

LASHING OUT

OK, after last month's Box Stock report, we're diving back into the Animal with a subject that has been requested by several readers. We hope you find this informative and helpful. This column is in no way intended to steer the average racer down the path of self-sufficiency to the point of replacing your engine



builder's services. Rather, it is for information and "survival" purposes. We understand that the large majority of racers don't have the desire to delve into this area, either due to lack of time, or aptitude. But there are many out there who can handle the "basics" with a little guidance. That's where Grass Roots Tech Barn comes in. Let's get rolling.

Setting Valve Lash...

The valve lash is one of the most common adjustments performed on the Animal engine. Valve lash is the amount of clearance between the butt, or tip of the valve and the rocker arm. Adjustment is a relatively simple procedure, but care must be taken to make sure performance is not adversely affected. Many are critics of the Animal engine, but none can argue with the ease of valve adjustment the OHV platform offers. Just a few simple steps, a few minutes, and a few basic tools, and its done. We only wish the flathead was this simple.

There are two reasons for adjustment. The first is wear. Over the course of several races, the valves have pounded the

seats thousands and thousands of times. Couple this with the contact between the rocker arm and the butt of the valve, and there are several places the lash could possibly increase or decrease. The other reason is that the engine was partially disassembled, hopefully in tech, or to change the head gasket. Each one of these requires the lash to be reset.

Before going any further, it is necessary to find out what the valve lash needs to be. Contact your engine builder for their recommendation. The lash is a tuning tool, and the setting will very possibly be different between engine builders and the cam manufacturer's recommendations. If that information is not available, contact me I will further assist you.

Removal of the valve cover and the spark plug is all that's necessary to get started. Remove the 4 bolts that hold the valve cover on, usually a combination of a 3/8 and 10 mm wrenches or sockets will do the trick. Get the plug out, and lets get moving.

The valves must be adjusted with the engine at top dead center. The piston comes to the top of the cylinder two times for each rotation of the camshaft, and it is imperative to use the compression stroke with both valves closed. We must have the lifters



on the base circle of the cam and not the lobe. Rotate the engine slowly, looking down the spark plug hole with a flashlight, and turn until the piston is at the top of the cylinder and both pushrods down.

Now, measure the lash. Using a set of "feeler" gauges, insert the different blades until one of them fits with a little tension. Rocking the rocker arm a bit may be needed to accurately check the lash. Tension on the feeler gauge is necessary, however we don't want to crack the valve from its seat. Once we determine what we have, we can set out to adjust or correct it. Hypothetical-

ly, let's say we have .006 lash, and we want .002. First thing we want to do is back off the setscrew/ lock screw in the center of the adjuster assembly with our 1/8 allen wrench. Because of the small size, it may be necessary to take your 5/8 wrench and back off the whole assembly to relieve the tension on the setscrew. Once that's done, gently tighten the assembly until the desired lash of .002 is achieved. Then, hold the adjuster with the 5/8 and tighten the lock screw securely using the allen wrench. It is difficult to put a lot of tension on the small lock screw, so here is a handy tip. Get the lash correct, place the allen wrench in position, as well as the 5/8 wrench. Keep the tension on the lock screw, don't remove any tension from it, and back off the adjuster assembly about 1/8



turn. Then, tighten it back with the 5/8 wrench until the lash is back at the desired setting. This will put more tension on the lock screw and help keep it from loosening up. Be cautious not to put too much tension on it, as the rocker stud can possibly break.

If you are re-assembling the top end, be sure to lubricate the pushrod tips, the rocker arms and the adjuster assembly with light oil before reassembly. The procedure is the same as the adjustment explained above, just back out the lock screws from the beginning. Always replace the parts in the same exact position in



which they were removed. Parts that look the same sometimes have slight differences that can affect performance and sometimes tech. If disassembling for any reason, always separate the exhaust valve parts from the intake side parts. Always mark the pieces for the appropriate valve, and store separately.

Remember, when adjusting, it may take a couple attempts to reach the setting you desire. Be patient, observant, and careful. Helping educate and assist the racer is our main goal, and if unsure about the procedure, feel free contact myself or another professional before attempting adjustments.

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