

Machine Id E-170

OIL ANALYSIS REPORT

Sample Rating Trend







E-1/U Component Swing Drive Fluid PHILLIPS 80W90 (GAL)		
DIAGNOSIS	SAMPLE INFOR	RMATION
Recommendation	Sample Number	
Resample at the next service interval to monitor.	Sample Date	
Wear	Machine Age	hrs
All component wear rates are normal.	Oil Age	hrs
Contamination	Oil Changed	
There is no indication of any contamination in the	Sample Status	
oil.	WEAR METALS	\$
Fluid Condition	Iron	
The condition of the oil is acceptable for the time in	Chromium	ppm
service.	Nickel	ppm
	Titanium	ppm ppm
	Silver	ppm
	Aluminum	ppm
	Lead	ppm
	Copper	ppm
	Tin	ppm
		1-10-11

SAMPLE INFORMATION method limit/base current history1 history2 Sample Number Client Info VC0780328 VC0780338 VC0703787 Sample Date Client Info 17 Aug 2023 12 Apr 2023 07 Oct 2022 Machine Age hrs Client Info 1653 1062 517 Oil Age hrs Client Info Not Changd Changed Not Changd Sample Status Imit/base current NotRMAL NORMAL NORMAL VEAR METALS method limit/base current history1 history2 Iron ppm ASTM 05185m >10 <1 1 <1 Nickel ppm ASTM 05185m 0 0 0 0 Sample Status satm 05185m 50 0 0 <1 <1 Nickel ppm ASTM 05185m >200 0 <1 <1 Carbonium ppm ASTM 05185m 0 0 0			0c	2022	Apr2023 Aug20	23	
Sample Date Client Info 17 Aug 2023 12 Apr 2023 07 Oct 2022 Machine Age hrs Client Info 1653 1062 517 Oil Age hrs Client Info 591 1062 517 Oil Changed Client Info Not Changd Not Changd Not Changd Not Changd Sample Status Imit/base current History1 History2 Iron ppm ASTM 05158n >400 29 74 45 Chromium ppm ASTM 05158n >10 0 1 1 Nickel ppm ASTM 05158n >10 0 1 1 Cadmium ppm ASTM 05158n >50 0 0 1 1 Cadmium ppm ASTM 05158n >10 0 0 1 1 Cadmium ppm ASTM 05158n >10 0 0 1 1 Cadmium ppm ASTM 05158n 205 78	SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Machine Age Oil Age Oil Age Oil Changed IrsClient Info Client Info16531062517Oil Changed Sample StatusClient InfoNot Changd NORMALNoRMALNORMALNORMALWEAR METALSmethodimit/bas Imit/bascurrenthistoryhistoryIronppmASTM D5185m>10<1	Sample Number		Client Info		WC0780329	WC0780338	WC0703787
Oil Age Inrs Client Info 591 1062 517 Oil Changed Client Info Not Changed Not Changed Not Changed Not Changed Sample Status Imilian Imilian Normal Normal Normal Normal WEAR METALS method Imilians Querrent Inistory1 Inistory2 Iron ppm ASTM D5185m >400 29 74 45 Chromium ppm ASTM D5185m >10 0 <1	Sample Date		Client Info		17 Aug 2023	12 Apr 2023	07 Oct 2022
Oil Changed Sample Status Client Info Not Changed NORMAL Not Change NOR Lead ppm ASTM D5165m \$20 0 <1	Machine Age	hrs	Client Info		1653	1062	517
Sample Status method Imit/base current NoRMAL NORMAL NORMAL WEAR METALS method imit/base current history1 history2 Iron ppm ASTM D5185m >10 <1	Oil Age	hrs	Client Info		591	1062	517
WEAR METALS method imit/base current history1 history2 Iron ppm ASTM D5185m >400 29 74 45 Chromium ppm ASTM D5185m >10 <1	Oil Changed		Client Info		Not Changd	Changed	Not Changd
Iron ppm ASTM D5185m >400 29 74 45 Chromium ppm ASTM D5185m >10 <1	Sample Status				NORMAL	NORMAL	NORMAL
Chromium ppm ASTM D5185m >10 <1	WEAR METALS		method	limit/base	current	history1	history2
Nickel ppm ASTM D5185m >10 0 <1 <1 Titanium ppm ASTM D5185m 0 0 0 Silver ppm ASTM D5185m 0 0 0 Aluminum ppm ASTM D5185m >25 <1	Iron	ppm	ASTM D5185m	>400	29	74	45
Titanium ppm ASTM D5185m 0 0 0 Silver ppm ASTM D5185m >25 <1	Chromium	ppm	ASTM D5185m	>10	<1	1	<1
Silver ppm ASTM D5185m 0 0 0 0 Aluminum ppm ASTM D5185m >25 <1	Nickel	ppm	ASTM D5185m	>10	0	<1	<1
Aluminum ppm ASTM D5185m >25 <1 <1 0 Lead ppm ASTM D5185m >50 0 0 <1	Titanium	ppm	ASTM D5185m		0	0	0
Lead ppm ASTM D5185m >50 0 0 <1 Copper ppm ASTM D5185m >200 0 <1	Silver	ppm	ASTM D5185m		0	0	0
Copper ppm ASTM D5185m >200 0 <1 <1 Tin ppm ASTM D5185m >10 0 0 <1	Aluminum	ppm	ASTM D5185m	>25		<1	0
TinppmASTM D5185m>1000<1VanadiumppmASTM D5185m00<1	Lead	ppm			0		
VanadiumppmASTM D5185m00<<1CadmiumppmASTM D5185m000ADDITIVESmethodlimit/basecurrenthistory1history2BoronppmASTM D5185m2057877BariumppmASTM D5185m030MolybdenumppmASTM D5185m00<1	Copper	ppm	ASTM D5185m	>200	0	<1	
CadmiumppmASTM D5185m000ADDITIVESmethodlimit/basecurrenthistory1history2BoronppmASTM D5185m030MolybdenumppmASTM D5185m00<1	Tin	ppm	ASTM D5185m	>10			
ADDITIVESmethodlimit/basecurrenthistory1history2BoronppmASTM D5185m2057.87.7BariumppmASTM D5185m030MolybdenumppmASTM D5185m00<1	Vanadium	ppm	ASTM D5185m		0	0	<1
BoronppmASTM D5185m2057877BariumppmASTM D5185m030MolybdenumppmASTM D5185m00<1	Cadmium	ppm	ASTM D5185m		0	0	0
BariumppmASTM D5185m030MolybdenumppmASTM D5185m00<1ManganeseppmASTM D5185m<122MagnesiumppmASTM D5185m<1<10CalciumppmASTM D5185m2097PhosphorusppmASTM D5185m793565533ZincppmASTM D5185m660SulfurppmASTM D5185m207661290219606CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>5051812SodiumppmASTM D5185m>20013PotassiumppmASTM D5185m>20013VISUALmethodlimit/basecurrenthistory1history2White Metalscalar*VisualNONENONENONENONEYellow Metalscalar*VisualNONENONENONENONESiltscalar*VisualNONENONENONENONENONESand/Dirtscalar*VisualNONENONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLCodorscalar*VisualNORMLNORMLNORMLNORMLNORMLCodorscalar*VisualNORMLNORML<	ADDITIVES		method	limit/base	current	history1	history2
MolybdenumppmASTM D5185m00<1ManganeseppmASTM D5185m<1	Boron	ppm	ASTM D5185m		205	78	77
ManganeseppmASTM D5185m<122MagnesiumppmASTM D5185m<1	Barium	ppm	ASTM D5185m		0	3	0
MagnesiumppmASTM D5185m<1<1<10CalciumppmASTM D5185m2097PhosphorusppmASTM D5185m793565533ZincppmASTM D5185m660SulfurppmASTM D5185m207661290219606CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>5051812SodiumppmASTM D5185m>5051812SodiumppmASTM D5185m>20013VISUALmethodlimit/basecurrenthistory1history2White Metalscalar*VisualNONENONENONENONEYellow Metalscalar*VisualNONENONENONENONESiltscalar*VisualNONENONENONENONESiltscalar*VisualNONENONENONENONESodiutscalar*VisualNONENONENONENONEAstricturescalar*VisualNONENONENONENONEYellow Metalscalar*VisualNONENONENONENONESodiutscalar*VisualNONENONENONENONESolotitscalar*VisualNORMLNORMLNORMLNORMLAppearancescalar*VisualNORML<	Molybdenum	ppm	ASTM D5185m		0	0	<1
CalciumppmASTM D5185m2097PhosphorusppmASTM D5185m793565533ZincppmASTM D5185m660SulfurppmASTM D5185m207661290219606CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>5051812SodiumppmASTM D5185m>5051812SodiumppmASTM D5185m>20013VISUALmethodlimit/basecurrenthistory1history2White Metalscalar*VisualNONENONENONENONEYellow Metalscalar*VisualNONENONENONENONESiltscalar*VisualNONENONENONENONESiltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLOdorscalar*Visual>0.2NEGNEGNEGCodorscalar*Visual>0.2NEGNEGNEGOdorscalar*VisualNORMLNORMLNORMLNORMLOdorscalar*Visual>0.2NEG <td>Manganese</td> <td>ppm</td> <td>ASTM D5185m</td> <td></td> <th><1</th> <td>2</td> <td>2</td>	Manganese	ppm	ASTM D5185m		<1	2	2
PhosphorusppmASTM D5185m793565533ZincppmASTM D5185m660SulfurppmASTM D5185m207661290219606CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>5051812SodiumppmASTM D5185m>5051812SodiumppmASTM D5185m>20013PotassiumppmASTM D5185m>20013VISUALmethodlimit/basecurrenthistory1history2White Metalscalar*VisualNONENONENONENONEYellow Metalscalar*VisualNONENONENONENONEPrecipitatescalar*VisualNONENONENONENONESiltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNORMLNORMLNORMLNORMLAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLCorrscalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLOdorscalar<	Magnesium	ppm	ASTM D5185m		<1	<1	0
ZincppmASTM D5185m660SulfurppmASTM D5185m207661290219606CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>5051812SodiumppmASTM D5185m>5051812PotassiumppmASTM D5185m>20013VISUALmethodlimit/basecurrenthistory1history2White Metalscalar*VisualNONENONENONENONEYellow Metalscalar*VisualNONENONENONENONEPrecipitatescalar*VisualNONENONENONENONESiltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGFree Waterscalar*Visual>0.2NEGNEG	Calcium	ppm	ASTM D5185m		20	9	7
SulfurppmASTM D5185m207661290219606CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>5051812SodiumppmASTM D5185m>20013PotassiumppmASTM D5185m>20013VISUALmethodlimit/basecurrenthistory1history2White Metalscalar*VisualNONENONENONENONEYellow Metalscalar*VisualNONENONENONENONEPrecipitatescalar*VisualNONENONENONENONESiltscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGNEG	Phosphorus	ppm	ASTM D5185m		793	565	533
CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>5051812SodiumppmASTM D5185m1<1	Zinc	ppm	ASTM D5185m		6	6	0
SiliconppmASTM D5185m>5051812SodiumppmASTM D5185m1<1	Sulfur	ppm	ASTM D5185m		20766	12902	19606
SodiumppmASTM D5185m1<13PotassiumppmASTM D5185m>20013VISUALmethodlimit/basecurrenthistory1history2White Metalscalar*VisualNONENONENONENONEYellow Metalscalar*VisualNONENONENONENONEPrecipitatescalar*VisualNONENONENONENONESiltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGNEG	CONTAMINANTS		method	limit/base	current	history1	history2
PotassiumppmASTM D5185m>20013VISUALmethodlimit/basecurrenthistory1history2White Metalscalar*VisualNONENONENONENONENONEYellow Metalscalar*VisualNONENONENONENONENONEPrecipitatescalar*VisualNONENONENONENONENONESiltscalar*VisualNONENONENONENONENONEDebrisscalar*VisualNONENONENONENONENONESand/Dirtscalar*VisualNONENONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGNEG	Silicon	ppm	ASTM D5185m	>50	5	18	
VISUALmethodlimit/basecurrenthistory1history2White Metalscalar*VisualNONENONENONENONENONEYellow Metalscalar*VisualNONENONENONENONENONEPrecipitatescalar*VisualNONENONENONENONENONESiltscalar*VisualNONENONENONENONENONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGNEGFree Waterscalar*VisualNO.2NEGNEGNEG	Sodium	ppm	ASTM D5185m		1	<1	3
White Metalscalar*VisualNONENONENONENONENONEYellow Metalscalar*VisualNONENONENONENONENONEPrecipitatescalar*VisualNONENONENONENONENONESiltscalar*VisualNONENONENONENONENONEDebrisscalar*VisualNONENONENONENONENONESand/Dirtscalar*VisualNONENONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGNEG	Potassium	ppm	ASTM D5185m	>20	0	1	3
Yellow Metalscalar*VisualNONENONENONENONEPrecipitatescalar*VisualNONENONENONENONENONESiltscalar*VisualNONENONENONENONENONEDebrisscalar*VisualNONENONENONENONENONESand/Dirtscalar*VisualNONENONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGNEG	VISUAL		method	limit/base	current	history1	history2
Precipitatescalar*VisualNONENONENONENONESiltscalar*VisualNONENONENONENONENONEDebrisscalar*VisualNONENONENONENONENONESand/Dirtscalar*VisualNONENONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGNEGFree Waterscalar*VisualNEGNEGNEG	White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Siltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGFree Waterscalar*VisualNEGNEG	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Debrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGNEGFree Waterscalar*VisualNEGNEGNEG	Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGFree Waterscalar*VisualNEGNEGNEG	Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGNEGFree Waterscalar*VisualImage: Scalar*VisualNEGNEG	Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Odor scalar *Visual NORML NORML NORML NORML Emulsified Water scalar *Visual >0.2 NEG NEG NEG Free Water scalar *Visual Image: Constraint of the state of	Sand/Dirt		*Visual	NONE	NONE	NONE	NONE
Emulsified Water scalar *Visual >0.2 NEG NEG NEG Free Water scalar *Visual NEG NEG NEG	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Free Water scalar *Visual NEG NEG	Odor	scalar	*Visual	NORML	NORML	NORML	NORML
	Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
FLUID PROPERTIES method limit/base current history1 history2	Free Water	scalar	*Visual		NEG	NEG	NEG
	FLUID PROPERT	IES	method	limit/base	current	history1	history2

Visc @ 40°C Report Id: DUKRAL [WUSCAR] 05931239 (Generated: 08/23/2023 20:07:48) Rev: 1

ASTM D445

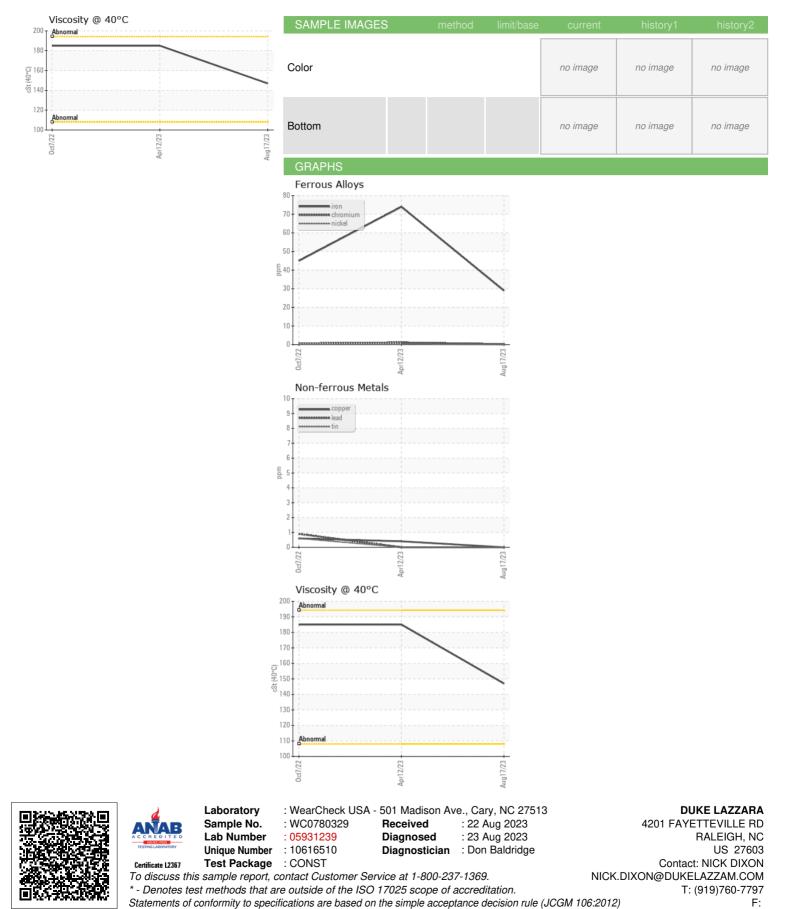
cSt

147 185 185 Contact/Location: NICK DIXON - DUKRAL

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Contact/Location: NICK DIXON - DUKRAL