



Diagnostic Trouble Code Diagnosis Charts

P1586	AT / MT codification
<p>Threshold Value ~</p> <ul style="list-style-type: none"> ⇒ AT coding signal is on (no voltage present at C211-72) but drive position switch is off (no voltage present at C211-86) and enabling conditions are met ⇒ AT coding signal is off (voltage present at C211-72) but drive position switch is on (voltage present at C211-86) and enabling conditions are met <p>Enable Conditions ~</p> <p>Engine speed: >2200 RPM</p> <p>Load value: >3.0 ms</p> <p>Time Requirements ~ Continuous</p> <p>MIL Illumination ~ 2 driving cycles</p>	<p>Related Items ~</p> <p>Auto Trans ~</p> <ul style="list-style-type: none"> ⇒ Open between C211-72 and GND. ⇒ Short between C211-86 and GND. <p>Manual Trans ~</p> <ul style="list-style-type: none"> ⇒ Open between C211-86 and GND. ⇒ Short between C211-72 and GND (there should not be a wire installed at C211-72).

STEP	INSPECTION	Y/N	ACTION
1	<p>IMPORTANT! Record all freeze frame data before disconnecting any connectors or clearing code(s).</p> <p>With ignition off, connect adapter cable #K99U-2106-G17 to BOB and disconnect C211 from ECM. Connect vehicle C211 to adapter cable but leave adapter cable C211 disconnected from ECM. Measure resistance to GND at BOB pin 72 (< 1N).</p> <p>Is resistance measured less than 1 ohm?</p>	YES	Go to step 2.
		NO	Locate source of open/high resistance between C211-72 and GND. Repair as necessary.
2	<p>Connect adapter cable C211 to ECM and turn ignition key on (engine off). Measure voltage at BOB pin 86 with gear selector in D (approximately 9~11v w/cruise control, 5vwo/cruise control).</p> <p>Is measured voltage between 8~10v?</p>	YES	Thoroughly check for loose, bent or corroded connectors. "Wiggle test" appropriate harnesses while redoing tests. Repair as necessary if any intermittent shorts/opens appear.
		NO	Disconnect C136 from range switch. If voltage at BOB pin 86 falls into specs, replace range switch and retest. If voltage at BOB pin 86 stays at approximately 0v, locate source of short to GND in C211-86 circuit between ECM, CCU, ignition switch and C136-6. Repair as necessary.

STEP	INSPECTION	Y/N	ACTION
1	<p>IMPORTANT! Record all freeze frame data before disconnecting any connectors or clearing code(s).</p> <p>With ignition off, connect adapter cable #K99U-2106-G17 to BOB and disconnect C211 from ECM. Connect vehicle C211 to adapter cable but leave adapter cable C211 disconnected from ECM. Measure resistance to GND at BOB pin 72 (infinite ohms).</p>	YES	Go to step 2.
		NO	Check Engine Harness part # to ensure proper harness is in vehicle. If part # checks okay, cut wire at C211-72.

	Is resistance measured infinite?		
2	Measure resistance to GND at BOB pin 86 (< 1N). Is measured resistance less than 1 ohm?	YES	Thoroughly check for loose, bent or corroded connectors. "Wiggle test" appropriate harnesses while redoing tests. Repair as necessary if any intermittent shorts/opens appear.
		NO	Locate source of open/high resistance between C211-86 and G103.
3A	Clear codes and return vehicle to original condition. Verify any repairs by driving vehicle with KIA Data Pro connected to OBD-II connector and monitoring for pending codes (refer to section 3 of the KIA Data Pro Generic OBD-II Program Card reference manual).		