

Save Fuel Costs: Articulated Truck Simulator

Simulators used as part of an overall heavy equipment training program makes sense on many levels—especially for cost savings during these tough economic times. Organizations that use simulators can avoid burning fuel and enjoy cost savings to their bottom line.

Typical Work Application Descriptions

In order to calculate fuel use, typical articulated truck work applications must be taken into consideration. Caterpillar classifies the articulated truck work applications into three categories:

Low. Earthmoving and stockpile use with well matched loading equipment, free flowing material. Large amount of idling, short to medium haul distances on well-maintained level haul roads. Minimum total resistance, few impact loads.

Medium. Typical use in road-building, dam construction, open-pit mining, etc. Normal load and haul times, varying haul road conditions with some adverse grades. Some impact loads.

High. Poorly-matched loading equipment with continuous overloading. Long haul time and continuous use on very poorly maintained haul roads with frequent adverse grades. High rolling resistance, poor traction, high impact loads.

	Low		Medium		High	
Load Factor*	20%-25%		26%-40%		41%-50%	
Fuel Consumption	Gallons	Liters	Gallons	Liters	Gallons	Liters
	3.6-6.1	13.8-23.0	6.1-9.7	23.0-36.8	9.7-12.1	36.8-46.0

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:

	144 to 244 Gallons	552 to 920 Liters
	\$3.85**	\$1.02**
Total Savings	\$554.40 to \$939.40 (1 week)	\$563.04 to \$938.40 (1 week)
	\$6,652.80 to \$11,272.80 (12 weeks)	\$6,756.48 to \$11,260.80 (12 weeks)

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

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

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

How Can You Benefit? learn@catsimulators.com

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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 Cat® 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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