

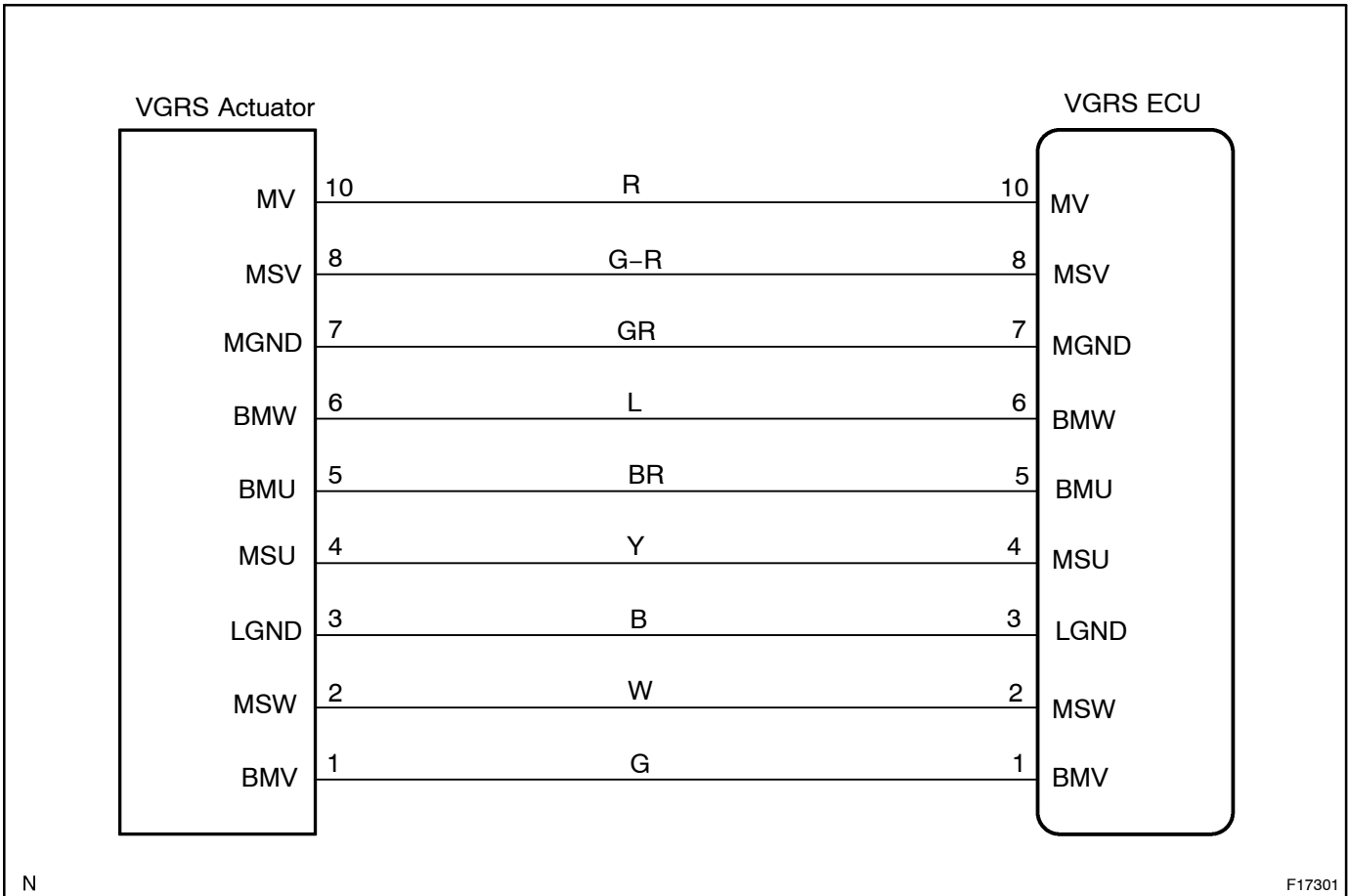
DTC	C1521 / 21	VGRS Actuator Malfunction
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CIRCUIT DESCRIPTION

The VGRS ECU drives the actuator while turning the steering wheel to set the gear ratio. It detects the current flowing into the actuator motor driving circuit. When the VGRS ECU detects excessive current, it records the DTC, turns on the VGRS warning light, and stops VGRS operation.

DTC No.	DTC Detecting Condition	Trouble Area
C1521/21	More than 60 A of current flows in the motor power source circuit for 0.1 sec or more.	•VGRS actuator •VGRS ECU

WIRING DIAGRAM



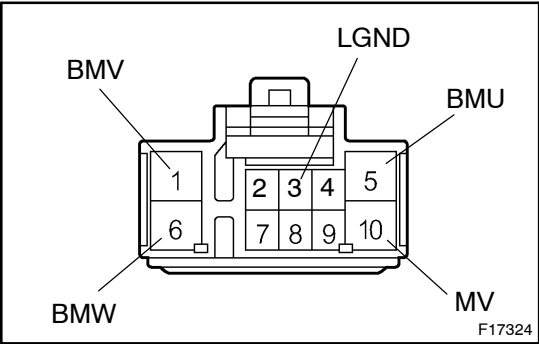
INSPECTION PROCEDURE

HINT:

When DTC C1521/21 is output, a short circuit inside the actuator or inside the ECU is suspected.

1

Inspect the VGRS actuator.



PREPARATION:

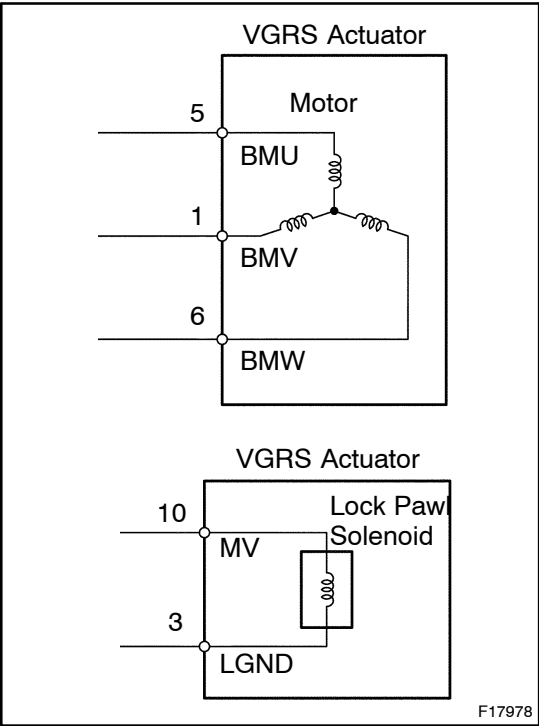
- (a) Turn the ignition switch OFF.
- (b) Disconnect the actuator connector from the VGRS ECU.

CHECK:

- (a) Measure resistance between terminals.

OK:

Symbols (Terminals)	Resistance
BMV (1) – BMU (5)	0.1 Ω to 1 Ω
BMV (1) – BMW (6)	
BMU (5) – BMW (6)	
MV (10) – LGND (3)	1 Ω to 100 Ω



- (b) Check continuity between terminals of actuator connector and body ground.

OK:

Symbols (Terminals)	Specified condition
BMV (1) – Body ground	No Continuity
BMU (5) – Body ground	
BMW (6) – Body ground	
MV (10) – Body ground	
LGND (3) – Body ground	

OK

NG

Replace VGRS actuator.

Replace VGRS ECU.