

## Motor durability

Posted by Aslet - 24 Oct 2009 07:46

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I had a cooling system failure on track in Aug and toasted the motor. I got a new (used) long block and had it all re-sealed and new rob bearings (a known failure point I hear). I was just at Watkins Glen and the motor blew (after 2 months from install). The connecting rod broke due to a bad nut holding it on. So I again have to get a new long block and do some work on it! I want to make sure I do it right this time. First I am going to get Raceware connecting rod hardware! I will also do the rod and main bearings, along with seals and belts/water pump. Are there any other items that are worth fixing up or changing? What are good upgrades to do on a stock 944 NA motor for better durability? Is getting the crankshaft cross drilled worth it?

Thanks,

Randy

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## Re:Motor durability

Posted by SvoChuck - 24 Oct 2009 07:56

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Sorry for the bad news.

I did pretty much the same thing last year with a used short block and got the same result. however we in the rmr have done the exact same thing and have 2 + race seasons and still going strong on more than 15 engines. so ...

A full rebuild by an engine builder who REALLY knows what they are doing makes for a great long lasting engine, short of that it might run for 2+ years or like last year at Miller for me it might only run for 2 days.

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## Re:Motor durability

Posted by JRichard - 24 Oct 2009 10:43

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My experience was sort of like the guy in monte python and the holy Grail, he builds a castle and it sinks into the swamp, so he builds another one and it sinks into the swamp, and so on until one finally doesnt sink...(cause it's standing on all the rubble that did)...

I had my first motor toast itself (rod bearing) the first event afer I bought the car... Parked it for a

year...got a new junker and had it rebearinged and sealed and put it in the car (didn't have the time to do it myself) it ran for four events , and it seized....So I went to a shop and said do whatever you need to to give me a motor that doesn't grenade... They got a nice used motor and disassembled it, renewed everything that was out of spec...this is my current engine... With three seasons on it, and it just got new RB before miller.

Few things I learned along the way:

1. A junkyard motor belongs in the junkyard.
2. Racing prep means doing it right if you want durability
3. GET AN OIL TEMP GUAGE and watch it during the race
4. DO NOT REUSE AN OIL COOLER FROM A MOTOR THAT SPUN A BEARING the cause of death of my second build
5. DO Get the oil pickup reinforcement done, and the pan baffle
6. Change the rod bearings every season and run synthetic

From what I've found the cross drilled cranks are mixed, Joe had one and did well by it others not as lucky, if I was starting from scatch I'd consider it dep on the \$\$\$\$.

Anyway just my .02c...

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**Re:Motor durability**

Posted by Aslet - 24 Oct 2009 21:50

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Good information! I do understand it is always a gamble, but the few things to improve the odds are good to know.

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**Re:Motor durability**

Posted by Sterling Doc - 24 Oct 2009 23:39

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We've had 90 race starts in the midwest this year w/o a single motor failure - one of those through it's third season of racing, and this includes several endurance races. Each of those motors got a

cross-drilled crank, ARP or Raceware hardware, new belts, rollers, cranks, rod (and often balance shaft) bearings; waterpump, a good oil cooler, updated oil pan baffle and a freshened head. this costs around \$3K to do around here, but the motors are very reliable when built this way.

Last year we had a bunch of problems when a particular engine builer was mis-timing balance shafts - be careful there!

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## Re:Motor durability

Posted by Aslet - 27 Oct 2009 23:44

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According to the rules, you are allowed a few durability modifications. First, does anyone use a steam vent kit? Is it worth it? Second, it says you can reinforce the oil pickup and drain tube; has anyone done this? What do you do to reinforce them, just weld on some additional brackets for support?

Sterling Doc, when you say freshen head, do you mean a valve job, like what you can have done by Lindsey Racing?

[www.lindseyracing.com/LR/Parts/LRHEADS.html](http://www.lindseyracing.com/LR/Parts/LRHEADS.html)

Thanks

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