

Parts Manual

Mfg. No: 5600007
52" 3-Bag System (IS1000Z Series)

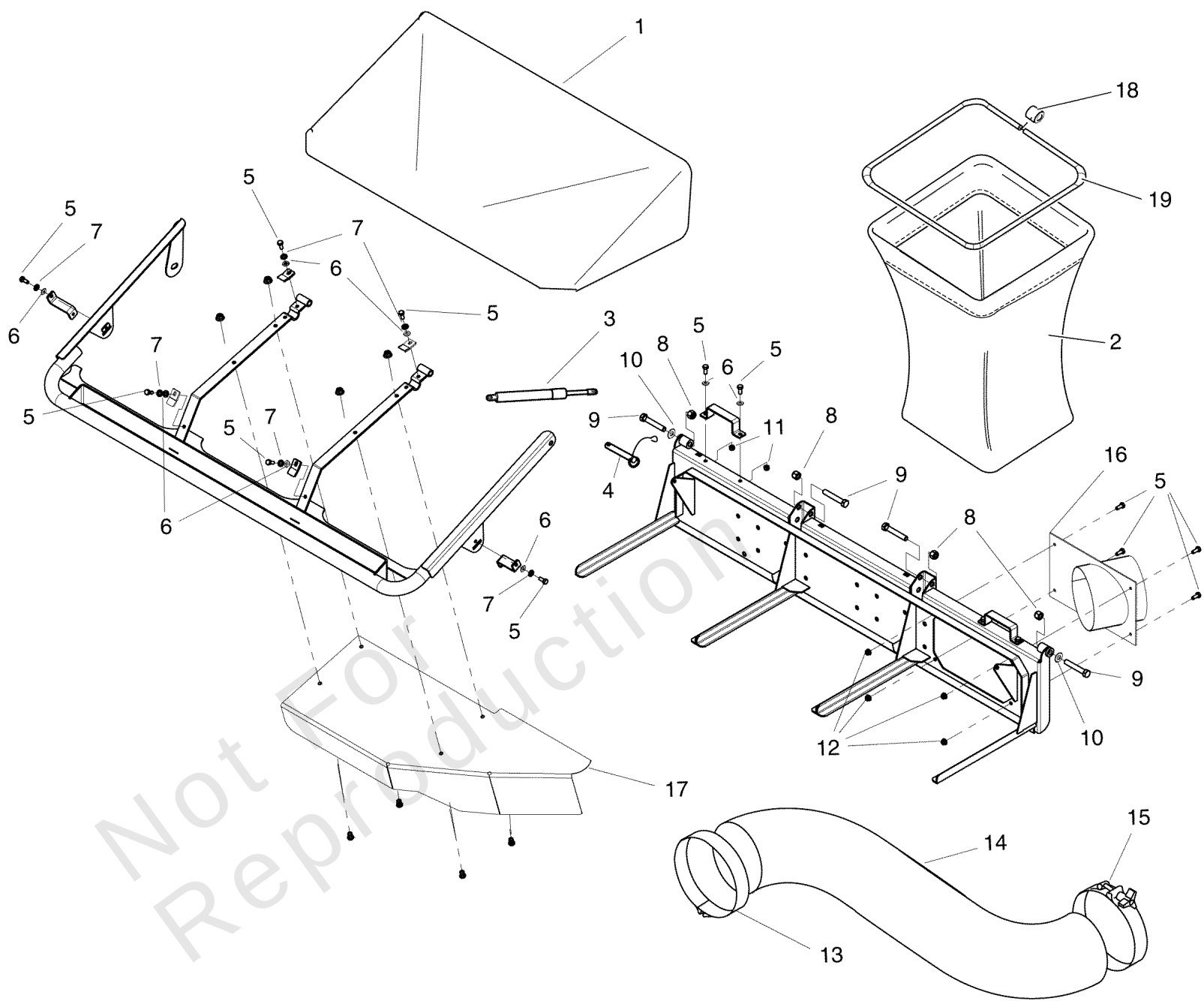
Model Components	Page
3-Bag Catcher & Cover Group.	4
3-Bag Mount - 1000Z, IS1000Z, 52" & 61" Deck.	6
Blower Group.	8
Blower Mount & Drive Group.	10
Decal Group - Fast-Vac Blower S/N: 06/2014 & Below.	14
Decal Group - Fast-Vac Blower S/N: 07/2014 & Above.	16
Model Reference Sheet 1 - Models w/Rubber Discharge Chutes.	18
Model Reference Sheet 2 - Models w/Rubber Discharge Chutes.	20
Weight Mount Group - IS1000Z.	22
Torque Specification Chart.	24

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3-Bag Catcher & Cover Group

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5600007



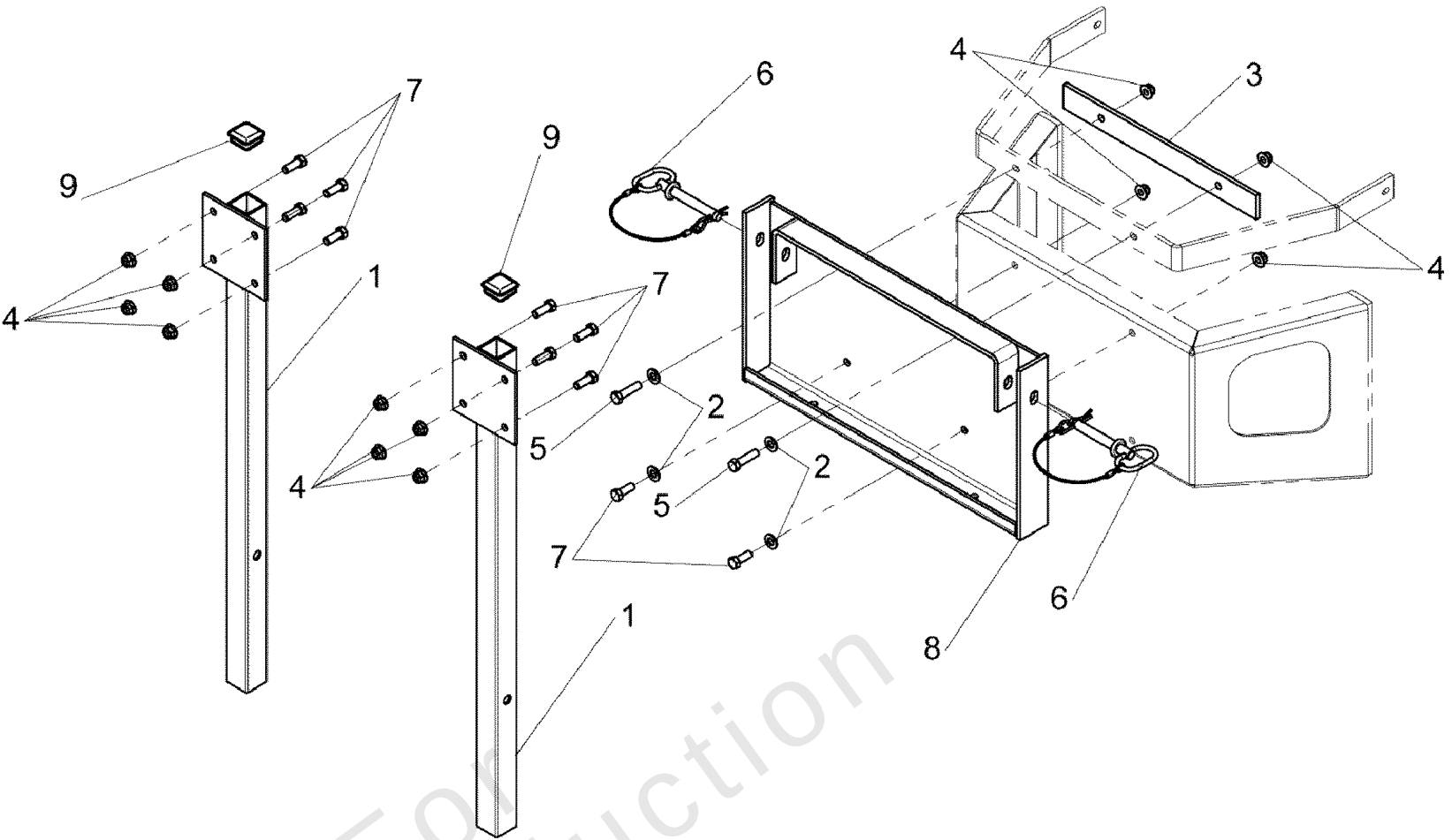
3-Bag Catcher & Cover Group

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

3-Bag Mount - 1000Z, IS1000Z, 52" & 61" Deck

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5600007



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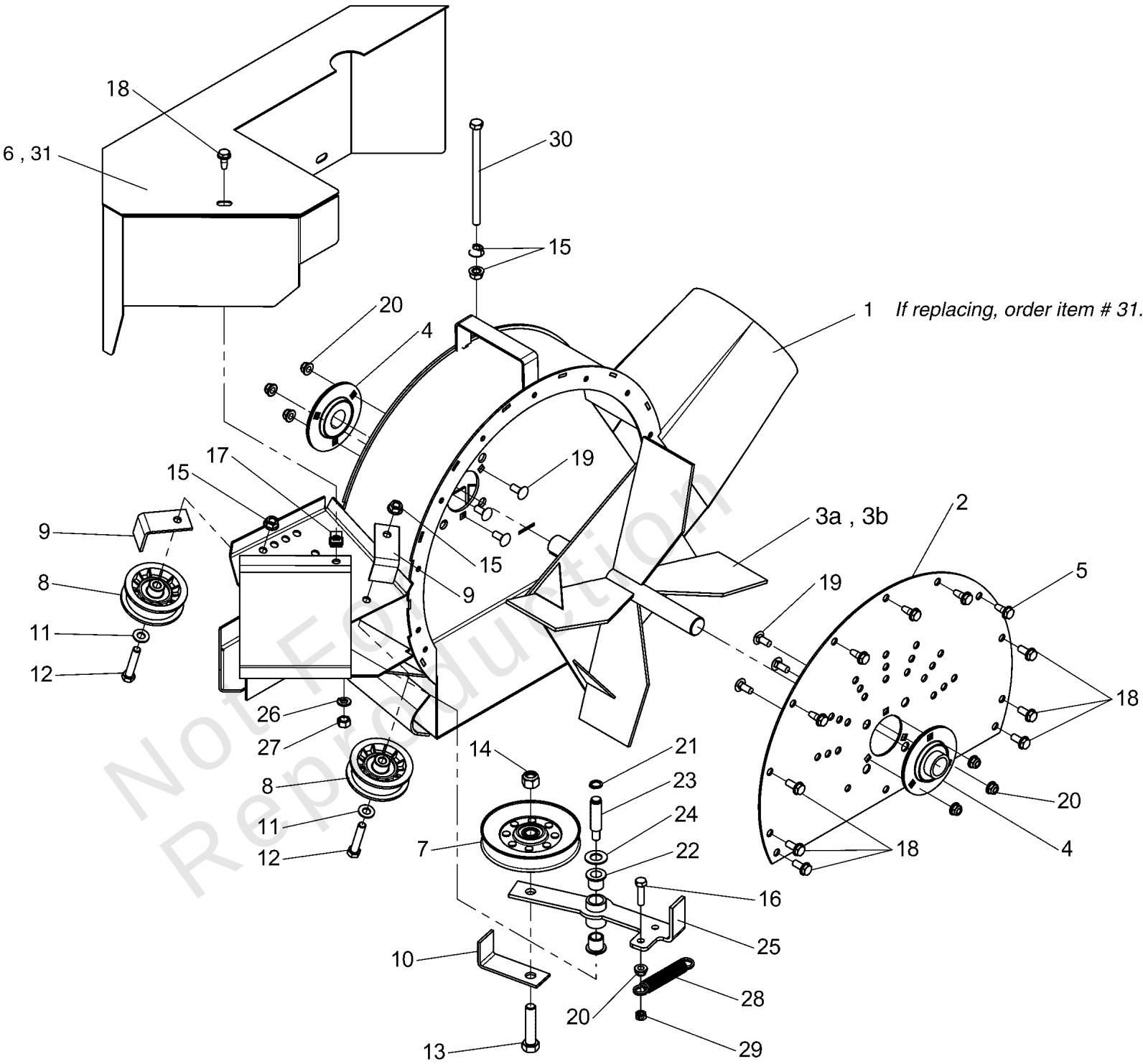
3-Bag Mount - 1000Z, IS1000Z, 52" & 61" Deck

REF NO	PART NO	QTY	DESCRIPTION
1	5400043A	2	WELD, MOUNT, POST - BLK
2	5025156	2	WASHER, 3/8 SAE -(2 washers removed from screen)
3	5400226A	1	BAR, BAGGER SUPPORT, BLACK.
4	5025394	12	NUT, 3/8-16 HEX NYLOCK FLANGE
5	5025013X12	2	BOLT, 3/8-16 X 1-1/2" GD5 CZ
6	5100013	2	PIN, HITCH, .50 X 3.25 W/ LAY
7	5025013X8	8	BOLT, 3/8-16 X 1" GD5 CZ -(2 bolts removed from screen)
8	5400221A	1	WELD, BAGR MNT-1000/IS1000 BLK
9	5022848	2	CAP, PLASTIC, 1-1/2" X 1-1/2

Blower Group

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5600007



Blower Group

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 -(Production Date 04/07/2010 & Later)
3b	5403741	1	WELD, IMPELLER, FAST VAC BLOWER -(Production Date 04/06/2010 & Earlier)
4	7100021SM	2	BEARING, FLANGE, 1" Bore
5	7091541	5	BOLT, 5/16-18 X 3/4" Self Tap
6	5403736A	1	WELD, BELT GUARD, BLOWER - BLK -(S/N: 07/15/2013 & 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	2	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	7091804	1	FLAT WASHER, 9/16" Narrow
25	5103677A	1	WELD, IDLERARM, FAST-VAC - BLK
26	5025171	1	WASHER, 3/8" SPLIT LOCK
27	5025035SM	1	NUT (3/8-24 HEX)
28	5020807	1	SPRING, Extension
29	7091575	1	NUT, 5/16-18 Hex Center Lock
30	5025013X48	1	BOLT, 3/8-16 X 6" GD5 CZ
31	5411464A	1	WELD, Fast-Vac Guard - BLK -(S/N: 07/15/2013 & Later)

Footnotes:

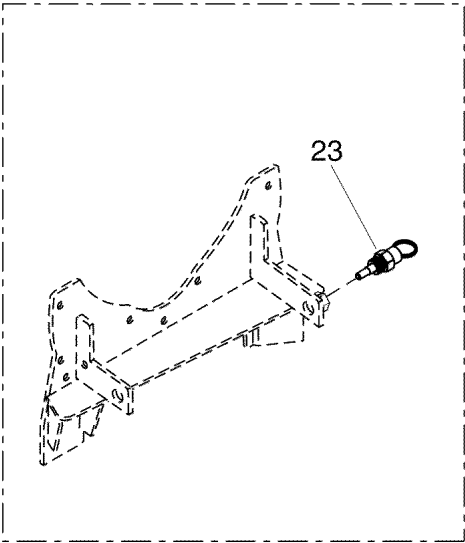
**If replacing, order # 5411464A also.

Blower Mount & Drive Group

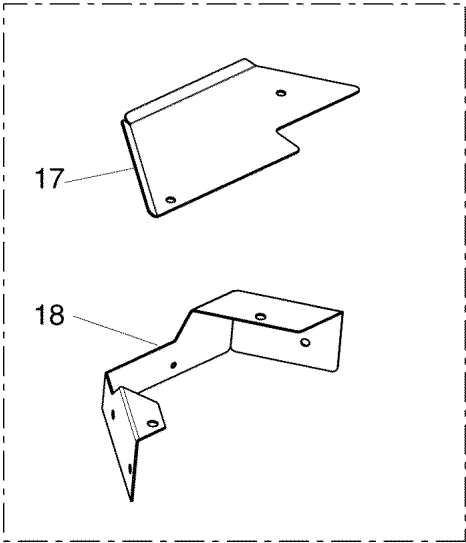
Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5600007

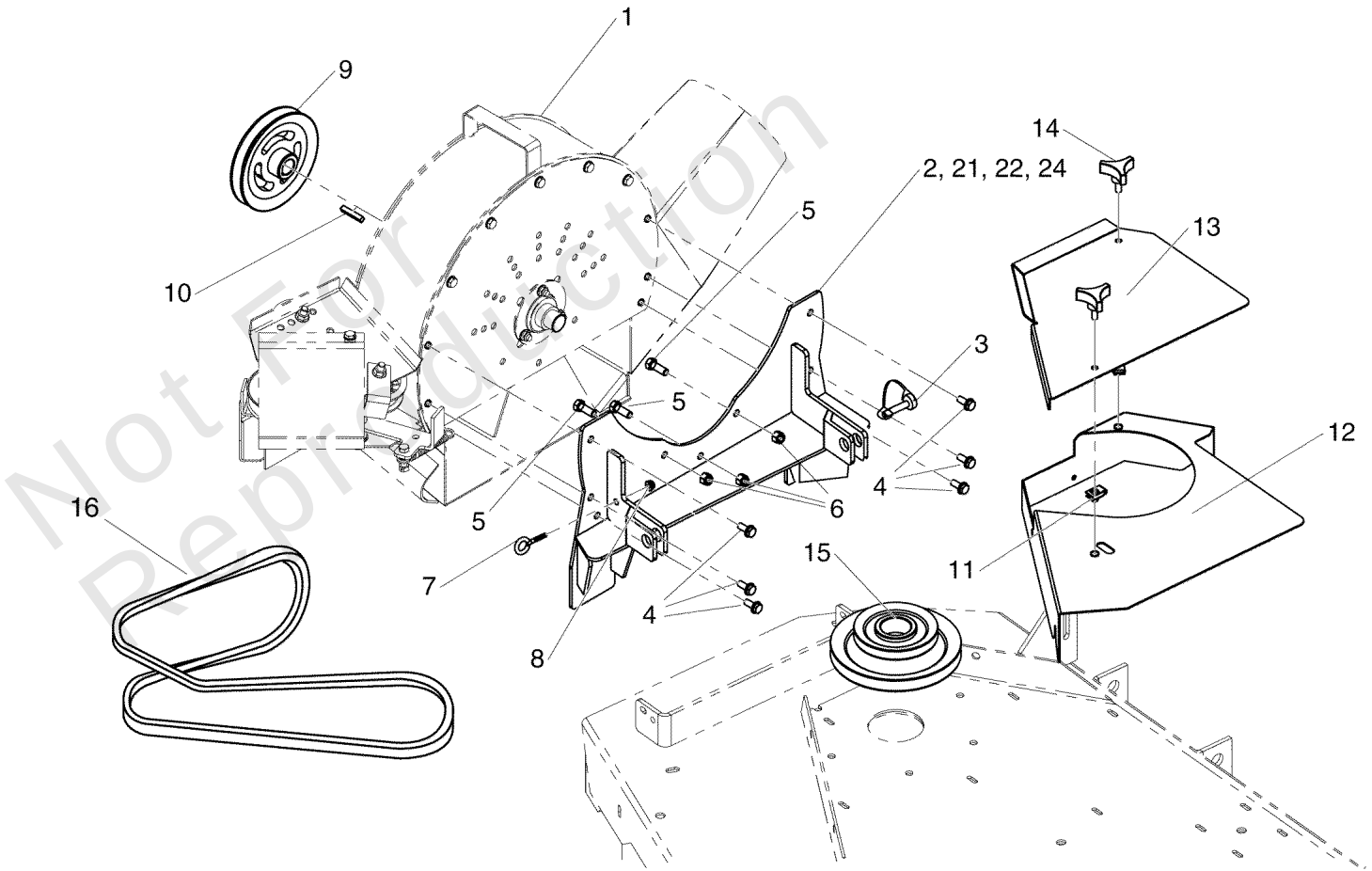
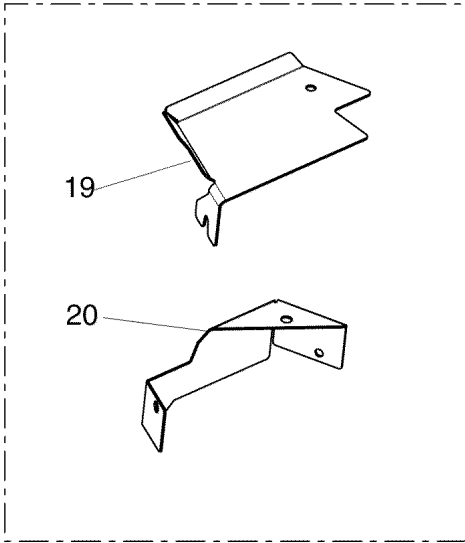
Old Style Blower Mounts



IS2000Z \ 61" Mower Deck



IS2000Z \ 52" Mower Deck



Blower Mount & Drive Group

REF NO	PART NO	QTY	DESCRIPTION
1	-----	-	BLOWER ASSEMBLY
2	5402632A	1	WELD, BLOWER MOUNT 44 BLACK -(IS500Z & IS1500Z, 44" DECK)
2	5402633A	1	WELD, BLOWER MOUNT, 48" BLACK -(IS1500Z, 48" DECK)
3	5100847	2	SNAPPERPIN, 5/16 X 2 -(FITS NEWER STYLE BLOWER MOUNTS WITH FOUR TABS)
4	7091811	6	BOLT, 5/16-18 X 3/4" SELF LOCK
5	5025013X8	3	BOLT, 3/8-16 X 1" GD5 CZ
6	5025096	3	NUT, 3/8-16 HEX NYLON LOCK
7	5022205	1	EYE BOLT, 1/4-20 X 2.5, 1THRD, .5EYE,CZ
8	5025391	1	NUT, 1/4-20 HEX NYLOCK FLANGE
9	5046806	1	PULLEY, BLOWER AXLE, 44 & 48 -(IS500Z, 44" DECK; IS1500Z, 44" & 48" DECK)
9	5046807	1	PULLEY, BLOWER AXLE, 52 -(IS1000Z, IS1500Z, IS2000Z, 52" DECK)
9	5046808	1	PULLEY, BLOWER AXLE, 61 -(1000Z, IS2000Z, IS3000ZF, IS3000ZX, 61" DECK)
10	5022726	1	KEY 1/4 SQ X 1 1/2 LONG
11	5022308	2	BODY CLIP, 5/16-18-7GA MATERIAL
12	5400124A	1	GUARD, DECK - BLACK -(IS500Z & IS1500Z, 44" DECK)
12	5061858A	1	GUARD, DECK - BLACK -(IS1500Z, 48" & 52" DECK)
12	5047256A	1	GUARD, DECK - BLACK -(IS1000Z, 52" DECK)
12	5400189A	1	GUARD, DECK - BLACK -(1000Z, IS3000ZF, IS3000ZX, 61" DECK)
13	5400144A	1	SHIELD, BELT -(IS500Z & IS1500Z, 44" DECK)
13	5400007A	1	SHIELD, BELT -(IS1500Z, 48" & 52" DECK)
13	5047257A	1	SHIELD, BELT -(IS1000Z, 52" DECK)
13	5400190A	1	SHIELD, BELT -(1000Z, IS3000ZF, IS3000ZX, 61" DECK)
14	5022319	2	KNOB, PLASTIC, 5/16-18 X 3/4"
15	5023176	1	PULLEY, BLOWER 48" DECK -(IS500Z, 44" DECK; IS1500Z, 44" & 48" DECK)
15	5023177	1	PULLEY, BLOWER 52" DECK -(IS1000Z, IS1500Z, IS2000Z, 52" DECK)
15	5046702	1	PULLEY, BLOWER 61" DECK -(1000Z, IS2000Z, IS3000ZF, IS3000ZX, 61" DECK)
16	7028334	1	BELT, # 7-3359 -(IS500Z & IS1500Z, 44" DECK)
16	5022844	1	BELT, A-SEC, 92.00EL, ARAMID, WRPD -(IS1500Z, 48" DECK & 1000Z, IS2000Z, IS3000ZF, IS3000ZX, 61" DECK)
16	5021006	1	BELT, #7-6717, 88.8" E.L. -(IS1000Z, IS1500Z, IS2000Z, 52" DECK)
17	5401436AA	1	GUARD, BELT, 61", 2000 FASTVAC - BLK -(IS2000Z, 61" DECK)
18	5401435A	1	GUARD, DECK, 61", 2000 FASTVAC - BLK -(IS2000Z, 61" DECK)
19	5401612A	1	GUARD, BELT, 52",2000 FASTVAC - BLK -(IS2000Z, 52" DECK)

Footnotes:

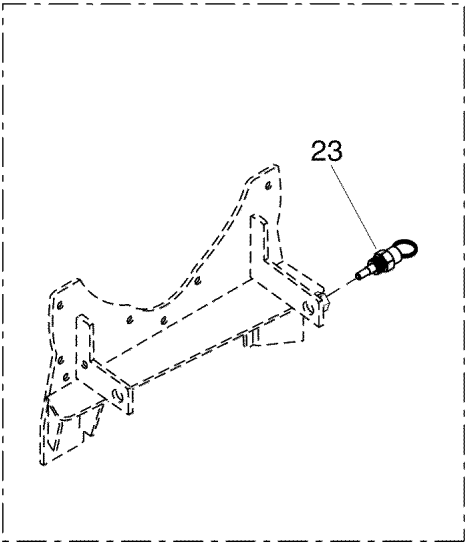
(*NOTE: IF REPLACING AN OLDER STYLE BLOWER MOUNT, ORDER THE APPROPRIATE NEW MOUNT AND TWO (2) OF P/N 5100847)

Blower Mount & Drive Group

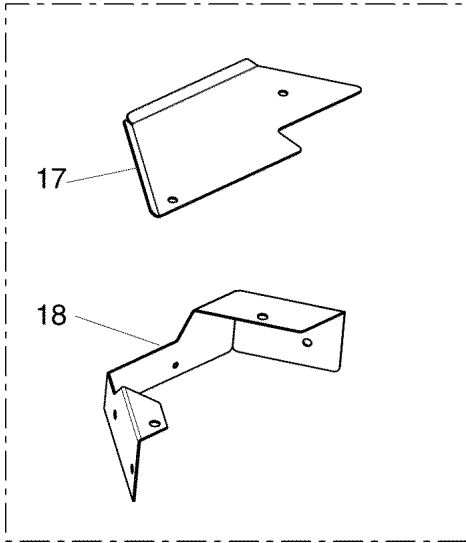
Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5600007

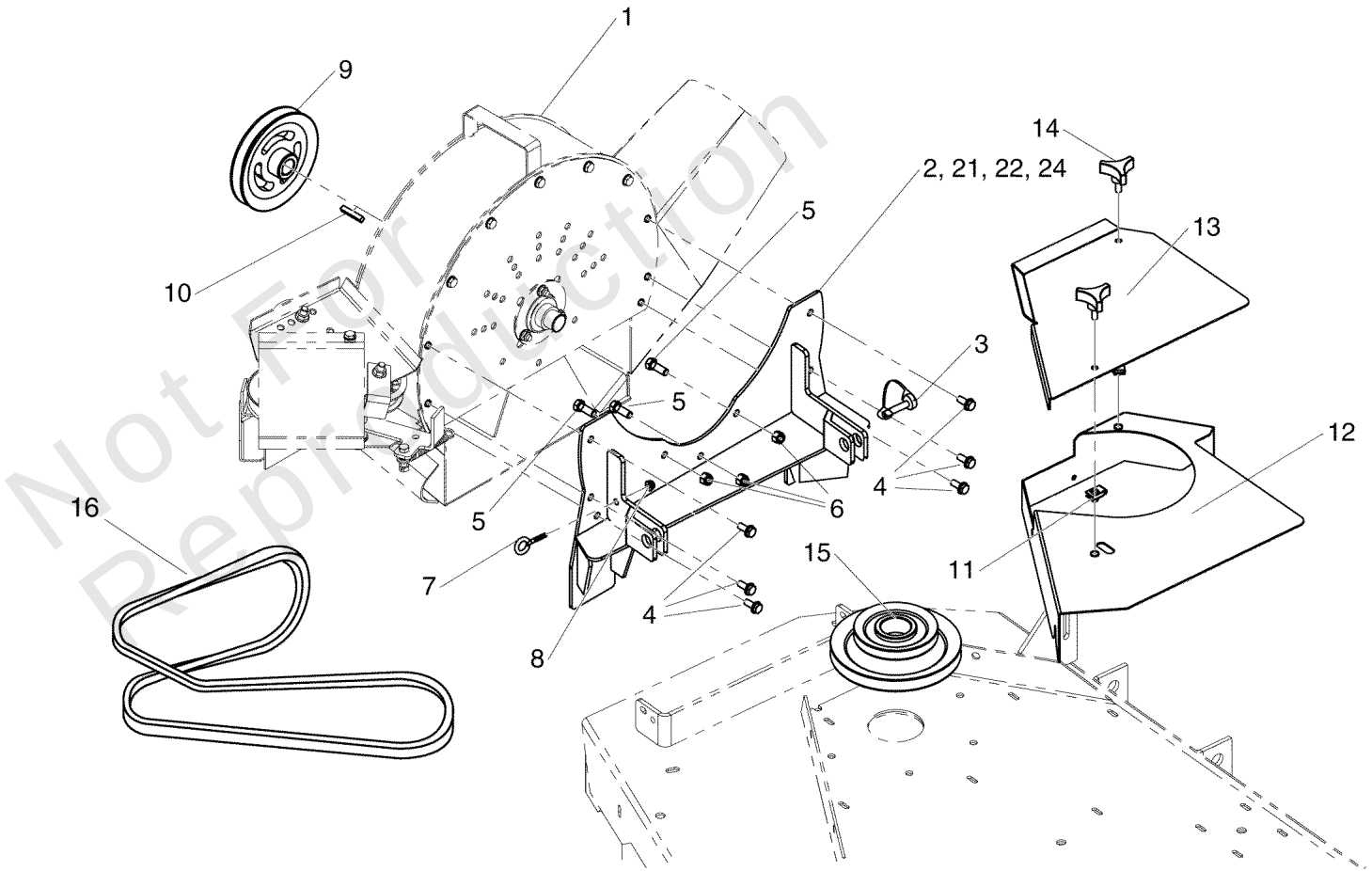
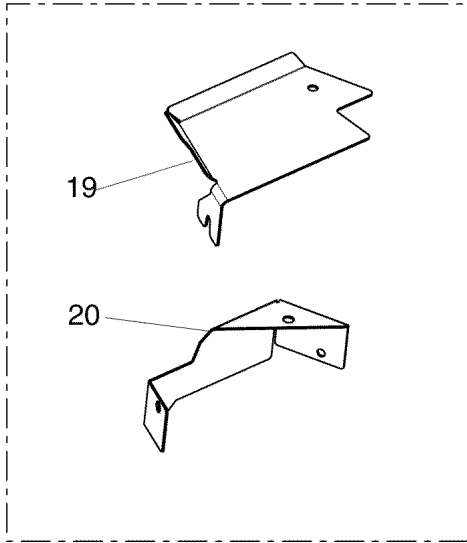
Old Style Blower Mounts



IS2000Z \ 61" Mower Deck



IS2000Z \ 52" Mower Deck



Blower Mount & Drive Group

REF NO	PART NO	QTY	DESCRIPTION
20	5401613A	1	GUARD, DECK, 52",2000 FASTVAC - BLK -(IS2000Z, 52" DECK)
21	5402354A	1	WELD, BLOWER MOUNT, 52" - BLK -(ALL MODELS, 52" DECK S/N: 2012628763 & Below)
22	5402380A	1	WELD, BLOWER MOUNT, 61" - BLK -(ALL MODELS, 61" DECK)
23	5100010	2	PIN, LATCH, SPRING LOADED - PULL ACTION -(FITS OLDER STYLE BLOWER MOUNTS WITH TWO TABS)
24	5403650A	1	WELD, BLOWER MOUNT, 52" BLACK -(ALL MODELS, 52" DECK S/N: 2012628764 & Above)

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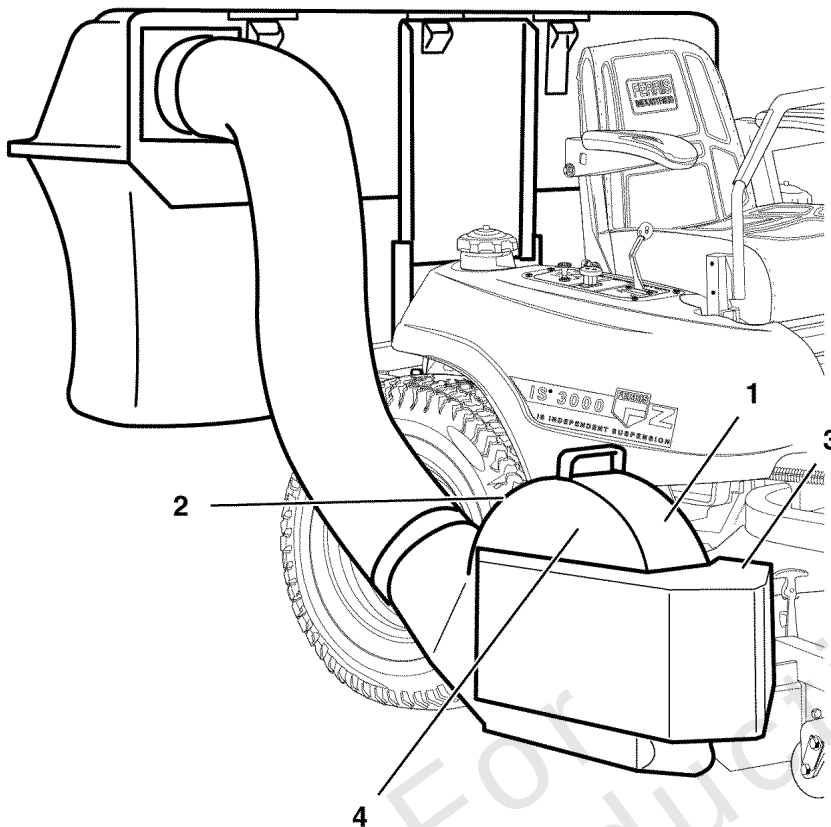
Footnotes:

(*NOTE: IF REPLACING AN OLDER STYLE BLOWER MOUNT, ORDER THE APPROPRIATE NEW MOUNT AND TWO (2) OF P/N 5100847)

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

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5600007



⚠ DANGER

Contact with rotating blades and moving parts could blow up or catch on fire, causing injury or death.

When in operation, keep all parts of body away from blades and rotating parts.

DO NOT operate the mower without proper tie-down straps, anchors or the deflector in place.

Before opening discharge door or blow-off deflector PTO, stop engine and remove key.

Never place hands into blower housing or discharge chute or blower housing. Blower may rotate when engine is removed.

⚠ WARNING

- Know the mower controls, safety rules, and how to stop quickly. READ and UNDERSTAND the mower operator's manual as well as the grass collector operator's manual.
- When operating on slopes, use front counterweights. Never operate on slopes greater than 15° (1:4).
- Wear personal protective equipment, such as full and limited slip protection for the eyes, ears, feet and head as well as protective footwear and long trousers.
- DO NOT operate equipment when barefoot or wearing open sandals.
- Before making any adjustments or repairs, stop engine, hold parking brake and remove spark plug wires.

⚠ ADVERTENCIA

LA DESCARGA DE ALTA VELOCIDAD PUEDE CAUSAR LESIONES O LA MUERTE. NO TIENGA FUNCIONAR EL SOPLOADOR SIN LA TENDIDA DE DESCARGA, LA CUBIERTA Y LAS RUEDAS, INSTALADAS Y SUELTAS.

⚠ WARNING

- This shield must be in place at all times during operation.
- Mower deflector must be in down position when blower is removed.

FAST-Vac



Flat Idler Pulleys

Blower Pulley

V-Groove Idler Pulley

Spindle Pulley

IMPORTANT:
V-side of belt must contact v-groove pulleys
Flat side of belt must contact flat pulleys

5100081

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

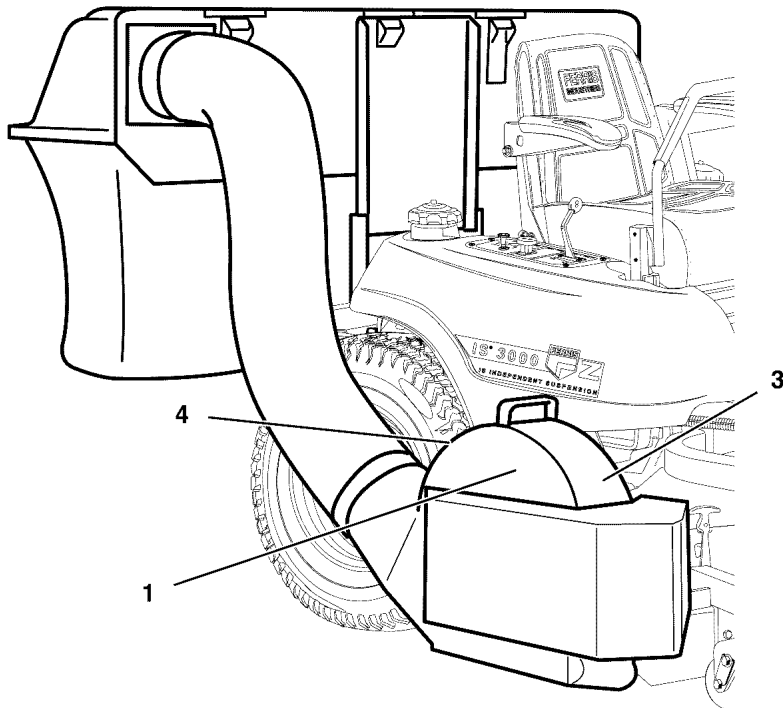
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Decal Group - Fast-Vac Blower S/N: 07/2014 & Above

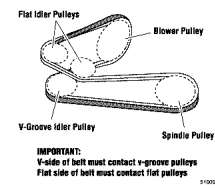
Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5600007

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1 — **FAST-Vac**

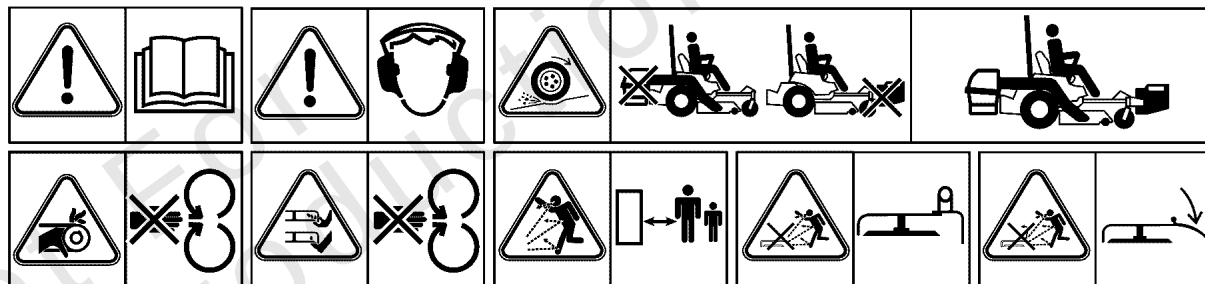


3 _____

The diagrams illustrate the following safety rules:

- Top Row:**
 - Warning: Falling objects (triangle with a falling box).
 - Prohibition: Carrying loads on the forks (forks with a load and a large 'X' over it).
 - Limitation: Mast tilt angle must be less than 10° (triangle with a forklift mast tilted at an angle labeled < 10°).
- Middle Row:**
 - Warning: Rotating parts (triangle with a hand being caught by a rotating wheel).
 - Diagram: A forklift carrying a load.
- Bottom Row:**
 - Warning: Rotating parts (triangle with a hand being caught by a rotating wheel).
 - Sequence: Three steps for parking: 1. Lower mast, 2. Turn key, 3. Stop.
 - STOP sign with a rotating part warning symbol.

4 _____



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

Model Reference Sheet 1 - Models w/Rubber Discharge Chutes

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5600007

9/24/2007



FAST-Vac Grass Collection Systems (2005 Model Year & Later)

IMPORTANT NOTE: These kits will only fit models equipped with the rubber discharge chute.

N/A = Not available.

Mower Deck Size	2-Bag System	3-Bag System
44" Ferris IS500Z & IS1500Z Series - Model #: 5900614, 5900605 & 5900640	5600001	N/A
48" Ferris IS1500Z Series - Model #: 5900615 & 5900606 Snapper Pro S150x Series - Model #: 5900686 & 5900696	5600002	5600003
52" Ferris IS1500Z Series - Model #: 5900616 & 5900607 (S/N: 2012628762 & Below) Snapper Pro S150x Series - Model #: 5900665 & 5900697 (S/N: 2012628762 & Below)	N/A	5600004
52" Ferris IS1500Z Series - Model #: 5900616 & 5900607 (S/N: 2012628763 & Above) Snapper Pro S150x Series - Model #: 5900665 & 5900697 (S/N: 2012628763 & Above)	N/A	5600148
52" Ferris IS1000Z Series (S/N: 2531 & Above)	N/A	5600007
52" Ferris IS2000Z Series - Model #: 5900624 & 5900625 (S/N: 2012628762 & Below)	N/A	5600061
52" Ferris IS2000Z Series - Model #: 5900624 & 5900625 (S/N: 2012628763 & Above)	N/A	5600150
61" Ferris 1000Z Series (S/N: 2899 & Above)	N/A	5600008
61" Ferris IS2000Z Series - Model #: 5900619 & 5901170 Snapper Pro S200x Series - Model #: 5900664, 5900692 & 5900695	N/A	5600057
61" Ferris IS3000Z & IS3000ZX Series (S/N: 3631 & Above)	N/A	5600006
61" Ferris IS3000ZL Series - Model #: 5901059	N/A	5600005
61" Ferris IS3100Z Series - Model #: 5900611, 5900612 & 5900613	N/A	5600060
61" Ferris IS4500Z Series - Model #: 5900159, 5900160, 5901180 & 5901179	N/A	5600009

See Reverse for Kit Contents

5600059
Rev. H 9/24/2007

Model Reference Sheet 1 - Models w/Rubber Discharge Chutes

REF NO	PART NO	QTY	DESCRIPTION
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Not For Reproduction

9/24/2007



FAST-Vac Grass Collection Systems

(2005 Model Year & Later)

IMPORTANT NOTE: These kits will only fit models equipped with the rubber discharge chute.

Kit Contents:

5600001

(1) 5900800 - FAST-Vac Blower
(1) 5100001 - 2-Bag Collector
(1) 5300012 - 2-Bag Mount
(1) 5300005 - Blower Mount
(1) 5300189 - Weight Mount
(2) 1717627 - Weight, 50lbs.

5600002

(1) 5900800 - FAST-Vac Blower
(1) 5100001 - 2-Bag Collector
(1) 5300012 - 2-Bag Mount
(1) 5300006 - Blower Mount
(1) 5300189 - Weight Mount
(2) 1717627 - Weight, 50lbs.

5600003

(1) 5900800 - FAST-Vac Blower
(1) 5100002 - 3-Bag Collector
(1) 5300019 - 3-Bag Mount
(1) 5300006 - Blower Mount
(1) 5300189 - Weight Mount
(3) 1717627 - Weight, 50lbs.

5600004

(1) 5900800 - FAST-Vac Blower
(1) 5100002 - 3-Bag Collector
(1) 5300019 - 3-Bag Mount
(1) 5300007 - Blower Mount
(1) 5300189 - Weight Mount
(3) 1717627 - Weight, 50lbs.

5600005

(1) 5900800 - FAST-Vac Blower
(1) 5100002 - 3-Bag Collector
(1) 5300014 - 3-Bag Mount
(1) 5300009 - Blower Mount
(1) 5046869 - Weight Mount
(3) 1717627 - Weight, 50lbs.

5600006

(1) 5900800 - FAST-Vac Blower
(1) 5100002 - 3-Bag Collector
(1) 5300014 - 3-Bag Mount
(1) 5300008 - Blower Mount
(1) 5046869 - Weight Mount
(3) 1717627 - Weight, 50lbs.

5600007

(1) 5900800 - FAST-Vac Blower
(1) 5100002 - 3-Bag Collector
(1) 5300022 - 3-Bag Mount
(1) 5300016 - Blower Mount
(1) 5047609 - Weight Mount
(2) 1717627 - Weight, 50lbs.

5600008

(1) 5900800 - FAST-Vac Blower
(1) 5100002 - 3-Bag Collector
(1) 5300022 - 3-Bag Mount
(1) 5300020 - Blower Mount
(1) 5061134 - Weight Mount
(3) 1717627 - Weight, 50lbs.

5600009

(1) 5900800 - FAST-Vac Blower
(1) 5100002 - 3-Bag Collector
(1) 5300019 - 3-Bag Mount
(1) 5300010 - Blower Mount
(1) 5300189 - Weight Mount
(3) 1717627 - Weight, 50lbs.
(1) 5600019 - Bumper Kit

5600057

(1) 5900800 - FAST-Vac Blower
(1) 5100002 - 3-Bag Collector
(1) 5300019 - 3-Bag Mount
(1) 5300188 - Blower Mount
(1) 5300189 - Weight Mount
(3) 1717627 - Weight, 50lbs.

5600060

(1) 5900800 - FAST-Vac Blower
(1) 5100002 - 3-Bag Collector
(1) 5300117 - 3-Bag Mount
(1) 5300009 - Blower Mount
(1) 5046869 - Weight Mount
(3) 1717627 - Weight, 50lbs.

5600061

(1) 5900800 - FAST-Vac Blower
(1) 5100002 - 3-Bag Collector
(1) 5300019 - 3-Bag Mount
(1) 5300223 - Blower Mount
(1) 5300189 - Weight Mount
(3) 1717627 - Weight, 50lbs.

5600059
Rev. H 9/24/2007

Model Reference Sheet 2 - Models w/Rubber Discharge Chutes

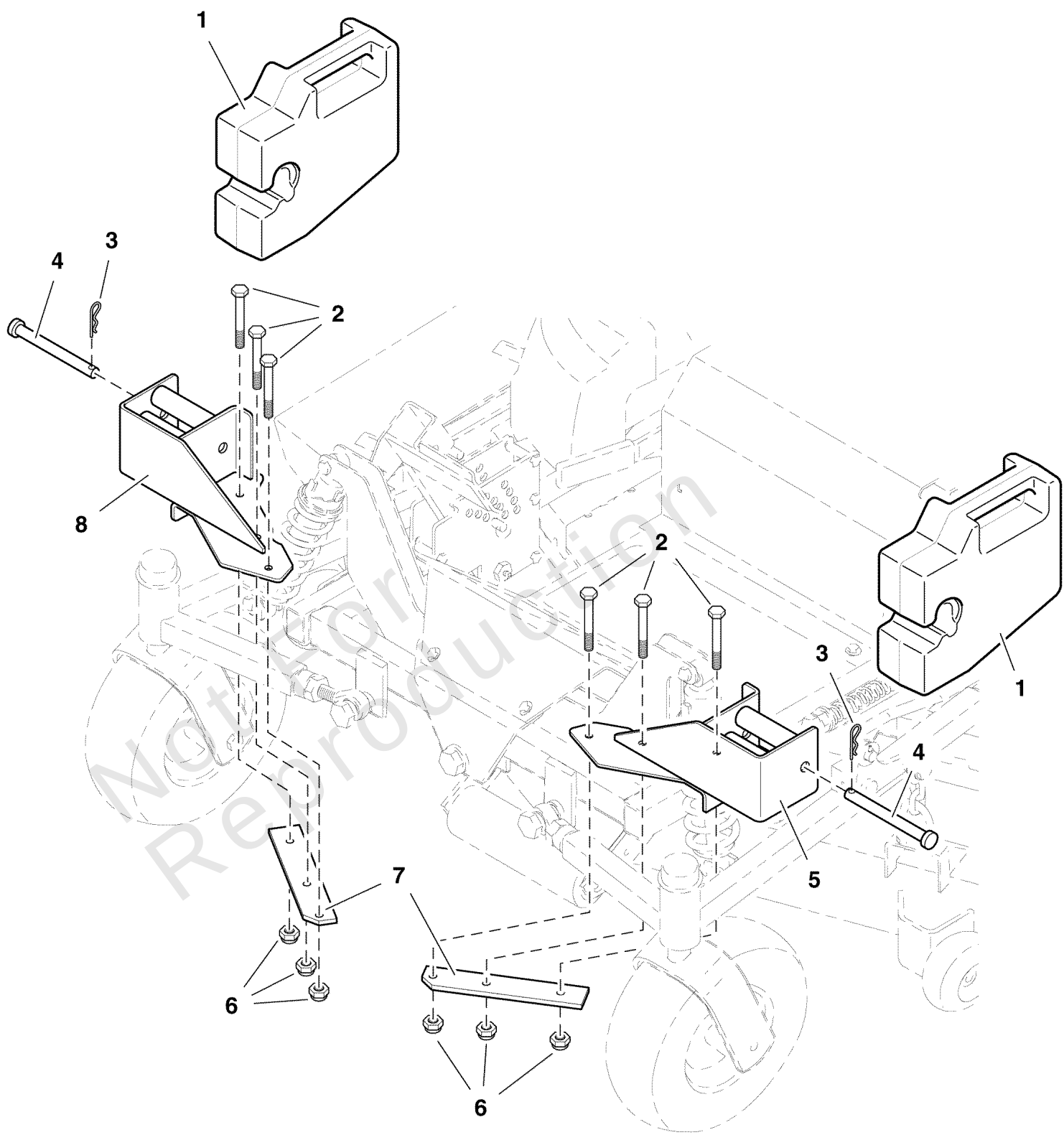
REF NO	PART NO	QTY	DESCRIPTION
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Not For Reproduction

Weight Mount Group - IS1000Z

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5600007



Weight Mount Group - IS1000Z

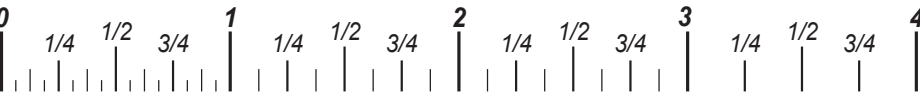
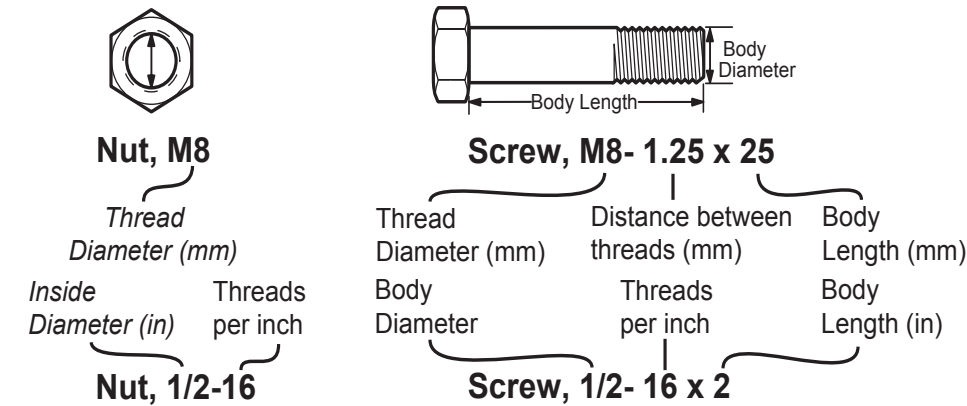
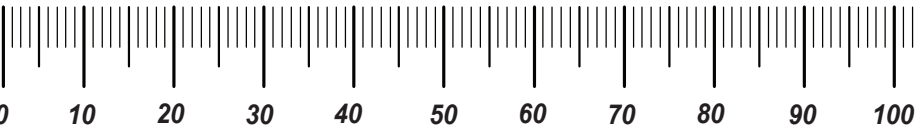
REF NO	PART NO	QTY	DESCRIPTION
1	1717627	2	WEIGHT-QUICK ATTACH 50LB SUITCASE PAINTED
2	5025011X20	6	BOLT, 5/16-18 X 2-1/2" GD5 YZ
3	5025210	2	PIN, HAIR, .0915 X 1-7/8
4	5022877	2	PIN,CLEVIS, 1/2" X 4 1/2",PLTD
5	5047241A	1	WEIGHT MOUNT BRACKET W'MENT-LH
6	5025057	6	NUT, 5/16-18 HEX NYLON LOCK
7	5047234A	2	CLAMP, BAR
8	5047242A	1	WEIGHT MOUNT BRACKET W'MENT-RH

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).

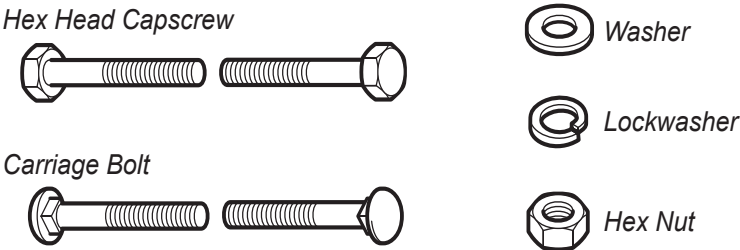
When bolt or capscrew is identified as 1/2 - 16 x 2" (M8 - 1.25 x 50), this means the *Nominal size*, or body diameter is 1/2 inch (8mm metric thread diameter), the second number, 16, represents the *threads per inch*, (*distance between threads*). The final number is the body length of the bolt or screw,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

