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**SUBJECT: REJECTED WARRANTY CLAIMS ON ENGINE BALANCE
SHAFT BEARING FAILURES IN DETROIT DIESEL
ENGINES**

ISSUE

Detroit Diesel Corporation (DDC) has rejected warranty claims for engine balance shaft bearing failures on approximately seventy engines. DDC rejected these claims based upon findings that the incorrect oil was used in these engines. Upon investigation, MTA determined that the oil supplier had provided unapproved engine oil.

BACKGROUND

The MTA fleet has 538 buses equipped with the DDC Series 50 CNG Engines (100 Neoplan buses, 223 New Flyer buses, and 215 NABI buses). The current orders for future deliveries of 808 new buses from New Flyer and NABI will also use this engine.

The DDC Series 50 CNG Engines were introduced to revenue service in April 1999. The MTA began to experience a high rate of balance shaft bearing failures beginning in January 2000. DDC responded to each failure and made repairs under the warranty provisions of the bus procurement contracts.

In April 2000, DDC provided a report supporting a claim that the incorrect engine oil was used in oil changes on the DDC Series 50 CNG Engines, causing engine corrosion that led to premature balance shaft bearing failure. Almost 300 DDC engines used the incorrect oil for varying lengths of time.

It was determined that the MTA had contracted for the correct oil and that the oil distributor had not delivered the oil ordered. The oil distributor had provided the MTA with Unocal's Triton 4905, engine oil unsuitable for mobile CNG engines. The MTA had specified Unocal's Triton 5005, engine oil that is approved by the engine manufacturer.

Oil for the CNG engines is used out of MTA bulk storage and drums purchased from the oil distributor. The oil distributor repackaged the incorrect oil into drums labeled as the correct product. Unocal immediately removed all of the incorrect oil from MTA storage tanks and replaced it with the correct oil at no charge to the MTA.

DDC presented a claim for reimbursement of \$145,000 for repair expenses that were previously paid as warranty. Staff has documented balance shaft bearing failures on 72 of the 300 engines that have run on the improper oil. The remaining engines may have sustained some degree of damage, dependent upon the length of time of operation with the incorrect oil.

Procurement is processing a partial payment for the repairs, with an agreement that does not concede liability for the expenses claimed by DDC.

NEXT STEPS

Procurement, Legal and Transit Operations are working with counsel to evaluate MTA options for cost recovery from the oil distributor, oil manufacturer, and Detroit Diesel Corporation.

Engine oil analysis is now being conducted during CNG engine oil changes. Results will be monitored, and trends on potential engine failures will be identified and evaluated. Monitoring of this issue continues and periodic updates will be provided as the situation progresses.

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