

Parts Manual

Mfg. No: 5600347

61" iCD FAST-Vac; 3-Bag Soft Top System
(125XT/150XT/IS700Z/IS2100Z/210/
ISX2200/S175/S200X/S200XT)

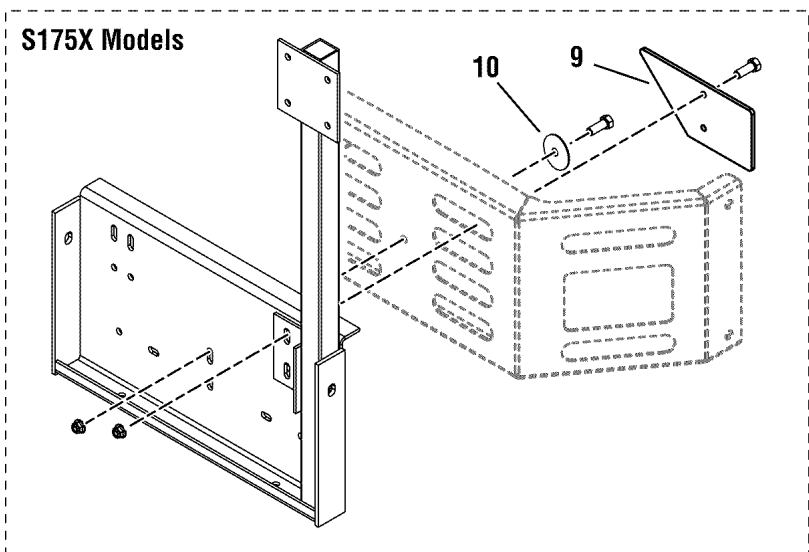
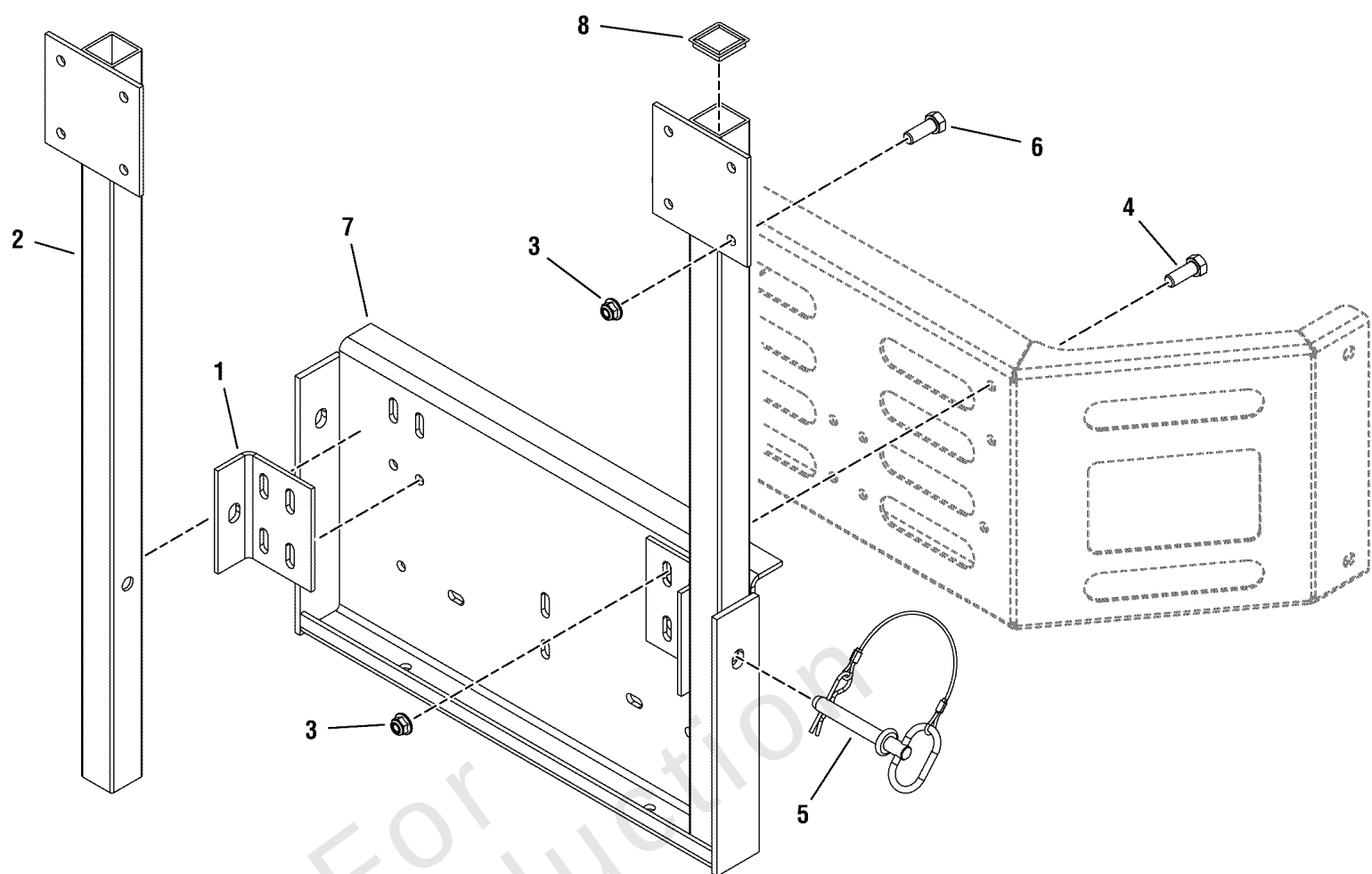
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Not For
Reproduction

2-Bag & 3-Bag Mount Group - Flat Plate Bumpers & Soft Top Systems

Note: Unless noted otherwise, use the standard torque specifications

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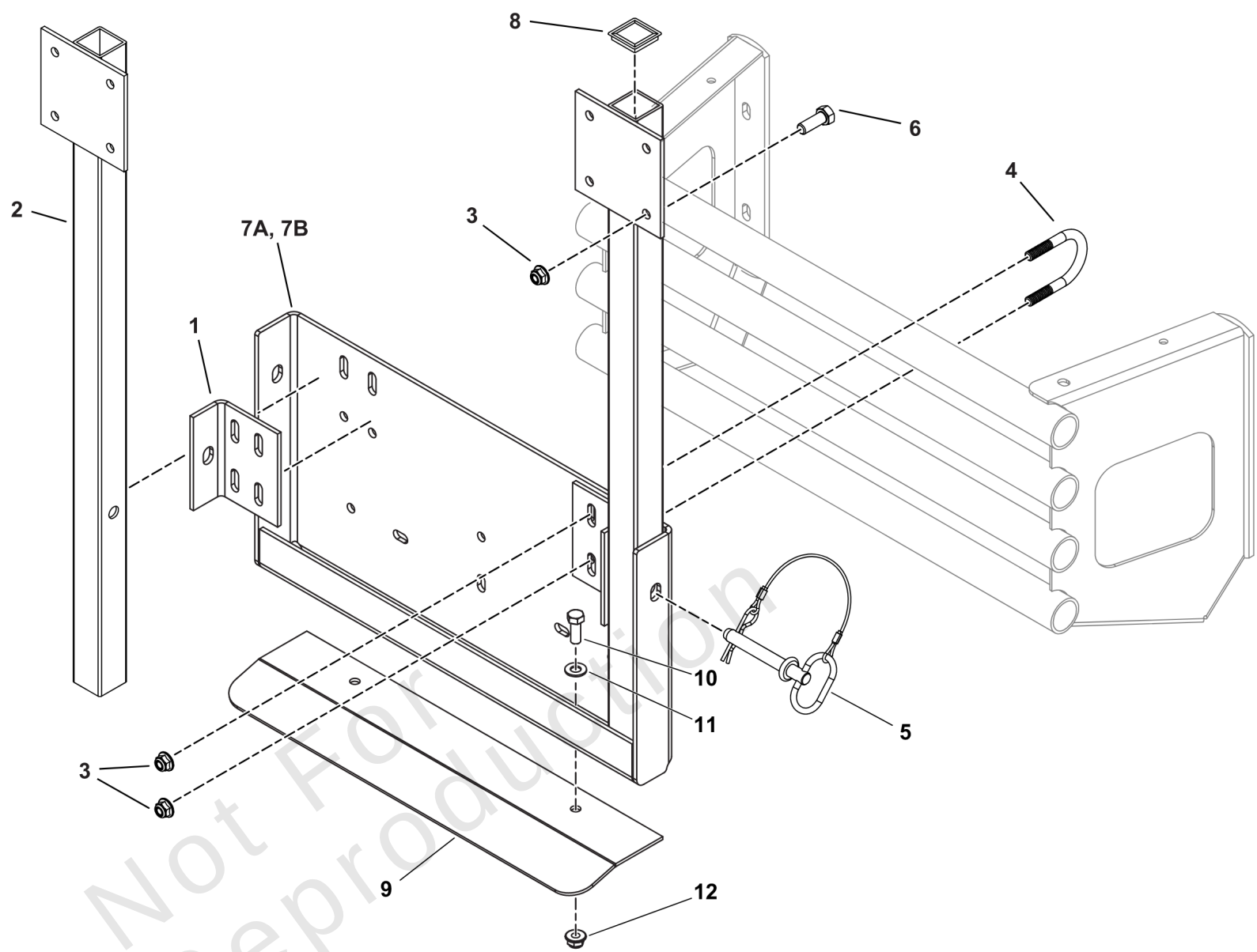
2-Bag & 3-Bag Mount Group - Flat Plate Bumpers & Soft Top Systems

REF NO	PART NO	QTY	DESCRIPTION
1	5402665A	2	MOUNT, TAB, BLACK
2	5400043A	2	WELD, MOUNT, POST - BLK
3	5025394	14	NUT, 3/8-16 HEX NYLOCK FLANGE
4	5025013X10	6	BOLT, 3/8-16 X 1-1/4" GD5 CZ
5	5100013	2	PIN, HITCH, .50 X 3.25 W/ LAY
6	5025013X8	8	BOLT, 3/8-16 X 1" GD5 CZ
7	5408631A	1	WELD, BAGGER MOUNT, 2 BAG - BLK -(2-Bag Systems)
7	5400149AYP	1	WELD, BAGGER MNT,1500 -(3-Bag Systems)
8	5022848	2	CAP, PLASTIC, 1-1/2" X 1-1/2
9	5407783A	2	PLATE, SUPPORT, BAGGER MOUNT - BLK
10	5025326	1	WASHER, .39 X 2.00 X X .14

2-Bag & 3-Bag Mount Group - Round Tube Bumpers & Soft Top Systems

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5600347



2-Bag & 3-Bag Mount Group - Round Tube Bumpers & Soft Top Systems

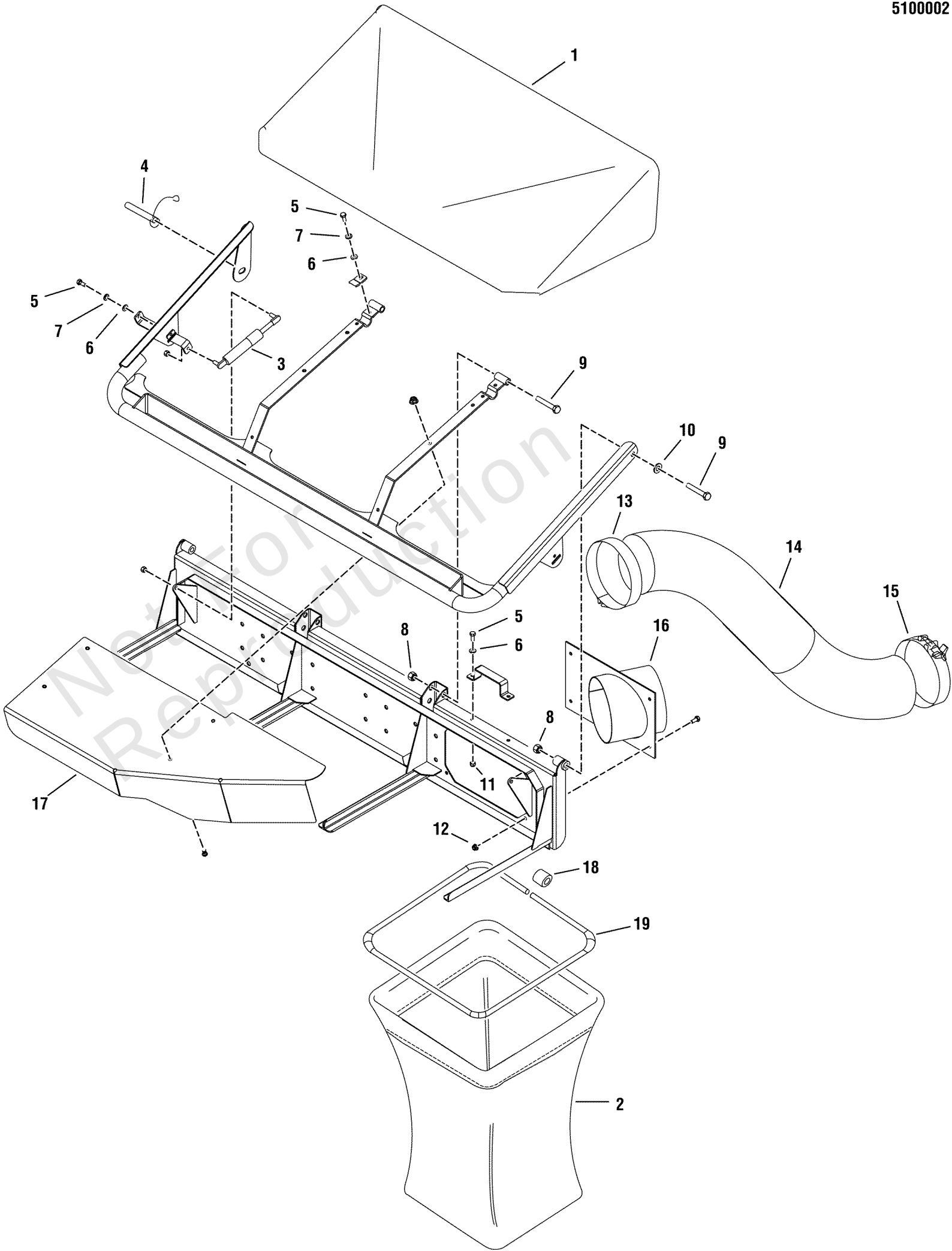
REF NO	PART NO	QTY	DESCRIPTION
1	5402665AA	2	MOUNT, TAB, BLACK
2	5400043AA	2	WELD, MOUNT, POST - BLK
3	5025394	14	NUT, 3/8-16 HEX NYLOCK FLANGE
4	5100009	3	U-BOLT, 3/8 X 1-1/4
5	5100013	2	PIN, HITCH, .50 X 3.25 W/ LAY
6	5025013X8	8	BOLT, 3/8-16 X 1" GD5 CZ
7A	5408631AA	1	WELD, BAGGER MNT -(2-Bag Systems)
7B	5400149AYP	1	WELD, BAGGER MNT,1500 -(3-Bag Systems)
8	5022848	2	CAP, PLASTIC, 1-1/2" X 1-1/2
9	5422431AA	1	PLATE, BAGGER MOUNT, DEFLECTOR - BLK -(ISX3300 Models Only)
10	5025013X8	2	BOLT, 3/8-16 X 1" GD5 CZ -(ISX3300 Models Only)
11	5025156	2	WASHER, 3/8 SAE -(ISX3300 Models Only)
12	5025394	2	NUT, 3/8 - 16 HEX NYLOCK FLANGE -(ISX3300 Models Only)

3-Bag Catcher & Cover Group - Soft Top System

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5600347

5100002



3-Bag Catcher & Cover Group - Soft Top System

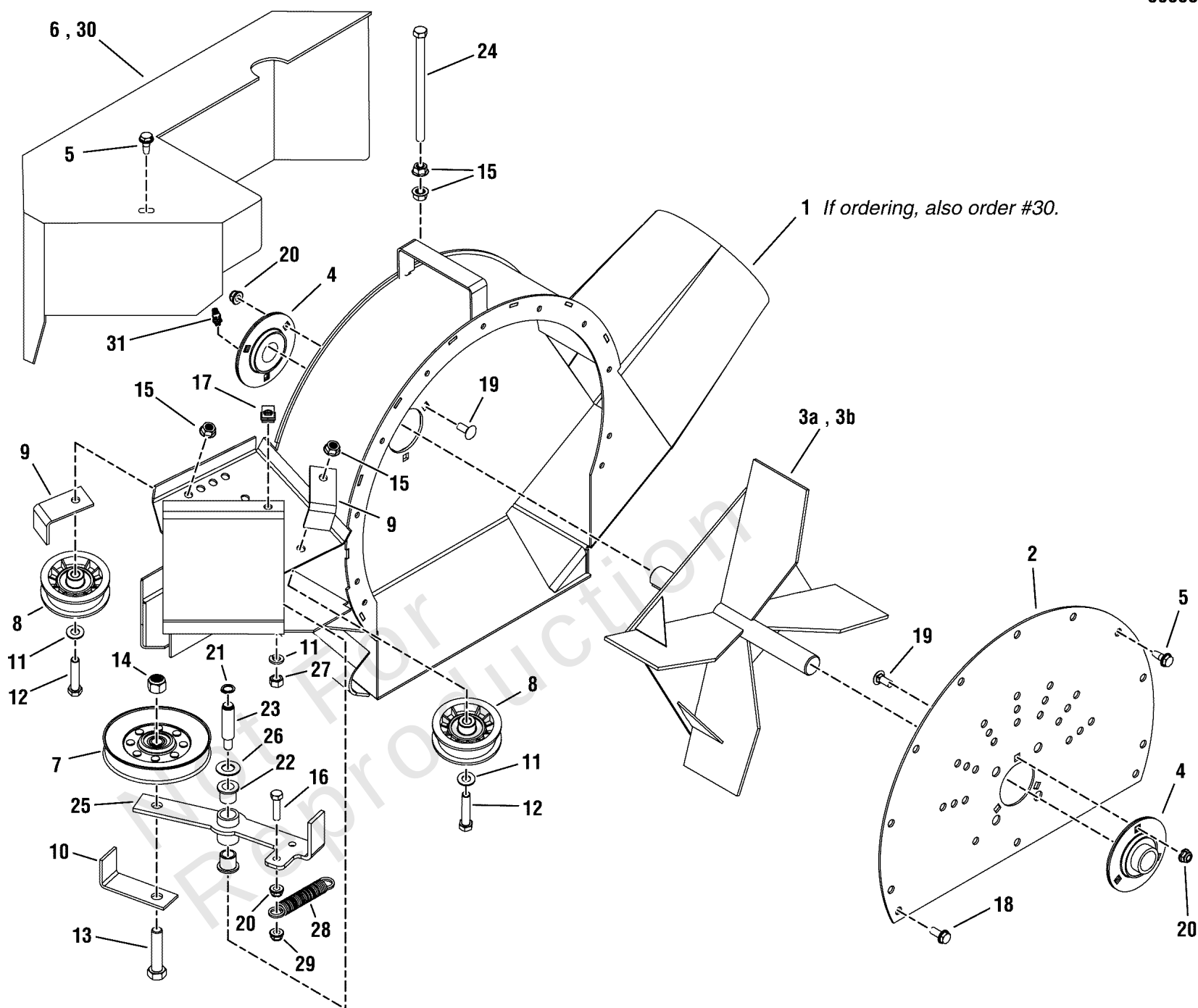
REF NO	PART NO	QTY	DESCRIPTION
1	5100154	1	3 BAG AIR DOME
2	5100150	3	CATCHER BAG W/ HANDLE
3	5100152	2	GAS CYLINDER
4	5100151	1	DETENT PIN W/ LANYARD
5	5025011X6	14	BOLT, 5/16-18 X 3/4 GD5
6	5025155	10	WASHER, 5/16" SAE
7	5025170	6	WASHER, 5/16 LOCK CZ
8	5025056	4	NUT, 1/2-13 HEX NYLON LOCK
9	5025018X24	4	BOLT, 1/2-20 X 3" GD5
10	5025158	2	WASHER, 1/2 SAE
11	5025057	4	NUT, 5/16-18 HEX NYLON LOCK
12	5025392	4	NUT, 5/16-18 HEX NYLOCK FLANGE
13	5022875	1	CLAMP, HOSE, UPPER
14	5103646	1	HOSE, FLEXIBLE, 7" DIA. X 58"
15	5022876	1	CLAMP, HOSE, LOWER
16	5400145A	1	WELD, INLET BLOWER 3-BAG BLACK
17	5400197A	1	BAFFLE
18	5100730	1	BAG FRAME CONNECTOR, PLASTIC
19	5100729	1	BAG FRAME

Blower Group, FAST-Vac

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5600347

5900800



Blower Group, FAST-Vac

REF NO	PART NO	QTY	DESCRIPTION
1	5403723A	1	WELD, BLOWER HOUSING - FAST VAC - BLK
2	5403750A	1	PLATE, BACK - BLK
3a	5407093	1	WELD, IMPELLER, FAST-VAC BLOWER -(S/N: 04/07/2010 & Later)
3b	5403741	1	WELD, IMPELLER, FAST VAC BLOWER -(S/N: 04/06/2010 & Earlier)
4	7100021SM	2	BEARING, FLANGE, 1" Bore -(Torque set screws to 87 in-lbs (9.8 Nm). Use Loctite 271 Threadlocker on threads).
5	7091541	5	BOLT, 5/16-18 X 3/4" Self Tap
6	5403736A	1	WELD, BELT GUARD, BLOWER - BLK -(S/N: 07/14/2013 & Earlier)
7	5021097	1	PULLEY-IDLER-V, 4.85OB, .506 ID, .94W, STL
8	5106480	2	PULLEY, IDLER, 2.75"OD X .37"ID, INSERT
9	5403749A	2	KEEPER, BELT - BLK
10	5403740A	1	RETAINER, BELT - BLK
11	5025156	3	WASHER, 3/8 SAE
12	80003522	2	HHCS, 3/8-16 X 2.00, GR5, ZINC/CLEAR
13	5025017X18	1	BOLT, 1/2-13 X 2-1/4" GD5 CZ
14	5025056	1	NUT, 1/2-13 HEX NYLON LOCK
15	5025128	4	NUT, 3/8-16 Hex Large Serrated Flange
16	5025011X10	1	BOLT, 5/16-18 X 1-1/4" GD5 YZ
17	5022308	3	BODY CLIP, 5/16-18-7GA MATERIAL
18	7091811	6	BOLT, 5/16-18 X 5/8" Self Lock
19	5025145X6	6	BOLT, 5/16-18 X 3/4, CARRIAGE, GD5, CZ
20	5025392	6	NUT, 5/16-18 HEX NYLOCK FLANGE NUT
21	7010776	1	RETAINING RING, 1/2"
22	7014409	2	FLANGE BEARING, 9/16"
23	7044995	1	IDLER STUD
24	5025013X48	1	BOLT, 3/8-16 X 6" GD5 CZ
25	5411358	1	ASSM, IDLER ARM, FAST-VAC
26	5103679	1	WASHER, FLAT, 9/16 ID, 1-1/8 OD, 98THK -Was 5025171
27	5025097	1	NUT, 3/8-24 Hex Nylon Lock -Was 5025097
28	5020807	1	SPRING, Extension
29	7091575	1	NUT, 5/16-18 Hex Center Lock
30	5411464A	1	WELD, Fast-Vac Guard - BLK -(S/N: 07/15/2013 & Later)
31	-----	1	ZERK, Grease Fitting (65 Deg, 1/4-28 Taper Male)

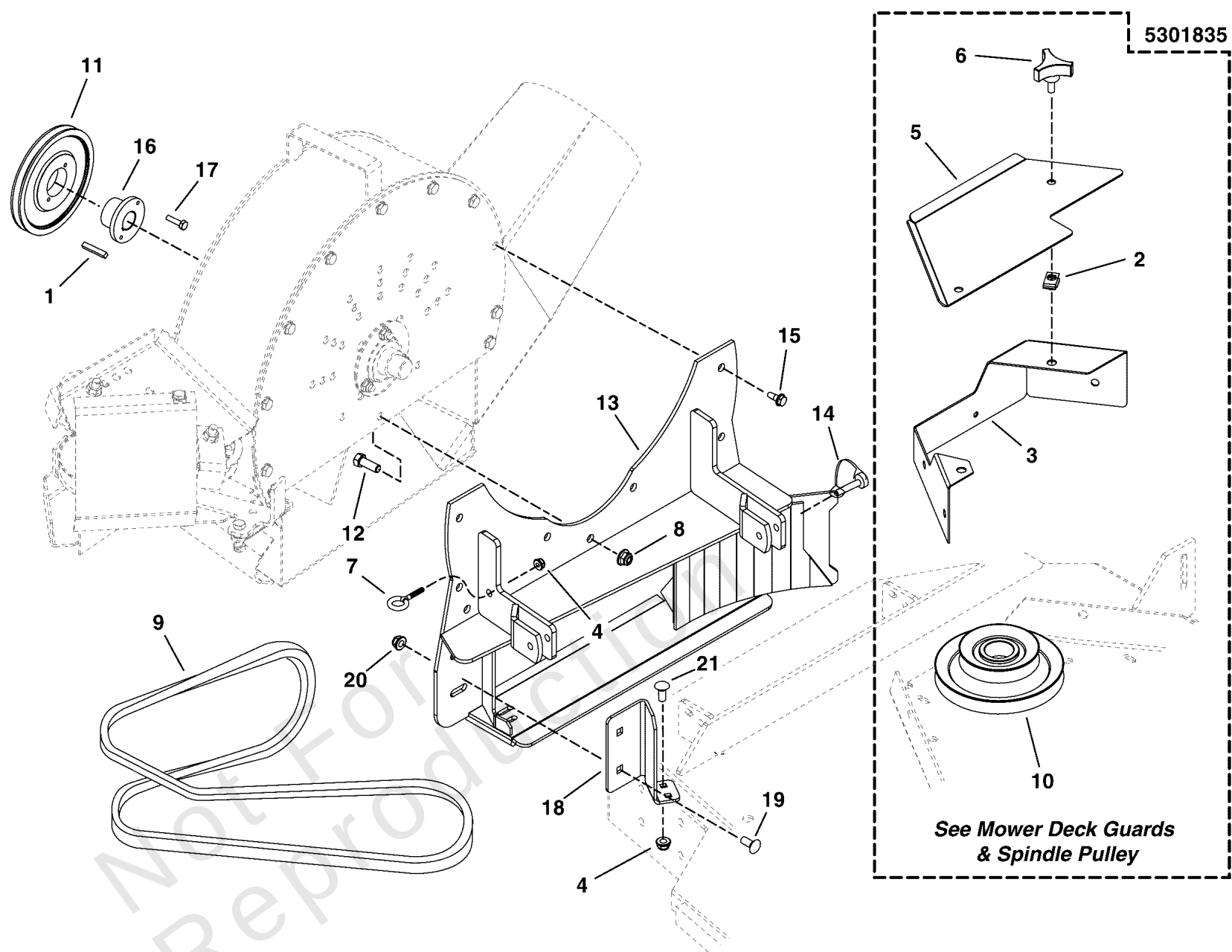
Footnotes:

**If replacing, order 5411464A also.

Blower Mount Group - 61" Models, FAST-Vac

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5600347



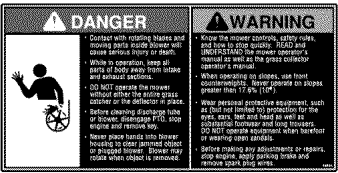
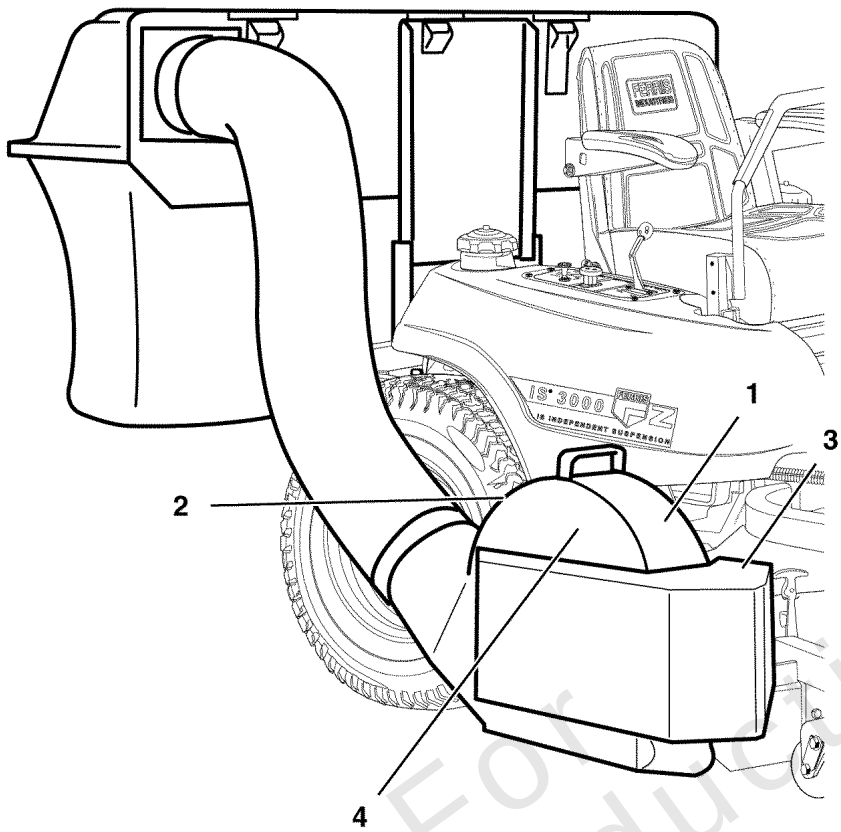
Blower Mount Group - 61" Models, FAST-Vac

REF NO	PART NO	QTY	DESCRIPTION
1	5022726	1	KEY 1/4 SQ X 1 1/2 LONG
2	5022308	2	BODY CLIP, 5/16-18-7GA MATERIAL
3	-----	1	SEE MOWER DECK GUARDS & SPINDLE PULLEY -(ZTR Models)
3	-----	1	SEE MOWER DECK GUARDS & SPINDLE PULLEY -(800X Models)
4	5025391	3	NUT, 1/4-20 Hex Nylock Flange
5	-----	1	SEE MOWER DECK GUARDS & SPINDLE PULLEY -(ZTR Models)
5	-----	1	SEE MOWER DECK GUARDS & SPINDLE PULLEY -(800X Models)
6	5022319	2	KNOB, PLASTIC, 5/16-18 X 3/4"
7	5022205	1	EYE BOLT, 1/4-20 X 2.5, 1THRD, .5EYE,CZ
8	5025394	3	NUT, 3/8 - 16 HEX NYLOCK FLANGE
9	5102334	1	BELT, 96" EL, A-SECT, ARAMID, WRAPPED
10	-----	1	SEE MOWER DECK GUARDS & SPINDLE PULLEY -(ZTR Models)
10	-----	1	SEE MOWER DECK GUARDS & SPINDLE PULLEY -(800X Models)
11	5046808	1	PULLEY, BLOWER AXLE, 61
11	5100815	1	PULLEY , 4.75 OD, SINGLE GROOVE BH-48 -(IS2500Z Models)
12	5025013X8	3	BOLT, 3/8-16 X 1" GD5 CZ
13	5408254A	1	WELD, ADAPTER, 61ICD, FVAC - BLK
14	5100847	2	SNAPPERPIN, 5/16 X 2
15	7091811	2	BOLT, 5/16-18 X 5/8" Self Lock
16	5020819	1	BUSHING, Tapered Hub
17	5025010X8	2	BOLT, 1/4-20 X 1" GD5 CZ
18	5408272A	1	BRACKET, DEFLECTOR PLATE, 61" iCD - BLK
19	5025145X6	2	BOLT, 5/16-18 X 3/4, CARRIAGE, GD5, CZ
20	5025392	2	NUT, 5/16-18 HEX NYLOCK FLANGE NUT
21	1960252	2	BOLT-RD HD SH SQ NK 1/4-20X0.625 G5 BLK

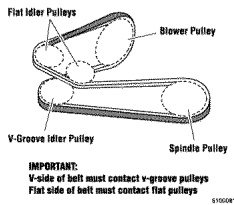
Decal Group - Fast-Vac Blower S/N: 06/2014 & Below

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5600347



FAST-Vac



Decal Group - Fast-Vac Blower S/N: 06/2014 & Below

REF NO	PART NO	QTY	DESCRIPTION
1	3046850	1	DECAL, DANGER / WARNING
2	3046851	1	DECAL, WARNING-BLOWER
3	3046883	1	DECAL, WARNING-SHIELD
4	3046944	1	DECAL, FAST-VAC
5	7027733	1	(S) DECAL, EAR PROTECTION
6	5100081	1	DECAL, BELT ROUTING

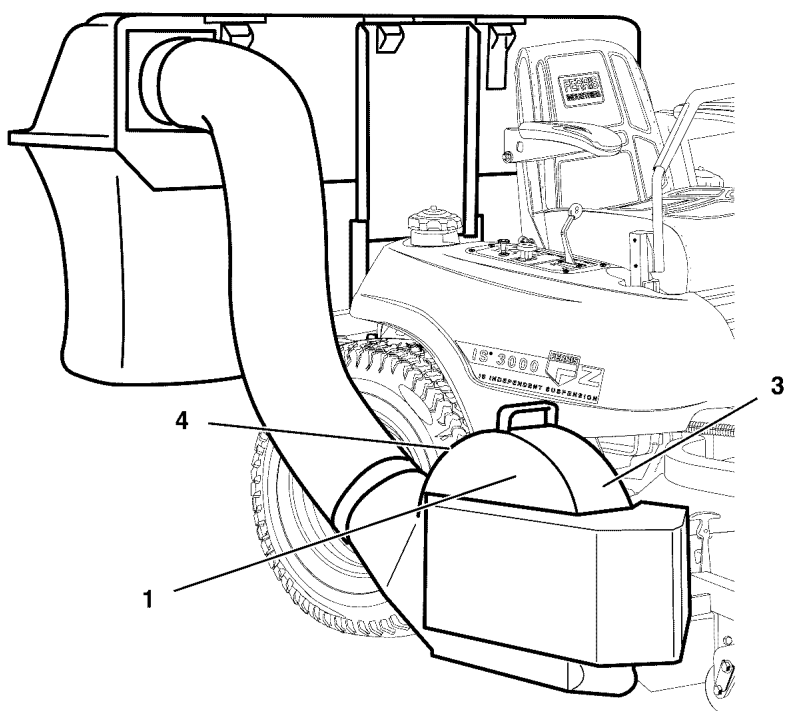
Not For Reproduction

Decal Group - Fast-Vac Blower S/N: 07/2014 & Above

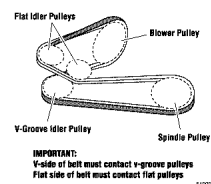
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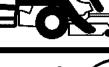
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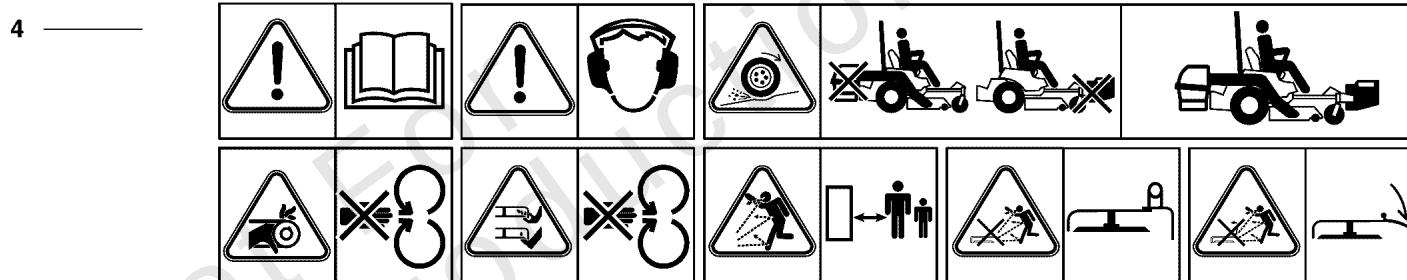


1 ——— **FAST-Vac**



3



Decal Group - Fast-Vac Blower S/N: 07/2014 & Above

REF NO	PART NO	QTY	DESCRIPTION
1	3046944	1	DECAL, FAST-VAC
2	5100081	1	DECAL, BELT ROUTING
3	5104313	1	DECAL, BLOWER, SMALL, ICONS
4	5104314	1	DECAL, BLOWER, MAIN, LARGE, ICONS

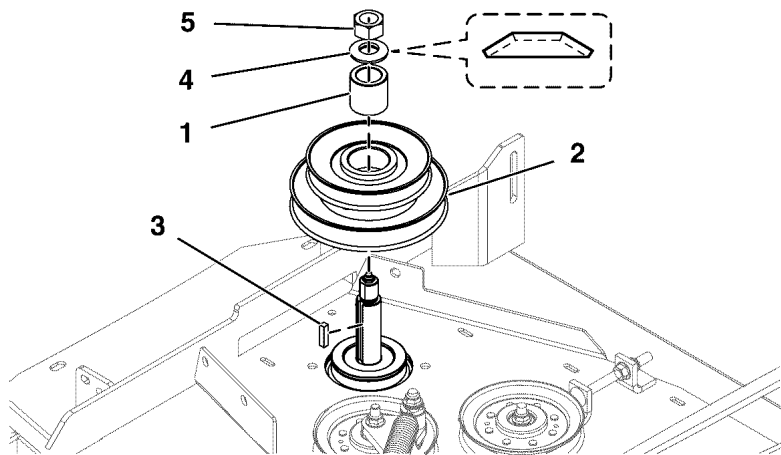
Not For Reproduction

Mower Deck Guards & Spindle Pulley - 2-Belt Driven Mower Decks

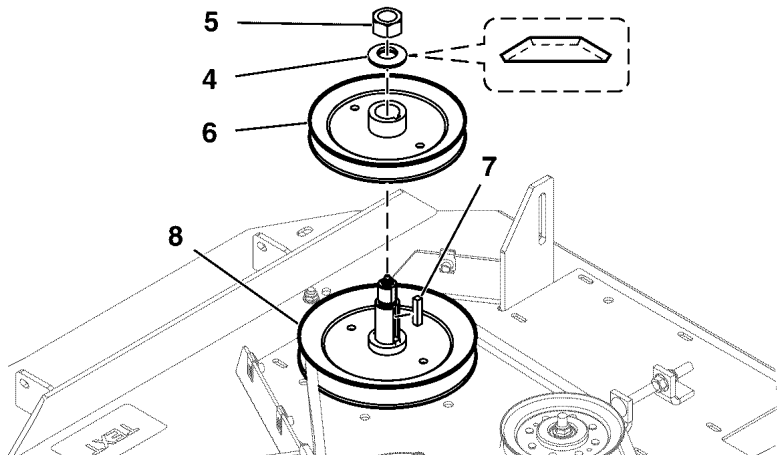
Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5600347

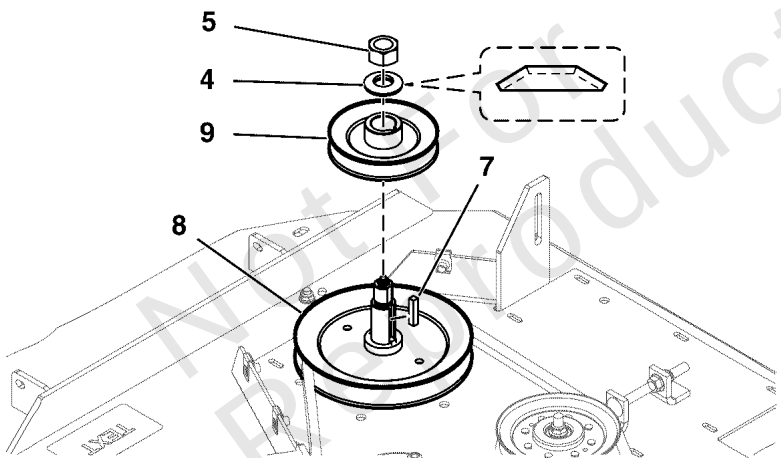
52" Mower Decks
(5303119, 5303823, 5303088)



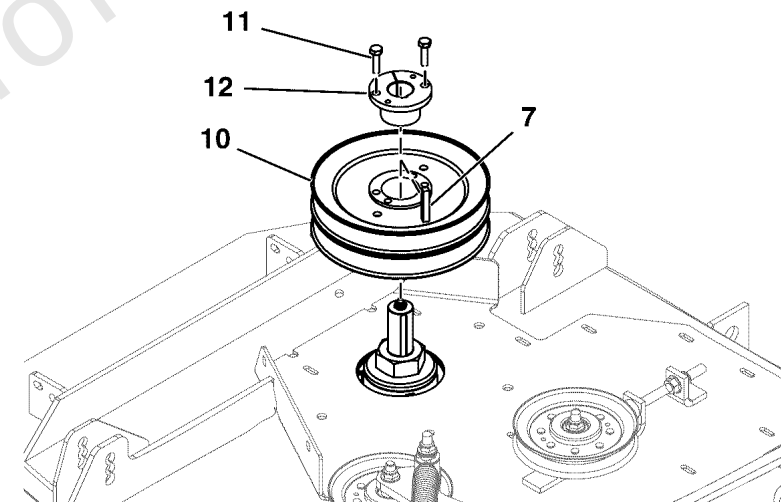
5303116 5303821 5303119 5303823
5303088 5304154 5304153
61" Mower Decks - Fast-Vac Collection Systems
(5303116)



61" Mower Decks - TURBO-Pro MAX Collection Systems
(5303821)

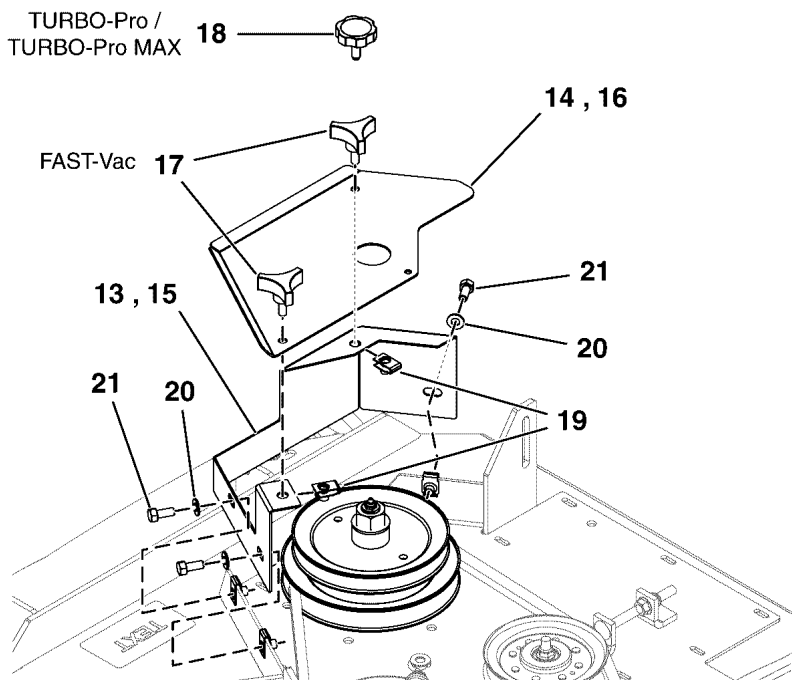


61" Mower Decks w/ Tapered Hub
(5304153, 5304154)



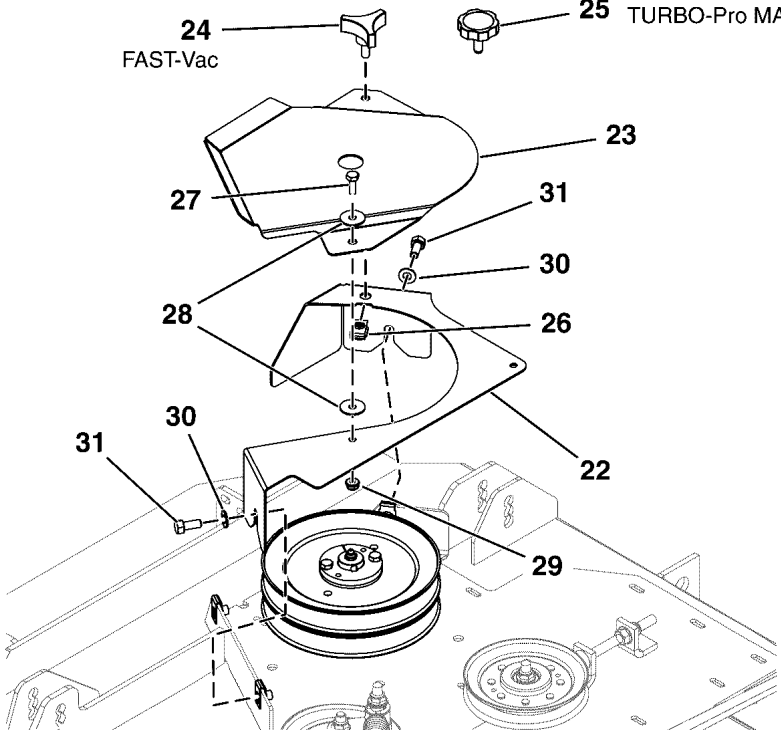
All Other Models
(5303119, 5303823, 5303088, 5303116, 5303821)

TURBO-Pro /
TURBO-Pro MAX



61" Mower Decks w/ Tapered Hub
(5304153, 5304154)

FAST-Vac TURBO-Pro /
TURBO-Pro MAX



Mower Deck Guards & Spindle Pulley - 2-Belt Driven Mower Decks

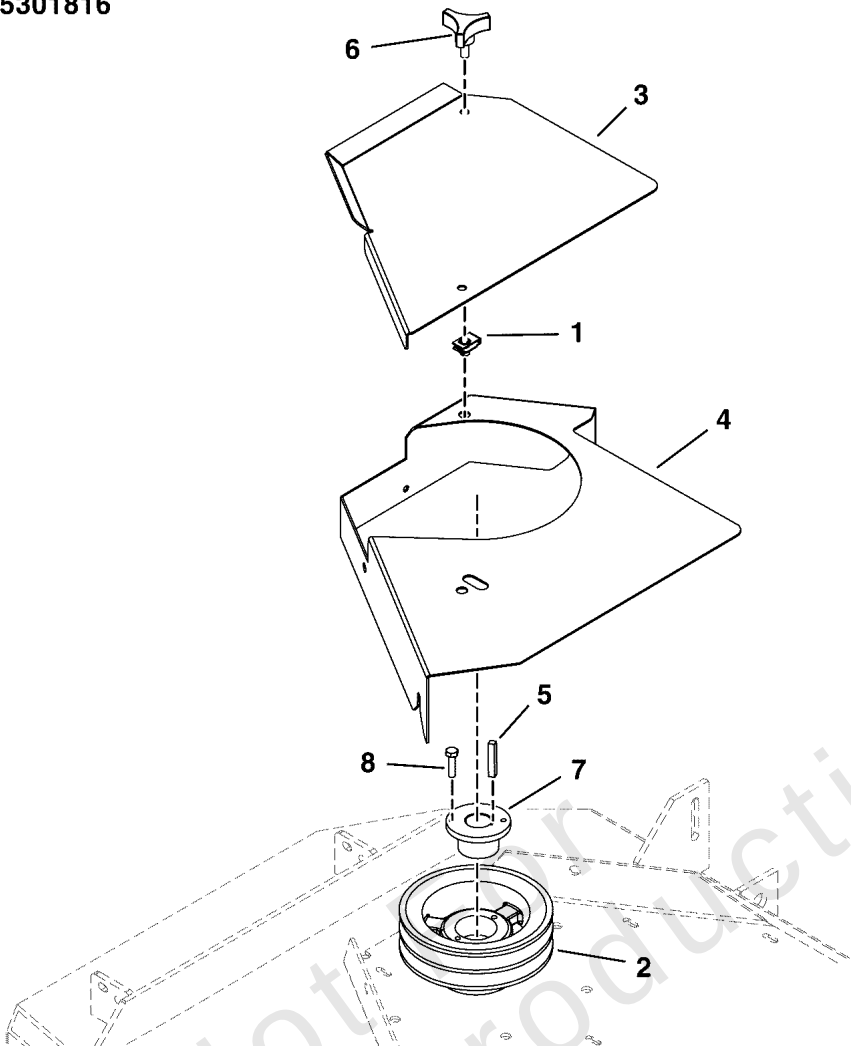
REF NO	PART NO	QTY	DESCRIPTION
1	5105339	1	SPACER, 1.00"ID X 1.50"OD X 1.48", BZ -(52" Mower Decks)
2	5023177	1	PULLEY, BLOWER 52" DECK -(FAST-Vac Units)
2	5103468	1	PULLEY, DOUBLE, 52" DECK -(TURBO-Pro / TURBO-Pro MAX Units)
3	5022726	1	KEY 1/4 SQ X 1 1/2 LONG
4	5025406	1	WASHER, 3/4 BELLEVILLE CL/ZC -(Existing Components on Deck)
5	5025405	1	NUT, 3/4-16 Hex -(Existing Components on Deck)
6	5105338	1	PULLEY, V SPINDLE, 4.30"OB X .985"ID
7	5022726	1	KEY 1/4 SQ X 1 1/2 LONG
8	-----	0	EXISTING MOWER DECK PULLEY
9	5105334	1	PULLEY, V SPINDLE, 6.18"OB X .985"ID
10	5105006	1	PULLEY, SPNDL, 7.032"OB-DBL, HQ BORE
11	5025010X8	2	BOLT, 1/4-20 X 1" GD5 CZ
12	5020819	1	BUSHING, Tapered Hub
13	5416222AA	1	GUARD, PULLEY, BLWR -BLK -(61" Mower Decks)
14	5416223AA	1	GUARD, BLOWER BELT - BLK -(61" Mower Decks)
15	5416220AA	1	GUARD, DECK PULLEY - BLK -(52" Mower Decks)
16	5416221AA	1	PLATE, BELT GUARD - BLK -(52" Mower Decks)
17	5022319	2	KNOB, PLASTIC, 5/16-18 X 3/4" -(FAST-Vac Units)
18	5101731	2	KNOB, 5/16-18 X 1.00, ROSETTE BLACK -(TURBO-Pro / TURBO-Pro MAX Units)
19	5022308	2	BODY CLIP, 5/16-18-7GA MATERIAL
20	5025155	3	WASHER, 5/16" SAE
21	5025011X6	3	BOLT, 5/16-18 X 3/4 GD5
22	5416224AA	1	GUARD, DECK PULLEY, IS3200-61, RH - BLK
23	5413841AA	1	SHIELD, BELT, 3200-61", BLOWER - BLK
24	5022319	1	KNOB, PLASTIC, 5/16-18 X 3/4" -(FAST-Vac Units)
25	5101731	1	KNOB, 5/16-18 X 1.00, ROSETTE BLACK -(TURBO-Pro / TURBO-Pro MAX Units)
26	5022308	1	BODY CLIP, 5/16-18-7GA MATERIAL
27	5025010X6	1	BOLT, 1/4"-20 X 3/4" GD5 YZ
28	5025288	2	WASHER, 1/4" Fender
29	5025391	1	NUT, 1/4-20 Hex Nylock Flange
30	5025155	2	WASHER, 5/16" SAE
31	5025011X6	2	BOLT, 5/16-18 X 3/4 GD5

Mower Deck Guards & Spindle Pulley - Single Belt Driven Mower Decks

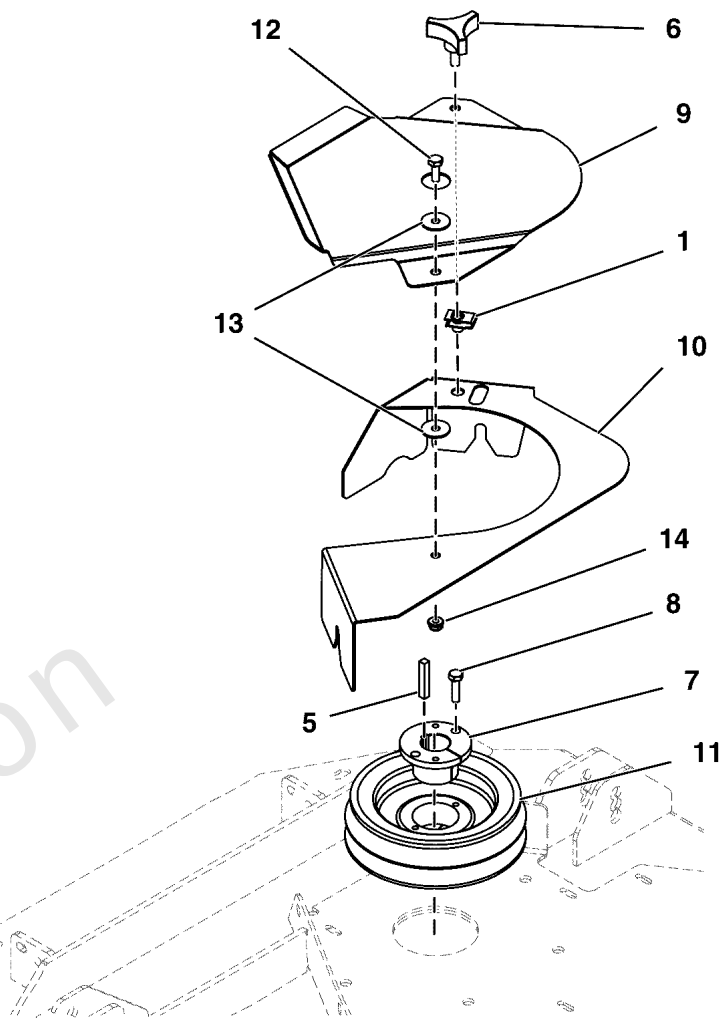
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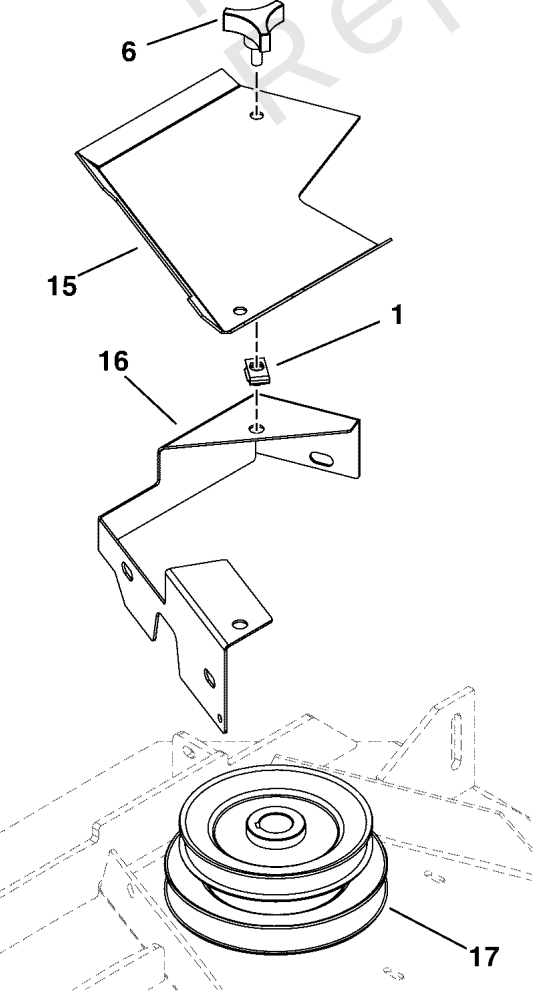
IS3100Z Series, FAST-Vac
5301816



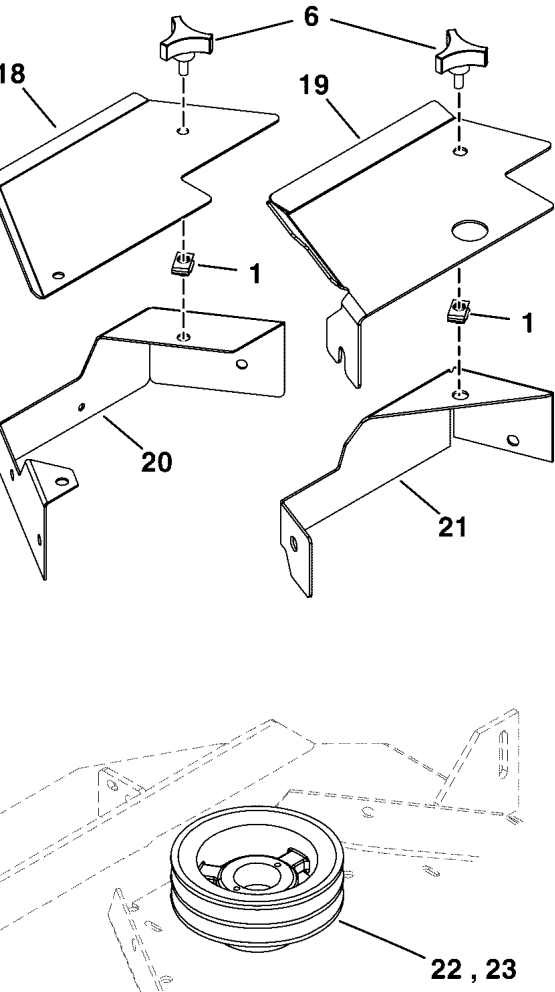
IS3200Z / F320Z Series, FAST-Vac
5304154



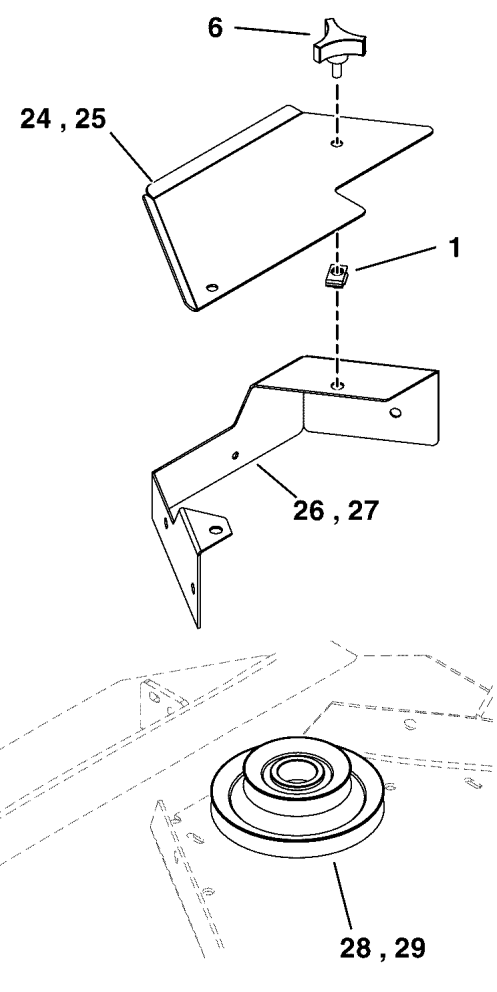
48" Mower Decks, FAST-Vac
5302724



52" Mower Decks, FAST-Vac
5301971



61" Mower Decks, FAST-Vac
5301815



Mower Deck Guards & Spindle Pulley - Single Belt Driven Mower Decks

REF NO	PART NO	QTY	DESCRIPTION
1	5022308	2	BODY CLIP, 5/16-18-7GA MATERIAL
2	5102067	1	PULLEY, DOUBLE, DH4600, 5.95 OD TAPERED
3	5400190A	1	BELT SHIELD, 61" BLOWER DECK-BK
4	5400189A	1	WELD, GUARD 61" DECK
5	5022726	2	KEY 1/4 SQ X 1 1/2 LONG
6	5022319	2	KNOB, PLASTIC, 5/16-18 X 3/4
7	5020819	2	BUSHING, TAPERED HUB
8	5025010X8	4	BOLT, 1/4-20 X 1" GD5 CZ
9	5413841AA	1	SHIELD, BELT, 3200-61", BLOWER - BLK
10	5413834AA	1	GUARD, DECK PULLEY, 3200-61" - BLK
11	5104573	1	PULLEY, DOUBLE, 5.95/6.43 OD, IS3200
12	5025010X6	1	BOLT, 1/4-20 X 3/4 GD5 CZ
13	5025288	2	WASHER, 1/4 FENDER
14	5025391	4	NUT, 1/4-20 HEX NYLOCK FLANGE
15	5400007A	1	GUARD, DECK - BLACK
16	5061858A	1	GUARD, DECK 48, 52 - BLK
17	5023176	1	PULLEY, BLOWER 48 DECK
18	5400007A	1	GUARD, DECK - BLACK -(Snapper Pro branded models with iCD Mower Decks Only)
19	5405961A	1	GUARD, BELT, 52/2000 SND - BLK -(Ferris branded models with iCD Mower Decks Only)
20	5061858A	1	GUARD, DECK - BLACK -(Snapper Pro branded models with iCD Mower Decks Only)
21	5405962A	1	GUARD, DECK, 52/2000 SND - BLK -(Ferris branded models with iCD Mower Decks Only)
22	5023177	1	PULLEY-BLOWER 52 DECK
23	5046702	1	PULLEY, DECK, 61 BLOWER UNIT -(IS2000Z Models)
24	5401435A	1	GUARD, DECK, 61", 2000 FASTVAC - BLK -(ZTR Models)
25	5405574A	1	WELD, PULLEY GUARD, 800X - BLK -(800X Models)
26	5401436AA	1	GUARD, BELT, 61", 2000 FASTVAC - BLK -(ZTR Models)
27	5405534A	1	SHIELD, BLOWER BELT, 800X - BLK -(800X Models)
28	5046702	1	PULLEY, DECK, 61 BLOWER UNIT -(ZTR Models)
29	5023176	1	PULLEY, BLOWER 48 DECK -(800X Models)

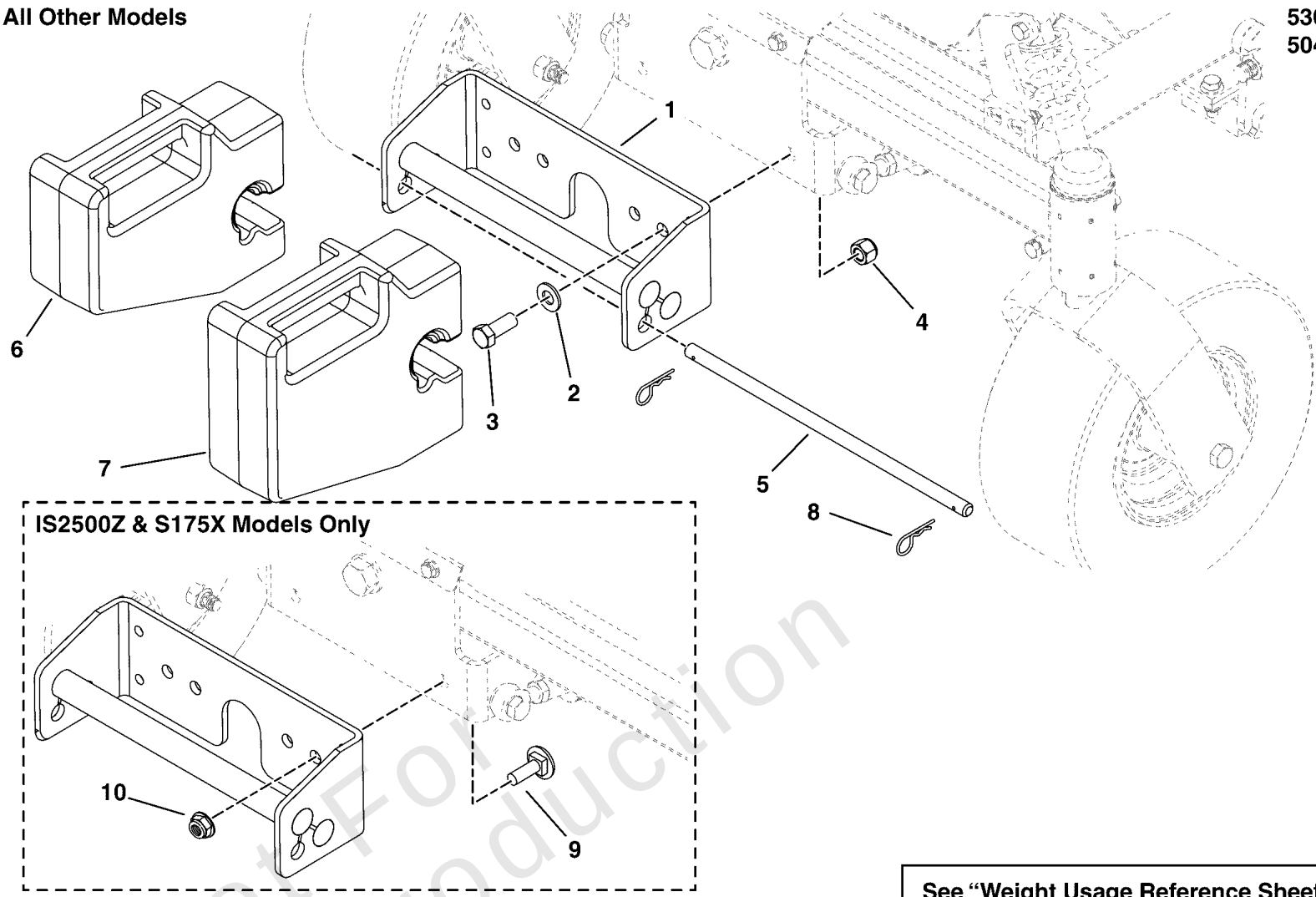
Weight Mount Group

Note: Unless noted otherwise, use the standard torque specifications

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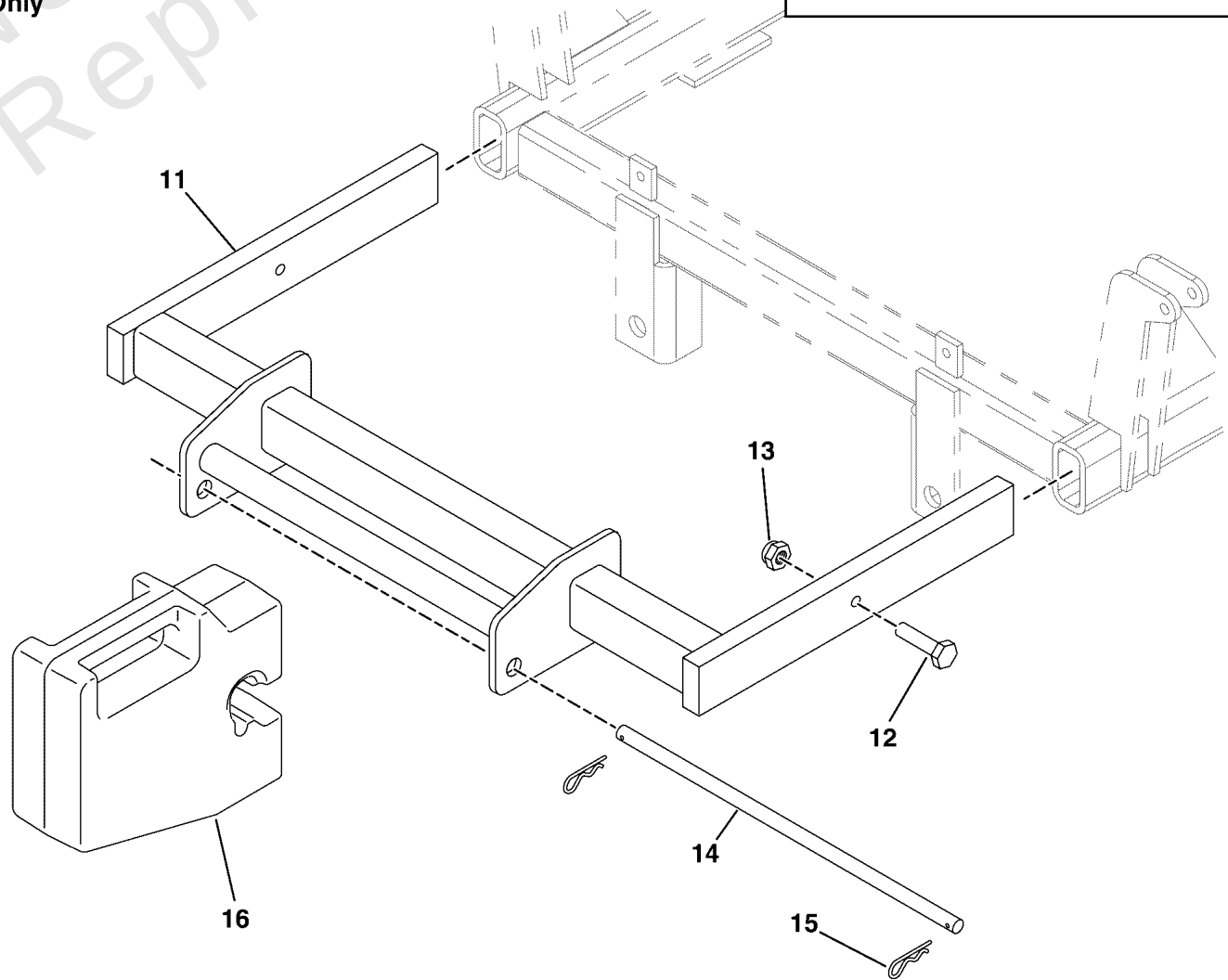
All Other Models

5300189
5046869



See "Weight Usage Reference Sheet"
for Quantity of Weights

IS3100Z Models Only



Weight Mount Group

REF NO	PART NO	QTY	DESCRIPTION
1	5049082A	1	HOLDER ASMY-WEIGHT CONS Z CAT - BLACK
2	5025158	2	WASHER, 1/2 SAE
3	5025018X10	2	BOLT, 1/2-20 X 1-1/4" GD8 CZ
4	5025098	2	NUT, Hex, Nylon Lock, 1/2-20
5	5049143	1	ROD-.500DIA 13.75LG YELLOW CON
6	1700000	0	WEIGHT-QUICK ATTACH 33LBS PAINTED BLACK -(See Weight Usage Reference Sheet for Qty)
7	1717627	0	WEIGHT-QUICK ATTACH 50LB SUITCASE PAINTED -(See Weight Usage Reference Sheet for Qty)
8	5025210	2	3/32 X 1-5/8 HAIR PIN CLIP
9	5025324X10	2	BOLT, CARRIAGE 1/2-13 X 1-1/4 GD.5
10	5025396	2	NUT, Hex Flange, Nylock, 1/2-13
11	5046169A	1	3-BAG WEIGHT RACK WELDMENT
12	80003522	2	HHCS, 3/8-16 X 2.00, GR5, ZINC/CLEAR
13	5025096	2	NUT, 3/8-16 HEX NYLON LOCK
14	5046174A	1	ROD, WEIGHT RETAINER
15	5025210	2	3/32 X 1-5/8 HAIR PIN CLIP
16	1717627	0	WEIGHT-QUICK ATTACH 50LB SUITCASE PAINTED -(See Weight Usage Reference Sheet for Qty)

Weight Usage Reference Sheet

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5600347

Soft Top Bagger Collection Systems

S/N: 08/2014 & Below			S/N: 09/2014 & Above			S/N: 08/2014 & Below			S/N: 09/2014 & Above		
Kit Number	Weight Part Number	Qty	Weight Part Number	Qty		Kit Number	Weight Part Number	Qty	Weight Part Number	Qty	
5600002	1717627	2	1700000	3		5600749	1717627	3	1717627	2	
5600003	1717627	3	1717627	3		5600750	1717627	3	1717627	2	
5600004	1717627	3	1717627	3		5600759	1717627	3	1717627	2	
5600006	1717627	3	1717627	3		5600760	1717627	3	1717627	2	
5600009	1717627	3	1717627	3		5600761	1717627	3	1717627	2	
5600057	1717627	3	1717627	3		5600762	1717627	3	1717627	2	
5600060	1717627	3	1717627	3		5600802	1717627	2	1700000	3	
5600061	1717627	3	1717627	3		5600803	1717627	2	1700000	3	
5600148	1717627	3	1717627	3		5600804	1717627	2	1700000	3	
5600150	1717627	3	1717627	3		5600805	1717627	3	1717627	3	
5600173	1717627	2	1700000	3		5600806	1717627	3	1717627	3	
5600333	1717627	3	1717627	2		5600807	1717627	3	1717627	3	
5600347	1717627	3	1717627	2		5600808	1717627	3	1717627	3	
5600348	1717627	2	1700000	3		5600864	1717627	3	1717627	2	
5600371	1717627	3	1717627	2		5600865	1717627	3	1717627	2	
5600372	1717627	2	1700000	3		5600866	1717627	3	1717627	2	
5600373	1717627	3	1717627	2		5600867	1717627	3	1717627	2	
5600445	1717627	3	1717627	3							
5600446	1717627	3	1717627	2							
5600539	1717627	2	1700000	3							
5600601	1717627	2	1700000	2							
5600602	1717627	2	1700000	2							
5600605	1717627	3	1717627	2							
5600608	1717627	3	1717627	2							
5600609	1717627	2	1700000	2							
5600610	1717627	2	1700000	2							
5600611	1717627	2	1700000	2							
5600615	1717627	3	1717627	2							
5600616	1717627	3	1717627	2							
5600618	1717627	3	1717627	2							
5600619	1717627	3	1717627	2							
5600620	1717627	3	1717627	2							
5600621	1717627	3	1717627	2							
5600624	1717627	3	1717627	2							
5600641	1717627	3	1717627	2							
5600648	1717627	2	1700000	2							
5600649	1717627	2	1700000	2							
5600657	1717627	3	1717627	2							
5600747	1717627	3	1717627	2							
5600748	1717627	3	1717627	2							

Weight Usage Reference Sheet

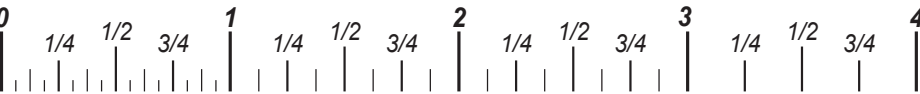
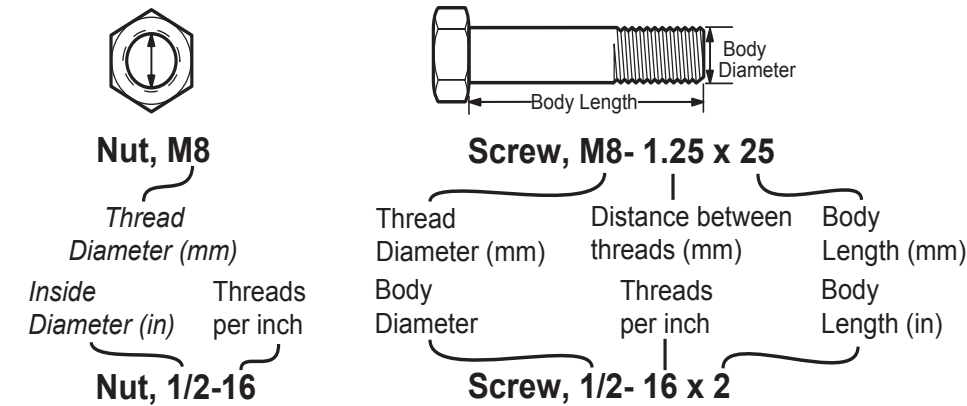
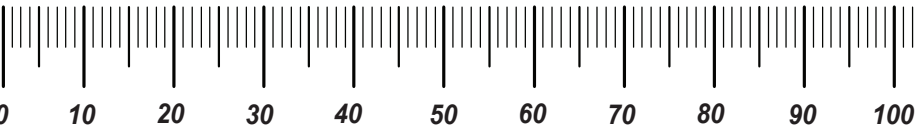
REF NO	PART NO	QTY	DESCRIPTION
1	1700000	0	WEIGHT-QUICK ATTACH 33LBS PAINTED BLACK
2	1717627	0	WEIGHT-QUICK ATTACH 50LB SUITCASE PAINTED

Not For Reproduction

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).

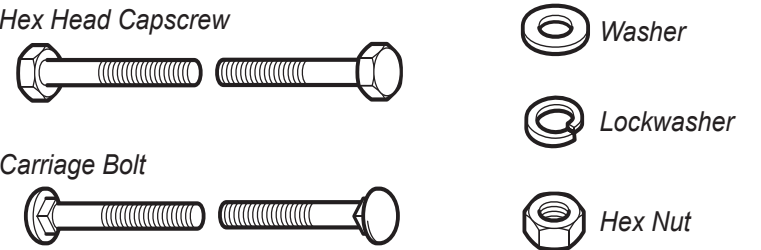
When bolt or capscrew is identified as 1/2 - 16 x 2" (M8 - 1.25 x 50), this means the *Nominal size*, or body diameter is 1/2 inch (8mm metric thread diameter), the second number, 16, represents the *threads per inch*, (*distance between threads*). The final number is the body length of the bolt or screw,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

