

Fuel Use Avoidance

M-Series Motor Grader Simulator

Using a simulator for part of your overall operator training program makes smart economic sense on many levels, especially when it comes to fuel consumption. When an organization uses a simulator, it avoids burning fuel.

Typical Work Application Descriptions

In order to calculate fuel use, typical motor grader work applications must be taken into consideration. Caterpillar classifies motor grader work applications into three categories.

Low. Light road maintenance; finish grading; plant and road mix work; and light snow plowing. Motor grader travels a great deal.

Medium. Haul road maintenance. Average road maintenance, road mix work and scarifying. Road construction, ditch building/cleaning, loose fill spreading. Land forming, land leveling and elevating grader use. Medium to heavy amounts of snow removal.

High. Heavy maintenance of hard packed roads with embedded rock. Heavy fill spreading, base material spreading and ditch building/cleaning. Ripping/scarifying of asphalt or concrete. Continuous high load factor and high impact use. Heavy amounts of snow plowing.

	Low		Medium		High	
Load Factor*	35%-50%		50%-65%		65%-80%	
Fuel Consumption	Liter	Gallon	Liter	Gallon	Liter	Gallon
	14.6-17.8	3.9-4.7	17.8-23.1	4.7-6.1	23.1-33.5	6.1-8.8

Fuel Avoidance Savings

(Formula: Hourly consumption x Local Unit Prices of Fuel = Hourly Fuel Cost)

If you use simulator training one week a month (40 hours), you will avoid using fuel as follows:

	156 to 188 Gallons	584.0 to 712.0 Liters
	\$3.85**	\$1.02**
Total Savings	\$600.60 to \$723.80 (1 week)	\$595.68 to \$726.24 (1 week)
	\$7,207.20 to \$8,685.60 (12 weeks)	\$7,148.16 to \$8,714.88 (12 weeks)

Note: All estimates based on a low engine load factor.

How Can You Benefit?

Find out the benefits of heavy equipment training simulators. Call an Account Manager at 1.309.266.2640 or sales@catsimulators.com.

*Average engine load factor based on application description for each range.

**Cost of fuel will fluctuate with market and by country.

When using this information, keep in mind the many variables which can affect fuel consumption. Two operators of different temperament or attitude operating identical machines side by side in the same material can have as much as 10%-12% difference in their consumption rates. However, the ranges shown should be applicable across a wide spectrum of conditions. Your Caterpillar dealer representative can help select the most reasonable estimate for your specific situation. Keep in mind also that a fuel consumption study measured over a short period of operation may give higher fuel consumption than shown here. This information was figured for "normal" inefficiencies in the working cycle and will more closely relate to "normal" day to day operation.



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