



An Open Letter from Jerry Hoffmann, CEO, Hoffmann Innovations, Inc.

Heads up everyone-- If you've recently purchased an MS3Pro Ultimate or Evo, we've made a goof here-- and now it's time to make it right. We'll never be perfect, but we can handle our imperfection with integrity, and we intend to!

There was no design problem here. There was, however, an assembly error introduced at the contract manufacturer due to some miscommunication with our team. This was discovered about a week ago with a single report of an Evo having injector #1 not function at all. (Not locked on, would not fire) We spent a few days investigating to ensure we knew exactly who was affected to the greatest degree possible. This assembly error placed a single resistor on the Evo boards in the wrong place (where it belonged on an Ultimate). And vice versa, on the Ultimate boards, a single resistor was misplaced (where it belonged on Evo). Essentially they got the two transposed. They use the same circuit board, but are populated differently.

The symptom on an Evo is Injector A will not fire at all. Very few Evo's shipped this way, and we've already emailed you if you purchased direct from us, and were affected. If you purchased from a dealer, we've asked them to email you this information, as well.

The symptom on an Ultimate is something most would never notice, but it can affect pulse-widths on injector A, specifically when using low impedance injectors. In most cases, you'd not see the vehicle run any differently, and we have thoroughly tested that and verified such. As with the Evo, we have already emailed you if you purchased direct from us, and were affected. If you purchased from a dealer, we've asked them to email you this information.

And now I'm going to talk about the silver lining here. We learned a LOT through this process! I can truly say I've never been momentarily more disappointed with my team, and I can just as truly say I've now never been more proud of my team. We made a mistake. That mistake helped draw our attention to analyze our processes and our people. And we found improvements to be made in both areas, and we're well on the way to completely re-inventing several processes. We had a team of 7 dig into the deepest of technical details on all of these. Challenged to find a problem, and told they would fail if they did not. This team came together and did an amazing job. Furthermore they rearchitected our Quality Assurance processes, and we exposed no new hardware errors beyond the one we just ate crow for above--- we did find a couple of minor firmware tweaks though to be made, things that may not be 'broken' but don't really work as expected. They have been forwarded to our development team.

I couldn't be prouder of how the team at Hoffmann Innovations/AMPEFI/DIYAUTOTUNE have come together as really almost more than a team... more like a family is what I saw here this week! They are killing it, and in doing so, they're going to help us ensure quality, and take this company, and the product, to the next level!

Thanks for your support!

Jerry Hoffmann  
CEO, Hoffmann Innovations, Inc.  
d.b.a. AMP EFI & DIYAutoTune



## Issue Date

August 2, 2017

## Applicable Products

MS3Pro Evo Engine Control Units purchased between June 26 and July 17, 2017.

MS3Pro Ultimate Engine Control Units purchased between April 3 and July 20, 2017.

## Description

Evo: Injector A will not fire.

Ultimate: No impactful difference was found with high impedance injectors. When used with low impedance injectors, we found that injector A pulse-width may vary by up to 100 microseconds in comparison to injector channels B-J under specific conditions. This variance would not be easily detectable without sophisticated equipment, and would not show under idle/ light load. Our flow tests conducted with an [ASNU Classic](#) machine showed the largest data point variance we could find was ~100 microseconds on injector channel A vs. channels B-J. The error is observable when a low impedance injector, controlled by peak & hold circuit with active current monitoring, is in its hold phase. The largest variance we were able to observe was 3.76% found at a commanded 3.0 millisecond pulse-width. The percentage variance decreased as pulse-width increased. Further, any variance at low pulse-widths where the injector was still in its peak period, such as a typical idle, was not found.

## Condition of Concern

Evo: Injector A will unfortunately be dead on arrival.

Ultimate: Some users may experience a disproportionate injector pulse-width on a single channel (injector channel A).

## Correction of Condition

Evo & Ultimate: 1. Transposed resistor will be moved to the correct location per specification.  
2. Complete Full System QA test

Shipping to our headquarters will be arranged by pre-paid label.

Please contact [support@ampefi.com](mailto:support@ampefi.com) to receive an RMA number, verify your address and receive return instructions. Your ECU will then be promptly repaired and returned in the order it was received.