

Rear Wiper/Washer System Description and Operation

Rear Wiper/Washer System Components

The rear window wiper/washer system consists of the following components:

- Rear window wiper/washer switch
- · Rear window wiper module
- Washer fluid pump reversible
- W/S WASH relay
- RR WPR 15A fuse Fuse Block I/P
- RR WPR 25A fuse Fuse Block Underhood
- W/S WASH 15A fuse

Rear Wiper/Washer System Operation

The rear window wiper motor module is part of the rear window wiper module and controls wiper motor operation. Battery voltage supplied to the wiper motor assembly is used to operate the wiper motor in all modes and to return the rear wiper arm to the park position after the ignition is turned OFF. Accessory voltage supplied to the rear window wiper/washer switch is used to supply the rear window wiper/washer switch signal and control circuits. In switch positions low and high the wiper switch signal circuit voltage level to the wiper motor module determines the wiper motor delay interval. The rear window washer switch signal circuit activates the rear window wiper motor wash operating mode, and the same signal is used to signal the windshield wiper motor module the rear window wash mode is active.

The washer fluid pump is a reversible motor and is used to wash both the windshield and rear window. The washer fluid pump is controlled by the windshield wiper motor module through the washer fluid pump relay. The washer fluid pump relay coil and switch are supplied battery positive voltage, and during the windshield or rear window wash modes the wiper motor module grounds the washer fluid pump relay control circuit energizing the relay. When the relay is energized battery positive voltage to the switch side of the relay is supplied to the windshield wiper motor module through the washer fluid pump supply voltage circuit. The windshield wiper motor module also controls the voltage polarity of the washer fluid pump control circuits. During rear window wash operation the rear window washer pump control circuit supplies positive voltage to the washer fluid pump and the windshield washer pump control circuit is the ground circuit.

Rear Wiper Inoperative

Step	Action	Yes	No			
Schei	Schematic Reference: Wiper/Washer Schematics					
Conn	ector End View Reference: Wiper/Washer Con	nector End Views				
11	NITION: The rear wiper motor is inoperative in may or may not operate.	n one or more modes	, the rear washer			
	Did you review the Rear Wiper/Washer System Description and Operation and perform the necessary inspections?	Go to <u>Step 2</u>	Go to <u>Symptoms -</u> <u>Wiper/Washer</u> <u>Systems</u>			
2	 Turn ON the ignition, with the engine OFF. Operate the rear wiper/washer system in all the switch positions. Does the rear wiper/washer system operate normally? 	Go to <u>Testing for</u> <u>Intermittent</u> <u>Conditions and Poor</u> <u>Connections</u>	Go to <u>Step 3</u>			
3	Inspect the courtesy lamps for proper operation. Refer to <u>Interior Lighting Systems</u> <u>Description and Operation</u> . Do the courtesy lamps operate properly?	Go to <u>Step 4</u>	Go to <u>Symptoms -</u> <u>Lighting Systems</u>			
4	Does the rear wiper motor operate when the rear washer switch is pressed?	Go to <u>Step 6</u>	Go to <u>Step 5</u>			
	Is the rear wiper only inoperative when the rear washer switch is pressed?	Go to Step 12	Go to Step 6			
6	 Disconnect the harness connector of the rear wiper switch. Connect a test lamp from the accessory voltage circuit of the rear wiper/washer switch to a good ground. Does the test lamp illuminate? 	Go to <u>Step 7</u>	Go to <u>Step 13</u>			
7	·	Go to Step 16	Go to Step 8			

	Connect a 15-amp fused jumper wire from the accessory voltage circuit to the rear window wiper switch signal circuit. Does the rear wiper motor operate? • Remove the fused jumper wire and		
8	connect the rear wiper switch connector. • Disconnect the harness connector of the rear window wiper module. • Connect a test lamp from the rear window wiper switch signal circuit to a good ground. • Turn the rear wiper switch to the 2 position.		
	Does the test lamp illuminate?	Go to Step 9	Go to Step 18
9	Connect a test lamp from battery voltage to the ground circuit of the rear wiper module.		
	Does the test lamp illuminate?	Go to Step 10	Go to Step 19
10	Connect a test lamp from the battery voltage circuit of the rear wiper module to a good ground.		
	Does the test lamp illuminate?	Go to Step 11	Go to Step 20
11	 Connect the rear wiper module harness connector. Disconnect the wiper motor to module connector. Connect a test lamp across the motor control circuit terminals in the module. Turn the rear wiper switch to the 2 position. 		
	Does the test lamp illuminate?	Go to Step 24	Go to Step 17
12	 Disconnect the harness connector of the rear wiper/washer module. Connect a test lamp from the rear window washer switch signal circuit to a good ground. Depress the rear washer switch. 		
	Does the test lamp illuminate?	Go to Step 17	Go to Step 15
13		Go to Step 25	Go to Step 14

	Test the accessory voltage circuit of the rear wiper/washer switch for an open or a short to ground. Refer to <u>Circuit Testing</u> and <u>Wiring Repairs</u> .		
	Did you find and correct the condition?		
14	Test the rear window wiper switch signal circuit for a short to ground. Refer to <u>Circuit Testing</u> and <u>Wiring Repairs</u> .		
	Did you find and correct the condition?	Go to Step 25	Go to Step 21
15	Test the rear window washer switch signal circuit for an open or high resistance. Refer to <u>Circuit Testing</u> and <u>Wiring Repairs</u> .		
	Did you find and correct the condition?	Go to Step 25	Go to Step 16
16	Inspect for poor connections at the harness connector of the rear wiper/washer switch. Refer to Testing for Intermittent Conditions and Poor Connections and Connector Repairs .		
	Did you find and correct the condition?	Go to Step 25	Go to Step 22
17	Inspect for poor connections at the harness connector of the rear wiper module. Refer to Testing for Intermittent Conditions and Poor Connections and Connector Repairs.		
	Did you find and correct the condition?	Go to Step 25	Go to Step 23
18	Repair an open or high resistance in the rear window wiper switch signal circuit. Refer to Circuit Testing and Wiring Repairs .		
	Did you complete the repair?	Go to Step 25	
19	Repair an open or high resistance in the ground circuit of the rear wiper module. Refer to <u>Circuit Testing</u> and <u>Wiring Repairs</u> .		
	Did you complete the repair?	Go to Step 25	
20	Repair an open or a short to ground in the battery voltage circuit of the rear wiper module. Refer to <u>Circuit Testing</u> and <u>Wiring Repairs</u> .	Go to Step 25	

	Did you complete the repair?		
21	Repair a short to ground in the rear window washer switch signal circuit. Refer to <u>Circuit Testing</u> and <u>Wiring Repairs</u> . Did you complete the repair?	Go to <u>Step 25</u>	
22	Replace the rear window wiper/washer switch. Refer to Rear Window Wiper and Washer Switch Replacement. Did you complete the replacement?	Go to <u>Step 25</u>	
23	Replace the rear wiper motor module. Refer to Rear Window Wiper Control Module Replacement . Did you complete the replacement?	Go to <u>Step 25</u>	
24	Replace the rear wiper motor. Refer to Rear Window Wiper Motor Replacement. Did you complete the replacement?	Go to Step 25	
25	Operate the system in order to verify the repair. Did you correct the condition?	System OK	Go to Step 3
	Did you correct the condition:	System or	Go to <u>Step 3</u>

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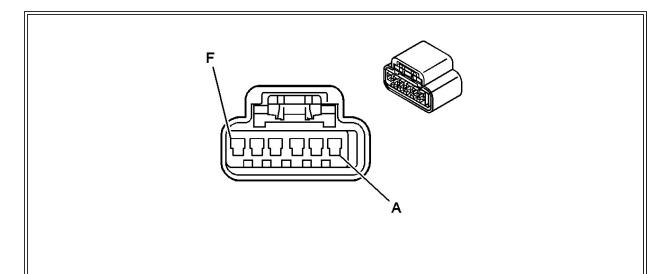
Wiper/Washer Connector End Views

 Table 1:
 Rear Window Wiper Module

Table 2: Rear Window Wiper/Washer SwitchTable 3: Turn Signal/Multifunction Switch - C2

Table 4: Washer Fluid Level Sensor
 Table 5: Washer Fluid Pump - Reversible
 Table 6: Windshield Wiper Motor and Module

Rear Window Wiper Module

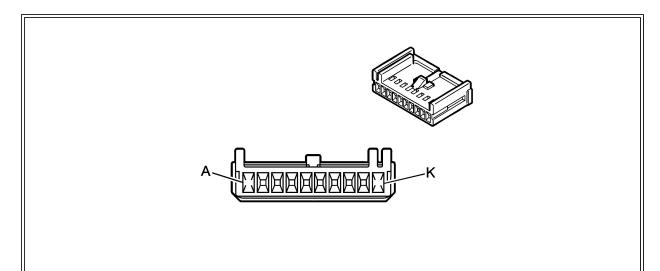


Connector Part Information

- 15332141
- 6-Way F GT 150 Series (BK)

<u> </u>			• •
Pin	Wire Color	Circuit No.	Function
А	OG	2040	Battery Positive Voltage
В	ВК	1450	Ground
С			Not Used
D	WH	393	Rear Window Washer Switch Signal
Е	GY	391	Rear Window Wiper Switch Signal
F	PK/BK	1303	Liftgate Ajar Switch Signal

Rear Window Wiper/Washer Switch

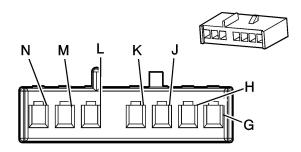


Connector Part Information

- 15393435
- 10-Way F Micro-Pack (GY)

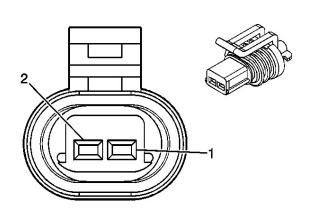
		U 10-446	IN I MICIO-Pack (GI)
Pin	Wire Color	Circuit No.	Function
A-C			Not Used
D	BK/WH	1851	Ground
E	BN/WH	230	Instrument Panel Lamps Dimming Control
F	GY	391	Rear Window Wiper Switch Signal
G	YE	343	Accessory Voltage
Н	D-GN	392	Rear Window Washer Pump Control
J	WH	393	Rear Window Wiper Motor Wash Signal
K			Not Used

Turn Signal/Multifunction Switch - C2



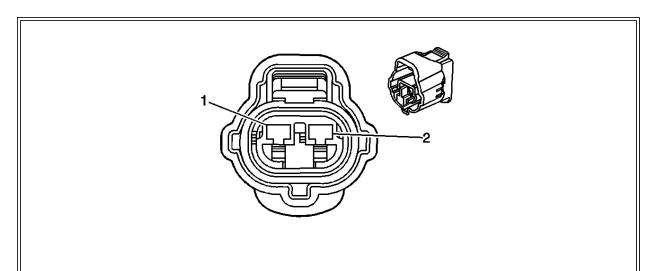
Connector Part Information		• 15339 • 7-Way	058 F Metri-Pack 150 Series (MD GY)
Pin	Wire Color	Circuit No.	Function
G			Not Used
Н	PK	94	Windshield Washer Switch Signal
J	GY	478	Windshield Washer Switch Supply Voltage
К	D-BU/ WH	477	Windshield Wiper Switch High Signal
L-N			Not Used

Washer Fluid Level Sensor



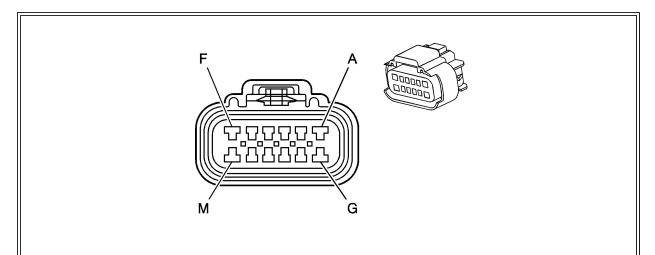
Connector Part Information		153360242-Way F GT 150 Sealed (BK)	
Pin	Wire Color	Circuit No.	Function
1	BK/WH	174	Low Washer Fluid Indicator Signal
2	ВК	150	Ground

Washer Fluid Pump - Reversible



Connector Part Information		• 154234 • 2-Way	l80 F Yazaki Sealed (BK)
Pin	Wire Color	Circuit No.	Function
1	RD	228	Windshield Washer Pump Control

Windshield Wiper Motor and Module



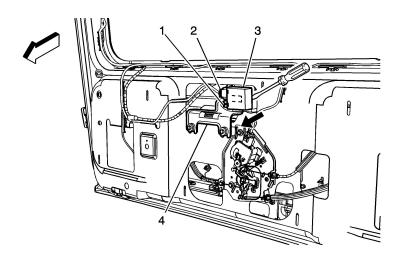
Connector Part Information

- 15326939
- 12-Way F GT 150 SLD (BK)

Pin	Wire Color	Circuit No.	Function
А	D-GN/WH	266	Washer Fluid Pump Supply Voltage
В	RD	228	Windshield Washer Pump Control
С	D-GN	392	Rear Window Washer Switch Signal
D	D-BU	477	Windshield Wiper Switch High Signal
E	GY	478	Windshield Wiper Switch Supply Voltage
F	YE	143	Accessory Voltage
G	ВК	1050	Ground
Н	D-BU	227	Rear Window Washer Pump Control
J	OG	2268	Washer Fluid Pump Relay Control

K	PK	94	Windshield Washer Switch Signal
L	D-GN	113	Windshield Wiper Switch Signal 2
М	ВК	1050	Ground

Rear Window Wiper Control Module Replacement



Callout	Component Name		
Fastenei	Tightening Specifications: Refer to Fastener Tightening Specifications.		
Prelimi	nary Procedure		
Remove	the rear liftgate trim panel. Refer to <u>Liftgate Trim Panel Replacement</u> .		
1	Wiper Motor Electrical Connector		
2	Main Liftgate Harness Electrical Connector		
	Rear Window Wiper Control Module		
	Tip Using a flat-bladed tool, insert the tool behind the control module and release the locking tab in order to slide and remove the wiper control module from the wiper motor bracket.		
4	Rear Window Wiper Motor Bracket		