

MoTeC puts the Yamaha WaveRunner FX SHO to the test!

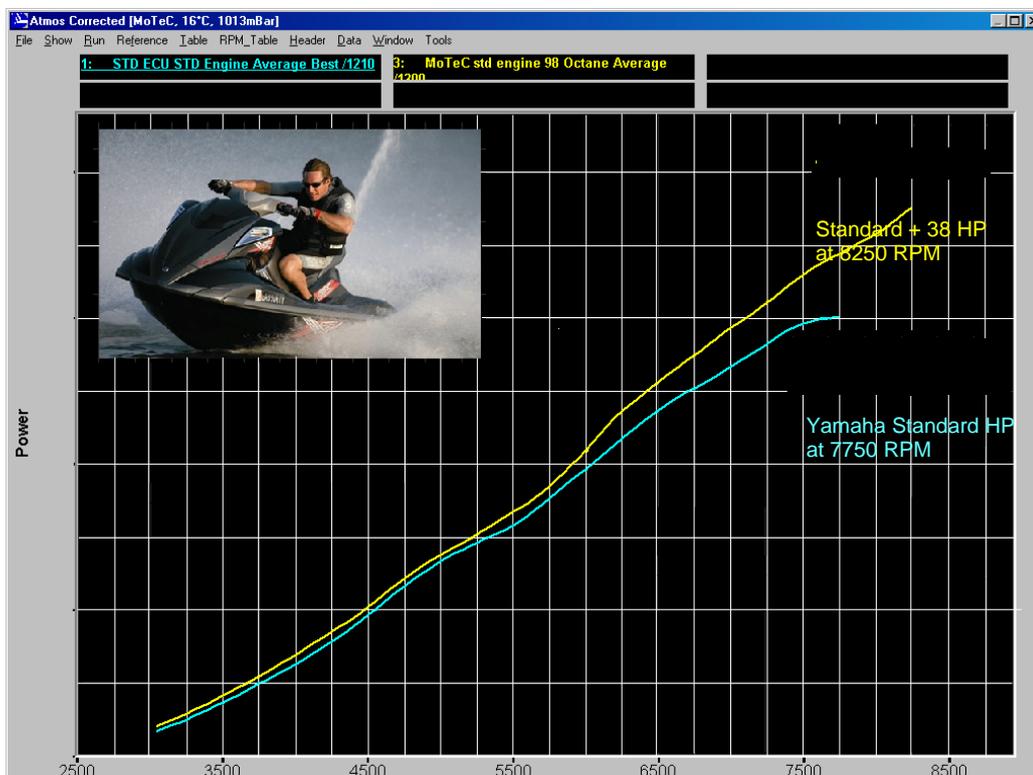
1. Optimise power with a MoTeC 'hundred series' ECU

MoTeC recently took delivery of a factory standard FX SHO engine to test the performance gains that could be achieved with a MoTeC 'hundred series' Engine Control Unit (ECU)*. When compared back to back with the factory Yamaha ECU, the MoTeC ECU showed significant gains.

The MoTeC test included the complete factory air filter box and exhaust system. Apart from swapping the ECUs, no other modifications were made. This is a relatively simple task; MoTeC ECUs use the same connectors as the factory ECU, requiring only changes in the pin out.

Additional benefits particularly useful in the Jet Ski world include:

- Multiple maps - with the flick of a switch the rider can change maps for different fuel or power levels.
- Data logging – analysing logged data will help to develop the engine, the jet unit and the rider's performance.
- Fuel mapping - significant fuel savings at cruising speed are achievable by careful mapping; 15% savings have been measured during engine dyno testing.
- Drive By Wire remapping - another bonus often overlooked, is the ability to remap the DBW throttle response, allowing users to change the relationship between the hand throttle and actual throttle blade angle. This can be used, for example, to control impeller cavitation on launch. To prevent the unit cavitating, the throttle blade can be opened smoothly proportional to speed. The throttle blade angle is controlled via a four dimensional table providing almost limitless control options.



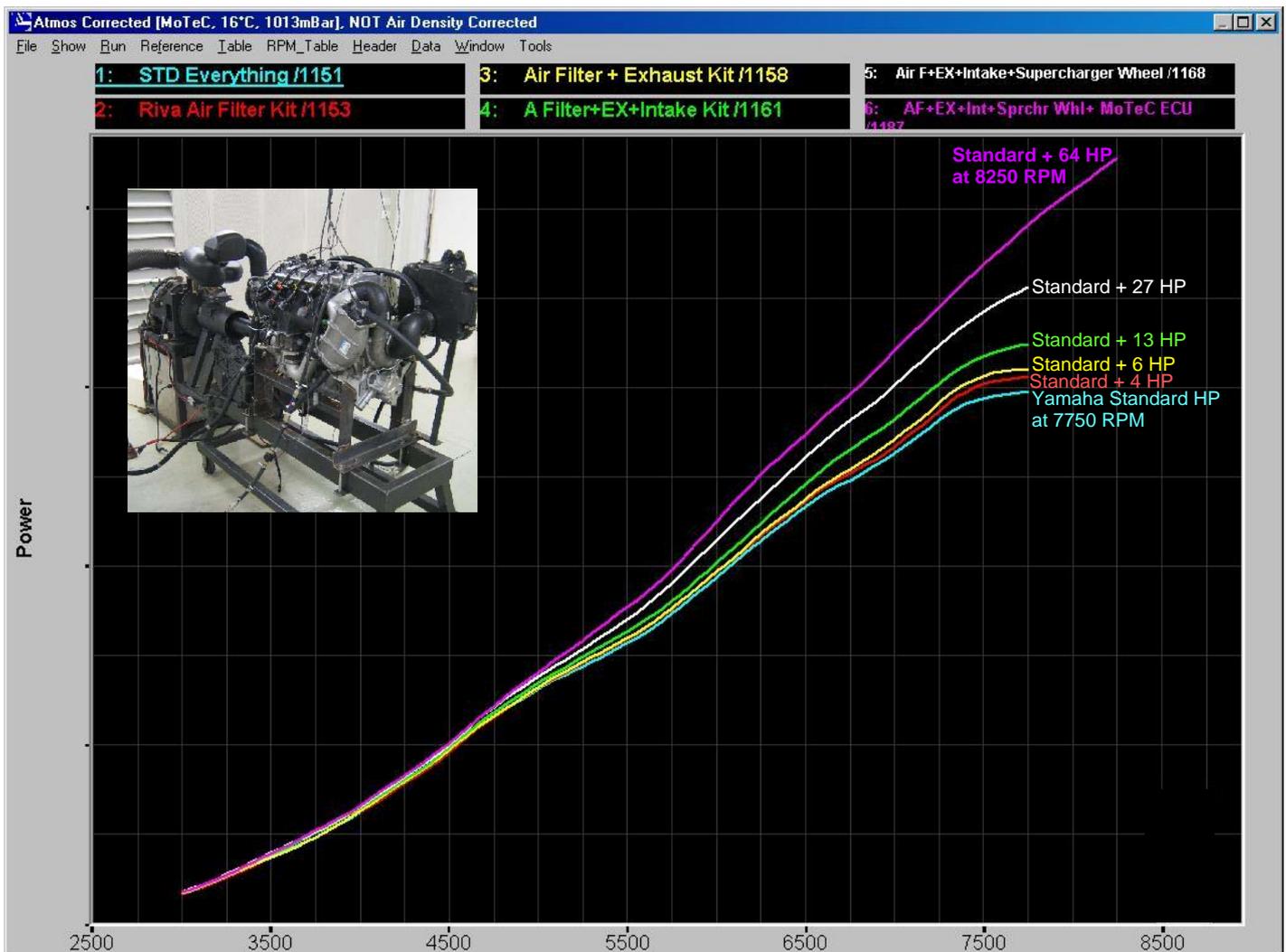
*MoTeC 'hundred series' ECU: M400, M600 or M800 ECU.

2. Modify to maximise the performance!

MoTeC also evaluated the performance gains of bolt on parts. The following readily available aftermarket performance parts were added:

- Air Filter Kit
- High Flow Exhaust Kit
- Intercooler Spacer and replacement of Intake Spark Arrestor
- Monster Supercharger Wheel
- MoTeC M400 ECU

When the parts were fitted sequentially the added benefit of each could be charted. The MoTeC M400 ECU was fitted last, calibrated with a larger RPM limit.



More information

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