

case study



Recreational safety. Customized engine stop switch increases snowmobile safety.

Snowmobiles, all-terrain vehicles and personal watercraft vehicles are often synonymous with speed, adventure and fun — and some amount of risk. As result, manufacturers are always looking for new ways to keep riders safe.

Honeywell



Safety and Reliability in Harsh Conditions

When one leading global manufacturer

of motorized recreational vehicles encountered a quality issue with its snowmobile push and pull engine stop switch, it immediately sprung into action. The engine stop switch shuts off a vehicle's engine, providing a quick way of slowing or stopping the vehicle — and is an important safety feature.

“Safety measures, including engine stop switches, are a critical aspect of our vehicles,” the manufacturer said. “We work to ensure the right measures are always in place to meet our high safety standards, so any quality issues that compromise those standards must be immediately addressed.”

The switch the manufacturer had been using failed, and led to many warranty claims. To add to the manufacturer's urgency, the issue had to be resolved within six months, before the next model

year. As a result, the manufacturer looked to Honeywell Sensing and Control to help it make a clean start by designing and manufacturing a new switch.

The top button used to activate the manufacturer's engine stop switch would become loose and fall off when touched. The reason was a poor design unable to withstand the extreme weather and environmental conditions of snowmobiling, as well as the physical pushing and pulling required for switch operation. The manufacturer needed a new engine stop switch with a high degree of reliability and repeatability to perform under all conditions, including those with cold temperatures and wet, snowy surroundings.

To meet the manufacturer's specific needs, Honeywell Sensing and Control designed a new engine stop switch from scratch. This enabled Honeywell to ensure the design was specifically customized to meet the manufacturer's safety needs. Honeywell sought to provide a rugged and reliable switch suitable for high-cost-of-failure operations, like shutting the engine off in an emergency. For these

types of operations, a switch failure could come at a high cost for the manufacturer, resulting in warranty issues, expensive product recalls, or liability lawsuits.

Honeywell's experience with custom switches, as well as its application knowledge of the recreational vehicle industry, led to the design and manufacturing of a custom switch in less than 6 months — and just in time for the new model year. The Honeywell engine stop switch offered a better design in terms of its termination and housing fit. The sliding switch with customized housing offers enhanced reliability over a wider temperature range and also has a better tactile feel, which is ideal for a switch that relies on touch for activation.

Since the manufacturer began using the Honeywell engine stop switch, it has experienced zero quality issues.

“The Honeywell engine stop switch is customized to withstand even the most rugged handling and conditions while still performing as needed,” the manufacturer said. “This reliability helps ensure the right safety measures are always in place for our snowmobiles and provides us with a great deal of confidence that the switches will always work as needed.”

For more information about sensing and control products, visit www.honeywell.com/sensing or call +1-815-235-6847
Email inquiries to info.sc@honeywell.com

Sensing and Control
Honeywell
1985 Douglas Drive North
Golden Valley, MN 55422
USA
+1-815-235-6847

www.honeywell.com/sensing

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