Finning UK&I - Facebook Annual maintenance

PM Checklist

● 1 ● 3 ● 32 ● 54

Inspection Number	25720249	Customer Name	Nine X Power
Serial Number	WYB02020	Customer Email	pmckenna@finning.com
Make	CATERPILLAR	Work Order	8S27164
Model	C175-16	Completed On	20/11/2025 20:29:37
Equipment Family	ENGINE - GENERATOR SET	Inspector	Glenn Walsh
Asset ID	Nine x Power	PDF Generated On	20/11/2025
SMU	0 Hours	Location	Finning Dublin Storage yard
Coordinates	0, 0, 0		
Technician	GW		

General Info & Comments

● **General info/Comments** *MONITOR*

Comments: Rust beginning to form due to being in storage

Red - GENERATOR RETURNED TO SERVICE

● **15.1 Generator Returned to Service** *NO*

Comments: Not a live generator

Yellow - PRE-START CHECKS COOLING SYSTEM

● **1.13 Check Heather hoses for signs of cracks, heat damage [pipe not flexible] Correctly sized, Quote to replace hoses if any issues found** *MONITOR*

Comments: Minor surface cracks on the heater hoses
Hoses are very stiff
Recommend replacement before returning to service

Yellow - GENERATOR - INSTALLATION/ENCLOSURE

● **12.7 Visual Inspection - For overall condition of generator set. Insure cleanliness of unit, wipe down as necessary. Report any Paint Defects for follow up works** *MONITOR*

Comments: Generator has rust build up in places due to moisture from being in storage

Green - PRE-START CHECKS COOLING SYSTEM

● **1.1 Radiator(S) Cooling System visually inspect for Core leaks, Blockage and damage, loose bolts, overflow spills from Pressure caps, foreign materials.** *NORMAL*

Comments: Cooling system visually inspected, no leakage or blockages found in cores, no bolts missing or damage to report

1.2 Hoses – Visually Check condition and for signs of leakage. Check all clamp connections and torque marks are aligned. *NORMAL*

Comments: Visually checked hoses, no signs of leakage or deep cracks, all connections are tight

1.3 4 x Electric Fan Motors – Check mounting bolts of motors, torque marks should be aligned. Live checks required. Run Generator and Measure the current draw at the Thermal overloads in the MCC panel (Record each value in Cat Inspect). (Note section). Verify that the trip points are sitting at 63amps on each Thermal Overload. Verify shutdown operation for each overload by turning to trip on each overload in the MCC panel. 4 starts required to verify each shutdown. *NORMAL*

Comments: Fan motors are in place and secure
No loose mounting bolts or brackets
No damage to report

1.4 Check all Earthing and Bonding at Fan Assembly is correctly rated and in place and all earth cables, lugs, bolts are correctly torqued and in good condition. *NORMAL*

Comments: All earthing cables in place
No loose connections or issues to report

1.5 Inspect output Breaker at alternator feeding Fan Assemble, Test Breaker, Check cables, Lugs, Terminations, Check that correctly rated earthing and bonding in place for this system. *NORMAL*

Comments: No loose connections or damage to the breaker found during inspection

1.6 Electric Motor Fan Assembly – Visually Inspect fan blades for damage, signs of contact. Visually check alignment. *NORMAL*

Comments: Fan blades were visually inspected
No signs of damage or misalignment

1.7 Fan Guards - Inspect for missing or broken parts and inspect torque mark alignments on bolts. *NORMAL*

Comments: Fan guards are in good condition

1.8 Coolant - Take coolant sample according to prescribed collection procedure and arrange for shipping to Facebook provided address before close of business (5pm IST) the day after collection of the coolant sample Take sample from Coolant SOS Point. *NORMAL*

Comments: Coolant sample taken for lab analysis

1.9 Filler Coolant Cap - Inspect filler cap gaskets and sealing surfaces. Check pressure ratings match. *NORMAL*

Comments: Radiator caps in good condition
No leaks or issues to report

1.10 Coolant level- inspect sight glass to confirm correct level *NORMAL*

Comments: Coolant level is ok

1.11 Water Pump - Visual inspection for leaks. Specifically check around weep hole. *NORMAL*

Comments: No leaks from the water pumps
No damage to report

Green - LUBRICATION SYSTEM

2.1 Oil Level - Inspect for proper level inspect for leaks. *NORMAL*

Comments: Oil level is ok
No oil leaks to report

2.3 Oil Cooler - Visually inspect for leaks or damage. Verify Oil Temp during operation. Record values. *NORMAL*

Comments: No leaks or damage to the oil cooler

2.4 Crankcase Breathers - Inspect Fumes disposal hoses, Check all hoses are tight, Inspect around breathers for leaks. (Annually Remove breathers, inspect and clean) *NORMAL*

Comments: All hoses secure
No signs of leaks

2.4.1 Filter Number

Green - AIR SYSTEM

3.1 Air Filter - Inspect filter element and seals. With filters out, Check turbo compressor wheels, Signs of contact or damage. Report any concerns. *NORMAL*

Comments: Air filters and seals checked
No issues to report
Turbochargers are in good condition
Turbo shafts are moving freely
No signs of contact with the turbo housing

3.2 Air Inlet System - Inspect piping for damage or loose connections. Check during confidence run for any Air leaks from manifolds and charge air pipe work. *NORMAL*

Comments: Air inlet system components in good condition
No loose connections or damage to report

Green - ENGINE FUEL SYSTEM

5.2 Fuel Filters - Primary/Secondary. Inspect for damage or leaks. (Quarterly's) *NORMAL*

Comments: No leaks or damage found to the fuel filters

5.3 Fuel Lines - Check fuel lines and connections for leaks. Check overall condition of fuel lines/hoses condition and supports. Check Torque mark alignment on pipes. *NORMAL*

Comments: All connections secure
No damage to report

Green - EXHAUST SYSTEM

6.1 Inspect Exh-Bellows for cracks or splits, piping, and Silencer supports - Inspect for damage or leakage. Check for loose bolts at Manifolds. *NORMAL*

Comments: Exhaust system components in good condition
No loose connections or broken bolts
Rust building on exhaust stacks

6.2 Exhaust Manifolds/Turbos - Inspect for damage, missing parts, or wet stacking. Download a PSR if signs of Wet stacking. *NORMAL*

Comments: No loose or broken parts

Green - GENERATOR

7.1 Drive Coupling and Guards - Inspect for signs of coupling breakdown/Splits cracks. Loose or missing parts, Bolts. *NORMAL*

Comments: Drive coupling and guard in good condition
No loose or damaged parts

7.3 Alternator – Remove guards and Inspect windings, connections, and wiring for dirt/debris/moisture/damage, foreign materials. *NORMAL*

Comments: Alternator internal components in good condition
No signs of damage or loose parts

7.4 Alternator Bearings- Visually Inspect bearing casings for signs of heat discolouration. Grease bearings on Annual Inspections. Empty grease traps if required. *NORMAL*

Comments: No discolouration or excessive grease

7.5 Rotating Rectifier Assembly - Inspect rotating rectifier wiring for loose connections. *NORMAL*

Comments: RFA in good condition
No loose wires or damage to report

7.7 Check Earthing and bonding is in place, correctly rated for this application, Check all earth cables, lugs, and termination. *NORMAL*

Comments: Earthing cables are in place
No loose connections or damage to report

Green - STARTING SYSTEM

- **8.1 Starting Motors - Inspect Cable connections, relays, and associated wiring. Inspect Isolator switch Connections and operation. Check the MCB is in the ON position within the Engine Distribution box.** — *NORMAL*

  Comments: Starting motors and associated components are in good condition
  No loose connections or damage to report

- **8.8 Battery Cables – Check for damage, Clean and tighten all battery cable connections per published torque specifications. Torque mark after checks.** — *NORMAL*

  Comments: Battery cables are in good condition
  No damage to report
  Minor build up of dirt from being in storage

- **8.9 Inspect positive and negative Terminals and Battery posts, Check none are split.** — *NORMAL*

  Comments: Battery terminals are in good condition
  No signs of damage to report

Green - BATTERY DIODE BOX

- **9.1 Open Diode Box and Inspect Battery cables, and Diodes and that charger MCB's are in the on position. Check Isolators for Damage and operation. Make sure Diode Box is clear before closing. (Verify functionality of isolators.)** — *NORMAL*

  Comments: Battery cables and components inside the diode box are in good condition
  No issues to be raised

Green - COOLING SYSTEM

- **11.2 Water Pump - Check for leaks and unusual noise or vibration. Re-check Weep Hole** — *NORMAL*

  Comments: There is no leaks from either water pumps

Green - GENERATOR - INSTALLATION/ENCLOSURE

- **12.1 Enclosure Condition - Check for leaks, security, etc. Report any Defects.** — *NORMAL*

  Comments: No signs of leaks from the enclosure
  There is no security concerns
  All locking mechanism are working correctly

- **12.2 Enclosure-Inspect door hinges, handles and make adjustments if needed.** — *NORMAL*

  Comments: All doors, hinges and handles are in good condition and need no attention

Grey - PRE-START CHECKS COOLING SYSTEM

1.12 Inspect Jacket Water Heater/Pump - Check for proper operation, Verify Temperature on EMCP, Verify Contactor operating as normal. Verify JWH pump is circulating. Test current draw at Contactor. Make sure it is within normal range 52-54A (Max) JWH Contactor change out 100,000 cycles. (Preventative 3 years) recommended.	*N/A*

Grey - LUBRICATION SYSTEM

2.2 Pre-lube Pump - Inspect for proper operation. (Engine Distribution box Power down 24v MCB and Power on,) Check there is No leaks around fittings and hoses.	*N/A*

Grey - FUEL SYSTEM

4.1 Fuel Tank - Visually inspect tank for leaks/Seal Damage between tank and enclosure and Paint damage/Rust staining. Inspect Desiccant breather for proper operation an advice Facebook if replacement needed.	*N/A*
4.2 Fuel Polisher -Test run for 15min. Confirm proper operation and visually inspect all fittings for leaks. Verify OLE panel is cleared of faults, Compare Ole panel fuel level to Manual dipstick level. (Record values) Test fuel polishing unit bund alarm by lifting in cabinet. Confirm Time clock settings are correct for polisher. Recommended global standard of 12 hours/day, 7 days/week.	*N/A*
4.3 Fuel Tank Heaters check they are operating, verify Temp from OLE panel. If not check thermostat setting on Heater in under floor cover on top of heater.	*N/A*
4.4 Fuel polisher service and filter change.	*N/A*
4.5 Perform a single-point calibration of the pneumercator to within +/- 0.2" per the tank charts and as measured using a fuel gauge stick.	*N/A*

Grey - ENGINE FUEL SYSTEM

5.1 Fuel Priming Pump -Operating the pre-prime system. Turn ON the fuel priming pump through the EMCP and record the fuel priming pump pressure. Inspect for leaks while functioning.	*N/A*
5.4 Change fuel filters.	*N/A*

Grey - GENERATOR

7.2 Alternator Heaters. Touch the barrel of alternator for verification. Check operation of Thermostat and that it is set around 35 degrees. (Visually check drop out contactor in Interface panel for Alt heaters)	*N/A*

7.6 Output Alternator Cable -Check phase cables torque mark alignment and visual inspection.	*N/A*
7.8 Check CTs, Check for signs of heat or vibration, mounted correctly, Terminations are tight, CTs are correctly grounded.	*N/A*
7.9 Grease alternator bearings per OEM procedure.	*N/A*
7.10 Carryout Insulation Test on Alternator (Recommended) Take note of readings and Record.	*N/A*
7.11 Perform a generator full-load run for 90-minutes using Facebook provided equipment to confirm proper operation after completion of annual maintenance.	*N/A*

Grey - STARTING SYSTEM

8.2 24v Battery Charger 1- Check for proper operation, record all values at charger and check they are in spec. Test, Drop out contactors in Interface panel for both Battery Chargers. Press in CR relay for this check.	*N/A*
8.3 24v Battery Charger 2- Check for proper operation and record battery charger float voltage, Verify that Both chargers 1&2 drop out during engine cranking at confidence run stage.	*N/A*
8.4 Main Batteries: - Test battery condition and Breather vents, Check cells with Hydrometer per manufacturer's published procedure. Ensure that the electrolyte level is 13 mm (0.5 inch) above the top of the separators. Warmer climates, check the electrolyte level more frequently, once per week. (Battery change out recommended every 3 years.) Record battery voltages and log.	*N/A*
8.5 Record battery top ups, volume and battery requiring top up.	*N/A*
8.6 Record battery voltage during cranking.	*N/A*
8.7 Battery backups- visually inspect and record battery voltages and log. (Fuel and PLC)	*N/A*

Grey - START UP & RUNNING CHECKS

10.1 Engine Radiator (high temp and low temp) Check for cleanliness and monitor engine running temperatures. Verify High Coolant Temp shutdown Alarm, Verify Low coolant level shutdown. Confirm low coolant Temp alarm.	*N/A*

10.2 Start Controls - Manual/Auto check for proper operation and general start ability. Test and confirm Cool down period (5min cool down time)	*N/A*
10.3 E-Stop - Test Functionality of all 4x E-Stop's 2 container E-Stop's, Control Panel and Engine. Reset and confirm before completion.	*N/A*
10.4 Battery Voltage - Check battery voltage Reading on EMCP and ET in Standby and during Run time and record readings. Verify High and Low battery voltage alarms.	*N/A*
10.5 Generator operating Temperature: Record Engine readings from EMCP or ET.	*N/A*
10.6 Record Oil Pressure	*N/A*
10.6.1 Record Oil Pressure	
10.7 Record Water Temp	*N/A*
10.7.1 Record Temperature	
10.8 Record Oil Temp	*N/A*
10.8.1 Record Oil Temp	
10.9 Record Engine Speed	*N/A*
10.9.1 Record Engine Speed	
10.10 Record Fuel Pressure	*N/A*
10.10.1 Record Fuel Pressure	
10.11 Record Battery Voltage	*N/A*
10.11.1 Record Battery Voltage	
10.12 Record Alternator Amps	*N/A*
10.12.1 Record Alternator Amps	
10.13 Record AC Amps on all three phases.	*N/A*
10.13.1 Record AC Amp on phase 1	
10.13.2 Record AC Amp on phase 2	

10.13.3 Record AC Amp on phase 3

10.14 Record AC Voltage on all three phases.	*N/A*
10.14.1 Record AC Voltage on phase 1	
10.14.2 Record AC Voltage on phase 2	
10.14.3 Record AC Voltage on phase 3	
10.15 Record Power	*N/A*
10.15.1 Record Power	
10.16 Record Power Factor	*N/A*
10.16.1 Record Power Factor	
10.17 Record Frequency	*N/A*
10.17.1 Record Frequency	
10.18 DC Alternator - Check for unusual noise and for proper voltage output. Check belt for proper belt tension and wear.	*N/A*
10.19 Verify proper operation of all internal and external E-Stops.	*N/A*

Grey - COOLING SYSTEM

11.1 Electronic Thermostat - Verify for proper temperature modulation. Power down MCB in Engine Distribution Box and listen for functionality while it resets itself.	*N/A*

Grey - GENERATOR - INSTALLATION/ENCLOSURE

12.3 Enclosure-Inspect exterior lights, interior lights and exit signs.	*N/A*
12.4 Enclosure-Inspect condition of pad.	*N/A*
12.5 Enclosure - Inspection of steps, landing and handrails. Report any Defects	*N/A*
12.6 Enclosure - Visually inspect Exhaust Flue and smoke colour. Empty external Flue Drain from water trap each maintenance Interval. FACOPS approval required for waste water.	*N/A*

●	**12.8 Vibration Isolators - Inspect for broken springs or damaged cases. Check and make necessary adjustments of Vibration mounts, (Gap 6mm - 10mm)**	*N/A*

Comments: No issues regarding the vibration isolators
Vibration mount gap is within specifications

●	**12.9 Louvers - Check for proper operation of all Intake and Exhaust louvers. Lubricate linkages and bushings, adjust if needed. Spring load each linkage with Heel Bar. Exercise Louvers several times by powering down M12 MCB in the Interface panel. (To be Done every 3 months) Quarterlies.)**	*N/A*
●	**12.10 Check Operation of Container Space heater, check functionality of thermostat on wall. Pre-set at 15degrees. Check at each service interval.**	*N/A*
●	**12.11 Visually check for signs of loose wiring within the Interface Panel. (Caution live unit AC/DC)**	*N/A*

Grey - AFTER SHUTDOWN

●	**13.1 Engine Lock-Out Switch – Test where applicable**	*N/A*
●	**13.2 Take Oil Sample for analysis and trend results over time. Recheck for proper crankcase engine oil level and top up if required (subject additional cost). Document quantity of oil added and how this is trending over time.**	*N/A*
●	**13.3 FACOPS/FINNING - Reset all controls to Auto and close generator breaker.**	*N/A*
●	**13.4 Check the event log for any new or historical error codes and discuss with generator contact, clear any logged codes and take PSR Download for records.**	*N/A*

Grey - ADDITIONAL WORK REQUIRED

●	**14.1 Is there any additional work required?**	*N/A*