

# **OIL ANALYSIS REPORT**

Sample Rating Trend

NORMAL



#### Area Scoop 6 Yard Machine Id LHD6104 Component

### PETRO CANADA TRAXON 80W90 (3 LTR)

Sample Number         Client Info         PC0074894             Sample Date         Client Info         20 Jan 2024             Machine Age         hrs         Client Info         3370             Oil Age         hrs         Client Info         0             Oil Changed         Client Info         N/A             Sample Status         Client Info         N/A             Sample Status         Client Info         N/A             CONTAMINATION         method         Imit/base         current         history1         history1           Water         WC Method         >0.2         NEG             VeAR METALS         method         imit/base         current         history1         history1           PQ         ASTM D5156(m)         >10         <1              Itrainum         ppm         ASTM D5156(m)         0              Sliver         ppm         ASTM D5156(m)         1 <th></th> <th>•</th> <th></th> <th></th> <th>Jan 2024</th> <th></th> <th></th>		•			Jan 2024		
Sample Date         Client Info         20 Jan 2024             Machine Age         hrs         Client Info         3370             Oil Age         hrs         Client Info         0             Oil Changed         Client Info         N/A             Sample Status         NORMAL             CONTAMINATION         method         limit/base         current         history1         history2           Water         WC Method         >0.2         NEG             WEAR METALS         method         limit/base         current         history1         history2           PQ         ASTM D5185(m)         >10         <1             Nickel         ppm         ASTM D5185(m)         1             Aluminum         ppm         ASTM D5185(m)         33             Aduminum         ppm         ASTM D5185(m)         33             Aluminum         ppm         ASTM D5185(m)         0             Copper	SAMPLE INFOR	RMATION	method	limit/base	current	history1	history2
Machine Age         hrs         Client Info         3370             Oil Age         hrs         Client Info         0              Oil Age         hrs         Client Info         N/A              Sample Status         Client Info         N/A              CONTAMINATION         method         Imit/base         current         history1         history2           Water         WC Method         >0.2         NEG             WEAR METALS         method         limit/base         current         history1         history2           PQ         ASTM D8184'         32               Nickel         ppm         ASTM D8184'         32              Nickel         ppm         ASTM D8184'         32              Nickel         ppm         ASTM D8185(m)         >10         -1             Aluminum         ppm         ASTM D8185(m)         0	Sample Number		Client Info		PC0074894		
Oil Age         hrs         Client Info         0             Gil Changed         Client Info         N/A             Sample Status         Client Info         N/A             CONTAMINATION         method         limit/base         current         history1         history1           Water         WC Method         >0.2         NEG             WEAR METALS         method         limit/base         current         history1         history1           PQ         ASTM D6185(m)         >20.0         217             Iron         ppm         ASTM D6185(m)         >10         <1	Sample Date		Client Info		20 Jan 2024		
Oil Changed Sample Status         Client Info         N/A             Sample Status         method         Imit/base         current         history1         history1           CONTAMINATION         method         Imit/base         current         history1         history1           Water         WC Method         >0.2         NEG             WEAR METALS         method         limit/base         current         history1         history1           PQ         ASTM D5186(m)         >200         217             Iron         ppm         ASTM D5186(m)         >10         <1             Nickel         ppm         ASTM D5186(m)         10         <1             Aluminum         ppm         ASTM D5186(m)         0              Lead         ppm         ASTM D5186(m)         0              Antimony         ppm         ASTM D5186(m)         0              Antimony         ppm         ASTM D5186(m)         0	Machine Age	hrs	Client Info		3370		
Sample Status         NORMAL             CONTAMINATION         method         limit/base         current         history1         history2           Water         WC Method         >0.2         NEG             WEAR METALS         method         limit/base         current         history1         history2           PQ         ASTM D8184/         32              Chromium         ppm         ASTM D5185(m)         >200         217             Nickel         ppm         ASTM D5185(m)         >10         <1	Oil Age	hrs	Client Info		0		
CONTAMINATION         method         limit/base         current         history1         history2           Water         WC Method         >0.2         NEG             WEAR METALS         method         limit/base         current         history1         history1           PQ         ASTM D8184'         32              Iron         ppm         ASTM D5185(m)         >10         <1	Oil Changed		Client Info		N/A		
Water         WC Method         >0.2         NEG             WEAR METALS         method         limit/base         current         history1         history2           PQ         ASTM D8184/         32              Iron         ppm         ASTM D5185(m)         >200         217             Chromium         ppm         ASTM D5185(m)         >10         <1	Sample Status				NORMAL		
WEAR METALS         method         limit/base         current         history1         history2           PQ         ASTM D8184/m         32              Iron         ppm         ASTM D8185(m)         >200         217             Chromium         ppm         ASTM D5185(m)         >10         <1	CONTAMINA	ΓΙΟΝ	method	limit/base	current	history1	history2
PQ         ASTM D8184*         32             Iron         ppm         ASTM D5185(m)         >200         217             Chromium         ppm         ASTM D5185(m)         >10         <1             Nickel         ppm         ASTM D5185(m)         >10         <1             Silver         ppm         ASTM D5185(m)         1              Aluminum         ppm         ASTM D5185(m)         33              Aluminum         ppm         ASTM D5185(m)         <1              Aluminum         ppm         ASTM D5185(m)         <1              Copper         ppm         ASTM D5185(m)         <0              Antimony         ppm         ASTM D5185(m)         <0             Cadmium         ppm         ASTM D5185(m)         0             Boron         ppm         ASTM D5185(m)         1         <1	Water		WC Method	>0.2	NEG		
Iron         ppm         ASTM D5185(m)         >200         217             Chromium         ppm         ASTM D5185(m)         >10         <1	WEAR METAI	_S	method	limit/base	current	history1	history2
Chromium         ppm         ASTM D5185(m)         >10         <1            Nickel         ppm         ASTM D5185(m)         >10         <1	PQ		ASTM D8184*		32		
Chromium         ppm         ASTM D5185(m)         >10         <1            Nickel         ppm         ASTM D5185(m)         >10         <1		maa		>200			
Nickel         ppm         ASTM D5185(m)         >10         <1             Titanium         ppm         ASTM D5185(m)         1              Silver         ppm         ASTM D5185(m)         0              Aluminum         ppm         ASTM D5185(m)         33              Lead         ppm         ASTM D5185(m)         <1							
Titanium       ppm       ASTM D5185(m)       1           Silver       ppm       ASTM D5185(m)       33           Aluminum       ppm       ASTM D5185(m)       33           Lead       ppm       ASTM D5185(m)       <1							
Silver         ppm         ASTM D5185(m)         0             Aluminum         ppm         ASTM D5185(m)         33             Lead         ppm         ASTM D5185(m)         <1	Titanium		· · ·		1		
Aluminum       ppm       ASTM D5185(m)       33           Lead       ppm       ASTM D5185(m)       <1	Silver				0		
Lead         ppm         ASTM D5185(m)         <1             Copper         ppm         ASTM D5185(m)         <1	Aluminum				33		
Copper         ppm         ASTM D5185(m)         <1             Tin         ppm         ASTM D5185(m)         0              Antimony         ppm         ASTM D5185(m)         >5         0             Vanadium         ppm         ASTM D5185(m)         0              Beryllium         ppm         ASTM D5185(m)         0              Cadmium         ppm         ASTM D5185(m)         0              ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185(m)         243         165             Molybdenum         ppm         ASTM D5185(m)         1         <1	Lead						
Tin         ppm         ASTM D5185(m)         0             Antimony         ppm         ASTM D5185(m)         >5         0             Vanadium         ppm         ASTM D5185(m)         0             Beryllium         ppm         ASTM D5185(m)         0             Cadmium         ppm         ASTM D5185(m)         0             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185(m)         243         165             Molybdenum         ppm         ASTM D5185(m)         1         <1	Copper						
Antimony         ppm         ASTM D5185(m)         >5         0             Vanadium         ppm         ASTM D5185(m)         0         0             Beryllium         ppm         ASTM D5185(m)         0             Cadmium         ppm         ASTM D5185(m)         0             Cadmium         ppm         ASTM D5185(m)         0             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185(m)         24/3         165             Barium         ppm         ASTM D5185(m)         1         <1	Tin						
Vanadium         ppm         ASTM D5185(m)         0             Beryllium         ppm         ASTM D5185(m)         0             Cadmium         ppm         ASTM D5185(m)         0             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185(m)         243         165             Barium         ppm         ASTM D5185(m)         1         <1				>5	0		
Beryllium         ppm         ASTM D5185(m)         0             Cadmium         ppm         ASTM D5185(m)         0             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185(m)         243         165             Barium         ppm         ASTM D5185(m)         1         <1             Molybdenum         ppm         ASTM D5185(m)         1         <1             Manganese         ppm         ASTM D5185(m)         2         13             Magnesium         ppm         ASTM D5185(m)         987         888             Phosphorus         ppm         ASTM D5185(m)         987         888             Zinc         ppm         ASTM D5185(m)         1         39             Sulfur         ppm         ASTM D5185(m)         21530         15613             Lithium         ppm         ASTM D5185(m)	,				0		
Cadmium         ppm         ASTM D5185(m)         0             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185(m)         243         165             Barium         ppm         ASTM D5185(m)         243         165             Molybdenum         ppm         ASTM D5185(m)         0             Manganese         ppm         ASTM D5185(m)         2             Magnesium         ppm         ASTM D5185(m)         2         13             Calcium         ppm         ASTM D5185(m)         6         92             Magnesium         ppm         ASTM D5185(m)         987         888             Calcium         ppm         ASTM D5185(m)         1         39             Zinc         ppm         ASTM D5185(m)         21530         15613             Sulfur         ppm         ASTM D5185(m)         11			( )		0		
Boron         ppm         ASTM D5185(m)         243         165             Barium         ppm         ASTM D5185(m)         1         <1	Cadmium		( /		0		
Barium         ppm         ASTM D5185(m)         1         <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum         ppm         ASTM D5185(m)         0             Manganese         ppm         ASTM D5185(m)         2         13             Magnesium         ppm         ASTM D5185(m)         2         13             Calcium         ppm         ASTM D5185(m)         6         92             Phosphorus         ppm         ASTM D5185(m)         987         888             Zinc         ppm         ASTM D5185(m)         987         888             Zinc         ppm         ASTM D5185(m)         1         39             Sulfur         ppm         ASTM D5185(m)         21530         15613             Lithium         ppm         ASTM D5185(m)         1             Silicon         ppm         ASTM D5185(m)         81             Sodium         ppm         ASTM D5185(m)         11	Boron	ppm	ASTM D5185(m)	243	165		
Manganese         ppm         ASTM D5185(m)         2             Magnesium         ppm         ASTM D5185(m)         2         13             Calcium         ppm         ASTM D5185(m)         6         92             Phosphorus         ppm         ASTM D5185(m)         6         92             Zinc         ppm         ASTM D5185(m)         987         888             Zinc         ppm         ASTM D5185(m)         1         39             Sulfur         ppm         ASTM D5185(m)         21 530         15613             Lithium         ppm         ASTM D5185(m)         1              Silicon         ppm         ASTM D5185(m)         81              Sodium         ppm         ASTM D5185(m)         11	Barium	ppm	ASTM D5185(m)	1	<1		
Magnesium         ppm         ASTM D5185(m)         2         13             Calcium         ppm         ASTM D5185(m)         6         92             Phosphorus         ppm         ASTM D5185(m)         6         92             Phosphorus         ppm         ASTM D5185(m)         987         888             Zinc         ppm         ASTM D5185(m)         1         39             Sulfur         ppm         ASTM D5185(m)         21530         15613             Lithium         ppm         ASTM D5185(m)         1              CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185(m)         81             Sodium         ppm         ASTM D5185(m)         11	Molybdenum	ppm	ASTM D5185(m)		0		
Calcium         ppm         ASTM D5185(m)         6         92             Phosphorus         ppm         ASTM D5185(m)         987         888              Zinc         ppm         ASTM D5185(m)         1         39              Sulfur         ppm         ASTM D5185(m)         21530         15613             Lithium         ppm         ASTM D5185(m)         21530         1             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185(m)         81             Sodium         ppm         ASTM D5185(m)         11	Manganese	ppm	ASTM D5185(m)		2		
Phosphorus         ppm         ASTM D5185(m)         987         888             Zinc         ppm         ASTM D5185(m)         1         39             Sulfur         ppm         ASTM D5185(m)         21530         15613             Lithium         ppm         ASTM D5185(m)         1              CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185(m)         81             Sodium         ppm         ASTM D5185(m)         11	Magnesium	ppm	ASTM D5185(m)	2	13		
Phosphorus         ppm         ASTM D5185(m)         987         888             Zinc         ppm         ASTM D5185(m)         1         39             Sulfur         ppm         ASTM D5185(m)         21530         15613             Lithium         ppm         ASTM D5185(m)         21530         1             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185(m)         81             Sodium         ppm         ASTM D5185(m)         11	Calcium	ppm		6	92		
Sulfur         ppm         ASTM D5185(m)         21530         15613             Lithium         ppm         ASTM D5185(m)         1             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185(m)         81             Sodium         ppm         ASTM D5185(m)         11	Phosphorus	ppm		987	888		
Lithium         ppm         ASTM D5185(m)         1             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185(m)         81             Sodium         ppm         ASTM D5185(m)         11	Zinc	ppm	ASTM D5185(m)	1	39		
CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185(m)     81         Sodium     ppm     ASTM D5185(m)     11	Sulfur	ppm	ASTM D5185(m)	21530	15613		
Silicon         ppm         ASTM D5185(m)         81             Sodium         ppm         ASTM D5185(m)         11	Lithium	ppm	ASTM D5185(m)		1		
Sodium         ppm         ASTM D5185(m)         11	CONTAMINA	NTS	method	limit/base	current	history1	history2
Sodium         ppm         ASTM D5185(m)         11	Silicon	ppm	ASTM D5185(m)		81		
	Sodium		( /		-		
	Potassium	ppm	ASTM D5185(m)	>20	8		

## DIAGNOSIS

### Recommendation

Confirm the source of the lubricant being utilized for top-up/fill. 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

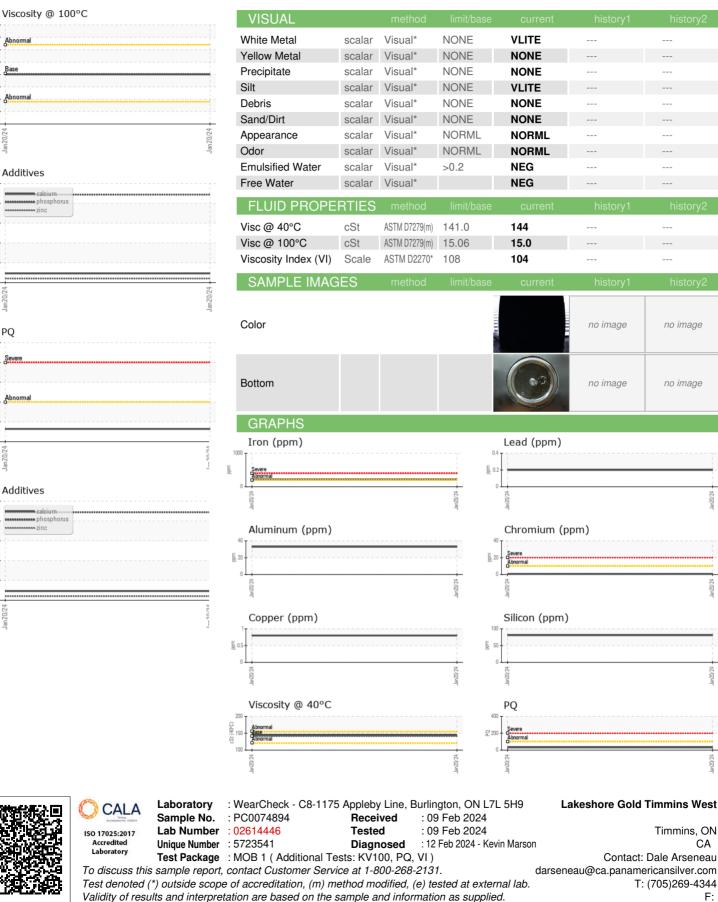
Additive levels indicate the addition of a different brand, or type of oil. The condition of the oil is acceptable for the time in service.



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# **OIL ANALYSIS REPORT**



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Timmins, ON

CA

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no image

no image