



2024 SEMI-ANNUAL INSPECTION

Customer
Name

Lynden International

PRE-START CHECKS	JAN	26-Feb	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Running Hours Start		341.7										
Oil Level Full (yes/no)		YES										
Glycol Level Full (yes/no)		YES										
Coolant Heater Operation		97 F										
Cooling System Leaks		NONE										
Oil System Leaks		NONE										
Air Cleaner System		GOOD										
V-Belts		GOOD										
Battery Charger Rate VOLTS		26.8 V										
Battery Charger Rate AMPS		0.2 A										
Battery Post Condition		GOOD										
Battery Water Full (yes/no)		SEALED										
RUNNING CHECKS												
Oil Pressure		7 Bar										
AC Volts		600 V										
Louver Operation		N/A										
Hertz		60.0 Hz										
Kilowatts		124 Kw										
AC Amps		120 A										
Belt Driven Alternator VOLTS		27.5 V										
Belt Driven Alternator AMPS		2.0 A										
Coolant Temp (after 30 min)		82 C										
Fuel Level		5/8 Tank										
Transfer Completed (Yes or No)		YES										
Running Hours Finish		342.9										
Record in Customer Log		N/A										
Inspect/Clean Crankcase Breathers		GOOD										
Inspect/Clean All Engine Linkages		GOOD										
Lube Eng. Gov. & Ventilation System		GOOD										
Test Protective Devices		PASSED										
Perform Battery Load Test		PASSED										
Inspect Ventilation System Belts		N/A										
Work Order Number		260832										
Technician Number		7049										

COMMENTS:

Batts rated 1000cca

Feb-Batts 1086/973cca. Received call from Daryl after I left. They had lost facility internet for 2 hours after transfer test. I advised to contact their IT dept as transfer is closed transition and no services should be impacted.

PLANNED MAINTENANCE REPORT

CSA: Weekly ☐ Monthly ☐ Semi ☐ Annual ☒ Quinquennial ☐
Non CSA: Visual Inspection ☐ Maintenance ☐ Other: Repair ☐ E-Call ☐

Engine Make/Model: Perkins/FGDF2024 Engine S/N: FGDF4024U13991 Gen Make/Model: Stamford/WPS400D6/S
 Gen S/N: FGDF4024/U1399 Work Order # 6100338018 Unit # Lynden KW: 250 Kw Voltage: 600 V

Customer Name: Lynden International Date: 20-Aug-24 Time: 6:00 am
 Site Address: 4441 76 Ave. SE Distance: 5 km

SAFETY INFORMATION

- ☐ FIRE EXTINGUISHER ☐ SPILL KIT ☐ FIRST AID KIT
☐ EMERGENCY CONTACT INFO ☐ EMERGENCY LIGHT ☐ EMERGENCY EXIT NEAR BY

ENTER THE MONTH AND YEAR OF THE LAST REPLACEMENT			HOURLY METER
Spark plug : N/A	Battery : Unknown	Engine hoses :	344.7
Coolant : Unknown	Belts : Unknown	Unknown	

☐ Complete the check list below and comment on nonconformities at the bottom of this form.

VISUAL INSPECTION

- ☐ (1) General cleanliness
☐ (2) Condition of the cooling system: Full ☒ Added ☐ L
☐ (3) Hoses condition: Fuel ☐ Coolant ☐ Lube ☐
☐ (4) Belt(s) condition: tension ☐ wear ☐
☐ (5) Water-pump condition: wear ☐ leak ☐
☐ (6) Liquids leakage (oil, fuel, coolant)
☐ (7) Exhaust system condition
☐ (8) Operation of the block-heater Temp. 157 F ☐ C ☐
☐ (9) Electrical connection verification
☐ (10) Room heating operation (min 10°)
☐ (11) Engine oil level Full ☒ Added ☐ L
☐ (12) Fuel level – main tank: 1/4 1/2 3/4 full
 day tank: 1/4 1/2 3/4 full
☐ (13) Inspect for proper operation of fuel transfer pump (if applicable)
☐ (14) If the fuel filter contains a clear glass bowl verify to determine if contamination is present

- ☐ (37) Function of louvers
☐ (38) Lubrication of louvers (if needed)
☐ (39) Air filter – replaced ☐
☐ (40) Check and clean the governor control linkages
☐ (41) Verify the emergency alarms:
 LOP Passed HET Passed OC Passed LWL Passed
☒ (42) Tighten hose clamps
☐ (43) Lubricate enclosure locks
☐ (44) Drain the exhaust condensate trap

OIL CHANGE

- ☒ (45) Oil change
☒ (46) Filters change
 Fuel ☐ Oil ☐ Coolant ☐
☐ (47) Inspect fuel pump strainer (if applicable)

VERIFICATION OF THE CONTROLLER and BATTERY CHARGER

- ☒ (48) Solidity of the connections and cleanliness
☒ (49) Relay (contact damage) and breaker
☐ (50) Test emergency lighting (enclosure unit)
☒ (51) Verify pilot lights on controller panel

VERIFICATION OF THE ALTERNATOR

- ☐ (52) Rotor and stator verification
☐ (53) Visual inspection of diodes
☐ (54) Connections
☐ (55) Assemble bolts (visual)
☐ (56) Anti-vibration holder (visual)
☐ (57) Grease the main bearing (if needed)
☐ (58) Verification of the over speed switch (Onan)
☐ (59) Verification of slip ring (if needed)
☐ (60) Verification of brush springs (if needed)
☐ (61) Infrared survey during load bank

VERIFICATION OF THE TRANSFER SWITCH

- ☐ (62) Verification of the exercise period: With load ☐ Without load ☐
☐ (63) Cleanliness
☐ (64) Contacts condition (relay + auxiliary contact)
☐ (65) Delay adjustment: start _____
 Transfer _____ Re-transfer _____
 Cool down _____
☐ (66) Transfer test with load: Completed ☐ Customer declined ☐
 Hz: _____ A: _____ V: _____
☐ (67) Infrared survey on normal and emergency side

- ☒ (68) Load bank testing

BEFORE ENGINE START

- ☒ (15) Inspect engine crankcase breathers
☐ (16) Battery electrolyte level
☐ (17) Specific gravity: 987/1025ccA (Rated 1000ccA)
☒ (18) Terminal tightening, cleaning and lubrication (battery, starter)
☒ (19) Charger adjustment: 26.7 V 0.2 A
☒ (20) Starting test:
 voltage in operation 22.1 V current in operation 299 A
☒ (21) Perform a second cycle starting test
 voltage in operation 22.1 V current in operation 308 A
☒ (22) DC alternator: 27.0 V 5.6 A
☒ (23) Coolant test:
 Clarity Sample Strength Sample PH Sample

VERIFICATION (GASOLINE MOTOR)

- ☐ (24) Operation, lubrication and adjustment of the choke
☐ (25) Cap distributor and high voltage wire
☐ (26) Spark plug change, breaker point & capacitor
☐ (27) Adjust breaker points/engine timing
☐ (28) Operation of the gas throttle solenoid
☐ (29) Drain the day tank and carburetor

VERIFICATION (NATURAL GAS/PROPANE MOTOR)

- ☐ (30) Gas supply pressure
☐ (31) Check and clean strainer
☐ (32) Cap distributor and high voltage wire
☐ (33) Spark plug change, breaker point & capacitor
☐ (34) Adjust the ignition breakers

VERIFICATION (ALL MOTORS)

- ☐ (35) AC instrumentation and electrical connection
☐ (36) Instrumentation motor Temp. _____ F ☐ C Oil _____

PLANNED MAINTENANCE REPORT

FUEL - CLEAR & BRIGHT TEST RESULTS

Color: Clear ☒ Clear ☐ Cloudy ☐ Water Present ☐ Other contamination ☐

Additional Fuel Info:

Sample taken from tank.

QUINQUENNIAL (EVERY FIVE YEARS)

- ☐ Megger test
- ☐ Drain and flush the cooling system. Add new coolant.
- ☐ Clean radiator tubes and cooling fins.
- ☐ Replace thermostats
- ☐ Inspect valves clearance

BEFORE YOU LEAVE

- ☒ CHARGER IN OPERATION
- ☒ ENGINE OIL LEVEL FULL
- ☒ BLOCK HEATER IN OPERATION
- ☒ VERIFY NO LEAK BY FILTERS
- ☒ CIRCUIT-BREAKER CLOSED (ON POSITION)
- ☒ CONTROLLER IN "AUTO" POSITION
- ☐ LOG BOOK FILLED OUT

Job Description/Comments:

Deficiency Report to Follow: Y ☐ N ☒

Loaded 1MW trailer and material for service on truck. Drove to site. Contacted Darryl on arrival. Darryl arrived at 6:30 AM and gave me keys to generator. Performed pre-checks. Found oil on ground from previous spill. No signs of any leaks. Found 4 hours on unit since last service. Recommend running unit for 1 hour every month. Performed annual service c/w oil and filter change. Verified operation of safety shutdowns. Performed 2 hour load test at 250 Kw using 1MW trailer, 50' #4/0 cables and #4/0 whips. Customer declined verification of transfer switch. Loaded up truck. Returned to shop. Unloaded truck. Disposed of used oil and garbage. Completed paperwork. Recommend quinquennial service on unit as no signs of it ever being completed. Follow up created.

Technician Name: Scott Murphy

Technician Signature: Scott Murphy Digitally signed by Scott Murphy
Date: 2024.08.20 10:37:57 -06'00'

Customer Name : Darryl Collins

Customer Signature: _____ Technician Stamp: _____

WAJAX PM SERVICES



LOAD TEST REPORT

Engine Readings						Alternator		D.C. Volts	Ambient Temp	A.C. Readings									
Time	Run Time	Oil Press PSI	Oil Temp °C	Water Temp °C	Exh. Temp °C	Frame Temp °C	Air Temp °C	Volts	°C	VOLTS			AMPS			Hz	KW	% Load	Max Pick Up
										Line 1 – 2	Line 2 – 3	Line 3 – 1	line 1	Line 2	Line 3				
9:25	0	8 Bar	127.5 F	60 C	281.1 F	92.1 F	87.9 F	27 V	71 F	600 V	600 V	600 V	0 A	0 A	0 A	60.1 Hz	0 Kw	0 %	
9:40	15	6	195.4	82	758.1	104.5	112.6	27	83.3	600	600	600	100	100	100	60.0	125	50	
9:55	30	6	196.5	85	939	101.3	98.4	27	73.2	600	600	600	225	225	225	60	250	100	
10:10	45	6	195.9	85	953.2	102.2	98.2	27	69.8	600	600	600	225	225	225	60	250	100	
10:25	60	6	196.5	85	948.3	103.4	103.2	27	71	600	600	600	225	225	225	60	250	100	
10:40	75	6	190.5	85	953.4	98.2	98.6	27	71.7	600	600	600	225	225	225	60	250	100	
10:55	90	6	197.7	85	969.2	133.5	116.2	27	81.5	600	600	600	225	225	225	60	250	100	
11:10	105	6	196.8	85	967.6	105.2	103.8	27	74.8	600	600	600	225	225	225	60	250	100	
11:25	120	6	197.7	85	967.2	108.1	107.6	27	75.2	600	600	600	225	225	225	60	250	100	
Notes:																			
										Building Load Transfer Test:						Stamp:			
										Approved ☐ Declined ☒									

CUSTOMER Lynden International

W.O. # 6100338018

DATE Aug. 20, 2024

SITE ADDRESS 4441 76 Ave. SE

LOAD BANK 1 MW Trailer

CABLE SIZE #4/0

CABLE LENGTH 50'

TESTED BY Scott

RADIATOR

N030-54236-9015

LABEL#: 201402797

SHOP JOB NUM : 6100338018

SAMPLE SHIP TIME (days) : 3

WAJAX POWER SYS

CALGARY

RECEIVED DATE: 23-Aug-24

EQUIP NUM: LYNDEN INT

PERKINS FGDF402_PERKINS

No Action Required

SERIAL NUMBER: FGDF4024U139918

Interp By: Joseph Cusick

Interpreted On: 27-Aug-24

ALL LEVEL 1 TESTS APPEAR WITHIN RANGE FOR THIS COOLANT. CONTINUE TO USE THIS COOLANT. SAMPLE AGAIN AT THE REGULAR INTERVAL TO MONITOR THE COOLING SYSTEM.

SAMPLE INFORMATION

	20-Aug-24	01-Sep-23	18-Aug-22	20-Aug-21
Sampled Date	20-Aug-24	01-Sep-23	18-Aug-22	20-Aug-21
Sample Id	N030-54236-9015	N030-53250-9006	N030-52237-9030	N030-51237-9031
Lab Date	23-Aug-24	07-Sep-23	25-Aug-22	25-Aug-21
Meter [Hr]	344.7	338	327.6	314.5
Comp Meter [Hr]	344.7	338	327.6	314.5
Meter On Fluid	344.7	338.0	327.6	314.5
Fluid Brand				
Fluid Weight				
Fluid Type				
Fluid Change	N	N	N	N
Filter Change	U	U	U	U

ADDITIONAL CHARACTERISTICS

	20-Aug-24	01-Sep-23	18-Aug-22	20-Aug-21
ADDITIONAL ANALYTES (ppm)				
BO3 Borate			1742	
CaC Ca as CaCO3			1	
MgC Mg as CaCO3			2	
MoO4 Molybdate			15	
PO4 Phosphate			17	
SiO3 Silicate			129	
TH Total Hardness			4	

REFRACTIVE INDEX

GL Glycol (%)	60	59	58	60
FP Freeze Point (°C)	-53	-52	-50	-53
BP Boil Point (°C)	109	109	109	109

CORROSION LEVELS/ CHEMISTRY

	20-Aug-24	01-Sep-23	18-Aug-22	20-Aug-21
--	-----------	-----------	-----------	-----------

ELEMENTAL ANALYSIS (ppm)

Al Aluminum	3
B Boron	320
Ca Calcium	1
Cu Copper	3
Fe Iron	0
K Potassium	504
Mg Magnesium	1
Mo Molybdenum	9
Na Sodium	1837
P Phosphorus	6
Pb Lead	0
Si Silicon	47
Sn Tin	1
Zn Zinc	0

pH

pH	pH	7.7	7.7	7.6	7.9
----	----	-----	-----	-----	-----

CONDUCTIVITY (µS/cm)

CON Conductivity	5414	2957	2678	3424
------------------	------	------	------	------

PHYSICAL

Foam	Foam	norm	norm	norm	norm
------	------	------	------	------	------

NITRITE (ppm)

NO2 Nitrite	545	707	950	842
-------------	-----	-----	-----	-----

PHYSICAL CHARACTERISTICS

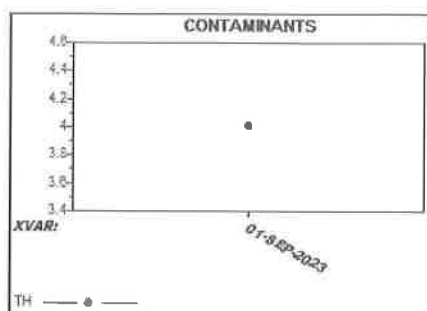
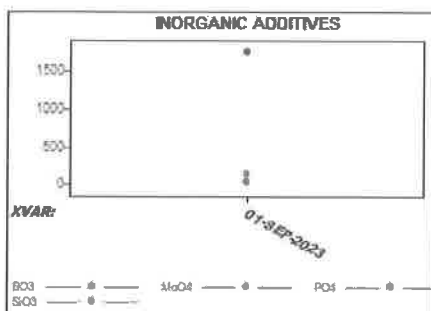
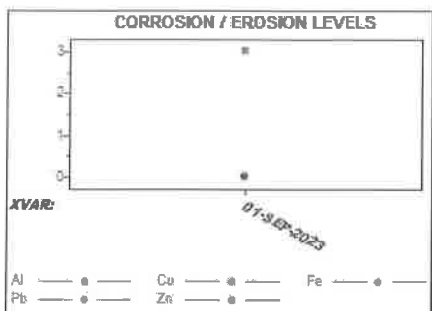
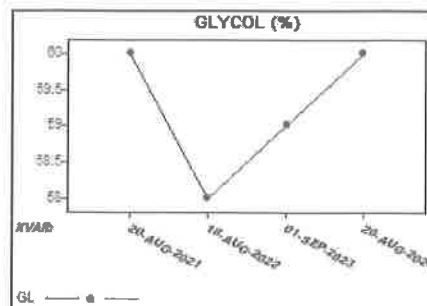
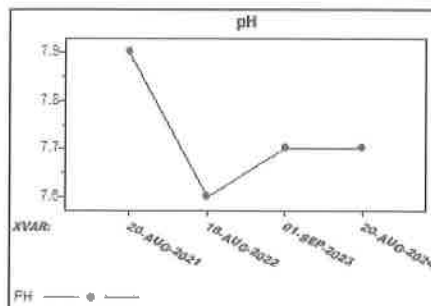
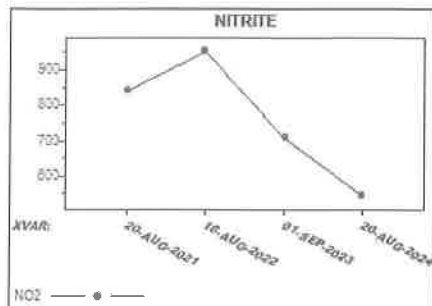
		20-Aug-24	01-Sep-23	18-Aug-22	20-Aug-21
PHYSICAL					
Color	Color	orange/light	yellow	orange/light	yellow
App	Appearance	clear	clear	clear	clear
Odor	Odor	norm	norm	norm	norm
Oil	Oil	none	none	none	none
PAmt	Precip Amount	none	none	none	none

RADIATOR
SERIAL NUMBER: FGDF4024U139918
EQUIP NUM: LYNDEN INT
PERKINS FGDF402_PERKINS

N030-54238-9015



No Action Required



Report Comment

Our sample reports has been updated! For more information on the new report, go to - <https://www.youtube.com/watch?v=4h8bREJVUs>. Access our online platform: <https://soswebmc.cat.com/cat-sos/samples>. Want to sign up for online portal?, Go Paperless? Or have any questions on SOS? Contact us 8:00am - 4:00pm MST M-F at SOS Support: 1-888-FINNING or oilssupport@finning.com.

ENGINE
N030-54236-0223

LABEL#: 201733812

SHOP JOB NUM : 6100338018

SAMPLE SHIP TIME (days) : 3

WAJAX POWER SYS
CALGARY

RECEIVED DATE: 23-Aug-24

EQUIP NUM: LYNDEN INT
PERKINS FGDF402_PERKINS
 **No Action Required**
SERIAL NUMBER: FGDF4024U139918
Interp By: Brandon Hepler
Interpreted On: 27-Aug-24

NO PROBLEMS PRESENTLY ASSOCIATED WITH THIS SAMPLE. CONTINUE SAMPLING AT THE NORMAL INTERVAL.

SAMPLE INFORMATION

	20-Aug-24	01-Sep-23	18-Aug-22
Sampled Date	20-Aug-24	01-Sep-23	18-Aug-22
Sample Id	N030-54236-0223	N030-53250-0199	N030-52237-0506
Lab Date	23-Aug-24	07-Sep-23	25-Aug-22
Meter [Hr]	344.7	338	327.6
Comp Meter [Hr]	344.7	338	327.6
Meter On Fluid	6	11	12
Fluid Brand	CASTROL	CASTROL	CASTROL
Fluid Weight	15W-40	15W-40	15W-40
Fluid Type	UNKNOWN	UNKNOWN	UNKNOWN
Fluid Change	Y	Y	Y
Filter Change	Y	Y	Y
Make Up Fluid [L]	58	54	60
Kidney Loop	U	U	U

CONDITION / CONTAMINATION

		20-Aug-24	01-Sep-23	18-Aug-22
VISCOSITY (Centistokes)				
V100	Viscosity at 100 C	14.40	13.00	12.40

V40	Viscosity at 40 C	99.30	89.60	83.20
-----	-------------------	-------	-------	-------

VI	Viscosity Index	149	144	146
----	-----------------	-----	-----	-----

INFRARED (UFM)

ST	Soot	0	0	0
OXI	Oxidation	9	9	10
SUL	Sulfur Products	17	17	17
NIT	Nitration	5	5	5

ANTIFREEZE

A	Antifreeze	N	N	N
---	------------	---	---	---

FUEL

F	Fuel	N	N	N
---	------	---	---	---

FUEL CONTENT (%)

PFc	Percent Fuel			5.72
-----	--------------	--	--	------

WATER

W	Water	N	N	N
---	-------	---	---	---

WEAR LEVELS / ADDITIVES

20-Aug-24 01-Sep-23 18-Aug-22

ELEMENTAL ANALYSIS (ppm)

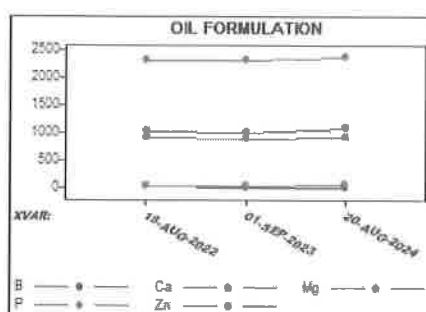
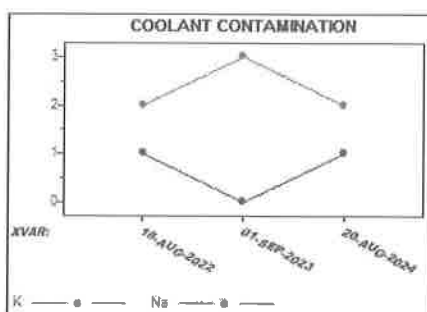
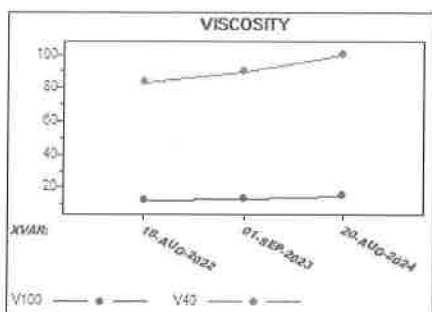
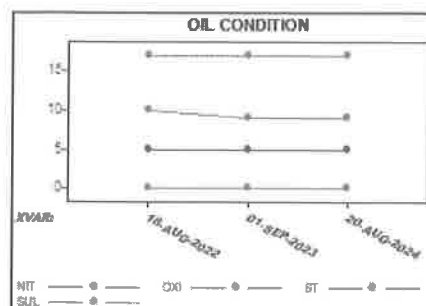
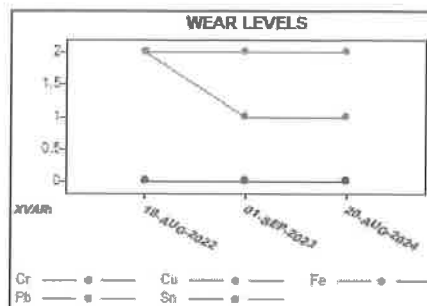
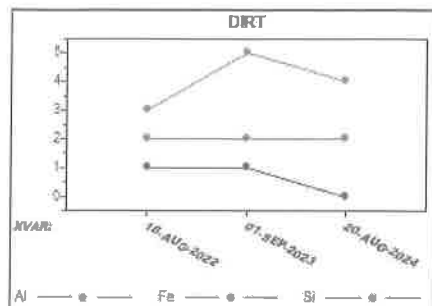
Na	Sodium	2	3	2
K	Potassium	1	0	1
Si	Silicon	4	5	3
Al	Aluminum	0	1	1
Fe	Iron	2	2	2
Cr	Chromium	0	0	0
Pb	Lead	0	0	0
Cu	Copper	1	1	2
Sn	Tin	0	0	0
Ni	Nickel	0	0	0
Ag	Silver	0	0	0
Ti	Titanium	0	0	0
V	Vanadium	0	0	0
Zn	Zinc	1068	1002	1031
Ca	Calcium	2344	2311	2288
Mg	Magnesium	45	21	12
Ba	Barium	0	0	0
B	Boron	4	5	9
Mo	Molybdenum	2	2	1
P	Phosphorus	917	891	919

ENGINE
SERIAL NUMBER: FGDF4024U139918
EQUIP NUM: LYNDEN INT
PERKINS FGDF402 PERKINS

N030-54236-0223



No Action Required



Report Comment

Our sample reports has been updated! For more information on the new report, go to - <https://www.youtube.com/watch?v=4h8bREJVUrs>. Access our online platform: <https://soswebmc.cat.com/cat-sos/samples>. Want to sign up for online portal?, Go Paperless? Or have any questions on SOS? Contact us 8:00am - 4:00pm MST M-F at SOS Support: 1-888-FINNING or oilsupport@finning.com.

FUEL

N030-54236-8002

LABEL#: 201733947

SHOP JOB NUM : 6100338018

SAMPLE SHIP TIME (days) : 3

WAJAX POWER SYS
CALGARY

RECEIVED DATE: 23-Aug-24

EQUIP NUM: LYNDEN INT
PERKINS FGDF402_PERKINS
 **No Action Required**
SERIAL NUMBER: FGDF4024U139918
Interp By: Greg Eyre
Interpreted On: 20-Sep-24

SAMPLE CONFORMS TO STANDARD DIESEL PROPERTIES. SPECTROANALYSIS DOES NOT DETECT ANY CONTAMINATION.
 FUEL IS FIT FOR FURTHER USE. SUGGEST RESAMPLE AGAIN IN 6 MONTHS IF FUEL HAS NOT BEEN USED UP DURING
 THAT TIME.

SAMPLE INFORMATION

	20-Aug-24	01-Sep-23	18-Aug-22	20-Aug-21
Sample Id	N030-54236-8002	N030-53250-8001	N030-52237-8008	N030-51237-8004
Lab Date	23-Aug-24	07-Sep-23	25-Aug-22	25-Aug-21
Meter [Hr]	344.7	338	327.6	314.5
Comp Meter [Hr]	344.7	338	327.6	314.5
Meter On Fluid	6.7	338.0	327.6	314.5
Fluid Brand		UNKNOWN	UNKNOWN	UNKNOWN
Fluid Weight				
Fluid Type		UNKNOWN	UNKNOWN	UNKNOWN
Fluid Change	U	Y	U	U
Filter Change	U	Y	U	U

PROPERTIES / PHYSICALS

		20-Aug-24	01-Sep-23	18-Aug-22	20-Aug-21
DENSITY					
API G	API Gravity	36.3	36.2	35.3	35.9
VISCOSITY (Centistokes)					
V40	Viscosity at 40 C	2.41	2.34	2.34	2.5
FLASH POINT					
FL Pt	Flash Point	55.0	56.0	62.0	59.0

ELEMENTAL ANALYSIS

20-Aug-24 01-Sep-23 18-Aug-22 20-Aug-21

ELEMENTAL ANALYSIS (ppm)

Na	Sodium	2	1	1	1
K	Potassium	0	0	0	0
Si	Silicon	0	0	0	0
Al	Aluminum	0	0	0	0
Fe	Iron	0	0	0	0
Cr	Chromium	0	0	0	0
Pb	Lead	0	0	1	0
Cu	Copper	0	0	0	0
Sn	Tin	0	0	0	0
Ni	Nickel	0	0	0	0
Ag	Silver	0	0	0	0
Ti	Titanium	0	0	0	0
V	Vanadium	0	0	0	0
Zn	Zinc	0	1	2	2
Ca	Calcium	0	2	3	3
Mg	Magnesium	0	0	0	0
Ba	Barium	0	0	0	0
B	Boron	0	0	0	0
Mo	Molybdenum	1	0	0	0
P	Phosphorus	1	0	3	0
S	Sulfur		8	29	20

COLOR

Color	Color	Yellow	Yellow	Yellow	Yellow
Clari	Clarity	clear		clear	clear

PHYSICAL

App	Appearance		CLEAR		CLEAR
PAmI	Precip Amount	none	none	none	none

CLEANLINESS / CONTAMINATION

20-Aug-24 01-Sep-23 18-Aug-22 20-Aug-21

WATER CONTENT (%)

H2O	Water	0.01	0.01	0.01	0.02
-----	-------	------	------	------	------

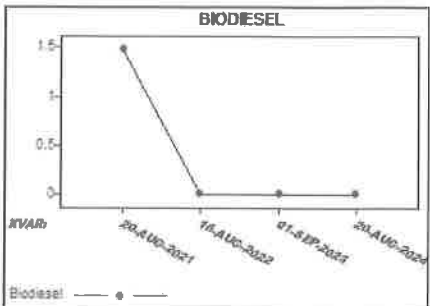
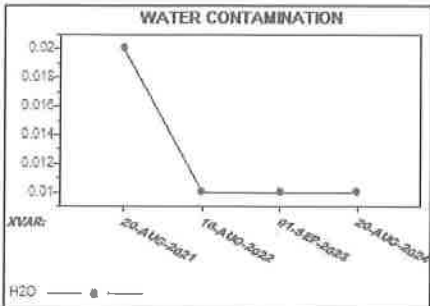
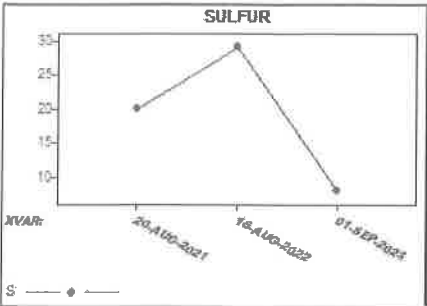
BIODIESEL

Blodl	Biodiesel	0.00	0.00	0.00	1.47
-------	-----------	------	------	------	------

FUEL
SERIAL NUMBER: FGDF4024U139918
EQUIP NUM: LYNDEN INT
PERKINS FGDF402_PERKINS

N030-54236-8002

No Action Required



Report Comment

Our sample reports has been updated! For more information on the new report, go to - <https://www.youtube.com/watch?v=4h8bREJVUs>. Access our online platform: <https://soswebmc.cat.com/cat-sos/samples>. Want to sign up for online portal?, Go Paperless? Or have any questions on SOS? Contact us 8:00am - 4:00pm MST M-F at SOS Support: 1-888-FINNING or oilsupport@finning.com.