Turbo Actuator Code Guide

Code U010C or P0046 -
This normally points to either a turbocharger actuator or the power, ground or communication wires going to the actuator. A bad turbocharger cannot cause this code but bad wiring can.
Check to make sure your connector terminals look good and not corroded, make sure that you have good power and ground to the actuator (Power and ground are the two outside terminals).
With the key "Off", giving it plenty of time for the ecm to shutdown (~10 minutes) unplug the actuator and check ohms between the two middle pins of the connector on the harness side. It should read 115-125 ohms
*Note this is with the actuator unplugged.
Make sure to shake the wiring while doing both of these checks to make sure you don't have a bad wire. Also, check ohms on those two pins on the actuator itself (with the harness still unplugged) it should read between 115-125.
*Note on the late model the wire order goes "Ground, Can Low, Can High, and Power", but on the early model it goes "Power, Ground, Can High, Can Low". The resistance check should be between "Can High and Can Low".

Code P003A - This says the end stops could not be found by the actuator. This is normally an actuator issue but could be caused by removing the actuator without re-calibrating it.

Code P00AF - This can only be set by either a bad actuator or wiring fault, like we had you checking for on Code P0046.

Code P226C - This is normally the turbocharger. It is saying that the desired vane position does not match the actual. This is normally caused by stuck vanes that may not be stuck all the time.
Because of this we normally recommend people with this code get the turbocharger rebuilt regardless of what the vanes feel like. It can be caused by a bad actuator but its rare and if it is they will have a P00AF or P003A code set as well.
*Note that even if they have all 3 codes set with this we do not normally encourage them to just replace the actuator in this case as it can be both a bad actuator and stuck vanes.