

Machine Id HYUNDAI 5NMS5CAA0LH266769 Component Gasoline Engine Fluid

DEXOS 5W30 (5 LTR)

RECOMMENDATION

We advise that you check the fuel injection system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

WEAR

All component wear rates are normal.

CONTAMINATION

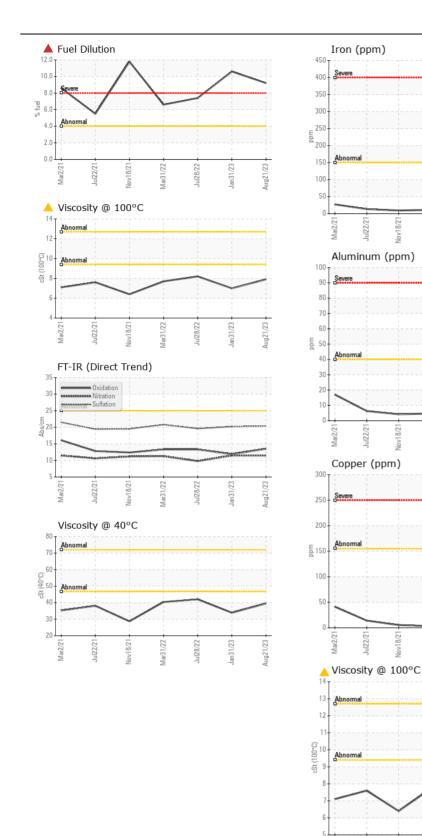
There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

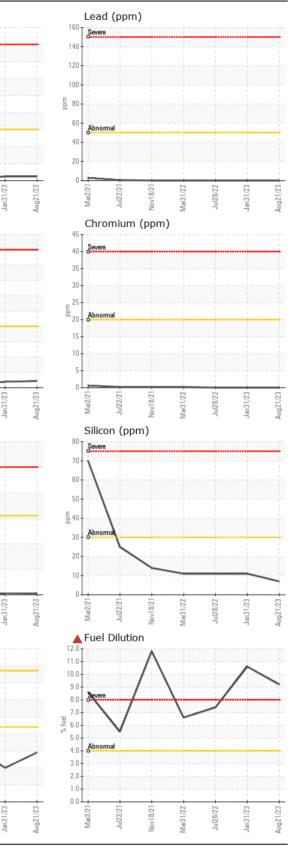
FLUID CONDITION

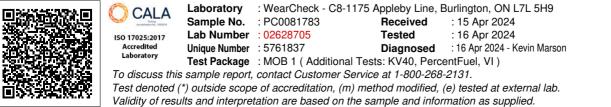
Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Sample DateClient Info21 Aug 202331 Jan 202328 Jul 2022Machine AgekmsClient Info48660032015Oil AgekmsClient Info074116383Filter AgekmsClient Info074116383Oil ChangedClient InfoChangedChangedChangedChangedFilter ChangedClient InfoChangedChangedChangedChanged							
Sample DateClient Info21 Aug 202331 Jan 202328 Jul 2022Machine AgekmsClient Info4866003201532015Oil AgekmsClient Info074116383Filter AgekmsClient Info074116383Oil ChangedClient Info0ChangedChangedChangedFilter ChangedClient Info0ChangedChangedChangedSample Status-SEVERESEVERESEVEREABNORMANIronppmASTMD5185(m)>20000NickelppmASTMD5185(m)>2000SilverppmASTMD5185(m)>2000AluminumppmASTMD5185(m)>2000AstmD5185(m)>5000000AdadiumppmASTMD5185(m)>20000VanadiumppmASTMD5185(m)>205333Fuel%ASTMD5185(m)>205333Fuel%ASTMD5185(m)>205333Fuel%ASTMD5185(m)>205333Fuel%ASTMD5185(m)>20S333Fuel%ASTMD5185(m)>4.0A44SulfacionAstmASTMD5185(m)>4.0A4<	Test	UOM	Method	Limit/Abn	Current	History1	History2
Machine Age kms Client Info 48660 0 32015 Oil Age kms Client Info 0 7411 6383 Filter Age kms Client Info Changed Changed Changed Sample Status Client Info Changed Changed Changed Changed Iron ppm ASTM D5185(m) >150 12 12 7 Chromium ppm ASTM D5185(m) >20 0 0 0 Nickel ppm ASTM D5185(m) >20 0 0 0 Silver ppm ASTM D5185(m) >40 4 4 Lead ppm ASTM D5185(m) >40 4 4 Lead ppm ASTM D5185(m) >10 0 0 0 Vanadium ppm ASTM D5185(m) >10 0 0 0 Vanadium ppm ASTM D5185(m) >20 ASTM 33 3 <td< th=""><th>Sample Number</th><th></th><th>Client Info</th><th></th><th>PC0081783</th><th>PC0046035</th><th>PC425792</th></td<>	Sample Number		Client Info		PC0081783	PC0046035	PC425792
Oil Age kms Client Info 0 7411 6383 Filter Age kms Client Info 0 7411 6383 Oil Changed Client Info Changed Changed Changed Changed Filter Changed Client Info Changed Changed Changed Changed Changed Sample Status SEVERE SEVERE SEVERE ASNORMAL Iron ppm ASTM D5185(m) >20 0 0 0 Nickel ppm ASTM D5185(m) >20 0 0 0 Silver ppm ASTM D5185(m) >20 0 0 0 Qopper ppm ASTM D5185(m) >10 0 0 0 Vanadium ppm ASTM D5185(m) >10 <11 <11 Potassium ppm ASTM D5185(m) >30 7 11 11 Potassium ppm ASTM D5185(m) >20 AC NEG NEG <th>Sample Date</th> <th></th> <th>Client Info</th> <th></th> <th>21 Aug 2023</th> <th>31 Jan 2023</th> <th>28 Jul 2022</th>	Sample Date		Client Info		21 Aug 2023	31 Jan 2023	28 Jul 2022
Filter AgekmsClient Info074116383Oil ChangedClient InfoChangedChangedChangedChangedSample StatusClient InfoChangedChangedChangedIronppmASTM D5185(m) >1012127ChromiumppmASTM D5185(m) >500<10NickelppmASTM D5185(m) >520<00TitaniumppmASTM D5185(m) >22000SilverppmASTM D5185(m) >50000AuminumppmASTM D5185(m) >50000CopperppmASTM D5185(m) >10000VanadiumppmASTM D5185(m) >10000VanadiumppmASTM D5185(m) >10000VanadiumppmASTM D5185(m) >20533Fuel%ASTM D5185(m) >20533Fuel%ASTM D5185(m) >20AST33Fuel%ASTM D5185(m) >20AST33GlycolWC Method0.2NEGNEGNEGSoliconppmASTM D5185(m) >20AST3.33Fuel%ASTM D5185(m) >20AST3.33Fuel%ASTM D5185(m) >20AST3.33Fuel%ASTM D5185(m) >20AST3.33Fuel%ASTM D5185(m) >20AST<	Machine Age	kms	Client Info		48660	0	32015
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Filter Changed Sample Status Client Info Changed SEVERE SEVERE SEVERE ABNORMAL Nickel ppm ASTMDS185(m) >10 0 0 0 0 0 Aluminum ppm ASTMDS185(m) >10 0 0 0 0 Vanadium ppm ASTMDS185(m) >10 0 0 0 0 Silicon ppm ASTMDS185(m) >10 0 0 0 0 0 Silicon ppm ASTMDS185(m) >20 PSC 3 3 3 Fuel % ASTMD7933' >4.0	Filter Age	kms	Client Info		0	7411	6383
Sample Status SEVERE SEVERE SEVERE ABNORMAL Iron ppm ASTM D5185(m) >12 12 7 Chromium ppm ASTM D5185(m) >50 0 0 0 Nickel ppm ASTM D5185(m) >5 0 <10 0 Titanium ppm ASTM D5185(m) >6 0 0 0 Silver ppm ASTM D5185(m) >6 0 0 0 Auminum ppm ASTM D5185(m) >50 0 0 0 Copper ppm ASTM D5185(m) >10 0 0 0 Vanadium ppm ASTM D5185(m) >10 0 0 0 Silicon ppm ASTM D5185(m) >0 7 111 111 Potassium ppm ASTM D5185(m) >0 4 0 0 Silicon wc Mc Method >0 NEG NEG NEG	Oil Changed		Client Info		Changed	Changed	Changed
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Nickel ppm ASTM D5185(m) >5 0 <1	-	ppm	ASTM D5185(m)	>150			
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Boron ppm ASTM D5185(m) 34 32 47 Barium ppm ASTM D5185(m) 0 0 <1 Molybdenum ppm ASTM D5185(m) 0 0 <1 Manganese ppm ASTM D5185(m) <138 129 134 Magnesium ppm ASTM D5185(m) <1 <1 <1 Magnesium ppm ASTM D5185(m) 382 361 390 Calcium ppm ASTM D5185(m) 1187 1218 1241 Phosphorus ppm ASTM D5185(m) 612 643 612 Zinc ppm ASTM D5185(m) 712 691 727 Sulfur ppm ASTM D5185(m) 1559 1566 1648 Oxidation Abs/.1mm ASTM D7414* >25 13.5 11.9 13.3 Visc @ 40°C cSt ASTM D7279(m) 39.5 33.9 42.0 Visc @ 100°C cSt ASTM D7279(m) \checkmark 7.9							
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Molybdenum ppm ASTM D5185(m) 138 129 134 Manganese ppm ASTM D5185(m) <1 <1 <1 Magnesium ppm ASTM D5185(m) 382 361 390 Calcium ppm ASTM D5185(m) 1187 1218 1241 Phosphorus ppm ASTM D5185(m) 612 643 612 Zinc ppm ASTM D5185(m) 712 691 727 Sulfur ppm ASTM D5185(m) 1559 1566 1648 Oxidation Abs/.1mm ASTM D7414*<>25 13.5 11.9 13.3 Visc @ 40°C cSt ASTM D7279(m) 39.5 33.9 42.0 Visc @ 100°C cSt ASTM D7279(m) \checkmark 7.9 7 & 8.2	Boron	ppm	ASTM D5185(m)		34	32	47
Manganese ppm ASTM D5185(m) <1	Barium	ppm	ASTM D5185(m)		0	0	<1
Magnesium ppm ASTM D5185(m) 382 361 390 Calcium ppm ASTM D5185(m) 1187 1218 1241 Phosphorus ppm ASTM D5185(m) 612 643 612 Zinc ppm ASTM D5185(m) 712 691 727 Sulfur ppm ASTM D5185(m) 1559 1566 1648 Oxidation Abs/.1mm ASTM D7414* >25 13.5 11.9 13.3 Visc @ 40°C cSt ASTM D7279(m) 39.5 33.9 42.0 Visc @ 100°C cSt ASTM D7279(m) ▲ 7.9 ~ 7.9 8.2	Molybdenum	ppm	ASTM D5185(m)		138	129	134
Calcium ppm ASTM D5185(m) 1187 1218 1241 Phosphorus ppm ASTM D5185(m) 612 643 612 Zinc ppm ASTM D5185(m) 712 691 727 Sulfur ppm ASTM D5185(m) 1559 1566 1648 Oxidation Abs/.1mm ASTM D7414* >25 13.5 11.9 13.3 Visc @ 40°C cSt ASTM D7279(m) 39.5 33.9 42.0 Visc @ 100°C cSt ASTM D7279(m) \checkmark 7.9 \checkmark 7.2 8.2	Manganese	ppm	ASTM D5185(m)		<1	<1	<1
Phosphorus ppm ASTM D5185(m) 612 643 612 Zinc ppm ASTM D5185(m) 712 691 727 Sulfur ppm ASTM D5185(m) 1559 1566 1648 Oxidation Abs/.1mm ASTM D7414* >25 13.5 11.9 13.3 Visc @ 40°C cSt ASTM D7279(m) 39.5 33.9 42.0 Visc @ 100°C cSt ASTM D7279(m) 4<7.9 8.2	Magnesium	ppm	ASTM D5185(m)		382	361	390
Zinc ppm ASTM D5185(m) 712 691 727 Sulfur ppm ASTM D5185(m) 1559 1566 1648 Oxidation Abs/.1mm ASTM D7414*<>25 13.5 11.9 13.3 Visc @ 40°C cSt ASTM D7279(m) 39.5 33.9 42.0 Visc @ 100°C cSt ASTM D7279(m) \checkmark 7.9 \checkmark 7.2 8.2	Calcium	ppm	ASTM D5185(m)		1187	1218	1241
Sulfur ppm ASTM D5185(m) 1559 1566 1648 Oxidation Abs/.1mm ASTM D7414*<>25 13.5 11.9 13.3 Visc @ 40°C cSt ASTM D7279(m) 39.5 33.9 42.0 Visc @ 100°C cSt ASTM D7279(m) 47.9 8.2	Phosphorus	ppm	ASTM D5185(m)		612	643	612
Oxidation Abs/.1mm ASTM D7414* >25 13.5 11.9 13.3 Visc @ 40°C cSt ASTM D7279(m) 39.5 33.9 42.0 Visc @ 100°C cSt ASTM D7279(m) 4 7.9 7 8.2	Zinc	ppm	ASTM D5185(m)		712	691	727
Visc @ 40°C cSt ASTM D7279(m) 39.5 33.9 42.0 Visc @ 100°C cSt ASTM D7279(m) A 7.9 7 8.2	Sulfur	ppm	ASTM D5185(m)		1559	1566	1648
Visc @ 100°C cSt ASTM D7279(m) ▲ 7.9 ▲ 7 ▲ 8.2	Oxidation	Abs/.1mm	ASTM D7414*	>25	13.5	11.9	13.3
	Visc @ 40°C	cSt	ASTM D7279(m)		39.5	▲ 33.9	42.0
Viscosity Index (VI) Scale ASTM D2270* 176 174 173	Visc @ 100°C	cSt	ASTM D7279(m)		A 7.9	A 7	▲ 8.2
	Viscosity Index (VI)	Scale	ASTM D2270*		176	174	173

Contact/Location: Pete O'Hare - PETMAP







Mar2/21

Vov18/21

Mar31/22

Mar31/22

Mar21/22

Mar31/22

08/02

Jul28/22

PETE & SHELLEY O`HARE BOX 1063 MAPLE CREEK, ON CA SON 1N0 Contact: Pete O'Hare shelley.ohare@sasktel.net T: (306)661-9808 F:

Contact/Location: Pete O'Hare - PETMAP Page 2 of 2