

Delo® Testimonial: Golden Arrow Bus Services



**Achieves 630,000 kilometres in severe service in a
MAN Bus using Caltex Delo® family of products.**



Golden Arrow has a long and integral history in the Cape Town, South Africa market and is over 150 years old. It originally started out as a horse-drawn cart company and has grown into one of the largest bus fleets in South Africa. They operate over 1,100 buses and their newest ones use Euro 5 common-rail engines to help reduce the amount of particulate and Nitrous Oxide (NO_x) emissions released into the atmosphere, allowing for improved air quality in Cape Town.

Golden Arrow has a long relationship with Caltex and they are currently running their whole fleet on Delo® Gold Ultra engine oil and Delo® XLC coolant. Recently, Caltex and Golden Arrow personnel agreed to conduct an engine teardown and inspection on one of their MAN engines that had over 600,000 kilometres in severe service operation to see how the Delo® family of products has protected the engine parts.



Pistons

In very good condition with minimal deposit build-up on the lands after 630,000 kilometres of stop-and-go operation.



Connecting Rod Bearings

There is minimal overlay removal showing – these are in excellent condition after this many hours and severity of operating conditions.



Gideon Neethling

“In our stop-start environment, a busload of people and luggage can weigh up to 10 tons, which increases the stress on the engine and drivetrain components. Using the right product is really important to us to make sure we don’t have downtime which significantly inconveniences and adds more cost to our operation,” says Gideon Neethling, Divisional Engineer, Golden Arrow Bus Services.

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Mieke Mortier

“We inspected a MAN A078 engine that has driven 630,000 kilometres on Delo® Gold Ultra SAE 15W-40 dropping off thousands of customers in continuous stop-and-go mode,” says Mieke Mortier, Senior Product Technical Support, Caltex Lubricants.

The initial inspection overall showed a clean engine with minimal deposits and no visible sludge on the engine top deck and oil pan. As the engine components were removed, they were inspected to check on their condition.

“The piston rings move freely and there are virtually no deposits on the crown land, the second land and the third lands. The undercrown is clean with no visible deposits, which means the oil has done a very good job of preventing deposits and providing excellent heat transfer properties. The roller followers on the valve train are uniformly polished, with minimal wear and the

camshaft lobes are also in very good condition. Actually, this camshaft can go back into the engine,” says Mortier.

“In the seven years as a foreman, we have never had an oil-related engine failure when using Caltex Delo® engine oil. The engine and parts from this inspection show really good performance of the Delo® Gold Ultra,” says Faiek Hendricks, Foreman, Golden Arrow.

Delo® XLC Extended Life Coolant also helps protect the engine cooling system on this bus. Inspection of the cooling system revealed that Delo® XLC prevented cavitation pitting on the liners and water pump impeller. The engine cooling system showed no signs of deposit build-up or corrosion on key metal parts. Additionally, the outsides of the piston liners are in very good condition with no visual sign of pitting or corrosion.

“It is clear from inspecting the engine parts of this passenger bus that the combination of MAN engine design, good maintenance and the use of Delo® family of products is providing the reliability and the durability that Golden Arrow is looking for to deliver its passengers safely and on time,” says Mortier.

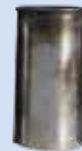
“Our fleet travels just short of 60 million kilometres a year. Over 20 years, that’s 1.2 billion kilometres that we’ve travelled without having an engine failure due to the oil and coolant that we use. Clearly, Delo® helps our buses go further,” says Neethling.

To learn how Delo’s family of products can help you go further, visit www.caltexdelo.co.za



Camshaft

No visible abrasive or skidding wear on the lobes. Just even polishing which indicates excellent soot handling performance by Delo® Gold Ultra.



Piston Liners Exterior

No visible pitting or corrosion showing the excellent protection provided by Delo® XLC.



Faiek Hendricks

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