

JEFF FOSTER TRUCKING

AMSOIL Series 3000 Synthetic 5W-30 Heavy Duty Diesel Oil Is Correct Choice For Jeff Foster Trucking

With the help of Jeff Foster Trucking Inc. of Superior, WI, AMSOIL put its [Series 3000 Synthetic 5W-30 Heavy Duty Diesel Oil \(HDD\)](#), as well as its Dual-Gard filtration system, to the test.

Ten 1996 Kenworth Class 8 tractors used as interstate freight hauling vehicles and equipped with Cummins N-14 ESP3 diesel engines participated in the demonstration. Five trucks equipped with AMSOIL Series 3000 Synthetic 5W-30 Heavy Duty Diesel Oil, AMSOIL BMK-12 Filter mounts and BE-110 By-Pass filtration elements utilized 120,000-mile oil drain intervals, 20,000-mile full-flow oil filter change intervals and 40,000-mile By-Pass filter change intervals, while the other five trucks continued using petroleum motor oil, utilizing 20,000-mile oil and filter drain intervals.

The 10 Jeff Foster Trucking vehicles were identical in the following areas:

1. Vehicle manufacturer, model and model year
2. Engine model, displacement and year
3. Transmission and differential manufacturer and model
4. Tires (brand and design)
5. Mileage (10,000-mile minimum; 25,000-mile maximum)

The objective of the field demonstration was to prove that using AMSOIL Series 3000 Synthetic 5W-30 Heavy Duty Diesel Oil, together with the AMSOIL Dual-Gard filtration system, would result in a reduction in operating expenses when compared to the use of conventional petroleum lubricants and filtration methods. Verification will be demonstrated through increased fuel economy, extended drain intervals, reduced oil consumption and reduced maintenance.

Both the AMSOIL motor oil and the petroleum product were sampled and tested at 20,000-mile intervals in the areas of elemental analysis (including wear metals, contaminants and additives), physical properties (including viscosity, total acid number and total base number) and contamination (including water, solids, glycol, oxidation, fuel soot and fuel dilution). Oil condemnation limits vary due to individual engine idiosyncrasies, operating conditions and time the fluid has been in service.

The total mileage in this demonstration exceeded 2,548,580 miles, with the average over-the-road mileage for each demonstration vehicle exceeding 217,527 miles. Even while making use of extended drain intervals, the protection and fuel economy advantages of AMSOIL Series 3000 Synthetic 5W-30 Heavy Duty Diesel Oil met or exceeded that offered by the petroleum products utilizing conventional 20,000-mile fluid and filter change intervals. Furthermore, Jeff Foster Trucking saves \$61.90 in lubrication costs per vehicle by using AMSOIL products. Calculated to cover the entire Jeff Foster fleet of 200 vehicles, that's a savings of \$12,380.

The chart below demonstrates the fuel economy benefits of the AMSOIL products. Overall, AMSOIL provided a 3.065 percent increase in fuel economy. For every 240,000 miles a single Jeff Foster truck travels, it saves \$1443 in fuel costs by using AMSOIL products. Calculated to cover the entire fleet, that's a savings of \$288,600 at an average diesel fuel cost of \$1.30/gal. Jeff Foster Trucking currently uses AMSOIL Diesel Oil in its entire fleet of 200 trucks.

JEFF FOSTER TRUCKING INC./AMSOIL INC. Fuel Economy			
Control Group Monthly Average (Petroleum)		Test Group Monthly Average (AMSOIL)	
September	6.595 mpg	September	7.175 mpg
October	6.708	October	6.7975
November	6.63	November	6.9446
December	6.3633	December	6.2
January	6.23	January	6.245
February	6.034	February	6.378
Average for the six month period:			
Petroleum 6.4267 mpg		AMSOIL 6.6237 mpg	

Overall, the demonstration was quite successful. The chart below demonstrates the group averages related to the conditions of both the petroleum product and the AMSOIL Series 3000 Synthetic 5W-30 Heavy Duty Diesel Oil.

Miles on Oil	Iron (Fe) (PPM per mile)		Lead (Pb) (PPM per mile)		Soot (% per mile)		TBN		Viscosity (VIS. cSt @ 100 C)	
	Petroleum	AMSOIL	Petroleum	AMSOIL	Petroleum	AMSOIL	Petroleum	AMSOIL	Petroleum	AMSOIL
20,000	0.001672	0.001255	0.000875	0.000752	0.0000204	0.000008	4.41	8.92	12.62	10.87
40,000	0.001420	0.001362	0.000426	0.000732	0.0000167	0.000010	4.42	8.45	14.08	11.22
60,000	0.000911	0.001599	0.000398	0.001153	0.0000197	0.000014	4.63	8.22	14.49	11.03
80,000	0.000809	0.001222	0.000818	0.000766	0.0000031	0.000015	4.52	8.36	13.17	11.12
100,000	0.001151	0.001064	0.001738	0.000737	0.0000264	0.000013	4.36	6.90	13.09	11.31
120,000	0.001001	0.000927	0.001176	0.006310	0.0000223	0.000012	4.21	7.24	13.61	11.49
140,000	0.000921	0.001135	0.001191	0.001094	0.0000315	0.000025	3.87	8.80	13.90	11.10
160,000	0.000886	0.001032	0.001165	0.001151	0.0000300	0.000018	4.81	7.97	13.40	11.03
180,000	0.001246	0.000938	0.009280	0.000759	0.0000313	0.000016	5.02	7.34	14.01	12.17
200,000	0.001079	0.001039	0.000755	0.000891	0.0000306	0.000016	4.72	5.71	14.04	11.39
220,000	0.000937	0.000656	0.001236	0.000777	0.0000219	0.000012	5.37	5.54	13.73	11.24
240,000	0.001677	0.000687	0.000864	0.000609	0.0000199	0.000010	5.63	6.05	13.90	11.56

*PPM = Part Per Million

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