

## LUBRIPORT LABORATORIES INC.

1650 AIRLINE DRIVE KENNER, LA 70062

(504) 464-1734

NEW ORLEANS PUBLIC BELT RAILROAD JOSH HARPER LOCO 2001 ENGINE

OIL CHANGED SINCE LAST ANALYSIS. WEAR METALS AND FUEL DILUTION ARE REDUCED. NO CORRECTIVE ACTION NECESSARY.
WEAR AND CONTAMINATION LEVELS ARE NORMAL.

FUEL DILUTION CONTINUES. LITTLE
CHANGE IN WEAR METALS FOUND. APRIL
RESAMPLE MAY BE
CONSIDERED.

CP #Ø16

MINOR FUEL DILUTION CONTINUES. SLIGHT RISE IN MOST WEAR METALS FOUND. NO IMMEDIATE ACTION REQUIRED.

LITTLE CHANGE SINCE LAST ANALYSIS. NO IMMEDIATE ACTION REQUIRED.

INVOICE NO.	LL-61723	LL-62537	LL-62652	LL-63297	LL-65374
	OCTOBER 10, 2017	MARCH 26, 2018	APRIL 18, 2018	SEPTEMBER 5, 2018	OCTOBER 21, 2019
		MARCH 6, 2018	APRIL 5, 2018	AUGUST 7, 2018	OCTOBER 1, 2019
The state of the s			LUBE OIL	LUBE OIL	LUBE OIL
			4-169	8-284	10-1
			3/22/18	6/25/18	9/18/19
				69.Ø SECS.	7Ø.3 SECS.
The second secon	The second secon	and the second s	8.1	8.2	8.0
			Ø.1%	Ø.1%	Ø.2%
A Province of the Control of the Con	the second of th	g to the transfer and t	Ø.1%	Ø.1%	Ø.1%
		1.5%	2%	2%	2%
	A Residence (1990) A Residence of the second	1	Control of the contro		
METALS IRON	5.7	9.2	8.7	10.9	10.9
IN SILVER	·Ø.Ø	Ø.Ø	Ø.3	Ø.3	Ø.5
PPM ALUMINUM	Ø.7	1.4	2.4	2.7	3.0
CHROMIUM	Ø.9	Ø.8	1.7	1.7	1.1
COPPER	Ø.7	1.2	2.3	2.6	2.5
MAGNESIUM	7.Ø	9.3	9.6	11.3	12.7
SODIUM	6.9	6.9	6.3	8.3	8.1
NICKEL	Ø.4	Ø.2	1.0	1.8	1.8
LEAD	1.6	1.6	3.4	2.Ø	1.2
SILICON	4.2	4.5	3.8	3.6	7.1
TIN	Ø.Ø	Ø.Ø	Ø.Ø	Ø.Ø	Ø.Ø
TITANIUM	Ø.Ø	Ø.Ø	Ø.7	Ø.9	Ø.5
the state of the s	Ø.3	Ø.3	2.3	1.9	1.1
BARIUM	Ø.1	Ø.1	Ø.4	Ø.9	Ø.8
MOLYBDENUM	The second secon	2.7	9.7	9.8	4.Ø
The state of the s		Ø.Ø	Ø.3	Ø.2	Ø.Ø
the second secon		3.0	3.7	4.5	6.0
		Ø.Ø	Ø.Ø	Ø.Ø	Ø.2
	2921	2936	2734	3174	2987
PHOSPHORUS	3.9	2.9	5.1	12.9	14.7
	REPORT DATE: DATE SAMPLE REC'D: PRODUCT LAB NUMBER DATE SAMPLED VISC. SUS @ 21Ø F T.B.N. (D2896) PENTANE INSOLUBLES WATER DILUTION  METALS IRON IN SILVER PPM ALUMINUM COPPER MAGNESIUM SODIUM NICKEL LEAD SILICON TIN TITANIUM BORON BARIUM MOLYBDENUM VANADIUM ZINC MANGANESE CALCIUM	REPORT DATE: OCTOBER 10, 2017  DATE SAMPLE REC'D: SEPTEMBER 29, 2017  PRODUCT LUBE OIL  LAB NUMBER 9-952  DATE SAMPLED 9/20/17  VISC. SUS @ 210 F 72.5 SECS.  T.B.N. (D2896) 8.4  PENTANE INSOLUBLES 0.1%  WATER 0.05%  DILUTION 1%  METALS IRON 5.7  IN SILVER 0.0  PPM ALUMINUM 0.7  CHROMIUM 0.9  COPPER 0.7  MAGNESIUM 7.0  SODIUM 6.9  NICKEL 0.4  LEAD 1.6  SILICON 4.2  TIN 0.0  TITANIUM 0.0  TITANIUM 0.0  BORON 0.3  BARIUM 0.1  MOLYBDENUM 0.0  ZINC 2.7  MANGANESE 0.0  CALCIUM 2921	REPORT DATE: OCTOBER 10, 2017 MARCH 26, 2018 DATE SAMPLE REC'D: SEPTEMBER 29, 2017 MARCH 6, 2018 PRODUCT LUBE OIL LUBE OIL LAB NUMBER 9-952 3-235 DATE SAMPLED 9/20/17 12/22/17 VISC. SUS @ 210 F 72.5 SECS. 71.5 SECS. T.B.N. (D2896) 8.4 8.3 PENTANE INSOLUBLES 0.1% 0.1% WATER 0.05% 0.05% DILUTION 1% 1.5%  METALS IRON 5.7 9.2 IN SILVER 0.0 0 0.0 PPM ALUMINUM 0.7 1.4 CHROMIUM 0.9 0.8 COPPER 0.7 1.2 MAGNESIUM 7.0 9.3 SODIUM 6.9 6.9 NICKEL 0.4 0.2 LEAD 1.6 1.6 SILICON 4.2 4.5 TIN 0.0 0 0.0 TITANIUM 0.0 0.0 BORON 0.3 0.3 BARIUM 0.1 0.1 MOLYBDENUM 0.0 0.0 VANADIUM 0.0 0.0 EACH 0.0 0.0 MANGANESE 0.0 0.0 MANGA	REPORT DATE: OCTOBER 10, 2017 MARCH 26, 2018 APRIL 18, 2018 DATE SAMPLE REC'D: SEPTEMBER 29, 2017 LUBE OIL LUBE	REPORT DATE: OCTOBER 10, 2017 MARCH 26, 2018 APRIL 18, 2018 AUGUST 7, 2018 DATE SAMPLE REC'D: SEPTEMBER 29, 2017 MARCH 6, 2018 APRIL 5, 2018 AUGUST 7, 2018 LUBE OIL