



**LUBRIPORT
LABORATORIES
INC.**

1650 AIRLINE DRIVE
KENNER, LA 70062

(504) 464-1734

NEW ORLEANS PUBLIC
BELT RAILROAD
JOSH HARPER

LOCO 1503
ENGINE

CP #059

SERIOUS PROBLEM
UNLIKELY. WEAR
AND CONTAMINATION
LEVELS ARE RELA-
TIVELY STABLE.

SLIGHT INCREASE IN
METALS AND INSOL-
UBLES FOUND. NO
IMMEDIATE ACTION
NECESSARY.

WEAR METALS AND
INSOLUBLES ARE
REDUCED, BUT FUEL
DILUTION INCREASED.
RESAMPLE IN JUNE.

SLIGHTLY LESS IN-
SOLUBLES AND FUEL
DILUTION FOUND.
NORMAL RISE IN WEAR
METALS DETECTED. NO
CORRECTIVE ACTION
NECESSARY.

SODIUM AND WATER
CONTENT INCREASED.
LITTLE CHANGE IN
WEAR METALS DETECT-
ED. FEBRUARY RE-
SAMPLE SUGGESTED.

INVOICE NO.	LL-62227	LL-64071	LL-64599	LL-65498	LL-65932
REPORT DATE:	JANUARY 19, 2018	FEBRUARY 5, 2019	MAY 21, 2019	NOVEMBER 14, 2019	FEBRUARY 21, 2020
DATE SAMPLE REC'D:	JANUARY 12, 2018	JANUARY 18, 2019	MAY 7, 2019	NOVEMBER 8, 2019	FEBRUARY 10, 2020
PRODUCT	LUBE OIL	LUBE OIL	LUBE OIL	LUBE OIL	LUBE OIL
LAB NUMBER	1-338	1-619	5-258	11-220	2-252
DATE SAMPLED	1/4/18	1/15/19	4/18/19	10/17/19	1/16/20
VISC. SUS @ 210 F	76.7 SECS.	75.6 SECS.	73.2 SECS.	75.8 SECS.	76.9 SECS.
VISC. KIN @ 210 F	14.68 CST.	14.42 CST.	13.85 CST.	14.45 CST.	14.73 CST.
TBN (D2896)	8.2	8.0	7.9	8.0	7.9
PENTANE INSOLUBLES	0.4%	0.5%	0.4%	0.3%	0.25%
WATER BY DIST.	TRACE	0.1%	0.1%	0.05%	0.15%
SAE WEIGHT	40 WT.	40 WT.	40 WT.	40 WT.	40 WT.
DILUTION	TRACE	TRACE	1%	TRACE	TRACE
METALS					
IRON	30	38	20	30	29
SILVER	0.0	0.0	0.0	0.0	0.0
ALUMINUM	3.0	3.4	2.9	3.1	3.6
CHROMIUM	2.8	2.6	2.5	3.6	3.3
COPPER	25	30	18.4	20	22
MAGNESIUM	11.0	9.8	10.9	20	22
SODIUM	26	25	26	22	34
NICKEL	1.5	1.0	1.2	0.5	0.6
LEAD	10.7	6.9	7.5	7.9	8.6
SILICON	4.4	9.9	6.9	13.8	14.7
TIN	0.0	0.0	0.0	0.0	0.0
TITANIUM	0.1	0.0	0.0	0.9	0.4
BORON	0.2	1.0	0.4	2.0	2.0
BARIUM	0.7	1.0	1.4	0.8	0.6
MOLYBDENUM	32	18.4	9.7	6.8	5.6
VANADIUM	0.1	0.0	0.1	0.1	0.2
ZINC	6.4	8.4	6.8	7.0	5.7
MANGANESE	0.7	0.4	0.2	0.8	0.9
CALCIUM	2689	3015	2736	3095	3033
PHOSPHORUS	26	27	9.8	11.7	10.8

Josh Harper