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#### Machine Id 850 COXWELL AVE EAST YORK CIVIC CENTRE SPP00183 - CITY OF TORONTO SPP00183 Component Rear Natural Gas Engine Fluid

ESSO XD-3 EXTRA 15W40 (200 LTR)

## RECOMMENDATION

Resample at the next service interval to monitor. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using MOB 3 test kits, this testkit includes Analytical Ferrography which provides a detailed morphological analysis of wear particles present in the fluid. this testkit includes BN to determine the suitability of the oil for continued use.

### WEAR

Metal levels are typical for a new component breaking in. Component wear rates appear to be normal (unconfirmed).

#### CONTAMINATION

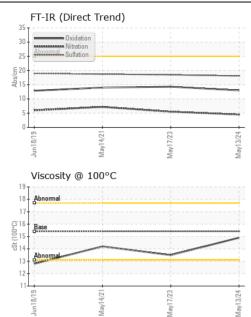
There is no indication of any contamination in the oil.

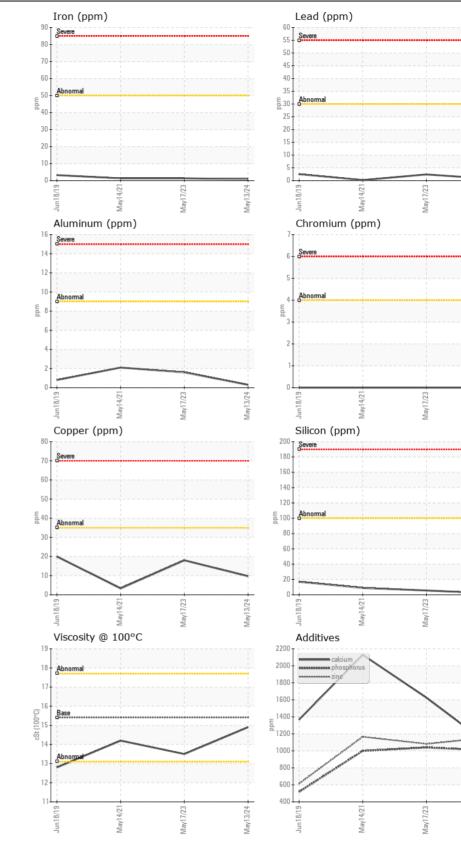
# FLUID CONDITION

The condition of the oil is acceptable for the time in service (unconfirmed).

Sample DateClient Info13 May 202417 May 202314 May 2024Machine AgehrsClient Info14713298Oil AgehrsClient Info30025Filter AgehrsClient InfoMay 202410025Oil ChangedClient InfoClient InfoChangedChangedChangedFilter ChangedClient InfoChangedChangedChangedChanged							
Sample DateClient InfoIf May 202417 May 202314 May 2024Machine AgehrsClient InfoIaf13298Oil AgehrsClient InfoIaf13298Oil AgehrsClient InfoIafIaf13298Filter AgehrsClient InfoIafIaf12298Oil ChangedClient InfoIafChangedChangedChangedChangedFilter ChangedIafClient InfoShoreShoreNORMALNORMALIronppmASTMD51850>50<111ChronumppmASTMD51850>2000NickelppmASTMD51850>2000NickelppmASTMD51850>3000AluminumppmASTMD51850>3013SilverppmASTMD51850>310183CopperppmASTMD51850>4111VanadiumppmASTMD51850>4111VanadiumppmASTMD51850>4111SilconppmASTMD51850>4111SilconppmASTMD51850>4111SilconppmASTMD51850>4111SoltationppmASTMD51850>2111Soltation<	Test	UOM	Method	Limit/Abn	Current	History1	History2
Machine AgehrsClient Info14713298Oil AgehrsClient Info30025Filter AgehrsClient Info30025Oil ChangedClient InfoChangedChangedChangedChangedFilter Changed1Client InfoChangedChangedChangedSample StatusVNORMALNORMALNORMALIronppmASTM D5186(n)>50<111ChromiumppmASTM D5186(n)>2000NickelppmASTM D5186(n)>2000NickelppmASTM D5186(n)>3000SilverppmASTM D5186(n)>3000AluminumppmASTM D5186(n)>30<122LeadppmASTM D5186(n)>30<111CopperppmASTM D5186(n)>41001SiliconppmASTM D5186(n)>411<11SiliconppmASTM D5186(n)>20c1s13SiliconppmASTM D5186(n)>20c1s13SiliconppmASTM D5186(n)>20c1s13SiliconppmASTM D5186(n)>20c1s13SiliconppmASTM D5186(n)>20c1s13Siliconppm	Sample Number		Client Info		PN0006186	PN0004708	PN0002339
Oil Age Filter AgehrsClient Info30025Filter AgehrsClient Info30025Oil ChangedClient InfoChangedChangedChangedChangedFilter ChangedIClient InfoChangedChangedChangedChangedSample StatusVNORMALNORMALNORMALNORMALNORMALIronppmASTM25185(m)>50<1111ChromiumppmASTM25185(m)>2000NickelppmASTM25185(m)>2000SilverppmASTM25185(m)>3000AluminumppmASTM25185(m)>30<1122LeadppmASTM25185(m)>30<111<11VanadiumppmASTM25185(m)>4<11<1<11VanadiumppmASTM25185(m)>20<1133SiliconppmASTM25185(m)>20<1133<11VanadiumppmASTM25185(m)>20<11<1<3SiliconkStASTM25185(m)>20<11<1<1VanadiumppmASTM25185(m)>20<11<13SiliconkStASTM25185(m)>20<11<1<1VanadiumppmASTM25185(m)>20<11<13SiliconppmASTM25185	Sample Date		Client Info		13 May 2024	17 May 2023	14 May 2021
Filter Age Oil ChangedhrsClient Info30025Oil ChangedClient InfoChangedChangedChangedChangedFilter ChangedClient InfoChangedChangedChangedChangedSample StatusVNORMALNORMALNORMALNORMALIronppmASTM D5185(m)>50<111ChromiumppmASTM D5185(m)>2000NickelppmASTM D5185(m)>2000SilverppmASTM D5185(m)>3000AluminumppmASTM D5185(m)>3000AluminumppmASTM D5185(m)>30<1122LeadppmASTM D5185(m)>4<11<11<11VanadiumppmASTM D5185(m)>4<111<11VanadiumppmASTM D5185(m)>4<11<11<11SiliconppmASTM D5185(m)>4<111<11<11SubtistimppmASTM D5185(m)>20<14<14<11<11<11VanadiumppmASTM D5185(m)>20<14<14<11<11<11<11<11<11<11<11<11<11<11<11<11<11<11<11<11<11<11<11<11<11<11<11<11<11<11<11<1	Machine Age	hrs	Client Info		147	132	98
Client InfoChangedChangedChangedChangedChangedFilter Changed(Client InfoIChangedChangedChangedSample StatusNORMALNORMALNORMALNORMALNORMALIronppmASTM D5185(m)>50<111ChromiumppmASTM D5185(m)>2000NickelppmASTM D5185(m)>2000NickelppmASTM D5185(m)>3000SilverppmASTM D5185(m)>3000AluminumppmASTM D5185(m)>30<11<1CopperppmASTM D5185(m)>4<11<1VanaduumppmASTM D5185(m)>4<11<1VanaduumppmASTM D5185(m)>4<11<1SiliconppmASTM D5185(m)>4<11<1VanaduumppmASTM D5185(m)>20<1<13WaterWC Method>.1NEGNEGNEGSoot %%ASTM D5185(m)>1018.118.518.7SulfationAbs/cmASTM D5185(m)>192126Soot %%ASTM D5185(m)>19218.118.518.7SulfationAbs/cmASTM D5185(m)>192126Soot %%ASTM D5185(m)>19212<	Oil Age	hrs	Client Info		30	0	25
Filter Changed Sample StatusClient InfoImage Image Image NoRMALChanged NoRMALChanged NoRMALChanged NoRMALIronppmASTM D5/85(m)>50<111ChromiumppmASTM D5/85(m)>2000NickelppmASTM D5/85(m)>2000NickelppmASTM D5/85(m)>3000SilverppmASTM D5/85(m)>3000AluminumppmASTM D5/85(m)>30<122LeadppmASTM D5/85(m)>30<112<1CopperppmASTM D5/85(m)>4<11<1VanadiumppmASTM D5/85(m)>4<11<1VanadiumppmASTM D5/85(m)>+100269PotassiumppmASTM D5/85(m)>+100269Soot %%ASTM D5/85(m)>+100000NitrationAbs/cmASTM D7/84*204.55.57.2SuffationAbs/limASTM D7/85(m)>10018.118.718.7Emulsified WaterrocalrocalrocalrocalrocalSoot %%AASTM D7/85(m)>10016.440077BariumppmASTM D5/85(m)>102126BoronppmASTM D5/85(m)<10000 </th <th>Filter Age</th> <th>hrs</th> <th>Client Info</th> <th></th> <th>30</th> <th>0</th> <th>25</th>	Filter Age	hrs	Client Info		30	0	25
Sample Status         NORMAL         NORMAL         NORMAL         NORMAL           Iron         ppm         ASTM D5/85(m)         >50         <1         1         1           Chromium         ppm         ASTM D5/85(m)         >2         0         0         0           Nickel         ppm         ASTM D5/85(m)         >2         0         0         0           Titanium         ppm         ASTM D5/85(m)         >3         0         0         0           Silver         ppm         ASTM D5/85(m)         >3         0         0         0           Aluminum         ppm         ASTM D5/85(m)         >30         <1         2         2           Lead         ppm         ASTM D5/85(m)         >30         <1         1         <1           Vanadium         ppm         ASTM D5/85(m)         >4         <1         1         <1           Silicon         ppm         ASTM D5/85(m)         >4         <1         1         3           Water         WC Method         >0.1         NEG         NEG         NEG           Soot %         %         ASTM D7/82         >30         18.1         18.5         18.7	Oil Changed		Client Info		Changed	Changed	Changed
IronppmASTM D5185(m)>50<1	Filter Changed		Client Info		Changed	Changed	Changed
ChromiumppmASTM D5165(m)>4OONickelppmASTM D5165(m)>2OOOTitaniumppmASTM D5165(m)>3OOOSilverppmASTM D5165(m)>3OOOAluminumppmASTM D5165(m)>3OOOAluminumppmASTM D5165(m)>30<12<1CopperppmASTM D5165(m)>30<1183TinppmASTM D5165(m)>4<11<1VanadiumppmASTM D5165(m)>4<11<1SiliconppmASTM D5165(m)>4<1<13WaterWC Mtbids>20<1<133WaterWC Mtbids>20<1<133Soot %%ASTM D5185(m)>20<1.55.57.2SulfationAbs/mASTM D7844*OO00NitrationAbs/mASTM D5185(m)>192126BoronppmASTM D5185(m)>192126BoronppmASTM D5185(m)>192126BoronppmASTM D5185(m)>192126BoronppmASTM D5185(m)>192126BoronppmASTM D5185(m)<1000<1Magnesiumppm <t< th=""><th>Sample Status</th><th></th><th></th><th></th><th>NORMAL</th><th>NORMAL</th><th>NORMAL</th></t<>	Sample Status				NORMAL	NORMAL	NORMAL
NickelppmASTM D5165(m)>2000TitaniumppmASTM D5165(m)>3000SilverppmASTM D5165(m)>3000AluminumppmASTM D5165(m)>30<122LeadppmASTM D5165(m)>30<12<1CopperppmASTM D5165(m)>30<1183TinppmASTM D5165(m)>4<11<1VanadiumppmASTM D5165(m)>+100269PotassiumppmASTM D5165(m)>+100269PotassiumppmASTM D5165(m)>+100269NitrationAbs/cmASTM D7624'>20<1<13Soot %%ASTM D71624'>204.55.57.2SulfationAbs/cmASTM D5165(m)>192126BoronppmASTM D5165(m)>192126BoronppmASTM D5165(m)>192126BoronppmASTM D5165(m)>192126MolybdenumppmASTM D5165(m)<10000MolybdenumppmASTM D5165(m)<1000<1MagnesiumppmASTM D5165(m)<7864480MagnesiumppmASTM D5165(m)37801062162421	Iron	ppm	ASTM D5185(m)	>50	<1	1	1
Titanium         ppm         ASTM D5185(m)         0         0         0           Silver         ppm         ASTM D5185(m)         >3         0         0         0           Aluminum         ppm         ASTM D5185(m)         >9         <1         2         2           Lead         ppm         ASTM D5185(m)         >30         <1         2         <1           Copper         ppm         ASTM D5185(m)         >35         10         18         3           Tin         ppm         ASTM D5185(m)         >4         <1         1         <1           Vanadium         ppm         ASTM D5185(m)         >4         <1         1         <1           Vanadium         ppm         ASTM D5185(m)         >+100         2         6         9           Potassium         ppm         ASTM D5185(m)         >10         1         <1         3           Water         WC Method         >0.1         NEG         NEG         NEG           Soot%         %         ASTM D7624*         >20         4.5         5.5         7.2           Sulfation         Abs/rm         ASTM D5185(m)         >192         1         2         6 </th <th>Chromium</th> <th>ppm</th> <th>ASTM D5185(m)</th> <th>&gt;4</th> <th>0</th> <th>0</th> <th>0</th>	Chromium	ppm	ASTM D5185(m)	>4	0	0	0
Silver         ppm         ASTM D5185(m)         >3         0         0         0           Aluminum         ppm         ASTM D5185(m)         >9         <1	Nickel	ppm	ASTM D5185(m)	>2	0	0	0
Aluminum         ppm         ASTM D5185(m)         >9         <1	Titanium	ppm	ASTM D5185(m)		0	0	0
LeadppmASTM D5185(m)>30<1	Silver	ppm	ASTM D5185(m)	>3	0	0	0
Copper         ppm         ASTM D5185(m)         >35         10         18         3           Tin         ppm         ASTM D5185(m)         >4         <1         1         <1           Vanadium         ppm         ASTM D5185(m)         >4         0         0         <1           Silicon         ppm         ASTM D5185(m)         >+100         2         6         9           Potassium         ppm         ASTM D5185(m)         >+100         2         6         9           Potassium         ppm         ASTM D5185(m)         >+100         2         6         9           Potassium         ppm         ASTM D5185(m)         >+100         2         6         9           Soot %         %         ASTM D7844*         0         0         0         0           Nitration         Abs/.tmm         ASTM D7624*         >20         4.5         5.5         7.2           Sulfation         Abs/.tmm         ASTM D715*         >30         18.1         18.5         18.7           Emulsified Water         scalar         Visual*         >0.1         NEG         NEG         77           Barium         ppm         ASTM D5185(m)	Aluminum	ppm	ASTM D5185(m)	>9	<1	2	2
Tin         ppm         ASTM D5185(m)         >4         <1	Lead	ppm	ASTM D5185(m)	>30	<1	2	<1
VanadiumppmASTM D5185(m) $0$ $0$ $0$ $1$ SiliconppmASTM D5185(m)>+100 $2$ $6$ $9$ PotassiumppmASTM D5185(m)>20 $\mathbf{-1}$ $1$ $3$ WaterWC Method>0.1NEGNEGNEGSoot %%ASTM D784* $0$ $0$ $0$ NitrationAbs/cmASTM D7624*>20 $4.5$ $5.5$ $7.2$ SulfationAbs/1mmASTM D7624*>30 $18.1$ $18.5$ $18.7$ Emulsified WaterscalarVisual*>0.1NEGNEGNEGSodiumppmASTM D5185(m)>192 $1$ $2$ $6$ BoronppmASTM D5185(m)>192 $1$ $2$ $6$ BoronppmASTM D5185(m) $0$ $0$ $0$ $0$ MalybdenumppmASTM D5185(m) $0$ $0$ $0$ $1$ MagnesiumppmASTM D5185(m) $1062$ $1624$ $2129$ PhosphorusppmASTM D5185(m) $3780$ $1062$ $1624$ $2129$ PhosphorusppmASTM D5185(m) $1370$ $1040$ $999$ ZincppmASTM D5185(m) $3800$ $2582$ $2744$ $3246$ OxidationAbs./1mASTM D5185(m) $380$ $14.3$ $14.3$ $14.3$	Copper	ppm	ASTM D5185(m)	>35	10	18	3
Silicon         ppm         ASTM D5185(m)         >+100         2         6         9           Potassium         ppm         ASTM D5185(m)         >20         <1	Tin	ppm	ASTM D5185(m)	>4	<1	1	<1
Potassium         ppm         ASTM D5185(m)         >20         <1	Vanadium	ppm	ASTM D5185(m)		0	0	<1
WaterWC Method>0.1NEGNEGNEGSoot %%ASTM D7844*000NitrationAbs/cmASTM D7624*>204.55.57.2SulfationAbs/lmASTM D7624*>3018.118.518.7Emulsified WaterscalarVisual*>0.1NEGNEGNEGSodiumppmASTM D5185(m)>192126BoronppmASTM D5185(m)>192126BariumppmASTM D5185(m)<1640077BariumppmASTM D5185(m)<1000MolybdenumppmASTM D5185(m)<1646480ManganeseppmASTM D5185(m)<100<11MagnesiumppmASTM D5185(m)3780106216242129PhosphorusppmASTM D5185(m)137010051040999ZincppmASTM D5185(m)1500115710811165SulfurppmASTM D5185(m)3800258227443246	Silicon	ppm	ASTM D5185(m)	>+100	2	6	9
Soot %         %         ASTM D7844*         0         0         0           Nitration         Abs/cm         ASTM D7624*         >20         4.5         5.5         7.2           Sulfation         Abs/.1mm         ASTM D7624*         >20         4.5         5.5         7.2           Sulfation         Abs/.1mm         ASTM D7624*         >30         18.1         18.5         18.7           Emulsified Water         scalar         Visual*         >0.1         NEG         NEG         NEG           Sodium         ppm         ASTM D5185(m)         >192         1         2         6           Boron         ppm         ASTM D5185(m)         >192         6         400         77           Barium         ppm         ASTM D5185(m)         I         0         0         0           Malganese         ppm         ASTM D5185(m)         I         0         0         <11           Magnesium         ppm         ASTM D5185(m)         I         910         538         70           Calcium         ppm         ASTM D5185(m)         3780         1062         1624         2129           Phosphorus         ppm         ASTM D5185(m)	Potassium	ppm	ASTM D5185(m)	>20	<1	<1	3
Nitration         Abs/cm         ASTM D7624*         >20         4.5         5.5         7.2           Sulfation         Abs/1mm         ASTM D7624*         >20         4.5         5.5         7.2           Sulfation         Abs/1mm         ASTM D7624*         >30         18.1         18.5         18.7           Emulsified Water         scalar         Visual*         >0.1         NEG         NEG         NEG           Sodium         ppm         ASTM D5185(m)         >192         1         2         6           Boron         ppm         ASTM D5185(m)         >192         1         2         6           Barium         ppm         ASTM D5185(m)         <10	Water		WC Method	>0.1	NEG	NEG	NEG
SulfationAbs/.1mmASTM D7415*>3018.118.518.7Emulsified WaterscalarVisual*>0.1NEGNEGNEGSodiumppmASTM D5185(m)>192126BoronppmASTM D5185(m)>192640077BariumppmASTM D5185(m) $-192$ 64000MolybdenumppmASTM D5185(m) $-100$ 00MagnesiumppmASTM D5185(m) $-100$ 0<11MagnesiumppmASTM D5185(m) $-100$ 0<11PhosphorusppmASTM D5185(m)3780106216242129PhosphorusppmASTM D5185(m)137010051040999ZincppmASTM D5185(m)1500115710811165SulfurppmASTM D5185(m)3800258227443246OxidationAbs/.1mmASTM D741*>2513.014.314.0	Soot %	%	ASTM D7844*		0	0	0
Emulsified WaterscalarVisual*>0.1NEGNEGNEGSodiumppmASTM D5185(m)>192126BoronppmASTM D5185(m)I640077BariumppmASTM D5185(m)I000MolybdenumppmASTM D5185(m)I5864480ManganeseppmASTM D5185(m)I00<1MagnesiumppmASTM D5185(m)I91053870CalciumppmASTM D5185(m)3780106216242129PhosphorusppmASTM D5185(m)137010051040999ZincppmASTM D5185(m)1500115710811165SulfurppmASTM D5185(m)3800258227443246OxidationAbs/.1mmASTM D7414*>2513.014.314.0	Nitration	Abs/cm	ASTM D7624*	>20	4.5	5.5	7.2
SodiumppmASTM D5185(m)>192126BoronppmASTM D5185(m) $\sim$ 1926400777BariumppmASTM D5185(m) $\sim$ 64000MolybdenumppmASTM D5185(m) $\sim$ 5864480ManganeseppmASTM D5185(m) $\sim$ 00<10	Sulfation	Abs/.1mm	ASTM D7415*	>30	18.1	18.5	18.7
BoronppmASTM D5185(m)G64077BariumppmASTM D5185(m)O00MolybdenumppmASTM D5185(m)C586480ManganeseppmASTM D5185(m)O0<1	Emulsified Water	scalar	Visual*	>0.1	NEG	NEG	NEG
Barium         ppm         ASTM D5185(m)         0         0         0           Molybdenum         ppm         ASTM D5185(m)         Image: State St	Sodium	ppm	ASTM D5185(m)	>192	1	2	6
Molybdenum         ppm         ASTM D5185(m)         58         64         80           Manganese         ppm         ASTM D5185(m)         0         <1           Magnesium         ppm         ASTM D5185(m)         0         <1           Magnesium         ppm         ASTM D5185(m)         910         538         70           Calcium         ppm         ASTM D5185(m)         3780         1062         1624         2129           Phosphorus         ppm         ASTM D5185(m)         1370         1005         1040         999           Zinc         ppm         ASTM D5185(m)         1500         1157         1081         1165           Sulfur         ppm         ASTM D5185(m)         3800         2582         2744         3246           Oxidation         Abs/.1mm         ASTM D7414*         >25         13.0         14.3         14.0	Boron	ppm	ASTM D5185(m)		6	40	77
Manganese         ppm         ASTM D5185(m)         0         <1	Barium	ppm	ASTM D5185(m)		0	0	0
Magnesium         ppm         ASTM D5185(m)         910         538         70           Calcium         ppm         ASTM D5185(m)         3780         1062         1624         2129           Phosphorus         ppm         ASTM D5185(m)         1370         1005         1040         999           Zinc         ppm         ASTM D5185(m)         1500         1157         1081         1165           Sulfur         ppm         ASTM D5185(m)         3800         2582         2744         3246           Oxidation         Abs/.1mm         ASTM D7414*         >25         13.0         14.3         14.0	Molybdenum	ppm	ASTM D5185(m)		58	64	80
Calcium         ppm         ASTM D5185(m)         3780         1062         1624         2129           Phosphorus         ppm         ASTM D5185(m)         1370         1005         1040         999           Zinc         ppm         ASTM D5185(m)         1500         1157         1081         1165           Sulfur         ppm         ASTM D5185(m)         3800         2582         2744         3246           Oxidation         Abs/.1mm         ASTM D7414*         >25         13.0         14.3         14.0	Manganese	ppm	ASTM D5185(m)		0	0	<1
Phosphorus         ppm         ASTM D5185(m)         1370         1005         1040         999           Zinc         ppm         ASTM D5185(m)         1500         1157         1081         1165           Sulfur         ppm         ASTM D5185(m)         3800         2582         2744         3246           Oxidation         Abs/.1mm         ASTM D7414*         >25         13.0         14.3         14.0	Magnesium	ppm	ASTM D5185(m)		910	538	70
Zinc         ppm         ASTM D5185(m)         1500         1157         1081         1165           Sulfur         ppm         ASTM D5185(m)         3800         2582         2744         3246           Oxidation         Abs/.1mm         ASTM D7414*         >25         13.0         14.3         14.0	Calcium	ppm	ASTM D5185(m)	3780	1062	1624	2129
Sulfur         ppm         ASTM D5185(m)         3800         2582         2744         3246           Oxidation         Abs/.1mm         ASTM D7414*         >25         13.0         14.3         14.0	Phosphorus	ppm	ASTM D5185(m)	1370	1005	1040	999
Oxidation         Abs/.1mm         ASTM D7414*         >25         13.0         14.3         14.0	Zinc	ppm	ASTM D5185(m)	1500	1157	1081	1165
	Sulfur	ppm	ASTM D5185(m)	3800	2582	2744	3246
Visc @ 100°C         cSt         ASTM D7279(m)         15.4         14.9         13.5         14.2	Oxidation	Abs/.1mm	ASTM D7414*	>25	13.0	14.3	14.0
	Visc @ 100°C	cSt	ASTM D7279(m)	15.4	14.9	13.5	14.2

Contact/Location: Brett Kinkley - POWMIS Page 1 of 2





Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 CALA Sample No. : PN0006186 Received : 21 May 2024 Lab Number : 02636610 Tested : 21 May 2024 ISO 17025:2017 Accredited Laboratory Diagnosed Unique Number : 5785772 : 21 May 2024 - Wes Davis Test Package : MOB 1 To discuss this sample report, contact Customer Service at 1-800-268-2131.

Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab. Validity of results and interpretation are based on the sample and information as supplied.

POWER STATION INC. 1050 JAYSON COURT MISSISSAUGA, ON CA L4W 2V5 Contact: Brett Kinkley Bkinkley@pwrstn.com T: F: (905)565-8544

May13/24

Aav13/74

Report Id: POWMIS [WCAMIS] 02636610 (Generated: 05/21/2024 15:20:05) Rev: 1

Contact/Location: Brett Kinkley - POWMIS Page 2 of 2