Intermittent Delay Wiper Mod for the Honda Element (2003-2006)

Important note – I do not have the information on the 2007 and up models. I have no way of knowing if this modification will work as posted on any model above the 2006. If you have an electrical manual, and/or service manual for the 2007 models, send me a copy of the schematics and I'll take a look and see if it is compatible.

A more important note: This mod will most likely cause some concern for, if not invalidate your warranty if something happens to the Multiplex Control Unit (MCU). I have no idea how Honda would respond to anyone who does something to damage the unit. I urge anyone who is weak at heart or lacking in electrical skills to be aware that while I'm sorry if you totally trash your MCU it's not my fault so don't start whining at me if you screw it up.

In other words, yes this circuit modification works. I have it installed in my E right now, but I have no control over your abilities to build and/or install this modification. Therefore, proceed at your own risk.

The problem:
Lack of adjustable delay sweep when the wiper is in the INT function. Depending on your situation, the OEM delay of 7 seconds may be too slow, or too fast. Ideally there should be a method to adjust the delay to suit the situation. The desired solution should be as minimally invasive as possible, and yet functional. The other functions of the wiper should remain exactly as the OEM designed.

The Solution:
Build and install a small time delay circuit board. Use the new delay board to control the sweep of the wipers while in the INT function.

In order to simplify the instructions, I will use the following colors when describing this mod.

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“Delay Timer Mod Board wire color”

<table>
<thead>
<tr>
<th>Wire Color</th>
<th>Schematic Notation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>Switch Pin 13</td>
</tr>
<tr>
<td>Black</td>
<td>Ground</td>
</tr>
<tr>
<td>White</td>
<td>Switch Pin 12</td>
</tr>
<tr>
<td>Brown</td>
<td>Under Dash Fuse/Relay Box B6</td>
</tr>
</tbody>
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Parts List:

The following parts are necessary for construction:

1 – small perf board  an example
1 – small plastic case (I did not want to drill any holes to mount the unit) an example
1 – 12 volt DC relay SPDT (20 amp contacts would be great) an example or this one would work too.
1 – 3.3k ohm 1/4w carbon resistor Resistors can be bought about anywhere, but you can get
1 – 10k ohm 1/4w carbon resistor enough right here for ten of these boards for $2.00
1 – 47k ohm 1/4w carbon resistor
1 – 100k ohm 1/4w carbon resistor
1 – 100k ohm potentiometer an example

   Note: if you are wanting to drill a hole and mount this in the dash, I would recommend
this type of pot.

1 – knob for whatever type potentiometer you choose.
1 – 2N3906 or equivalent PNP transistor an example
1 – 2N2222A or equivalent NPN transistor an example
1 – 1N4002 diode or equivalent rectifier diode an example

A few lengths of AWG 18 hook up wire. The exact length is going to vary depending on the location
you decide to mount the unit. Regardless, the wire is available about anywhere. I would recommend you
have different colors (I will use red, black, white, brown as the wire colors in this document) to prevent
errors both now and later on.
Parts availability:

There are numerous sources for the components, I use these guys a lot and recommend them. However, these should not be considered the only source for components. Remember, some of these have minimum order amounts and are not the best for 'small projects' like this.

- Mouser Electronics
- Digi-Key Electronics
- Newark Electronics

If you're looking for some bargain pricing I have to say, All Electronics would be one of the best for 'tinkering' and 'project parts'.

Assembly:

First, let me say right up front– I do not recommend anyone without basic electronic soldering skills even attempt to build this circuit. I'm sure you can locate a 'hobbyist' or technician who could build the circuit for little if any cost. If not, contact me and we'll work something out.

With the above said, I will not go into any techniques of assembly, other than to refer to the above schematic.

Installation:

Disconnect the negative terminal of the battery. Be sure you know the code for your radio, and also how to reprogram your automatic window. You will need to reprogram the drivers automatic window and reenter the radio code when you reconnect the battery later.

There are a total of four wires that will be involved in the unit.

I opted to make the connections at the UnderDash Relay/Fuse box. It just seems to be the easiest to get to. There are two connectors that we will use, connector B located in the upper right corner of the front of the box, and connector X located in the middle left side on the back of the fuse/relay box.
The power source is the INT output from the switch pin 13. It is the blue wire with a black stripe in the X connector. You need to cut this wire, connect the red wire to the harness, and tape off the bare wire that goes to the connector at the fuse box.

The next connection the blue wire with the red strip in connector B. Cut this wire, connect the white wire of the delay board to the wire from the switch (harness), then connect the other end of the wire (that goes to the connector) to the brown wire of the delay board.

Then connect the black wire from the delay board to a suitable ground. I used the one just visible above the center console if you look over to the right from the fuse/relay box.

I opted to put the whole board into a project box and attach it to the dashboard of the Element with double sided foam tape. If you desire, it can be mounted under the dash anywhere and a panel mount pot mounted somewhere on the dash. It would give the mod a more professional look. But you would have to drill a hole in the dash.
And just for fun, a video of the delay in action:
Clean up the loose ends:

Reconnect the battery, enter the radio code and reinitialize the auto window.

Go grab a beer and wait for the rain... ;-)

If I can help, contact me through the EOC

http://www.elementownersclub.com

Benny aka bh241