



Caterpillar Inc.

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To Members of the Heavy Duty Engine Oil Classification Panel (HDEOCP):

This letter is being sent for your information and in preparation for discussion at the next HDEOCP meeting on September 29, 2004.

Issues and Options for continued support of the Caterpillar 1M-PC SCOTE engine.

Caterpillar has identified that there is a manufacturing and supply issue with the current 1M-PC cylinder liner (1Y3995). The tooling for the manufacture of this liner is no longer functional and continued supply will require new tooling. The cost to manufacturers for new tooling will be in the range of \$150,000 to \$300,000. It is likely that ASTM will require the new liners to be referenced, which is also a cost that will have to be addressed.

The oil categories supported by the 1M-PC engine test includes the API CF and CF-2 categories, mainly in support of pre-chamber diesel engines and 2-stroke Detroit Diesel engines. Other markets that use the 1M-PC engine or API CF category include the Automotive, Railroad, Japan and older Marine engines.

Caterpillar has identified three possible solutions and would like to state that no matter which course of action the industry takes, Caterpillar will support this engine for a maximum of five more years.

Work with the HDEOCP/EMA/ASTM/CPD or outside companies to fund the purchase of a lifetime supply of liners to cover tests over the next five years. It is estimated that the total investment required by manufacturers would be about \$ 600,000, which includes tooling and procurement. The price of the finished liners would be determined by who ever agrees to pay for the tooling and purchase of the liners. The industry would also have to work through funding for any reference testing required. Caterpillar would continue to supply other 1M-PC parts.

2. Use a current production part 5H5657, which is available from any Caterpillar Dealer. The referencing and conformity of these parts will be entirely relying on the production manufacturing process. The cost of this liner is in the region of \$132 per liner.
3. Caterpillar stops supporting the 1M-PC test on January 1, 2005.

Under options 1 and 2 listed above, Caterpillar would not supply the 1Y3995 liner but would continue to support the 1M-PC with other parts in inventory for an estimated five-year period, after which the remaining parts would be sold or scrapped thus bringing to an end the support of this engine by Caterpillar. No more parts will be manufactured except consumables, pistons and rings. Caterpillar estimates a five-year life for parts between what is in inventory and what can be cannibalized from existing engines.

Caterpillar asks that the HDEOCP debate and recommend which of the three above options its members favor. Caterpillar welcomes any suggestions from members of the HDEOCP, EMA, ASTM, CPDs and test laboratories in the resolution of the 1M-PC liner issue. We will require an answer no later than October 15, 2004, after which our only option will be to stop supporting the 1M-PC test.