Component Procedures: Wiper and Washer Systems

Table of Contents

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Parts and Labor (itype_189)

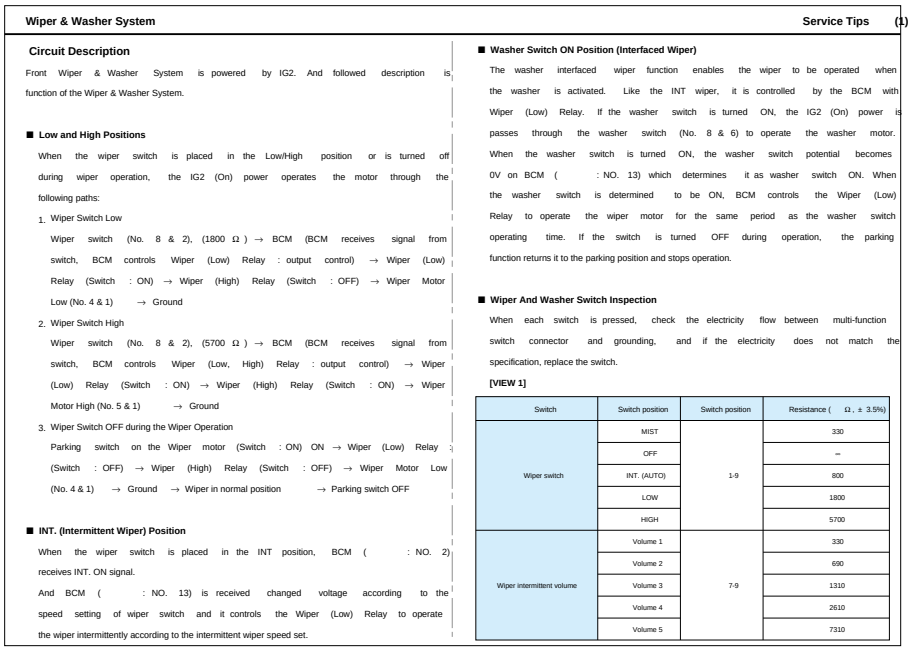
Parts

Qualifier	Part #	Name	Price	Note
Switches > Wiper Switch		Part Of Multifnt. Swit?	0.00	
Switches > Wiper Switch		Part Of Multifunction ?	0.00	
Wipers	98110F2000	Wiper Motor	301.90	
Wipers	98120F2000	Wiper Transmission	255.53	Includes Wiper Motor.
Wipers > Washer Pump	985103T500	Korea Built	72.27	
Wipers > Washer Pump	98510C1000	Us Built	92.87	
Wipers > Wiper Arm	98311F2000	Left	113.74	
Wipers > Wiper Arm	98321F2000	Right	136.15	
Wipers > Wiper Blade	99H09AK026C	Left	19.60	
Wipers > Wiper Blade	99H09AK016C	Right	13.23	

Labor

Operation	Qualifier Path	Skill	Std Hrs	Wty Hrs
Remove & Replace	Wipers > Reservoir, R&R	B	1.5	0.0
Remove & Replace	Wipers > Washer Pump, R&R	B	1.5	0.0
Remove & Replace	Wipers > Wiper Arm, R&R > Each	B	0.2	0.0
Remove & Replace	Wipers > Wiper Blade, R&R > Each	C	0.1	0.0
Remove & Replace	Wipers > Wiper Motor, R&R	B	0.4	0.0
Remove & Replace	Wipers > Wiper Transmission, R&R	B	0.4	0.0

Wiper & Washer System - Service Tips (Article 42586)



Wiper & Washer System **Service Tips (1)**

Circuit Description

Front Wiper & Washer System is powered by IG2. And followed description is function of the Wiper & Washer System.

■ Low and High Positions

When the wiper switch is placed in the Low/High position or is turned off during wiper operation, the IG2 (On) power operates the motor through the following paths:

1. Wiper Switch Low
   Wiper switch (No. 8 & 2), (1800 Ω) → BCM (BCM receives signal from switch, BCM controls Wiper (Low) Relay : output control) → Wiper (Low) Relay (Switch : ON) → Wiper (High) Relay (Switch : OFF) → Wiper Motor Low (No. 4 & 1) → Ground
2. Wiper Switch High
   Wiper switch (No. 8 & 2), (5700 Ω) → BCM (BCM receives signal from switch, BCM controls Wiper (Low, High) Relay : output control) → Wiper (Low) Relay (Switch : ON) → Wiper (High) Relay (Switch : ON) → Wiper Motor High (No. 5 & 1) → Ground
3. Wiper Switch OFF during the Wiper Operation
   Parking switch on the Wiper motor (Switch : ON) ON → Wiper (Low) Relay (Switch : OFF) → Wiper (High) Relay (Switch : OFF) → Wiper Motor Low (No. 4 & 1) → Ground → Wiper in normal position → Parking switch OFF

■ INT. (Intermittent Wiper) Position

When the wiper switch is placed in the INT position, BCM (: NO. 2) receives INT. ON signal.

And BCM (: NO. 13) is received changed voltage according to the speed setting of wiper switch and it controls the Wiper (Low) Relay to operate the wiper intermittently according to the intermittent wiper speed set.

■ Washer Switch ON Position (Interfaced Wiper)

The washer interfaced wiper function enables the wiper to be operated when the washer is activated. Like the INT wiper, it is controlled by the BCM with Wiper (Low) Relay. If the washer switch is turned ON, the IG2 (On) power is passes through the washer switch (No. 8 & 6) to operate the washer motor. When the washer switch is turned ON, the washer switch potential becomes 0V on BCM (: NO. 13) which determines it as washer switch ON. When the washer switch is determined to be ON, BCM controls the Wiper (Low) Relay to operate the wiper motor for the same period as the washer switch operating time. If the switch is turned OFF during operation, the parking function returns it to the parking position and stops operation.

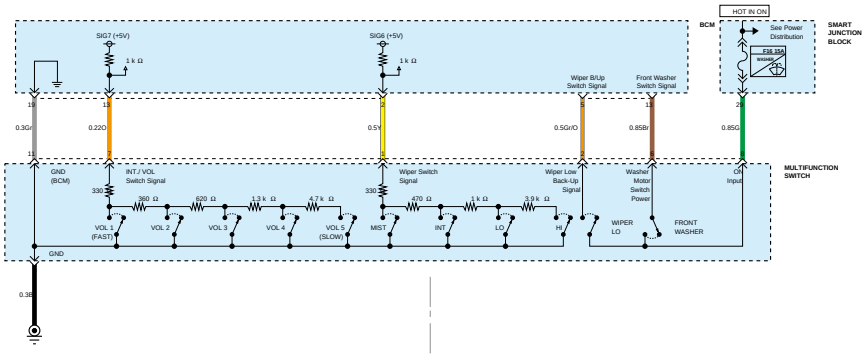
■ Wiper And Washer Switch Inspection

When each switch is pressed, check the electricity flow between multi-function switch connector and grounding, and if the electricity does not match the specification, replace the switch.

[VIEW 1]

Switch	Switch position	Switch position	Resistance (Ω , ± 3.5%)
Wiper switch	MIST	1-9	330
	OFF		–
	INT. (AUTO)		800
	LOW		1800
	HIGH		5700
Wiper intermittent volume	Volume 1	7-9	330
	Volume 2		690
	Volume 3		1310
	Volume 4		2610
	Volume 5		7310

[VIEW 2]

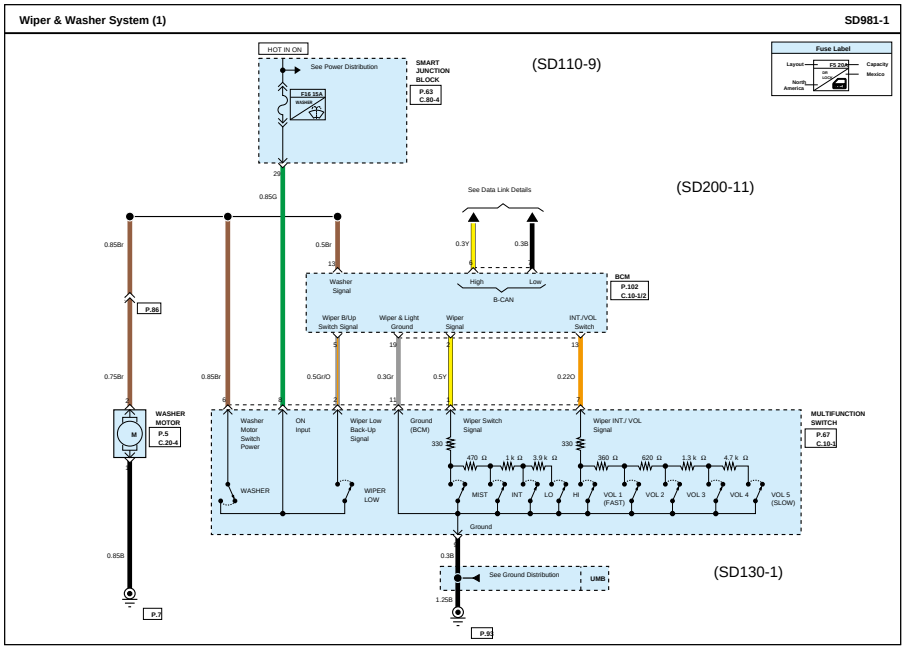


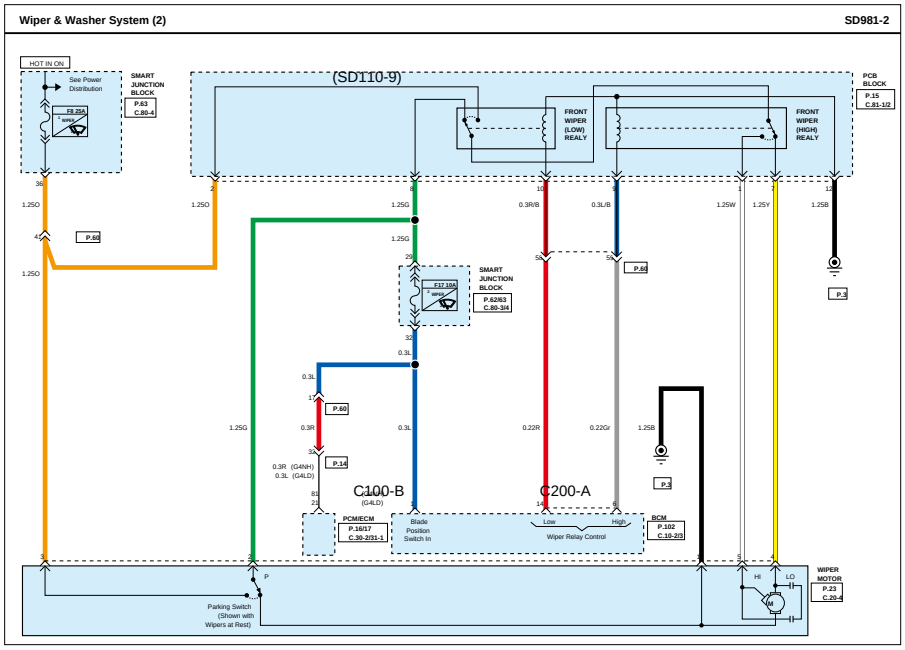
■ **Mist Wiper Operation**

Wiper operates one time. The wiper operates continuously if the lever is held in this position and returns to the OFF position after releasing it.

If the switch is turned OFF during operation, the parking function returns it to the parking position and stops operation.

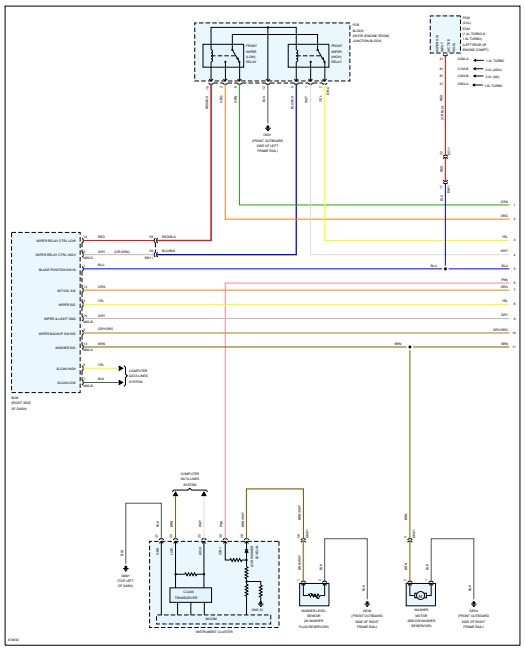
Wiper & Washer System - Schematic Diagrams (Article 42585)

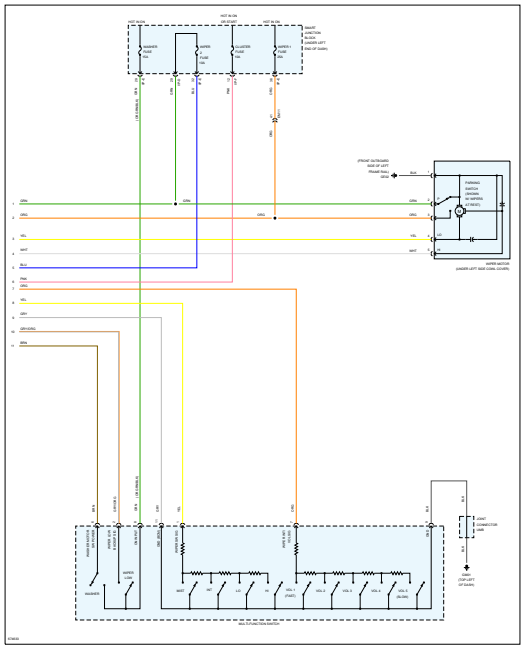




Wiper/Washer (Article 10916)

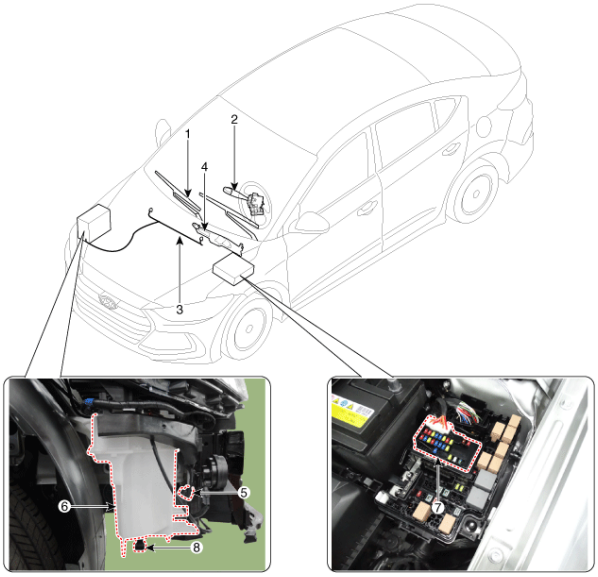
Wiper /Washer





Windshield Wiper/Washer - Components and Components Location (Article 44621)

- Component Location



1. Windshield wiper arm & blade 2. Wiper & washer switch 3. Windshield washer hose & nolzzle 4. Washer motor & linkage assembly 5. Washer motor 6. Washer reservoir 7. Wiper/Washer relay (Built - in PCB block) 8. Washer fluid level sensor

All Technical Service Bulletins (itype_100)

Tsbs

- WINDSHIELD WIPER BLADE SERVICE GUIDE (23-BD-008H, 2023/05/15)
- PROPER REMOVAL OF WINDSHIELD WIPER BLADE PROTECTIVE COVER (24-BD-001H, 2024/02/15)

Wiper & Washer System - Service Tips (Article 42587)

Wiper & Washer System **Service Tips (1)**

Circuit Description

Front Wiper & Washer System is powered by IG2. And followed description is function of the Wiper & Washer System.

■ Low and High Positions

When the wiper switch is placed in the Low/High position or is turned off during wiper operation, the IG2 (On) power operates the motor through the following paths:

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   Wiper switch (No. 8 & 2), (5700 Ω) → BCM (BCM receives signal from switch, BCM controls Wiper (Low, High) Relay : output control) → Wiper (Low) Relay (Switch : ON) → Wiper (High) Relay (Switch : ON) → Wiper Motor High (No. 5 & 1) → Ground
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   Parking switch on the Wiper motor (Switch : ON) ON → Wiper (Low) Relay (Switch : OFF) → Wiper (High) Relay (Switch : OFF) → Wiper Motor Low (No. 4 & 1) → Ground → Wiper in normal position → Parking switch OFF

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[VIEW 1]

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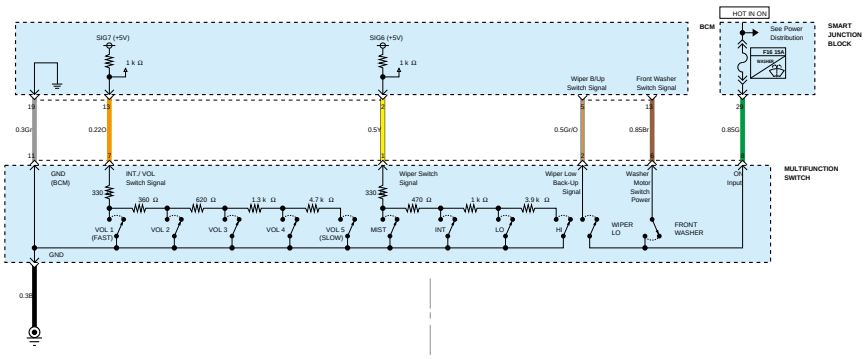
	HIGH		5700
Wiper intermittent volume	Volume 1	7-9	330
	Volume 2		690
	Volume 3		1310
	Volume 4		2610
	Volume 5		7310

Wiper & Washer System **Service Tips (2)**

[VIEW 2]



■ Mist Wiper Operation

Wiper operates one time. The wiper operates continuously if the lever is held in this position and returns to the OFF position after releasing it.

If the switch is turned OFF during operation, the parking function returns it to the parking position and stops operation.

OEM Policies and Procedures (itype_120)

Tsbs

- PROPER REMOVAL OF WINDSHIELD WIPER BLADE PROTECTIVE COVER (24-BD-001H, 2024/02/15)