

1A



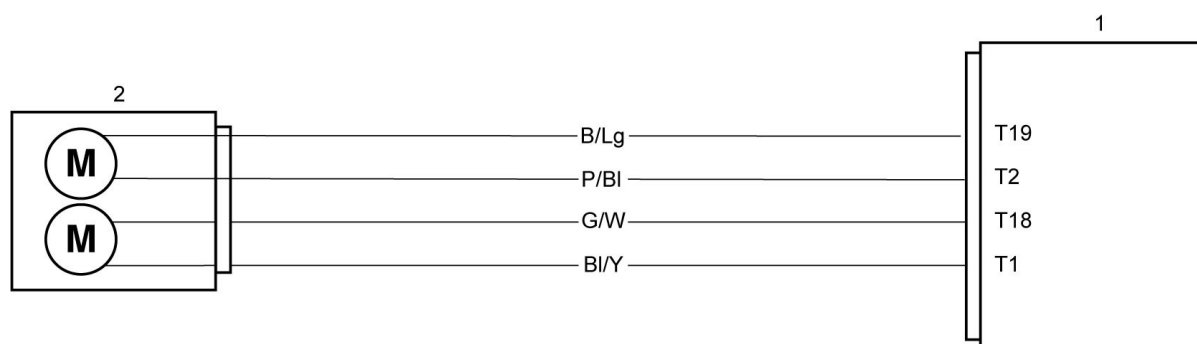
## DTC P1655 (C28)

### DTC Detecting Condition and Trouble Area

DTC detecting condition	Trouble area
<b>P1655 (C28): STVA Circuit Malfunction</b> The operation voltage does not reach the STVA. ECM does not receive communication signal from the STVA. STVA can not operate properly.	<ul style="list-style-type: none"><li>STVA malfunction</li><li>STVA circuit</li><li>ECM</li></ul>

### Wiring Diagram

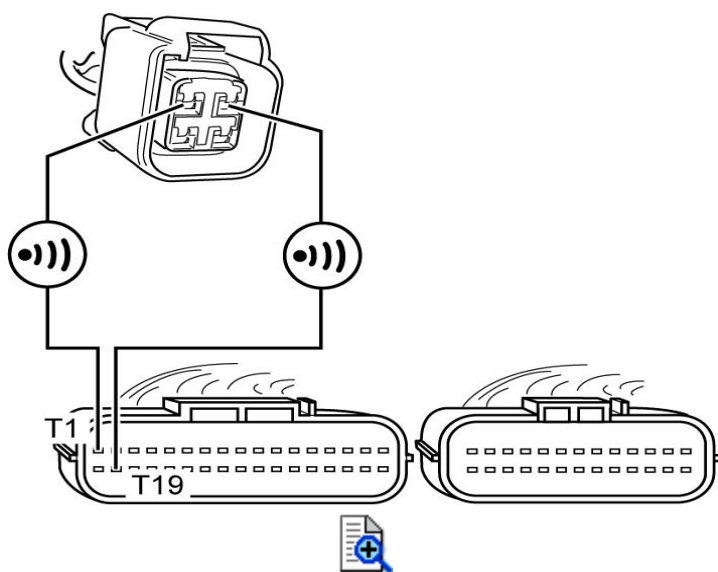
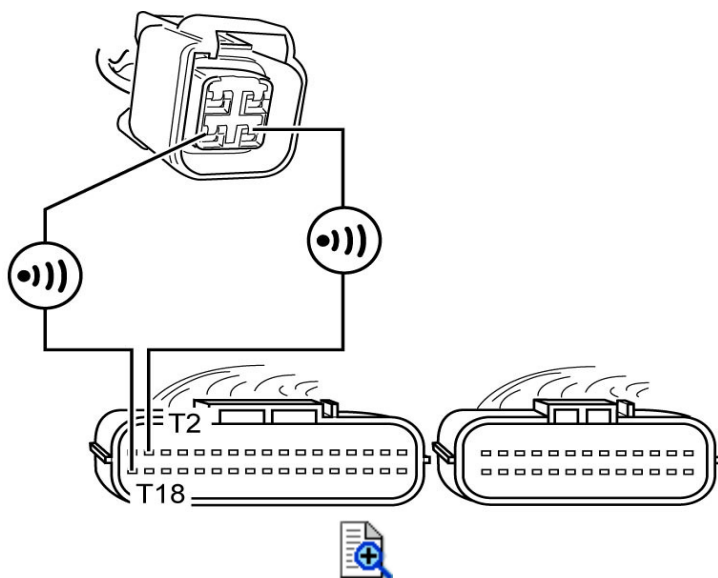
Refer to [FI System Wiring Diagram](#).



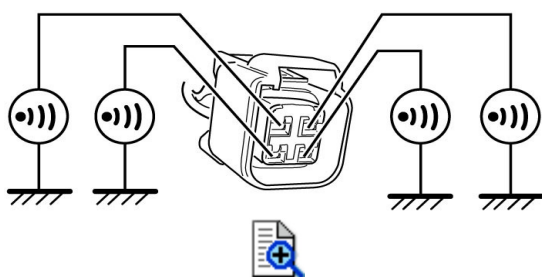
1. ECM	2. Secondary Throttle Valve Actuator (STVA)
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### Troubleshooting

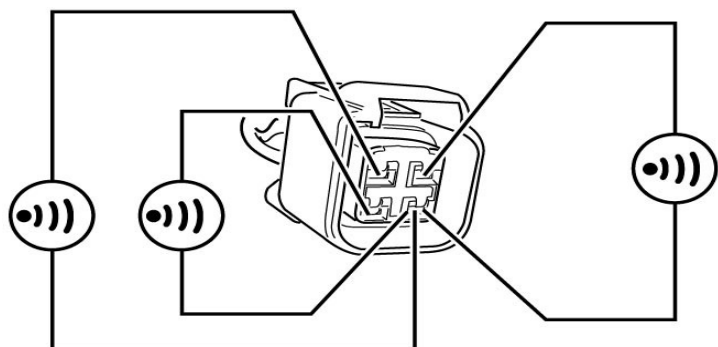
Step	Action	Yes	No
<b>1</b>	<b>STVA circuit check</b> 1) Turn the ignition switch OFF. 2) Disconnect the STVA coupler and ECM couplers. <ul style="list-style-type: none"><li>STVA: </li><li>ECM: </li></ul> 3) Check for proper terminal connection to the STVA coupler and ECM couplers. 4) If connections are OK, check the following points. <ul style="list-style-type: none"><li>Resistance<ul style="list-style-type: none"><li>P/Bl, G/W, B/Lg and Bl/Y wires: less than 1Ω</li></ul></li></ul>	Go to Step 2.	Repair or replace the defective wire harness.



- Between each of P/BI, G/W, B/Lg and BI/Y wire and ground: infinity

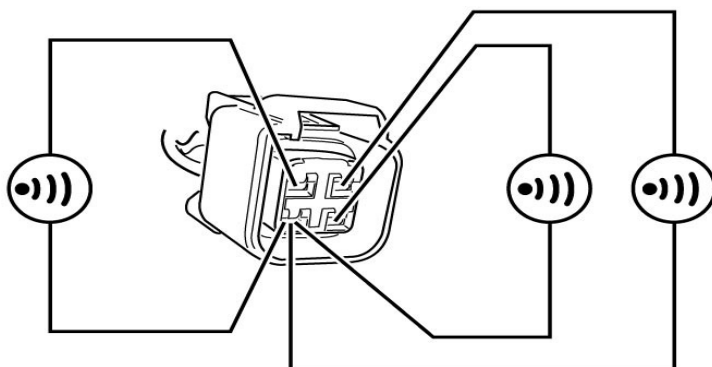


- Between P/BI wire terminal and other terminal at STVA coupler: infinity

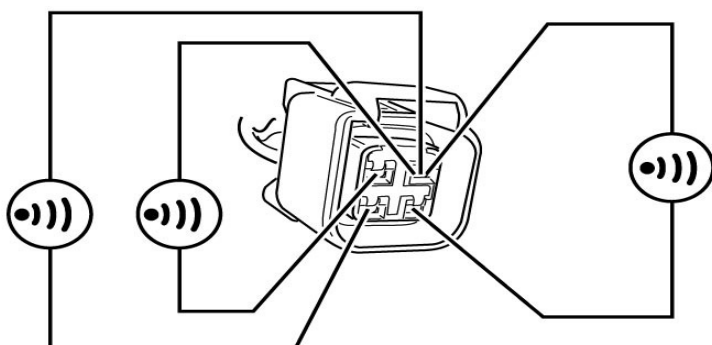




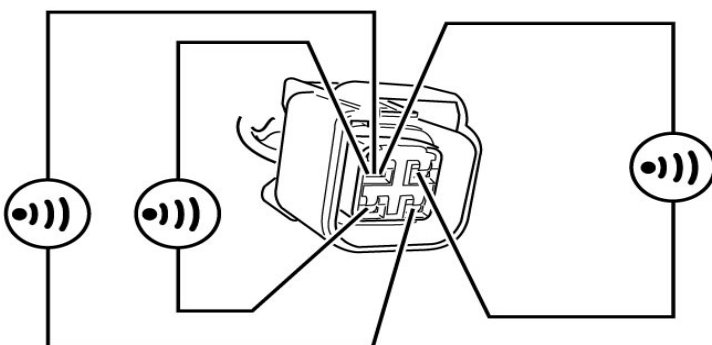
- Between G/W wire terminal and other terminal at STVA coupler: infinity



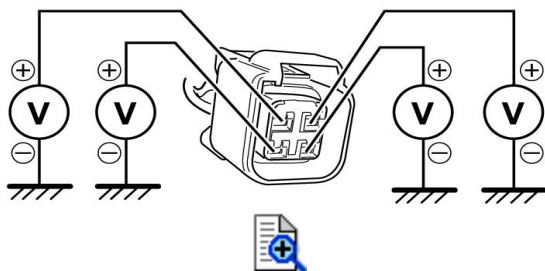
- Between B/Lg wire terminal and other terminal at STVA coupler: infinity



- Between Bl/Y wire terminal and other terminal at STVA coupler: infinity




- Voltage
  - Turn the ignition switch ON.
  - P/Bl, G/W, B/Lg and Bl/Y wires: approx. 0 V

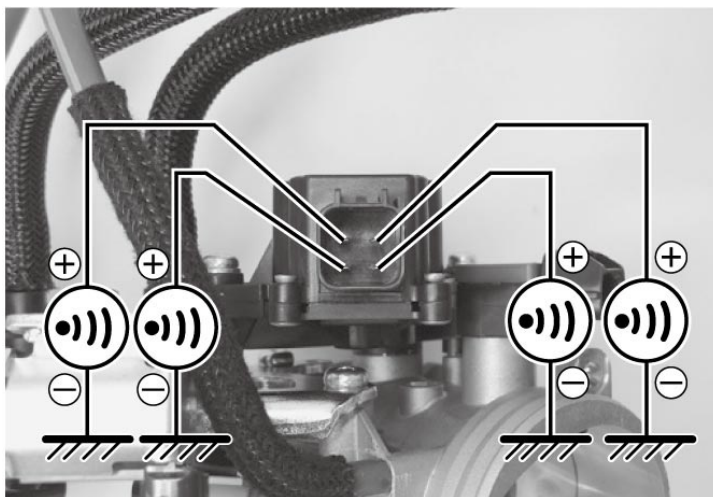


*Is check result OK?*

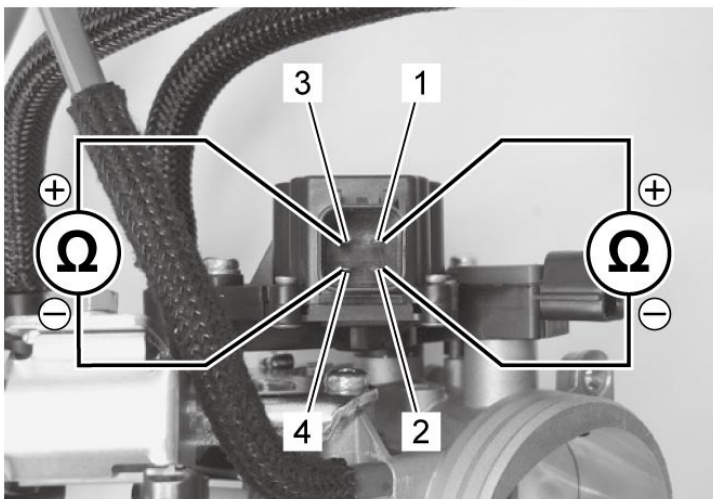
**2**


### STVA check


- 1) Turn the ignition switch OFF.
- 2) Remove the throttle body. 
- 3) Check the following points.
  - Continuity
    - Each terminal and ground: infinity



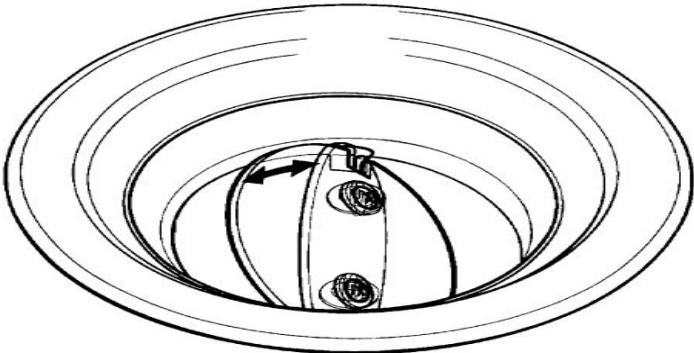





- Resistance
  - Terminal (1) and Terminal (2): approx. 7  $\Omega$
  - Terminal (3) and Terminal (4): approx. 7  $\Omega$



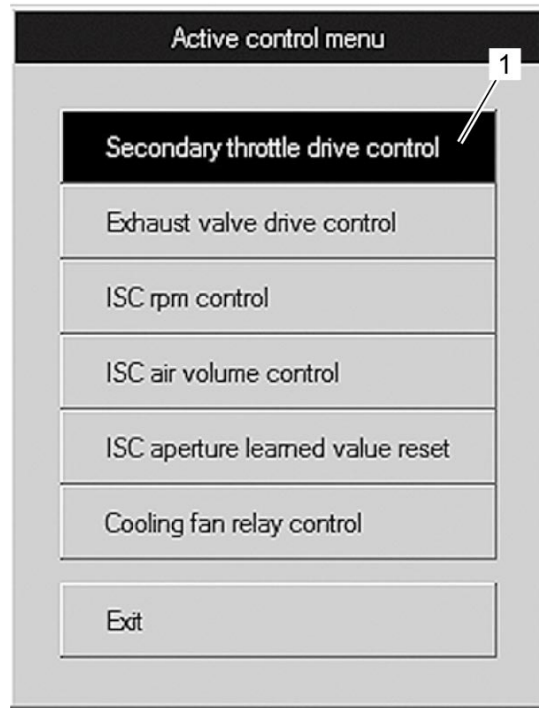
Replace the ECM with a known good one, and inspect it again. 

Replace the throttle body with a new one. 

			
	<b>Is check result OK?</b>		
<b>3</b>	<b>STV operation check</b> 1) Install the throttle body assembly.  . 2) Connect the STVA coupler and ECM coupler. 3) Check whether the STVs open by turning the ignition switch ON.  	Replace the ECM with a new one. 	Replace the throttle body assembly with a new one. 
	<b>Is the operation OK?</b>		

### Active Control Inspection

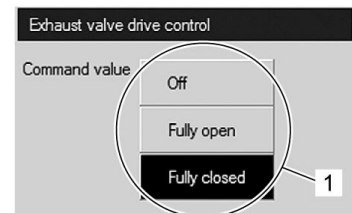
- 1) Set up the SDS tool referring to the SDS operation manual for further details.
- 2) Turn the ignition switch ON.
- 3) Click "Secondary throttle drive control" (1).



**4) Click each button (1).**

At this time, if an operation sound is heard from the STVA, the function is normal.

Item	Value	Unit	
<input type="checkbox"/> Manifold absolute pressure 2	102.2	kPa	
<input type="checkbox"/> Desired idle rpm	1205	rpm	
<input type="checkbox"/> O2 sensor (Bank 2-Sensor 2)	5.0	V	
<input type="checkbox"/> Secondary throttle actuator position sensor	0	%	
<input type="checkbox"/> Exhaust control valve actuator position sensor	92	%	



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