

**8800 MONOLEC ULTRA[®] ENGINE OIL
8440 MONOLEC[®] GFS ENGINE OIL**

A MAJOR RAIL REPAIR COMPANY IN MONTANA
Deutz, Hatz, Detroit, Cummins and John Deere engines • SIC 3743

Monolec Engine Oils perform regardless of engine type

CUSTOMER PROFILE

This customer repairs rail across the entire southern line that passes through the state of Montana (more than 400 miles of line). It best can be described as a construction operation on rail. Repairing line is hard work and requires multiple pieces of specialized equipment. Most of the equipment is old and undersized, and new equipment is cost-prohibitive. The company has been in business for more than 25 years, and has been an LE customer for 12 years.



APPLICATION

This rail repair company has multiple engines running its repair equipment, including cranes, ballast regulators, front-end loaders, swing masters, spikers, spike pullers, tampers, tie cranes, tie removers and various other small pieces. They use Deutz, Hatz, Detroit, Cummins and John Deere engines.



AREA OF INTEREST

The company's access to the rail is limited to early April through late October. Employees use the downtime to repair hydraulic hoses and other equipment. While on the line, they do no maintenance to the equipment other than what is necessary. When LE Lubrication Consultant Jim Pezoldt met with the potential customer, they told him that they wanted an engine oil program that allowed them not to change oil until coming off the line in the fall. At that time, a program such as this seemed unattainable, especially considering the number of two-stroke Detroit engines in service. Additionally, they used their



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equipment between 300 and 2,000 hours per year.

LE SOLUTION

Pezoldt recommended 8800 Monolec Ultra and 8440 Monolec GFS engine oils.

CUSTOMER COST SAVINGS

The customer was able to extend its oil drain intervals from 100 hours to 300 hours by switching to the Monolec engine oils. This change eliminated three oil changes per season; however, changing oil on the rail remained necessary and difficult.

During the 2001-2002 offseason, the customer notified Jim that it was going back to its previous program and oil supplier because it still had to change oil on the rail. Jim did some research and learned that secondary filtration provided by companies such as AMS Filtration further lengthened service intervals, especially when used with Monolec engine oils.

Pezoldt was able to convince the customers to add the filtration systems to the engine and to some hydraulic systems. The results prove that the combination of LE Monolec extended drain oils and AMS secondary filtration systems provide the service that the customer desired.

Customer cost savings have been substantial. The company was able to eliminate the costly time-consuming oil changes on the rail; this provided an environmental impact savings to the customer as well. In addition, oil use dropped five times over the initial three-year period. Engine life is also on the rise according to the maintenance supervisor, providing further savings.

The company is headed toward applying the same type of program for all of its hydraulic systems. AMS hydraulic kits are being mounted on three units for the 2009 season.



OTHER PRODUCTS USED

3752 Almagard Vari-Purpose Lubricant for summer grease

4622 Monolec Multiplex Lubricant for winter grease

AMS filter elements # 304 (for both hydraulic and engine)

Unit ID: 301-02
 Client ID: 2587
 Unit Type: DIESEL ENGINE
 Unit Make: HATZ
 Unit Model:
 Lube Type: L.E. 8800
 Grade: 15W40
 Capacity:

REMARKS

WEAR AND CONTAMINATION LEVELS APPEAR NORMAL. NO CORRECTIVE ACTION INDICATED BY TESTS PERFORMED. CONTINUE NORMAL PM & SAMPLE INTERVAL.

DATE TAKEN / TESTED	HRS/MLB OIL UNIT	WEAR METALS										CONTAMINANTS					ADDITIVES				PHYSICAL ANALYSIS				
		Fe	Co	Cr	Al	Si	Ca	Mg	Na	K	P	NOX	SOX	PM	Water	Acid	Alk	Viscosity	Cloud	Stability	Flash	Fire			
7148 06/04/07	241	13	2	2	2	0	2	1	0	8	134	4	2	976	1097	1425	1478	13	A	<0.1	N			14.6	
26759 06/21/07	0																								
812 06/16/05	392	37	7	7	9	2	4	0	0	28	174	9	1	1241	895	1532	1713	5	A	<0.1	N			12.4	
49104 06/24/05	570																								

AN	BN	>4 (c)	>6 (c)	>14 (c)	>25 (c)	>50 (c)	>100 (c)	ISO	DL	DS
26759		251	137	23	5	0	0	15/14/12		
49104		512	279	47	10	1	0	16/15/13		

Unit ID: 353-05
 Client ID: 2587
 Unit Type: DIESEL ENGINE
 Unit Make: COMNINS
 Unit Model: 610T-359T
 Lube Type: L.E. 8800
 Grade: 15W40
 Capacity:

REMARKS

WEAR AND CONTAMINATION LEVELS APPEAR NORMAL. NO CORRECTIVE ACTION INDICATED BY TESTS PERFORMED. CONTINUE NORMAL PM & SAMPLE INTERVAL.

SOOT	OXIDATION	NITRATION	ATTENTION CODES
<0.1	13.00	7.00	(--)= Slightly above normal
<0.1	14.00	8.00	(=)= Caution
			(**)= Severe
			(!!)= Critical

DATE TAKEN / TESTED	HRS/MLB OIL UNIT	WEAR METALS										CONTAMINANTS					ADDITIVES				PHYSICAL ANALYSIS				
		Fe	Co	Cr	Al	Si	Ca	Mg	Na	K	P	NOX	SOX	PM	Water	Acid	Alk	Viscosity	Cloud	Stability	Flash	Fire			
7148 06/04/07	259	11	1	1	9	0	1	0	0	3	125	2	1	1170	280	1439	1402	0	A	<0.1	N			13.6	
26766 06/21/07	0																								
4949 09/29/06	780	14	1	3	26	0	2	0	0	6	122	7	1	1243	322	1386	1481	1	A	<0.1	N			14.9	
99276 10/06/06	0																								
4302 06/12/06	259	9	0	1	14	0	1	0	0	4	113	7	1	1255	303	1406	1525	1	A	<0.1	N			14.4	
91365 07/27/06	2341																								
812 06/13/05	339	10	0	0	4	0	1	0	0	13	112	2	0	1211	291	1404	1578	0	A	<0.1	N			14.3	
49106 06/24/05	1361																								
812 06/16/05	350	11	0	0	4	0	1	0	0	14	124	3	0	1272	314	1485	1644	0	A	<0.1	N			14.4	
49101 06/24/05	1384																								

AN	BN	>4 (c)	>6 (c)	>14 (c)	>25 (c)	>50 (c)	>100 (c)	ISO	DL	DS
26766		740	400	70	10	0	0	17/16/13		
99276		803	437	74	15	1	0	17/16/13		
91365		468	255	43	9	1	0	16/15/13		
49106		380	370	63	13	1	0	17/16/13		
49101		217	118	20	4	0	0	15/14/11		

LAB USE ONLY:

SOOT	OXIDATION	NITRATION	ATTENTION CODES
<0.1	11.00	6.00	
<0.1	12.00	7.00	(--)= Slightly above normal
<0.1	13.00	7.00	(=)= Caution
<0.1	11.00	7.00	(**)= Severe
<0.1	11.00	7.00	(!!)= Critical

