

Table of Contents

EVO: Engine Mechanicals - Sub-09C	3
Evo Motor Mount Specs	3

[Go To Technical Menu](#)

EVO: Engine Mechanicals - Sub-09C

Evo Motor Mount Specs

The 1986-1991 FSMs list no torque specs for the rear mounts or lower front mounts.

There is only one spec in the 79-85 FSM (rear motor mounting bolt-nut: 16 to 24 ft lbs) and the 86-90 rear mount is the same part from 84-90.

For the rest, there are general "Torque Value" charts in the front of the service manual. ¹⁾

It lists general torque values for bolt types but not specific mounting bolts.

It also says to torque to these values given in the tables unless specified otherwise. There are two charts (English and Metric).

Below is a list of torque values from the different year model FSMs.

1986-2003 Motor Mount Torque Specs in HD Service Manuals							
Point of Torque	SAE	Metric	Year Model	Point of Torque	SAE	Metric	Year Model
Rear Mount Fasteners	16-24 ft-lbs 25-30 ft-lbs	21-33 Nm 34-41 Nm	1985→1990 1994-2003	Neg Cable Nut to Rear Mount Stud	68-80 in-lbs	7-10 Nm	1994-2003
Lower Front Mount to Engine	25-30 ft-lbs	34-41 Nm	1994-2003	Lower Front Mount to Frame	25-30 ft-lbs	34-41 Nm	1994-2003
Upper Front Mount to Head	21-27 ft-lbs 25-30 ft-lbs	28-36 Nm 34-41 Nm	1986-1989 1990-2003	Upper Front Mount to Frame	30-35 ft-lbs	40-47 Nm	1986-2003
Top Center Mount to Heads	21-27 ft-lbs 25-30 ft-lbs	28-36 Nm 34-41 Nm	1986-1989 1990-2003	Top Center Mount to Frame	30-35 ft-lbs	41-47 Nm	1986-2003

The charts below are from the torque value charts in the 86-90 FSM.

Low strength**No marks (Grade 1 or 2)**tensile strength 60,000-74,000 psi
yield strength 36,000-57,000 psi**SAE Bolt Head
Grade Markings****Medium strength****3 marks (Grade 5)**tensile strength 120,000 psi
yield strength 80,000-90,000 psi**High strength****6 marks (Grade 8)**tensile strength 150,000 psi
yield strength 130,000 psi

2)

SAE Torque Value Chart per Bolt Type

Bolt size	SAE 2 74,000 psi Low carbon	SAE 5 120,000 psi Medium carbon heat treat	SAE 7 133,000 psi Medium carbon alloy	SAE 8 150,000 psi Medium carbon alloy	Socket head cap screw 160,000 psi High carbon quenched tempered	Socket head set screw 212,000 psi High carbon quenched tempered	Studs
#6	-	-	-	-	-	9 in/lb	Use SAE 2,5 and 8 values when grade is known with nut and sufficient strength
#8	-	14 in/lb	-	-	-	16 in/lb	
#10	-	22 in/lb	-	-	-	30 in/lb	
1/4"	6 ft/lb	10 ft/lb	13 ft/lb	14 ft/lb	16 ft/lb	70 in/lb	
5/16"	12 ft/lb	19 ft/lb	25 ft/lb	29 ft/lb	33 ft/lb	140 in/lb	
3/8"	20 ft/lb	33 ft/lb	44 ft/lb	47 ft/lb	54 ft/lb	18 ft/lb	
7/16"	32 ft/lb	54 ft/lb	71 ft/lb	78 ft/lb	84 ft/lb	29 ft/lb	
1/2"	47 ft/lb	78 ft/lb	110 ft/lb	119 ft/lb	125 ft/lb	43 ft/lb	
9/16"	69 ft/lb	114 ft/lb	154 ft/lb	169 ft/lb	180 ft/lb	63 ft/lb	
5/8"	96 ft/lb	154 ft/lb	215 ft/lb	230 ft/lb	250 ft/lb	100 ft/lb	
3/4"	155 ft/lb	257 ft/lb	360 ft/lb	380 ft/lb	400 ft/lb	146 ft/lb	
7/8"	206 ft/lb	382 ft/lb	570 ft/lb	600 ft/lb	640 ft/lb	-	
1"	310 ft/lb	587 ft/lb	840 ft/lb	700 ft/lb	970 ft/lb	-	

Metric Torque Value Chart per Bolt Type

Bolt size	SAE 2 5,202 kg/cm ² Low carbon	SAE 5 8,436 kg/cm ² Medium carbon heat treat	SAE 7 9,350 kg/cm ² Medium carbon alloy	SAE 8 10,545 kg/cm ² Medium carbon alloy	Socket head cap screw 11,248 kg/cm ² High carbon quenched tempered	Socket head set screw 14,902 kg/cm ² High carbon quenched tempered	Studs
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2	-	-	-	-	-	-	Use SAE 2,5 and 8 values when grade is known with nut and sufficient strength
3	-	-	-	-	-	-	
4	-	-	-	-	-	-	
5	-	-	-	-	-	-	
6	-	-	-	-	-	1.0	
8	-	1.6	-	-	-	1.8	
10	-	2.5	-	-	-	3.4	
6.4	8.3	13.8	18.0	19.4	22.1	8.1	
7.9	16.6	26.3	34.6	40.1	45.6	16.1	
9.5	27.7	45.6	60.8	65.0	74.7	24.9	
11.1	44.3	74.7	98.2	107.9	116.2	40.1	
12.7	65.0	107.9	152.1	164.6	172.9	59.5	
14.3	95.4	157.7	213.0	233.7	248.9	87.1	
15.9	132.8	213.0	297.3	318.1	345.7	138.3	
19.1	214.4	355.4	497.9	525.5	553.2	201.9	
22.2	283.5	528.3	788.3	829.8	885.1	-	
25.4	428.7	811.8	1161.7	968.1	1341.5	-	

Go To Technical Menu

1)

1986-1990 HD Sportster FSM pg 1-8

2)

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