

## **OIL ANALYSIS REPORT**

Sample Rating Trend

VISCOSITY

# MANITOU MT625 FOR420

Component

Gearbox

SAE 80W90 (--- GAL)

### DIAGNOSIS

#### Recommendation

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. The fluid was specified as (GENERIC) SAE 80W90, however, a fluid match indicates that this fluid is SAE 80 Gear Oil. Please confirm the oil type and grade on your next sample.

#### Wear

All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

#### ▲ Fluid Condition

Viscosity of sample indicates oil is within SAE 80 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The condition of the oil is acceptable for the time in service.

Client Info   08 Mar 2024							
Sample Number   Client Info   WC0902336       Sample Date   Client Info   08 Mar 2024					Mar2024		
Coling   Date   Client Info   Client Info   Client Info   Client Info   Client Info   Client Info   Changed   Changed   Client Info   Changed   Client Info   Changed   Changed   Client Info   Changed   Client Info   Changed   Changed   Changed   Client Info   Changed   Chan	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age   hrs   Client Info   0   12200	Sample Number		Client Info		WC0902336		
Oil Age	Sample Date		Client Info		08 Mar 2024		
Contained   Collection   Contained   Collection   Contained   Co	Machine Age	hrs	Client Info		12200		
CONTAMINATION   method   limit/base   current   history1   history2	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         history2           PQ         ASTM D8188/m         200         251             Chromium         ppm         ASTM D8188/m         >10         2             Chromium         ppm         ASTM D8188/m         >10         2             Nickel         ppm         ASTM D8188/m         >10         2             Silver         ppm         ASTM D8188/m         >50         <1             Aluminum         ppm         ASTM D8188/m         >50         <1             Silver         ppm         ASTM D8188/m         >50         <1             Aluminum         ppm         ASTM D8188/m         >50         <1             Copper         ppm         ASTM D8188/m         >5         0	Oil Changed		Client Info		Changed		
Water         WC Method         >0.2         NEG            WEAR METALS         method         limit/base         current         history1         history2           PQ         ASTM D8184"         22             Iron         ppm         ASTM D5185(m)         >200         251            Chromium         ppm         ASTM D5185(m)         >10         2            Nickel         ppm         ASTM D5185(m)         >10         -1             Titanium         ppm         ASTM D5185(m)         >25         15             ASTM D5185(m)         >20         -1              ASTM D5185(m)         >20         -1             Copper         ppm         ASTM D5185(m)         >20         2            Copper         ppm         ASTM D5185(m)         >0             Vanadium         ppm         ASTM D5185(m)         0             Vanadium         ppm         ASTM D5185(m)         0	Sample Status				ABNORMAL		
WEAR METALS         method         limit/base         current         history1         history2           PQ         ASTM D8184*         22             Iron         ppm         ASTM D5185(m)         >200         251            Chromium         ppm         ASTM D5185(m)         >10         2            Nickel         ppm         ASTM D5185(m)         >10         -1            Titanium         ppm         ASTM D5185(m)         >25         15            ASTM D5185(m)         >20             ALuminum         ppm         ASTM D5185(m)         >50         -1            ALuminum         ppm         ASTM D5185(m)         >200         2            Copper         ppm         ASTM D5185(m)         >50         -1             Copper         ppm         ASTM D5185(m)         >50              Tin         ppm         ASTM D5185(m)         >5         0             Vanadium         ppm         ASTM D5185(m)         0 <td>CONTAMINATIO</td> <td>N</td> <td>method</td> <td>limit/base</td> <td>current</td> <td>history1</td> <td>history2</td>	CONTAMINATIO	N	method	limit/base	current	history1	history2
PQ	Water		WC Method	>0.2	NEG		
	WEAR METALS		method	limit/base	current	history1	history2
Chromium	PQ		ASTM D8184*		22		
Chromium	Iron	ppm	ASTM D5185(m)	>200	251		
Titanium	Chromium	ppm		>10	2		
Silver	Nickel	ppm	ASTM D5185(m)	>10	<1		
Aluminum	Titanium	ppm	ASTM D5185(m)		<1		
Lead	Silver	ppm	ASTM D5185(m)		0		
Copper         ppm         ASTM D5185(m)         >200         2             Tin         ppm         ASTM D5185(m)         >10         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)         200         50             Barium         ppm         ASTM D5185(m)         0         <1	Aluminum	ppm	ASTM D5185(m)	>25	15		
Tin ppm ASTM D5185(m) >10 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) 200 50  Barium ppm ASTM D5185(m) 0 <1  Molybdenum ppm ASTM D5185(m) 0 0  Manganese ppm ASTM D5185(m) 7  Calcium ppm ASTM D5185(m) 20 180  Calcium ppm ASTM D5185(m) 20 180  Calcium ppm ASTM D5185(m) 20 180  Solitur ppm ASTM D5185(m) 20 231  CONTAMINANTS method limit/base current history1 history2  CONTAMINANTS method limit/base current history1 history2  Silicon ppm ASTM D5185(m) >50 67  Sodium ppm ASTM D5185(m) >50 8	Lead	ppm	ASTM D5185(m)	>50	<1		
Antimony	Copper	ppm	ASTM D5185(m)	>200	2		
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)         200         50             Barium         ppm         ASTM D5185(m)         0         <1	Tin	ppm	ASTM D5185(m)	>10	0		
Beryllium	Antimony	ppm	ASTM D5185(m)	>5	0		
Cadmium         ppm         ASTM D5185(m)         0             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185(m)         200         50             Barium         ppm         ASTM D5185(m)         0         <1	Vanadium	ppm	ASTM D5185(m)		0		
ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185(m)         200         50             Barium         ppm         ASTM D5185(m)         0         <1	Beryllium	ppm	ASTM D5185(m)		0		
Boron   ppm   ASTM D5185(m)   200   50       Barium   ppm   ASTM D5185(m)   0   <1         Molybdenum   ppm   ASTM D5185(m)   0   0         Manganese   ppm   ASTM D5185(m)   7         Magnesium   ppm   ASTM D5185(m)   0   20           Magnesium   ppm   ASTM D5185(m)   20   180         Phosphorus   ppm   ASTM D5185(m)   1000   840         Zinc   ppm   ASTM D5185(m)   20   231         Sulfur   ppm   ASTM D5185(m)   2000   14054         Lithium   ppm   ASTM D5185(m)   <1         Sodium   ppm   ASTM D5185(m)   >50   67       Sodium   ppm   ASTM D5185(m)   >50   8           Sodium   ppm   ASTM D5185(m)   >50   8             Sodium   ppm   ASTM D5185(m)   >50   8	Cadmium	ppm	ASTM D5185(m)		0		
Barium	ADDITIVES		method	limit/base	current	history1	history2
Barium	Boron	ppm	ASTM D5185(m)	200	50		
Molybdenum         ppm         ASTM D5185(m)         0         0             Manganese         ppm         ASTM D5185(m)         7             Magnesium         ppm         ASTM D5185(m)         0         20             Calcium         ppm         ASTM D5185(m)         20         180             Phosphorus         ppm         ASTM D5185(m)         1000         840             Zinc         ppm         ASTM D5185(m)         20         231             Sulfur         ppm         ASTM D5185(m)         22000         14054             Lithium         ppm         ASTM D5185(m)         <1             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185(m)         >50         67             Sodium         ppm         ASTM D5185(m)         >50         8	Barium		. ,	0	<1		
Manganese         ppm         ASTM D5185(m)         7             Magnesium         ppm         ASTM D5185(m)         0         20             Calcium         ppm         ASTM D5185(m)         20         180             Phosphorus         ppm         ASTM D5185(m)         1000         840             Zinc         ppm         ASTM D5185(m)         20         231             Sulfur         ppm         ASTM D5185(m)         22000         14054             Lithium         ppm         ASTM D5185(m)         <1	Molybdenum		( /				
Magnesium         ppm         ASTM D5185(m)         0         20             Calcium         ppm         ASTM D5185(m)         20         180             Phosphorus         ppm         ASTM D5185(m)         1000         840             Zinc         ppm         ASTM D5185(m)         20         231             Sulfur         ppm         ASTM D5185(m)         22000         14054             Lithium         ppm         ASTM D5185(m)         <1	Manganese		ASTM D5185(m)		7		
Calcium         ppm         ASTM D5185(m)         20         180             Phosphorus         ppm         ASTM D5185(m)         1000         840             Zinc         ppm         ASTM D5185(m)         20         231             Sulfur         ppm         ASTM D5185(m)         22000         14054             Lithium         ppm         ASTM D5185(m)         <1	Magnesium			0	20		
Phosphorus         ppm         ASTM D5185(m)         1 000         840             Zinc         ppm         ASTM D5185(m)         20         231             Sulfur         ppm         ASTM D5185(m)         22000         14054             Lithium         ppm         ASTM D5185(m)         < 1             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185(m)         >50         67             Sodium         ppm         ASTM D5185(m)         >50         8	Calcium		ASTM D5185(m)	20	180		
Zinc         ppm         ASTM D5185(m)         20         231             Sulfur         ppm         ASTM D5185(m)         22000         14054             Lithium         ppm         ASTM D5185(m)         <1             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185(m)         >50         67             Sodium         ppm         ASTM D5185(m)         >50         8	Phosphorus		ASTM D5185(m)	1000	840		
CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185(m)         >50         67             Sodium         ppm         ASTM D5185(m)         >50         8	Zinc		ASTM D5185(m)	20	231		
CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185(m)         >50         67             Sodium         ppm         ASTM D5185(m)         >50         8	Sulfur	ppm	ASTM D5185(m)	22000	14054		
Silicon         ppm         ASTM D5185(m)         >50         67             Sodium         ppm         ASTM D5185(m)         >50         8	Lithium		ASTM D5185(m)		<1		
Sodium         ppm         ASTM D5185(m)         >50         8	CONTAMINANTS	8	method	limit/base	current	history1	history2
Sodium         ppm         ASTM D5185(m)         >50         8	Silicon	ppm	ASTM D5185(m)	>50	67		
	Sodium		. ,				
	Potassium	ppm	ASTM D5185(m)	>20	6		



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