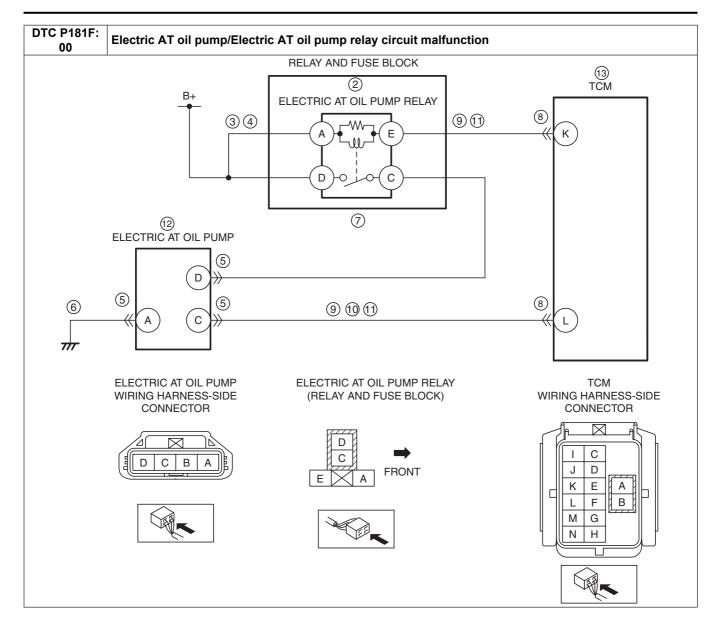
## DTC P181F:00 [GW6A-EL, GW6AX-EL]

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DTC P181F: 00	Electric AT oil pump/Electric AT oil pump relay circuit malfunction	
DETECTION CONDITION	If the TCM detects any of the following conditions for a continuous 5 s:  Electric AT oil pump circuit has a malfunction.  Electric AT oil pump relay circuit has a malfunction.  Diagnostic support note  The MIL does not illuminate.  The shift position indicator light does not illuminate.  PENDING CODE is available.  FREEZE FRAME DATA is not available.  DTC is stored in the TCM memory.	
FAIL-SAFE FUNCTION	Inhibits i-stop control.	
POSSIBLE CAUSE	<ul> <li>Electric AT oil pump relay malfunction</li> <li>Short to ground in wiring harness between electric AT oil pump relay terminal A and electric AT oil pump relay terminal D</li> <li>Open circuit in wiring harness between electric AT oil pump relay terminal A and electric AT oil pump relay terminal D</li> <li>Electric AT oil pump connector or terminals malfunction</li> <li>Open circuit in wiring harness between electric AT oil pump terminal A and body ground</li> <li>Short to ground or open circuit in wiring harness between battery positive terminal and electric AT oil pump terminal D</li> <li>TCM connector or terminals malfunction</li> <li>Short to ground in wiring harness between the following terminals:         <ul> <li>Electric AT oil pump relay terminal E—TCM terminal K</li> <li>Electric AT oil pump terminal C—TCM terminal L</li> </ul> </li> <li>Short to power supply in wiring harness between electric AT oil pump terminal C and TCM terminal L</li> <li>Open circuit in wiring harness between the following terminals:         <ul> <li>Electric AT oil pump relay terminal E—TCM terminal K</li> <li>Electric AT oil pump terminal C—TCM terminal L</li> </ul> </li> <li>Electric AT oil pump terminal C—TCM terminal L</li> <li>Electric AT oil pump malfunction</li> <li>TCM malfunction</li> </ul>	



Diagnostic procedure

STEP	INSPECTION		ACTION
1	VERIFY RELATED SERVICE INFORMATION	Yes	Perform repair or diagnosis according to the available
	AVAILABILITY		Service Information.
	Verify related Service Information availability.		If the vehicle is not repaired, go to the next step.
	Is any related Service Information available?	No	Go to the next step.
2	INSPECT ELECTRIC AT OIL PUMP RELAY	Yes	Replace the electric AT oil pump relay, then go to Step 13.
	Switch the ignition off.		(See RELAY LOCATION.)
	Remove the electric AT oil pump relay.	No	Go to the next step.
	(See RELAY LOCATION.)		·
	Inspect the electric AT oil pump relay.		
	(See RELAY INSPECTION.)		
	Is there any malfunction?		

STEP	INSPECTION		ACTION
3	INSPECT ELECTRIC AT OIL PUMP RELAY	Yes	Refer to the wiring diagram and verify whether or not there
	CIRCUIT FOR SHORT TO GROUND		is a common connector between electric AT oil pump relay
	Verify that the electric AT oil pump relay is removed.		terminal A and electric AT oil pump relay terminal D.  If there is a common connector:
	Inspect for continuity between electric AT oil pump		Determine the malfunctioning part by inspecting the
	relay terminal A (wiring harness-side) and body		common connector and the terminal for corrosion,
	ground.		damage, or pin disconnection, and the common wiring
	Is there continuity?		harness for a short to ground.
			Repair or replace the malfunctioning part.  If there is no common connector:
			Repair or replace the wiring harness which has a short to
			ground.
			Go to Step 13.
		No	Go to the next step.
4	INSPECT ELECTRIC AT OIL PUMP RELAY	Yes	Install the electric AT oil pump relay, then go to the next step.
	CIRCUIT FOR OPEN CIRCUIT     Verify that the electric AT oil pump relay is	No	(See RELAY LOCATION.) Refer to the wiring diagram and verify whether or not there
	removed.	140	is a common connector between electric AT oil pump relay
	Inspect for continuity between electric AT oil pump		terminal A and electric AT oil pump relay terminal D.
	relay terminal A (wiring harness-side) and electric		If there is a common connector:
	AT oil pump relay terminal D (wiring harness-		Determine the malfunctioning part by inspecting the
	side). • Is there continuity?		common connector and the terminal for corrosion, damage, or pin disconnection, and the common wiring
	io there contained .		harness for an open circuit.
			Repair or replace the malfunctioning part.
			If there is no common connector:
			Repair or replace the wiring harness which has an open
			circuit. Go to Step 13.
5	INSPECT ELECTRIC AT OIL PUMP	Yes	Repair or replace the connector and/or terminals, then go to
	CONNECTOR CONDITION		Step 13.
	Disconnect the electric AT oil pump connector.	No	Go to the next step.
	<ul> <li>Inspect for poor connection (such as damaged/ pulled-out pins, corrosion).</li> </ul>		
	Is there any malfunction		
6	INSPECT ELECTRIC AT OIL PUMP GROUND	Yes	Go to the next step.
	CIRCUIT FOR OPEN CIRCUIT	No	Refer to the wiring diagram and verify whether or not there
	Verify that the electric AT oil pump connector is disconnected.		is a common connector between electric AT oil pump terminal A and body ground.
	Inspect for continuity between electric AT oil pump		If there is a common connector:
	terminal A (wiring harness-side) and body ground.		Determine the malfunctioning part by inspecting the
	Is there continuity?		common connector and the terminal for corrosion,
			damage, or pin disconnection, and the common wiring
			harness for an open circuit.  • Repair or replace the malfunctioning part.
			If there is no common connector:
			Repair or replace the wiring harness which has an open
			circuit.
7	INSPECT ELECTRIC AT OIL PUMP POWER	Yes	Go to Step 13.  Refer to the wiring diagram and verify whether or not there
'	SUPPLY CIRCUIT FOR SHORT TO GROUND OR	100	is a common connector between battery positive terminal
	OPEN CIRCUIT		and electric AT oil pump terminal D.
	Verify that the electric AT oil pump connector is		If there is a common connector:
	disconnected.		Determine the malfunctioning part by inspecting the
	<ul> <li>Switch the electric AT oil pump relay to ON using the simulation item EOP_RLY.</li> </ul>		common connector and the terminal for corrosion, damage, or pin disconnection, and the common wiring
	(See ON-BOARD DIAGNOSTIC SYSTEM		harness for a short to ground or open circuit.
	SIMULATION INSPECTION [GW6A-EL,		Repair or replace the malfunctioning part.
	GW6AX-EL].)		If there is no common connector:
	Measure the voltage at the electric AT oil pump terminal D (wiring harness side)		Repair or replace the wiring harness which has a short to ground.
	terminal D (wiring harness-side).  • Is the voltage <b>0 V</b> ?		ground. Go to Step 13.
		No	Go to the next step.
			,

STEP	INSPECTION		ACTION
8	INSPECT TCM CONNECTOR CONDITION	Yes	Repair or replace the connector and/or terminals, then go to
	Disconnect the TCM connector.		Step 13.
	<ul><li>Visually inspect the TCM connector and terminals.</li><li>Is there any malfunction?</li></ul>	No	Go to the next step.
9	INSPECT ELECTRIC AT OIL PUMP CIRCUIT FOR SHORT TO GROUND	Yes	Refer to the wiring diagram and verify whether or not there is a common connector between the following terminals:
	Verify that the electric AT oil pump and TCM		Electric AT oil pump relay terminal E—TCM terminal K
	connectors are disconnected.		Electric AT oil pump terminal C—TCM terminal L
	Inspect for continuity between the following		If there is a common connector:
	terminals (wiring harness-side) and body ground:		Determine the malfunctioning part by inspecting the
	Electric AT oil pump relay terminal E		common connector and the terminal for corrosion,
	Electric AT oil pump terminal C		damage, or pin disconnection, and the common wiring
	Is there continuity?		harness for a short to ground.
			Repair or replace the malfunctioning part.  If there is no common connector:
			Repair or replace the wiring harness which has a short to
			ground.
			Go to Step 13.
		No	Go to the next step.
10	INSPECT ELECTRIC AT OIL PUMP CIRCUIT	Yes	Go to the next step.
	FOR SHORT TO POWER SUPPLY	No	Refer to the wiring diagram and verify whether or not there
	Verify that the electric AT oil pump and TCM     appropriate are disconnected.		is a common connector between electric AT oil pump
	connectors are disconnected.  • Switch the ignition ON (engine on).		terminal C and TCM terminal L.  If there is a common connector:
	Measure the voltage at the electric AT oil pump		Determine the malfunctioning part by inspecting the
	terminal C (wiring harness-side).		common connector and the terminal for corrosion,
	• Is the voltage <b>0 V</b> ?		damage, or pin disconnection, and the common wiring
			harness for a short to power supply.
			Repair or replace the malfunctioning part.
			If there is no common connector:
			Repair or replace the wiring harness which has a short to
			power supply. Go to Step 13.
11	INSPECT ELECTRIC AT OIL PUMP CIRCUIT	Yes	Refer to the wiring diagram and verify whether or not there
	FOR OPEN CIRCUIT		is a common connector between the following terminals:
	Verify that the electric AT oil pump and TCM		Electric AT oil pump relay terminal E—TCM terminal K
	connectors are disconnected.		Electric AT oil pump terminal C—TCM terminal L
	Switch the ignition off.		If there is a common connector:
	Visually inspect the wiring harness between the		Determine the malfunctioning part by inspecting the
	following terminals (wiring harness-side):  — Electric AT oil pump relay terminal E—TCM		common connector and the terminal for corrosion, damage, or pin disconnection, and the common wiring
	terminal K		harness for an open circuit.
	Electric AT oil pump terminal C—TCM		Repair or replace the malfunctioning part.
	terminal L		If there is no common connector:
	Is there any malfunction?		Repair or replace the wiring harness which has an open
			circuit.
		NIA	Go to the next step.
12	INSPECT ELECTRIC AT OIL PUMP	No Yes	Go to the next step. Go to the next step.
'2	Remove the electric AT oil pump.	No	Replace the electric AT oil pump, then go to the next step.
	(See ELECTRIC AT OIL PUMP REMOVAL/		(See ELECTRIC AT OIL PUMP REMOVAL/INSTALLATION
	NSTALLATION [GW6A-EL, GW6AX-EL].)		[GW6A-EL, GW6AX-EL].)
	Verify that the resistance according to the		
	following:		
	Between electric AT oil pump terminal D and A: Approx 48.2 Kilchma		
	A: <b>Approx. 18.2 Kilohms</b> — Between electric AT oil pump terminal C and		
	A: Approx. 21.5 Kilohms		
	• Is the resistance normal?		

STEP	INSPECTION		ACTION
13	VERIFY DTC TROUBLESHOOTING	Yes	Replace the control valve body, then go to the next step.
	COMPLETED		(See CONTROL VALVE BODY REMOVAL/INSTALLATION
	Always reconnect all disconnected connectors.		[GW6A-EL, GW6AX-EL].)
	Clear the DTC using the M-MDS.	No	Go to the next step.
	(See ON-BOARD DIAGNOSTIC SYSTEM DTC		
	INSPECTION [GW6A-EL, GW6AX-EL].)		
	Perform the following procedure to ensure that the		
	DTC has been resolved:		
	Operates the i-stop.		
	Perform the DTC inspection using the M-MDS.		
	(See ON-BOARD DIAGNOSTIC SYSTEM DTC		
	INSPECTION [GW6A-EL, GW6AX-EL].)		
	Is the DTC P181F:00 present?		
14	VERIFY NO DTC HAS BEEN PRESENTED	Yes	
	Are any DTCs present?		(See ON-BOARD DIAGNOSTIC SYSTEM DTC TABLE
			[GW6A-EL, GW6AX-EL].)
		No	DTC troubleshooting completed.