

CFMOTO 800 MT-X Service Manual — English Translation

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CFMOTO 800 MT-X Service Manual — English Translation (Key Sections)

Chapter 0 — Cover / Introduction

Chapter 3 — Technical Information (技术信息)

3.5 Fastening torques (紧固扭矩) — **MASTER TORQUE TABLE**

3.6 Lubrication requirements (润滑要求)

3.7 Engine operating materials & installation auxiliaries

Chapter 8 — Diagnostic trouble codes (excerpt — relevant DTCs)

What's NOT translated here

CFMOTO 800 MT-X Service Manual — English Translation (Key Sections)

Source: MTX800- Service Manual.pdf (Chinese 维修手册, 276 pages, models CF800-11 / CF800-11A, dated 2024-03-30, published by Zhejiang Chunfeng Power Co. Ltd. / 浙江春风动力股份有限公司)

This translation covers the most operationally critical sections of the Chinese-only service manual: the master torque table, the vehicle and engine specification tables, and the lubrication-materials chart. These are the parts you actually need when wrenching in the field or at home.

For procedure-by-procedure repair detail (disassembly, fault diagnosis, electrical), use the English Owner's Manual plus the dealer.

Chapter 0 — Cover / Introduction

- **Title:** 800MT-X 维修手册 — “800 MT-X Service Manual”
- **Models:** CF800-11 (base) / CF800-11A (touring variant 6HRW9-006K01-11)
- **Edition:** 2024-03-30
- **Publisher:** 浙江春风动力股份有限公司 (Zhejiang Chunfeng Power Co. Ltd.) — i.e. CFMOTO
- Manual states only authorized dealers with proper tools and trained technicians should perform repairs.

Coding key (页码 / part-number convention)

Standard CFMOTO prefix CF800-11(A) / 6HRW9-... — note that some maintenance items differ slightly between the -11 and -11A variants (notably curb weight: 231 kg vs 248 kg).

Unit conversion table (单位符号对照表)

Symbol	Chinese	English
N·m	牛米	Newton-meter (torque)
kgf·m	公斤力米	kilogram-force meter
MPa	兆帕	Megapascal
kPa	千帕	kilopascal
bar	巴	bar
psi	磅每平方英寸	pounds per square inch
L	升	liter
mL	毫升	milliliter
US gal	美加仑	US gallon
h	小时	hour
min	分	minute
HP	马力	horsepower
W	瓦	watt
V	伏	volt
A	安	ampere
Ω	欧	ohm
Hz	赫兹	hertz
cc / cm ³	立方厘米	cubic centimeter

Warning levels

- 危险 (Danger) — risk of death or severe injury
 - 警告 (Warning) — risk of injury
 - 注意 (Caution / Note) — risk of damage to vehicle
-

Chapter 3 — Technical Information (技术信息)

3.1 Vehicle main parameters (整车主要参数表)

Source: page 3-2 of the SM.

Item	CF800-11	CF800-11A
Overall length	2,288 mm	2,330 mm
Overall width	945 mm	945 mm
Overall height	1,355 / 1,390 mm	1,360 / 1,395 mm
Wheelbase	1,530 mm	1,530 mm
Engine model	288MW-D	288MW-D
Displacement	799 mL	799 mL
Fuel grade	RQ-95 unleaded or higher	same
Curb weight	231 kg	248 kg
Seating	2 (driver + 1 passenger)	same
Front tire	90/90-21	same
Rear tire	150/70 R18	same
Front rim	21 × MT 2.5	same
Rear rim	18 × MT 4.25	same
Ground clearance	225 mm	same
Min turning radius	5,400 mm	same
Max payload	198 kg	same
Steering angle	L 36° / R 36°	same
Brakes (F/R)	Hydraulic disc	same
Front suspension	Inverted (USD)	same
Rear suspension	Linkage-mounted shock	same
Frame	Steel-tube welded	same

3.2 Engine main parameters (发动机主要参数表)

Source: page 3-3 of the SM.

Item	Value
Type	Inline 2-cylinder · 4-stroke · liquid-cooled · DOHC
Bore × stroke	88 mm × 65.7 mm
Compression ratio	12.8 ± 0.3 : 1
Displacement	799 mL
Idle speed	1,400 ± 140 rpm
Starting	Electric
Max net power	70 kW @ 8,500 rpm
Max torque	87 N·m @ 6,500 rpm
Ignition control	ECU
Spark plug type / gap	BN8RT1 / 0.8–1.0 mm (<i>see note below</i>)
Charging system	Permanent-magnet three-phase AC generator
Fuel	RON 95 unleaded gasoline (or higher)
Valvetrain	DOHC, chain-driven
Oil pump	Rotor type
Oil filter	Full-flow paper element + magnetic core
Engine oil	SAE 10W-50 · JASO T903 MA2
Cooling	Closed-circuit liquid · –35 °C antifreeze
Clutch	Wet multi-plate slipper clutch
Transmission	6-speed sequential, international shift pattern
Primary reduction	1.923
Final drive ratio	2.813
Gear ratios	1st 2.846 · 2nd 2.000 · 3rd 1.550 · 4th 1.250 · 5th 1.083 · 6th 0.957
Engine output direction	Counter-clockwise viewed from LH side
Engine weight	47.3 kg

Note on spark plug: the SM lists the plug as “BN8RT1 / 0.8–1.0 mm”. The current English Owner’s Manual lists **NGK LMAR9AI-10** with the same 0.9–1.0 mm gap and 10 N·m torque (OM p.120). The newer iridium NGK part is what’s actually fitted from the factory today.

3.3 / 3.4 Inspection parameters

Front-wheel, rear-wheel, brake-system, lights/instruments/switches, valvetrain + cylinder head, lubrication system, cylinder/piston/rings/crank, clutch/transmission, cooling, intake, and electrical inspection limits. These are wear/clearance tables and aren’t reproduced here in full — consult the original manual for specific component limits.

3.5 Fastening torques (紧固扭矩) — MASTER TORQUE TABLE

Standard fastener torques (普通标准紧固件)

Fastener	Bolt / Nut N·m (kgf·m)	Screw N·m (kgf·m)
M5	5 ± 1 (0.5 ± 0.1)	4 ± 1 (0.4 ± 0.1)
M6	10 ± 1 (1.0 ± 0.1)	9 ± 1 (0.9 ± 0.1)
M6 flanged screw / flanged nut	—	12 ± 1 (1.2 ± 0.1)
M8	20–26 (2.0–2.6)	20–30 (2.0–3.0)
M10	30–40 (3.0–4.0)	30–40 (3.0–4.0)
M12	40–50 (4.0–5.0)	—

3.5.1 Complete vehicle fastening torque table (整车紧固扭矩表)

Note: Items not listed below use the standard torques above.
 Note 1: Apply thread locker to mating surfaces where specified. Note 2: Replace fasteners when removed.

Installation location	Fastener	Torque	Loctite
Oxygen sensor mount nut	O ₂ sensor	20 N·m, 1 location	—
Exhaust pipe nut	Silencer mounting nut	12 N·m, 2 locations	—

Installation location	Fastener	Torque	Loctite
Front body bolts	Bolt M8×30	25 N·m	Loctite 243
Rear brake caliper mount	Bolt M8	40 N·m	Loctite 243
Shift rod (gear linkage) mount	Bolt M8	25 N·m	Loctite 243
Brake banjo / pass-through bolt	Banjo bolt	25 N·m	—
Front brake caliper mount	Bolt M10×45	48 N·m	Loctite 243
Rear footpeg bracket — lower bolt	Bolt M10×87	40 N·m	Loctite 243
Footpeg bracket lower	Bolt M10×22	45 N·m	Loctite 243
Engine bracket — to engine	Bolt M10×60	45 N·m	Loctite 243
Center stand — LH/RH support plate	Bolt M10×30	28 N·m	Loctite 243
Engine bracket — to frame	Bolt M8×50	28 N·m	Loctite 243
Rear footpeg lower component	Bolt M6	25 N·m	—
Front footpeg, LH/RH, upper bolts	Bolt M12×60	100 N·m	—
Rear shock — upper & lower mount	Bolt M12×60	80 N·m	Loctite 243
Output shaft / front sprocket lock nut	Small sprocket lock nut	120 N·m	Loctite 243
Frame — main/sub-frame 5 bolts	Bolt M10×37	60 N·m	Loctite 2701
Sub-frame — lower bolts	Bolt M10×37	60 N·m	Loctite 2701
		45 N·m	Loctite 243

Installation location	Fastener	Torque	Loctite
Steering / handlebar miscellaneous	Bolt M10×1.25×60		
Clutch lever assembly	self	2 N·m	—
LH switch / LH front handle	self	2 N·m	—
Steering column nut	M25×1.5 (upper triple-clamp lock)	21 N·m	—
Front brake — master cylinder banjo	Pass-through bolt	25 N·m	—
Lower triple clamp — shock mount screws	M8×30	Upper 20 N·m / Lower 16 N·m	Loctite 243
Upper triple clamp pinch	Hex-head screw M8×30	20 N·m	Loctite 243
Upper triple clamp pinch	Hex-head screw M8×25	20 N·m	Loctite 243
Rear hub brake nut	M6×16	90 N·m	—
Oil pump mount	Bolt M6×16	5 N·m	—
Front brake master cylinder	M25×1.5	45 N·m	—
Front brake reservoir / line	Bolt M10×1.25×60	45 N·m	Loctite 243
Brake oil pipe (banjo)	Pass-through	25 N·m	—
Rear bracket cover / case	Hex bolt M8×52	25 N·m	Loctite 243
Rear silencer	Combination alloy bolt M5	5 N·m	Loctite 243
Shift lever to gear-shaft splines	GB70.2 M6×16	6 N·m	Loctite 243
LH/RH bumper / crash-bar middle bolts	Bolt M8×20	25 N·m	Loctite 243

Installation location	Fastener	Torque	Loctite
Rear pannier / bumper mount	Bolt M8×20	25 N·m	Loctite 243
Rear seat / luggage mount	Bolt M8×35	25 N·m	Loctite 243
LH grab-bar bracket	Combination alloy bolt M5	6 N·m	Loctite 243
Side cover LH support bracket	Bolt M8	12 N·m	Loctite 243
Center stand mount	Flanged bolt M8	25 N·m	Loctite 243
Drive sprocket cover lock	—	25 N·m	Loctite 243
Brake disc lock screw	Bolt M8	25 N·m	Loctite 243
Rear lock bolt	Torx no-sink screw M8×28	38 N·m	Loctite 2701

Key torque highlights (the ones you'll actually need on the road)

- **Front sprocket / output shaft nut: 120 N·m + Loctite 243**
← this is the one to know
- **Rear shock (upper & lower): 80 N·m + Loctite 243**
- **Sub-frame & main-frame bolts: 60 N·m + Loctite 2701 (≠ Loctite 243!)**
- **Front brake caliper mount: 48 N·m + Loctite 243**
- **Rear brake caliper mount: 40 N·m + Loctite 243**
- **Upper triple clamp pinch: 20 N·m**
- **Lower triple clamp pinch: 16 N·m** (intentionally low — do NOT over-torque)
- **Steering column nut: 21 N·m**
- **Footpeg upper-front bolt M12: 100 N·m**

3.6 Lubrication requirements (润滑要求)

Apply lithium-based grease (锂基润滑脂, **GB/T 5671**) to: - Steering bearings (顶头支架装承内/外) - Right and left foot bearings (左右支撑轴承内) - Rear shock pivots (后下叉支撑轴承) - Front fork inner / outer (前部内 / 右部内) - Rear brake-linkage pivots (后制动踏板枢转部位) -

Foot-shift pivots (后倾左右轴 / 拉杆) - Wind screen / dust supports -
 Front fender bracket pivots - Rear footpeg pivots (后翻踏板枢转部位)
 - Shift rod connections (变档杆驱转部位)

3.7 Engine operating materials & installation auxiliaries

(发动机运行材料及安装辅料)

Item	Spec	Application	Note
Engine oil	SAE 10W-50 SJ · JASO MA2 certified	Crankcase	Capacity: 2,800 mL (2.8 L)
Molybdenum-additive oil	(assembly-only)	Inside cam tower, lifters, O-rings, light parts	Used only at engine assembly
Grease	No. 3 MoS ₂ lithium grease	Rocker arms, O-rings, light contact surfaces	—
Coolant	–35 °C high-grade antifreeze	Cooling system	Pre-mixed, ethylene-glycol base
Surface sealant	Anaerobic plane sealant	Cylinder mating surfaces, oil-pan flange	Apply thin & even
Thread locker	Loctite 243 (medium) and 2701 (high)	Per torque table	Replace fastener when removing high-strength lock

Chapter 8 — Diagnostic trouble codes (excerpt — relevant DTCs)

The SM contains the full DTC list (pp.8-21 onward). Most useful for the trip:

DTC	Meaning	Quick check
U110C87		

DTC	Meaning	Quick check
	Lost RAMD communication	Disconnect battery → check OBD CAN_H (pin 6) to CAN_L (pin 14) resistance = 54–66 Ω. If out of range, inspect RAMD harness. Clear codes, repower, re-read after 10 s.
U010587	Lost DASH communication	Same procedure — check DASH harness.
U012187	Lost ABS communication	Same procedure — check ABS harness.
U018087	Lost Lamp communication	Same procedure — check Lamp harness.

(For the full DTC list and procedures, refer to the original SM ch. 8.)

What's NOT translated here

- Chapter 4: Engine disassembly/reassembly (full procedural walk-throughs)
- Chapter 5: Cooling-system service
- Chapter 6: Frame, suspension, brake-system service procedures
- Chapter 7: Electrical wiring schematics & diagnostic flows
- Most of Chapter 8 DTC table

Those chapters are heavily illustrated and the diagrams are the same in both languages — you can navigate by part number and use this torque table for any reassembly value.

Translation generated 2026-05-15 from SERVICEMANUALS/MTX800-Service Manual.pdf for the Balkan TET 2026 trip. Always cross-check torque values against the original Chinese manual before performing safety-critical work.