

# **OIL ANALYSIS REPORT**

Sample Rating Trend

WATER

X

### Machine Id MAZDA 24888-03 Component

Gasoline Engine Fluid {not provided} (--- GAL)

## DIAGNOSIS

#### Recommendation

We advise that you check for the source of water entry. Please note that there was too much water present in the oil to perform a viscosity test.

### Wear

All component wear rates are normal.

#### Contamination

There is a high concentration of water present in the oil. Moderate concentration of visible dirt/debris present in the oil.

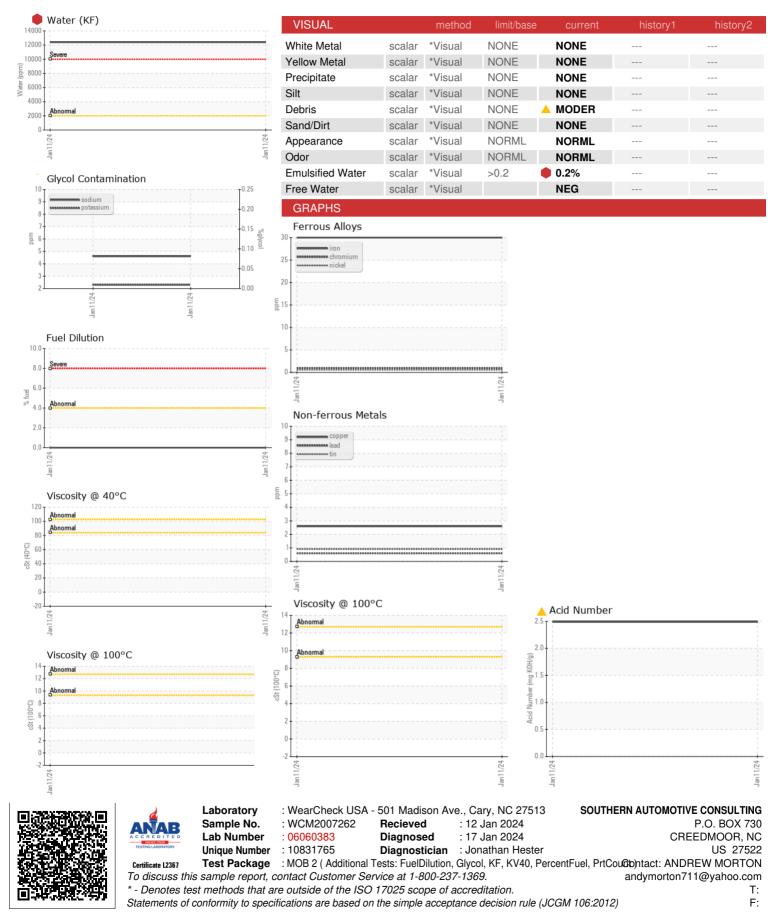
#### Fluid Condition

The AN level is acceptable for this fluid.

Sample Number       Client Info       11 Jan 2024           Sample Date       Client Info       11 Jan 2024           Machine Age       mis       Client Info       0           Oil Age       mis       Client Info       N/A           Oil Changed       Client Info       N/A           Sample Status       n       method       Mathice       current       history       history         from       ppm       ASTM 051655       >20       <1           Nickel       ppm       ASTM 051655       >2       0           Nickel       ppm       ASTM 051655       >2       0           Aluminum       ppm       ASTM 051655       >2       0           Silver       ppm       ASTM 051655       >2       0           Auminum       ppm       ASTM 051655       >15       3           Copper       ppm       ASTM 051655       >15       3           Auminum <th>SAMPLE INFORM</th> <th>MATION</th> <th>method</th> <th>limit/base</th> <th>current</th> <th>history1</th> <th>history2</th>	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age       mils       Client Info       0           Oil Changed       Client Info       N/A           Sample Status       I       Image       SEVERE           WEAR METALS       method       Imil/base       current       history1          WEAR METALS       method       Imil/base       current       history1          Nickel       ppm       ASTM D5185m       >520       <1	Sample Number		Client Info		WCM2007262		
Oil Age         mis         Client Info         N/A             Sample Status         I         Istatus         Istatus         Istatus         Istatus         Istatus           WEAR METALS         meihod         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >150         30             Nickel         ppm         ASTM D5185m         >20         <1	Sample Date		Client Info		11 Jan 2024		
Oli Changed         Client Info         N/A             Sample Status         Image Status	Machine Age	mls	Client Info		0		
Sample Status         Image of the status <thimage of="" status<="" th="" the="">         Image of the status         Image of the status</thimage>	Oil Age	mls	Client Info		0		
WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >150         30             Chromium         ppm         ASTM D5185m         >20         <1             Nickel         ppm         ASTM D5185m         >55         <1             Nickel         ppm         ASTM D5185m         >50         <1             Aluminum         ppm         ASTM D5185m         >50         <1             Copper         ppm         ASTM D5185m         >10         <1             Yanadium         ppm         ASTM D5185m         >10              ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0             Magnese         ppm         ASTM D5185m         11             Magneseium         ppm         ASTM D5185m         590	Oil Changed		Client Info		N/A		
Iron         ppm         ASTM D5185m         >150         30            Chromium         ppm         ASTM D5185m         >20         <1            Nickel         ppm         ASTM D5185m         <5         <1            Silver         ppm         ASTM D5185m         >2         0            Aluminum         ppm         ASTM D5185m         >50         <1            Aluminum         ppm         ASTM D5185m         >50         <1            Aluminum         ppm         ASTM D5185m         >50         <1            Vanadium         ppm         ASTM D5185m         >10         <1             Vanadium         ppm         ASTM D5185m         >10         <1             Vanadium         ppm         ASTM D5185m         0              ADDITIVES         method         imit/base         current         history1         history2           Barium         ppm         ASTM D5185m         1	-				SEVERE		
Chromium         ppm         ASTM D5185m         >20         <1	WEAR METALS		method	limit/base	current	history1	history2
Chromium         ppm         ASTM D5185m         >20         <1             Nickel         ppm         ASTM D5185m         >5         <1	Iron	ppm	ASTM D5185m	>150	30		
Nickel         ppm         ASTM D5185m         >5         <1             Titanium         ppm         ASTM D5185m         >2         0             Silver         ppm         ASTM D5185m         >2         0             Aluminum         ppm         ASTM D5185m         >20              Copper         ppm         ASTM D5185m         >155         3             Copper         ppm         ASTM D5185m         >10         <1	Chromium		ASTM D5185m	>20	<1		
Titanium         ppm         ASTM D5185m         <1             Silver         ppm         ASTM D5185m         >2         0             Aluminum         ppm         ASTM D5185m         >20              Lead         ppm         ASTM D5185m         >50         <1	Nickel				<1		
Silver         ppm         ASTM D5185m         >2         0             Aluminum         ppm         ASTM D5185m         >40         6             Lead         ppm         ASTM D5185m         >50         <1             Copper         ppm         ASTM D5185m         >10         <1             Vanadium         ppm         ASTM D5185m         10         <1             Vanadium         ppm         ASTM D5185m         10         <1             Vanadium         ppm         ASTM D5185m          51             ADDITIVES         method         limit/base         current         history1         history2           Barium         ppm         ASTM D5185m         51             Magnese         ppm         ASTM D5185m         51             Magnesium         ppm         ASTM D5185m         590             Magnesium         ppm         ASTM D5185m         20         978							
Aluminum         ppm         ASTM D5185m         >40         6             Lead         ppm         ASTM D5185m         >50         <1				>2			
Lead         ppm         ASTM D5185m         >50         <1             Copper         ppm         ASTM D5185m         >10         <1					-		
Copper         ppm         ASTM D5185m         >155         3             Tin         ppm         ASTM D5185m         >10         <1					-		
Tin       ppm       ASTM D5185m       >10       <1           Vanadium       ppm       ASTM D5185m       0       0           Cadmium       ppm       ASTM D5185m        <1           ADDITIVES       method       limit/base       current       history1       history2         Boron       ppm       ASTM D5185m       51           Molybdenum       ppm       ASTM D5185m       0           Magnese       ppm       ASTM D5185m       157           Magnesium       ppm       ASTM D5185m       590           Calcium       ppm       ASTM D5185m       590           Magnesium       ppm       ASTM D5185m       590           Calcium       ppm       ASTM D5185m       711           Sulfur       ppm       ASTM D5185m       30017           Sulfur       ppm       ASTM D5185m       >30       12           Sulfur       ppm       ASTM D							
Vanadium         ppm         ASTM D5185m         0             Cadmium         ppm         ASTM D5185m         <1					-		
Cadmium         ppm         ASTM D5185m         <1             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         51             Barium         ppm         ASTM D5185m         0             Molybdenum         ppm         ASTM D5185m         157             Magnese         ppm         ASTM D5185m         590             Magnesium         ppm         ASTM D5185m         590             Calcium         ppm         ASTM D5185m         792             Zinc         ppm         ASTM D5185m         3017             Sulfur         ppm         ASTM D5185m         >30         12             Sodium         ppm         ASTM D5185m         >30         12             Sodium         ppm         ASTM D5185m         >20         2             Vater         %         ASTM				>10			
ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         51             Barium         ppm         ASTM D5185m         0             Molybdenum         ppm         ASTM D5185m         157             Magnese         ppm         ASTM D5185m         5900             Magnesium         ppm         ASTM D5185m         978             Calcium         ppm         ASTM D5185m         978             Phosphorus         ppm         ASTM D5185m         711             Sulfur         ppm         ASTM D5185m         792             Sulfur         ppm         ASTM D5185m         3017             Sulfur         ppm         ASTM D5185m         >30         12             Sulfur         ppm         ASTM D5185m         >30         2             Sulfur         ppm         ASTM D5185m <td></td> <td></td> <td></td> <td></td> <th>-</th> <td></td> <td></td>					-		
BoronppmASTM D5185m51BariumppmASTM D5185m0MolybdenumppmASTM D5185m157ManganeseppmASTM D5185m1MagnesiumppmASTM D5185m590CalciumppmASTM D5185m978CalciumppmASTM D5185m711PhosphorusppmASTM D5185m792SulfurppmASTM D5185m>3017SulfurppmASTM D5185m>3012SodiumppmASTM D5185m>202PotassiumppmASTM D5185m>202Fuel%ASTM D5185m>202Water%ASTM D5185m>202Glycol%ASTM D5185m>2012400Water%ASTM D6304>0.212400Glycol%ASTM D7844>2012.6INFRA-REDmethodImit/basecurrenthistory1history2Soot %%'ASTM D7844>2012.6NitrationAbs/rm'ASTM D7845>3017.2Soot %%'ASTM D7845>30<		ppm	ASTM D5185m		<1		
Barium         ppm         ASTM D5185m         0             Molybdenum         ppm         ASTM D5185m         157             Manganese         ppm         ASTM D5185m         590             Magnesium         ppm         ASTM D5185m         590             Calcium         ppm         ASTM D5185m         590             Calcium         ppm         ASTM D5185m         978             Calcium         ppm         ASTM D5185m         711             Zinc         ppm         ASTM D5185m         3017             Sulfur         ppm         ASTM D5185m         >30         12             Sodium         ppm         ASTM D5185m         >20         2             Sodium         ppm         ASTM D5185m         >20         2             Potassium         ppm         ASTM D5185m         >20         1.24             Fuel         %	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum         ppm         ASTM D5185m         157             Manganese         ppm         ASTM D5185m         1             Magnesium         ppm         ASTM D5185m         590             Calcium         ppm         ASTM D5185m         978             Phosphorus         ppm         ASTM D5185m         711             Zinc         ppm         ASTM D5185m         792             Sulfur         ppm         ASTM D5185m         3017             Sulfur         ppm         ASTM D5185m         >30         12             Sodium         ppm         ASTM D5185m         >400         5             Sodium         ppm         ASTM D5185m         >20         2             Vater         %         ASTM D5185m         >20         2             Fuel         %         ASTM D5324         >4.0         <1.0	Boron	ppm	ASTM D5185m				
Manganese         ppm         ASTM D5185m         1             Magnesium         ppm         ASTM D5185m         590             Calcium         ppm         ASTM D5185m         978             Phosphorus         ppm         ASTM D5185m         711             Zinc         ppm         ASTM D5185m         792             Sulfur         ppm         ASTM D5185m         3017             Sulfur         ppm         ASTM D5185m         >30         12             Sodium         ppm         ASTM D5185m         >30         12             Sodium         ppm         ASTM D5185m         >30         12             Sodium         ppm         ASTM D5185m         >20         2             Potassium         ppm         ASTM D5185m         >20         1.24             Fuel         %         ASTM D5184         >0.2         1.24             Glycol	Barium	ppm	ASTM D5185m		0		
Magnesium         ppm         ASTM D5185m         590            Calcium         ppm         ASTM D5185m         978            Phosphorus         ppm         ASTM D5185m         711            Zinc         ppm         ASTM D5185m         792            Sulfur         ppm         ASTM D5185m         3017            Sulfur         ppm         ASTM D5185m         3017            CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >30         12             Sodium         ppm         ASTM D5185m         >20         2             Potassium         ppm         ASTM D5185m         >20         2             Fuel         %         ASTM D5185m         >20         2             Water         %         ASTM D5304         >0.2         1.24             Glycol         %         *ASTM D5304         >20.0         12400	Molybdenum	ppm	ASTM D5185m		157		
Calcium         ppm         ASTM D5185m         978             Phosphorus         ppm         ASTM D5185m         711             Zinc         ppm         ASTM D5185m         792             Sulfur         ppm         ASTM D5185m         3017             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >30         12             Sodium         ppm         ASTM D5185m         >30         12             Potassium         ppm         ASTM D5185m         >20         2             Fuel         %         ASTM D5185m         >20         2             Water         %         ASTM D5324         >4.0         <1.0	Manganese	ppm	ASTM D5185m		1		
Phosphorus         ppm         ASTM D5185m         711             Zinc         ppm         ASTM D5185m         792             Sulfur         ppm         ASTM D5185m         3017             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >30         12             Sodium         ppm         ASTM D5185m         >30         5             Potassium         ppm         ASTM D5185m         >20         2             Fuel         %         ASTM D5185m         >20         2             Water         %         ASTM D6304         >0.2         1.24             glycol         %         ASTM D6304         >200         12400             Glycol         %         *ASTM D2982         NEG             Soot %         %         *ASTM D7624         >20         12.6	Magnesium	ppm	ASTM D5185m		590		
Zinc         ppm         ASTM D5185m         792             Sulfur         ppm         ASTM D5185m         3017             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >30         12             Sodium         ppm         ASTM D5185m         >400         5             Sodium         ppm         ASTM D5185m         >400         5             Potassium         ppm         ASTM D5185m         >20         2             Fuel         %         ASTM D5185m         >20         2             Water         %         ASTM D5185m         >20         2             glycol         %         ASTM D5185m         >20         1.24             Water         ppm         ASTM D2982         NEG              Glycol         %         *ASTM D7844         0.1 <t< td=""><td>Calcium</td><td>ppm</td><td>ASTM D5185m</td><td></td><th>978</th><td></td><td></td></t<>	Calcium	ppm	ASTM D5185m		978		
SulfurppmASTM D5185m3017CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>3012SodiumppmASTM D5185m>4005PotassiumppmASTM D5185m>202Fuel%ASTM D5185m>202Water%ASTM D5324>4.0<1.0	Phosphorus	ppm	ASTM D5185m		711		
CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>3012SodiumppmASTM D5185m>4005PotassiumppmASTM D5185m>202Fuel%ASTM D5185m>202Water%ASTM D5324>4.0<1.0	Zinc	ppm	ASTM D5185m		792		
Silicon         ppm         ASTM D5185m         >30         12             Sodium         ppm         ASTM D5185m         >400         5             Potassium         ppm         ASTM D5185m         >20         2             Fuel         %         ASTM D524         >4.0         <1.0	Sulfur	ppm	ASTM D5185m		3017		
Sodium         ppm         ASTM D5185m         >400         5             Potassium         ppm         ASTM D5185m         >20         2             Fuel         %         ASTM D5185m         >20         2             Water         %         ASTM D50304         >0.2         1.24             Water         %         ASTM D60304         >0.2         12400             ppm Water         ppm         ASTM D60304         >2000         12400             Glycol         %         *ASTM D2982         NEG              INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7624         >20         12.6             Sulfation         Abs/.mm         *ASTM D7415         >30         17.2             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.mm	CONTAMINANTS	3	method	limit/base	current	history1	history2
Sodium         ppm         ASTM D5185m         >400         5             Potassium         ppm         ASTM D5185m         >20         2             Fuel         %         ASTM D5324         >4.0         <1.0	Silicon	maa	ASTM D5185m	>30	12		
Potassium         ppm         ASTM D5185m         >20         2             Fuel         %         ASTM D3524         >4.0         <1.0	Sodium			>400	5		
Fuel         %         ASTM D3524         >4.0         <1.0             Water         %         ASTM D6304         >0.2         1.24             ppm Water         ppm         ASTM D6304         >2000         12400             Glycol         %         *ASTM D6304         >2000         12400             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         0.1             Nitration         Abs/cm         *ASTM D7624         >20         12.6             Sulfation         Abs/.1mm         *ASTM D7415         >30         17.2             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         13.3							
Water         %         ASTM D6304         >0.2         1.24             ppm Water         ppm         ASTM D6304         >2000         12400             Glycol         %         *ASTM D6304         >2000         12400             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         0.1             Nitration         Abs/cm         *ASTM D7624         >20         12.6             Sulfation         Abs/.1mm         *ASTM D7415         >30         17.2             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         13.3					_		
ppm         ASTM D6304         >2000         12400             Glycol         %         *ASTM D2982         NEG             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         0.1             Nitration         Abs/cm         *ASTM D7624         >20         12.6             Sulfation         Abs/.1mm         *ASTM D7415         >30         17.2             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         13.3							
Glycol         %         *ASTM D2982         NEG             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         0.1             Nitration         Abs/cm         *ASTM D7624         >20         12.6             Sulfation         Abs/.1mm         *ASTM D7415         >30         17.2             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         13.3							
INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         0.1             Nitration         Abs/cm         *ASTM D7624         >20         12.6             Sulfation         Abs/.tmm         *ASTM D7624         >30         17.2             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.tmm         *ASTM D7414         >25         13.3				2000			
Soot %         %         *ASTM D7844         0.1             Nitration         Abs/cm         *ASTM D7624         >20         12.6             Sulfation         Abs/.1mm         *ASTM D7415         >30         17.2             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         13.3	•		method	limi <u>t/base</u>		historv1	historv2
Nitration         Abs/cm         *ASTM D7624         >20         12.6             Sulfation         Abs/.1mm         *ASTM D7415         >30         17.2             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         13.3		0/_					
Sulfation         Abs/.1mm         *ASTM D7415         >30         17.2             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         13.3				>20			
FLUID DEGRADATION     method     limit/base     current     history1     history2       Oxidation     Abs/.1mm     *ASTM D7414     >25     13.3							
Oxidation Abs/.1mm *ASTM D7414 >25 13.3							
	FLUID DEGRAD	ATION	method	limit/base	current	history1	history2
Acid Number (AN) mg KOH/g ASTM D8045				>25			
	Acid Number (AN)	mg KOH/g	ASTM D8045		<u> </u>		



# **OIL ANALYSIS REPORT**



Contact/Location: ANDREW MORTON - SOUCRE