

# Case Study

## Hillsdale County Sheriff Vehicle



### Extended Engine Oil Change to 6,500 Miles Reducing Costs, Maintenance Hours and Environmental Waste from County Budget

In cooperation with the Hillsdale County Sheriff's Department, NTZ Micro Filtration installed its ATF-09 engine oil filter (see photo) at 62,155 miles on car # 810. This test compared the vehicle **with** filtration (#810) against one without filtration (#86) for an objective view of the effects of micro filtration on fluid cleanliness. By keeping oil clean, you can continue to use your existing oil much longer.

To start the test, a fresh oil change was performed and the cleanliness rating of the oil (ISO Code) was recorded.

Over the course of 6,500 severe duty miles, eight (8) oil counts were taken at varying intervals to monitor and document the oil cleanliness level.

Prior to start of test, the normal oil change interval for this vehicle was performed every 3,000 miles. So, reducing the frequency of maintenance by extending oil cleanliness would yield cost savings and environmental benefits.

Test results concluded that the high efficient filter system was able to extend the oil service life by a minimum of 100%, resulting in a 50% saving on costs and a 50% reduction in environmental waste product.

**Follow Up on Story:** After these results, we were asked by HCSD to perform an oil sample after 10,000 miles to see the results. They came back still showing a "cleaner than new oil condition" of ISO 14/12.

#### Micro Filtration Technology —Engine Oil Filter



UNIT ID		SECOND ID		UNIT TYPE		APPLICATION		ACCOUNT NUMBER		DATE SAMPLED		DATE RECEIVED		DATE COMPLETED		TRACKING #		MANUFACTURER/MODEL		LUBE OIL		LUBE TYPE - GRADE		MILION MILES		FILTER TYPE		FUELFLOW		RPM/CAPACITY		HYD SYSTEM PRESSURE		PLU/DIAGNOSIS		OVERALL SEVERITY OF REPORT		LAB #		LOCATION		ANALYST			
H022 CAR #810 SAMPLE #4		02/20/16		02/15/16		02/15/16		3103770000000		02/20/16		02/15/16		02/15/16		02/15/16		FORD F-150		NATIONAL OIL		5W-30		15		FULLFLOW		0/00		0/00		0/00		0/00		0/00		0/00		0/00		0/00			
H022 CAR #810 SAMPLE #4		02/20/16		02/15/16		02/15/16		3103770000000		02/20/16		02/15/16		02/15/16		02/15/16		FORD F-150		NATIONAL OIL		5W-30		15		FULLFLOW		0/00		0/00		0/00		0/00		0/00		0/00		0/00		0/00		0/00	



2006 Ford Crown Victoria

Vehicle History Summary	
Vehicle with Filtration — Car #810 (Over 6,500 mile period)	Start ISO Code 22/20/16 Ending ISO Code: 17/15/13
Vehicle <u>without</u> Filtration — Car #86 (After 3,834 miles)	Start ISO Code 22/20/16 Ending ISO Code 26/23/14