

# *SpeedSafe*

## *Electronic Speed Limiter for ATV's*



The 'SpeedSafe' is a new option for our 'QuadCruise' electronic cruise control for ATV's. The 'SpeedSafe' speed limiter may be added to an existing 'QuadCruise' installation\* or fitted as a stand alone speed limiter without the 'QuadCruise' cruise control. A 'QuadCruise' cruise control may also be fitted after the speed limiter is fitted, using some of the parts already supplied with the speed limiter.

The 'SpeedSafe' speed limiter allows full use of the available power on the ATV up to the limiting speed. When the vehicle reaches the limiting speed, the speed limiter progressively cuts engine power. At the limiting speed the engine develops a slight misfire, however if the operator tries to go faster by applying more throttle, the speed limiter gradually makes the misfire worse.

The speed limiter defaults to 25kph (15mph) when it is enabled, however the owner or supervisor may set this to any speed desired.

The principles behind the 'SpeedSafe' speed limiter are very simple:

- The computer monitors the frequency of electrical impulses generated by the speed sensor. This may be the vehicles' speedometer sender or a speed sensor provided with the cruise control, depending on the model of ATV (Quad) it is fitted to;
- When the vehicle reaches the pre-set limiter trigger speed, the computer sends a signal to the speed limiter circuit to cut ignition or fuel flow (on some fuel injected models) twice per second, but only for a very short period. As a result the engine develops a slight misfire.
- If the operator increases speed by applying more throttle, the speed limiter increases the time the ignition or fuel is cut, making the misfire worse.
- The misfire reaches it worst level 5kph (3mph) above the limiter trigger speed. Most vehicles will not be able to reach this speed, as the reduction in power is too great (about 90% power loss).
- As soon as the speed drops below the limiter trigger speed, normal operation resumes.

The speed limiter is designed this way to prevent a sudden cut in power from destabilising the vehicle in a turn.

If the speed limiter is purchased as a stand alone unit, you will get all the parts needed to fit the 'SpeedSafe' speed limiter to your vehicle.

If you already have a 'QuadCruise' cruise control, then you only require the extra wiring harness to connect the speed limiter function. The cruise control already has the speed limiter function built into it\*.

Mounting brackets and other components are made to suit specific ATV models. The calibration of the computer is also set up to suit the specific model of ATV.

\*See over page for note on fitting speed limiter to existing 'QuadCruise' installations.

If the ATV does not come with a suitable electric speedometer, the kit comes with a speed sensor. This is usually mounted on the rear axle and detects rear wheel speed. On some models the speed sensor may be mounted on the gearbox or a drive shaft.

Alterations to the ATV are minimal and generally easy, if required. Electrical connection is simply a matter of plugging the cruise control loom into the vehicle's loom in most cases, as the same type of electrical connectors as those used on the vehicle are provided. If alterations to the vehicle loom are required, all terminals for connection are supplied in the kit. In most cases, electrical components for the speed limiter are placed in the ATV's luggage locker at the rear of the vehicle. Suitable grommets are provided on the wiring loom to seal any holes cut in the locker.

The installation instructions provided with the speed limiter are very detailed. A comprehensive troubleshooting guide is also provided, including a full electrical schematic diagram.

**See your dealer, our web site or phone us, for full details of models and prices.**

**\*Note:** - Some early versions of our 'QuadCruise' cruise control electronic module (computer) do NOT have the speed limiter function. Any computer with a version number 2.49 or later has the speed limiter function built in. You will find a label on the back end plate of the computer with a version number on it.

If the label is missing, the following test will tell you if you have version 2.49 or later.

If your 'QuadCruise' control switch has a toggle ON-OFF switch (most have a push button switch), move the switch to the OFF position.

- Turn the vehicle ignition switch OFF.
- Press and HOLD the RES/DEC button.
- Turn the ignition switch ON.
- Release the RES/DEC button.

If you have a version that is suitable, the indicator light on the control switch will start flashing slowly.

On the later small switch with a push button ON-OFF the indicator light will come on red and flash yellow.

On the earlier large switch with a toggle ON-OFF the indicator light will flash red on and off .

- Turn the ignition switch OFF.

If your version is earlier than 2.49, the indicator light will not flash. Your computer does NOT have the speed limiter function built in. You will need to upgrade to a later version computer to be able to fit the speed limiter.

## ***MotorCycle Cruise Controls***

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