



## INFORMATION ARTICLE

“An educated buyer is our best customer”

March 11, 2005

### Subject: “The Infamous No Oil Demo” Article

A *Car Maintenance Bible* article titled “The Infamous No Oil Demo” has come to our attention. This article concludes:

“This points out once again the inherent problem with particulate oil additives: They can cause oil starvation. This is particularly true in the area of piston rings, where there is a critical need for adequate oil flow. In practically all of the reports and studies on oil additives, and particularly those involving suspended solids like PTFE, this has been reported as a major area of engine damage.”

The “The Infamous No Oil Demo” article plagiarizes an outdated 1993 *Nutz & Boltz* newsletter article that reads:

“The Briggs study brings out another important problem with particulate oil additives: they can cause oil starvation. This is especially true in the area of piston ring lands, where there is a critical need for adequate oil flow.”

### QMI response:

Southwest Research Institute performed the Sequence IIIE test on QMI Engine Treatment with PTFE, utilizing a Buick V-6 engine. (This QMI test is registered with the Chemical Manufacturers Association and meets their standards.) The Sequence IIIE test demonstrates that QMI Engine Treatment produces no “oil starvation.” The Sequence IIIE test report includes “SCUFFED AND/OR WORN PARTS,” which would result from oil starvation. The test report reads as follows:

<u>SCUFFED AND/OR WORN PARTS</u>	
CAM	<u>0</u>
LIFTERS	<u>0</u>
VALVE STEM TIPS	<u>0</u>
ROCKER ARM PADS	<u>0</u>

Further, the Sequence IIIE test demonstrates that QMI Engine Treatment produces no inadequate oil flow to the piston rings. The following “RING AREA” test results indicate adequate oil flow to the piston rings:

<u>RING AREA</u>	
OIL RINGS PLUGGED, %	<u>0</u>
NUMBER OF STUCK RINGS	<u>0</u>
NUMBER OF SLUGGISH RINGS	<u>0</u>

(Sequence IIIE test document available upon request.)

The Sequence IIIE test also demonstrates QMI Engine Treatment’s performance safety under demanding conditions, proving safe in all test categories, including; 1) Viscosity Increase Data, 2) Sludge, 3) Varnish, 4) Oil Ring Land Deposits, 5) Cam and Lifter Wear, 6) Rod Bearing Weight Loss, 7) Scuffed and/or Worn Parts, 8) Oil Consumption, 9) Ring Area: Plugged, Stuck or Sluggish Rings, 10) and Stuck Lifters. QMI Engine Treatment has no history of causing “engine damage.”

Further, QMI is aware of no credible "... reports and studies on oil additives, and particularly those involving suspended solids like PTFE showing a relationship between PTFE applications and oil starvation." If "The Infamous No Oil Demo" author cannot provide support test documents from credible sources representing current product technologies, the article represents unreliable journalism.

"The Infamous No Oil Demo" article also references demonstrations utilizing engines operated with no oil, "... to demonstrate the effectiveness of certain oil additives." The article refers to a Briggs & Stratton "more scientific" experiment.

The experiment in question is documented in a Briggs & Stratton letter titled, "Oil Additives." The letter reports a procedure involving two Briggs & Stratton engines, one engine treated with "a commercial oil additive" and the second engine operated with "regular oil." The letter reads, in part:

"After both units were operated for 20 hours at 3300 r.p.m, no load, the oil was drained from both engines. Each of the engines then ran an additional 20 hours without oil. At that point, both engines were inspected, and it was found that about 1/4" to 1/2" of oil remained in the crankcase. That oil was then removed, and each of the engines ran for an additional three hours, at which time neither could be re-started. Inspection of the engines, at that point, indicated that the PTO and crankpin bearings were scored on both engines. On the engine, which had utilized regular oil, there was no scoring in the cylinder bore. On the engine, which had utilized the treated oil, the cylinder bore was heavily scored."

QMI Response:

**Note:** The Briggs & Stratton letter indicates that "about 1/4" to 1/2" of oil remained in the crankcase" during the 20 hours of operation after oil drain, but does not indicate the impact of this oil on engine lubrication. The oil dipper in Briggs & Stratton engine reaches within 1/4 inch of the crankcase bottom, raising the possibility that the Briggs & Stratton "more scientific" experiment was faulted by crankcase oil lubrication.

QMI operates Briggs & Stratton engines with no oil, after applying QMI Engine Treatment with PTFE. However, operating engines with no oil does not represent typical "real world" operating conditions. Therefore, QMI makes no claims regarding PTFE treatment performance based upon operation of engines with no oil. All QMI performance claims are based upon "real world" tests such as:

- The Sequence IIIE test performed by Southwest Research Institute, utilizing a Buick V-6 engine. In the Sequence IIIE test, QMI Engine Treatment produced an 88% reduction in wear rates, compared to the average for Reference Oil 402, the reference oil required by the US Army's "Automotive Engine Oil Additive Test Requirements" for Oxidation and Wear Tests.

(Sequence IIIE test document available upon request.)

- Numerous oil analysis reports demonstrating wear metal reduction following QMI Engine Treatment application to QMI customer engines.

(Oil analysis test documents available upon request.)

**In conclusion:**

"The Infamous No Oil Demo" article plagiarizes an outdated 1993 Nutz & Boltz newsletter article referring to an "experiment" that does not relate to real world applications. All QMI performance claims are based on reliable real world test data, available upon request.

Further, reliable Sequence IIIE test data by Southwest Research Institute proves that the concerns raised in "The Infamous No Oil Demo" article do not apply to QMI Engine Treatment.

# BRIGGS & STRATTON CORPORATION



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## Subject: Oil Additives

We are often asked for our opinion about various oil additives, which are available in the marketplace, in terms of benefits which might be obtained, if the additives would be used with our engines. Through the years, we have tested a number of such products, most of which made claims regarding reduced friction, improved gasoline usage, etc.

As a general statement we have found no additive, which appears to offer significant benefits, despite the fact that the use of such additives can substantially increase the cost of operation.

The manufacturers of some additives have actually used our engines to demonstrate apparent benefits by treating the engine oil with their product, then draining all the engine oil, after which the engine is operated 15-30 minutes without apparent damage. Such tests involve engines operated without load. While we cannot speak for the manufacturers of all small engines, we do know our engines are surprisingly resistant to damage, when operated low on oil, if the engine is operated without load.

In one, specific test, involving two identical engines, we treated the oil in one engine, per instructions, with a commercial oil additive. On the other engine, we simply operated it with regular oil. After both units' had operated for 20 hours at 3300 r.p.m., no load, the oil was drained from both engines. Each of the engines then ran an additional 20 hours without oil. At that point, both engines were inspected, and it was found that about 1/4" to 1/2" of oil remained in the crankcase. That oil was then removed, and each of the engines ran for an additional three hours, at which time neither could be re-started. Inspection of the engines, at that point, indicated that the PTO and crankpin bearings were scored on both engines. On the engine, which had utilized regular oil, there was no scoring in the cylinder bore. On the engine, which had utilized the treated oil, the cylinder bore was heavily scored.

Our experience indicates that, in most instances, oil additives do not harm the engine, neither do they appear to offer any benefits to justify the additional expense. "Therefore, we continue to urge all users to follow the oil recommendations found in our Operating and Maintenance Instructions, as reproduced below.

Yours truly,

BRIGGS & STRATTON CORP.

**C. L. Fricke**  
Vice President of Service