

From: Brown, Kristine [mailto:KBrown@wakefieldcanada.ca]
Sent: Tuesday, April 17, 2007 4:20 PM
To: trilliumaurora@sympatico.ca
Subject: FW: Consumer Calls - ZDDP Levels

Hi Ian,

As per our conversation yesterday, please see a the information below on ZDDP levels in the new GF-4 Motor oils.

Please let me know your mailing address as mentioned yesterday.

Thanks

Kristine

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From: McLaughlin, Marsha
Sent: Thursday, February 15, 2007 9:53 AM
To: Castle, Larry
Cc: Stadelman, Anthony; Brown, Kristine
Subject: FW: Consumer Calls - ZDDP Levels

Here is the response from the technical team at BP.....

“If a consumer has a modern car or is simply mentioning the article and has questions about the lowered ZDDP levels”:

Thank you for contacting Castrol North America.

As indicated on our product packaging, the current engine oil category API SM/ILSAC GF-4 is fully backwards compatible or 'back serviceable' and has been extensively tested. Valve train issues are not anticipated with the use of modern engine oil in older cars of OEM stock configuration. In fact, current

SM/GF-4 engine oils are subjected to testing that is far more intensive than engine oils of previous API/ILSAC categories.

To clarify, in general, ZDDP levels have been reduced a small amount in the current category engine oils (API SM/ILSAC GF-4) in compliance with industry regulations that set maximum levels of Sulphur and Phosphorus, but are still at levels that provide ample engine protection.

Special procedures have always been recommended for the proper initial break-in of a new, matched, cam and lifter set; which include the use of a properly formulated cam break-in lubricant paste which typically contains a healthy dose of molybdenum. Engine oil alone is typically insufficient for break-in of a new cam and lifter set, particularly in a vintage engine type built to historic specifications.

In regards to camshaft failure, Camshaft failure can be attributed to numerous possible causes. Only a thorough analysis of each case can identify the root cause(s) of any failure.

We trust this information addresses your concerns.

Thank you again for your interest in Castrol, The Technology Leader!

Castrol Consumer Relations

“Response for consumers who have an older performance car with flat-tappet cams, are angry with Castrol and who believe wholeheartedly in the truth of these articles, and want alternate oil recommendations”:

Thank you for contacting Castrol North America.

Castrol is aware of articles in enthusiast magazines and web-sites, as well as after-market parts manufacturer discussions concerning GF-4 engine oils and cam-shaft durability issues in older performance vehicles, and we sincerely regret that this has caused you concern.

Some consumers suspect the lower level of ZDDP in GF-4 oils may be causing these failures. Castrol is currently investigating this issue.

If you do not wish to use a GF-4/SM rated oil in these vehicles, Castrol does offer the following products that contain Zinc at a level that is higher than the Zinc level found in oils (API SG) marketed during the "muscle car" era of time:

- * Castrol GTX 20W-50 (SL,SM)
- * Castrol GTX Diesel 15W-40 (CI4,CH4,CG4,CF4,CF,SL)
- * Castrol GTX High Mileage 20W-50 (SL,SM)
- * Castrol HD 30 (SL,SM)
- * Castrol HD 40 (SL,SM)
- * Castrol Syntec Blend Truck 15W-40 (CI4,CH4,CG4,CF4,CF,SL)(Semi-synthetic)

- * Castrol Tecton Extra 15W-40 (CI4 Plus, CI4,CH4,CG4,CF4,SL)
- * Castrol Hypuron S 15W-40 (CI4 Plus,CH4,CG4,SL)(Semi-synthetic)

The following Castrol products have Zinc levels that are typical of API SG oil:

- * Castrol Syntec 5W-40 (SL,CF)(Synthetic)
- * Castrol GO! 10W-40 Motorcycle Oil (SG)
- * Castrol GO! 20W-50 Motorcycle Oil (SG)
- * Castrol Grand Prix 4-Stroke Motorcycle Oil 10W-40 (SG)
- * Castrol Grand Prix 4-Stroke Motorcycle Oil 20W-50 (SG)
- * Castrol TWS Motorsport 10W-60 (SJ)(Synthetic)

Please remember that if you are installing a new performance cam in an older performance vehicle, it is important to:

- * follow the installation recommendations provided by the cam manufacturer
- * use the recommended cam break-in lube
- * prime the engine oil circuits
- * use the recommended engine oil
- * confirm valvetrain geometries prior to starting the engine with the new cam

We trust this information addresses your concerns.

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