



**LUBRIPORT
LABORATORIES
INC.**

1650 AIRLINE DRIVE
KENNER, LA 70062

(504) 464-1734

NEW ORLEANS PUBLIC
BELT RAILROAD
JOSH/BANJO

UNIT #3002
ENGINE

CP #050

MORE RECENT SAMPLE FROM ENGINE EXHIBITS SIMILAR WEAR AND CONTAMINATION LEVELS. RESAMPLE AT NORMAL TIME.

RELATIVELY STABLE WEAR AND CONTAMINATION LEVELS FOUND. NO PROBLEMS APPARENT FROM THIS ANALYSIS.

GRADUAL RISE IN MOST WEAR METALS CONTINUES. CONTAMINATION UNCHANGED. SERIOUS PROBLEM UNLIKELY AT THIS TIME.

LITTLE CHANGE SINCE LAST ANALYSIS. NO CORRECTIVE ACTION NECESSARY.

INSOLUBLES AND MOST WEAR METALS ARE REDUCED. NO CORRECTIVE ACTION NEEDED.

INVOICE NO.	LL-63933	LL-64328	LL-65216	LL-65216	LL-65932
REPORT DATE:	JANUARY 7, 2019	MARCH 20, 2019	SEPTEMBER 18, 2019	SEPTEMBER 18, 2019	FEBRUARY 24, 2020
DATE SAMPLE REC'D:	DECEMBER 17, 2018	MARCH 11, 2019	AUGUST 29, 2019	AUGUST 29, 2019	FEBRUARY 10, 2020
PRODUCT	LUBE OIL	LUBE OIL	LUBE OIL	LUBE OIL	LUBE OIL
LAB NUMBER	12-475	3-208	8-963	8-964	2-256
DATE SAMPLED	11/20/18	2/11/19	5/15/19	8/13/19	11/15/19
VISC. SUS @ 210 F	73.4 SECS.	74.6 SECS.	71.9 SECS.	71.8 SECS.	74.2 SECS.
T.B.N. (D2896)	8.2	8.2	8.1	8.1	8.0
PENTANE INSOLUBLES	0.2%	0.2%	0.2%	0.2%	0.1%
WATER	0.1%	0.1%	0.1%	0.1%	0.05%
DILUTION	40 WT.	40 WT.	40 WT.	40 WT.	40 WT.
SAE WEIGHT	1%	0.5%	1%	1%	0.5%
METALS					
IRON	16.6	17.3	18.8	18.3	12.5
SILVER	0.0	0.0	0.0	0.0	0.0
ALUMINUM	2.3	3.0	3.2	2.9	2.1
CHROMIUM	4.4	4.5	5.6	5.0	3.7
COPPER	34	34	36	36	34
MAGNESIUM	10.9	11.7	30	34	14.1
SODIUM	19.2	14.1	14.2	13.3	8.1
NICKEL	0.7	1.0	0.7	0.7	0.0
LEAD	9.0	7.3	10.5	8.2	4.0
SILICON	4.0	5.0	10.8	10.2	12.4
TIN	0.0	0.0	0.0	0.0	0.0
TITANIUM	0.0	0.0	0.1	0.0	0.0
BORON	0.3	0.7	0.6	0.1	0.8
BARIUM	0.7	1.5	1.1	1.1	0.1
MOLYBDENUM	11.9	8.6	7.7	6.3	2.6
VANADIUM	0.0	0.1	0.1	0.2	0.0
ZINC	5.4	8.2	9.2	8.5	5.9
MANGANESE	0.0	0.0	2.0	0.0	0.0
CALCIUM	2709	2752	2867	2686	2593
PHOSPHORUS	11.2	11.6	12.1	17.3	4.8

Josh Banjo