

5 HP REAR TINE TILLER

AND
ATTACHMENT

514RT

Mfg. No.	Description
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1693705	514RT, 5HP Rear Tine Tiller
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ATTACHMENT

Mfg. No.	Description
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1692878	Hiller/Furrower
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Simplicity

MANUFACTURING, INC.

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REAR TINE TILLERS

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ATTACHMENT:

Hiller/Furrower Attachment	16
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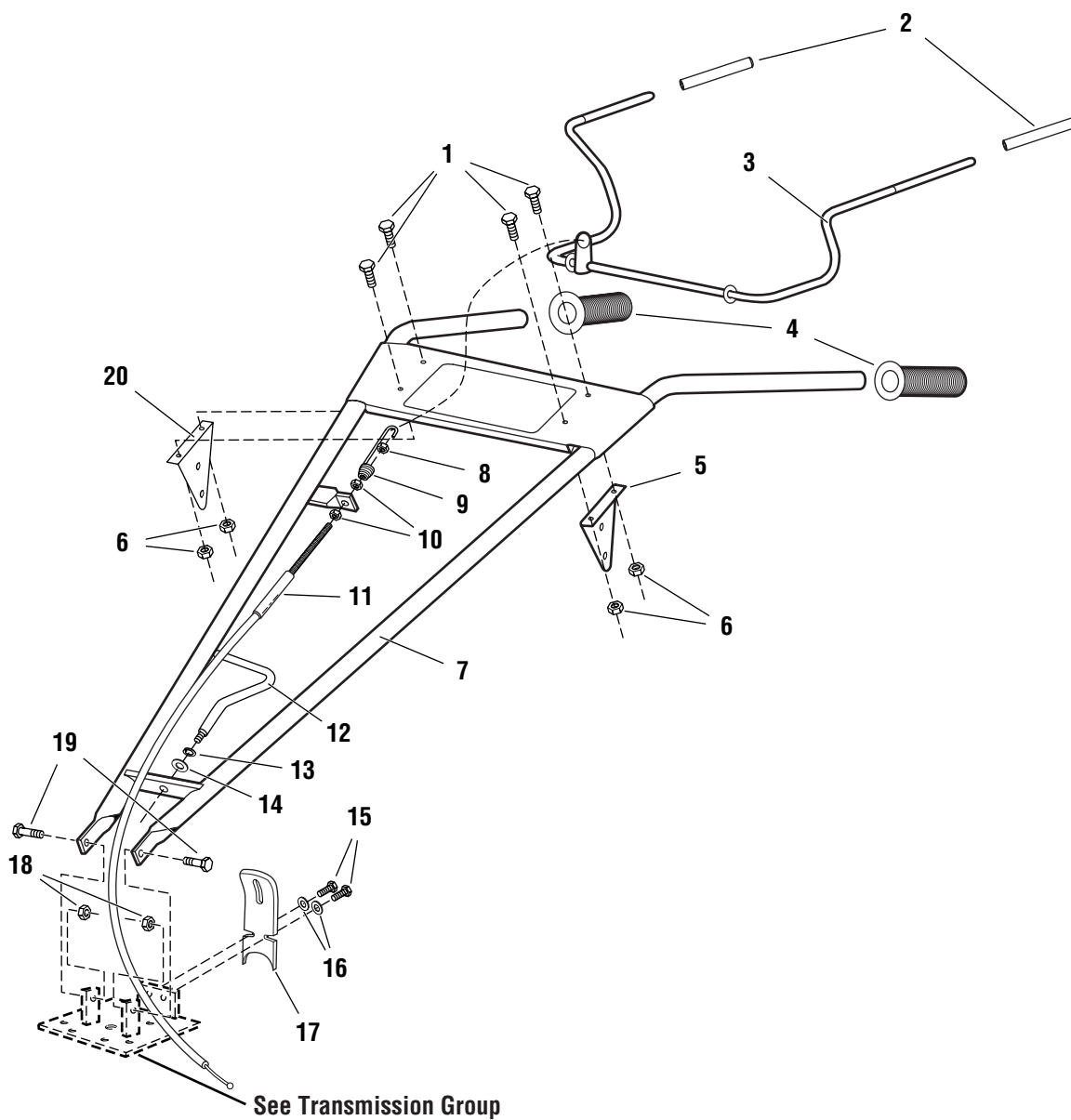
REFERENCE INFORMATION:

Torque Specification Chart	Inside Back Cover
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Handle Bar Group

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

985764



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

1693705 514RT, Rear Tine Tiller

Handle Bar Group

REF NO.	PART NO.	QTY.	DESCRIPTION
1	1716731	4	CAPSCREW, Hex Head, 5MM X .8MM X 10MM
2	1716699	2	HANDLE GRIP, Drive Control Lever
3	1721520	1	LEVER, Drive Control
4	1719038	2	HANDLE GRIP
5	1716723	1	BRACKET, Drive Control Lever LH
6	1716732	4	NUT, Hex Nylok
7	1721518	1	HANDLE BAR ASSEMBLY, w/Tab
8	1933896	1	NUT, Hex Nylok
9	1716720	1	SPRING, Forward Cable Adjustment
10	920438	2	NUT, Hex Jam, 5/16", 24NF, 2B
11	1719037	1	CABLE ASSEMBLY
12	1721517	1	CLAMP
13	1916965	1	LOCKWASHER, Spring 3/8"
14	1924940	1	WASHER, 3/8"
15	1716780	2	CAPSCREW, Hex Flange Head, 5/16"-18 x 3/4"
16	1960044	2	WASHER, 5/16"
17	1721519	1	PLATE, Height Adjust
18	1916950	2	NUT, Hex, 3/8"-16NC, 2B
19	1921210	2	CAPSCREW, 3/8"-16 x 1" G5
20	1716722	1	BRACKET, Drive Control Lever RH

Footnotes:

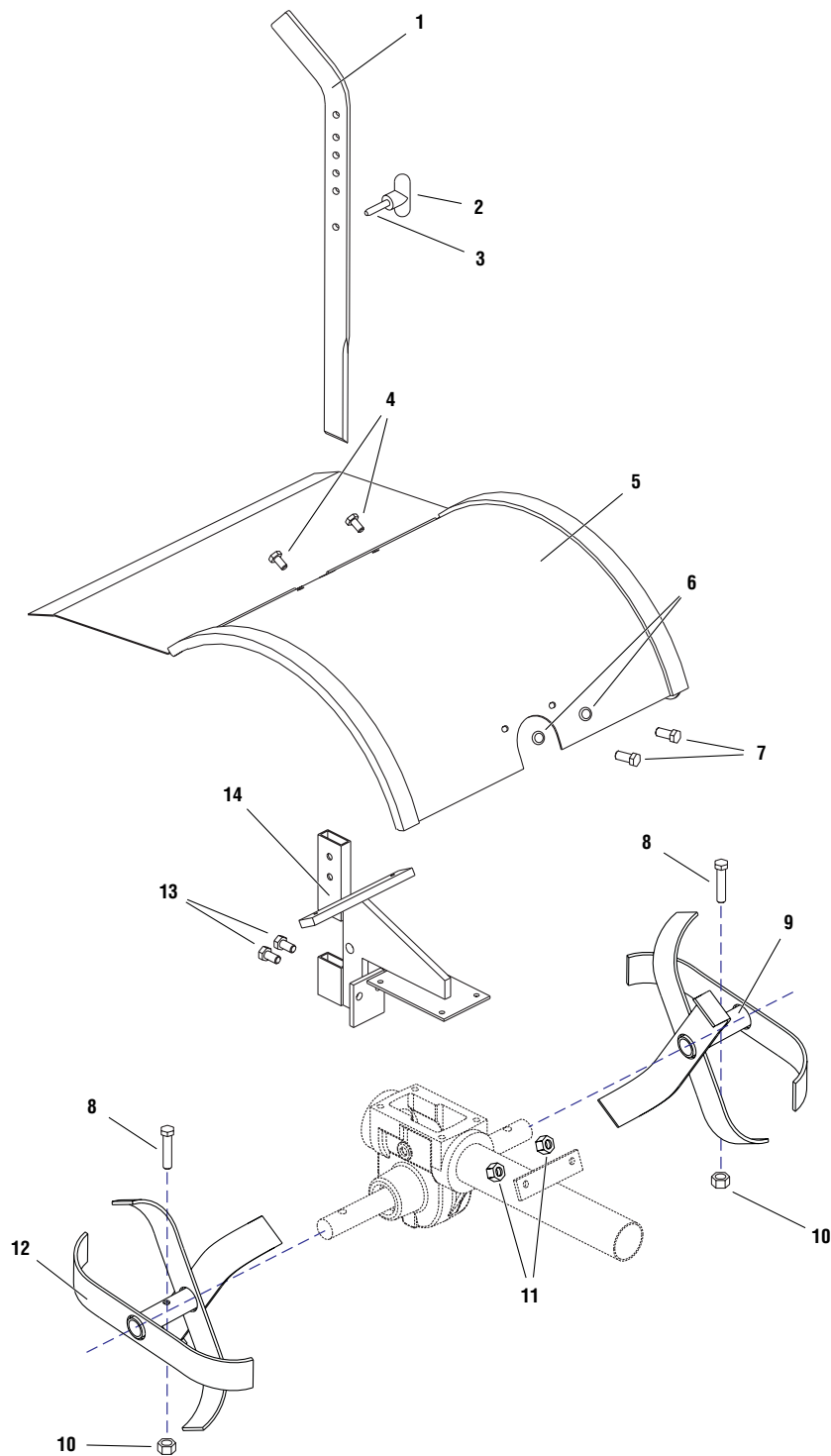
The above parts group applies to the following Mfg. Nos.:

1693705 514RT, Rear Tine Tiller

Hood, Drag Stake & Tine Group

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

985763



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

1693705 514RT, Rear Tine Tiller

Hood, Drag Stake & Tine Group

REF NO.	PART NO.	QTY.	DESCRIPTION
1	1721510	1	LEVER, Depth Regulator
2	1716743	1	KNOB, T handle, Drag Stake
3	1716742	1	PIN, Detent 5/16"-18 x 1"
4	1921958	2	CAPSCREW, 1/4"-20 x 1/2" G5
5	1721512	1	HOOD
6	1917356	2	LOCKWASHER, Spring 5/16"
7	1920787	2	CAPSCREW, 5/16"-18 x 1/2" G5
8	1921971	2	CAPSCREW, 3/8"-16 x 1 3/4" G5
9	1721513	1	TINE ASSEMBLY, LH
10	1916950	2	NUT, Hex, 3/8"-16NC, 2B
11	1935048	2	NUT, Hex Flange Head, 5/16"-18 Two, Way Lock
12	1721514	1	TINE ASSEMBLY, RH
13	1716701	2	CAPSCREW, Hex Flange Head, 5/16"-18 x 1/2"
14	1721511	1	BRACKET, Depth Regulator

Footnotes:

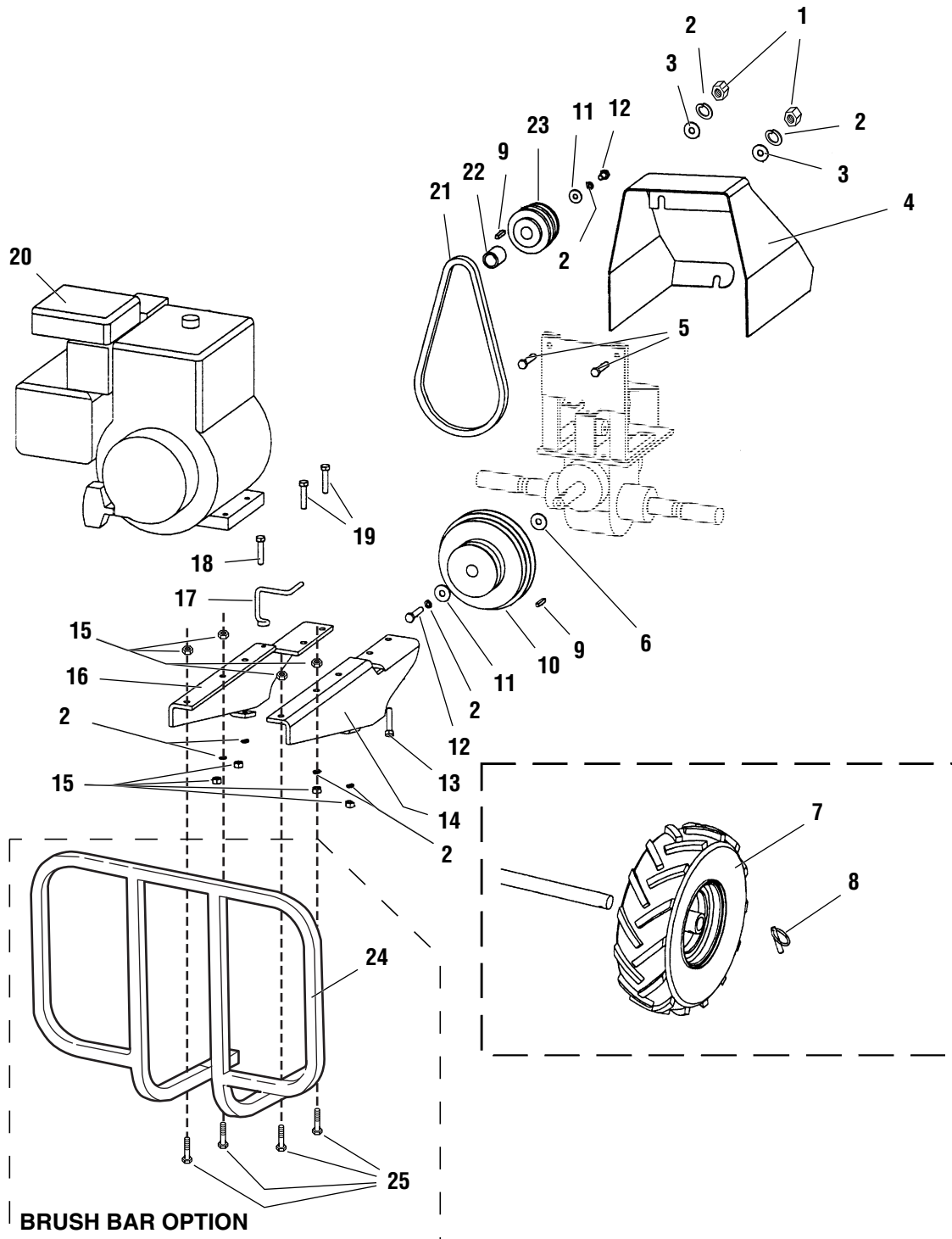
The above parts group applies to the following Mfg. Nos.:

1693705 514RT, Rear Tine Tiller

Engine Mount, Belts & Wheels Group

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

985762



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

1693705 514RT, Rear Tine Tiller

Engine Mount, Belts & Wheels Group

REF NO.	PART NO.	QTY.	DESCRIPTION
1	1917372	2	NUT, Hex, 5/16"-18NC, 2B
2	1917356	9	LOCKWASHER, Spring 5/16"
3	1960044	2	WASHER, 5/16"
4	1716784	1	COVER, Belt
5	1921978	2	CAPSCREW, 5/16"-18 x 2" G5
6	960164	1	WASHER, 5/8"
7	1721524	1	WHEEL & TIRE ASSEMBLY, Right
7	1721525	1	WHEEL & TIRE ASSEMBLY, Left
8	1716776	2	PIN, Lock
9	905850	2	KEY, Parrallel
10	1716768	1	PULLEY, Transmission
11	1716770	2	WASHER
12	1921515	2	CAPSCREW, 5/16"-24 x 3/4" G5
13	1960470	4	CAPSCREW, Hex Socket Head, 5/16"-18 x 11/4" G8
14	1716753	1	BRACKET, Engine Mount LH
15	1935048	8	NUT, Hex Flange Head, 5/16"-18 TWO, WAY Lock
16	1716752	1	BRACKET, Engine Mount RH
17	1716767	1	GUIDE, Belt Forward
18	1716756	1	CAPSCREW, 5/16"-24 x 1/2"
19	1922127	4	CAPSCREW, 5/16"-18 x 1 3/4" G5
20	*	1	ENGINE, 5.0HP Tecumseh - Engine Model 135392, Engine Type 1320-E1
21	1716765	1	V-BELT
22	1716762	1	SPACER, Engine Pulley
23	1716764	1	PULLEY, Engine, Forward
24**	1721528	1	BUMPER, Guard
25**	1922127	4	CAPSCREW, 5/16"-18 x 13/4" G5

Footnotes:

* See your local Tecumseh distributor for Parts & Service.

** The bumper guard is not standard with the 5HP tiller, but it is an option, just order the bumper guard (Ref# 24) and 4 capscrews (Ref# 25).

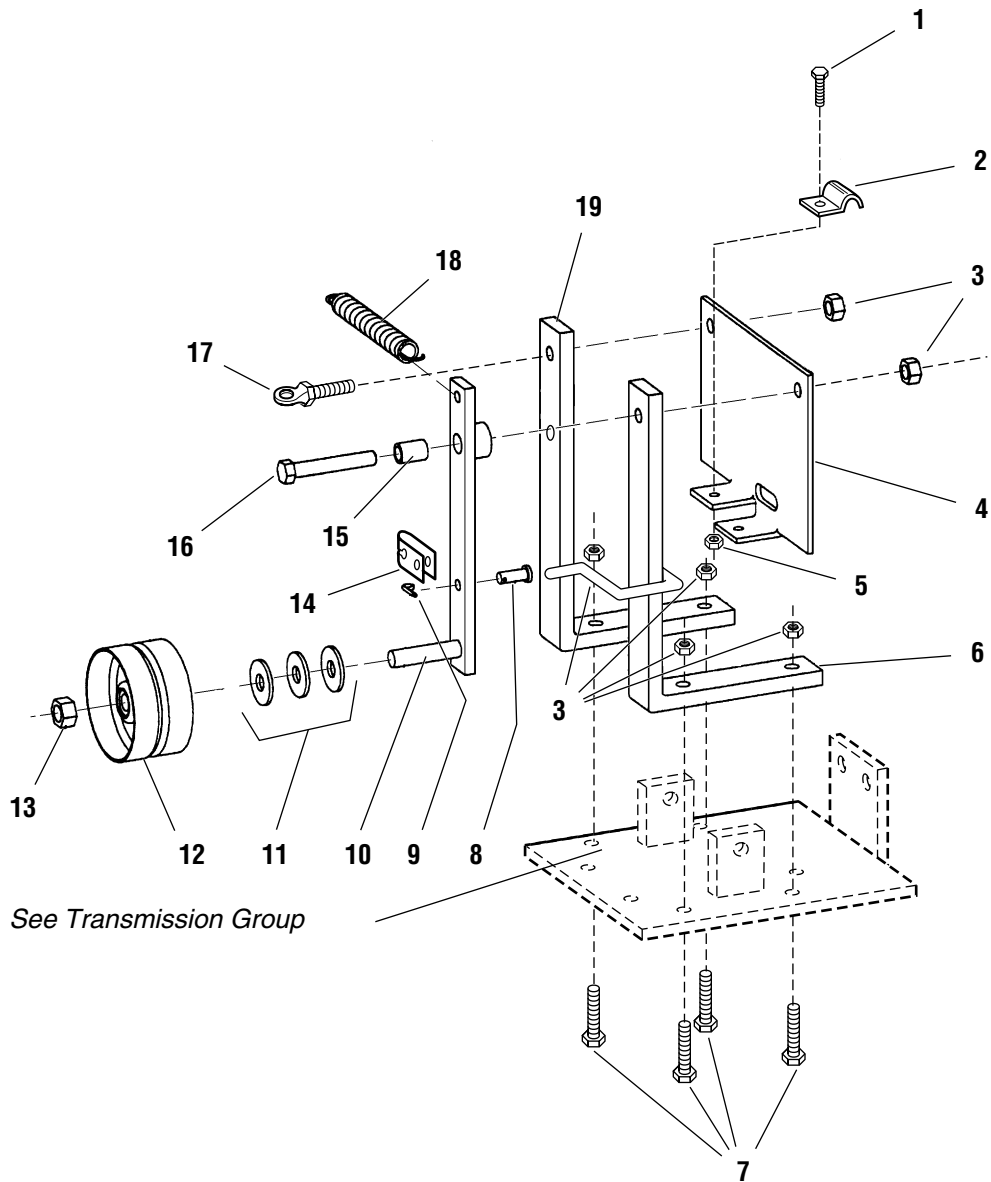
The above parts group applies to the following Mfg. Nos.:

1693705 514RT, Rear Tine Tiller

Shifting Mechanism Group

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

985761



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

1693705 514RT, Rear Tine Tiller

Shifting Mechanism Group

REF NO.	PART NO.	QTY.	DESCRIPTION
1	1721531	1	CAPSCREW, 5MM x .8 x 16MM
2	1719063	2	C-CLAMP
3	1935048	6	NUT, Hex Flange Head, 5/16"-18 TWO, WAY Lock
4	1716807	1	BRACKET, Cable Mount
5	1716732	1	NUT, Hex Nylok
6	1721530	1	BRACKET, w/Forward Belt Guide
7	1921977	4	CAPSCREW, 5/16"-18 x 11/4" G5
8	1716702	1	PIN, Link Forward/Reverse
9	1716703	1	PIN, Cotter
10	1716804	1	ARM, Forward Idler
11	1924940	3	WASHER, 3/8"
12	1716803	1	PULLEY, Forward Idler
13	1916950	1	NUT, Hex Head, 3/8"-16
14	1716728	1	YOKE, Cable
15	1716704	1	BUSHING, Pivot 5/16"
16	1921978	1	CAPSCREW, 5/16"-18 x 2" G5
17	1721529	1	BOLT, Washer Head, 5/16"-18 x 1 1/4"
18	1716802	1	SPRING, Idler Arm
19	1716801	1	BAR, Shift Mounting

Footnotes:

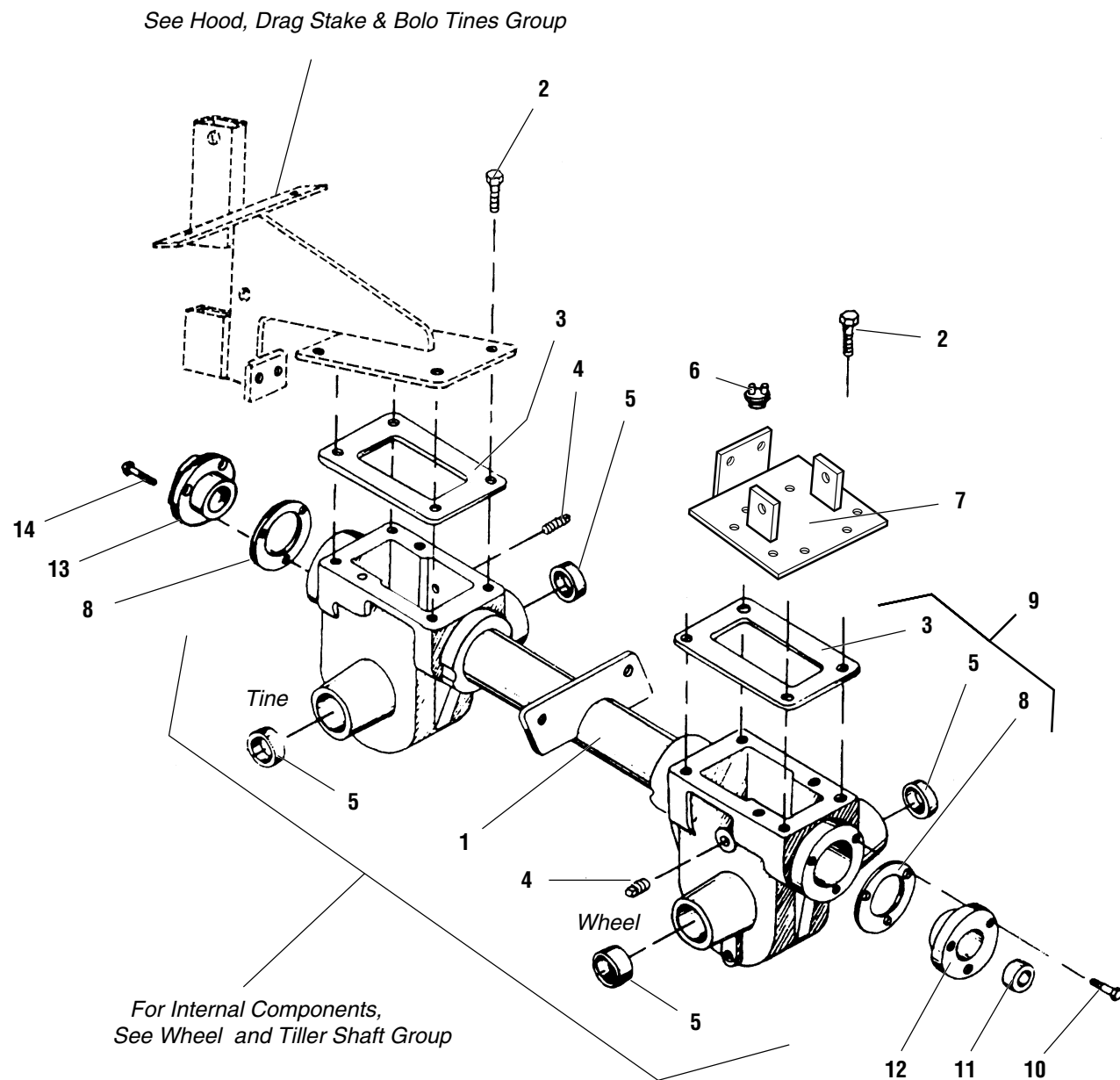
The above parts group applies to the following Mfg. Nos.:

1693705 514RT, Rear Tine Tiller

Transmission Group

985760

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



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

1693705 514RT, Rear Tine Tiller

Transmission Group

REF NO.	PART NO.	QTY.	DESCRIPTION
1	1721505	1	TRANSMISSION ASSEMBLY
2	1716780	8	CAPSCREW, Hex Flange Head, 5/16"-18 x 3/4"
3	1716789	2	GASKET, Housing & Transmission Cover
4	1716790	2	PLUG, Pipe Socket Head 1/4"-18, Oil Check
5	1716791	4	SEAL, Housing
6	1716794	1	PLUG, Oil Fill
7	1721506	1	COVER, Transmission Wheel Housing
8	1716792	2	GASKET, Bearing Cap Front, Rear
9	1716799	1	GASKET KIT, Oil Seal (Includes Ref. Nos. 3, 5 and 8)
10	1716798	3	CAPSCREW, Hex Flange Head, 1/4"-20 x 3/4"
11	1716797	1	SEAL, Oil Drive Shaft
12	1716796	1	CAP, Front Bearing
13	1716793	1	CAP, Rear Bearing
14	1716795	3	CAPSCREW, Hex Flange Head, 1/4"-20 x 7/8"

Footnotes:

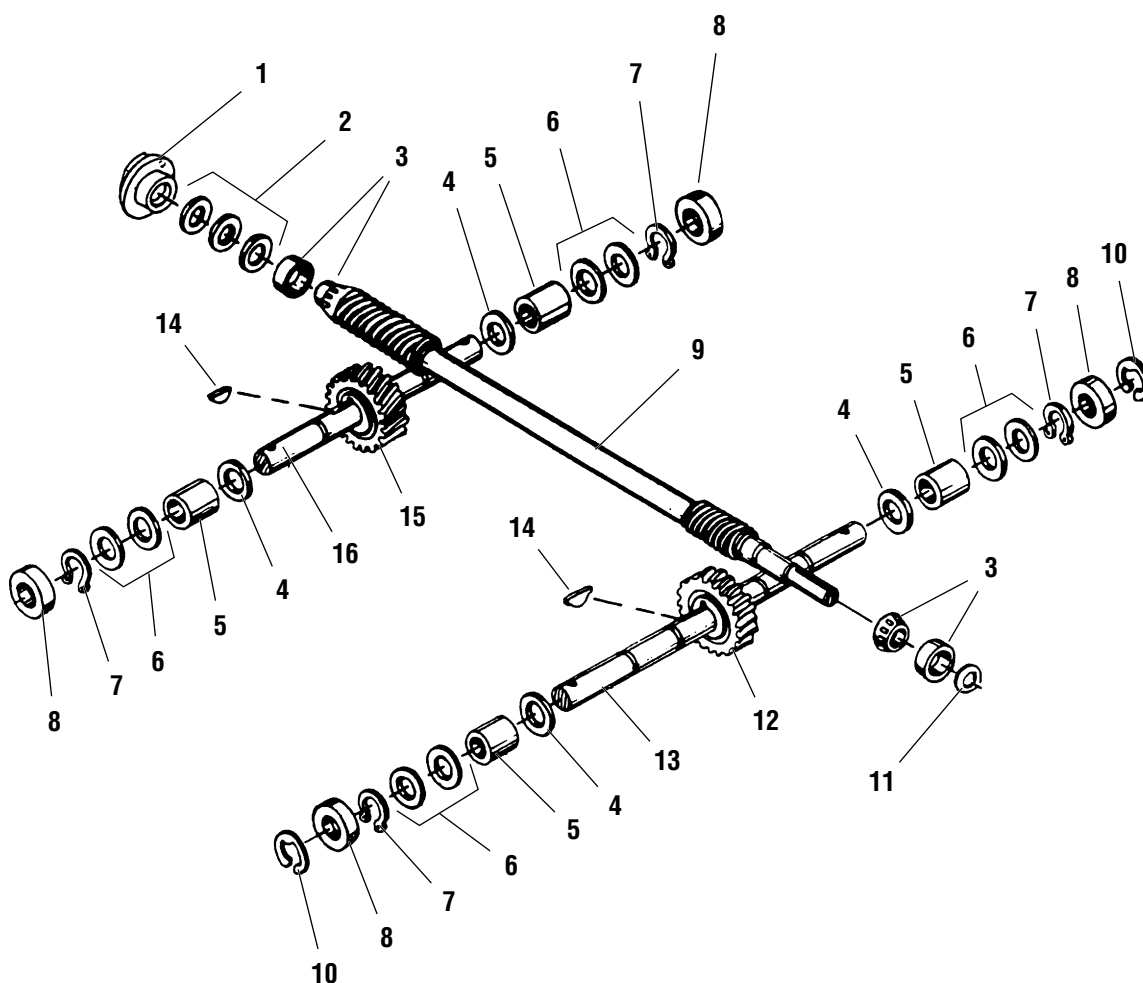
The above parts group applies to the following Mfg. Nos.:

1693705 514RT, Rear Tine Tiller

Wheel and Tiller Shaft Group

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

985155



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

1693705 514RT, Rear Tine Tiller

Wheel and Tiller Shaft Group

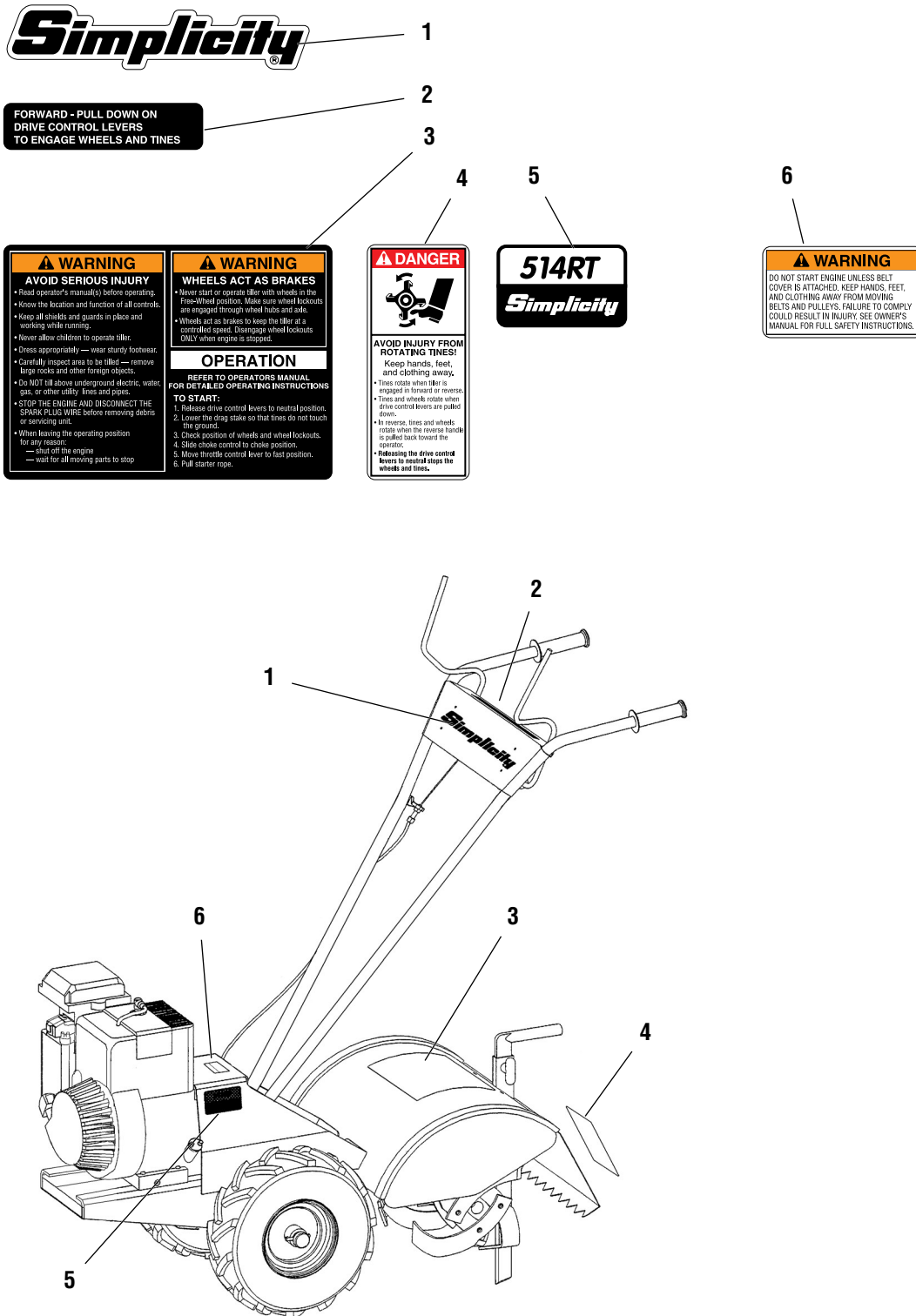
REF NO.	PART NO.	QTY.	DESCRIPTION
1	1716793	1	CAP, Rear Bearing
2	1716825	1	SHIM SET, Rear Bearing Cap
2	1716826	1	SHIM, 0.062 Thickness x 1 3/4" (As Required)
2	1716827	1	SHIM, 0.030 Thickness x 1 3/4" (As Required)
2	1716828	1	SHIM, 0.015 Thickness x 1 3/4" (As Required)
2	1716829	1	SHIM, 0.010 Thickness x 1 3/4" (As Required)
3	1716810	2	BEARING, Tappered (Cone & Race)
4	1716824	4	SPACER, 1" x 1 1/4" x 0.062 Thickness
5	1716816	4	BUSHING
6	1716815	4	SHIM SET, Axle Spacer
6	1716817	1	SHIM, 0.062 Thickness x 1 3/8"
6	1716818	1	SHIM, 0.030 Thickness x 1 3/8"
6	1716819	1	SHIM, 0.015 Thickness x 1 3/8"
6	1716820	1	SHIM, 0.010 Thickness x 1 3/8"
7	1716830	4	RING, Snap Internal Retainer
8	1716791	4	SEAL, Housing
9	1716809	1	SHAFT, Main Drive
10	1716821	2	RING, Snap External Retainer
11	1716797	1	SEAL, Oil Drive Shaft
12	1716814	1	GEAR, Worm Wheel Shaft
13	1716812	1	SHAFT ASSEMBLY, Wheel w/Lock Pin 5HP
14	1716813	2	KEY, Parrallel Pin
15	1716823	1	GEAR, Worm Shaft
16	1716822	1	SHAFT ASSEMBLY

Footnotes:

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

1693705 514RT, Rear Tine Tiller

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



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

1693705 514RT, Rear Tine Tiller

Decal Group

REF NO.	PART NO.	QTY.	DESCRIPTION
1	1722551	1	DECAL, Simplicity
2	1716733	1	DECAL, Console, Forward Instructions
3	1716747	1	DECAL, Hood, Operation Instructions
4	1716840	1	DECAL, Tine Hood
5	1721503	2	DECAL, Belt Cover
6	1716800	1	DECAL, Warning Belt Cover
7	1716839	1	DECAL, Brush Bar

Footnotes:

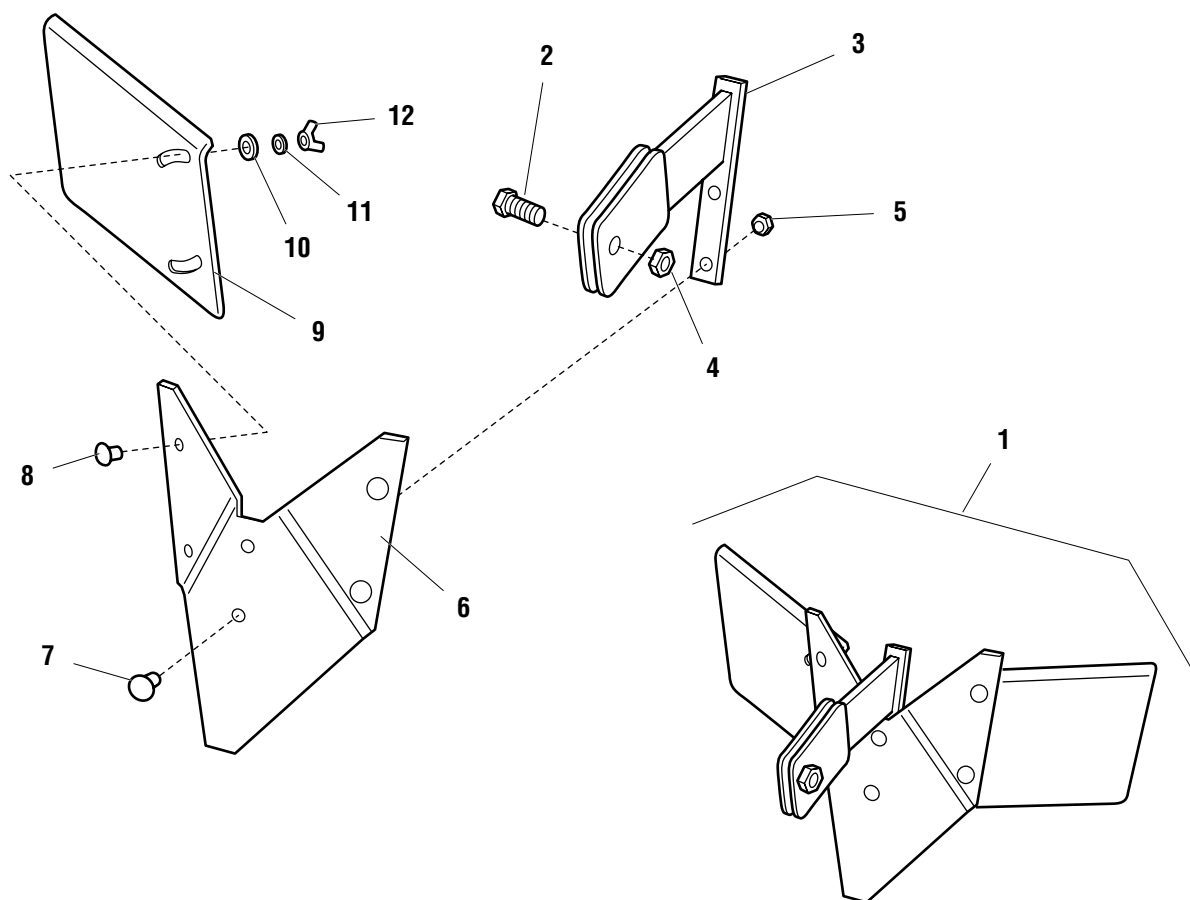
The above parts group applies to the following Mfg. Nos.:

1693705 514RT, Rear Tine Tiller

Hiller/Furrower Attachment

1692878

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



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

1692878 Hiller/Furrower Attachment
1693705 514RT, Rear Tine Tiller

Hiller/Furrower Attachment

REF NO.	PART NO.	QTY.	DESCRIPTION
1	1686802	1	HILLER/FURROWER, Complete (Order as Wholegood)
2	*	1	BOLT, Socket Head, 3/8"-16 x 1-1/4"
3	*	1	BRACKET
4	*	1	NUT, Hex, 3/8" - 16
5	*	2	NUT, Nyloc, 3/8" - 16
6	*	1	BLADE, Furrower
7	*	2	CARRIAGE BOLT, 3/8 - 16 x 1-1/2"
8	*	4	CARRIAGE BOLT, 5/16" - 18 x 3/4"
9	*	1	HILLER WING, Left
9	*	1	HILLER WING, Right (Not Shown)
10	*	4	WASHER, Flat, 5/16"
11	*	4	LOCKWASHER, External Tooth, 5/16"
12	*	4	WING NUT, 5/16" - 18

Footnotes:

* No servicable parts - components shown for reference only.

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

1692878 Hiller/Furrower Attachment
1693705 514RT, Rear Tine Tiller

Hardware Identification & Torque Specifications

Common Hardware Types

Hex Head Capscrew



Washer



Lockwasher

Carriage Bolt



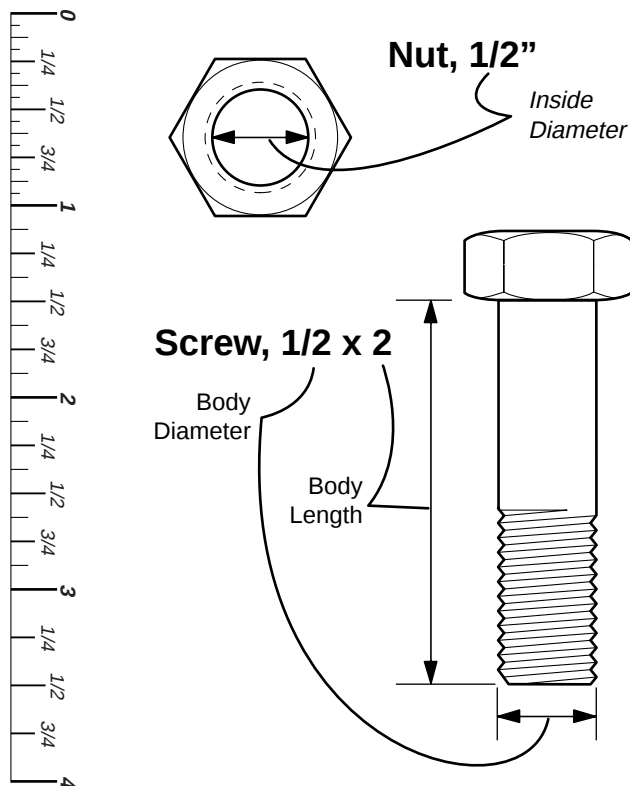
Hex Nut

Standard Hardware Sizing

When a washer or nut is identified as **1/2"**, this is the *Nominal size*, meaning the *inside diameter* is 1/2 inch; if a second number is present it represents the *threads per inch*

When bolt or capscrew is identified as **1/2 - 16 x 2"**, this means the *Nominal size*, or *body diameter* is 1/2 inch; the second number represents the *threads per inch* (16 in this example, and the final number is the *body length* of the bolt or screw (in this example 2 inches long).

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



Torque Specification Chart

FOR STANDARD MACHINE HARDWARE (Tolerance $\pm 20\%$)

Hardware Grade	No Marks SAE Grade 2		SAE Grade 5		SAE Grade 8	
	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	27	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

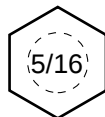
NOTES

- 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.

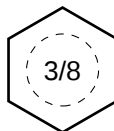
Wrench & Fastener Size Guide



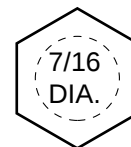
1/4" Bolt or Nut
Wrench—7/16"



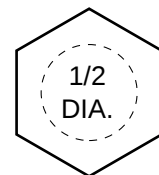
5/16" Bolt or Nut
Wrench—1/2"



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"