

Putting AMSOIL to the test using New York City Taxi Cabs



inspection.

It was 1984. Lubrizol, the prestigious specialty chemical supplier, launched an ambitious testing program for its additives and formulations. It involved finding a fleet whose normal use exposed the cars to a wide range of stress. One by one, the existing engines would be removed, and replaced by factory new engines. Completing the tests, the fleet's new engines would be removed and disassembled for

The fleet chosen was made up of New York City taxicabs. Here was a pool of automobiles subject to long periods of idling, strenuous bouts with traffic, and an occasional "follow that car!". Or "get me to the airport no matter what," accompanied by the full range of weather and temperature variables. A classic choice in field testing.

But there were other factors the testers couldn't anticipate. Once the tests began, an astonishing rate of smashed and disabled cabs emerged. The test fleet seemed to ricochet through the New York streets like billiard balls. Added to this was the Chevrolet 229 CID V-6, an engine in its last product year and remembered fondly by mechanics everywhere for its ability to produce income.

Like all field tests, real-life testing would provide something the laboratory never could. Unpredictability.

Welding The Plugs The AMSOIL test involved sixteen cabs divided into four groups of four cabs each. The first four were controls. Using the same petroleum oil and filters already in use by the fleet, they would follow the existing fleet custom of changing oil every 3,000 miles. They are identified as "**Group A**".

"**Group B**" used AMSOIL 10W-40 Synthetic Motor Oil with an AMSOIL Oil Filter. For **Group B**, the oil change interval was doubled to 6,000 miles.

Using the same AMSOIL products as "**Group B**", the third division of cars - "**Group C**" - quadrupled the control interval, changing oil at 12,000 miles.

[See figures below]

Group A, Unit 100: Control, Conventional Petroleum oil, **3,000-mile** drain interval **Group B**, Unit 076: AMSOIL, **6,000-mile** drain interval **Group C**, Unit 070: AMSOIL, **12,000-mile** drain interval **Group D**, Unit 074: AMSOIL, No oil changes, **60,000-miles**

But "**Group D**" ran the ultimate test. Using AMSOIL 10W-40 Synthetic Motor Oil, an AMSOILS Oil Filter and AMSOIL By-Pass Filter (changing the filter at 12,000-mile intervals),

the taxis were "filled for life". No oil changes at all. In fact, the drain plugs were welded to the pan.

The life of the test was 60,000 miles. Overall, the AMSOIL test fleet accumulated nearly three-quarter million miles.



**3,000 mile drain interval
using conventional Petroleum Oil**



**6,000 mile drain interval
using **AMSOIL** 10W40 Synthetic**



**12,000 mile drain interval
using **AMSOIL** 10W40 synthetic**



**No oil changes until 60,000 miles using
AMSOIL by-pass filter kit, changing
SDF filter at 12,000 miles
using AMSOIL 10W40 Synthetic**

Inside The Engines

With the tests completed and the engines removed and disassembled, there was no visible evidence that an AMSOIL-filled engine without an oil change in 60,000 miles was worse off than a cab with 20 petroleum oil changes. A systematic analysis of sludge, varnish, rust, and wear showed little variation between taxis with AMSOIL products and those without, even though AMSOIL oil change intervals ranged from double to twenty times the petroleum-filled engines.

In its written conclusions, the testing facility responsible for compiling the test data made this observation:

"The data presented in this report indicates that AMSOIL synthetic SAE 10W-40 passenger car motor oil formulation as described here provided protection of test engines from excessive wear and deposit formation far beyond the normal 3,000-mile change interval."

In a separate letter to AMSOIL's Technical Director, the testing facility diplomatically touched on the problems caused by using the Chevrolet engine for testing, while agreeing with the long-drain conclusions produced by AMSOIL Synthetic Oils:

"I believe the general conclusion that your 'four times normal drain' engines appeared as clear as our mineral oil 'normal drain' engines is testimonial to your oil, in spite of the unanticipated severity of the General Motors 3.8 liter engine."

Adding It Up

In the end, the long, grueling test, so riddled with the unpredictable events of real-life, pointed to a product vastly better than ordinary petroleum. It established base-line data that supported AMSOIL recommended **drain intervals of 25,000 miles** or one year. It gave visible evidence of how AMSOIL Synthetic Oil behaved in the worst of circumstances. And it established the role of the company's synthetic lubricants in the looming age of conservation and environmental awareness.

For those who used their vehicles to make a living, it promised a way to make the vehicle last longer, have fewer down hours for general maintenance, and a way to increase the profitability of their business.

N.Y.C. Field Test Deposit and Wear				
	Sludge* Deposits	Varnish* Deposits	Rust* Deposits	Cam + Lifter Wear
Control Group: Petroleum 3,000 Mi. Oil/Filter Change	9.5	6.1	10.0	.02-.06"
Group B: AMSOIL Synthetic 6,000 Mi. Oil/Filter Change	9.6	7.0	10.0	.01-.03"
Group C: AMSOIL Synthetic 12,000 Mi. Oil/Filter Change	9.4	7.1	10.0	01-.03"
Group D: AMSOIL Synthetic Fill for Life	9.5	6.6	10.0	.02-.05"
*10 = clean				
Duration - 60,000 Miles on all vehicles				

North Dakota taxi fleet recognizes savings and benefits of their ten-year relationship using AMSOIL

With over a hundred vehicles on the road, each traveling up to two-hundred fifty miles a day, a taxi fleet's office manager has his hands full. For Al Wangler, office manager of Schumacher

Cab in Bismark, North Dakota, the responsibility of such a huge operation is overwhelming, and any product that spares him a few headaches and dollars makes his work a lot easier.

Schumacher Cab carries a fleet of taxis, transit vehicles, limousines and crew vans. They've been using AMSOIL Synthetic Motor Oil, Automatic Transmission Fluid and Synthetic Grease for over a decade, and they've had outstanding results.

"We've saved thousands of dollars over the years," says Wangler. "But for me, the best part is the fact that AMSOIL spares us a lot of hassle."

The company extends the drain intervals of its vehicles to 24,000 miles, so they suffer a lot less vehicle down-time.

In addition to the time and money saved by the extended drain intervals, Schumacher Cab has realized the great long-term benefits of maintaining their vehicles with high-quality AMSOIL lubricants. Wangler feels that the lubricants have helped keep their vehicles on the road longer:

"Our vehicles average about 200,000 miles. We've even had some reach as high as 300,000 miles. In this business, where the vehicles are used for some very hard, very demanding city driving, such a long life-span is exceptional. AMSOIL has saved us money by helping us get more out of our vehicles."

And best of all, AMSOIL saves Wangler a lot of worry. He knows that the company vehicles have the best protection available to help them endure their brutal schedules. Fewer maintenance problems result in less downtime and fewer expenses for him to juggle in the company's daily operation.

Schumacher Cab has used AMSOIL products for over ten years, and they plan to continue their relationship with AMSOIL. It's a relationship that benefits them a great deal. It's a relationship that will continue to play a significant role in the success of Schumacher Cab.

Testimonial provide by Amsoil

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