



HEAVY-DUTY TORQUE SPECIFICATIONS REFERENCE GUIDE

METRIC TORQUE SPECIFICATIONS

THREAD SIZE (MM)	TORQUE
M6	12 ± 3 N·m (105 ± 27 lb in)
M8	28 ± 7 N·m (250 ± 62 lb in)
M10	55 ± 10 N·m (41 ± 7 lb ft)
M12	100 ± 20 N·m (75 ± 15 lb ft)
M14	160 ± 30 N·m (120 ± 22 lb ft)
M16	240 ± 40 N·m (175 ± 30 lb ft)
M20	460 ± 60 N·m (340 ± 44 lb ft)
M24	800 ± 100 N·m (590 ± 75 lb ft)
M30	1600 ± 200 N·m (1180 ± 150 lb ft)
M36	2800 ± 350 N·m (2060 ± 260 lb ft)

FOR USE ON GRADE 8.8 HARDWARE

Specifications taken from Caterpillar SENR3130.

Use only when service manual specifications are not available.

> IF THREADS ARE INTO ALUMINUM, USE HALF TORQUE

SAE/IMPERIAL TORQUE SPECIFICATIONS

THREAD SIZE (INCH)	TORQUE
$\frac{1}{4}$	$12 \pm 3 \text{ N}\cdot\text{m}$ ($105 \pm 27 \text{ lb in}$)
$\frac{5}{16}$	$25 \pm 6 \text{ N}\cdot\text{m}$ ($105 \pm 27 \text{ lb in}$)
$\frac{3}{8}$	$47 \pm 9 \text{ N}\cdot\text{m}$ ($35 \pm 7 \text{ lb ft}$)
$\frac{7}{16}$	$70 \pm 15 \text{ N}\cdot\text{m}$ ($50 \pm 11 \text{ lb ft}$)
$\frac{1}{2}$	$105 \pm 20 \text{ N}\cdot\text{m}$ ($75 \pm 15 \text{ lb ft}$)
$\frac{9}{16}$	$160 \pm 30 \text{ N}\cdot\text{m}$ ($120 \pm 22 \text{ lb ft}$)
$\frac{5}{8}$	$215 \pm 40 \text{ N}\cdot\text{m}$ ($160 \pm 30 \text{ lb ft}$)
$\frac{3}{4}$	$370 \pm 50 \text{ N}\cdot\text{m}$ ($275 \pm 37 \text{ lb ft}$)
$\frac{7}{8}$	$620 \pm 80 \text{ N}\cdot\text{m}$ ($460 \pm 60 \text{ lb ft}$)
1	$900 \pm 100 \text{ N}\cdot\text{m}$ ($660 \pm 75 \text{ lb ft}$)
$1 \frac{1}{8}$	$1300 \pm 150 \text{ N}\cdot\text{m}$ ($960 \pm 110 \text{ lb ft}$)
$1 \frac{1}{4}$	$1800 \pm 200 \text{ N}\cdot\text{m}$ ($1320 \pm 150 \text{ lb ft}$)
$1 \frac{3}{8}$	$2400 \pm 300 \text{ N}\cdot\text{m}$ ($1780 \pm 220 \text{ lb ft}$)
$1 \frac{1}{2}$	$3100 \pm 350 \text{ N}\cdot\text{m}$ ($2280 \pm 260 \text{ lb ft}$)

FOR USE ON GRADE 8 HARDWARE

Specifications taken from Caterpillar SENR3130.

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U-BOLT TORQUE GUIDE

RECOMMENDED U-BOLT TORQUE FOR COLD-FORMED U-BOLTS

SIZE	MATERIAL GRADE	MAX. TORQUE FT-LBS
$\frac{3}{8}$ - 24	5	26
$\frac{7}{16}$ - 20	5	44
$\frac{1}{2}$ - 20	5	70
$\frac{1}{2}$ - 20	8	87
$\frac{9}{16}$ - 18	5	100
$\frac{9}{16}$ - 18	8	124
$\frac{5}{8}$ - 18	5	143
$\frac{5}{8}$ - 18	8	177
$\frac{3}{4}$ - 16	5	253
$\frac{3}{4}$ - 16	8	313
$\frac{7}{8}$ - 14	5	405
$\frac{7}{8}$ - 14	8	500
1 - 14	8	1010
1 $\frac{1}{8}$ - 12	8	1131
1 $\frac{1}{4}$ - 14	8	1551

DO NOT RE-USE U-BOLTS

All of the above values are general guidelines.

The OEM Service Manual on specific models always takes precedence over values shown.

