

The Problem: Unpredictable C-Max Brake Lockup While Towing

In June, 2017 I learned that a fellow C-Max Energi owner had his toad brakes lock up while flat towing. By mid-July I had found a half-dozen web postings from other C-Max owners who experienced the same thing. Luckily, none reported a toad break-away. Some reported destroyed tires; one reported a bent front frame with associated damage. The reporting owners were using various RV-to-toad braking systems, with the C-Max Energi & Hybrid.

The original reporting owner was able to contact a retired Ford Service Manager who explained to him the C-Max Energi braking system. Based on that information, we were able to confirm continuous battery power to the braking system even with the ignition off. This “always-on” state can unnecessarily energize a vacuum pump which is normally only used while driving the car on electrics. This unpredictable vacuum assistance can result in a lockup with even the lightest touch on your RV brakes, regardless of your C-Max brake controller settings.

The DIY Solution: Remove Fuse #9

Removing fuse #9 disconnects battery power to the vacuum pump. I have tested this and found others on the web also using this solution. Doing this prevents driving the car on electrics until the fuse is reinserted, but allows for safely driving with the engine. Starting the car with the fuse removed sets a DTC error for service, which clears on its own with three or four restarts after the fuse is reinserted.

RoadMaster has designed a special-order solution using relays on the 40 amp fuse circuit to disconnect the Energi vacuum pump. At a price of \$150 it is not inexpensive, but could be money well spent. The part number is JK76517.

Ford Is Not On Board

In pursuing this issue with Ford, I received a call from a manager telling me of the need for C-Max owners who experience a lockup to report this problem to Customer Service at 800-392-3673, as Ford is not aware of the problem. Be sure to obtain a case number that you can refer your dealer to.

Additionally, you can report this issue to the National Highway Traffic Safety Administration at <https://www-odi.nhtsa.dot.gov/VehicleComplaint/>

Supplemental Information

The following additional information may help C-Max owners understand their braking systems.

-[ABS and Stability Control Operation extract](#) from the 2014 service manual.

-[Ford 2017 My OBD System Operation Summary for Plug-In and Hybrid Vehicles](#)

-[2014 C-Max fuse extract from the car manual](#)

[-2014 Energi/Hybrid Brake System wiring extract](#)

- [Ford service bulletin](#) addressing 12-volt battery discharge or Advancetrac error message after flat towing. This document also contains the current Ford flat tow recommendations. (SB-10058109-4254 / TSB 14-0173)