

## **OIL ANALYSIS REPORT**

# Line 2 [Line 2] L2 SAPAL 3 L2 SAPAL 3

Gearbox

**NOT GIVEN (--- GAL)** 

# Sample Rating Trend



### DIAGNOSIS

### Recommendation

Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

### Wear

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the oil.

### **Fluid Condition**

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Machine Age         hrs         Client Info         0         0         0           Oil Age         hrs         Client Info         0         0         0           Oil Changed         Client Info         N/A         N/A         N/A         Not Changd           Sample Status         NORMAL         NORMAL         NORMAL         NORMAL         NORMAL           WEAR METALS         method         limit/base         current         history1         history2           PQ         ASTM D8184         12         14         20           Iron         ppm         ASTM D5185m         >200         14         13         15           Chromium         ppm         ASTM D5185m         >15         0         0         0           Nickel         ppm         ASTM D5185m         >15         0         0         0           Silver         ppm         ASTM D5185m         >0         0         0         0           Silver         ppm         ASTM D5185m         >25         4         <1         <1           Lead         ppm         ASTM D5185m         >20         <1         <1         <1           Copper         ppm <t< th=""><th>SAMPLE INFORI</th><th>MATION</th><th>method</th><th>limit/base</th><th>current</th><th>history1</th><th>history2</th></t<>	SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Machine Age         hrs         Client Info         0         0         0         0           Oil Age         hrs         Client Info         N/A         N/A         N/A         NORMAL           Oil Changed         Client Info         N/A         N/A         N/A         NORMAL         NORMAL           VEAR METALS         method         limit/base         current         history1         history2           PQ         ASTM D5185m         200         14         13         15         Chromium           ppm         ASTM D5185m         15         0         0         0         0           Nickel         ppm         ASTM D5185m         15         0         0         0           Silver         ppm         ASTM D5185m         0         0         0         0           Silver         ppm         ASTM D5185m         25         4         <1	Sample Number		Client Info		PCA0103723	PCA0081383	PCA0081399
Oil Age         hrs         Client Info         N/A         N/A         N/A         Not Changd           Oil Changed         Client Info         N/A         N/A         N/A         Not Changd           Sample Status         Client Info         N/A         N/A         N/A         NORMAL           WEAR METALS         method         Imitibase         current         history1         history2           PQ         ASTM D5185m         200         14         13         15           Iron         ppm         ASTM D5185m         >20         14         13         15           Chromium         ppm         ASTM D5185m         >15         0         0         0           Nickel         ppm         ASTM D5185m         >15         0         0         0           Oil Chamium         ppm         ASTM D5185m         >10         0         0         0           Aluminum         ppm         ASTM D5185m         225         4         <1	Sample Date		Client Info		31 Aug 2023	06 Feb 2023	26 Dec 2022
Oil Changed Sample Status         Client Info         N/A         N/A         Not Changd NORMAL           WEAR METALS         method         limit/base         current         history1         history2           PQ         ASTM D5184M         12         14         20           Iron         ppm         ASTM D5185m         >200         14         13         15           Chromium         ppm         ASTM D5185m         >15         0         0         0           Nickel         ppm         ASTM D5185m         >15         0         0         0           Silver         ppm         ASTM D5185m         >15         0         0         0           Aluminum         ppm         ASTM D5185m         >0         0         0         0           Aluminum         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	Machine Age	hrs	Client Info		0	0	0
NORMAL   NORMAL   NORMAL	Oil Age	hrs	Client Info		0	0	0
WEAR METALS	Oil Changed		Client Info		N/A	N/A	Not Changd
PQ	-				NORMAL	NORMAL	
PQ	WEAR METAL	S	method	limit/base	current	history1	history2
Irron			ASTM D8184		12	14	20
Chromium		mag		>200			
Nickel							
Titanium         ppm         ASTM D5185m         0         0         0           Silver         ppm         ASTM D5185m         0         0         0           Aluminum         ppm         ASTM D5185m         >25         4         <1							
Silver				7.0			
Aluminum							
Lead				>25	-		
Copper         ppm         ASTM D5185m         >200         <1					-		
Tin							
Vanadium         ppm         ASTM D5185m         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         0         0         0           Barium         ppm         ASTM D5185m         0         0         0         0           Molybdenum         ppm         ASTM D5185m         0         0         0         0           Magnesium         ppm         ASTM D5185m         0         <1							
Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         0         0           Barium         ppm         ASTM D5185m         2         0         0           Molybdenum         ppm         ASTM D5185m         0         -1         0           Manganese         ppm         ASTM D5185m         0         -1         -1           Magnesium         ppm         ASTM D5185m         0         -1         -1           Calcium         ppm         ASTM D5185m         18         4         -1           Phosphorus         ppm         ASTM D5185m         249         257         271           Zinc         ppm         ASTM D5185m         45         26         32           Sulfur         ppm         ASTM D5185m         297         123         461           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >50         10         9				720	-		
ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         0         0           Barium         ppm         ASTM D5185m         2         0         0           Molybdenum         ppm         ASTM D5185m         0         0         0           Manganese         ppm         ASTM D5185m         0         <1         0           Manganesium         ppm         ASTM D5185m         0         <1         <1           Calcium         ppm         ASTM D5185m         249         257         271           Zinc         ppm         ASTM D5185m         249         257         271           Zinc         ppm         ASTM D5185m         297         123         461           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >50         10         9         10           Sodium         ppm         ASTM D5185m         >20         <1         0         2           FLUID DEGRADATION         method         limit/base<							
Boron   ppm   ASTM D5185m   Q		ррш					
Barium				limit/base			
Molybdenum         ppm         ASTM D5185m         0         0         0           Manganese         ppm         ASTM D5185m         0         <1							
Manganese         ppm         ASTM D5185m         0         <1		ppm					
Magnesium         ppm         ASTM D5185m         0         <1	•						
Calcium         ppm         ASTM D5185m         18         4         <1					-		
Phosphorus         ppm         ASTM D5185m         249         257         271           Zinc         ppm         ASTM D5185m         45         26         32           Sulfur         ppm         ASTM D5185m         297         123         461           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >50         10         9         10           Sodium         ppm         ASTM D5185m         >50         10         9         10           Sodium         ppm         ASTM D5185m         >20         <1         0         2           FLUID DEGRADATION         method         limit/base         current         history1         history2           Acid Number (AN)         mg KOH/g         ASTM D8045         0.42         0.42         0.45           VISUAL         method         limit/base         current         history1         history2           Acid Number (AN)         mg KOH/g         ASTM D8045         0.42         0.42         0.45           VISUAL         method         limit/base         current <th>-</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>	-						
Zinc         ppm         ASTM D5185m         45         26         32           Sulfur         ppm         ASTM D5185m         297         123         461           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >50         10         9         10           Sodium         ppm         ASTM D5185m         >50         10         9         10           Potassium         ppm         ASTM D5185m         >20         <1         0         2           FLUID DEGRADATION method limit/base current         limit/base current         history1         history2           Acid Number (AN)         mg KOH/g         ASTM D8045         0.42         0.42         0.45           VISUAL         method limit/base current         history1         history2           White Metal scalar *Visual NONE NONE NONE NONE NONE NONE NONE NON							
Sulfur         ppm         ASTM D5185m         297         123         461           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >50         10         9         10           Sodium         ppm         ASTM D5185m         >50         10         9         10           Potassium         ppm         ASTM D5185m         >20         <1         0         2           FLUID DEGRADATION method limit/base current         limit/base current         history1         history2           Acid Number (AN) mg KOH/g ASTM D8045         0.42         0.42         0.45           VISUAL         method limit/base current         history1         history2           White Metal scalar *Visual NONE NONE NONE NONE NONE NONE NONE NON							
CONTAMINANTS method limit/base current history1 history2  Silicon ppm ASTM D5185m >50 10 9 10  Sodium ppm ASTM D5185m >20 <1 0 2  FLUID DEGRADATION method limit/base current history1 history2  Acid Number (AN) mg KOH/g ASTM D8045 0.42 0.42 0.45  VISUAL method limit/base current history1 history2  White Metal scalar *Visual NONE NONE NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE NONE NONE Silt scalar *Visual NONE NONE NONE NONE NONE NONE Silt scalar *Visual NONE NONE NONE NONE NONE NONE NONE NON							
Silicon ppm ASTM D5185m >50 10 9 10  Sodium ppm ASTM D5185m >20 <1 <1 0  Potassium ppm ASTM D5185m >20 <1 0 2  FLUID DEGRADATION method limit/base current history1 history2  Acid Number (AN) mg KOH/g ASTM D8045 0.42 0.42 0.45  VISUAL method limit/base current history1 history2  White Metal scalar *Visual NONE NONE NONE NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE NONE NONE NONE NONE NON			ASTM D5185m		297	123	461
SodiumppmASTM D5185m<1	CONTAMINAN	TS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 <1 0 2  FLUID DEGRADATION method limit/base current history1 history2  Acid Number (AN) mg KOH/g ASTM D8045 0.42 0.42 0.45  VISUAL method limit/base current history1 history2  White Metal scalar *Visual NONE NONE NONE NONE NONE NONE  Yellow Metal scalar *Visual NONE NONE NONE NONE NONE  Precipitate scalar *Visual NONE NONE NONE NONE NONE  Silt scalar *Visual NONE NONE NONE NONE NONE  Debris scalar *Visual NONE NONE NONE NONE NONE  Appearance scalar *Visual NONE NONE NONE NONE NONE  Appearance scalar *Visual NORML NORML NORML NORML  Odor scalar *Visual NORML NORML NORML NORML	Silicon	ppm	ASTM D5185m	>50	10	9	10
FLUID DEGRADATION method limit/base current history1 history2  Acid Number (AN) mg KOH/g ASTM D8045 0.42 0.42 0.45  VISUAL method limit/base current history1 history2  White Metal scalar *Visual NONE NONE NONE NONE NONE  Yellow Metal scalar *Visual NONE NONE NONE NONE NONE  Precipitate scalar *Visual NONE NONE NONE NONE NONE  Silt scalar *Visual NONE NONE NONE NONE NONE  Debris scalar *Visual NONE NONE LIGHT LIGHT  Sand/Dirt scalar *Visual NONE NONE NONE NONE NONE  Appearance scalar *Visual NORML NORML NORML NORML  Odor scalar *Visual NORML NORML NORML NORML	Sodium	ppm	ASTM D5185m		<1	<1	0
Acid Number (AN) mg KOH/g ASTM D8045 0.42 0.42 0.45  VISUAL method limit/base current history1 history2  White Metal scalar *Visual NONE NONE NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE NONE NONE Silt scalar *Visual NONE NONE NONE NONE NONE Debris scalar *Visual NONE NONE LIGHT LIGHT Sand/Dirt scalar *Visual NONE NONE NONE NONE NONE Appearance scalar *Visual NORML NORML NORML NORML Odor scalar *Visual NORML NORML NORML NORML	Potassium	ppm	ASTM D5185m	>20	<1	0	2
VISUAL method limit/base current history1 history2  White Metal scalar *Visual NONE NONE NONE NONE NONE  Yellow Metal scalar *Visual NONE NONE NONE NONE NONE  Precipitate scalar *Visual NONE NONE NONE NONE NONE  Silt scalar *Visual NONE NONE NONE NONE NONE  Debris scalar *Visual NONE NONE LIGHT LIGHT  Sand/Dirt scalar *Visual NONE NONE NONE NONE NONE  Appearance scalar *Visual NORML NORML NORML NORML  Odor scalar *Visual NORML NORML NORML NORML	FLUID DEGRA	DATION	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 LIGHT LIGHT Sand/Dirt scalar *Visual NONE NONE NONE NONE Appearance scalar *Visual NORML NORML NORML Odor scalar *Visual NORML NORML NORML NORML	Acid Number (AN)	mg KOH/g	ASTM D8045		0.42	0.42	0.45
Yellow Metalscalar*VisualNONENONENONENONEPrecipitatescalar*VisualNONENONENONENONESiltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONELIGHTLIGHTSand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORML	VISUAL		method	limit/base	current	history1	history2
Precipitate scalar *Visual NONE NONE NONE NONE Silt scalar *Visual NONE NONE NONE NONE Debris scalar *Visual NONE NONE LIGHT LIGHT Sand/Dirt scalar *Visual NONE NONE NONE NONE Appearance scalar *Visual NORML NORML NORML NORML Odor scalar *Visual NORML NORML NORML NORML	White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silt scalar *Visual NONE NONE NONE NONE  Debris scalar *Visual NONE NONE LIGHT LIGHT  Sand/Dirt scalar *Visual NONE NONE NONE NONE  Appearance scalar *Visual NORML NORML NORML NORML  Odor scalar *Visual NORML NORML NORML NORML	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Debrisscalar*VisualNONENONELIGHTLIGHTSand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORML	Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORML	Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearancescalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORML	Debris	scalar	*Visual	NONE	NONE	LIGHT	LIGHT
Odor scalar *Visual NORML NORML NORML NORML	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water scalar *Visual >0.2 NEG NEG NEG	Odor	scalar	*Visual	NORML	NORML	NORML	NORML
	<b>Emulsified Water</b>	scalar	*Visual	>0.2	NEG	NEG	NEG

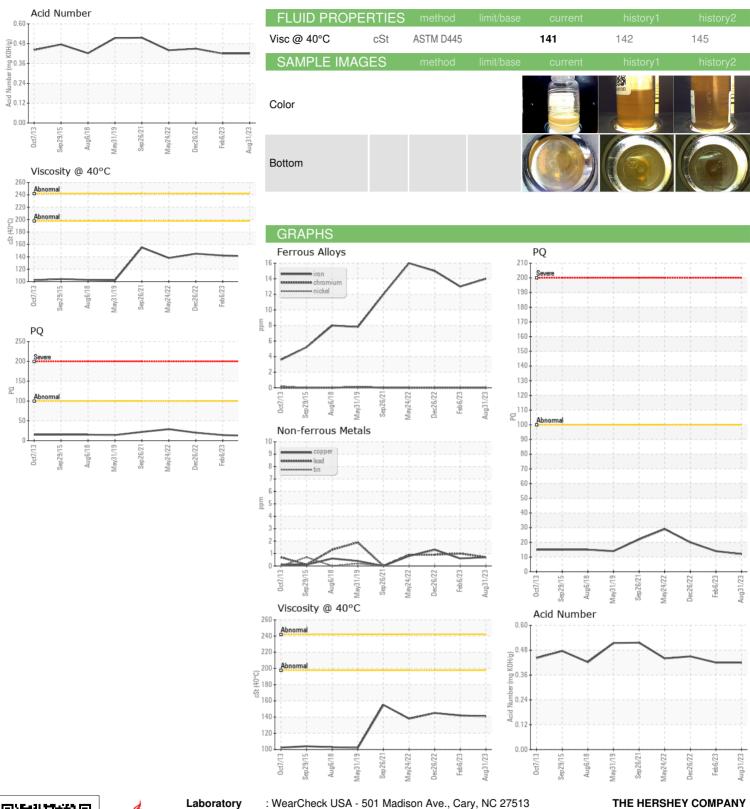
CLINEON ZOHNERNEGERHER

NEG

scalar \*Visual



## **OIL ANALYSIS REPORT**







Certificate L2367

Laboratory Sample No. Lab Number **Unique Number** 

: PCA0103723 : 05944713

To discuss this sample report, contact Customer Service at 1-800-237-1369.

Received : 10635325

: 07 Sep 2023 : 08 Sep 2023 Diagnosed Diagnostician : Wes Davis Test Package : IND 2 (Additional Tests: PQ)

US 17033 Contact: CLINTON ZOHNER

WEST HERSHEY - TECHNICAL ASSURANCE, 1033 OLDE WEST CHOCOLATE

clintzohner@hersheys.com T: (717)374-4846

\* - 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)

HERSHEY, PA

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