

# GRASS ROOTS

## TECH BARN

with Jimmy Rivers

### A Clean Animal Is A Good Animal

This month, I want to focus on washing and caring for your Animal engine. Cleanliness and attention to detail are key elements in a successful racing program. Clean engines just seem to perform better, and most times, run cooler than an engine that is dirty. Clean engines also offer the ability to fully inspect and perform maintenance much easier.

To clean the engine, we must take steps to insure that water does not enter the engine. We begin by identifying where



water can enter. Obviously we must remove the air filter and cover the carburetor inlet, and tape off the header. We also must tape off the crankcase vent and seal off the catch tank.

Speaking of header, on an Animal engine, the header is the number one place water is introduced to the engine. With the exhaust port straight up on top of the cylinder head, if the header is not fully sealed at the flange, water will leak into the exhaust port and circulate the engine causing obvious damage and resulting in a major performance drop.

We must also be very concerned with our catch tank as well. Anything that is allowed to remain in the tank, water, dirt, or otherwise can easily be drawn into the engine. The engine breathes out the breather hose on the downward motion of the piston, but it draws in on the upstroke and this can draw any contaminants or water right into the crankcase. Pay attention to your breather system and keep it clean.

With all our orifices sealed off, we can begin washing.

Use a mild degreaser and fully spray all areas of the engine. Be mindful that some cleaning agents are very powerful and can dull or remove paint. In this case, dilution may be necessary. Try and spray all inside the blower housing and behind the flywheel. This



insures that the engine is not carrying the unnecessary weight of a flywheel loaded with dirt. Wash thoroughly with a garden hose and use hot water if possible. Never use a pressure washer or other source of high pressure as this can force water and or dirt into places it is not desired.

Once we are satisfied we have the engine clean, it is best to blow dry with an air hose and to remove all moisture possible from the engine. This just helps to displace any leftover water and reduce the risk of rusting. If you don't have access to compressed air, you can start the engine

and let the heat remove the moisture, but it will be necessary to flush the carburetor again. Once the engine is dry, remove the spark plug and spray a liberal amount of WD-40 or similar lubricant into the cylinder and turn the engine over by hand a few times. I like to repeat this step a couple times and then drain the oil, as this displaces any moisture that may have slipped in on us and makes sure water is not in the crankcase. Just as always, when draining oil, mark the engine as a

reminder to fill before starting.

Header discussion round two.

As I stated above, the header flange is the number one

place I see water enter the engine. This makes the sealing of the exhaust header extremely critical. With the design of Animal headers and the weight of the muffler on the end of it, a great deal of vibration is unavoidable. This makes conventional header



gaskets unacceptable for use on this engine. The movement of the header reduces the gasket to a fraction of its original thickness and creates exhaust leaks, as well as a washing problem. My answer to this is to use a copper gasket or seal the flange of the header with high temp silicone. A light coat is all that is needed. Be careful not to use too much, as tightening the header creates a squish and will push the silicone into the port.

Hopefully, this can help you to keep your engine clean and reduce the risk of damage. Just use good judgment and always be observant.

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	<p><b>Lee Archer</b> Nickname: "Lard" Age: 17 Residence: Rock Hill, SC Division: Stock and Animal Sponsor: The East Pro Team Classes: Street Engines: Performance Gaming and EPR Sponsors: LJ Dodge, M&amp;M Photo, and Oceanic Parts Market</p> <p>Lee Archer is a self-employed graphic designer of various printed apparel. He has been racing since the age of 10 and has had contact with three teams and two sponsors since &amp; won the 2006 American Truck Show. He drove the 2nd Annual Safety Image. My friend Lee is the biggest one of his name.</p>
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