



Engine Service Manual

Our energy working for you.™



X3.3 Engine

General Precautions

- Keep ABC fire extinguishers handy.
- Make sure all fasteners are secure and torqued properly.
- Keep the generator set and its compartment clean. Excess oil and rags can catch fire.
- Let the engine cool down before removing the coolant pressure cap or opening the coolant drain.
- Hot coolant under pressure can spray out and cause severe burns.
- Before working on the generator set, disconnect the negative (-) battery cable at the battery to prevent starting.
- Use caution when making adjustments while the generator set is running hot, moving or Electrically live parts can cause severe personal injury or death -
- Used engine oil has been identified by some state and federal agencies as causing cancer or reproductive toxicity. Do not ingest, inhale, or contact used oil or its vapors.
- Do not work on the generator set when mentally or physically fatigued or after consuming alcohol or drugs.
- Carefully follow all applicable local, state and federal codes.

FUEL IS FLAMMABLE AND EXPLOSIVE

- Do not fill the fuel tank while the engine is running unless the tank is outside the engine compartment.
- Keep flames, cigarettes, sparks, pilot lights, electrical arc-producing equipment and switches and all other sources of ignition well away from areas where fuel fumes are present and areas sharing ventilation.
- Fuel lines must be secured, free of leaks and Separated or shielded from electrical wiring
- Use approved non-conductive flexible fuel hose for fuel connections at the generator set

Engine Exhaust is Deadly!

The exhaust system must be leak-free and convey all exhaust to the out-of-doors, away from buildings and building air vents, doors and windows. Look and listen for exhaust leaks daily and do not operate the generator set until all leaks have been fixed.

- Do not use engine exhaust or cooling air to heat a room or compartment.
- Make sure there is ample fresh air ' when operating the generator set.

Moving Parts Can Cause Severe Personal. Injury or Death

- Do not wear loose clothing or jewelry near moving parts such as PTO shafts, fans, belts and pulleys.
- Keep hands away from moving parts.
- Keep guards in place over fans, belts, pulleys etc.

Battery Gas is Explosive

- Wear safety glasses and do not smoke while servicing batteries.
- When disconnecting or reconnecting battery cables, always disconnect the negative of the battery cable first and reconnect it last to reduce arcing
- Do Not Operate In Flammable and Explosive Environments
- Flammable vapor can cause a diesel engine to over speed and become difficult to stop, resulting in possible fire, explosion, severe personal injury and death.
- Do not operate a diesel-powered generator set where a flammable vapor environment can be created by fuel spill, leak, etc, unless the generator set is equipped with an automatic safety device to block the air intake and stop the engine.
- The owners and operators of the generator set are solely responsible for operating the generator set safely. Contact your authorized Cummins dealer or distributor for more information.

TABLE OF CONTENTS

Section	Description	Page
A	Product Features	5
	Technical Specifications	10
	Engine Dimensions	12
	Engine Views	14
	Threads/ Recommended Torque	16
B	Technical Data	17
	Manufacturing Data and Dimensions	18
C	Operating and Maintenance	29
D	Fault Finding Chart	30
E	Cylinder Head	32
F	Pistons and Connecting Rods	36
G	Cylinder Block and Liners	39
H	Crankshaft and Main Bearings	40
I	Timing Case and Drive	44
J	Timing	48
K	Lubricating System	50
L	Cooling System	55
M	Fuel System	58
N	Fly Wheel and Fly Wheel Housing	61
O	Approved Lubricating Oils	62
P	FIP Spill Timing	63
Q	Fly Wheel Housing and Fly Wheel with Spill Timing And TDC Marks	64
R	Service Tools	65

BUY NOW

**Then Instant Download
the Complete Manual
Thank you very much!**