

## Frequently Asked Questions

*Q: I want to fit a bigger tyre to the back of my Sportster/Night Train/Fat Boy, etc. My mate's bike has a 150 tyre on it as standard but my slightly older bike has a 130 on it. I have looked at the clearance between the belt, tyre and swing arm and there's loads of room. Can I just fit a 150 to the same wheel or do I have to buy a different wheel?*

A: Up until Harley started fitting the 200 section tyres to the Night Train, Softail Standard, Softail Custom and Fat Boy, the standard rear rim was a 16" x 3.5". For years the biggest tyre allowable on this rim was a 130. In 2002 we saw the first Dunlop D401 150/80 B16 being fitted as standard to Softails and then Dynas. This tyre is safe to use on the original 16" x 3.5" rim. One further thing to check is the clearance on the inside of the fender. Make sure you have the late model "blind" nuts holding the fender struts and fender on, and not the old style nuts and bolts. If you don't check this, expect the nuts to take a huge chunk out of the tyre the first time you go over a pothole.

*Q: I don't ride my bike during winter but I keep it on an Optimate, and start it in the garage every few weeks. I went to it the other day and it wouldn't start, although the battery was fully charged.*

A: Most likely explanation is that your plugs are sooted up. Running the bike in the garage with the choke on WILL eventually soot the plugs up. This is because the choke delivers a rich mixture to the motor. Fuel injected bikes can do the same as the ECU will start the bike in a Cold Start mode, which again is very rich. The solution is to pick a nice day when there is no salt on the road and take the bike out for a blast. You need to do at least 20 miles to get the oil to its operating temperature, so wrap up warm!

Second most likely explanation is knackered petrol. Unleaded fuel "goes off" after time and loses its combustive qualities. It also creates residues, which gum up injectors and carb jets. Buy some petrol additive from your Harley Specialist if you aren't going to ride the bike in winter.

*Q: Can I legally fit a Black and Silver number plate to my bike?*

A: If it was registered before 1974, YES. Otherwise, NO.

*Q: I want to fit smaller, custom Turn Signals to my bike. Are they legal?*

A: Bottom line is yes, but that doesn't mean it's a good idea. Custom turn signals are typically 5 to 6 watts whereas your standard items are 21 watts. That's a big difference in brightness! Older bikes with the big "tulip bulb" units can have 2000 up style turn signals retro-fitted very easily. There are

kits available to do all four turn signals. Also consider making your standard units look trick with either clear or smoked lenses and amber bulbs. The second thing to bear in mind with low wattage units is the Electrical Load, which governs the flash rate. On older bikes with a mechanical flasher unit your flash rate will drop or it may not flash at all. On newer bikes (1991 to present) your turn signals will just not flash at all! This is because the Turn Signal Module or TSSM will see the Electrical Load from the custom units as a fault in the system. It warns you about this fault by refusing to flash. The way around this is to buy a Load Equaliser. This fools the TSSM into thinking that everything is OK.

*Q: I want to change the Gas Caps on my bike but I don't know whether I need vented on non-vented?*

A: All Harleys with a single cap need "vented" caps. This includes Sportsters, and Dynas / Softails with a fuel gauge. Older bikes that have two gas caps on Fat Bob tanks had vented on the right and non-vented on the left. The models with the "screw in and click" variety were different-handed threads, left and right.

*Q: Why does the bike need a vented cap anyway?*

A: Good Question. The vent is to allow air to come back into the tank to replace the volume of fuel that has flowed to the carb. If you didn't have a vent, the tank would "air lock" and after a few miles fuel would stop flowing to the carb.

*Q: Is Fuel Injection better than carburettor?*

A: The short answer is YES. The long answer is:- Carburettors are 19<sup>th</sup> Century technology. Even the best, most expensive carb on the market cannot deliver the same accuracy in fuel/air mixture that a fuel injection system can. A carb cannot make allowances for temperature, air density, humidity and engine load the same way that fuel injection can. Fuel injection wins out in the MPG stakes as the bike is not taking more fuel than it needs. This also cuts down on pollutants. In terms of performance tuning, a skilled technician can make the changes needed more easily with fuel injection "add-ons" as he doesn't need to spend hours with a bag full of jets. He just needs a lap top computer and a bit of savvy. The final argument is:- The reason car manufacturers have been fitting EFi as standard for years is that it's easier, cheaper and more reliable than a carb.

*Q: My Harley brakes are rubbish. Would converting to twin disc be a good idea.*

A: Most Harleys can be converted to twin disc but it's not a cheap job. Apart from the extra caliper you need a twin disc left fork slider, twin disc

brake lines and a twin disc master cylinder. This is because a twin disc bike has a different bore master cylinder to a single disc bike.

A cheaper solution is to fit an After-Market 4 pot caliper. Don't bother with a 6 pot as your standard master cylinder won't deliver the amount of fluid needed to push 6 pistons. An even cheaper solution is to fit a Goodridge line and Double H brake pads. These are a grippier compound but have the same wear characteristics as the standard Harley pads.

*Q: I am planning a trip to the continent but I've heard that my standard fit Harley Alarm will start playing up when I fill up at petrol stations in Europe.*

A: That's true. The larger European filling stations have a mobile phone inhibitor. This transmits a radio signal which disables your mobile phone. Unfortunately the frequency of the transmission is similar to the frequency of your key fob transmitter, so it disables that as well. The solution is:- a) Do not turn the ignition off. b) Push the bike away from the filling station and keep trying the key fob until it works.

*Q: My belt guards look horrible. Can I bin them?*

A: Don't do it! Harley belts are extremely susceptible to Foreign Object Damage. Stones, pebbles and even grit will damage the surface of your belt. The most important guard is the lower one. This stops things dropping onto the belt and getting dragged around the pulley.

*Q: My bike is far too quiet. I don't want to pay a fortune for a Stage 1, can't I just fit loud mufflers?*

A: No. The best-case scenario is that this would kill the performance. Worst-case scenario is that the bike will run so weak that it overheats and damages the engine.

*Q: Harley oil costs a fortune. Can't I use cheap oil from Motosave? It's all the same isn't it?*

A: No, it's not all the same. Harley oil and the approved alternatives are formulated to protect large capacity air-cooled motorcycle engines in most riding conditions. Cheap oils are for cheap engines.

*Q: I've had my bike laid up over winter. My friend says I should change the oil before I put it back on the road, but it isn't due for a service yet.*

A: Your friend is right for two reasons. Firstly, motor oil is hygroscopic. That means it absorbs water from the atmosphere. The greeny-white goo you sometimes see on your dipstick is emulsified oil. When the engine reaches its normal operating temperature the water will start to evaporate. In winter the water stays in the oil and can block up your oil ways and

promote corrosion. Secondly, one of the jobs your oil performs is to hold contaminants and combustion by-products in suspension. These are safely flushed away when you change the oil. When you leave them in the engine over winter they start to corrode all the important little parts of your motor. Ideally you should change the oil before you put the bike into hibernation and change it again when you put it back on the road. This might sound expensive, but it will prolong the life of your motor.

*Q: My mate told me that I should put my bike on an Optimate over winter to keep the battery charged. I'm not going to ride the bike over winter so why can't I just leave it and then charge the battery in spring?*

A: As you already know, your battery will slowly discharge when the bike is not being used. Bikes with alarms (late model Harleys) will discharge the battery quicker than bikes without alarms. What you might not know is that the battery condition will deteriorate if it becomes too discharged as sulphation occurs on the internal plates. This process is non-reversible and will permanently damage the battery. Generally speaking, a battery that has not been charged for 3 months will have suffered permanent damage. Just for info contrary to what most people think your battery will discharge slower in low temperatures and faster in high temperatures, so don't worry about your garage being too cold!

An Optimate is an Intelligent Battery Charger. It monitors the battery condition and will commence charging when the battery charge state drops below a pre-determined voltage. When the battery reaches a pre-determined level it stops charging. In this way the battery will stay good and the bike will always be ready to ride. Don't be tempted to buy a cheap trickle charger. These carry on delivering a charge current even after the battery is fully charged. This will boil the battery dry and in extreme cases may even cause the battery to overheat and explode!

Don't be tempted to use a knackered battery on modern bikes as you run the risk of damaging the electronic components of the ECU and other electronic systems on the bike.



**Andy Malham**