



**LUBRIPORT
LABORATORIES
INC.**

1650 AIRLINE DRIVE
KENNER, LA 70062

(504) 464-1734

NEW ORLEANS PUBLIC
BELT RAILROAD
JOSH/BANJO

LOCO 4001
ENGINE

CP #072

NO CORRECTIVE ACTION
NECESSARY. WEAR AND
CONTAMINATION LEVELS
ARE RELATIVELY STA-
BLE.

RESAMPLE AT NORMAL
TIME. NO EXCESSIVE
WEAR OR CONTAMINA-
TION FOUND.

HIGHER INSOLUBLES,
BUT RELATIVELY
STABLE WEAR LEVELS
PRESENT. SERIOUS
PROBLEM UNLIKELY.

VISCOSITY AND IN-
SOLUBLES HAVE IN-
CREASED. RISE IN
MOST WEAR METALS
ALSO DETECTED. NO
IMMEDIATE ACTION
REQUIRED.

OIL SUITABLE FOR
CONTINUED USE.
NORMAL WEAR AND
CONTAMINATION
FOUND.

INVOICE NO.	LL-63297	LL-63933	LL-64599	LL-65216	LL-65374
REPORT DATE:	SEPTEMBER 5, 2018	JANUARY 7, 2019	MAY 21, 2019	SEPTEMBER 18, 2019	OCTOBER 21, 2019
DATE SAMPLE REC'D:	AUGUST 7, 2018	DECEMBER 17, 2018	MAY 7, 2019	AUGUST 29, 2019	OCTOBER 1, 2019
PRODUCT	LUBE OIL	LUBE OIL	LUBE OIL	LUBE OIL	LUBE OIL
LAB NUMBER	8-288	12-482	5-264	8-967	10-5
DATE SAMPLED	6/19/18	12/12/18	3/13/19	6/10/19	9/11/19
VISC. SUS @ 210 F	77.6 SECS.	77.1 SECS.	73.4 SECS.	78.2 SECS.	80.1 SECS.
VISC. KIN @ 210 F	14.92 CST.	14.80 CST.	13.83 CST.	15.05 CST.	15.56 CST.
T.B.N. (D2896)	8.7	9.0	8.3	8.3	8.4
WATER BY DISTILLATION	0.1%	0.2%	0.3%	0.5%	0.3%
SAE WEIGHT	0.1%	0.1%	0.1%	0.1%	0.1%
DILUTION	0.5%	TRACE	1%	NIL	NIL
METALS					
IRON	6.3	8.9	6.7	9.9	11.5
SILVER	0.0	0.0	0.0	0.2	0.1
ALUMINUM	1.8	1.4	1.7	2.1	2.6
CHROMIUM	0.6	0.4	1.8	2.5	1.7
COPPER	2.8	3.2	3.0	4.6	5.9
MAGNESIUM	13.9	11.2	12.5	14.8	14.2
SODIUM	49	15.1	18.8	12.8	12.0
NICKEL	0.8	0.2	1.1	1.1	0.8
LEAD	1.5	1.0	4.7	3.1	2.0
SILICON	2.9	6.0	3.2	5.4	5.8
TIN	0.0	0.0	0.0	0.0	0.0
TITANIUM	0.0	0.0	0.0	0.1	0.1
BORON	0.9	0.5	0.0	0.6	0.7
BARIUM	1.1	0.8	1.4	1.2	0.9
MOLYBDENUM	50	37	15.9	16.0	12.4
VANADIUM	0.0	0.0	0.2	0.3	0.2
ZINC	1.8	5.3	5.5	6.1	6.8
MANGANESE	0.0	0.0	0.0	0.0	0.0
CALCIUM	2960	3283	2819	2696	2823
PHOSPHORUS	37	35	8.4	10.2	12.5

Joseph F. Johnson