

# **OIL ANALYSIS REPORT**

SAMPLE INFORMATION

## **NORMAL**



# NIDEC MOTOR CORP 401 MOTOR (S/N W07290097-002)

**ROYAL PURPLE SYNFILM 68 (30 QTS)** 

# **Left Pump**

### Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the

## Fluid Condition

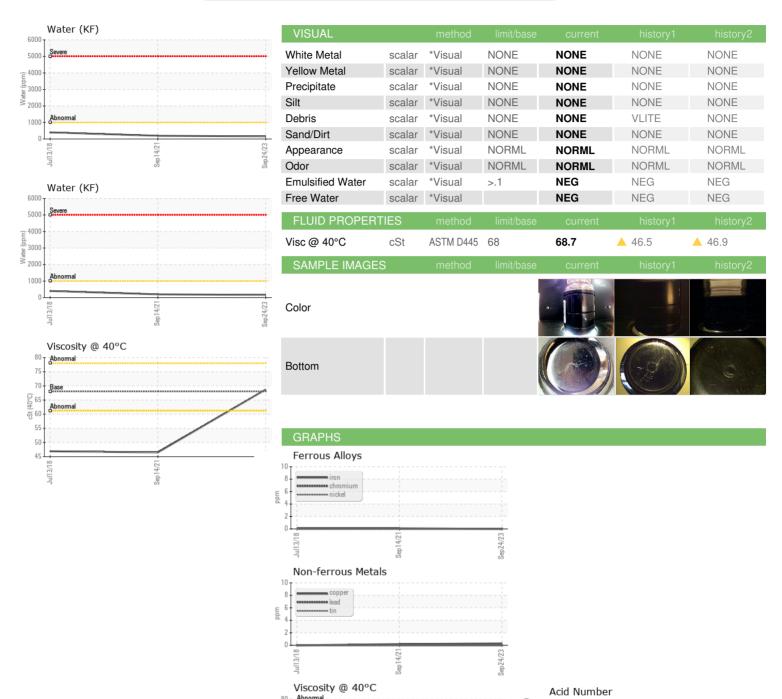
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

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JulZ018	Sep2021	Sep2023

Machine Age         hrs         Client Info         27349         21253         8752           Oil Age         hrs         Client Info         0         0         642           Oil Changed         Client Info         N/A         N/A         Not Change           Sample Status         NORMAL         ATTENTION         ATTENTION           WEAR METALS         method         limit/base         current         history1         history           Iron         ppm         ASTM D5185m         >5         0         0         0           Chromium         ppm         ASTM D5185m         >5         0         0         0           Nickel         ppm         ASTM D5185m         >5         0         0         0           Silver         ppm         ASTM D5185m         >3         <1         0         0           Aluminum         ppm         ASTM D5185m         >7         2         <1         <1           Lead         ppm         ASTM D5185m         >7         2         <1         <1           Copper         ppm         ASTM D5185m         >9         0         0         0           Antimony         ppm <td< th=""><th>97 HVII EE HVI 91 H</th><th>VII (111011</th><th>momou</th><th>mmebaoo</th><th>oarrone</th><th>Thotory</th><th>motory</th></td<>	97 HVII EE HVI 91 H	VII (111011	momou	mmebaoo	oarrone	Thotory	motory
Machine Age	Sample Number		Client Info		RP0026764	RP0005015	RP156621
Oil Age	Sample Date		Client Info		24 Sep 2023	14 Sep 2021	13 Jul 2018
Oil Changed   Client Info   N/A   N/A   N/A   N/A   Not Changed Sample Status   NORMAL   ATTENTION   ATTENTION	Machine Age	hrs	Client Info		27349	21253	8752
NORMAL   ATTENTION   ATTENTION	Oil Age	hrs	Client Info		0	0	642
WEAR METALS         method         limit/base         current         history1         history1           Iron         ppm         ASTM D5185m         >90         0         <1         <1           Chromium         ppm         ASTM D5185m         >5         0         0         0           Nickel         ppm         ASTM D5185m         >5         0         0         0           Titanium         ppm         ASTM D5185m         >3         <1         0         0           Silver         ppm         ASTM D5185m         >7         2         <1         <1           Lead         ppm         ASTM D5185m         >12         0         0         0           Copper         ppm         ASTM D5185m         >12         0         0         0           Copper         ppm         ASTM D5185m         >9         0         0         0           Tin         ppm         ASTM D5185m         >9         0         0         0           Antimony         ppm         ASTM D5185m         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         0           Cadmium	Oil Changed		Client Info		N/A	N/A	Not Changd
Iron	Sample Status				NORMAL	ATTENTION	ATTENTION
Chromium         ppm         ASTM D5185m         >5         0         0         0           Nickel         ppm         ASTM D5185m         >5         0         0         0           Titanium         ppm         ASTM D5185m         >3         <1         0         0           Silver         ppm         ASTM D5185m         >3         0         0         0           Aluminum         ppm         ASTM D5185m         >7         2         <1         <1           Lead         ppm         ASTM D5185m         >12         0         0         0           Copper         ppm         ASTM D5185m         >9         0         0         0           Tin         ppm         ASTM D5185m          0         0         0           Antimony         ppm         ASTM D5185m         0         0         0         0           Vanadium         ppm         ASTM D5185m         0         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         0         0           Barium         ppm         ASTM D5185m         0         0         0         0 </th <th>WEAR METALS</th> <th></th> <th>method</th> <th>limit/base</th> <th>current</th> <th>history1</th> <th>history2</th>	WEAR METALS		method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>90	0	<1	<1
Titanium         ppm         ASTM D5185m         >3         <1	Chromium	ppm	ASTM D5185m	>5	0	0	0
Silver         ppm         ASTM D5185m         >3         0         0         0           Aluminum         ppm         ASTM D5185m         >7         2         <1	Nickel	ppm	ASTM D5185m	>5	0	0	0
Aluminum         ppm         ASTM D5185m         >7         2         <1	Titanium	ppm	ASTM D5185m	>3	<1	0	0
Lead         ppm         ASTM D5185m         >12         0         0         0           Copper         ppm         ASTM D5185m         >30         <1	Silver	ppm	ASTM D5185m	>3	0	0	0
Copper         ppm         ASTM D5185m         >30         <1	Aluminum	ppm	ASTM D5185m	>7	2	<1	<1
Tin         ppm         ASTM D5185m         >9         0         0         0           Antimony         ppm         ASTM D5185m          0         0           Vanadium         ppm         ASTM D5185m         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history1           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         0         0         0           Magnesium         ppm         ASTM D5185m         0         1         2           Phosphorus         ppm         ASTM D5185m         0         1         2           Phosphorus         ppm         ASTM D5185m         0         0         1         2           Sodium         ppm         ASTM D5185m	Lead	ppm	ASTM D5185m	>12	0	0	0
Antimony         ppm         ASTM D5185m          0         0           Vanadium         ppm         ASTM D5185m         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history1           Boron         ppm         ASTM D5185m         0         <1	Copper	ppm	ASTM D5185m	>30	<1	<1	0
Vanadium         ppm         ASTM D5185m         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history1           Boron         ppm         ASTM D5185m         0         <1	Tin	ppm	ASTM D5185m	>9	0	0	0
Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         <1         <1           Barium         ppm         ASTM D5185m         0         0         0           Molybdenum         ppm         ASTM D5185m         0         0         0           Manganese         ppm         ASTM D5185m         0         0         0           Magnesium         ppm         ASTM D5185m         0         1         2           Phosphorus         ppm         ASTM D5185m         0         1         2           Phosphorus         ppm         ASTM D5185m         8         4         <1           Zinc         ppm         ASTM D5185m         0         0         <1           Zinc         ppm         ASTM D5185m         >60         <1         0         <1           Silicon         ppm         ASTM D5185m         >60         <1         0         <1           Sodium         ppm         ASTM D5185m         >20         0         <1 <td< th=""><th>Antimony</th><th>ppm</th><th>ASTM D5185m</th><th></th><th></th><th>0</th><th>0</th></td<>	Antimony	ppm	ASTM D5185m			0	0
ADDITIVES         method         limit/base         current         history1         history1           Boron         ppm         ASTM D5185m         0         <1         <1           Barium         ppm         ASTM D5185m         0         0         0           Molybdenum         ppm         ASTM D5185m         0         0         0           Manganese         ppm         ASTM D5185m         0         0         0           Magnesium         ppm         ASTM D5185m         0         1         2           Phosphorus         ppm         ASTM D5185m         8         4         <1           Zinc         ppm         ASTM D5185m         0         0         <1           Zinc         ppm         ASTM D5185m         0         <1         0         <1           Sodium         ppm         ASTM D5185m         >20         0         <1         0         <1 </th <th>Vanadium</th> <th>ppm</th> <th>ASTM D5185m</th> <th></th> <th>0</th> <th>0</th> <th>0</th>	Vanadium	ppm	ASTM D5185m		0	0	0
Boron         ppm         ASTM D5185m         0         <1	Cadmium	ppm	ASTM D5185m		0	0	0
Barium         ppm         ASTM D5185m         0         0         0           Molybdenum         ppm         ASTM D5185m         0         0         0           Manganese         ppm         ASTM D5185m         0         0         0           Magnesium         ppm         ASTM D5185m         90         78         74         93           Calcium         ppm         ASTM D5185m         0         1         2           Phosphorus         ppm         ASTM D5185m         8         4         <1           Zinc         ppm         ASTM D5185m         0         0         <1           CONTAMINANTS         method         limit/base         current         history1         history1           Silicon         ppm         ASTM D5185m         >60         <1         0         1           Sodium         ppm         ASTM D5185m         >20         0         0         <1           Potassium         ppm         ASTM D6304         >.1         0.016         0.019         0.040           ppm Water         ppm         ASTM D6304         >1000         160.6         195.9         400	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum         ppm         ASTM D5185m         0         0         0           Manganese         ppm         ASTM D5185m         0         0         0           Magnesium         ppm         ASTM D5185m         90         78         74         93           Calcium         ppm         ASTM D5185m         0         1         2           Phosphorus         ppm         ASTM D5185m         8         4         <1	Boron	ppm	ASTM D5185m		0	<1	<1
Manganese         ppm         ASTM D5185m         0         0         0           Magnesium         ppm         ASTM D5185m         90         78         74         93           Calcium         ppm         ASTM D5185m         0         1         2           Phosphorus         ppm         ASTM D5185m         8         4         <1           Zinc         ppm         ASTM D5185m         0         0         <1           CONTAMINANTS         method         limit/base         current         history1         history1           Silicon         ppm         ASTM D5185m         >60         <1         0         1           Sodium         ppm         ASTM D5185m         >20         0         0         <1           Potassium         ppm         ASTM D6304         >.1         0.016         0.019         0.040           ppm Water         ppm         ASTM D6304         >1000         160.6         195.9         400           FLUID DEGRADATION         method         limit/base         current         history1         history1	Barium	ppm	ASTM D5185m		0	0	0
Magnesium         ppm         ASTM D5185m         90         78         74         93           Calcium         ppm         ASTM D5185m         0         1         2           Phosphorus         ppm         ASTM D5185m         8         4         <1	Molybdenum	ppm	ASTM D5185m		0	0	0
Calcium         ppm         ASTM D5185m         0         1         2           Phosphorus         ppm         ASTM D5185m         8         4         <1           Zinc         ppm         ASTM D5185m         0         0         <1           CONTAMINANTS         method         limit/base         current         history1         history1           Silicon         ppm         ASTM D5185m         >60         <1         0         1           Sodium         ppm         ASTM D5185m         1         0         <1           Potassium         ppm         ASTM D5185m         >20         0         0         <1           Water         %         ASTM D6304         >.1         0.016         0.019         0.040           ppm Water         ppm         ASTM D6304         >1000         160.6         195.9         400           FLUID DEGRADATION         method         limit/base         current         history1         history1	Manganese	ppm	ASTM D5185m		0	0	0
Phosphorus         ppm         ASTM D5185m         8         4         <1	Magnesium	ppm	ASTM D5185m	90	78	74	93
Zinc         ppm         ASTM D5185m         0         0         <1	Calcium	ppm	ASTM D5185m		0	1	2
CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >60         <1         0         1           Sodium         ppm         ASTM D5185m         1         0         <1           Potassium         ppm         ASTM D5185m         >20         0         0         <1           Water         %         ASTM D6304         >.1         0.016         0.019         0.040           ppm Water         ppm         ASTM D6304         >1000         160.6         195.9         400           FLUID DEGRADATION         method         limit/base         current         history1         history2	Phosphorus	ppm	ASTM D5185m		8	4	<1
Silicon         ppm         ASTM D5185m         >60         <1	Zinc	ppm	ASTM D5185m		0	0	<1
Sodium         ppm         ASTM D5185m         1         0         <1	CONTAMINANTS	\$	method	limit/base	current	history1	history2
Potassium         ppm         ASTM D5185m         >20         0         0         <1	Silicon	ppm	ASTM D5185m	>60	<1	0	1
Water         %         ASTM D6304         >.1         0.016         0.019         0.040           ppm Water         ppm         ASTM D6304         >1000         160.6         195.9         400           FLUID DEGRADATION         method         limit/base         current         history1         history	Sodium	ppm	ASTM D5185m		1	0	<1
ppm Water ppm ASTM D6304 >1000 <b>160.6</b> 195.9 400  FLUID DEGRADATION method limit/base current history1 history	Potassium	ppm	ASTM D5185m	>20	0	0	<1
FLUID DEGRADATION method limit/base current history1 history	Water	%	ASTM D6304	>.1	0.016	0.019	0.040
	ppm Water	ppm	ASTM D6304	>1000	160.6	195.9	400
Acid Number (AN)         mg KOH/g         ASTM D8045         0.25         0.37         0.321         0.379	FLUID DEGRADA	NOITA	method	limit/base	current	history1	history2
	Acid Number (AN)	mg KOH/g	ASTM D8045	0.25	0.37	0.321	0.379



## **OIL ANALYSIS REPORT**







Certificate L2367

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

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: RP0026764 : 05964255 : 10670806 Test Package : IND 2

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received Diagnosed

Sep14/21-

Diagnostician

: 28 Sep 2023 : 01 Oct 2023 : Don Baldridge

0.20

0.00 G

KINDER MORGAN 5877 CR 210

SMILEY, TX US 78159

Contact: JOHN EVANS john\_evans@kindermorgan.com

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

Sep14/21.

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