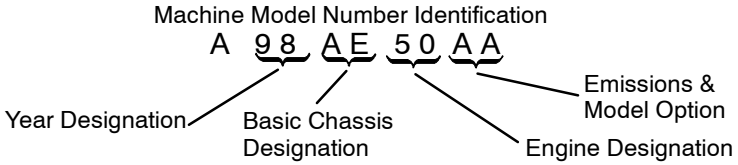
CHAPTER 1
GENERAL INFORMATION

1

MODEL IDENTIFICATION

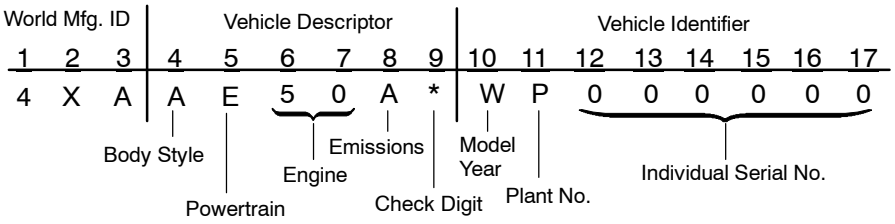
The machine model number must be used with any correspondence regarding warranty or service.



ENGINE DESIGNATION NUMBERS

50 EH50PLE06 . . . . . Single, L/C, SOHC 4 Stroke, Electric Start

VIN IDENTIFICATION



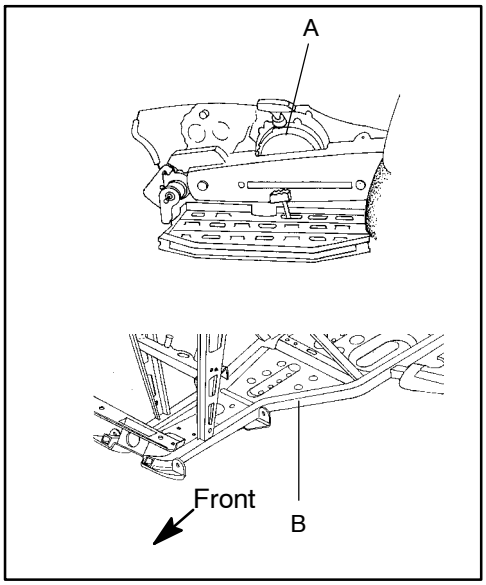
* This could be either a number or a letter

ENGINE SERIAL NUMBER LOCATION

Whenever corresponding about an engine, be sure to refer to the engine model number and serial number. This information can be found on the sticker applied to the recoil housing on the right side of engine.(A) An additional number is stamped on the center top of crankcase beneath the cylinder coolant elbow.

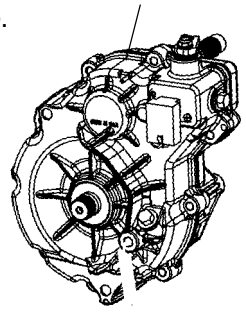
MACHINE MODEL NUMBER AND SERIAL NUMBER LOCATION

The machine model number and serial number are important for vehicle identification. The machine serial number is stamped on the lower left side of the frame tube.(B)

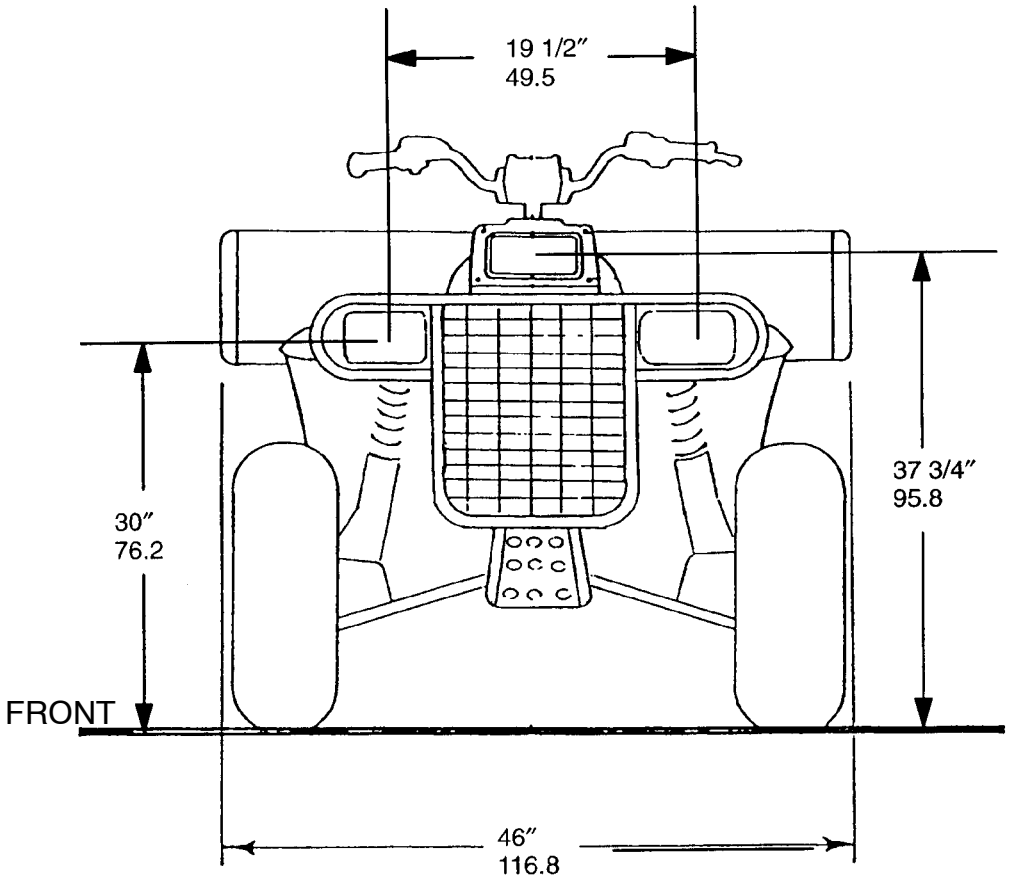


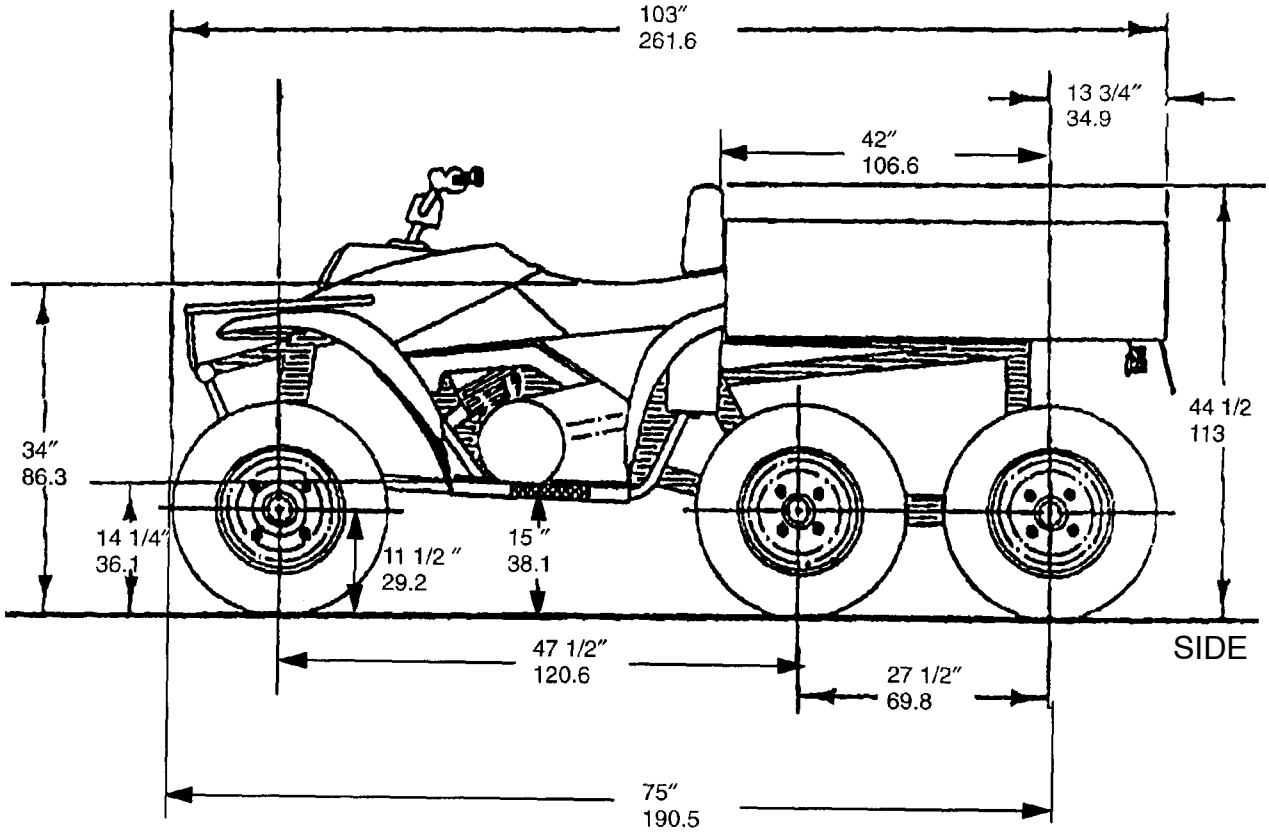
TRANSMISSION I.D. NUMBER LOCATION

The transmission I.D. number is located on top of the transmission, right side of machine.

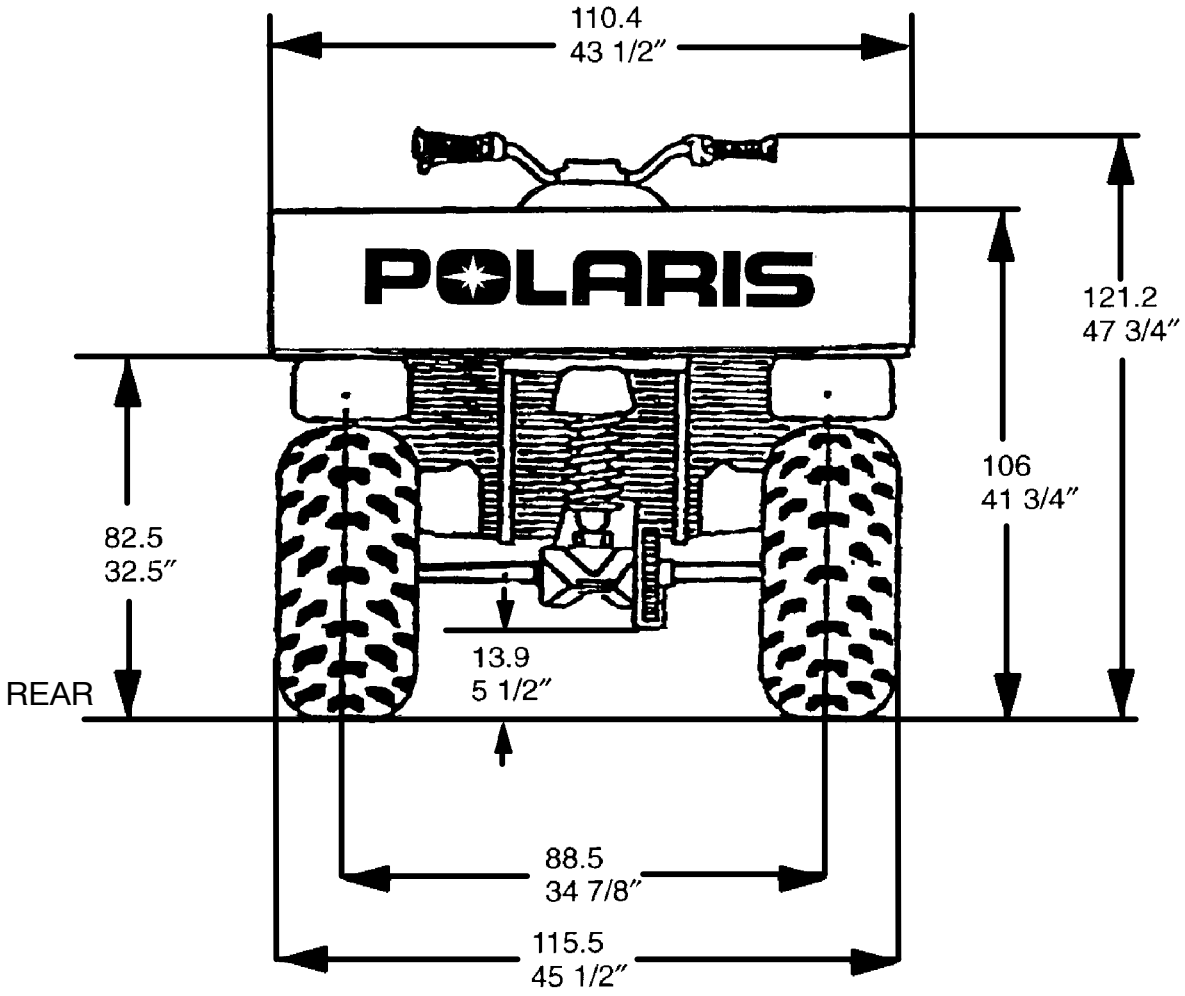


MACHINE DIMENSIONS





MACHINE DIMENSIONS



1998 MODEL SPECIFICATIONS

MODEL: ..... BIG BOSS 500 6X6
MODEL NUMBER: . A98AE50AA
ENGINE MODEL: .. EH50PLE06

CARBURETION

Type ..... BST 34 Mikuni
Main Jet 140
Pilot Jet 40
Jet Needle 4D33-3
Needle Jet Q-6
Throttle Valve ..... #100
Pilot Screw 2
Pilot Air Jet 160
Valve Seat 1.5
Fuel Octane (R+M/2) . 87 Non-Oxygenated or
89 Oxygenated

JETTING CHART

Altitude		AMBIENT TEMPERATURE			
		Below 0°F Below -18°C	0° to +40°F -18°to +5°C	+40°to +80°F +5° to +26°C	Above +80°F Above +26°C
Meters (Feet)	0-900 (0-3000)	150	145	140	135
	900-1800 (3000-6000)	145	140	135	130
	1800-2700 (6000-9000)	137.5	135	130	122.5
	2700-3700 (9000-12000)	132.5	127.5	122.5	117.5

- Pilot screw in 1/2 turn

CLUTCH

Type ..... PVT
Belt 3211077
Belt Width (Projected) ..... 1.188” (30.18mm)
Side Angle (Overall) ..... 26°
Outside Circumference .... 40.86 ±.12”
Center Distance ..... 10±.12” (254.5mm)
Clutch Offset ..... 0.5” (12.7mm)
Secondary Spring ..... Red
Driven Helix ..... Compound
Spring Position (Helix) 2
Spring Position (Sheave) .. 2

CLUTCH CHART

Altitude		Shift Weight	Clutch Spring	Driven Helix
Meters (Feet)	0-900 (0-3000)	10MH	Blue/Green	2-2
	900-1800 (3000-6000)	10BH	Blue/Green	2-2
	1800-2700 (6000-9000)	10WH	Blue/Green	2-1
	2700-3700 (9000-12000)	10RH	Blue/Green	2-1

ENGINE

Type ..... 4 Cycle, Single Cyl.
Displacement ..... 498 cc
Bore ..... 3.625” (92mm)
Stroke ..... 2.955” (75mm)
Valve Clearance In/Ex ..... 0.006/0.006″ @ TDC on compression
Compression Ratio ..... 10/2 Full Stroke
Cooling ..... Liquid
Lubrication Type ..... Dry Sump
Operating RPM±200 ..... 6000 RPM
Idle RPM±200 (lights off) ..... 1200 RPM
Compression Pressure ..... (Std) ±15%

1998 MODEL SPECIFICATIONS

MODEL: ..... BIG BOSS 500 6X6
MODEL NUMBER: ... A98AE50AA
ENGINE MODEL: EH50PLE06

ELECTRICAL

Flywheel I.D.	FF97
CDI Marking	CU2557
Alternator Output	250 Watts
Ignition Timing	30° BTDC@3500RPM±1.5°
Spark Plug / Gap	NGK BKR5E / 0.028" (0.7mm)
Lights: Head	12V/60W
Grill	(2) 12V/27W
Tail	8.26 watts
Brake	26.9 watts
Voltage Regulator	LR39
Electric Start	Standard

FLUID

FLUID	Capacity	Type
Fuel Tank	3.5 gals. (13.2L)	
Injector Oil	N / A	
Coolant	2.25 qts.	PP6*
Transmission	20 oz.	PPS*
Gearcase Oil (Front)	N / A	
Gearcase Oil (Center)	N / A	
Gearcase Oil (Rear)	N / A	
Engine Oil	2 qts. (1.9L)	PP4*
Brake (Hand)		Dot 3
Brake (Foot)		Dot 3
Front Hubs (AWD)	N / A	
Shift Selector Box	1 oz. (30ml)	PP4*

Lubricant Key
*PP6 Polaris Premium 60/40 Antifreeze/Coolant
*PPS Polaris Premium Synthetic Gear Case Oil
*PP4 Polaris 0W/40 Synthetic Engine Lubricant

SUSPENSION / CHASSIS

Body Style	Gen II
Front Suspension	MacPherson Strut
Tow Capacity	1225 lbs. (556.2kg)
Turning Radius	98" (248.9cm)
Toe Out	1/8"-1/4" (3-6.35mm)
Ground Clearance	5.5" (13.97cm)
Front Vertical Travel	6.25" (15.88cm)
Rear Suspension	Swing Arm w/Scissor Stabilizer
Rear Travel	7.25" (18.42cm)
Rear Shock	25mm Bore Gas Bag
Shock Adjustment	Cam
Center Suspension	Progressive Rate Swing Arm
Center Travel	5" (12.7cm)
Center Shock	1" Bore
Shock Adjustment	Cam

TIRES

Tire Size - Front	25 x 8 - 12
Tire Size - Rear	25 x 11 - 10
Tire Size - Center	25 x 11 - 10
Tire Pressure - F/R	5/5/5 lbs.
Total Width	46" (116.84cm)
Total Length	103" (261.62cm)
Total Height	47" (119.38cm)
Wheel Base	75" (190.5cm)
Weight - Dry	870 lbs. (395kg)

DRIVE TRAIN

Chain Type	520 O-Ring
Gear Reduction-Low	6.64/1
Gear Reduction-Rev	5.13/1
Gear Reduction-High	3.29/1
Front Drive Ratio	11/22 68P
Center Drive Ratio	11/24 72P
Final Drive Ratio	12/42 88P
Axle to Axle	30/30 116P
Brake (Hand)	Single Lever, Hyd. Disc
Brake (Auxiliary Foot)	Hydraulic

LOAD CAPACITY

Front Rack	75 lbs.
Rear Box	800 lbs.
Tongue Weight	35 lbs.
Tow Hitch	Std

OPTIONAL SUSPENSION SPRINGS

	SOFT	STANDARD	FIRM
Rear Compression Spring	7041204-067 Option 190 lb/in.	7041303-067 Standard 250 lb/in.	N / A
Mid Compression Spring	N / A	7041305-067 Standard 60 lb/in.	N / A
Front Strut Spring	7041375-067 Option 64/113 lb/in.	7041450-067 Standard 101 lb/in.	N / A

1999 MODEL SPECIFICATIONS

MODEL: ..... BIG BOSS 500 6X6
MODEL NUMBER: . A99AE50AA
ENGINE MODEL: .. EH50PLE06

CARBURETION

Type ..... BST 34 Mikuni
Main Jet 140
Pilot Jet 40
Jet Needle 4D33-3
Needle Jet Q-6
Throttle Valve ..... #100
Pilot Screw 2
Pilot Air Jet 160
Valve Seat 1.5
Fuel Octane (R+M/2) . 87 Non-Oxygenated or
89 Oxygenated

JETTING CHART

Altitude		AMBIENT TEMPERATURE			
		Below 0°F Below -18°C	0° to +40°F -18°to +5°C	+40°to +80°F +5° to +26°C	Above +80°F Above +26°C
Meters (Feet)	0-900 (0-3000)	150	145	140	135
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Outside Circumference .... 40.86 ±.12”
Center Distance ..... 10±.12” (254.5mm)
Clutch Offset ..... 0.5” (12.7mm)
Secondary Spring ..... Red
Driven Helix ..... Compound
Spring Position (Helix) 2
Spring Position (Sheave) .. 2

CLUTCH CHART

Altitude		Shift Weight	Clutch Spring	Driven Helix
Meters (Feet)	0-900 (0-3000)	10MH	Blue/Green	2-2
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ENGINE MODEL: EH50PLE06

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CDI Marking	CU2557
Alternator Output	250 Watts
Ignition Timing	30° BTDC@3500RPM±1.5°
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Lights: Head	12V/60W
Grill	(2) 12V/27W
Tail	8.26 watts
Brake	26.9 watts
Voltage Regulator	LR39
Electric Start	Standard

FLUID

	Capacity	Type
Fuel Tank	3.5 gals. (13.2L)	
Injector Oil	N / A	
Coolant	2.25 qts.	PP6*
Transmission	20 oz.	PPS*
Gearcase Oil (Front)	N / A	
Gearcase Oil (Center)	N / A	
Gearcase Oil (Rear)	N / A	
Engine Oil	2 qts. (1.9L)	PP4*
Brake (Hand)		Dot 3
Brake (Foot)		Dot 3
Front Hubs (AWD)	N / A	
Shift Selector Box	1 oz. (30ml)	PP4*

Lubricant Key
*PP6 Polaris Premium 60/40 Antifreeze/Coolant
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Center Drive Ratio	11/24 72P
Final Drive Ratio	12/42 88P
Axle to Axle	30/30 116P
Brake (Hand)	Single Lever, Hyd. Disc
Brake (Auxiliary Foot)	Hydraulic

LOAD CAPACITY

Front Rack	75 lbs.
Rear Box	800 lbs.
Tongue Weight	35 lbs.
Tow Hitch	Std

OPTIONAL SUSPENSION SPRINGS

	SOFT	STANDARD	FIRM
Rear Compression Spring	N / A	7041303-067 Standard 250 lb/in.	N / A
Mid Compression Spring	N / A	7041305-067 Standard 60 lb/in.	N / A
Front Strut Spring	7041375-067 Option 64/113 lb/in.	7041450-067 Standard 101 lb/in.	7041696-067 Option 140/190 lb/in.

PUBLICATION NUMBERS

Year	Model	Model No.	Owner's Manual PN	Parts Manual PN	Parts Micro Fiche PN	Service Manual
1998	Big Boss 500 6x6	A98AE50AA	9914720	9914639	9915239	9916575
1999	Big Boss 500 6x6	A99AE50AA	9914919	9914920	9915651	9916575

When ordering service parts be sure to use the correct parts manual.

PAINT CODES

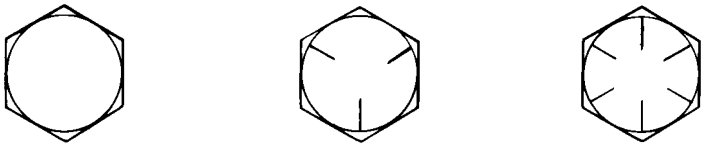
PAINTED PART	COLOR DESCRIPTION	DITZLER NUMBER	POLARIS NUMBER
1998/99 Big Boss 500 6x6 Springs	Eddie Bauer Green	44931	P-195
1998/99 Big Boss 500 6x6 Rims	Aluminum	N/A	N/A
1998/99 Big Boss 500 6x6 Rack & Box	Eddie Bauer Green	44931	P-195

FRAME COLOR - (All) P067 Medium Gloss Black 9440 / 8520147.

Order direct from Midwest Industrial Coatings (952-942-1840). Mix as directed.

STANDARD TORQUE SPECIFICATIONS

The following torque specifications are to be used as a general guideline. There are exceptions in the steering, suspension, and engine areas. Always consult the exploded views in each manual section for torque values of fasteners before using standard torque.



Bolt Size	Threads/In	Grade 2	Grade 5	Grade 8
		Torque in. lbs. (Nm)		
#10 -	24	27 (3.1)	43 (5.0)	60 (6.9)
#10 -	32	31 (3.6)	49 (5.6)	68 (7.8)
		Torque ft. lbs. (Nm)*		
1/4 -	20	5 (7)	8 (11)	12 (16)
1/4 -	28	6 (8)	10 (14)	14 (19)
5/16 -	18	11 (15)	17 (23)	25 (35)
5/16 -	24	12 (16)	19 (26)	29 (40)
3/8 -	16	20 (27)	30 (40)	45 (62)
3/8 -	24	23 (32)	35 (48)	50 (69)
7/16 -	14	30 (40)	50 (69)	70 (97)
7/16 -	20	35 (48)	55 (76)	80 (110)
1/2 -	13	50 (69)	75 (104)	110 (152)
1/2 -	20	55 (76)	90 (124)	120 (166)

Metric

6 x 1.0	72-78 In. lbs.
8 x 1.25	14-18 ft. lbs.
10 x 1.25	26-30 ft. lbs.

***To convert ft. lbs. to Nm multiply foot pounds by .1.382**
***To convert Nm to ft. lbs. multiply Nm by .7376.**

SPECIFIC TORQUE VALUES OF FASTENERS
Refer to exploded views in the appropriate section.

TORQUE CONVERSIONS

Newton Meter to Pound Foot and Pound Inch

Nm	lb ft	lb in
1	0.74	8.65
2	1.48	17.30
3	2.21	25.95
4	2.95	34.60
5	3.69	43.26
6	4.43	51.91
7	5.16	60.56
8	5.90	69.21
9	6.64	77.86
10	7.38	86.51
11	8.11	95.16
12	8.85	103.81
13	9.59	112.46
14	10.33	121.11
15	11.06	
16	11.80	
17	12.54	
18	13.28	
19	14.01	
20	14.75	
21	15.49	
22	16.23	
23	16.96	
24	17.70	
25	18.44	
26	19.18	
27	19.92	
28	20.65	
29	21.39	
30	22.13	
31	22.87	
32	23.60	
33	24.34	
34	25.08	
35	25.82	
36	26.55	
37	27.29	
38	28.03	
39	28.77	
40	29.50	
41	30.24	
42	30.98	
43	31.72	
44	32.45	
45	33.19	
46	33.93	
47	34.67	
48	35.40	
49	36.14	
50	36.88	
51	37.62	
52	38.36	
53	39.09	
54	39.83	
55	40.57	
56	41.31	
57	42.04	
58	42.78	
59	43.52	
60	44.26	
61	44.99	
62	45.73	
63	46.47	
64	47.21	
65	47.94	
66	48.68	
67	49.42	
68	50.16	
69	50.89	
70	51.63	
71	52.37	
72	53.11	
73	53.84	
74	54.58	
75	55.32	
76	56.06	
77	56.80	
78	57.53	
79	58.27	
80	59.01	
81	59.75	
82	60.48	
83	61.22	
84	61.96	
85	62.70	
86	63.43	
87	64.17	
88	64.91	
89	65.65	
90	66.38	
91	67.12	
92	67.86	
93	68.60	
94	69.33	
95	70.07	
96	70.81	
97	71.55	
98	72.28	
99	73.02	
100	73.76	
101	74.50	
102	75.24	
103	75.97	
104	76.71	
105	77.45	
106	78.19	
107	78.92	
108	79.66	
109	80.40	
110	81.14	
111	81.87	
112	82.61	
113	83.35	
114	84.09	
115	84.82	
116	85.56	
117	86.30	
118	87.04	
119	87.77	
120	88.51	
121	89.25	
122	89.99	
123	90.72	
124	91.46	
125	92.20	
126	92.94	
127	93.68	
128	94.41	
129	95.15	
130	95.89	
131	96.63	
132	97.36	
133	98.10	
134	98.84	
135	99.58	
136	100.31	
137	101.05	
138	101.79	
139	102.53	
140	103.26	
141	104.00	
142	104.74	
143	105.48	
144	106.21	

TORQUE CONVERSIONS

Newton Meter to Pound Foot and Pound Inch

Nm	lb ft
145	106.95
146	107.69
147	108.43
148	109.16
149	109.90
150	110.64
151	111.38
152	112.12
153	112.85
154	113.59
155	114.33
156	115.07
157	115.80
158	116.54
159	117.28
160	118.02
161	118.75
162	119.49
163	120.23
164	120.97
165	121.70
166	122.44
167	123.18
168	123.92
169	124.65
170	125.39
171	126.13
172	126.87
173	127.60
174	128.34
175	129.08
176	129.82
177	130.56
178	131.29
179	132.03
180	132.77
181	133.51
182	134.24
183	134.98
184	135.72
185	136.46
186	137.19
187	137.93
188	138.67
189	139.41

Nm	lb ft
190	140.14
191	140.88
192	141.62
193	142.36
194	143.09
195	143.83
196	144.57
197	145.31
198	146.04
199	146.78
200	147.52
201	148.26
202	149.00
203	149.73
204	150.47
205	151.21
206	151.95
207	152.68
208	153.42
209	154.16
210	154.90
211	155.63
212	156.37
213	157.11
214	157.85
215	158.58
216	159.32
217	160.06
218	160.80
219	161.53
220	162.27
221	163.01
222	163.75
223	164.48
224	165.22
225	165.96
226	166.70
227	167.44
228	168.17
229	168.91
230	169.65
231	170.39
232	171.12
233	171.86
234	172.60

Nm	lb ft
235	173.34
236	174.07
237	174.81
238	175.55
239	176.29
240	177.02
241	177.76
242	178.50
243	179.24
244	179.97
245	180.71
246	181.45
247	182.19
248	182.92
249	183.66
250	184.40
251	185.14
252	185.88
253	186.61
254	187.35
255	188.09
256	188.83
257	189.56
258	190.30
259	191.04
260	191.78
261	192.51
262	193.25
263	193.99
264	194.73
265	195.46
266	196.20
267	196.94
268	197.68
269	198.41
270	199.15
271	199.89
272	200.63

DECIMAL EQUIVALENTS

1/64	.0156	
1/32	.0312	1 mm = .0394″
3/64	.0469	
1/16	.0625	
5/64	.0781	2 mm = .0787″
3/32	.0938	
7/64	.1094	3 mm = .1181″
1/8	1250	
9/64	.1406	
5/32	.1563	4 mm = .1575″
11/64	.1719	
3/16	.1875	5 mm = .1969″
13/64	.2031	
7/32	.2188	
15/64	.2344	6 mm = .2362″
1/4	.25	
17/64	.2656	7 mm = .2756″
9/32	.2813	
19/64	.2969	
5/16	.3125	8 mm = .3150″
21/64	.3281	
11/32	.3438	9 mm = .3543″
23/64	.3594	
3/8	.375	
25/64	.3906	10 mm = .3937″
13/32	.4063	
27/64	.4219	11 mm = .4331″
7/16	.4375	
29/64	.4531	
15/32	.4688	12 mm = .4724″
31/64	.4844	
1/2	.5	13 mm = .5118
33/64	.5156	
17/32	.5313	
35/64	.5469	14 mm = .5512″
9/16	.5625	
37/64	.5781	15 mm = .5906″
19/32	.5938	
39/64	.6094	
5/8	.625	16 mm = .6299″
41/64	.6406	
21/32	.6563	17 mm = .6693″
43/64	.6719	
11/16	.6875	
45/64	.7031	18 mm = .7087″
23/32	.7188	
47/64	.7344	19 mm = .7480″
3/4	.75	
49/64	.7656	
25/32	.7813	20 mm = .7874″
51/64	.7969	
13/16	.8125	21 mm = .8268″
53/64	.8281	
27/32	.8438	
55/64	.8594	22 mm = .8661″
7/8	.875	
57/64	.8906	23 mm = .9055″
29/32	.9063	
59/64	.9219	
15/16	.9375	24 mm = .9449″
61/64	.9531	
31/32	.9688	25 mm = .9843
63/64	.9844	
1	1.0	

CONVERSION TABLE

Unit of Measure	Multiplied by	Converts to
ft. lbs.	x 12	= in. lbs.
in. lbs.	x .0833	= ft. lbs.
ft. lbs.	x 1.356	= Nm
in. lbs.	x .0115	= kg-m
Nm	x .7376	= ft.lbs.
kg-m	x 7.233	= ft. lbs.
kg-m	x 86.796	= in. lbs.
kg-m	x 10	= Nm
in.	x 25.4	=mm
mm	x .03937	= in.
in.	x 2.54	= cm
mile (mi.)	x 1.6	= km
km	x .6214	= mile (mi.)
Ounces (oz)	x 28.35	= Grams (g)
Fluid Ounces (fl. oz.)	x 29.57	= Cubic Centimeters (cc)
Cubic Centimeters (cc)	x .03381	= Fluid Ounces (fl. oz.)
Grams (g)	x 0.035	= Ounces (oz)
lb.	x .454	= kg
kg	x 2.2046	= lb.
Cubic inches (cu in)	x 16.387	= Cubic centimeters (cc)
Cubic centimeters (cc)	x 0.061	= Cubic inches (cu in)
Imperial pints (Imp pt)	x 0.568	= Liters (l)
Liters (l)	x 1.76	= Imperial pints (Imp pt)
Imperial quarts (Imp qt)	x 1.137	= Liters (l)
Liters (l)	x 0.88	= Imperial quarts (Imp qt)
Imperial quarts (Imp qt)	x 1.201	= US quarts (US qt)
US quarts (US qt)	x 0.833	= Imperial quarts (Imp qt)
US quarts (US qt)	x 0.946	= Liters (l)
Liters (l)	x 1.057	= US quarts (US qt)
US gallons (US gal)	x 3.785	=Liters (l)
Liters (l)	x 0.264	= US gallons (US gal)
Pounds - force per square inch (psi)	x 6.895	= Kilopascals (kPa)
Kilopascals (kPa)	x 0.145	= Pounds - force per square inch (psi)
Kilopascals (kPa)	x 0.01	= Kilograms - force per square cm
Kilograms - force per square cm	x 98.1	= Kilopascals (kPa)
π (3.14) x R^2 x H (height)		= Cylinder Volume

°C to °F: 9 (°C + 40) ÷ 5 - 40 = °F
°F to °C: 5 (°F + 40) ÷ 9 - 40 = °C

SAE TAP DRILL SIZES

Thread Size	Drill Size	Thread Size	Drill Size
#0-80	3/64	1/2-13	27/64
#1-64	53	1/2-20	29/64
#1-72	53	9/16-12	31/64
#2-56	51	9/16-18	33/64
#2-64	50	5/8-11	17/32
#3-48	5/64	5/8-18	37/64
#3-56	45	3/4-10	21/32
#4-40	43	3/4-16	11/16
#4-48	42	7/8-9	49/64
#5-40	38	7/8-14	13/16
#5-44	37	1-8	7/8
#6-32	36	1-12	59/64
#6-40	33	1 1/8-7	63/64
#8-32	29	1 1/8-12	1 3/64
#8-36	29	1 1/4-7	1 7/64
#10-24	24	1 1/4-12	1 11/64
#10-32	21	1 1/2-6	1 11/32
#12-24	17	1 1/2-12	1 27/64
#12-28	4.6mm	1 3/4-5	1 9/16
1/4-20	7	1 3/4-12	1 43/64
1/4-28	3	2-4 1/2	1 25/32
5/16-18	F	2-12	1 59/64
5/16-24	I	2 1/4-4 1/2	2 1/32
3/8-16	O	2 1/2-4	2 1/4
3/8-24	Q	2 3/4-4	2 1/2
7/16-14	U	3-4	2 3/4
7/16-20	25/64		

METRIC TAP DRILL SIZES

Tap Size	Drill Size	Decimal Equivalent	Nearest Fraction
3 x .50	#39	0.0995	3/32
3 x .60	3/32	0.0937	3/32
4 x .70	#30	0.1285	1/8
4 x .75	1/8	0.125	1/8
5 x .80	#19	0.166	11/64
5 x .90	#20	0.161	5/32
6 x 1.00	#9	0.196	13/64
7 x 1.00	16/64	0.234	15/64
8 x 1.00	J	0.277	9/32
8 x 1.25	17/64	0.265	17/64
9 x 1.00	5/16	0.3125	5/16
9 x 1.25	5/16	0.3125	5/16
10 x 1.25	11/32	0.3437	11/32
10 x 1.50	R	0.339	11/32
11 x 1.50	3/8	0.375	3/8
12 x 1.50	13/32	0.406	13/32
12 x 1.75	13/32	0.406	13/32

GLOSSARY OF TERMS

ABDC: After bottom dead center.

ACV: Alternating current voltage.

Alternator: Electrical generator producing voltage alternating current.

ATDC: After top dead center.

BBDC: Before bottom dead center.

BDC: Bottom dead center.

BTDC: Before top dead center.

CC: Cubic centimeters.

Center Distance: Distance between center of crankshaft and center of driven clutch shaft.

Chain Pitch: Distance between chain link pins (No. 35 = 3/8″ or 1 cm). Polaris measures chain length in number of pitches.

CI: Cubic inches.

Clutch Buttons: Plastic bushings which transmit rotation of the clutch to the movable sheave in the drive and driven clutch.

Clutch Offset: Drive and driven clutches are offset so that drive belt will stay nearly straight as it moves along the clutch face.

Clutch Weights: Three levers in the drive clutch which relative to their weight, profile and engine RPM cause the drive clutch to close.

Condenser/Capacitor: A storage reservoir for DC voltage.

Crankshaft Run-Out: Run-out or “bend” of crankshaft measured with a dial indicator while crankshaft is supported between centers on V blocks or resting in crankcase. Measure at various points especially at PTO.

DCV: Direct current voltage.

Dial Bore Gauge: A cylinder measuring instrument which uses a dial indicator. Good for showing taper and out-of-round in the cylinder bore.

Electrical Open: Open circuit. An electrical circuit which isn’t complete.

Electrical Short: Short circuit. An electrical circuit which is completed before the current reaches the intended load. (i.e. a bare wire touching the chassis).

End Seals: Rubber seals at each end of the crankshaft.

Engagement RPM: Engine RPM at which the drive clutch engages to make contact with the drive belt.

ft.: Foot/feet.

Foot Pound: Ft. lb. A force of one pound at the end of a lever one foot in length, applied in a rotational direction.

g: Gram. Unit of weight in the metric system.

gal.: Gallon.

HP: Horsepower.

ID: Inside diameter.

in.: Inch/inches.

Inch Pound: In. lb. 12 in. lbs. = 1 ft. lb.

kg/cm^2 : Kilograms per square centimeter.

kg-m: Kilogram meters.

Kilogram/meter: A force of one kilogram at the end of a lever one meter in length, applied in a rotational direction.

l or ltr: Liter.

lbs/in^2 : Pounds per square inch.

Left Side: Always referred to based on normal operating position of the driver.

GLOSSARY OF TERMS

m: Meter/meters.

Mag: Magneto.

Magnetic Induction: As a conductor (coil) is moved through a magnetic field, a voltage will be generated in the windings. Mechanical energy is converted to electrical energy in the stator.

mi.: Mile/miles.

mm: Millimeter. Unit of length in the metric system. 1mm = approximately .040″.

Nm: Newton meters.

OD: Outside diameter.

Ohm: The unit of electrical resistance opposing current flow.

oz.: Ounce/ounces.

Piston Clearance: Total distance between piston and cylinder wall.

psi.: Pounds per square inch.

PTO: Power take off.

PVT: Polaris Variable Transmission (Drive Clutch System)

qt.: Quart/quarts.

RPM: Revolutions per minute.

Regulator: Voltage regulator. Regulates battery charging system output at approx. 14.5 DCV as engine RPM increases.

Reservoir Tank: The fill tank in the liquid cooling system.

Resistance: In the mechanical sense, friction or load. In the electrical sense, ohms. Both result in energy conversion to heat.

Right Side: Always referred to based on normal operating position of the driver.

RPM: Revolutions per minute.

Secondary Clutch: Driven clutch on chaincase or jackshaft.

Seized Piston: Galling of the sides of a piston. Usually there is a transfer of aluminum from the piston onto the cylinder wall. Possible causes: 1) improper lubrication; 2) excessive temperatures; 3) insufficient piston clearance; 4) stuck piston rings.

Stator Plate: The plate mounted under the flywheel supporting the battery charging coils.

TDC: Top dead center. Piston's most outward travel from crankshaft.

Volt: The unit of measure for electrical pressure of electromotive force. Measured by a voltmeter in parallel with the circuit.

Watt: Unit of electrical power. Watts = amperes x volts.

WOT: Wide open throttle.