

1/3/20

Steve Spurr, President
Katech, Inc.
24324 Sorrentino Court
Clinton Township, Michigan 48035

Dear Steve,

In your email of the ninth of last month, I was delighted to read that your 2000-mile oil use test proved that a different ring and bore finish package was the solution to excessive oil use by my Street Attack LS7. As I said in my reply, 12-oz. of oil in 2000 miles is a quart about every 5300 miles. That is better than I had expected. My hope had been for 1 qt. every 4000 miles which I feel is good for a modified engine with forged pistons. I am so looking forward to my road trip back to California later this month which will be further proof that our two-year quest for a 600-hp Street Attack LS7 with a reasonable level of oil consumption is finally coming to an end.

Now, I'd like to focus on the second rebuild ("rebuild 2") of my LS7, detailed in Katech estimate 16SE11 Revision 02, dated 30JUL2018, and in Invoice #41500, dated 29OCT2018.

After reviewing "14180 & WK14180–Hib Halverson C6 Z06 Street Attack LS7 Engine Performance/Oil Consumption Diagnosis" dated 26JUN2018 (the "report"), reviewing Mahle Motorsports' "Technical Report MSS19-1260-27" and recalling conference calls with you and your team once the engine was disassembled prior to the third rebuild (rebuild 3), I believe the piston ring and bore wear, which occurred after the first rebuild ("rebuild 1"), was the same type of ring and bore wear which occurred after rebuild 2.

Apparently, during the preparation of the report, the possibility of faulty rings and/or bore finish being used in rebuild 1 was never considered. I believe that lack of consideration unduly influenced the report's conclusion: that my actions caused the excessive oil use by the engine after rebuild 1.

During a conference call while rebuild 3 was underway, you stated that the ring/bore failures after rebuild 2 were caused by defective top compression rings, supplied by Mahle Motorsports and improper bore finish recommended by Mahle. You, also, stated that the same same Mahle ring and bore finish package was used during rebuilds 1 and 2. Both sets of top compression rings failed in a similar manner, after similar periods of operation, resulting in similar rates of high oil consumption.

Wide-open-throttle calibration changes I made, *after rebuild 1's excessive oil consumption became obvious*, melted the cat substrates, but that round of cal changes was not the cause of the oil consumption because rebuild 1's ring and bore failures *had already occurred* before I made those changes. Nevertheless, for the sake of discussion, let's imagine those ring and bore failures occurred after I made changes to wide-open-throttle fuel and spark. While high exhaust temperature did damage the cats, the report contains no evidence of other damage characteristic of high combustion temperature, such as exhaust valve or piston damage. If combustion temperature was not high enough to damage pistons or valves, then I believe it would have been unlikely to have caused the ring and bore failures.

As for the calibration changes I made in late December of 2017, *before* rebuild 1 began to exhibit excessive oil consumption...they were only to tables having to do with idle speed, low speed air:fuel ratio and idle spark. Those changes were to solve two problems: 1) unstable idle

speed around 900 RPM. I had to fix that to get the car to pass the California "Smog Check" which prohibits idle speed higher than 900 RPM and 2) occasional "tip-in" engine stalls due to idle speed surging in traffic. Katech's calibration engineer made a few attempts to fix these problems by emailing me revised calibrations, but after three tries at that, you stepped-in and stopped that practice. Left with no other choice, I violated the Katech warranty and solved those problems myself. I was able to get the idle speed slowed down and was able to improve idle stability. Once I reached those goals, I was able to get the car "Smog Checked". At that point, I stopped flashing in new cal's. By mid-January, the engine's oil use had become a significant problem.

The failure of the air filtering system which the report, also, cited as a cause of the high oil use after rebuild 1, is another situation which occurred *after the rings and bores had already failed*. After about two months of my observing the worsening excessive oil use problem, on 2FEB2018, during the Katech-initiated inspection of the engine's PCV system at Abel Chevrolet, there was so much oil in the intake manifold that Abel's technicians removed the intake and washed the oil out of it. During the parts cleaning process, they did not observe excessive dirt/dust particles inside the manifold. If Abel technicians had observed particle contamination; they would have noted that in the report they forwarded to you after their inspection. This inspection occurred three months prior to my shipping the car to Katech on 9MAY2018 and five months prior to the date of the report. While evidence of air filter failure was discovered during the preparation of the report. That failure occurred *after* excessive oil consumption had been documented in video footage as well as after the car was at Abel Chevrolet in February of 2018. Thus, I do not believe that dirt/dust contamination was a cause of the ring and bore failures after rebuild 1.

Based on all these facts, I request that Katech, Inc, refund to me \$19155.10 which was the cost of rebuild 2, as listed by Invoice #41500, less the charge of \$220.00 for "Modify after-cat flange for customer's exhaust system."

I hope we can resolve this situation when I meet with you in later this month.

Regards,

Hib Halverson