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## Harley-Davidson Tuning Notes

When tuning our products on Harley-Davidsons, there is a possibility that pre-existing mechanical and/or sensor issues that may interfere with the tuning process. If our base settings seem way off, or if following our basic adjustment sequence does not produce the desired results of smoother running as we suggest, then you may want to have your mechanic look into the following:

1. In all of the recommended suggestions and settings given below, it is imperative that you are working on a FULLY warmed up engine. That means driving the bike for a good 15 minutes and then idling it for another 2 to 3 minutes before attempting any adjustment.

2. The following information is strictly for the Magneti Marelli injection system. This includes all FLH's, Roadkings, etc. up to 2001. If adding fuel on the green pot (per basic adjustment in the instructions) causes the bike to run worse, you should follow this procedure

- make sure the bike idles at 1000 to 1050 rpm. No exceptions. If the idle speed is wrong, remove the aircleaner cover, readjust it. To verify that your bikes idle is not on the high idle mechanism; attempt to insert a small piece of paper between the base of the idle screw and the bracket it pushes against. Make sure you are adjusting and checking the idle screw, not the high idle adjustment. Check your shop manual if you are not sure. Once you have made the adjustment, double check with the aircleaner re-installed. The air cleaner and vent hose can cause a change in idle. Now follow the rest of the instructions.

- The number one problem we see is an intake manifold leak at the cylinder head. Check this by spraying aerosol carb cleaner at the intake manifold area when the bike is idling. If your idle changes, you have a leak and that needs to be fixed before proceeding.

- If there is no air leak, cycle the ignition key on and off ten times, allowing the fuel pump to start and run until it stops each time.

- with the key off, pull the two flat fuses on the right side, for 15 minutes and replace them.

- now start the bike and re-attempt the adjustment as per the basic instructions. If there is still no change, disconnect our unit.

- remove the aircleaner assembly to gain access to the throttle position sensor (TPS). Using a windproof lighter or small torch, heat the epoxy on the two Torx screws holding the TPS onto the throttle body and once warm, dig out the epoxy so that you can loosen the 2 screws.

- Make a scribe mark on the TPS and throttle body as a reference, loosen slightly the two Torx screws, and bring the engine up to a fast idle of about 1500 rpm. Now very gently tap the TPS clockwise, this is moving the top of the TPS switch towards you as you face the bike, so that it rotates the switch the thickness of a business card (.010") off your scribe mark. You should notice a change in the exhaust note to a leaner, uneven sound.

- Tighten the Torx screws, reconnect our unit and set the green fuel pot again, like our basic instructions recommend. If you now achieve the desired smooth idle, verify that the idle is still at 1000-1050 rpm. If so, pull the fuses for 15 minutes and restart the bike one more time. If your idle has changed, you need to readjust to 1000-1050 rpm, then pull the fuses and then restart.

3. Another common problem we have seen is a failed temperature sensor. The noticeable issues connected with this failure are erratic drivability problems (there one day but not the next, etc.) and backfiring on deceleration from high r.p.m. down to 3000 r.p.m.

4. If your bike has previously been experiencing occasional stalling, or detonation at light loads (like in

parking lots, etc.), we have found in the field that sometimes removing the last factory HD download can solve those conflicts. Our product always works best with a minimum of pre-existing downloads. Have your dealer remove one download and test ride your bike to confirm an improvement of those issues prior to installing our product.

5. On some Delphi equipped bikes (2001-up Soft tails, and all 2002 -up) equipped with aftermarket performance camshafts, the green fuel pot setting can be difficult to setup caused by the longer overlap that makes the map sensor read incorrectly. Please call our techline @ 1-702-558-5142 for suggestions

6. On Delphi equipped bikes, the factory has added a safety feature that adds fuel if the motor reaches a temperature of 280 degrees. This is very hot, and you should never experience this unless driving in a parade, or other slow speed events for prolonged periods. If you are aware in advance of being in this situation, we suggest reducing the green fuel pot setting by 1 full clock setting ( i.e. 3:00 to 2:00 o'clock)

Harley-Davidson TFI Forum <http://www.dobeckperformance.com/forum/forums/forum-view.asp?fid=34>