



Identité de la machine  
**MACK 4012**  
 Composant  
**Moteur diesel**  
 Fluide  
**PETRO CANADA DURON SHP 10W30 (--- GAL)**

**RECOMMANDATION**

Échantillonner de nouveau l'équipement au prochain intervalle de vidange afin d'en surveiller la condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Numéro d'échant.		Client Info		<b>PC0076036</b>	PC0060252	PC0060919
Date d'échant.		Client Info		<b>10 Jul 2023</b>	10 Feb 2023	20 May 2022
Âge d la Machine	kms	Client Info		<b>373156</b>	283988	142012
Âge de l'huile	kms	Client Info		<b>89168</b>	85612	56361
Âge du filtre	kms	Client Info		<b>89168</b>	85612	56361
Huile changée		Client Info		<b>Changed</b>	Changed	Changed
Filtre changé		Client Info		<b>Changed</b>	Changed	Changed
Statut de l'échant.				<b>NORMAL</b>	NORMAL	NORMAL

**USURE**

Les taux d'usure de tous les composants sont normaux.

Fer	ppm	ASTM D5185(m)	>120	<b>45</b>	38	23
Chrome	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185(m)	>5	<b>&lt;1</b>	<1	<1
Titane	ppm	ASTM D5185(m)	>2	<b>0</b>	<1	0
Argent	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	0	<1
Aluminium	ppm	ASTM D5185(m)	>20	<b>4</b>	6	8
Plomb	ppm	ASTM D5185(m)	>40	<b>3</b>	2	5
Cuivre	ppm	ASTM D5185(m)	>330	<b>19</b>	25	138
Étain	ppm	ASTM D5185(m)	>15	<b>2</b>	2	2
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0

**CONTAMINATION**

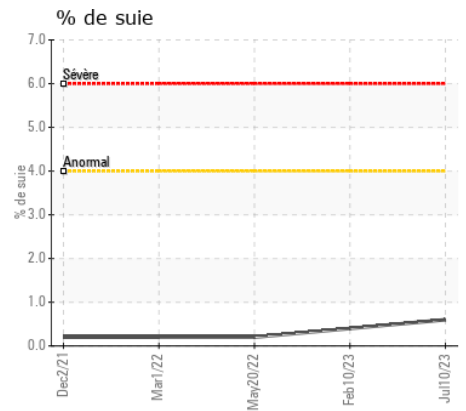
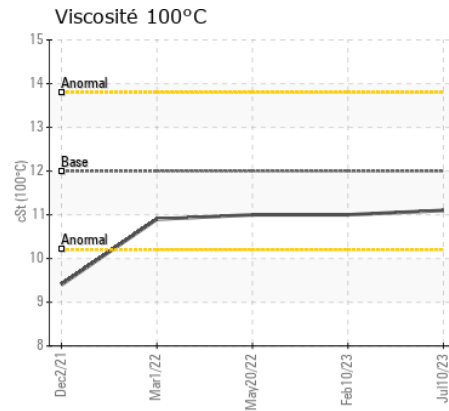
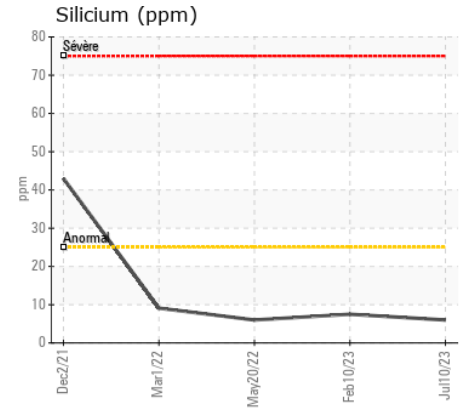
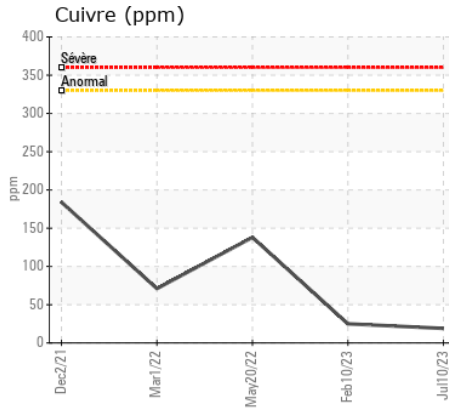
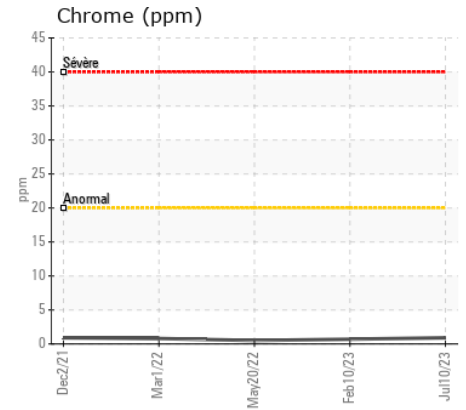
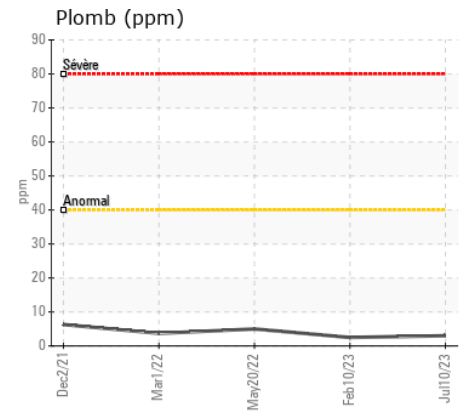
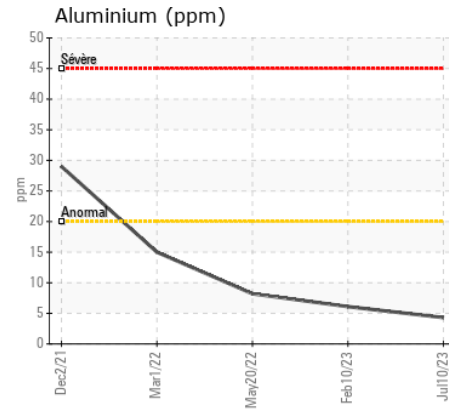
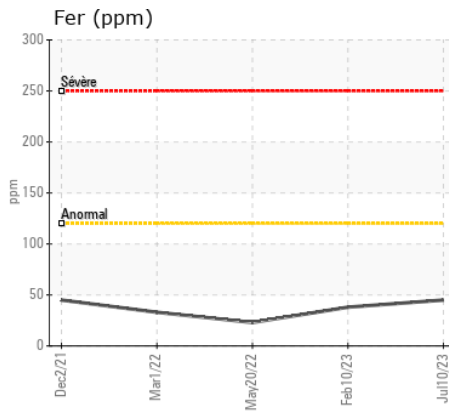
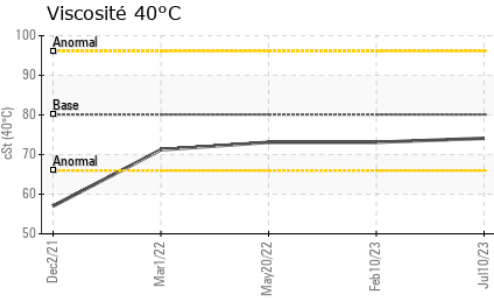
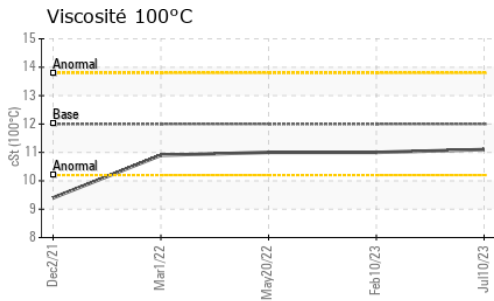
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. Il n'y a aucun indice de contamination dans l'huile.

Silicium	ppm	ASTM D5185(m)	>25	<b>6</b>	8	6
Potassium	ppm	ASTM D5185(m)	>20	<b>7</b>	12	18
Essence		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Glycol		WC Method		<b>NEG</b>	NEG	NEG
% de suie	%	ASTM D7844*	>4	<b>0.6</b>	0.4	0.2
Nitration	Abs/cm	ASTM D7624*	>20	<b>12.2</b>	11.6	9.5
Sulfatation	Abs/.1mm	ASTM D7415*	>30	<b>25.2</b>	25.5	22.8
Eau émulsifiée	scalar	Visual*	>0.2	<b>NEG</b>	NEG	NEG

**ÉTAT DU FLUIDE**

L'état de l'huile est acceptable pour la durée de service.

Sodium	ppm	ASTM D5185(m)		<b>4</b>	2	2
Bore	ppm	ASTM D5185(m)	2	<b>1</b>	2	2
Baryum	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Molybdène	ppm	ASTM D5185(m)	50	<b>60</b>	62	59
Manganèse	ppm	ASTM D5185(m)	0	<b>1</b>	1	<1
Magnésium	ppm	ASTM D5185(m)	950	<b>966</b>	923	963
Calcium	ppm	ASTM D5185(m)	1050	<b>1070</b>	1125	1118
Phosphore	ppm	ASTM D5185(m)	995	<b>945</b>	930	875
Zinc	ppm	ASTM D5185(m)	1180	<b>1177</b>	1155	1176
Soufre	ppm	ASTM D5185(m)	2600	<b>2093</b>	2150	2027
Oxydation	Abs/.1mm	ASTM D7414*	>25	<b>21.1</b>	19.0	17.2
Visc 40°C	cSt	ASTM D7279(m)	80.1	<b>74.1</b>	73.1	73.1
Visc 100°C	cSt	ASTM D7279(m)	12.00	<b>11.1</b>	11.0	11.0
Indice de viscosité (VI)	Scale	ASTM D2270*	144	<b>140</b>	140	140



ISO 17025:2017  
Accredited  
Laboratory

**Laboratoire** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**N° d'échantillon** : PC0076036 **Reçu** : 26 Jul 2023  
**N° de laboratoire** : 02572127 **Diagnostiqué** : 26 Jul 2023  
**Numéro unique** : 5617178 **Diagnostiqueur** : Wes Davis  
**Analyse** : MOB 1 ( Additional Tests: KV40, VI )

**LOCATION BROSSARD INC**  
 2190 HYMUS  
 DORVAL, QC  
 CA H9P 1J7  
 Contact: Shawn Lamoureux  
 slamoureux@brossard.com

Pour discuter ce rapport, contacter le service à la clientèle au 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 La validez de los resultados y la interpretación se basan en la muestra y la información proporcionada.

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