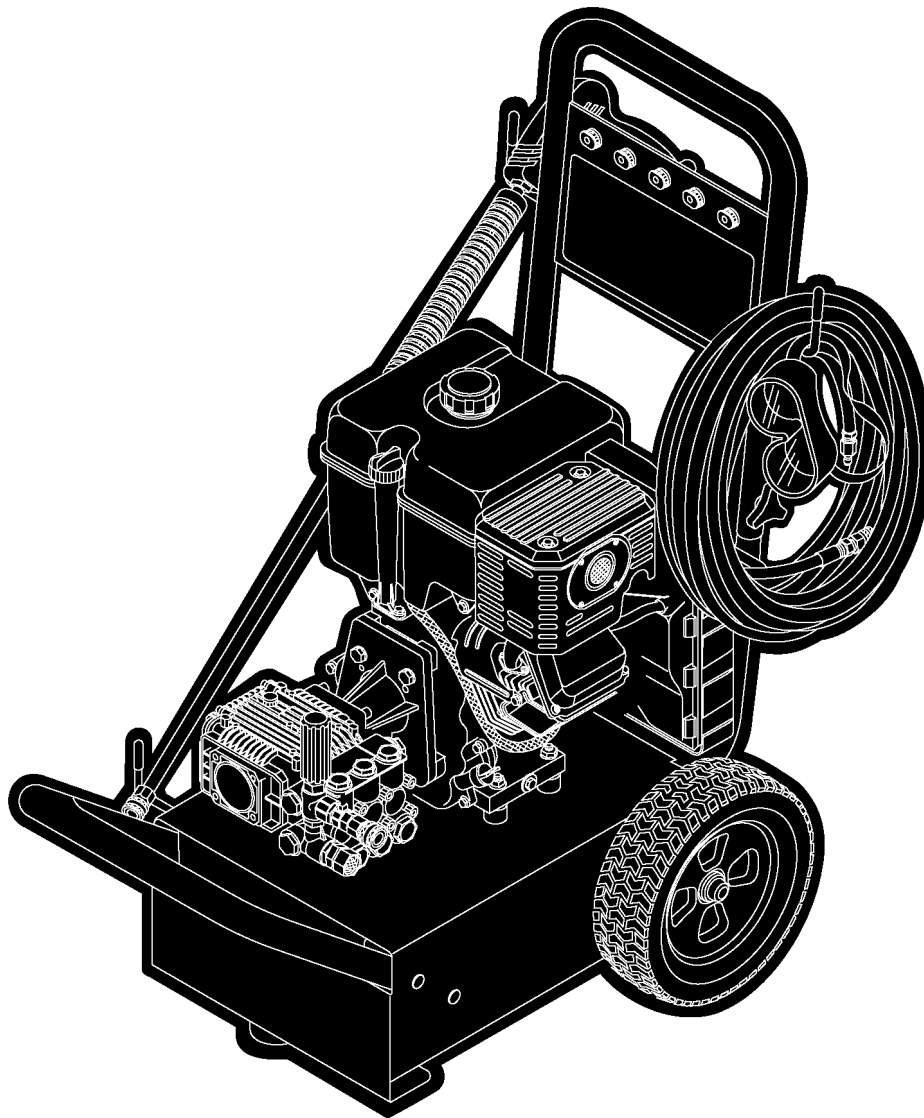


Parts Manual

Mfg. No: 1780-0
3,500 PSI BPW3500



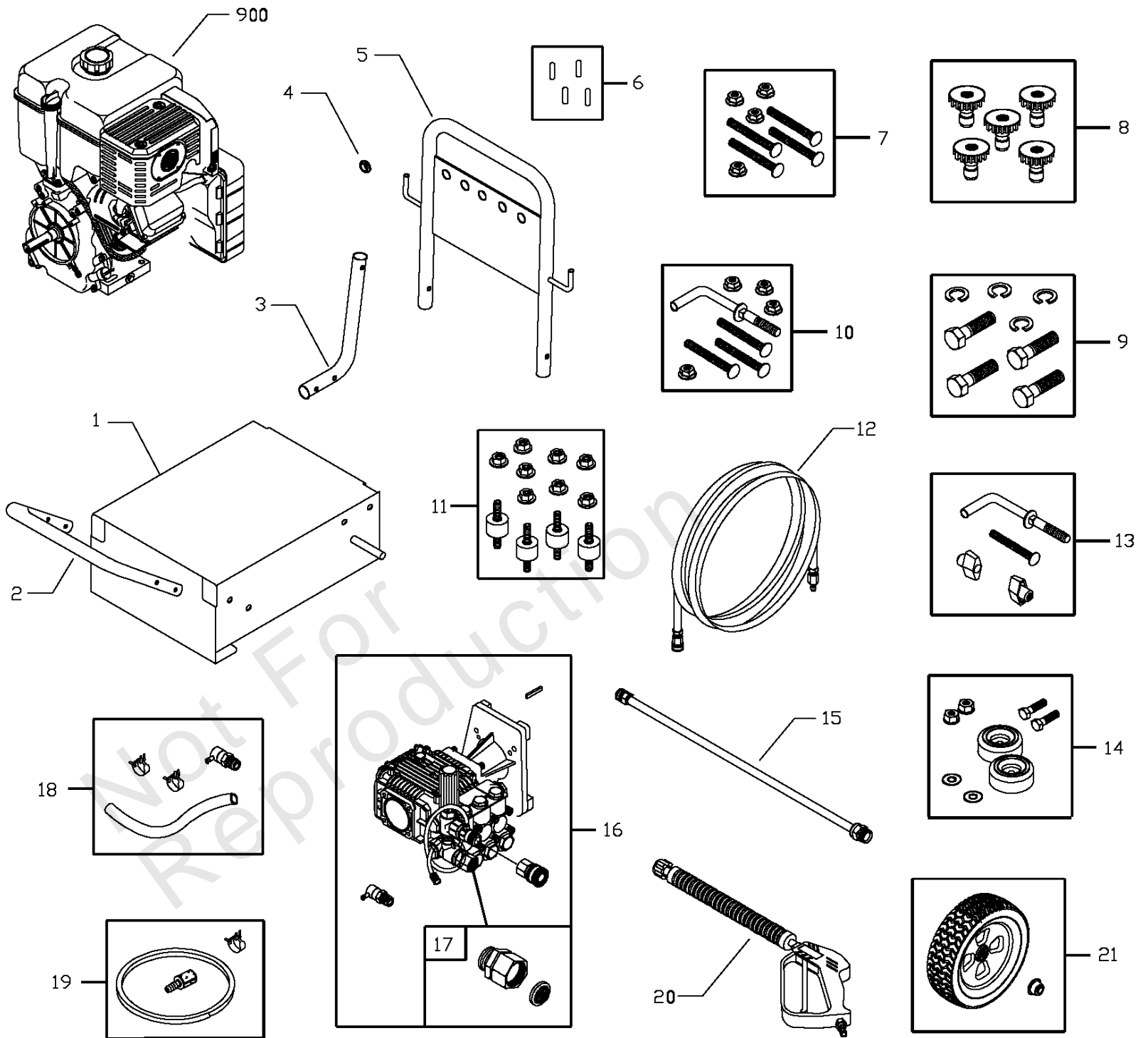
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Not For
Reproduction

Main Unit

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 1780-0



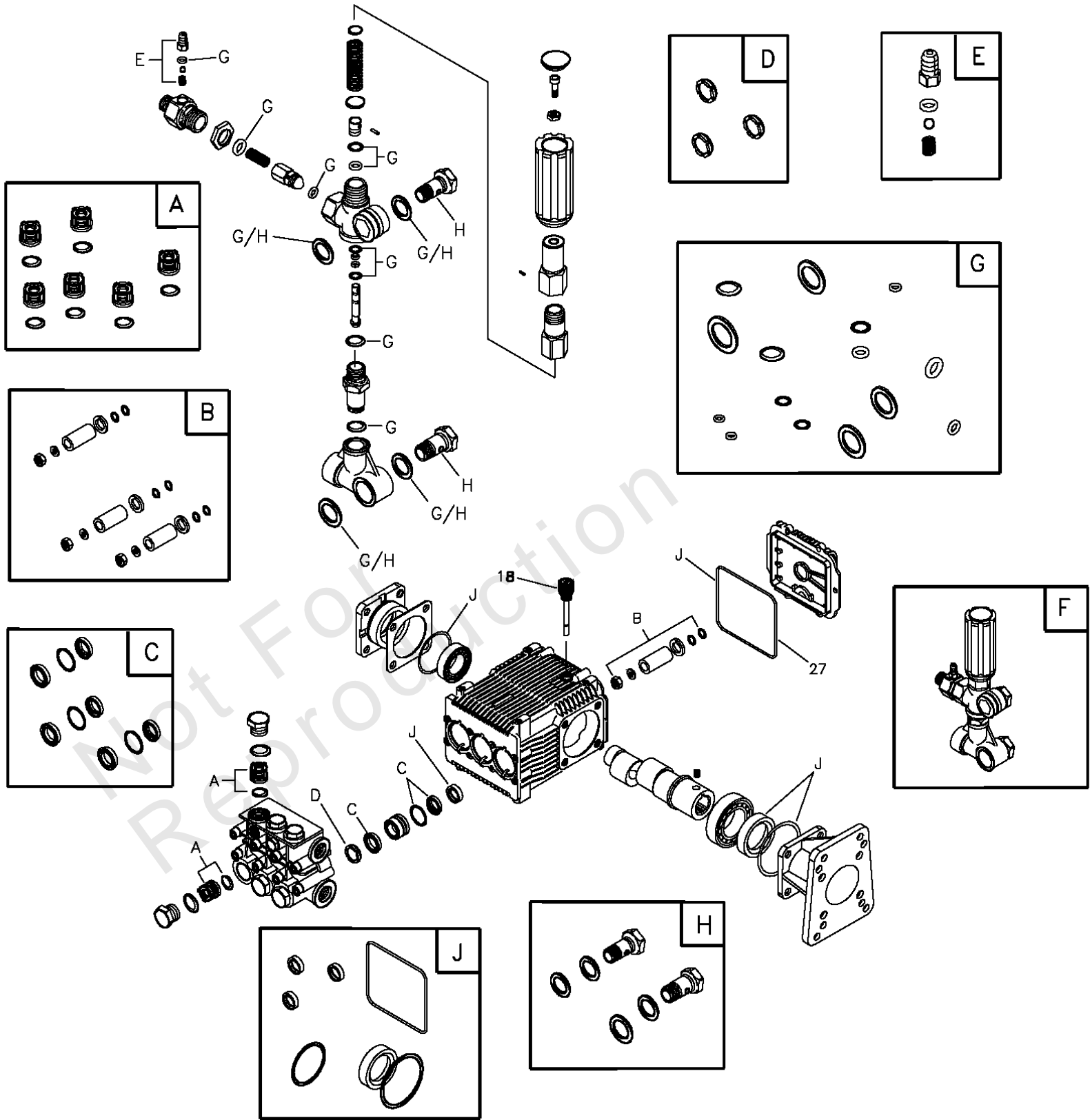
Main Unit

REF NO	PART NO	QTY	DESCRIPTION
1	A189641GS		BASE
2	BB1982GS		BUMPER
3	BB1981GS		HANDLE, Lower
4	30809GS		GROMMET
5	B190293GS		HANDLE
6	192126GS		KIT, Vinyl Cap
7	192129GS		KIT, Lower Handle Hardware
8	B4847GS		KIT, Nozzles
--	191903A		Nozzle, QC, Red
--	191903B		Nozzle, QC, Yellow
--	191903C		Nozzle, QC, Green
--	191903D		Nozzle, QC, White
--	191903ZZ		Nozzle, QC, Black
9	192132GS		KIT, Pump Mounting Hardware
10	192130GS		KIT, Bumper Mounting Hrdwr
11	192134GS		KIT, Engine Mounting Hrdwre
12	B4805GS		HOSE
13	187978GS		KIT, Upper Handle Hardware
14	192553GS		KIT, Vibration Mount
15	200595GS		EXTENSION, QC
16	195110GS		ASSY, Pump
--	195016GS		Valve, Thermal Relief
--	63281GS		Key
--	95458GS		Quick Connect
17	192135GS		KIT, Garden Hose Inlet
18	192136GS		KIT, Thermal Relief
19	192168GS		KIT, Chemical Hose
20	B1436BGS		GUN
21	192124GS		KIT, Wheel
--	190146GS		Pushnut
900	-----		ENGINE
			-Contact Engine Manufacturer
--	191806GS		MANUAL, Operator's -Not Illustrated
--	MS6669		MANUAL, Engine -Not Illustrated
--	BB3061BGS		OIL BOTTLE -Not Illustrated
--	6048		KIT, O-Ring Maintenance -Not Illustrated
--	87815GS		GOGGLES -Not Illustrated
--	192015GS		FITTING, Hose -Not Illustrated
--	192139GS		KIT, Decal, Srv -Not Illustrated
--	6039		PUMP SAVER -Optional Accessory

Pump

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 1780-0



Pump

REF NO	PART NO	QTY	DESCRIPTION
18	198849GS		CAP, Oil Dipstick
27	116B2126GS		O-RING, Square
A	200B1410GS		KIT, VALVE -Service kits include all parts shown within the box.
B	193990GS		KIT, PISTON -Service kits include all parts shown within the box.
C	203B2327GS		KIT, WATER SEALS -Service kits include all parts shown within the box.
D	204B1410GS		KIT, SUPPORT RINGS -Service kits include all parts shown within the box.
E	192914GS		KIT, HOSE TAIL -Service kits include all parts shown within the box.
F	153B2126GS		UNLOADER, Complete -Service kits include all parts shown within the box.
G	193991GS		KIT, O-RINGS -Service kits include all parts shown within the box.
H	199894GS		KIT, BOLTS -Service kits include all parts shown within the box.
J	202B1410GS		KIT, OIL SEALS -Service kits include all parts shown within the box.
	B2384GS		FILTER, Inlet -Not Illustrated
	100515GS		PUMP SAVER -Optional Accessory
	186452GS		FILTER, Inlet Bag of 10 -Optional Accessory
	6033		OIL BOTTLE, Pump -Optional Accessory

Hardware Identification & Torque Specifications

Torque Specification Chart								
FOR STANDARD METRIC MACHINE HARDWARE (Tolerance ± 20%)								
Property Class	5.6		8.8		10.9		12.9	
	Class 5.6		Class 8.8		Class 10.9		Class 12.9	
Size Of Hardware	in/lbs		in/lbs		in/lbs		in/lbs	
	ft/lbs	Nm.	ft/lbs	Nm.	ft/lbs	Nm.	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

Torque Specification Chart						
FOR STANDARD MACHINE HARDWARE (Tolerance ± 20%)						
Hardware Grade	No Marks		SAE Grade 5		SAE Grade 8	
	SAE Grade 2		SAE Grade 5		SAE Grade 8	
Size Of Hardware	in/lbs		in/lbs		in/lbs	
	ft/lbs	Nm.	ft/lbs	Nm.	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

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



Nut, M8

Thread Diameter (mm)

Inside Diameter (in) Threads per inch

Nut, 1/2-16



Screw, M8- 1.25 x 25

Thread Diameter (mm) Distance between threads (mm) Body Length (mm)

Body Diameter Threads per inch Body Length (in)

Screw, 1/2- 16 x 2



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).

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

Hex Head Capscrew



Washer



Carriage Bolt



Hex Nut

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

