

SPINNER II[®]

Oil Cleaning Centrifuge

Spinner II Products / T.F. Hudgins, Incorporated

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SALES BULLETIN

Bulletin 91.022

August 20, 2003

SUBJECT: Mack Warranty Policy — Using Spinner II Centrifuge

The second page of this bulletin is a reprint of a letter received from Mack Trucks, Incorporated regarding the use of the Spinner II Oil Cleaning Centrifuge as a bypass oil cleaning filter for Mack engines.

As you may see by the letter, Mack does not endorse the use of the Spinner II centrifuge. However, since Mann+Hummel is the only manufacturer of both the Spinner II Oil Cleaning Centrifuge *and* the Mack Centri-Max[®] engine-mounted product, there is an obvious relationship between the applications.

Mack is a vertically-integrated truck builder, manufacturing both the powertrain components and assembling their own trucks. Their business choice in 1985 was to apply the disposable version of the Mann+Hummel lube oil-powered centrifuge on the E6 engine series. That same Centri-Max is now being first-fit to all E7 engines, the design-upgrade of the E6. As a result of this application, there are now over 140,000 Mack engines equipped with the Centri-Max bypass centrifuge.

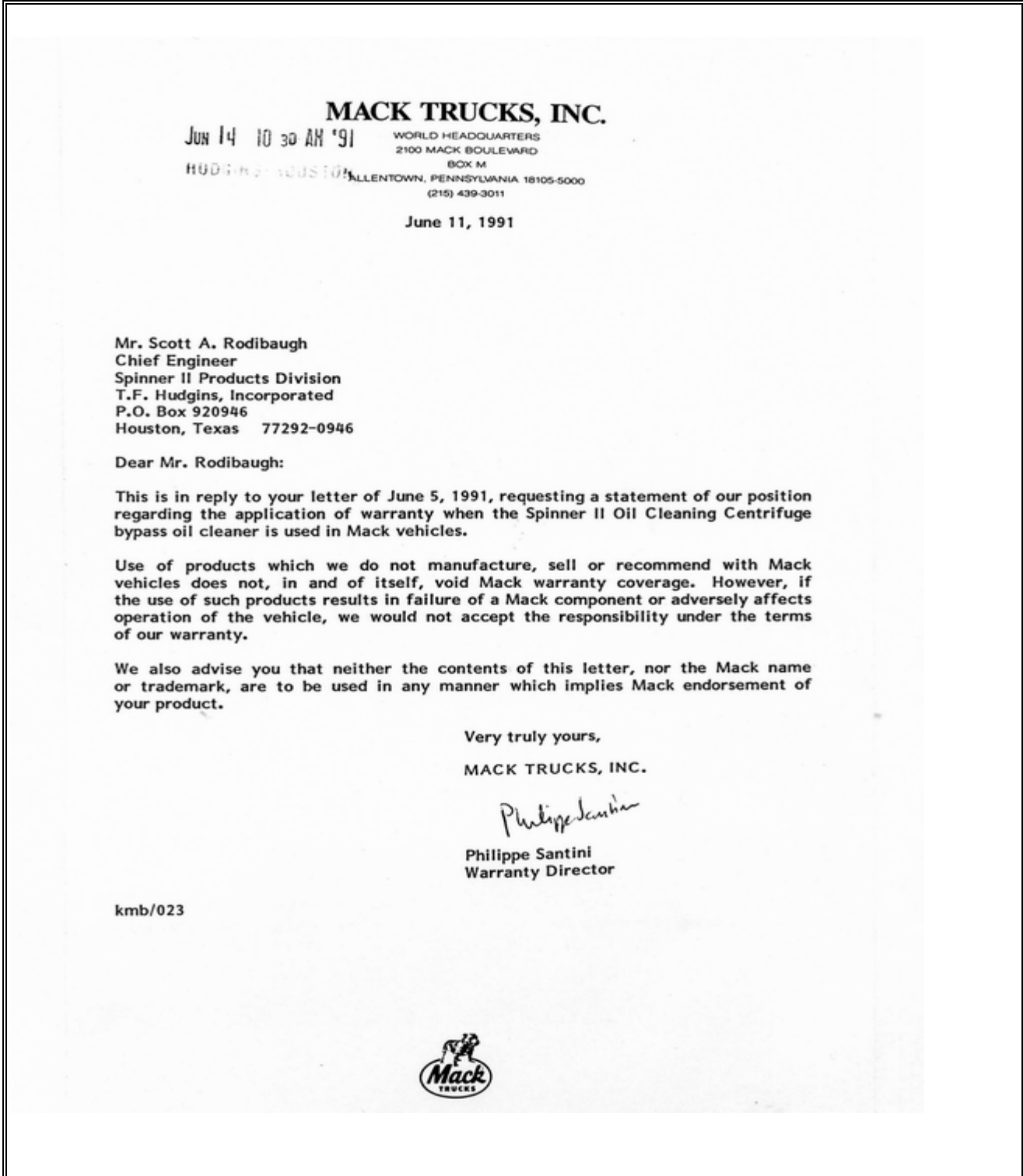
Excerpts from some of the Mack literature describing the release of the Centri-Max are attached at pages 3 and 4. For those who wish a technical exposure to why Mack selected the Mann+Hummel centrifuge as their standard bypass filtration device, please get a copy of the following SAE Technical Paper:

W. R. Alexander, L. T. Murphy and G. L. Shank; *Improving Engine Durability via Filters and Lubricants*, SAE Paper 852125

If there are any questions about this document, please give us a call.



Mack Warranty Division Letter (Jun-91):



Mack Brochure Excerpt:

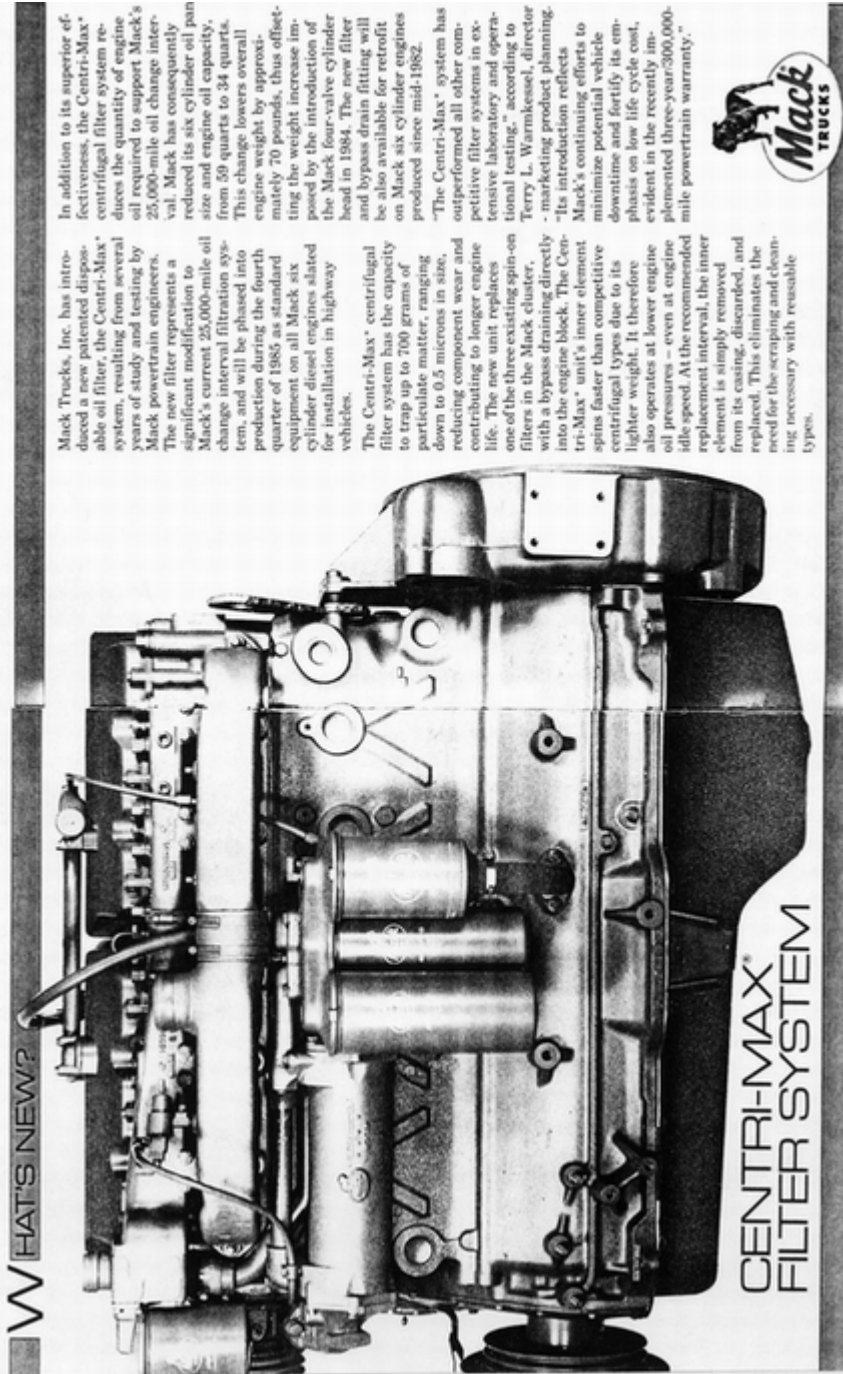


The Centri-Max engine oil filter removes up to 700 grams of sludge as small as 0.5 microns. It cleans engine oil even at low engine oil pressure, cleaning oil even at idle speeds, when carbon production is high.

Specifications were accurate at time of publication and are subject to change without notice.

Mack Fax® Magazine Excerpt (Summer-85):

WHAT'S NEW?



**CENTRI-MAX®
FILTER SYSTEM**

Mack Trucks, Inc. has introduced a new patented disposable oil filter, the Centri-Max system, resulting from several years of study and testing by Mack powertrain engineers. The new filter represents a significant modification to Mack's current 25,000-mile oil change interval filtration system, and will be phased into production during the fourth quarter of 1985 as standard equipment on all Mack six cylinder diesel engines slated for installation in highway vehicles.

The Centri-Max® centrifugal filter system has the capacity to trap up to 700 grams of particulate matter, ranging down to 0.5 microns in size, reducing component wear and contributing to longer engine life. The new unit replaces one of the three existing spin-on filters in the Mack cluster, with a bypass draining directly into the engine block. The Centri-Max® unit's inner element spins faster than competitive centrifugal types due to its lighter weight. It therefore also operates at lower engine oil pressures - even at engine idle speed. At the recommended replacement interval, the inner element is simply removed from its casing, discarded, and replaced. This eliminates the need for the scraping and cleaning necessary with reusable types.

In addition to its superior effectiveness, the Centri-Max® centrifugal filter system reduces the quantity of engine oil required to support Mack's 25,000-mile oil change interval. Mack has consequently reduced its six cylinder oil pan size and engine oil capacity, from 59 quarts to 34 quarts. This change lowers overall engine weight by approximately 70 pounds, thus offsetting the weight increase imposed by the introduction of the Mack four-valve cylinder head in 1984. The new filter is also available for retrofit on Mack six cylinder engines produced since mid-1982.

"The Centri-Max® system has outperformed all other competitive filter systems in extensive laboratory and operational testing," according to Terry L. Warmkessel, director - marketing product planning. "Its introduction reflects Mack's continuing efforts to minimize potential vehicle downtime and fortify its emphasis on low life cycle cost, evident in the recently implemented three-year/300,000-mile powertrain warranty."

