

## **OIL ANALYSIS REPORT**

### Area **SCHEID PRODUCE INC HINO SPI42**

**Diesel Engine** Fluic PETRO CANADA DURON SHP 10W30 (16 QT

#### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

All component wear rates are normal.

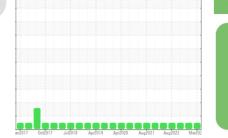
#### Contamination

There is no indication of any contamination in the oil.

#### Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sample Number     Client Info     PCA0110684     PCA0097331     PCA00       Sample Date     Client Info     27 Mar 2024     20 Jul 2023     06 Apr       Machine Age     mis     Client Info     246823     230641     223974       Oil Age     Mis     Client Info     Changed     Changed <th colspan="12"></th>												
Sample Date     Client Info     27 Mar 2024     20 Jul 2023     06 Apr Machine Age       Machine Age     mis     Client Info     246823     230641     22397       Oil Age     mis     Client Info     99175     6667     8136       Oil Changed     Client Info     Changed	SAMPLE INFORM	NATION	method	limit/base	current	history1	history2					
Sample Date     Client Info     27 Mar 2024     20 Jul 2023     06 Apr Vachine Age       Dil Age     mls     Client Info     246823     230641     22397       Dil Changed     Client Info     99175     6667     8136       Dil Changed     Client Info     Changed     Changed <td>Sample Number</td> <td></td> <td>Client Info</td> <td></td> <td>PCA0110684</td> <td>PCA0097331</td> <td>PCA0083804</td>	Sample Number		Client Info		PCA0110684	PCA0097331	PCA0083804					
Machine Age     mls     Client Info     246823     230641     223974       Dil Age     mls     Client Info     99175     6667     8136       Dil Age     Client Info     NORMAL     NORMAL     NORMAL     NORMAL       Sample Status     Client Info     NORMAL     NORMAL     NORMAL     NORMAL       CONTAMINATION     method     Imit/base     current     history1     file       Tol     VC Method     >0.2     NEG     NEG     NEG       Nycol     WC Method     >0.2     NEG     NEG     NEG       VEAR METALS     method     Imit/base     current     history1     file       Vickel     ppm     ASTM D5185m     >100     10     8     9       Chromium     ppm     ASTM D5185m     >20     1     <1			Client Info		27 Mar 2024	20 Jul 2023	06 Apr 2023					
Dil Changed Sample Status     Client Info     Changed NORMAL     NORMAL     NORMAL <th< td=""><td>Age</td><td>mls</td><td>Client Info</td><td></td><td>246823</td><td>230641</td><td>223974</td></th<>	Age	mls	Client Info		246823	230641	223974					
Sample Status     NORMAL     Norm     Call     Call <thcall< th="">     Call</thcall<>	Dil Age	mls	Client Info		99175	6667	8136					
CONTAMINATION     method     limit/base     current     history1     history1       Fuel     WC Method     >5     <1.0	Dil Changed		Client Info		Changed	Changed	Changed					
Fuel     WC Method     >5     <1.0     <1.0     <1.0     <1.0       Water     WC Method     >0.2     NEG     NEG     NEG     NEG       Slycol     WC Method     Imit/base     current     history1     history1       VEAR METALS     method     Imit/base     current     history1     history1       Vickel     ppm     ASTM D5185m     >20     1     <1	Sample Status				NORMAL	NORMAL	NORMAL					
Water     WC Method     >0.2     NEG     NEG     NEG     NEG     NEG       Blycol     WC Method     NEG     NEG     NEG     NEG       WEAR METALS     method     limit/base     current     history1     history1     history1       ron     ppm     ASTM D5185m     >100     10     8     9       Chromium     ppm     ASTM D5185m     >20     1     <1	CONTAMINATI	ON	method	limit/base	current	history1	history2					
Bilycol     WC Method     NEG     NEG     NEG     NEG       WEAR METALS     method     limit/base     current     history1     history1       ron     ppm     ASTM D5185m     >100     10     8     9       Dhromium     ppm     ASTM D5185m     >20     1     <1	uel		WC Method	>5	<1.0	<1.0	<1.0					
WEAR METALS     method     limit/base     current     history1     history1       ron     ppm     ASTM D5185m     >100     10     8     9       Chromium     ppm     ASTM D5185m     >20     1     <1	Vater		WC Method	>0.2	NEG	NEG	NEG					
ron     ppm     ASTM D5185m     >100     10     8     9       Chromium     ppm     ASTM D5185m     >20     1     <1	àlycol		WC Method		NEG	NEG	NEG					
Dromium     ppm     ASTM D5185m     >20     1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1	WEAR METALS	5	method	limit/base	current	history1	history2					
Dromium     ppm     ASTM D5185m     >20     1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1			ASTM D5185m	>100	10							
Nickel     ppm     ASTM D5185m     >4     <1     0     0       Fitanium     ppm     ASTM D5185m     57     4     26       Silver     ppm     ASTM D5185m     >3     0     0     0       Auminum     ppm     ASTM D5185m     >20     2     2     4       ead     ppm     ASTM D5185m     >330     1     2     0       Copper     ppm     ASTM D5185m     >15     <1	-				-							
Titanium     ppm     ASTM D5185m     57     4     26       Silver     ppm     ASTM D5185m     >3     0     0     0       Numinum     ppm     ASTM D5185m     >20     2     2     4       ead     ppm     ASTM D5185m     >20     2     2     4       ead     ppm     ASTM D5185m     >40     <1	lickel		ASTM D5185m	>4	<1	0	0					
Silver     ppm     ASTM D5185m     >3     0     0     0       Aluminum     ppm     ASTM D5185m     >20     2     2     4       Lead     ppm     ASTM D5185m     >20     2     2     4       Lead     ppm     ASTM D5185m     >330     1     2     0       Copper     ppm     ASTM D5185m     >15     <1	itanium		ASTM D5185m		57	4	26					
Numinum     ppm     ASTM D5185m     >20     2     2     4       Lead     ppm     ASTM D5185m     >40     <1	Silver		ASTM D5185m	>3	0	0	0					
Dopper     ppm     ASTM D5185m     >330     1     2     0       Tin     ppm     ASTM D5185m     >15     <1	luminum		ASTM D5185m	>20	2	2	4					
Dopper     ppm     ASTM D5185m     >330     1     2     0       Tin     ppm     ASTM D5185m     >15     <1	ead		ASTM D5185m	>40	<1	<1	0					
Tin     ppm     ASTM D5185m     >15     <1     0     <1       Vanadium     ppm     ASTM D5185m     1     <1	Copper		ASTM D5185m	>330	1	2	0					
Vanadium     ppm     ASTM D5185m     1     <1     <1     0       Cadmium     ppm     ASTM D5185m     <1     0     0       ADDITIVES     method     limit/base     current     history1     history1       Boron     ppm     ASTM D5185m     2     70     10     18       Barium     ppm     ASTM D5185m     2     70     10     18       Barium     ppm     ASTM D5185m     0     0     0     0     0     0       Magnesium     ppm     ASTM D5185m     50     20     61     44       Magnesium     ppm     ASTM D5185m     950     518     973     833       Calcium     ppm     ASTM D5185m     950     1547     1207     1370       Phosphorus     ppm     ASTM D5185m     995     960     1058     1060       Contact     ppm     ASTM D5185m     2600     3672     3294     3847       Solifur     ppm     ASTM D5185m			ASTM D5185m	>15	<1	0	<1					
ADDITIVES     method     limit/base     current     history1     history1       Boron     ppm     ASTM D5185m     2     70     10     18       Barium     ppm     ASTM D5185m     0     0     0     0       Magnese     ppm     ASTM D5185m     0     20     61     44       Magnesium     ppm     ASTM D5185m     0     <1	/anadium	ppm	ASTM D5185m		1	<1	0					
Boron     ppm     ASTM D5185m     2     70     10     18       Barium     ppm     ASTM D5185m     0     0     0     0     0       Malybdenum     ppm     ASTM D5185m     50     20     61     44       Manganese     ppm     ASTM D5185m     0     <1	Cadmium	ppm	ASTM D5185m		<1	0	0					
Barium     ppm     ASTM D5185m     0     0     0     0       Molybdenum     ppm     ASTM D5185m     50     20     61     44       Manganese     ppm     ASTM D5185m     0     <1	ADDITIVES		method	limit/base	current	history1	history2					
Molybdenum     ppm     ASTM D5185m     50     20     61     44       Manganese     ppm     ASTM D5185m     0     <1	Boron	ppm	ASTM D5185m	2	70	10	18					
Manganese     ppm     ASTM D5185m     0     <1     <1     <1     <1       Magnesium     ppm     ASTM D5185m     950     518     973     833       Calcium     ppm     ASTM D5185m     1050     1547     1207     1370       Phosphorus     ppm     ASTM D5185m     1050     1547     1207     1370       Phosphorus     ppm     ASTM D5185m     995     960     1058     1060       Zinc     ppm     ASTM D5185m     995     960     1058     1060       Zinc     ppm     ASTM D5185m     995     960     1058     1060       Zinc     ppm     ASTM D5185m     2600     3672     3294     3847       CONTAMINANTS     method     limit/base     current     history1     history1       Silicon     ppm     ASTM D5185m     >25     6     3     3       Potassium     ppm     ASTM D5185m     >20     4     3     2       INFRA-RED     method	Barium	ppm	ASTM D5185m	0	0	0	0					
Agnesium     ppm     ASTM D5185m     950     518     973     833       Calcium     ppm     ASTM D5185m     1050     1547     1207     1370       Phosphorus     ppm     ASTM D5185m     1050     1547     1207     1370       Phosphorus     ppm     ASTM D5185m     995     960     1058     1060       Zinc     ppm     ASTM D5185m     1180     1139     1325     1224       Sulfur     ppm     ASTM D5185m     2600     3672     3294     384       CONTAMINANTS     method     limit/base     current     history1     his       Silicon     ppm     ASTM D5185m     >25     6     3     3     3       Potassium     ppm     ASTM D5185m     >20     4     3     2       INFRA-RED     method     limit/base     current     history1     his       Soot %     %     *ASTM D7624     >3     0.7     0.8     0.9       Nitration     Abs/cm     *A	lolybdenum	ppm	ASTM D5185m	50	20	61	44					
Description     ppm     ASTM D5185m     1050     1547     1207     1374       Phosphorus     ppm     ASTM D5185m     995     960     1058     1060       Zinc     ppm     ASTM D5185m     1180     1139     1325     1224       Sulfur     ppm     ASTM D5185m     2600     3672     3294     3844       CONTAMINANTS     method     limit/base     current     history1     his       Silicon     ppm     ASTM D5185m     >25     6     3 <td< td=""><td></td><td>ppm</td><td>ASTM D5185m</td><td>0</td><td>&lt;1</td><td>&lt;1</td><td>&lt;1</td></td<>		ppm	ASTM D5185m	0	<1	<1	<1					
Phosphorus     ppm     ASTM D5185m     995     960     1058     1060       Zinc     ppm     ASTM D5185m     1180     1139     1325     1224       Sulfur     ppm     ASTM D5185m     2600     3672     3294     384       CONTAMINANTS     method     limit/base     current     history1     history1       Solicon     ppm     ASTM D5185m     >25     6     3     3       Solicon     ppm     ASTM D5185m     >25     6     3     3       Potassium     ppm     ASTM D5185m     >20     4     3     2       INFRA-RED     method     limit/base     current     history1     history1       Soot %     %     *ASTM D7844     >3     0.7     0.8     0.9       Jitration     Abs/cm     *ASTM D7624     >20     10.1     8.4     9.4       Sulfation     Abs/.1mm     *ASTM D7415     >30     20.9     19.2     18.7       FLUID DEGRADATION     method <thimit b<="" td=""><td>lagnesium</td><td>ppm</td><td>ASTM D5185m</td><td>950</td><td>518</td><td>973</td><td>833</td></thimit>	lagnesium	ppm	ASTM D5185m	950	518	973	833					
Zinc     ppm     ASTM D5185m     1180     1139     1325     1224       Sulfur     ppm     ASTM D5185m     2600     3672     3294     384       CONTAMINANTS     method     limit/base     current     history1     hist       Silicon     ppm     ASTM D5185m     >25     6     3     3       Sodium     ppm     ASTM D5185m     >25     6     3     3       Potassium     ppm     ASTM D5185m     >20     4     3     2       INFRA-RED     method     limit/base     current     history1     history1       Soot %     %     *ASTM D7844     >3     0.7     0.8     0.9       Jitration     Abs/cm     *ASTM D7624     >20     10.1     8.4     9.4       Sulfation     Abs/.1mm     *ASTM D7415     >30     20.9     19.2     18.7	Calcium	ppm	ASTM D5185m	1050	1547	1207	1370					
Description     ppm     ASTM D5185m     1180     1139     1325     1224       Gulfur     ppm     ASTM D5185m     2600     3672     3294     384       CONTAMINANTS     method     limit/base     current     history1     hist       Silicon     ppm     ASTM D5185m     >25     6     3     3       Sodium     ppm     ASTM D5185m     >25     6     3     3       Potassium     ppm     ASTM D5185m     >20     4     3     2       INFRA-RED     method     limit/base     current     history1     history1       Soot %     %     *ASTM D7844     >3     0.7     0.8     0.9       Jitration     Abs/cm     *ASTM D7624     >20     10.1     8.4     9.4       Sulfation     Abs/.1mm     *ASTM D7415     >30     20.9     19.2     18.7       FLUID DEGRADATION     method     limit/base     current     history1     history1	hosphorus	ppm	ASTM D5185m	995	960	1058	1060					
CONTAMINANTSmethodlimit/basecurrenthistory1hisSiliconppmASTM D5185m>25633SodiumppmASTM D5185m343PotassiumppmASTM D5185m>20432INFRA-REDmethodlimit/basecurrenthistory1history1Soot %%*ASTM D7844>30.70.80.9JitrationAbs/cm*ASTM D7624>2010.18.49.4SulfationAbs/cm*ASTM D7415>3020.919.218.7FLUID DEGRADATIONmethodlimit/basecurrenthistory1history1		ppm	ASTM D5185m	1180	1139	1325	1224					
Silicon     ppm     ASTM D5185m     >25     6     3     3       Sodium     ppm     ASTM D5185m     >20     3     4     3       Potassium     ppm     ASTM D5185m     >20     4     3     2       INFRA-RED     method     limit/base     current     history1     history1       Soot %     %     *ASTM D7844     >3     0.7     0.8     0.9       Jitration     Abs/cm     *ASTM D7624     >20     10.1     8.4     9.4       Sulfation     Abs/Imm     *ASTM D7415     >30     20.9     19.2     18.7       FLUID DEGRADATION     method     limit/base     current     history1     history1	Sulfur	ppm	ASTM D5185m	2600	3672	3294	3847					
Sodium     ppm     ASTM D5185m     3     4     3       Potassium     ppm     ASTM D5185m     >20     4     3     2       INFRA-RED     method     limit/base     current     history1     his       Soot %     %     *ASTM D7844     >3     0.7     0.8     0.9       Nitration     Abs/cm     *ASTM D7624     >20     10.1     8.4     9.4       Sulfation     Abs/cm     *ASTM D7615     >30     20.9     19.2     18.7       FLUID DEGRADATION     method     limit/base     current     history1     history1	CONTAMINAN	ΓS	method	limit/base	current	history1	history2					
Potassium     ppm     ASTM D5185m     >20     4     3     2       INFRA-RED     method     limit/base     current     history1     history1       Soot %     %     *ASTM D7844     >3     0.7     0.8     0.9       Mitration     Abs/cm     *ASTM D7624     >20     10.1     8.4     9.4       Sulfation     Abs/.1mm     *ASTM D7415     >30     20.9     19.2     18.7       FLUID DEGRADATION     method     limit/base     current     history1     history1	Silicon	ppm	ASTM D5185m	>25	6	3	3					
INFRA-REDmethodlimit/basecurrenthistory1history1Soot %%*ASTM D7844>30.70.80.9NitrationAbs/cm*ASTM D7624>2010.18.49.4SulfationAbs/.1mm*ASTM D7115>3020.919.218.7FLUID DEGRADATIONmethodlimit/basecurrenthistory1history1	Sodium	ppm	ASTM D5185m		3	4	3					
Soot %     %     *ASTM D7844     >3     0.7     0.8     0.9       Vitration     Abs/cm     *ASTM D7624     >20     10.1     8.4     9.4       Sulfation     Abs/.1mm     *ASTM D7415     >30     20.9     19.2     18.7       FLUID DEGRADATION     method     limit/base     current     history1     history1	Potassium	ppm	ASTM D5185m	>20	4	3	2					
NitrationAbs/cm*ASTM D7624>2010.18.49.4SulfationAbs/.1mm*ASTM D7415>3020.919.218.7FLUID DEGRADATIONmethodlimit/basecurrenthistory1history1	INFRA-RED		method	limit/base	current	history1	history2					
NitrationAbs/cm*ASTM D7624>2010.18.49.4SulfationAbs/.1mm*ASTM D7415>3020.919.218.7FLUID DEGRADATIONmethodlimit/basecurrenthistory1history1	Soot %	%	*ASTM D7844	>3	0.7	0.8	0.9					
Sulfation     Abs/.1mm     *ASTM D7415     >30     20.9     19.2     18.7       FLUID DEGRADATION     method     limit/base     current     history1     history1												
							18.7					
	FLUID DEGRAD	ATION	method	limit/base	current	history1	history2					
			*ASTM D7414	>25	17.7	15.7	16.4					
Base Number (BN) mg KOH/g ASTM D2896 7.0 8.9 7.5												



Sample Rating Trend



NORMAL

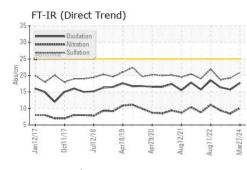
Report Id: MILLAN [WUSCAR] 06140887 (Generated: 04/10/2024 10:49:38) Rev: 1

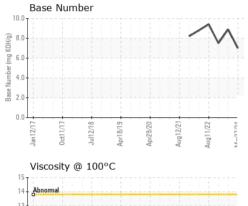
Contact/Location: RON ROBERTS - MILLAN Page 1 of 2

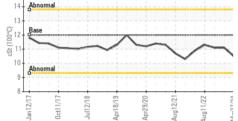


# **OIL ANALYSIS REPORT**

VICLAI







	VISUAL		method	limit/base	current	history1	history2	
	White Metal scalar		*Visual	NONE	NONE	NONE	NONE	
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE	
~~~	Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE	
~~	Silt	scalar	*Visual	NONE	NONE	NONE	NONE	
	Debris	scalar	*Visual	NONE	NONE	NONE	NONE	
and the second	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE	
1/22	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML	
Aug 1 2/21 Aug 1 1/22 Mar2 7/24	Odor	scalar	*Visual	NORML	NORML	NORML	NORML	
	Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG	
	Free Water	scalar	*Visual		NEG	NEG	NEG	
$\sim$	FLUID PROPE		method	limit/base	current	history1	history2	
	Visc @ 100°C	cSt	ASTM D445	12.00	10.5	11.1	11.1	
	GRAPHS							
	Iron (ppm)				Lead (ppm)			
	250			100				
лстсм	200 - Severe				80 - Severe			
Aug	E <sup>150</sup> - Abnormal			5	60 Abnormal			
	100 - 0							
	50				20 -			
		/19-	22	/24		/19	/21 /22	
	Jan 12/17 Oct11/17 Jul12/18	Apr1 8/19 Apr2 9/20	Aug 12/21 Aug 11/22	Mar27/24	Jan 12/17 Oct1 1/17 Jul12/18	Apr18/19 Apr29/20	Aug12/21 Aug11/22 Mar27/24	
$\sim$	Aluminum (ppm)			<u> </u>	Chromium (p	nm)		
$\sim$	50 T			ingen d	50 T			
	40 - Severe				40 - Severe			
	20 - Abnormal			E E	30			
Aug11/22 Aug11/22	all 20 - Abnormal			udd	20 - Abnormal			
Aug	10				10			
		10	21	24		61 02	22	
	Jan 12/17 Oct 11/17 Jul 12/18	Apr1 8/19 Apr2 9/20	Aug 12/21 Aug 11/22	Mar27/24	Jan 12/17 Oct1 1/17 Jul1 2/18	Apr18/19 Apr29/20	Aug12/21 Aug11/22 Mar27/24	
	, – ,	A A	Aı	≥	,		Aı M	
	Copper (ppm)			80	Silicon (ppm)			
	400 Severe Pubitormati				60			
	톱 200 -			udd	Abnormal			
	100-				20 -			
		6 0	5	4	0			
	Jan 12/17 Oct11/17 Jul12/18	Apr18/19 Apr29/20	Aug 12/21 Aug 11/22	Mar27/24	Jan 12/17 Oct1 1/17 Jul1 2/18	Apr18/19 Apr29/20	Aug12/21 Aug11/22 Mar27/24	
	-		Au	M	,		Au	
	Viscosity @ 100°C			10	Base Number	-		
	14 Abnormal			B	.0		$\sim$	
				В б	.0-			
	(0-001) 12 - Base	$\sim$	$\sim$	- <sup>1</sup> <sup>1</sup> <sup>1</sup> <sup>1</sup>	.0			
	10 Abnormal		$\sim$	Nn es 2	.0			
	8				.0			
	Jan 12/17 Oct11/17 Jul12/18	Apr18/19 Apr29/20	Aug 12/21 Aug 11/22	Mar27/24	Jan 12/17 Oct1 1/17 Jul1 2/18	Apr18/19 Apr29/20	Aug12/21 Aug11/22 Mar27/24	
	Jar Ju	Ap	Aug	Ma	Jar Jul	Api	Aug Aug Mar	
Lab Number : 06140887 T		Recei Teste Diagr	ved : 08   d : 08   iosed : 10	, NC 27513 Apr 2024 Apr 2024 Apr 2024 - Jonathan Hester		MILLER TRUCK LEASING #123 66 KELLER AVENUE LANCASTER, PA US 17601 Contact: PON POPERTS		



Unique Number : 10965695 Diagnosed : 10 Apr 2024 - Jonathan Hester Test Package : MOB 1 (Additional Tests: TBN) Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Report Id: MILLAN [WUSCAR] 06140887 (Generated: 04/10/2024 10:49:38) Rev: 1

Contact/Location: RON ROBERTS - MILLAN

Contact: RON ROBERTS

T: (717)945-6205

F: (717)945-5818

rroberts@millertransgroup.com