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Topic

The effects of the new Ethanol fuel blends on Recreational and Sport Vehicles

Issue

Engine damage can result from the use of the new Ethanol blended fuels on 2 stroke applications. Most recreational (Sport) vehicle manufacturers offering 2 stroke engines usually provide warnings within the owner's manual pertaining to using fuels types other than what the engine was originally specified for. The use of alternative fuel types such as Ethanol blended gasoline can alter the calibration of the air/fuel mixture resulting in severe engine damage.

Solution

In many owners' manuals it is suggested to adjust carburetion settings (larger jetting) to accommodate the requirements of this new fuel. This new fuel burns more completely and cleaner but creates a leaner condition within the air/fuel mixture to that of the original OE specified fuels.

Note: Some new vehicles have been calibrated with Ethanol type fuels already and are not subjected to warnings from the vehicle manufacturer.

Additional Information

The most common appearance of a spark plug and engine components that have been subjected to the use of Ethanol fuels without the proper adjustments being done to their vehicle are;

- ◆ The spark plug ground electrode strap melts and separates usually at the bend on the ground electrode strap.
- ◆ The piston top may have a hole melted through the surface, opposite the ground electrode strap of the spark plug.
- ◆ The missing portion of the electrode strap can be found in either of the following two locations 1) wedged between the piston and the cylinder wall, or 2) on the valve seat.

In either case there is now a major repair job to do.

All recreational/ sport vehicle owners should review their owner's manual on warnings with the use of ethanol type fuels and make the proper adjustments to the calibration to avoid any engine damage. If no warning exists in the owners' manuals, consult the dealership where the vehicle was purchased to ensure your vehicle can use Ethanol blended fuels without encountering engine damage.

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