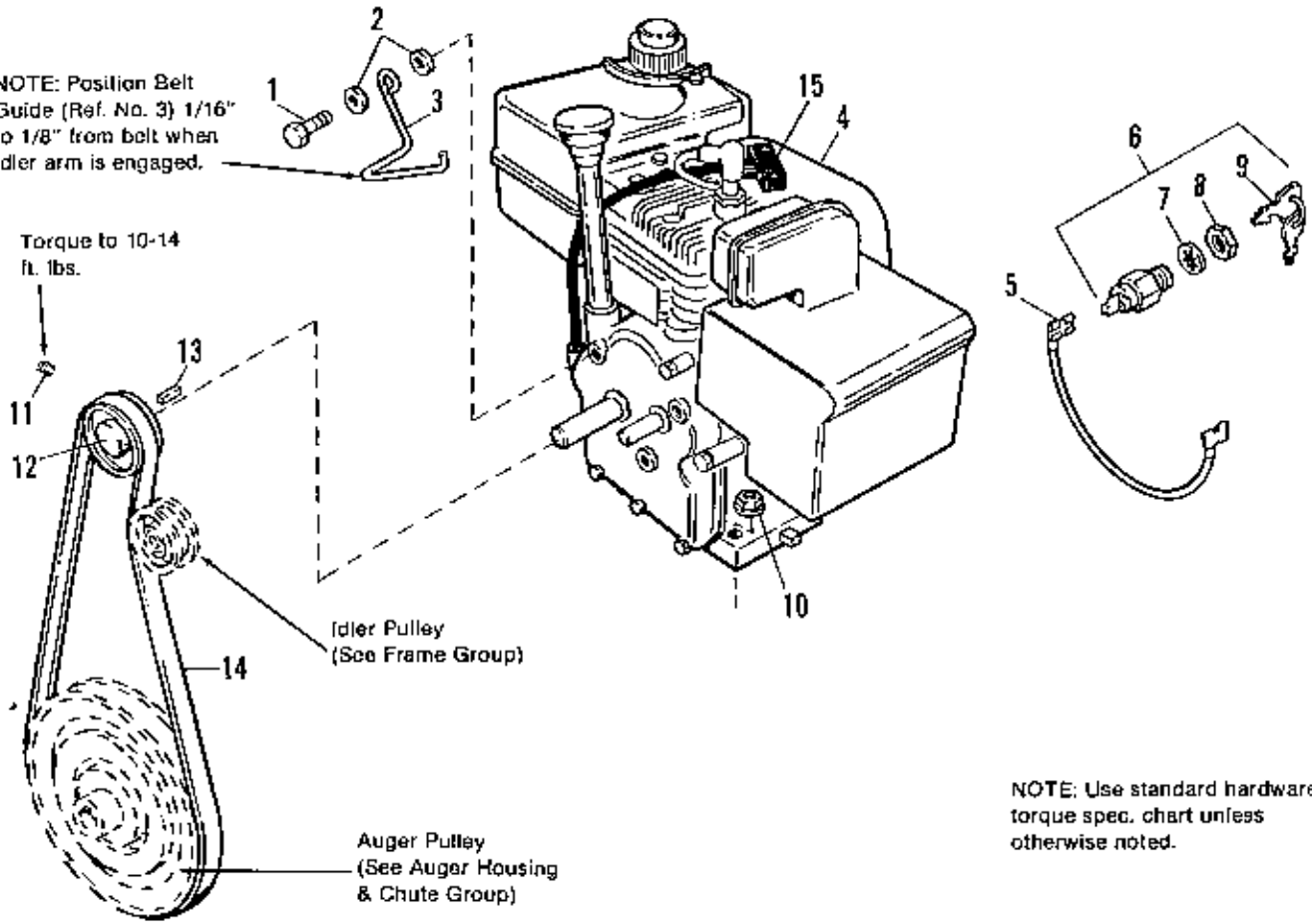
View From Rear



NOTE: Use standard hardware torque spec. chart unless otherwise noted.

Ref. No.	Part No.	Qty.	Description
1	1611743	1	FRAME
2	935255	8	PALNUT, 5/16-18
3	1674297	1	COVER, Belt
4	1930591	6	SCREW, Hex, 5/16-18 x 3/4
5	1674320	1	ROD, Idler
6	1678943	1	MOUNTING PLATE, Trans.
7	1921221	4	SCREW, Hex, 5/16-18 x 1-1/2
8	1675114	1	SUPPORT, Trans.
9	1931277	2	NUT, Hex, Flange Lock, 5/16-18
10	1676442	1	PAN, Bottom
11	1925003	7	SCREW, Hex, Tapfit 1/4-20 x 1/2
12	1928731	5	NUT, Hex, Jam 3/8-16 (Qty. 2 on 1691416 & 1691417)
13	1673911	1	SPRING, Extension
14	925160	2	RIVET, Brake Pad
15	1676543	1	PAD, Brake
16	1674316	1	IDLER ARM & BRAKE ASSY.
17	1917642	9	WASHER (Qty. 8 on 1691172)
18	1668477	1	IDLER PULLEY
19	916169	2	PIN, Roll
20	921969	1	CAPSCREW, Hex, 3/8-16 x 1-1/2
21	1930645	4	NUT, Hex Flange Lock 7/8-16
22	1674315	3	GUIDE, Belt
23	1676508	1	GUARD, Belt

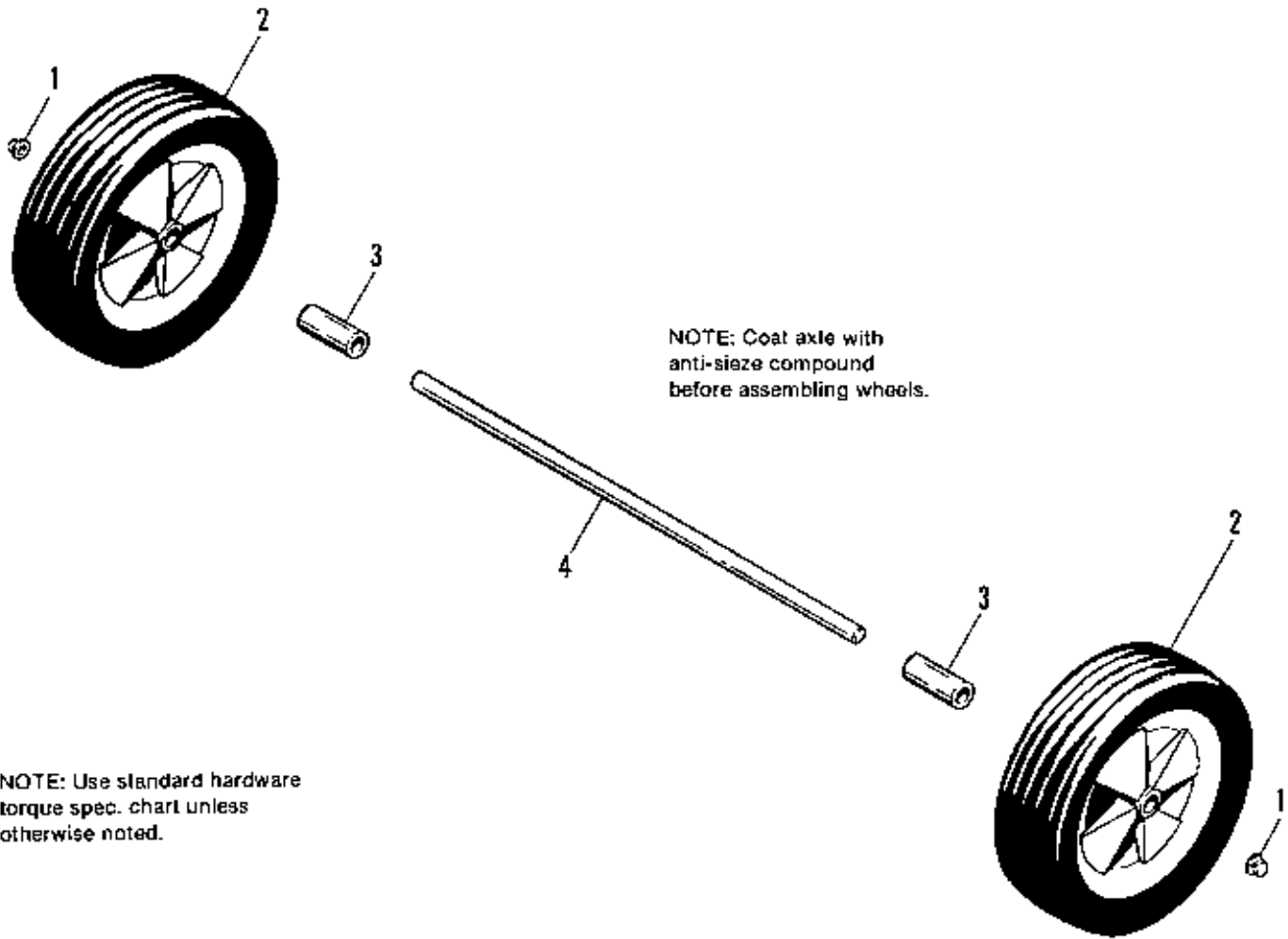
NOTE: Position Belt Guide (Ref. No. 3) 1/16" to 1/8" from belt when idler arm is engaged.



NOTE: Use standard hardware torque spec. chart unless otherwise noted.

Engine Group

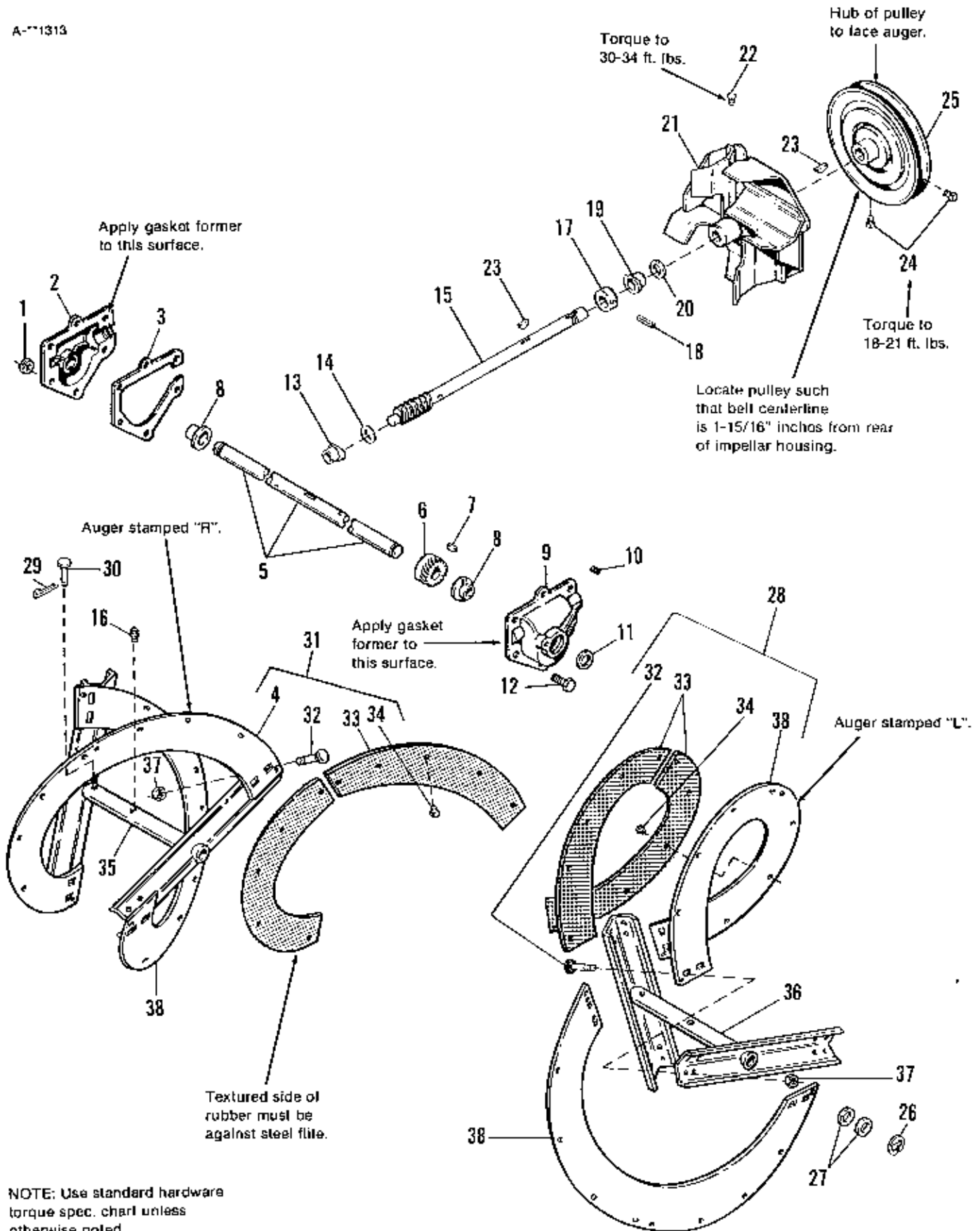
Ref. No.	Part No.	Qty.	Description
1	1921515	1	CAPSCREW, Hex, 5/16-24 x 3/4
2	1919326	2	WASHER, 5/16
3	1677924	1	GUIDE, Belt, Engine Pulley
4		1	ENGINE, 3.5 HP (Tecumseh)
5	1667700	1	GROUND WIRE, Switch
6	177163	1	SWITCH ASSY., Ignition w/Keys (Incl. Ref. Nos. 7, 8 & 9)
7	918906	1	LOCKWASHER, 5/8
8	122234	1	NUT, Hex, 5/8-32
9	122203	1	KEY & RING ASSY.
10	1931277	4	NUT, Hex, Fl. Lock, 5/16-18
11	1928691	1	SETSCREW, Socket Hd., 5/16-18 x 5/16
12	1674328	1	PULLEY, Engine
13	905850	1	KEY, Sq., 3/16 x 3/16 x 1
14	1674312	1	V-BELT, Auger Drive
15		1	ELECTRIC START (Order Wholegoods 1690384) (1691364 only)



Wheel Group

Ref. No.	Part No.	Qty.	Description
1	1678038	2	PUSHNUT
2	1678036	2	WHEEL, 10"
3	1679166	2	SPACER, Wheel
4	1678037	1	AXLE

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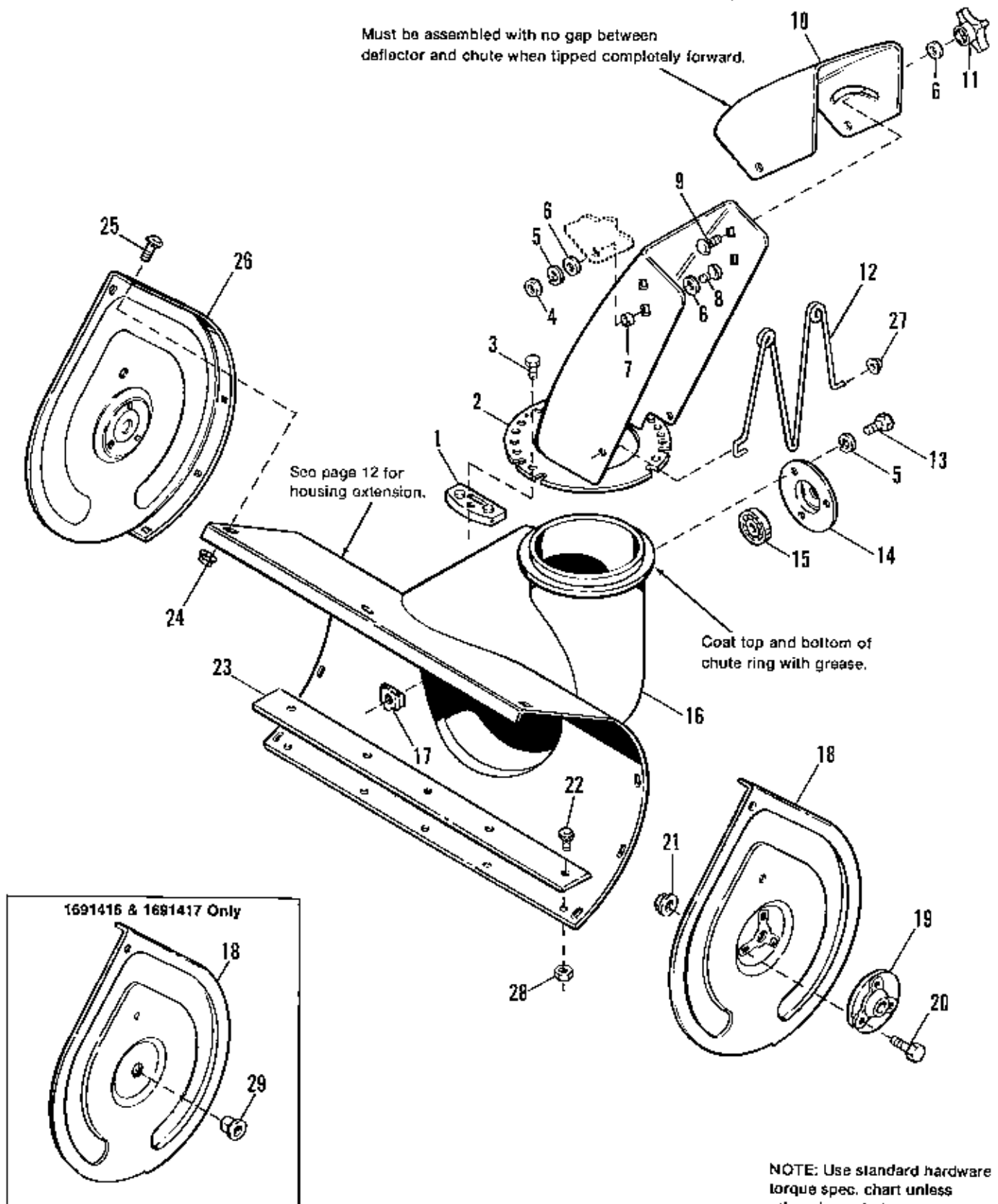


Ref. No.	Part No.	Qty.	Description
1	1923358	5	NUT, Lock, 1/4-20 (Qty. 6 on 1691416 & 1691417)
2	1685331	1	GEAR CASE KIT, R.H. & L.H. (Incl. Ref. No. 2, 8 & 9) (1691172, 1691364 only)
	1611794	1	GEAR CASE ASSY., R.H. (Incl. Ref. No. 8) (1691416 & 1691417 only)
3	1611792	1	GASKET, Gear Case (1691172, 1691364 only)
	1611784	1	GASKET, Gear Case (1691416 & 1691417 only)
4		2	AUGER BLADE, R.H. (See Ref. No. 31)
5	1678066	1	AUGER, Shaft
6	1678024	1	GEAR, Worm
7	918312	1	KEY, Woodruff
8	1678026	2	BUSHING, Auger Shaft
9	1685331	1	GEAR CASE KIT, R.H. & L.H. (Incl. Ref. No. 2, 8 & 9) (1691172, 1691364 only)
	1611793	1	GEAR CASE ASSY., L.H. (Incl. Ref. No. 8) (1691416 & 1691417 only)
10	917673	1	PLUG, Pipe, 1/8-NPT, Gear Case
11	1678027	2	SEAL, Oil
12	1924009	5	CAPSCREW, Hex, 1/4-20 x 7/8 (Qty. 6 on 1691416 & 1691417)
13	1666424	1	BUSHING, Worm Shaft
14	1670971	1	WASHER, Plain
15	1675162	1	WORM SHAFT
16	921133	2	GREASE FITTING, Auger Support Assy.
17	1668105	1	COLLAR, Thrust, Worm Shaft
18	936098	1	PIN, Driv-lok, 3/16 x 1-1/2, Thrust Collar
19	1666425	1	BUSHING, Worm Shaft
20	1669372	1	SEAL, Oil, Impeller Assy. (1691172, 1691364 only)
	1611789	1	SEAL, Oil, Impeller Assy. (1691416 & 1691417 only)
21	1611795	1	IMPELLER ASSY.
22	1923084	1	SETSCREW, Sq. Hd., 3/8-16 x 1/2
23	905123	2	KEY, Woodruff, 3/16 x 3/4
24	1928721	2	SETSCREW, Sq. Hd., 5/16-18 x 1/2
25	1679655	1	PULLEY, Input, Auger
26	927794	2	RING, Retaining
27	1960114	2	WASHER
28	1678028	2	AUGER FLITE ASSY., L.H. (Incl. Ref. No. 32, Qty. 4; Ref. No. 33, Qty. 2; Ref. No. 34, Qty. 20; & Ref. No. 38, Qty. 1)
29	1918447	2	PIN, Cotter, 3/4
30	1668344	2	PIN, Shear, Auger Support Assy.
31	1678027	2	AUGER FLITE ASSY., R.H. (Incl. Ref. No. 32, Qty. 4; Ref. No. 33, Qty. 2; Ref. No. 34, Qty. 20; & Ref. No. 4, Qty. 1)
32	1960252	16	BOLT, Carriage, 1/4-20 x 5/8
33	1678031	8	FLITE, Rubber, Auger Blade
34	1673320	40	RIVET, 3/16" Tubular
35	1678065	1	AUGER SUPPORT ASSY., R.H. (Incl. Ref. No. 16, Qty. 1)
36	1678024	1	AUGER SUPPORT ASSY., L.H. (Incl. Ref. No. 16, Qty. 1)
37	1960294	16	NUT, Hex Lock, 1/4-20
38		2	AUGER BLADE, L.H. (See Ref. No. 28)

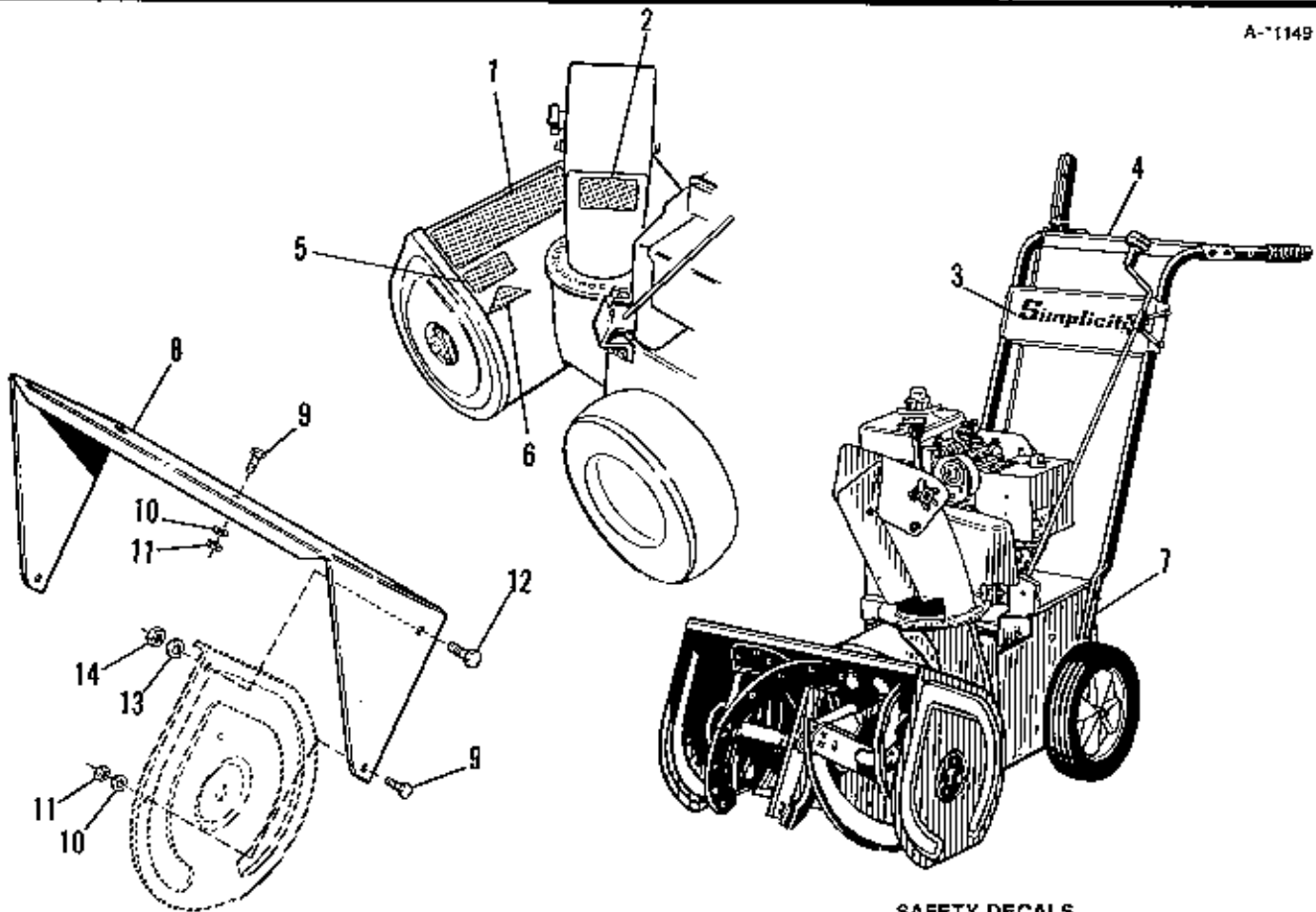
*Kit contains both R.H. & L.H. gear case halves.

A-11314

Must be assembled with no gap between deflector and chute when tipped completely forward.



Rel. No.	Part No.	Qty.	Description
1	1666613	2	HOLD DOWN, Chute
2	1676224	1	CHUTE ASSY.
3	1960001	2	SCREW, Plastite, #10
4	1917372	2	NUT, Hex, 5/16-18
5	1917356	5	LOCKWASHER
6	1917642	3	WASHER, 5/16
7	1667790	2	SPACER
8	1936482	2	SCREW, Truss Hd., 5/16-18 x 3/4
9	1931334	1	BOLT, Carriage, 5/16-18 x 7/8
10	1676379	1	DEFLECTOR
11	1670578	1	KNOB, Deflector Adj.
12	1678954	1	GUARD, Chute
13	1925205	3	SCREW, Hex, 5/16-18 x 5/8
14	1665982	1	RETAINER, Bearing
15	108202	1	BEARING, Ball, Auger Hsg. Assy.
16	1611800	1	AUGER HSG. ASSY.
17	930659	3	NUT, Retainer, 5/16-18
18	1678019	1	AUGER HSG. END, L.H. (1691172, 1691364 only)
	1611744	1	AUGER HSG. END, L.H. (1691416 & 1691417 only)
19	1674280	2	BEARING, Auger (1691172, 1691364 only)
20	1930591	6	SCREW, Hex, Whizlock, 5/16-18 x 3/4 (1691172, 1691364 only)
21	1935048	6	NUT, Hex., Fl. Hd. Lock, 5/16-18 (1691172, 1691364 only)
22	1960252	5	BOLT, Carriage, 1/4-20 x 5/8
23	1678020	1	SCRAPER BLADE, Auger Hsg. Assy.
24	1930641	8	NUT, Hex, 1/4-20 Fl. Lock
25	1931315	8	BOLT, Carriage, 1/4-20 x 1/2
26	1678018	1	AUGER HSG. END, R.H. (1691172, 1691364 only)
	1611745	1	AUGER HSG. END, R.H. (1691416 1691417 only)
27	1960140	1	NUT, Push
28	1930641	5	NUT, Hex Whizlock, 1/4-20
29	1666001	2	BUSHING (1691416 & 1691417 only)



SAFETY DECALS



Ref. No. 2



Ref. No. 5




Decal Group

Ref. No.	Part No.	Qty.	Description
1	1678121	1	DECAL, <i>Simplicity</i> 450
2	1677488	1	DECAL, Danger, Blower
3	1670170	1	DECAL, <i>Simplicity</i>
4	1678122	1	DECAL, Dash
5	1677485	1	DECAL, Danger, Auger
6		1	DECAL, OPEI
7		1	I.D. PLATE, <i>Simplicity</i>
8	1679135	1	WRAPPER EXT. (Optional)
9	1921958	3	CAPSCREW, 1/4-20 x 1/2
10	1916964	3	LOCKWASHER, 1/0
11	1916622	3	NUT, Hex, 1/4-20
12	1925205	2	CAPSCREW, 5/16-18 x 5/8
13	1917356	2	LOCKWASHER, 5/16
14	1917372	2	NUT, Hex, 5/16-18

Not Shown:

1703659	1	DECAL, Touch-up Paint
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**TORQUE SPECIFICATIONS FOR
STANDARD MACHINE HARDWARE
TOLERANCE $\pm 20\%$**




SIZE	SAE GRADE #2		SAE GRADE #5		SAE GRADE #8	
						
8-32	19	In. Lbs.	30	In. Lbs.	41	In. Lbs.
8-36	20	"	31	"	43	"
10-24	27	"	43	"	60	"
10-32	31	"	49	"	68	"
1/4-20	66	"	8	Ft. Lbs	12	Ft. Lbs.
1/4-28	76	"	10	"	14	"
5/16-18	11	Ft. Lbs	17	"	25	"
5/16-24	12	"	19	"	25	"
3/8-16	20	"	30	"	45	"
3/8-24	23	"	35	"	50	"
7/16-14	30	"	50	"	70	"
7/16-20	35	"	55	"	80	"
1/2-13	50	"	75	"	110	"
1/2-20	55	"	90	"	120	"
9/16-12	65	"	110	"	150	"
9/16-18	75	"	120	"	170	"
5/8-11	90	"	150	"	220	"
5/8-18	100	"	180	"	240	"
3/4-10	160	"	260	"	386	"
3/4-16	180	"	300	"	420	"
7/8-9	140	"	400	"	600	"
7/8-14	155	"	440	"	660	"
1-8	220	"	580	"	900	"
1-12	240	"	640	"	1,000	"

NOTE:

1. These torque values are to be used for all *Simplicity* hardware excluding: locknuts, self-tapping screws, thread forming screws, sheet metal screws and socket head setscrews.
2. Recommended seating torque values for locknuts:
 - a. For prevailing torque locknuts - use 65% of grade 5 torques.
 - b. For flange whizlock nuts (and screws) - use 135% of grade 5 torques.
3. Unless otherwise noted on assembly drawings all torque values must meet this specification.

BOLT HEAD MARKING

S.A.E. GRADE:

- 2 
- 5 
- 8 

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Port Washington, WI 53074-0997

