

e-QD Series Generator Set Models

MDKAU, MDKAV, MDKBG, MDKAW, MDKAZ, MDKBD, MDKBE, MDKBF

PRE-START CHECKS

Before the first start of the day and after every eight hours of operation:

1. Check for proper oil and coolant levels.
2. Check for fuel, coolant and water leaks, mechanical damage, loose parts, damaged exhaust hose, loose or corroded battery connections, clogged sea water strainer, and CO monitors that don't work. Service as necessary.
3. Check for swimmers that might be exposed to the engine exhaust.
4. Turn off air conditioners and other large appliances.

PRIMING THE FUEL SYSTEM

If the genset ran out of fuel, push the control switch to **STOP (Prime)** and hold for at least 30 seconds.

STARTING THE GENSET

1. Push and hold the control switch at **START (Preheat)** until the genset starts. The *amber* status lamp on the control switch will blink rapidly.* The *amber* lamp will go out and the *green* run lamp on the switch will light after the starter has disconnected and the engine is up to speed. (Depending on how cold the engine is, preheat can take as long as 15 seconds before cranking starts.)
2. For longer engine life, let the engine warm up for two minutes before turning on air conditioners and other large appliances.
3. Check for water, coolant, fuel and exhaust leaks. Stop the genset immediately if there is a leak.

▲WARNING *Fuel and exhaust leaks can lead to severe personal injury or death. Shut down the genset immediately. Repair fuel leaks immediately. Do not run the genset until fuel and exhaust leaks have been repaired.*

4. *If the genset fails to start*, cranking will discontinue in 20 to 60 seconds,

* The green run lamp and gauges will also flash momentarily.

depending on how cold the engine is, and the *amber* status lamp will blink Shutdown Code No. 4. See *Troubleshooting* (Operator's Manual) if the genset does not start after two or three tries.

▲ CAUTION *Do not continue cranking and risk burning out the starter or flooding the engine (exhaust flow during cranking is too low to expel water from the exhaust system). Find out why the genset does not start and repair as necessary.*

5. *If the genset shuts down*, the *amber* status lamp will blink a shutdown code. See SHUTDOWN CODES below.

STOPPING THE GENSET

Turn off air conditioners and other large appliances and let the genset run for two minutes to cool down. Then touch the Control Switch to **STOP (Prime)**.

SHUTDOWN CODES

The *amber* status lamp will blink if the genset shuts down. It will blink 1, 2, 3, 4 or 7 times, pause, and then repeat the blinking. **The number of blinks is the shutdown code.** Blinking continues for five minutes and stops. Pressing the control switch to **STOP (Prime)** three times restores blinking.

- **One blink** indicates shutdown due to high engine temperature.
- **Two blinks** indicate shutdown due to low oil pressure.
- **Three blinks** indicate shutdown requiring service by trained and experienced service personnel.
- **Four blinks** indicate shutdown due to a failure to start within the time allowed for cranking.
- **Seven blinks** indicate shutdown due to a loss of raw water flow for engine and exhaust cooling.

See *Troubleshooting* in the Operator's Manual for more information.

PERIODIC MAINTENANCE SCHEDULE

	First 50-Hr	Daily, 8-Hr	Monthly, 100-Hr	Yearly, 200-Hr	Yearly, 500-Hr	800-Hr	2-Yr	5-Yr, 2000-Hr
General Inspection ¹		x						
Check Engine Oil Level		x						
Check Battery			x ²					
Check V-Belt Tension			x ³					
Drain Fuel Filters			x					
Check Siphon Break			x					
Change Oil/Oil Filter	x			x				
Change Fuel Filter				x ⁴	x ⁴			
Replace Pump Impeller					x			
Replace Zinc Anode ⁵					x			
Adjust Valve Lash						x ⁶		
Change Coolant, Pres- sure Cap & Thermostat							x	
Check Generator Bear- ing(s) & Drive Belt								x ⁶

1. Includes Oil Level, Coolant Level, Fuel System, Exhaust System, Battery, and Sea Water Strainer Checks.
2. See battery manufacturer's recommendations
3. Check for slippage, cracking and wear (pump drive belt only).
4. Models MDKAV, MDKBG, MDKAW, MDKAZ, MDKBD, MDKBE & MDKBF—200 hours. Model MDKAU—500 hours.
5. Model MDKAU does not have a zinc anode to replace.
6. Must be performed by a trained and experienced mechanic (Onan Distributor/Dealer) in accordance with the engine and genset Service Manuals. Only Model MDKAU has a drive belt and two generator bearings.

MAINTENANCE PARTS

	MDKAU	MDKAV, MDKBG MDKAW, MDKAZ	MDKBD, MDKBE	MDKBF	MDKBD, MDKBE, MDKBF ²
Oil Filter	185-7444	185-5835	122-0810	122-0810	122-0810
Fuel Filter	149-2106	149-2106	149-2106	149-2106	149-2106
Crankcase Breather	185-5523	185-6721	185-6721	185-6721	185-6721
Pump Impeller	132-0415	132-0349	132-0349	132-0349	132-0349
12V Glow Plugs ¹	185-5421	185-5421	185-5990	185-5990	185-5990
24V Glow Plugs ¹	—	185-7628	185-6725	185-6725	185-6725
Zinc Pencil	—	130-4434	130-4434	130-4434	130-4434
V-Belt	511-0197	185-6934	511-0201	185-7055	185-7055
Cruise Kit	100-3478-08	100-3478-02	100-3478-04	100-3478-06	100-3478-05
Oil Filter Wrench	420-0577	—	—	—	—

1. Number of glow plugs: 2—MDKAU; 3—MDKAV & MDKBG; 4—MDKAW, MDKAZ, MDKBD & MDKBE; 5—MDKBF
2. Gensets with isolated ground systems.

ENGINE FLUID CAPACITIES

	MDKAU	MDKAV, MDKBG	MDKAW, MDKAZ	MDKBD, MDKBE	MDKBF
Oil	2.2 Q (2.1 L)	4.2 Q (4.0 L)	4.5 Q (4.3 L)	8 Q (7.6 L)	12.7 Q (12 L)
Coolant	2.2 Q (2.1 L)	4.2 Q (4.0 L)	5.3 Q (5.0 L)	8 Q (7.6 L)	8 Q (7.6 L)

Shipped with 15W40 engine oil and 50/50 water/ethylene glycol coolant.

Refer to the Operator's Manual for maintenance procedures, troubleshooting and important safety precautions. To locate the nearest Onan Distributor/Dealer or get more information, call Onan (1-800-888-ONAN or 763-574-5000); write Onan Corporation, 1400 73rd Ave. N.E., Minneapolis, MN 55432 U.S.A.; fax 763-574-5298; e-mail pgamail@cummins.com; or browse www.onanmarine.com



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