8340 MONOLEC PLUS® ENGINE OIL

SPARKS REGIONAL MEDICAL CENTER, Fort Smith, AR

Six White Superior Dual Fueled Generating Sets
SIC 8062 General Medical & Sugical Hospitals

36.8% Reduction in Makeup Oil!

CUSTOMER TESTIMONIAL

CUSTOMER PROFILE

Sparks Regional Medical Center, Fort Smith, AR is the oldest hospital in Arkansas. They operate a Co-generation Facility that generates electricity and steam for the hospital, and the excess electricity is sold to the local utility company. Larry Benge is the Chief Power Plant Operator.

APPLICATION

The six White Superior dual fueled generating sets burn 90% natural gas mixed with 10% No. 2 diesel fuel. The diesel fuel is used as the ignition source for the natural gas.

AREA OF INTEREST

While using a commercial grade engine oil, the engines were consuming an average of 34.1 gallons of oil per week, per engine.

LE SOLUTION

It was recommended they use LE's 8340 MONOLEC PLUS Engine Oil.

CUSTOMER COST SAVINGS

After they converted to LE's 8340, the oil consumption dropped to 22.6 gallons per week. This was a reduction of 36.8% in makeup oil! Another benefit was that the engines produced more steam and consumed less fuel, plus there was less oil leaking through the threaded pipe joints.

During the month of February 1991, Engine #1 ran 34.5 minutes (recorded on the computer used to monitor the generator sets) with no oil. The engines are called dry sump engines because the oil for all units is pumped from a storage tank in the basement. The oil valve for Engine #1 was shut. After 34.5 minutes, one bearing was on fire. The engine never seized--the residual 8340 MONOLEC PLUS Engine Oil provided the needed protection. Had the crankshaft required replacement, it would have cost approximately $300,000.

With LE's 8340 MONOLEC PLUS Engine Oil protecting the engine, it did not seize, so the crankshaft required only regrinding and was rechromed, at a cost of only $35,000. The maintenance personnel were very surprised and very pleased with the performance of LE's 8340. When the crankshaft was installed, the rings were replaced on the original pistons, new liners and bearings were installed, and the unit was returned to service.

From the records of Curt Belin, Director of Engineering Maintenance, the reported average oil cost per quarter using the commercial grade engine oil was $4,045.85. The cost for LE's 8340 MONOLEC PLUS$^®$ Engine Oil was $3,089.47, a savings of $956.38

LEAP^{SM} (Lubrication Engineers Oil Analysis Program) is used to monitor the condition of LE's 8340 MONOLEC PLUS Engine Oil. A copy of the LEAP on Engine #6 is shown. Note that the iron wear is minimal, as are other metal values. The calcium level, left from the commercial grade lubricant, has continued to decrease as it is diluted by makeup oil.

Kenneth Leding

We wish to thank Chief Power Plant Operator, Larry Benge, and LE Representative Kenneth Leding for the information provided to prepare this report.

LEAP
Lubrication Engineers, Inc.
Analysis Program
P. O. Box 7128
Fort Worth, Texas 76111
(817) 834-6321

SEVERITY CODE:
OCT 1 5 1992
LUBRICATION ENGINEERS
TECHNICAL SERVICES
3851 AIRPORT FREEWAY
FT. WORTH   TX

593000-943-0008
10/13/92

UNIT I.D.: 6 E
CUSTOMER: SPARKS COGEN
LOCATION: FORT SMITH   AR
UNIT TYPE: DUAL-FUEL
APPLICATION: PLANT, INDUSTRIAL
             SUPERIOR
LUBE PLANT: LUBRICATION ENGINEERS
            8340 MONOLEC PL. 40

10/05/92   13321   48 YRS   188A51

NO ABNORMAL FINDINGS: LUBRICANT IN SATISFACTORY CONDITION, AND APPEARS SUITABLE FOR CONTINUED

SAMPL RECD	LAB UNIT	IRON	CHROMIUM	MOLYBDENUM	ALUMINUM	COPPER	LEAD	TIN	SILVER	NICKEL	VANADIUM	TITANIUM	SILICON	SODIUM	POTASSIUM	BORON	MAGNESIUM	CALCIUM	BARIUM	PHOSPHORUS	ZINC	FUEL	FUEL SOOT	WATER	VIS	VIS
0506 0511	9955 48 YRS	27	2	1	3	172	0	0	0	0	0	0	6	46	3	82	1194	0	0	821	1271	0.5	<.1	<.1	1A.2
0603 0608	48 10471	27	0	0	1	161	0	0	0	0	0	0	4	51	0	61	1073	51	0	757	1146	0.5	<.1	<.1	1A.6
0702 0709	11163	30	0	0	1	151	0	0	0	0	0	0	6	53	1	66	1179	47	0	1455	1751	0.5	0.1	<.1	15.4
0803 0810	11897 48 YR	28	0	0	1	175	1	0	0	0	0	0	6	45	1	56	1106	0	0	825	1269	0.5	<.1	<.1	1A.1
0904 0911	12630 48 YRS	27	0	0	1	168	1	0	0	0	0	0	5	44	0	54	1130	0	0	846	1281	0.5	<.1	<.1	1A.1
1005 1008	13321 48 YRS	36	1	0	0	173	0	0	0	0	0	0	6	50	2	57	1112	0	0	803	1304	0.5	<.1	<.1	1A.4

DATE CHG #

0506 0511	N	6
0603 0608	N	1
0702 0709	N	2
0803 0810	N	3
0904 0911	N	4
1005 1008	N	5