



## Review Reports

### IND 3 Sample Report

Test kit used →

		<b>WEAR</b> <span style="background-color: #FF0000; color: white; padding: 2px;">SEVERE</span> <b>CONTAMINATION</b> <span style="background-color: #00FF00; color: black; padding: 2px;">NORMAL</span> <b>OIL CONDITION</b> <span style="background-color: #FFA500; color: black; padding: 2px;">ATTENTION</span>		
INDUSTRIAL OIL ANALYSIS REPORT				
1B01CYMG25 [UB/B LIFTER] - Gearbox				
Unit Make : N/A	Date Rec'd : Apr 30, 2001	Sample Date : Apr 24, 2001		
Unit Model : {n/a}	Serial No. : {n/a}	Time on Unit : 0 hrs		
Comp Make : N/A	Cust. Ref No. : {n/a}	Time on Oil : 0 hrs		
Comp Model : {n/a}	Stub No. : WC-23000212	Time on Filter : 0 hrs		
<b>RECOMMENDATION</b>		Diagnostician: Barry Goslin		
We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid.				
<b>WEAR</b>				
All component elemental wear rates are normal. Analytical ferrography indicates a large concentration of ferrous rubbing wear with trace amount of low and medium alloy steel gear wear particles. No less than two gear seats are generating abnormal wear. Suspect the root cause to be the amount of wear debris present limiting the efficiency of the lubricant on gear teeth.				
Sample Date	10/9/00	12/18/00	Current	Abn
Iron	26	48	39	---
Nickel	0.0	0.0	0.0	---
Chromium	0.0	0.0	0.1	---
Titanium	0.0	0.0	0.3	---
Copper	4.0	6.0	6.3	---
Aluminum	0.5	0.0	0.4	---
Tin	0.0	0.0	0.0	---
Lead	1.3	1.4	0.7	---
Silver	0.0	0.0	0.0	---
<b>Direct-Reading Ferrography</b>				Abn
DR-Ferr Large	147	148	48.5	---
DR-Ferr Small	115	111	18.7	---
WPC	262	239	67.2	---
% Large	12.2	14.3	44.3	---
Severity Index	4704	5476	1445	---
Dilution	1:1	1:1	1:10	
Ferrous	9	1	1	size μ
Rubbing				15
Sliding				50
Cutting				
Rolling				
Break-in				
Spheres				
Black Oxides				
Red Oxides				
Corrosion				
Other				
Nonferrous	9	1	1	size μ
Rubbing				
Sliding				
Cutting				
Rolling				
Other				

← Quick Sample Status

← Unit Identification

Sample Information

Sample, Recieved Date  
Sample Number  
Time on oil, filter, component

← Abnormal Limits

Direct-Reading Ferrography  
Density of small and large wear particles and ratios showing minute changes in wear condition.

Analytical Ferrography  
Detailed analysis of wear regimes evident in component.

← Report Identification

#### Unit Information

Including make, model, s/n

#### Recommendation

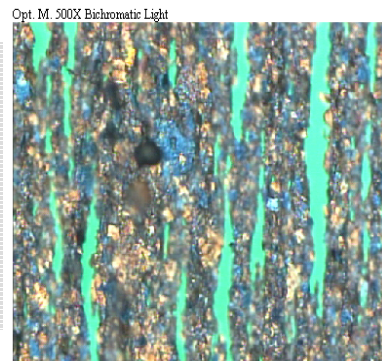
Summary and any necessary corrective actions required.

#### Wear

Determination of normal wear generated metals in parts per million (ppm) and detailed discussion of equipment condition.

#### Analytical Ferrogram

Photomicrograph of Ferrogram as viewed by optical microscopy.



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### IND 3 Sample Report

#### Contamination

*Dirt, Water, Particle Count (ISO Code) as well as a detailed account of any Contaminants present in the ferrography. Identifies any abnormal contaminants present in the oil.*

#### Oil Condition

*Oil additive levels in ppm  
Viscosity @ 40°C  
Total Acid Number (AN)  
Determines if oil is suitable for continued use.*

#### Wear Metal Graph

*All ppm wear metals charted on a log graph showing up to 25 samples chronologically. Allows for the visual identification of wear of alloyed components.*

#### DR-Ferr Graph

*Trends the total small and large particles and shows a bar graph of the percentage large particles. Demonstrates subtle changes in wear pattern for the component.*

CONTAMINATION				
There is no indication of any contamination in the component.				

Contaminants	0	1	2	3	4	5	10	size $\mu$
Sand/Dirt	[Bar chart]							
Fibres	[Bar chart]							
Spheres	[Bar chart]							
Other	[Bar chart]							
Sample Date	10/9/00	12/18/00	Current					
Silicon	6.5	7.1	7.6					
Sodium	0.0	0.0	0.0					
Potassium	0.6	0.0	0.0					
Water (%)	<0.1	<0.1	<0.1					
>5 $\mu$ m	---	---	---					
>15 $\mu$ m	---	---	---					
>25 $\mu$ m	---	---	---					
>50 $\mu$ m	---	---	---					
>100 $\mu$ m	---	---	---					
ISO 4406								---

OIL CONDITION				
Oil Type: ESSO SPARTAN EP 220				
The condition of oil is suitable for further service, provided fluid cleanliness can be improved.				

Oil Condition	0	1	2	3	4	5	10	size $\mu$
Oil Degradat'n	[Bar chart]							Base
Sample Date	10/9/00	12/18/00	Current					
Boron	2.0	2.8	3.2					
Barium	0.1	0.3	0.5					
Calcium	0.0	5.4	6.6					
Magnesium	0.0	0.0	4.7					
Molybdenum	0.5	0.3	0.4					
Phosphorus	317	396	402					
Sulfur	14940	16826	14791					
Zinc	2.3	15	18					
Visc@40°C	196	194	195					
Visc@100°C	---	---	---					
Oxidation	---	---	---					
TAN	0.830	0.640	0.700					

**Wear Metals**

**DR-Ferrography**

If you have any questions concerning this sample report (work order no 00867158) please call 1-800-268-2131.

**The leader in oil analysis**  
**WearCheck International**  
Africa, Asia, Australia, Europe, North America

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New oil baseline

Customer contact info