

Fixing dash clusters that have internal limiters

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Limiter Comparison Chart			
	Solid State Limiter	Stock Mechanical Limiter	Linear Regulator Limiter
Protects gauges if unit becomes ungrounded	yes	no	no
Quick needle movement at ignition on time	yes	yes	no
Output is short circuit protected	yes	no	yes
Built in operational display	yes	no	no
Insensitive to vibration	yes	no	yes
Low heat generation	best	good	poor
Gauge Response	good	good	fair
Battery Drain	best	good	poor

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Some of the cars made my Mopar did not use external limiters. Instead these cars built the limiter into one of the gauges, usually the fuel gauge. Cars in this category include the 66/67 charger, 68-74 ABody cars with Rallye dash, and some older imperials.

When these internal limiters go bad, you have two choices, either replace the whole gauge (expensive and hard to find!), or disable the limiter built into the gauge and wire in an external limiter. If you decide to wire in an external limiter, then you should verify that the gauge still functions as a gauge, i.e. that it hasn't been burned out when the limiter failed. Another thing to consider is that it might be good insurance to just disable the internal limiter and replace it with an external limiter before the internal limiter fails. Here are some pictures showing how RTE disabled the internal limiter in an older Imperial dash cluster, and wired in an external solid state limiter. Real Time Engineering can do this for you for \$50 labor plus the cost of the solid state limiter. The red arrow shows how we bent the internal limiter bi-metallic strip to disable the internal limiter.

A-body rallye dash limiter fix



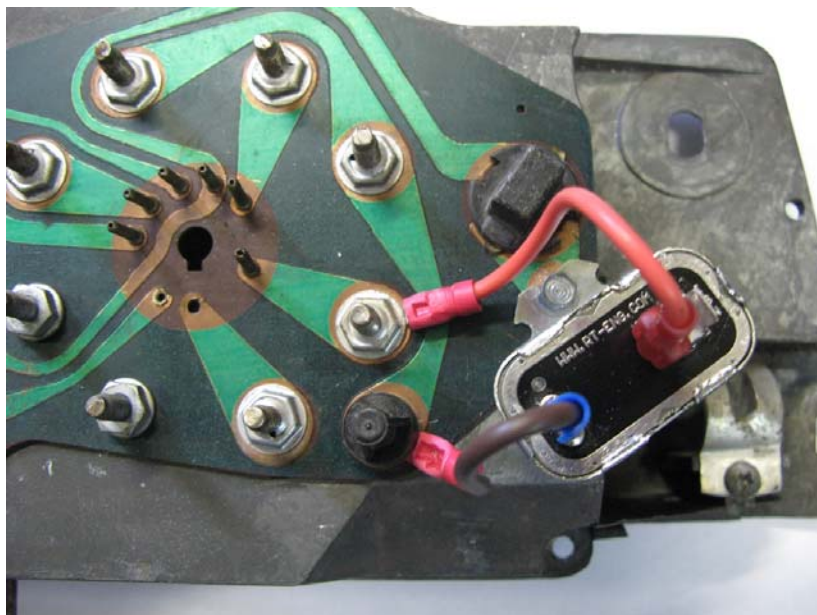
- Step 1: Take the fuel gauge out of the cluster, and gently take the face off.



- Step 2: Bend the limiter points out of the way, so that they no longer contact. Make sure that the points don't touch anything.



- Step 3: Put the Fuel gauge face back on.
- Step 4: Mount the IVR3 (Ebody) style limiter using one of the circuit board ground mounting points.



- Step 5: Run a wire from the 12V stud going into the fuel gauge to the IGN terminal on the new solid state limiter. Use a ring terminal on the fuel gauge side, and a male spade terminal on the limiter side.
- Step 6: Run a wire from the old fuel gauge limiter output stud to the solid state limiter output terminal. Use a ring terminal on the fuel gauge side, and a female spade terminal on the limiter side.



- Step 7: Test the setup by turning the key on in the car. The fuel gauge, oil gauge, and temperature gauge should operate properly, and the red LED on the new solid state limiter should blink after the 3-6 second warm up time.

See our website for more information on other fine products that may help you with your Mopar restoration needs. <http://rt-eng.com>

Our website contains more information about which limiter style is used in which car here: http://rt-eng.com/rte/index.php/RTE_Limiter_Faq

We also have a large amount of technical information that is useful in the FAQ sections: http://rt-eng.com/rte/index.php/RTE_Faqs