

# Lubricant Inspection Report



## METRO TECH SYSTEMS LTD

*Petroleum Products Consultants*  
 Bay 112, 5621 - 11th Street N.E.  
 Calgary, Alberta T2E 6Z7

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**ISO 9001:**  
 Registered Firm

Client  
 Location  
 Unit Number  
 Component  
 Make / Model  
 Serial #

Calgary  
 JEEP GLADIATOR  
 Engine  
 JEEP GLADIATOR

Lab Number:			<b>New Oil</b>
Sample Date:	Oct 03/22		Aug 06/21
Unit:	1567 Km		
Oil:	1567 Km		
Oil Type:	PENNZOIL 0W20		PENNZOIL 0W20
<b>METALS (D5185): Milligrams per Kilogram (PPM)</b>		Highlighted Test Results Indicate Abnormal Concentrations	
Tin	1		0.00
Lead	1		0.80
Copper	8		0.80
Aluminum	3		0
Silicon	47		2.00
Iron	16		1.00
Chromium	0.4		0.00
Silver	0		0.00
Zinc	824		648
Magnesium	428		648
Nickel	0		0.00
Barium	0		0.00
Sodium	2		1.00
Calcium	1250		934
Vanadium	0		0.00
Phosphorus	628		560
Molybdenum	141		77
Boron	94		280
Manganese	10		0.00
<b>PHYSICAL PROPERTIES</b>			
Viscosity (D445) @ 40C			
Viscosity (D445) @ 100C	7.840		8.358
Water (D4007) (% v/v)	0.0		0
Solids (D4007) (% v/v)	0.0		0
Glycol	No		
Fuel Dilution	No		
<b>OTHER PROPERTIES</b>			
Acid No. (D664)			
Base No. (D2896)			
Base No. (D4739)			
Oxidation			
Nitro Compounds			
Organic Nitrates			
Particle Count(ISO 4406)			
Oil Changed?	YES		
<b>COMMENTS      RATING SYSTEM:    A is LOW      B is LOW to MODERATE      C is MODERATE      D is HIGH      E is SEVERE</b>			
Tests indicate the need to CHANGE OIL & FILTER. Silicones (C). Maintain routine sampling.			
Laboratory Telephone (403) 295-8803      Results were verified on Oct 04/22 by      108016 01			

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Client  
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Calgary  
 JEEP GLADIATOR  
 Engine  
 JEEP GLADIATOR

Lab Number:						New Oil
Sample Date:	Oct 21/22	Nov 01/22	Nov 27/22	Dec 19/22	Jan 09/23	Oct 24/22
Unit:	3098 Km	4765 Km	6474 Km	8231 Km	9951 Km	
Oil:	1531 Km	1668 Km	1709 Km	1757 Km	1720 Km	
Oil Type:	Q.S. F.S. 0W20	Q.S. F.S. 0W20	Q.S. F.S. 0W20	Q.S. F.S. 0W20	Q.S. F.S. 0W20	Q.S. F.S. 0W20
<b>METALS (D5185): Milligrams per Kilogram (PPM)</b>						
Highlighted Test Results Indicate Abnormal Concentrations						
Tin	0.8	0	0	0	0	0
Lead	1	0	1	1	1	1
Copper	7	4	3	2	2	0.1
Aluminum	2	2	1	0.9	2	0.6
Silicon	27	13	10	8	7	5
Iron	20	18	22	24	24	1
Chromium	0.5	0.5	0.5	0.6	0.6	0
Silver	0	0	0	0	0	0
Zinc	762	775	788	751	745	775
Magnesium	452	453	432	427	415	446
Nickel	0	0	0	0	0	0
Barium	0	0	0	0	0	0
Sodium	1	1	1	1	2	1
Calcium	1250	1250	1200	1250	1150	1197
Vanadium	0	0	0	0	0	0
Phosphorus	626	627	602	593	614	588
Molybdenum	136	141	138	137	142	137
Boron	80	76	72	69	79	99
Manganese	4	2	1	1	1	0
<b>PHYSICAL PROPERTIES</b>						
Viscosity (D445) @ 40C						
Viscosity (D445) @ 100C	7.754	8.149	8.141	8.165	8.154	8.621
Water (D4007) (% v/v)	0.0	0.0	0.0	0.0	0.0	0
Solids (D4007) (% v/v)	0.0	0.0	0.0	<0.1	0.0	0
Glycol	No	No	No	No	No	No
Fuel Dilution	No	No	No	No	No	No
<b>OTHER PROPERTIES</b>						
Acid No. (D664)						
Base No. (D2896)						
Base No. (D4739)						
Oxidation						
Nitro Compounds						
Organic Nitrates						
Particle Count(ISO 4406)						
Oil Changed?	YES	YES	YES	YES	YES	
<b>COMMENTS RATING SYSTEM: A is LOW B is LOW to MODERATE C is MODERATE D is HIGH E is SEVERE</b>						
- Tests DO NOT indicate an immediate need for an oil change. Silicones (B). Maintain routine sampling. - Tests DO NOT indicate an immediate need for an oil change. Silicones (A). Tests do not indicate any current problems. Maintain routine sampling. - Tests DO NOT indicate an immediate need for an oil change. Tests do not indicate any current problems. Maintain routine sampling. - Tests DO NOT indicate an immediate need for an oil change. Tests do not indicate any current problems. Maintain routine sampling. - Tests DO NOT indicate an immediate need for an oil change. Tests do not indicate any current problems. Maintain routine sampling.						
Laboratory Telephone (403) 295-8803 Results were verified on Jan 09/23 by 108016 01						