Municipal Wastewater Collection System Annual Report

2023

Submitted – March 2026

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Introduction

The City of Dryden (City) provides a wastewater collection system to collect and convey wastewater to the City's Wastewater Treatment Plant. As per requirements under the Environmental Protection Act R.S.O. 1990 c. E. 19, the City is required to produce an annual report which includes:

- Any Collection System Overflow or Spill of Sewage, include dates, volume, duration and sample results, disinfection (if applicable), adverse impacts and corrective actions
- A Summary of any available monitoring data
- Complaints Received
- Any Operating Problems and associated corrective actions
- A summary of any all calibration, maintenance, and repairs conducted to any major structures associated with the Sewage Collection System (SCS)
- A summary of alterations to the SCS
- A summary of efforts made to reduce SCS overflows, spills, wastewater treatment plant overflows including projects undertaken and competed that results in overall overflow reduction (or elimination), including expenditures and or proposed projects with estimated budget for the following year

Dryden Wastewater Collection System Description

Environmental Certificate of Approval: 223-W601

Dryden Wastewater Treatment Plant Certificate of Approval: 3788-88QNWV

The City's Wastewater SCS collects and conveys wastewater for approximately 2,800 residential and commercial connections. All wastewater collected is conveyed to the City's Wastewater Treatment Plant (WWTP) located at 129 Marguerite Street.

The wastewater conveyance pipes consist of plastic, concrete, and clay in various dimensions and adding up to an approximate linear total of 58km. Wastewater flow is conveyed by gravity, however 5 wastewater pump stations are located throughout the City in areas where natural gravity flow to the WWTP is not an option.

The five pump stations are named Wabigoon Drive, West River Road, Kennedy Road, Ross Street, and Lakeside Drive. A summary of the features for the stations include:

Station Name	Station Capacity (L/S)	# of Pumps	Physical Overflow	Storage Volume (m^3)	Standby Power
Wabigoon Drive	75	3	No	330	Yes
West River Road	38	2	No	21	No
Kennedy Road	30	2	No	12	Provision for Hookup
Ross Street	15	2	No	3	No
Lakeside Drive	26	2	No	3	No

System Overflows and Spills

There were no recorded sewer spills for this reporting year, or related system overflows.

Collection System Monitoring Data

All pump stations are monitored for pump operational status and high-level warnings for operational response by the City's Supervisory Control and Data Acquisition System (SCADA). The SCADA system alerts operational staff regarding equipment problems, or high flow levels in the system. There are no flow measurements or any operational data collected outside of general operational status.

2023 run times for the lift stations are summarized in the following table.

Station Name	Run Time (Hours)
Wabigoon Drive	485
West River Road	275
Kennedy Road	1107
Ross Street	117
Lakeside Drive	1461

Complaints and Operational Issues Received

For the 2023 operational year, 34 complaints and Operational Issues were received by Public Works for the collection system. These events are tabled below.

Location	Date of Issue or Complaint	Issue or Complaint	Action Taken
St. Charles Street	January 20	Backup	Sewer Main Cleared
Victoria Street	February 17	Backup	Sewer Main Cleared
Dingwall Parkway	May 9	Replacement	Sewer Lateral Replacement
Sandy Beach Road	May 15	Repair	Sewer Manhole Repaired
Casimir Avenue	May 25	Replacement	Sewer Lateral Replacement
Pitt Avenue	May 29	Replacement	Sewer Lateral Replacement
Duke Street	June 12	Repair	Sewer Manhole Repaired
Second Street	June 30	Repair	Sewer Manhole Repaired
Birch Avenue	July 1	Backup	Sewer Main Cleared
Davis Street	July 1	Backup	Sewer Main Cleared
Ross Street	July 5	Repair	Sewer Manhole Repaired
Government Street	July 6	Repair	Sewer Manhole Repaired
Whyte Avenue	July 31	Repair	Sewer Manhole Repaired
Van Horne Avenue	August 25	Repair	Sewer Manhole Repaired
McMillan Avenue	September 12	Blockage	Sewer Main was blocked, blockage cleared
McMillan Avenue	September 14	Replacement	Sewer Main Section was replaced
Dingwall Parkway	September 18	Repair	Sewer Main Broken, Repaired
Second Street	September 18	Repair	Sewer Main Broken, Repaired
Hearst Avenue	September 25	Replacement	Sewer Lateral Replaced
St. Charles Street	September 25	Repair	Sewer Lateral Repaired
Second Street	October 2	Repair	Sewer Main Broken; Repaired
Wice Road	October 8	Repair	Sewer Manhole Repaired
Queen Street	October 19	Repair	Sewer Manhole Repaired
Eagle Drive	October 19	Repair	Sewer Manhole Repaired
Duke Street	October 31	Reline	Multiple Sewer Main Sections Relined
Dingwall Parkway	October 23	Repair	Sewer Main Broken; Repaired
Second Street	October 31	Reline	Multiple Sewer Main Sections Relined
Ross Street	October 31	Reline	Sewer Main Section Relined
Dingwall Parkway	October 31	Reline	Multiple Sewer Main Sections Relined
St. Charles Street	October 31	Reline	Sewer Main Section Relined
McMillan Avenue	October 31	Reline	Multiple Sewer Main Sections Relined
Wabigoon Drive	November 9	Repair	Sewer Manhole Repaired
Government Street	November 10	Backup	Sewer Main Cleared
Memorial Avenue	December 13	Repair	Sewer Lateral Repaired

Overall System Operation

Collection System Operation and Maintenance

In addition to capital upgrades the City also repairs and maintains existing infrastructure. Over this calendar year, repairs by Public Works staff were performed to two sewer laterals, four sewer lateral replacements, four sewer main repairs, eleven manhole repairs and one sewer main replacement.

The City additionally issues an annual Closed Circuit Television inspection program. For 2023, an approximate total of 3km of collection system piping was inspected for River Heights Drive, Goodall Street, Wood Street, Van Horne Avenue, Pitt Avenue, Grand Trunk Avenue, Government Street, Pine Crescent, Cedar Bay, Elm Road, Mary Avenue, Ingall Drive, Lakeside Drive and Birch Avenue.

Lift Station Operation and Maintenance

There were no significant issues with any of the lift station components within the SCS for the operating year of 2023. All pump station pumps are inspected and repaired (if necessary) every two years. Pump inspections are currently scheduled for 2024.

Generator maintenance records, and Lift inspection records for the Wabigoon Lift Station can be found in Appendix A.

Alterations to Collection System

No alterations were made to the Collection System in the 2023 operating year.

Activities to Reduce Overflows & Spills

In this calendar year, approximately $496,800 was spent on the SCS via capital upgrades, specifically relining sewer main sections on St. Charles Street, Second Street, and Duke Street.

Ensuring that the collection system remains in a good state of repair allows the City to minimize inflow and infiltration of groundwater and maintain assets in good health which reduces the risk of spills and overflows to the environment.

More Information or Questions

This report is available to the public free of charge to anyone who requests a copy. An electronic copy is available on the City of Dryden's website, and anyone wanting to be provided a paper copy can make arrangement to pick one up from the Public Works Office. Any concerns or inquiries of this report can be directed to:

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Utilities and Environmental Services Manager
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bmundy@dryden.ca
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Appendix A
Inspection Records

2023 Wabigoon Drive Lift Station Emergency Generator Maintenance Log On Site

CSA C282 Logbook:19

Emergency electrical power supply for buildings maintenance logbook

Inspection, test, and maintenance of emergency electrical power supply for buildings

Table 2 — Weekly inspection, test, and maintenance requirements

1. Consumables:
   a) Inspect auxiliary supply tank fuel level (gas pressure) and main tank level (gas pressure) (if applicable). There shall be a minimum supply of 2 h (see Clause 7.3.1).
   b) Inspect lubricating oil level.
   c) Inspect engine coolant level.
   d) Inspect engine, generator, fuel tank(s), and cooling systems for leakage.
   e) Inspect for proper operation of fuel transfer pump (if applicable).
   f) Inspect fuel filter for contamination if filter is equipped with a transparent bowl.
2. Starter system:
   a) Inspect electric starter for cleanliness, mounting, and terminal security.
   b) Air starter:
      i) Inspect air tanks for pressure.
      ii) Inspect valves for leakage.
      iii) Test auxiliary engine and compressor for proper operation.
      iv) Bleed off any condensation.
3. Batteries and charging equipment:
   a) Inspect electrical connections for tightness and evidence of corrosion.
   b) Inspect battery for cleanliness and dryness between terminals.
   c) Inspect charger electrical connections for cleanliness and tightness.
4. Engine:
   a) Test lubricant and/or coolant heaters for proper operation.
   b) Inspect governor control linkages and oil level (if applicable).
   c) Inspect fuel pump oil sump (if applicable).
   d) Inspect fan belts for correct tension and wear.
5. Control panel:
   a) Inspect control panel covers for security.
   b) Test annunciator lamps to confirm that they are operational.
   c) Inspect control panel settings (ensure that the unit is ready for automatic start-up).
   d) Test remote visual and audible trouble signals at the building fire alarm panel.
6. Inspect air control louvre settings to ensure proper operation.
7. Test emergency lighting unit(s).
8. Verify whether room temperature is above 10 °C.
9. Inspect generator and transfer switch room(s) for cleanliness and accessibility to all components of the emergency system.
10. Correct all defects found during inspections and tests.
11. Record all inspections, tests, and corrective actions in the log (see Clause 11.5.3).

Note: *The work described in this Table shall be carried out by a competent person or individuals trained by the system manufacturer.*

Table 3 — Monthly (weekly in health care facilities) inspection, test, and maintenance requirements

Note: *Except for transfer switches [Table 3, Items 2.a) and 2.d)], for installations of emergency generators in health care facilities inspection, test and maintenance of the items in this Table shall be performed weekly.*

1. Complete all items specified in Table 2.
2. Test and verify the entire system as follows:
   a) Simulate a failure of the normal electrical supply to the building.
   b) Verify that the battery charger current output increases while cranking.
   c) Operate the system under at least 40% of the rated load for 60 min.
   d) Operate all automatic transfer switches under load.
   e) Inspect brush operation for sparking, if applicable.
   f) Inspect for bearing seal leakage.
   g) Inspect for correct operation of all auxiliary equipment, e.g., radiator shutter control, coolant pumps, fuel transfer pumps, oil coolers, and engine room ventilation system(s).
   h) Record the readings for all instruments in the log (see Clause 11.5.3) and verify that they are normal.
   i) Drain the exhaust system condensate trap.
3. Inspect block heater hoses and wires.
4. Batteries and charging equipment:
   a) Inspect all battery cells for correct electrolyte fill level (applicable to vented or flooded lead-acid batteries only). As a safer alternative, perform a battery conductance test using a conductance tester. Record test results in the log book for trending purposes.
   b) Test all battery cells for correct electrolyte-specific gravity (applicable to vented or flooded lead-acid batteries only). This inspection may be omitted if the conductance test in Item a) is performed.
5. Correct all defects found during inspections and tests.
6. Record all inspections, tests, and corrective actions in the log (see Clause 11.5.3).
7. Inspect all electrical components to ensure proper function.

Note: *The work described in this Table shall be carried out by a competent person, or individuals trained by the system manufacturer.*

Table 4 — Semi-annual inspection, test, and maintenance requirements

1. Complete all items specified in Tables 2 and 3.
2. Inspect and clean engine crankcase breathers.
3. Inspect and clean all engine linkages.
4. Lubricate the engine governor and ventilation system.
5. Test protective devices for proper operation.
6. Before start-up, perform two full cranking cycles (as specified in Clauses 10.4.1 and 10.4.2). Near the end of each cycle (and while still cranking), measure and record the lowest indicated battery voltage. If the measured voltage is less than 80% of the battery's rated voltage, replace the battery. Alternatively, perform a battery load test using a suitable load tester.
7. Inspect ventilation system belt(s).
8. Correct all defects found during inspections and tests.
9. Record all inspections, tests, and corrective actions in the log (see Clause 11.5.3).

Notes:

1) *Items 2 to 9 shall be carried out by a competent person or individuals trained by the system manufacturer.*
2) *For Item 5, if it is not possible to create the fault condition, a simulated fault condition should be performed if possible*

Table 5 — Annual inspection, test, and maintenance requirements

1. Complete all items specified in Tables 2 to 4.
   For the load test (Item 2. c) in Table 3) increase the minimum load to 40% of the rated load for 60 minutes.
2. Control panel (see Clause B.29):
   a) Open all inspection covers and inspect all electrical connections.
   b) Test breakers for proper operation.
   c) Clean insulators and bushings.
   d) Test voltage regulator for proper operation.
   e) Operate all moving parts to ensure that they move freely.
   f) Clean and dress contacts as necessary.
   g) Remove all dust.
   h) Check gauge calibration.
   i) For off-site fueled generators, turn position-indicating gas valve to off-position to ensure valve rotates properly and that the audible alarm on generator control panel is activated.
3. Engine:
   a) Change engine lubrication oil and filters.
   b) Test strength of coolant and chemical protection level of coolant inhibitors.
   c) Change fuel filters, clean strainer(s), and verify that the fuel supply valve is open.
   d) Inspect the exhaust system. Check and record the back pressure of the exhaust system to ensure that it complies with the engine manufacturer's requirements, and compare with previous readings.
   e) Clean and lubricate linkages.
   f) Inspect air filters.
   g) Inspect all mechanical connections.
   h) Inspect all electrical connections.
   i) Inspect all external surfaces of heat exchanger(s) and clean as necessary.
   j) Inspect all belts and hoses and replace if necessary.
   k) Test and inspect ignition system(s). Replace any defective components.
   l) Inspect coolant pump(s) for leaks and external wear [if belt driven, remove the belt(s) first].
4. Diesel fuel storage tank(s):
   The fuel oil in any storage tank (and auxiliary supply tank, if used) shall be tested in accordance with Clause 11.5.5, and if the fuel oil fails the test, it shall be
   a) drained and refilled with fresh fuel in accordance with Article 6.5.1.5 of the *National Fire Code of Canada*; or
   b) full filtered to remove water, scale, bacteria, and oxidized gums/resins in order to minimize filter clogging and ensure diesel start-up (see Clause B.30 for commentary).

   Note: *The bottom(s) of the tank(s) shall be also tested chemically for water.*
   When the fuel is filtered, it shall be treated with a suitable conditioner and stabilizer to minimize degradation while in storage.
5. Generator:
   a) Test surge suppressor and rotating rectifier on brushless machines.
   b) Grease bearings (replace old grease with new) (if applicable).
   c) Clean commutator and slip rings (if applicable).
   d) Clean rotor and stator windings using clean compressed air.

Table 5 (Concluded)

   e) Inspect coupling bolts and alignment.
   f) Inspect conduits for tightness.
   g) Inspect windings at rotor and stator slots.
   h) Inspect all electrical connections.
6. Overcurrent protective devices:
   a) Electrically isolate all overcurrent protective devices.
   b) Remove all dust.
   c) Test devices for proper operation.
7. Transfer switches:
   a) Isolate transfer switch, open all inspection covers, and inspect all electrical connections.
   b) Operate all moving parts to ensure that they move freely.
   c) Clean and dress contacts as required.
   d) Remove all dust.
   e) Clean and lubricate linkages.
8. Infrared thermal imaging:
   a) Perform infrared thermal imaging of the normal power supply (preferred) side of each transfer switch. Ensure that the normal power supply side of each transfer switch has been loaded to at least 40% of the circuit rating of the normal power supply feeder for at least 60 min and that the load does not drop below 40% during the imaging. Scan all electrical connections, contacts, and energized components.
   b) At the end of the 60 min load test (Item 2 c), Table 3), with the emergency power supply system (all components) still operating under at least 40% load, perform infrared thermal imaging of all components from the point where the load bank cables will be connected (for the 2 h full load test), through to and including the load side of each transfer switch. Scan all electrical connections, contacts, circuit breakers, and energized components.
   c) After at least 60 min of the emergency generator full load test (see Clause 11.3), with the emergency generator still operating under full load, conduct infrared thermal imaging of all components from the load terminals of each alternator through to the connection point for the load bank cables. Scan all electrical connections, contacts, circuit breakers, and energized components.
   d) Correct any components or connections that displayed unacceptably high temperatures or unacceptable differences in temperature between phases, during the tests in Items a), b) and c) above.
   e) Repeat the infrared thermal imaging for any components and connections that were serviced, repaired, or replaced following the scans performed in Items a), b), or c) above.
9. Lubricate door locks and hinges (if necessary), especially those of outdoor enclosures.
10. Conduct a 2 h full load test (see Clause 11.3).
11. As needed, review and provide instruction on the technical requirements specified in Tables 2 to 4 with the person(s) responsible for carrying out the work.
12. Correct all defects found during inspections and tests.
13. Record all inspections, tests, and corrective actions in the log (see Clause 11.5.3).

Note: *Items 2 to 13 require special skill and shall be carried out by a competent person or individuals trained by the system manufacturer.*

Table 6 — Quinquennial (every 5 years)
Inspection, test, and maintenance requirements

1. Complete all items specified in Table 5.
2. Generator:
   Inspect insulation of generator windings. Use an insulation tester (megger). The resistance in megohms should be not less than

$$\left[\frac{\text{Rated voltage} + 1000}{1000}\right]$$

   If the resistance is less, dry out the insulation using the auxiliary heat process.
3. Engine:
   a) Drain and flush the cooling system. Refill the system with new coolant.
   b) Clean radiator tubes and cooling fins.
   c) Replace thermostats.
   d) Inspect valve clearances and adjust as appropriate.
4. Correct all defects found during inspections and tests.
5. Record all inspections, tests, and corrective actions in the log (see Clause 11.5.3).

Note: *Items 2 to 5 shall be carried out by a competent person or individuals trained by the system manufacturer.*

★ DO NOT USE THIS LOG UNTIL JAN 2023 ★

Weekly inspection, test, and maintenance requirements (refer to Table 2 on page 1)

Consumables (No. 1)						Starter system (No. 2)					Signature	Date
							Air starter					
Auxiliary supply tank fuel level	Oil level	Coolant level	Check for leaks	Fuel transfer pump	Fuel filter	Electric starter	Air pressure	Valve leakage	Aux. engine	Bleed condensate		
5/8	✓	✓	✓	✓	✓	✓						01/02/23
″	″	″	″	″	″	″						1 10 23
5/8	—	—	—	—	—	—						01/18/23
″ ″	—	—	—	—	—	—						01/25/23
″ ″	—	—	—	—	—	—						02/01/23
″ ″	—	—	—	—	—	—						02/07/23

Batteries and charging equipment (No. 3)			Engine (No. 4)				Signature	Date
Electrical connections	Battery terminals	Charger connections	Heater operation	Governor	Fuel pump oil sump	Fan belts		
✓	✓	✓	120°			✓		01/02/23
″	″	″	″			″		1 10 23
—	—	—	125°			—		01/18/23
—	—	—	118°			—		01/25/23
—	—	—	133°			—		02/01/23
—	—	—	127°			—		02/07/23

Control panel (No. 5)				Other (Nos. 6 to 9)				Additional requirements, if applicable (see Clause 11.5.2)				Signature	Date
Panel covers	Annunciator lamps	Panel settings	Visual and audible signals	Air control louvres	Emergency lighting	Room temp. (°C)	Room cleanliness and accessibility	HRS.					
✓	✓	✓	✓	✓	✓	20°	✓	271					01/02/23
″	″	″	″	″	″	20	″	271					1 10 23
—	—	—	—	—	—	20°	—	272.0					01/18/23
—	—	—	—	—	—	″ ″	—	272.0					01/25/23
—	—	—	—	—	—	″ ″	—	272.0					02/01/23
—	—	—	—	—	—	″ ″	—	″ ″					02/07/23

Notes:

(1) *Mark "X" for satisfactory or "O" for unsatisfactory.*

(2) *The work described in this Table shall be carried out by a competent person or individuals trained by the system manufacturer.*

Weekly inspection, test, and maintenance requirements (refer to Table 2 on page 1)

Consumables (No. 1)						Starter system (No. 2)					Signature	Date
							Air starter					
Auxiliary supply tank fuel level	Oil level	Coolant level	Check for leaks	Fuel transfer pump	Fuel filter	Electric starter	Air pressure	Valve leakage	Aux. engine	Bleed condensate		
5/8	✓	✓	✓	✓	✓	✓					BM	Feb 13/23
11 11	✓	✓	✓	✓	✓	✓					GW	FEB 20/23
11 11	—	—	—	—	—	—					WAH	MAR 1/23
11 11	—	—	—	—	—	—					WAH	MAR 8/23
11 11	✓	✓	✓	✓	✓	✓					BM	Mar 13/23
X	X	X	X	X	X	X					MH	3 21 23

Batteries and charging equipment (No. 3)			Engine (No. 4)				Signature	Date
Electrical connections	Battery terminals	Charger connections	Heater operation	Governor	Fuel pump oil sump	Fan belts		
✓	✓	✓	129°			✓	BM	Feb 13/23
✓	✓	✓	124°			✓	GW	FEB 20/23
—	—	—	123°			—	WAH	MAR 1/23
—	—	—	114°			—	WAH	MAR 8/23
✓	✓	✓	108°			✓	BM	Mar 13/23
X	X	X	120°			X	MH	3 21 23

Control panel (No. 5)				Other (Nos. 6 to 9)				Additional requirements, if applicable (see Clause 11.5.2)				Signature	Date
Panel covers	Annunciator lamps	Panel settings	Visual and audible signals	Air control louvres	Emergency lighting	Room temp. (°C)	Room cleanliness and accessibility	Hrs					
✓	✓	✓	✓	✓	✓	20°	✓	273				BM	Feb 13/23
✓	✓	✓	✓	✓	✓	17°	✓	11 11				GW	FEB 20/23
—	—	—	—	—	—	17°	—	11 11				WAH	MAR 1/23
—	—	—	—	—	—	17°		11 11				WAH	MAR 8/23
✓	—	✓	—	✓	✓	17°	✓	11 11				BM	Mar 13/23
X	X	X	X	X	X	17	X	273				MH	3 21 23

Notes:

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Weekly inspection, test, and maintenance requirements (refer to Table 2 on page 1)

Consumables (No. 1)						Starter system (No. 2)					Signature	Date
Auxiliary supply tank fuel level	Oil level	Coolant level	Check for leaks	Fuel transfer pump	Fuel filter	Electric starter	Air starter					
							Air pressure	Valve leakage	Aux. engine	Bleed condensate		
5/8	—	—	—	—	—	—						MAR 29/23
" "	—	—	—	—	—	—						APR 5/23
" "	—	—	—	—	—	—						APR 12/23
" "	—	—	—	—	—	—						APR 19/23
" "	✓	✓	✓	✓	✓	✓						APR 27/23
" "	—	—	—	—	—	—						MAY 3/23

Batteries and charging equipment (No. 3)			Engine (No. 4)				Signature	Date
Electrical connections	Battery terminals	Charger connections	Heater operation	Governor	Fuel pump oil sump	Fan belts		
—	—	—	130°			—		MAR 29/23
—	—	—	120°			—		APR 5/23
—	—	—	113°			—		APR 12/23
—	—	—	115°			—		APR 19/23
✓	✓	✓	113°			✓		APR 27/23
—	—	—	107°			—		MAY 3/23

Control panel (No. 5)				Other (Nos. 6 to 9)				Additional requirements, if applicable (see Clause 11.5.2)				Signature	Date
Panel covers	Annunciator lamps	Panel settings	Visual and audible signals	Air control louvres	Emergency lighting	Room temp. (°C)	Room cleanliness and accessibility	HRS					
—	—	—	—	—	—	20°	—	574.0					MAR 29/23
—	—	—	—	—	—	" "	—	574.0					APR 5/23
—	—	—	—	—	—	" "		" "					APR 12/23
—	—	—	—	—	—	" "		" "					APR 19/23
✓	✓	✓	✓	✓	✓	" "	✓	275					APR 27/23
—	—	—	—	—	—	" "	—	" "					MAY 3/23

Notes:

(1) *Mark "X" for satisfactory or "O" for unsatisfactory.*

(2) *The work described in this Table shall be carried out by a competent person or individuals trained by the system manufacturer.*

Weekly inspection, test, and maintenance requirements (refer to Table 2 on page 1)

Consumables (No. 1)						Starter system (No. 2)					Signature	Date
Auxiliary supply tank fuel level	Oil level	Coolant level	Check for leaks	Fuel transfer pump	Fuel filter	Electric starter	Air starter					
							Air pressure	Valve leakage	Aux. engine	Bleed condensate		
5/8	✓	✓	✓	✓	✓	✓					Gw	May 9/23
" "	—	—	—	—	—	—					Wtho	May 17/23
"	✓	✓	✓	✓	✓	✓						May 22/23
X	X	X	X	X	X	X						5/29/23
5/8	—	—	—	—	—	—					Wtho	6/6/23
" "	—	—	—	—	—	—					Wtho	6/15/23

Batteries and charging equipment (No. 3)			Engine (No. 4)				Signature	Date
Electrical connections	Battery terminals	Charger connections	Heater operation	Governor	Fuel pump oil sump	Fan belts		
✓	✓	✓	129°			✓	Gw	May 9/23
✓	—	—	129°			—	Wtho	May 17/23
✓	✓	✓	130°			✓		May 22/23
X	X	X	125°			X		5/29/23
—	—	—	106°			—	Wtho	6/6/23
—	—	—	122°			—	Wtho	6/15/23

Control panel (No. 5)				Other (Nos. 6 to 9)				Additional requirements, if applicable (see Clause 11.5.2)				Signature	Date
Panel covers	Annunciator lamps	Panel settings	Visual and audible signals	Air control louvres	Emergency lighting	Room temp. (°C)	Room cleanliness and accessibility						
✓	✓	✓	✓	✓	✓	✓	✓	485					
—	—	—	—	—	—	—	—	275				Gw	May 9/23
✓	✓	✓	✓	✓	✓	✓	✓	275				Wtho	May 17/23
X	X	X	X	X	X	X	X	277					May 22/23
—	—	—	—	—	—	—	—	278					5/29/23
—	—	—	—	—	—	—	—	" "				Wtho	6/6/23
												Wtho	6/15/23

Notes:

(1) *Mark "X" for satisfactory or "O" for unsatisfactory.*

(2) *The work described in this Table shall be carried out by a competent person or individuals trained by the system manufacturer.*

Weekly inspection, test, and maintenance requirements (refer to Table 2 on page 1)

Consumables (No. 1)						Starter system (No. 2)					Signature	Date
							Air starter					
Auxiliary supply tank fuel level	Oil level	Coolant level	Check for leaks	Fuel transfer pump	Fuel filter	Electric starter	Air pressure	Valve leakage	Aux. engine	Bleed condensate		
5/8	—	—	—	—	—	—						06/21/23
X	X	X	X	X	X	X						6 26 23
5/8	—	—	—	—	—	—						07/05/23
" "	—	—	—	—	—	—						07/11/23
" "	—	—	—	—	—	—						07/19/23
2	X	X	X	X	2	X						7 26 23

Batteries and charging equipment (No. 3)			Engine (No. 4)				Signature	Date
Electrical connections	Battery terminals	Charger connections	Heater operation	Governor	Fuel pump oil sump	Fan belts		
—	—	—	98°			—		06/21/23
X	X	X				X		6 26 23
—	—	—	107°			—		07/05/23
—	—	—	127°			—		07/11/23
—	—	—	126°			—		07/19/23
X	X	X	108°			X		7 26 23

Control panel (No. 5)				Other (Nos. 6 to 9)				Additional requirements, if applicable (see Clause 11.5.2)				Signature	Date
Panel covers	Annunciator lamps	Panel settings	Visual and audible signals	Air control louvres	Emergency lighting	Room temp. (°C)	Room cleanliness and accessibility	HRS					
—	—	—	—	—	—	—	—	278					06/21/23
X	X	X	X	X	X	X	X	278					6 26 23
—	—	—	—	—	—	—	—	279					07/05/23
—	—	—	—	—	—	—	—	" "					07/11/23
—	—	—	—	—	—	—	—	" "					07/19/23
X	X	X	X	X	X	X	X	279					7 26 23

Notes:

(1) *Mark "X" for satisfactory or "O" for unsatisfactory.*

(2) *The work described in this Table shall be carried out by a competent person or individuals trained by the system manufacturer.*

Weekly inspection, test, and maintenance requirements (refer to Table 2 on page 1)

Consumables (No. 1)						Starter system (No. 2)					Signature	Date
							Air starter					
Auxiliary supply tank fuel level	Oil level	Coolant level	Check for leaks	Fuel transfer pump	Fuel filter	Electric starter	Air pressure	Valve leakage	Aux. engine	Bleed condensate		
5/8	✓	✓	✓	✓	✓	✓						07 31 23
〃 〃	✓	✓	✓	✓	✓	✓						Aug 8/23
5/8	—	—	—	—	—	—						Aug 16/23
〃 〃	—	—	—	—	—	—						Aug 23/23
〃 〃	✓	✓	✓	✓	—	—						Aug 28/23
〃 〃	✓	✓	✓	—	—	—						Sept 4/23

Batteries and charging equipment (No. 3)			Engine (No. 4)				Signature	Date
Electrical connections	Battery terminals	Charger connections	Heater operation	Governor	Fuel pump oil sump	Fan belts		
✓	✓	✓	113°			✓		07 31 23
—	—	—	120°			✓		Aug 8/23
—	—	—	117°			—		Aug 16/23
—	—	—	116°			—		Aug 23/23
✓	✓	✓	123°			✓		Aug 28/23
✓	✓	✓	116°			✓		Sept 4/23

Control panel (No. 5)				Other (Nos. 6 to 9)				Additional requirements, if applicable (see Clause 11.5.2)				Signature	Date
Panel covers	Annunciator lamps	Panel settings	Visual and audible signals	Air control louvres	Emergency lighting	Room temp. (°C)	Room cleanliness and accessibility	285					
✓	✓	✓	✓	✓	✓	23°	✓	280°					07 31 23
✓	✓	✓	✓	✓	✓	26°	✓	〃 〃					Aug 8/23
—	—	—	—	—	—	21°	—	281°					Aug 16/23
—	—	—	—	—	—	20°	—	〃 〃					Aug 23/23
✓	✓	✓	✓	✓	✓			〃 〃					Aug 28/23
✓	✓	✓	✓	✓	✓	25°	✓	〃 〃					Sept 4/23

Notes:

(1) *Mark "X" for satisfactory or "O" for unsatisfactory.*

(2) *The work described in this Table shall be carried out by a competent person or individuals trained by the system manufacturer.*

Weekly inspection, test, and maintenance requirements (refer to Table 2 on page 1)

Consumables (No. 1)						Starter system (No. 2)						
							Air starter					
Auxiliary supply tank fuel level	Oil level	Coolant level	Check for leaks	Fuel transfer pump	Fuel filter	Electric starter	Air pressure	Valve leakage	Aux. engine	Bleed condensate	Signature	Date
5/8	—	—	—	—	—	—						SEPT 13/23
" "	—	—	—	—	—	—						SEPT 20/23
" "	—	—	—	—	—	—						SEPT 27/23
5/8	—	—	—	—	—	—						OCT 4/23
" "	—	—	—	—	—	—						OCT 11/23
" "	—	—	—	—	—	—						OCT 18/23

Batteries and charging equipment (No. 3)			Engine (No. 4)					
Electrical connections	Battery terminals	Charger connections	Heater operation	Governor	Fuel pump oil sump	Fan belts	Signature	Date
—	—	—	114°			—		SEPT 13/23
—	—	—	114°			—		SEPT 20/23
—	—	—	112°			—		SEPT 27/23
—	—	—	105°			—		OCT 4/23
—	—	—	115			—		OCT 11/23
—	—	—	130°			—		OCT 18/23

Control panel (No. 5)				Other (Nos. 6 to 9)				Additional requirements, if applicable (see Clause 11.5.2)					
Panel covers	Annunciator lamps	Panel settings	Visual and audible signals	Air control louvres	Emergency lighting	Room temp. (°C)	Room cleanliness and accessibility	HRS				Signature	Date
—	—	—	—	—	—	—	—	281.0					SEPT 13/23
—	—	—	—	—	—	—	—	" "					SEPT 20/23
—	—	—	—	—	—	—	—	284.0					SEPT 27/23
—	—	—	—	—	—	—	—	285.6					OCT 4/23
—	—	—	—	—	—	—	—	" "					OCT 11/23
—	—	—	—	—	—	—	—	" "					OCT 18/23

Notes:

(1) *Mark "X" for satisfactory or "O" for unsatisfactory.*

(2) *The work described in this Table shall be carried out by a competent person or individuals trained by the system manufacturer.*

Weekly inspection, test, and maintenance requirements (refer to Table 2 on page 1)

Consumables (No. 1)						Starter system (No. 2)					Signature	Date
							Air starter					
Auxiliary supply tank fuel level	Oil level	Coolant level	Check for leaks	Fuel transfer pump	Fuel filter	Electric starter	Air pressure	Valve leakage	Aux. engine	Bleed condensate		
✓	✓	✓	✓	✓	✓	✓					MM	10/25/23
1/2 ✓	✓	✓	✓	✓	✓	✓					BM	10/30/23
1/2	↘	↘	↘	↘	↘	↘					CP 11/06	23
" "	—	—	—	—	—	—					[illegible]	11/15/23
✓	✓	✓	✓	✓	✓	✓					[illegible] BM	11/22/23 11/27/23

Batteries and charging equipment (No. 3)			Engine (No. 4)				Signature	Date
Electrical connections	Battery terminals	Charger connections	Heater operation	Governor	Fuel pump oil sump	Fan belts		
✓	✓	✓	✓			✓	[illegible] BM	10/25/23 10/30/23
↘	↘	↘	↘			↘	CP 11/06	23
—	—	—	114°			—	[illegible]	11/15/23
✓	✓	✓	✓			✓	[illegible] BM	11/22/23 11/27/23

Control panel (No. 5)				Other (Nos. 6 to 9)				Additional requirements, if applicable (see Clause 11.5.2)				Signature	Date
Panel covers	Annunciator lamps	Panel settings	Visual and audible signals	Air control louvres	Emergency lighting	Room temp. (°C)	Room cleanliness and accessibility	485					
✓	✓	✓	✓	✓	✓	✓	✓	283.6				[illegible] BM	10/25/23 10/30/23
✓	✓	✓	✓	✓	✓	✓	✓	284.7				CP 11/06	23
↘	↘	↘	↘	↘	↘	↘	↘	284.7				[illegible]	11/15/23
—	—	—	—	—	—	—	—	" "				[illegible] BM	11/22/23 11/27/23
✓	✓	✓	✓	✓	✓	✓	✓	✓					

Notes:

(1) *Mark "X" for satisfactory or "O" for unsatisfactory.*

(2) *The work described in this Table shall be carried out by a competent person or individuals trained by the system manufacturer.*

DO NOT USE PAST DEC 2023

Weekly inspection, test, and maintenance requirements (refer to Table 2 on page 1)

Consumables (No. 1)						Starter system (No. 2)					Signature	Date
							Air starter					
Auxiliary supply tank fuel level	Oil level	Coolant level	Check for leaks	Fuel transfer pump	Fuel filter	Electric starter	Air pressure	Valve leakage	Aux. engine	Bleed condensate		
✓	✓	✓	✓	✓	✓	✓						12 6 23
9/16	—	—	—	—	—	—						12/13/23
" "	—	—	—	—	—	—						12/19/23
" "	✓	✓	✓	✓	✓	✓						12 25 23

Batteries and charging equipment (No. 3)			Engine (No. 4)				Signature	Date
Electrical connections	Battery terminals	Charger connections	Heater operation	Governor	Fuel pump oil sump	Fan belts		
✓	✓	✓	✓			✓		12 6 23
—	—	—	—			—		12/13/23
—	—	—	—			—		12/19/23
✓	✓	✓	✓			✓		12 25 23

Control panel (No. 5)				Other (Nos. 6 to 9)				Additional requirements, if applicable (see Clause 11.5.2)				Signature	Date
Panel covers	Annunciator lamps	Panel settings	Visual and audible signals	Air control louvres	Emergency lighting	Room temp. (°C)	Room cleanliness and accessibility	HRS					
✓	✓	✓	✓	✓	✓	✓	✓	285.7					12 6 23
—	—	—	—	—	—	—	—	286.7					12/13/23
—	—	—	—	—	—	—	—	" "					12/19/23
✓	✓	✓	✓	✓	✓	✓	✓	" "					12 25 23

Notes:
(1) *Mark "X" for satisfactory or "O" for unsatisfactory.*
(2) *The work described in this Table shall be carried out by a competent person or individuals trained by the system manufacturer.*

Monthly (weekly in health care facilities) inspection, test, and maintenance requirements (refer to Table 3 on page 1)

No. 1	Complete system test (No. 2)								No. 3	Batteries and charging equipment (No. 4)		Nos. 5 to 7				
Weekly items	Failure simulation	Battery charger output	40% load test for 60 min	Transfer switches	Brush operation	Bearing seals	Auxiliary equipment	Exhaust condensate trap	Block heater hoses & wires	Electrolyte fill level *	Electrolyte-specific gravity *	Defects found	Defects corrected	Electrical components	Signature	Date
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	NONE	NO	✓		Jan 10/23
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	NONE	NO	✓		Feb 7/23
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	NONE	NO	✓		Mar 21/23
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	NONE	NO	✓		Apr 20/23
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	NONE	NO	✓		May 29/23
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	NONE	NO	✓		Jun 26/23
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	NONE	NONE	✓		Jul 26/23
X	X	X	X	X	X	X	X	X	X	X	X	NONE	NO	X		Aug 15/23
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	NONE	NO	✓		Sep 21/23
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	NONE	NO	✓		Oct 25/23
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	NONE	NO	✓		Nov 22/23
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	NONE	NO	✓		Dec 6/23

	Instrument readings (No. 2(h)) (identify each instrument in box at top of each column)															Signature	Date
ON	OFF	OILP	COOLANT °C	BATV	RPM	LN1V	LN2V	LN3V	L1AMP	L2AMP	L3AMP	HZ					
271	272	59	170	13.9	1801	350	351	349	43	48	47	60.1					Jan 10/23
272	273	59	170	13.9	1800	351	351	350	44	45	46	60.1					Feb 7/23
273	274	60	170	13.9	1801	349	350	348	43	47	47	60.1					Mar 21/23
274	275	59	175	14.1	1800	350	350	349	44	44	46	60.1					Apr 20/23
277	278	62	170	13.9	1801	350	351	349	44	44	45	60.1					May 29/23
278	279	62	169	13.9	1802	348	348	346	40	45	44	60.1					Jun 26/23
279	280	64	169	13.9	1802	350	351	349	41	46	46	60.1					Jul 26/23
280	281	61	166	13.8	1802	350	351	349	41	44	45	60.1					Aug 15/23
281	282	63	166	13.9	1800	350	351	349	39	44	43	60.1					Sep 21/23
283.6	284.6	64	167	13.9	1801	350	351	348	42	47	45	60.1					Oct 25/23
284.7	285.7	61	167	13.8	1800	350	351	349	41	45	40	60.1					Nov 22/23
285.7	286.7	62	165	13.9	1800	349	350	349	44	44	43	60.1					Dec 6/23

*Applicable to vented or flooded lead acid batteries only.

Notes:

(1) *Mark "X" for satisfactory or "O" for unsatisfactory.*

(2) *The work described in this Table shall be carried out by a competent person or individuals trained by the system manufacturer.*

ON

Semi-annual inspection, test, and maintenance requirements (refer to Table 4 on page 1)

No. 1		Engine (Nos. 2 to 5)				Battery (No. 6)			No. 7				
Weekly items	Monthly items	Crankcase breathers	Linkages	Lubricate governor	Protective devices*	First cranking cycle	Second cranking cycle	Battery load test	Inspect ventilation system belt(s)	Defects found	Defects corrected	Signature	Date
X	X	X	N/A	N/A	X	108	109	N/A	X	NO	NONE	[signature]	11723

If it is not possible to create the fault condition, a simulated fault condition should be performed if possible.

Notes:

(1) *For Nos. 1 to 6, mark "X" for satisfactory or "O" for unsatisfactory. For No. 7, mark "X" for satisfactory and "R" for replaced.*

(2) *The work described in this Table shall be carried out by a competent person or individuals trained by the system manufacturer.*

Annual inspection, test, and maintenance requirements — Sheet #1 (refer to Table 5 on page 2)

No. 1	Control panel (No. 2)										
Weekly, monthly, and semi-annual items	Electrical connections	Breaker operation	Insulators and bushings	Voltage regulator	Operate moving parts	Clean and dress contacts	Remove dust	Gauge calibration	Valve rotation and audible alarm	Signature	Date
X	X	X	X	X	X	X	X	X	X	[signature]	May 23, 2023

Engine (No. 3)													
Change engine oil and filters	Coolant strength and inhibitors	Change fuel filters etc.	Inspect and clean exhaust system	Clean and lubricate linkages	Inspect air filters	Inspect mechanical connections	Inspect electrical connections	Inspect heat exchanges	Inspect belts and hoses	Test and inspect ignition system(s)	Inspect coolant pump(s)	Signature	Date
X	X	X	X	X	X	X	X	X	X	NA	X	[signature]	May 23, 2023

Notes:
(1) *Mark "X" for satisfactory or "O" for unsatisfactory.*
(2) *The work described in this Table shall be carried out by a competent person or individuals trained by the system manufacturer.*

Annual inspection, test, and maintenance requirements — Sheet #2 (refer to Table 5 on page 2)

Diesel fuel storage tank(s) (No. 4)			Generator (No. 5)									
Test fuel oil (clear and bright test)	Chemical test for water	If fuel oil test fails: drain and refill fuel tanks or full filter fuel	Suppressor and rectifier	Grease bearings	Commutator and slip rings	Rotor and stator windings	Coupling bolts and alignment	Conduits (tightness)	Windings	Electrical connections	Signature	Date
✓	✓	NA	NA	✓	NA	✓	✓	✓	✓	✓	[signature]	May 27, 2023

Overcurrent protective devices (No. 6)			Transfer switches (No. 7)						
Electrical isolation	Remove dust	Test devices for proper operation	Electrical connections	Operate moving parts	Clean and dress contacts	Remove dust	Clean and lubricate linkages	Signature	Date
✓	✓	✓	✓	✓	✓	✓	✓	[signature]	May 27, 2023

Notes:
(1) *Mark "X" for satisfactory or "O" for unsatisfactory.*
(2) *The work described in this Table shall be carried out by a competent person or individuals trained by the system manufacturer.*

Annual inspection, test, and maintenance requirements — Sheet #3 (refer to Table 5 on page 2)

Infrared thermal imaging (No. 8)									Signature	Date
40% site load			40% site load pre-cable connection			Full load				
Electrical connections	Contacts	Energized components	Electrical connections	Contacts	Energized components	Electrical connections	Contacts	Energized components		
X	X	X	X	X	X	X	X	X	JL	May 23, 2023

No. 9	No. 10	No. 11	Defects found	Defects corrected	Signature	Date
Lubricate door locks and hinges	2 h full load test	Review and provide instructions				
X	X	X			JL	May 23, 2023

Notes:
(1) *Mark "X" for satisfactory or "O" for unsatisfactory.*
(2) *The work described in this Table shall be carried out by a competent person or individuals trained by the system manufacturer.*

Quinquennial (every 5 years) inspection, test, and maintenance requirements (refer to Table 6 on page 3)

No. 1	Generator (No. 2)	Engine No. 3							
Weekly, monthly, semi-annual, and annual items	Inspect insulation/ megger test	Drain, flush, and refill cooling system	Clean radiator tubes and cooling fins	Replace thermostats	Inspect valve clearances	Defects found	Defects corrected	Signature	Date

Notes:
(1) *Mark "X" for satisfactory or "O" for unsatisfactory.*
(2) *The work described in this Table shall be carried out by a competent person or individuals trained by the system manufacturer.*

GAL POWER SYSTEMS LTD.

GAL POWER SYSTEMS THUNDER BAY LTD.

219 Hardisty Street North, Thunder Bay, ON, P7C 3G8
PHONE 807-346-6888
FAX 807-346-0696

WO#: **1051385**
CUSTOMER #: **800291**
DATE: **05/23/2023 8:00 AM** END: **05/23/2023 10:00 AM**
HOUR METER START: **275**
HOUR METER STOP: **277**

Annual

CUSTOMER INFORMATION

CUSTOMER ADDRESS		GENERATOR	ALTERNATOR	ENGINE
Wabigoon Lift Station	MAKE	**Olympian**	**na**	**Perkins**
	MODEL	**D125P1**	**na**	**YD51130**
CONTACT INFORMATION	SN	**OYL0000LNA101748**	**na**	**U868237**
NAME: **Merv Hoey**	REASON FOR SERVICE			
PH#: **8072219148**	**Annual**			

GENERAL INSPECTION (WEEKLY / MONTHLY / QUARTERLY)

VISUAL	READING	OPERATION	MANUAL	OK	NA
FUEL LEVEL DAY TANK	na	FUEL TRANSFER PUMP			✓
FUEL LEVEL MAIN TANK	3/4	TRANSFER PUMP CONTROLS			✓
2 HR CAPACITY IN TANK YES/NO	Yes	VENTILATION SYSTEM		✓	
FUEL LINE CONDITION	ok	DRAIN EXHAUST SYSTEM		✓	
OIL LEVEL	full	**GENERATOR**	**READING**		
CRANKCASE BREATHER	ok	VOLTAGE	600	Vac	
COOLANT LEVEL	full	FREQUENCY	60.1	Hz	
COOLANT CONDITION	ok	AMPERAGE L1	120	A	
RADIATOR CONDITION/CLEAN	ok	AMPERAGE L2	120	A	
ALL HOSES	ok	AMPERAGE L3	120	A	
OPERATIONAL BLOCK HEATER	ok	ENGINE TEMP.	180°f		
AIR FILTER	ok	OIL PRESSURE	50 Psi		
FAN BELT CONDITION/TIGHTNESS	ok	BATTERY	14	V	
VIBRATION MOUNTS	ok	DC CHARGING AMPS	5		
TRANSFER SWITCH VISUAL	ok	EXHAUST TEMP. LEFT	na		
LINKAGES	ok	EXHAUST TEMP. CENTRE	600°f		
STARTER CONNECTION	ok	EXHAUST TEMP. RIGHT	na		
BATTERY FLOAT LEVEL	13	ROOM TEMP.	20°c		
BATTERY CHARGE RATE	.4			YES	NO
		TRANSFER TEST PERFORMED			✓
		30% LOAD ACHIEVED		✓	

BATTERY INSPECTION

MAINTENANCE-FREE? No

BATTERY 1		BATTERY 2	
CELL	S.G.	CELL	S.G.
1	1.3	1	
2	1.3	2	
3	1.3	3	
4	1.3	4	
5	1.3	5	
6	1.3	6	
TEST	100 A	TEST	A
TEST	12 V	TEST	V

BATTERY 3		BATTERY 4	
1		1	
2		2	
3		3	
4		4	
5		5	
6		6	
TEST	A	TEST	A
TEST	V	TEST	V

SEMI-ANUAL INSPECTION (INCLUDES GENERAL INSPECTION)

	YES	NO		YES	NO	OIL SAMPLE TRACKING:
OIL SAMPLE		✓	TEST SAFETIES	✓		
CLEAN BATT. CONNECTIONS	✓		INSPECT EXHAUST SYSTEM	✓		
INSPECT BATTERY CONNECTIONS	✓					

ANNUAL INSPECTION (INCLUDES GENERAL INSPECTION)

	YES	NO		YES	NO	EXHAUST BACK PRESSURE	na	
OIL CHANGE	✓		INSPECT BREAKERS	✓		TEST REQUIRED	YES	NO
OIL FILTER CHANGE	✓		INSPECT VOLTAGE REGULATOR	✓		WITH LOAD		✓
FUEL FILTER CHANGE	✓		CALIBRATION OF GAUGES	✓		IGNITION SYSTEM	na	
LOAD TEST PERFORMED	✓		CLEAN PANELS	✓		COUPLER BOLTS	ok	
FUEL FILTERING PERFORMED		✓	INSPECT ELECTRICAL CONNECTIONS	✓		CHECK WINDINGS	ok	
			INSPECT ATS CONTACTS	✓				
FUEL CLEAR AND BRIGHT TEST PERFORMED **Yes**				**Pass**		VOLTAGE AFTER 2X CRANK **12**		

WORK PERFORMED/RECOMMENDATIONS

Annual

No transfer test just a full two hour load test performed. Customer performed oil and filter changes.

DOES INSPECTION CONFORM TO CSA 282: Yes.

ADDITIONAL PARTS USED

none

	Yes	No		Yes	No
Fire Log Book Entry	✓		Generator Log Book Entry	✓	
Unit in Auto	✓		Battery Charger On	✓	
Alarms Cleared on All Panels	✓		Repair Recommendation		✓

SIGNATURE FOR RECEPTION OF SERVICE

GAL TECHNICIAN

Merv

CUSTOMER ON SITE

CUSTOMER SIGNATURE

Josh Smith

GAL POWER SYSTEMS THUNDER BAY LP
219 Hardisty Street North, Thunder Bay, ON
P7C 3G8

Load Test Report

Webpage: www.galpower.com

Engine						DC Charge		AC Readings							
Time	Hourmeter	Oil Pres. (PSI)	Oil Temp. (°F)	Water Temp. (°F)	Exh. Temp. (°F)	Amps	Volts	Volts L1-L2	Volts L2-L3	Volts L1-L3	Amps L1	Amps L2	Amps L3	Freq.	Kilowatts
8:00 AM	275	60	150	155	340	5	14	600	600	600	120	120	120	60.1	125
8:15 AM	275.2	55	170	168	480	5	14	600	600	600	120	120	120	60.1	125
8:30 AM	275.5	50	190	180	600	5	14	600	600	600	120	120	120	60.1	125
8:45 AM	275.7	50	190	180	600	5	14	600	600	600	120	120	120	60.1	125
9:00 AM	276	50	190	180	600	5	14	600	600	600	120	120	120	60.1	125
9:15 AM	276.2	50	190	180	600	5	14	600	600	600	120	120	120	60.1	125
9:30 AM	276.5	50	190	180	600	5	14	600	600	600	120	120	120	60.1	125
9:45 AM	276.7	50	190	180	600	5	14	600	600	600	120	120	120	60.1	125
10:00 AM	277	50	190	180	600	5	14	600	600	600	120	120	120	60.1	125

Date May 23, 2023 **Tested by** Josh Smith **W.O.#** 1051385 **Size** 125 Kw

Customer City of Dryden **Site** Wabigoon Lift Station

6. Five Year Inspection

18350095611

Reference Number: **20240102-18350095611**	Form Name: **6. Five Year Inspection**
Submitter Name: **Josh Smith | j.smith@galpower.com**	Date Sent on Device: **Jan 2, 2024 8:30:17 AM EST**
Location: **217 Hardisty St N, Thunder Bay, ON P7C 3G8, Canada Jan 2, 2024 8:30:07 AM EST [View Map]**	

CUSTOMER INFO

Section 1

Inspection Type	5 Year Inspection
Tech Name	Joshua Smith
W.O. #	1051385
File #	800291
Date	May 23, 2023
Hour Meter Start	275
Customers Address	City of Dryden Wabigoon Lift Station
Customer Name	Merv Hoey
Customer PH#	8072219148

GENERATOR INFO

Section 1

Generator	
Make	Olympian
Model	D125P1
Serial#	OYL000OLNA101748
Alternator	
Make	na

Model	na
Serial#	na
Engine	
Make	Perkins
Model	YD51130
Serial#	U868237

Five Year Inspection/Service That Is Required As Per CSA 282-15.The Following Must Be Completed As Well As The Annual Inspection In Order To Meet CSA Standards

5 YEAR INSPECTION

Section 1

Inspect Insulation Of Windings	Yes
Comments	ok
Megger Test	Yes
Comments	ok
Readings	
Reading L1-L2	0
Reading L2-L3	0
Reading L1-L3	0
Reading L1-N	0
Reading L2-N	0
Reading L3-N	0
Reading L1-GND	infinity
Reading L2-GND	infinity
Reading L3-GND	infinity
Reading N-GND	infinity

ENGINE

Section 1

Drain And Flush Cooling System	Yes
Comment	ok
Refilled Cooling System With New Coolant	Yes
Comment	ok
Replace Thermostat(S)	Yes
Comment	ok

Clean Radiator Cooling Tubes And Fins	Yes
Comment	ok
Inspect Valve Clearance And Adjust	Yes
Comment	ok

SIGNATURES

Section 1

Status	Complete
Print Name	Josh Smith
Tech Signature	
Approved?	Yes

7. Generator Megger test

18350103069

Reference Number:	Form Name:
20240102-18350103069	**7. Generator Megger test**
Submitter Name:	Date Sent on Device:
Josh Smith | j.smith@galpower.com	**Jan 2, 2024 8:35:20 AM EST**

Location:

217 Hardisty St N, Thunder Bay, ON P7C 3G8, Canada Jan 2, 2024 8:35:10 AM EST [View Map]

CUSTOMER INFO

Section 1

Date	May 23, 2023
W.O. #	1051385
File#	800291
Customer	City of Dryden
Location	Wabigoon Lift Station

EQUIPMENT DESCRIPTION

Section 1

Make	Olympian
Serial	OYL000OLNA101748
Model	D125P1
Amp Rate	125
Voltage	600/347
Phase	3
Wire	4
Hertz	60

SYSTEM MEASUREMENTS

Section 1

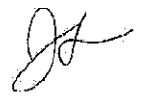
Line 1-2	
Reading	0
Voltage Applied	1000
Line 2-3	
Reading	0
Voltage Applied	1000
Line 3-1	
Reading	0
Voltage Applied	1000
Line 1-N	
Reading	infinity
Voltage Applied	1000
Line 2-N	
Reading	infinity
Voltage Applied	1000
Line 3-N	
Reading	infinity
Voltage Applied	1000
Line 1-G	
Reading	infinity
Voltage Applied	1000
Line 2-G	
Reading	infinity
Voltage Applied	1000
Line 3-G	
Reading	infinity
Voltage Applied	1000
Phase Rotation	ABC
Frequency	60

SIGN OFF

Section 1

Customer Signature

Gal Tech Signature



MAINMAN ASSESSMENT REPORT

KONECRANES Lifting Businesses™

Findings and Actions (14 Assets)

Wabigoon Drive lift station

Monorail system - 1 trolley manual chain hoist

Manufacturer	INGERSOL RAND	**Model**	VL2-010
Serial Number	09481		
Capacity/SWL	1t		

Service Products Routine Maintenance & MAINMAN Assessment

	✔ / !	Comment
Maintenance log book	✔	

! **Monorail system - 1 trolley manual chain hoist Monorail system - 1 trolley manual chain hoist** **Quote**

Date Reported: Dec 4, 2023

Technician: Roger Miner

Task Type: Visual assessment

Fault Code: Acceptable

Risk: **Undetermined Condition**

Recommendation: Repair

Comment:

At the time of inspection monorail and chain hoist were visually assessed at being capable of handling rated load. There are however, maintenance repairs that are recommended to repair.

✔ **Markings** – Visual assessment

✔ **Documentation** – Visual assessment

Trolley

Structure

✔ **Trolley intermediate structure** – Visual assessment

Trolley side 1

✔ **Trolley side structure** – Visual assessment

✔ **Trolley wheel** – Visual assessment, Lubricate, Operational assessment

✔ **Trolley wheel** – Visual assessment, Lubricate, Operational assessment

Trolley side 2

✔ **Trolley side structure** – Visual assessment

✔ **Trolley wheel** – Visual assessment, Lubricate, Operational assessment

✔ **Trolley wheel** – Visual assessment, Lubricate, Operational assessment

✔ **Frame** – Visual assessment

✔ **Hanging hook** – Visual assessment, Operational assessment

! **Hoisting machinery** **Quote**

Date Reported: Dec 4, 2023
Technician: Roger Miner
Task Type: Visual assessment
Fault Code: Acceptable
Risk: **Improvement Opportunity**
Recommendation: Modernize
Comment:
Recommended customer consider a new electric chain hoist and trolley. A powered hoist would allow the operators to remove anything from the lower floors more efficiently.

! **Hoisting machinery** **Quote**

Date Reported: Dec 4, 2023
Technician: Roger Miner
Task Type: Visual assessment
Fault Code: Acceptable
Risk: **Undetermined Condition**
Recommendation: Lubrication Maintenance
Comment:
Recommended to remove the hoist and disassemble it to lubricant both chains and any moveable internal workings. The chains are extremely rusty as the environment they remain in is harsh on them. Afterwards, it is recommended that extra chain be nested stowed into a bucket as opposed to left all over the floor.

- ✔ **Hoisting gear** – Visual assessment, Lubricate, Operational assessment
- ✔ **Hand chain gear** – Visual assessment, Operational assessment
- ✔ **Hoisting brake - holding** – Visual assessment, Adjust, Clean, Operational assessment
- ✔ **Chain container** – Visual assessment
- ✔ **Chain guide** – Visual assessment, Operational assessment
- ✔ **Chain** – Visual assessment, Lubricate, Operational assessment

Hook block

- ✔ **Hook block structure and markings** – Visual assessment
- ✔ **Chain wheel** – Visual assessment, Lubricate, Operational assessment
- ✔ **Crosshead** – Visual assessment, Operational assessment
- ✔ **Thrust ball bearing** – Lubricate, Operational assessment
- ✔ **Hook forging** – Visual assessment
- ✔ **Latch** – Visual assessment, Operational assessment

Runway

Beam

- ✔ **End stops** – Visual assessment
- ✔ **Suspension 1** – Visual assessment

✔ **Suspension 2** – Visual assessment

Wabigoon Drive lift station, Hoisting machinery, Acceptable

Dec 5, 2023 Dean Walker, Customer

Dec 4, 2023 Roger Miner, Technician