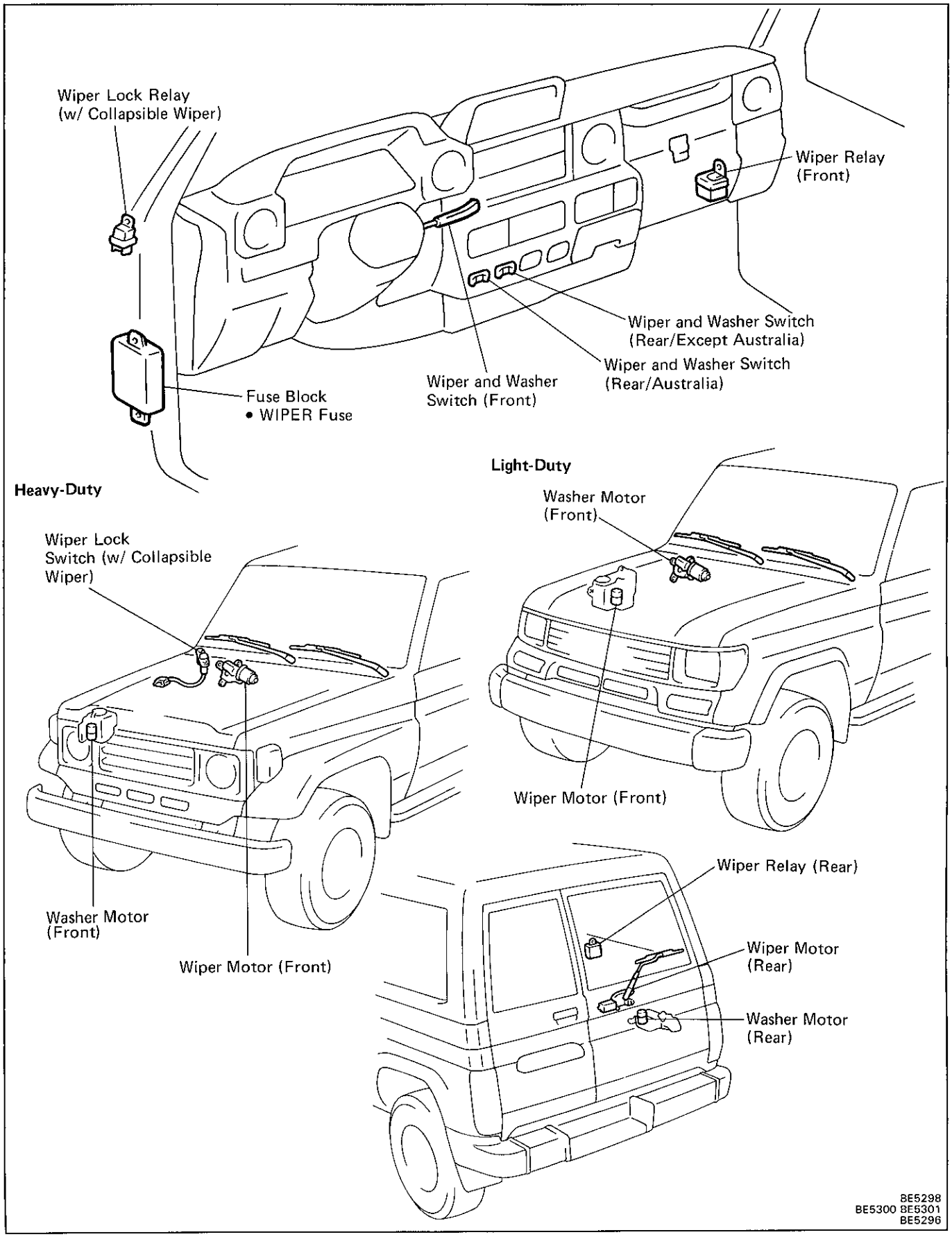
WIPER AND WASHER SYSTEM

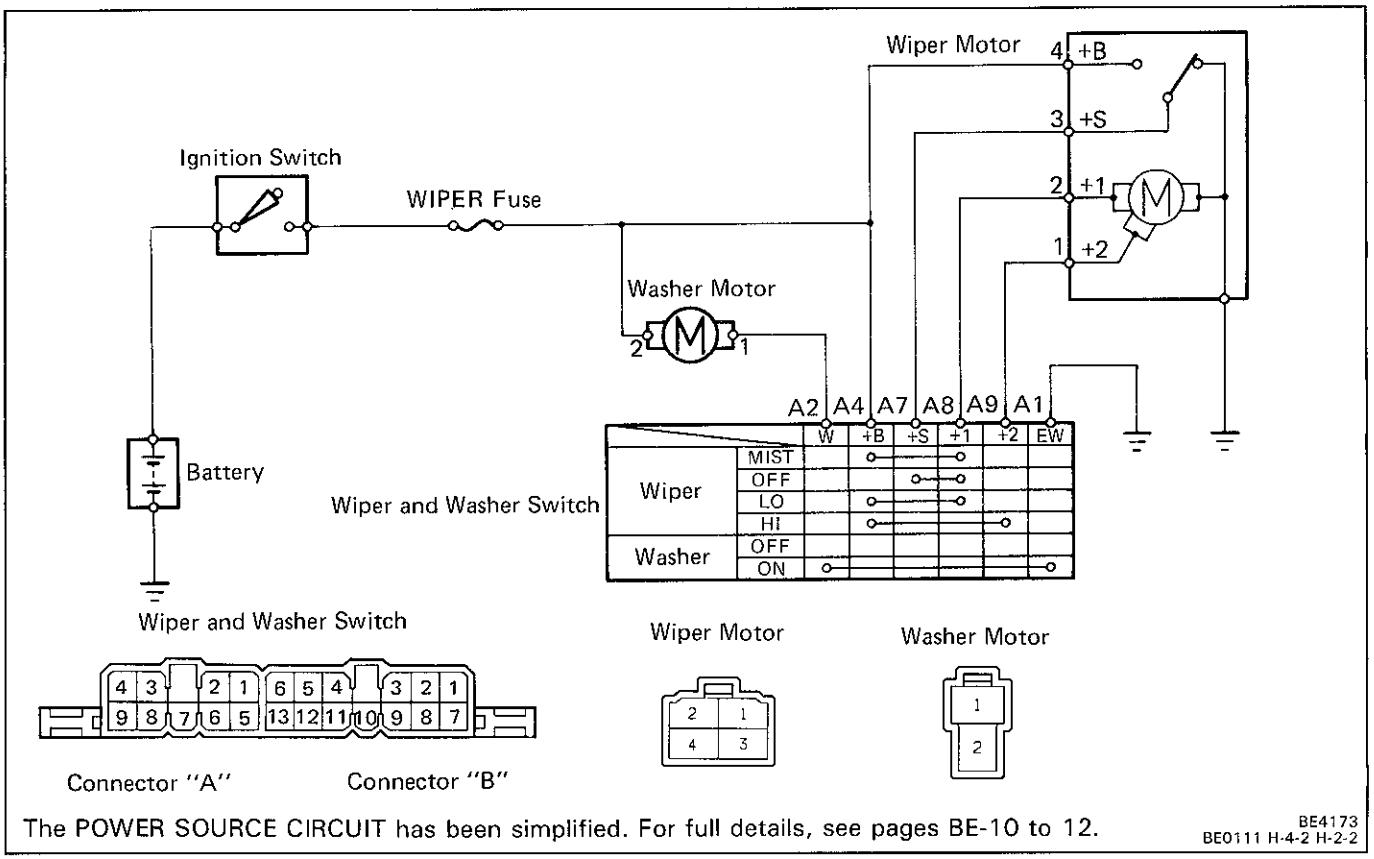
Parts Location



8E5298
BE5300 8E5301
BE5296

Wiring and Connector Diagrams

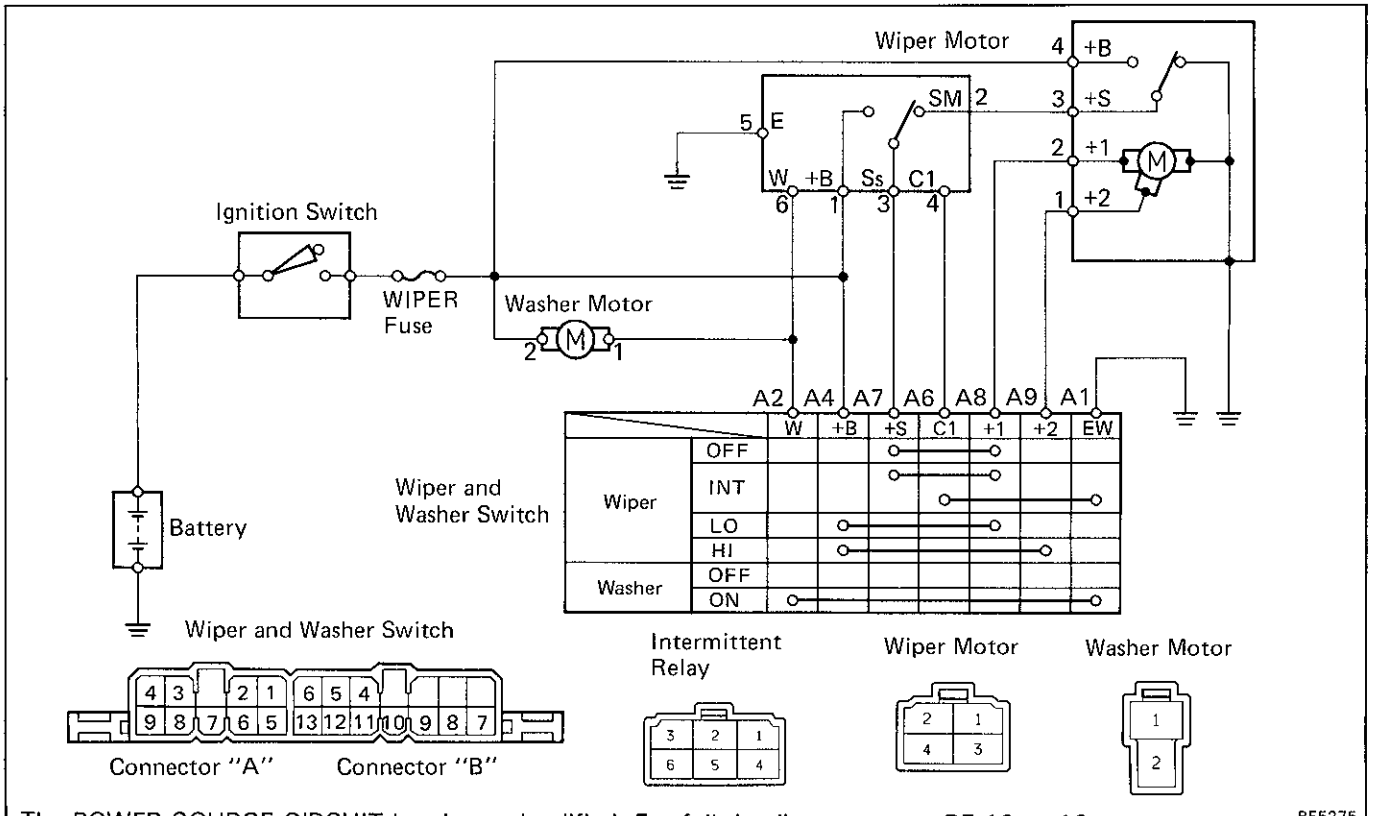
(Front: Mist Type)



The POWER SOURCE CIRCUIT has been simplified. For full details, see pages BE-10 to 12.

BE4173
BE0111 H-4-2 H-2-2

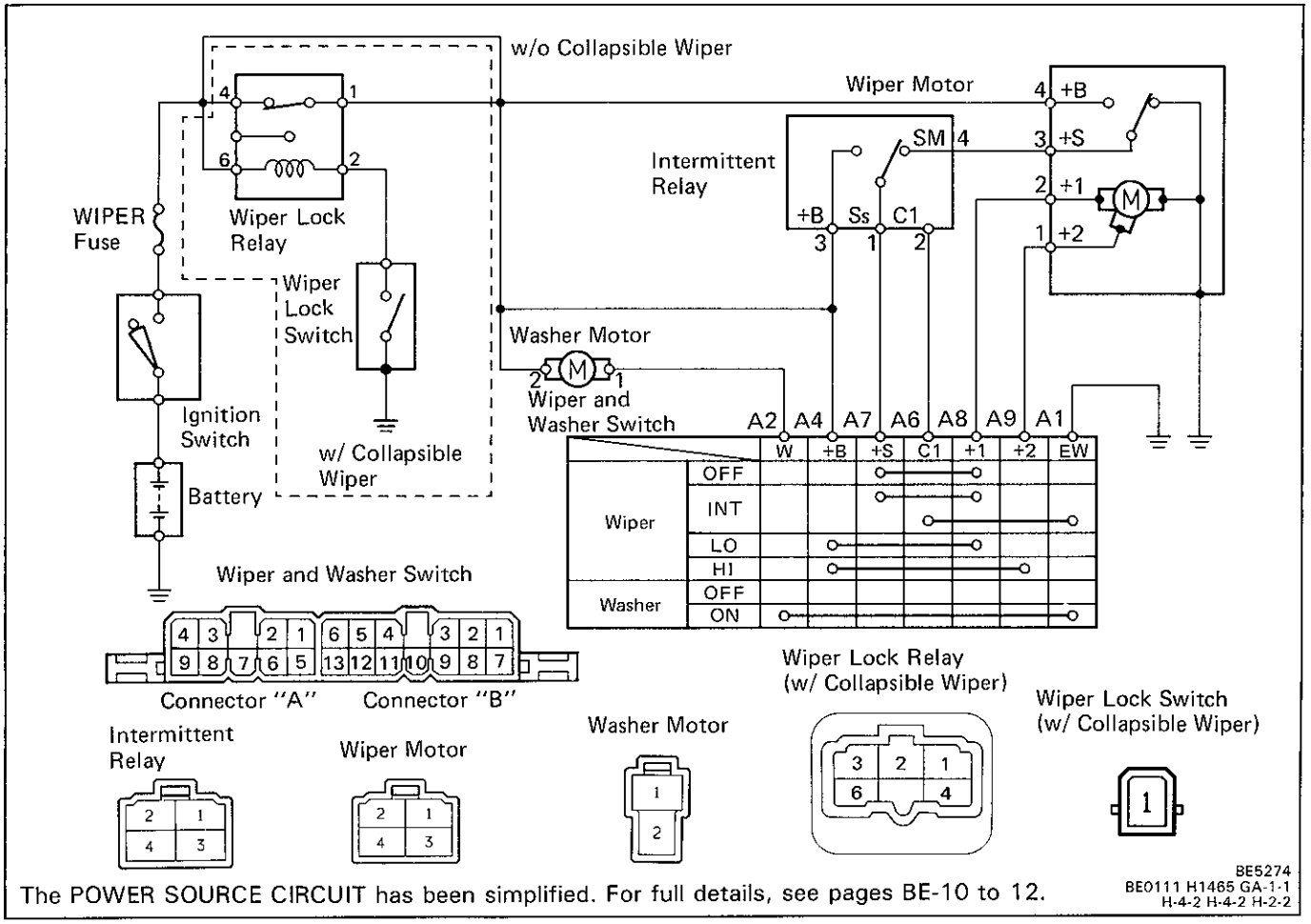
(Front: Intermittent Type w/ Washer Linked)



The POWER SOURCE CIRCUIT has been simplified. For full details, see pages BE-10 to 12.

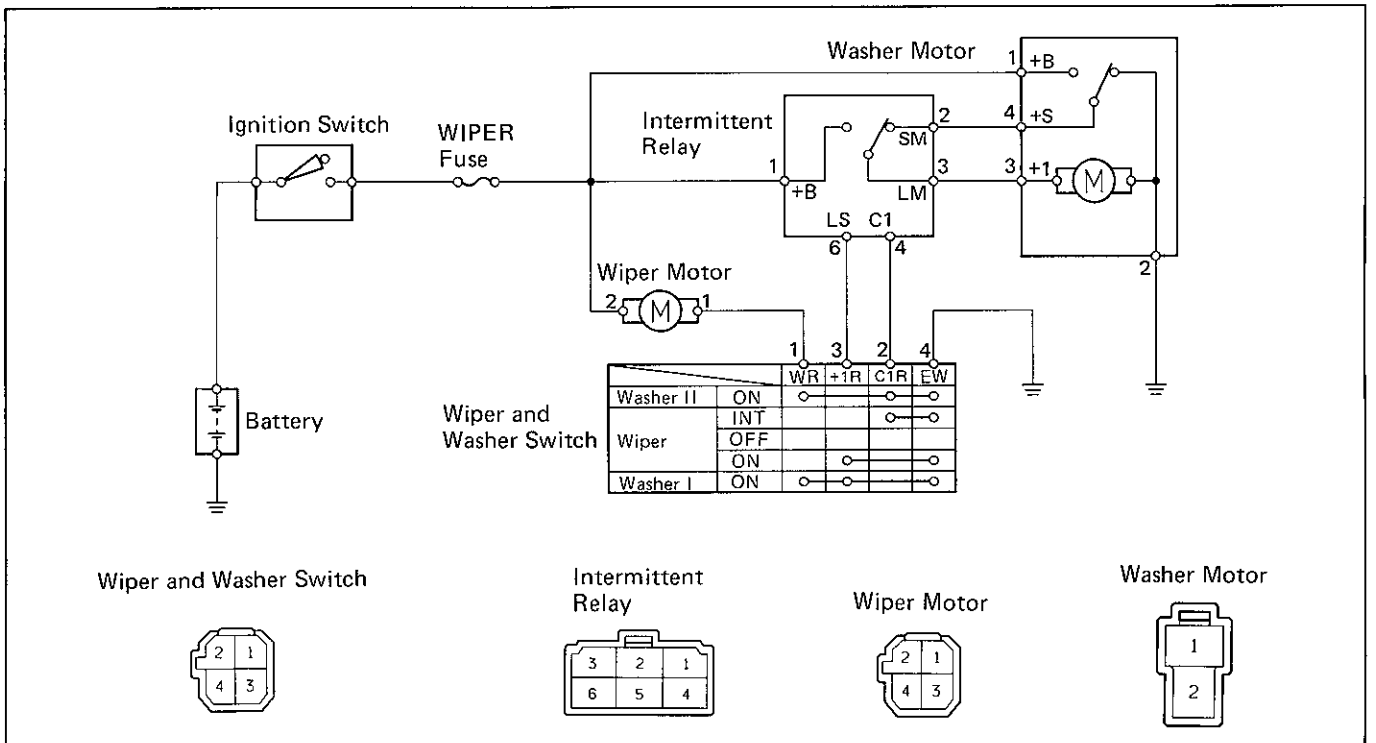
BE5275
BE0111 H-6-2 H-4-2 H-2-2

(Front: Intermittent w/o Washer Linked)



The POWER SOURCE CIRCUIT has been simplified. For full details, see pages BE-10 to 12.

(Rear)



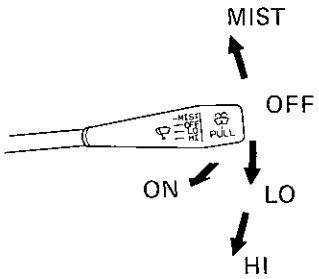
The POWER SOURCE CIRCUIT has been simplified. For full details, see pages BE-10 to 12.

Troubleshooting

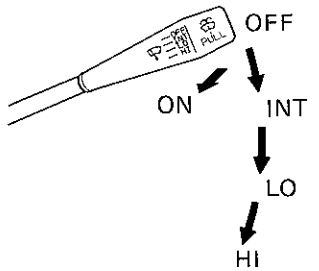
Problem	Possible cause	Remedy	Page	
			Front	Rear
Wiper do not operate or return to off position	WIPER fuse blown	Replace fuse and check for short	BE-4	BE-4
	Wiper motor faulty	Check motor	BE-45	BE-45
	Wiper switch faulty	Check switch	BE-41	BE-42
	Wiring or ground faulty	Repair as necessary		
Wiper do not operate in Mist position	Wiper switch faulty	Check switch	BE-41	BE-42
	Wiper motor faulty	Check motor	BE-45	BE-45
	Wiring or ground faulty	Repair as necessary		—
Wiper do not operate in Intermittent (INT) position	Wiper relay faulty	Check relay	BE-42	BE-44
	Wiper switch faulty	Check switch	BE-41	BE-42
	Wiper motor faulty	Check motor	BE-45	BE-45
	Wiring or ground faulty	Repair as necessary		
Washer do not operate	Washer hose or nozzle clogged	Repair as necessary		
	Washer motor faulty	Check motor	BE-46	BE-46
	Washer switch faulty	Check switch	BE-41	BE-42
	Wiring or ground faulty	Repair as necessary		

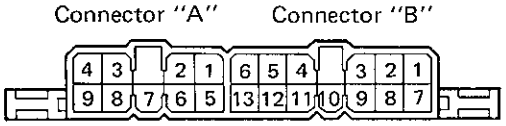
Reference: LHD Vehicles

w/ Mist Wiper



w/ Intermittent Wiper





Reference: For RHD vehicles, the switches are always symmetrically opposite to those of LHD vehicles.

BE5276
BE5277
BE0111

Parts Replacement

See Parts Replacement of Combination Switch on page BE-25.

Parts Inspection

Wiper System

1. **INSPECT SWITCHES**

(Front Wiper and Washer Switch/Continuity)

w/ Mist Wiper

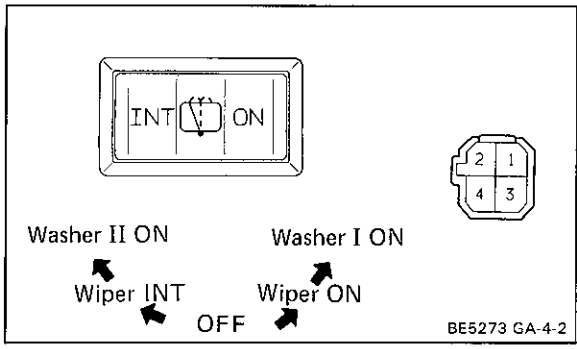
Terminal (Color) / Switch position		A1 (B)	A2 (L)	A4 (L-W)	A7 (L-R)	A8 (L-B)	A9 (L-O)
Wiper	MIST			○		○	
	OFF				○	○	
	LO			○		○	
	HI			○			○
Washer	OFF						
	ON	○	○				

w/ Intermittent Wiper

Terminal (Color) / Switch position		A1 (B)	A2 (L)	A4 (L-W)	A7 (L-R)	A8 (L-B)	A9 (L-O)
Wiper	OFF				○	○	
	INT				○	○	
	LO			○		○	
	HI			○			○
Washer	OFF						
	ON	○	○				

If continuity is not as specified, replace the switch.

(Rear Wiper and Washer Switch/Continuity)

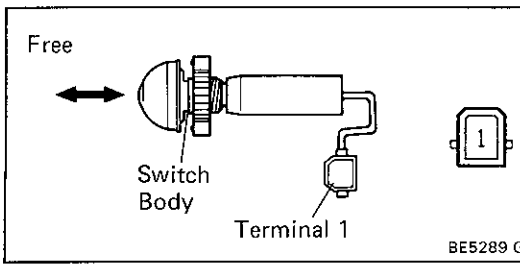


Terminal / Switch position		1	2	3	4
Washer I	ON	○		○	○
Wiper	ON			○	○
	OFF				
	INT		○		○
Washer II	ON	○	○		○

If continuity is not as specified, replace the switch.

(Wiper Lock Switch: w/ Collapsible Wiper)

(Continuity)



Terminal / Switch position	1	Switch body
Free (OFF)		
Push (ON)	○	○

If continuity is not as specified, replace the switch.

2. **INSPECT RELAYS**

(Front Wiper Relay: w/ Washer Linked)

(Continuity)

(a) Check that there is no continuity between terminals 1 and 3.

(b) Check that there is continuity between terminals 2 and 3.

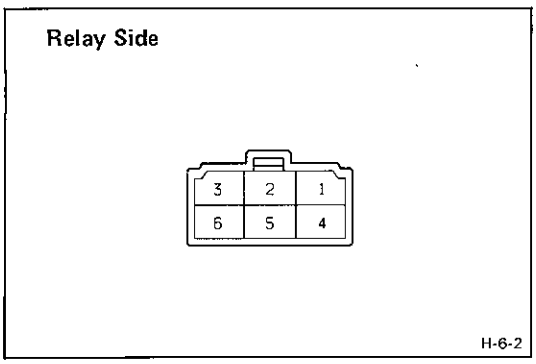
If continuity is not as specified, replace the relay.

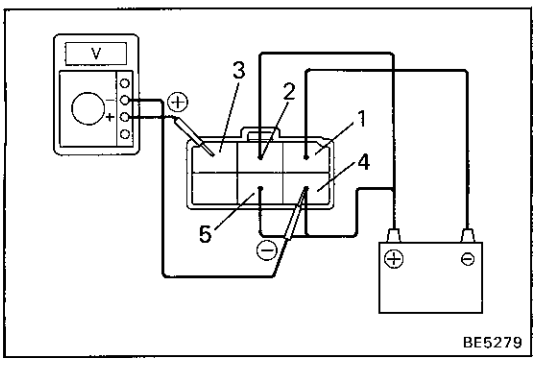
(Operation at Intermittent)

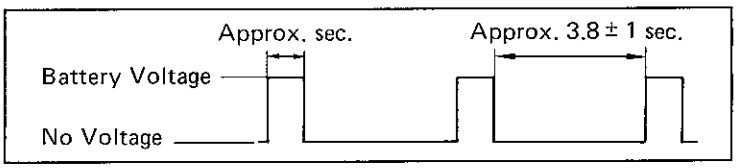
(a) Connect the positive (+) lead from the battery to terminal 1 and the negative (—) lead to terminal 4, 2 and 5.

(b) Connect the positive (+) lead from the voltmeter to terminal 3 and the negative (—) lead to terminal 4.

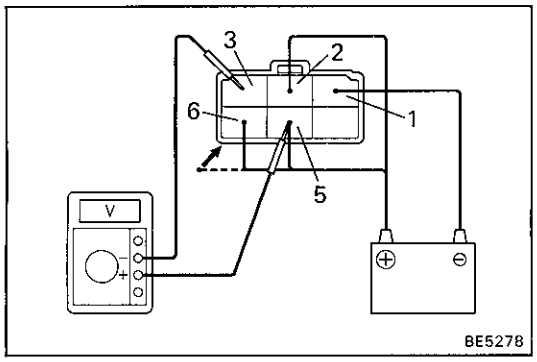
(c) Check that the voltage changes as shown in the table.







If operation is not as specified, replace the switch.

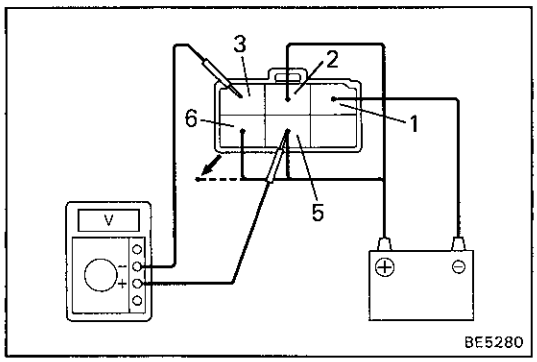


(Operation at Washer Linked)

(a) Connect the positive (+) lead from the battery to terminal 1 and the negative (—) lead to terminal 5 and 2.

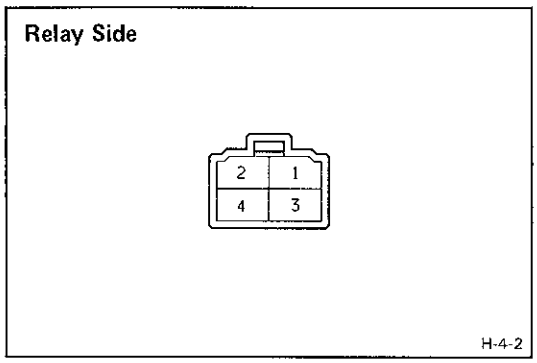
(b) Connect the positive (+) lead from the voltmeter to terminal 3 and the negative (—) lead to terminal 5.

(c) Connect the negative (—) lead from the battery to terminal 6, check that the voltage changes soon to battery voltage from to voltage.



(d) Disconnect the negative (—) lead from terminal 6, check that the voltage changes to no voltage from battery voltage approximately 2.5 seconds later.

If operation is not as specified, replace the relay.



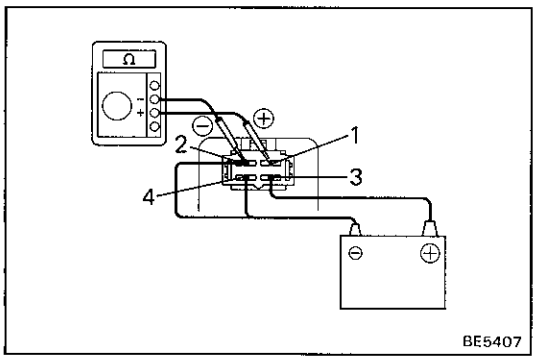
(Front Wiper Relay: w/o Washer Linked)

(Continuity)

(a) Check that there is no continuity between terminals 1 and 3.

(b) Check that there is continuity between terminals 1 and 4.

If continuity is not as specified, replace the relay.

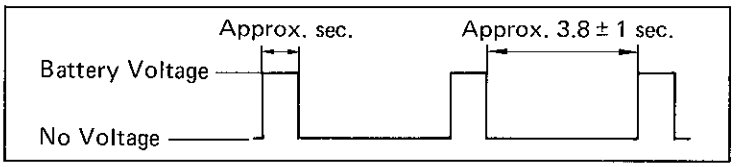


(Operation at Intermittent)

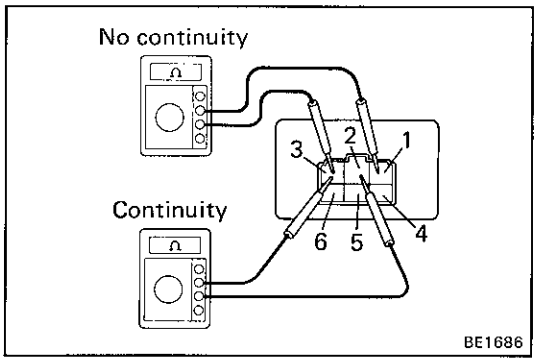
(a) Connect the positive (+) lead from the battery to terminal 3 and the negative (—) lead to terminal 2 and 4.

(b) Connect the positive (+) lead from the voltmeter to terminal 1 and the negative (—) lead to terminal 2.

(c) Check that the voltage changes as shown in the table.



If operation is not as specified, replace the switch.

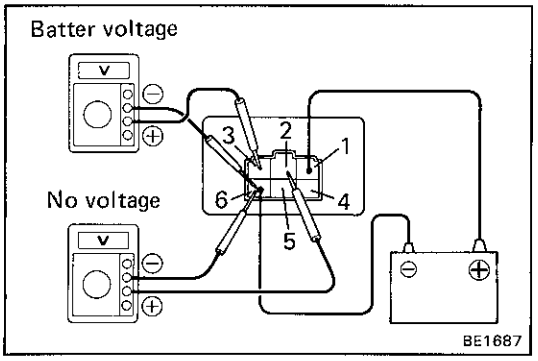


(Rear Wiper Relay)

(Continuity)

(a) Check that there is no continuity between terminals 1 and 3.

(b) Check that there is continuity between terminals 2 and 3.



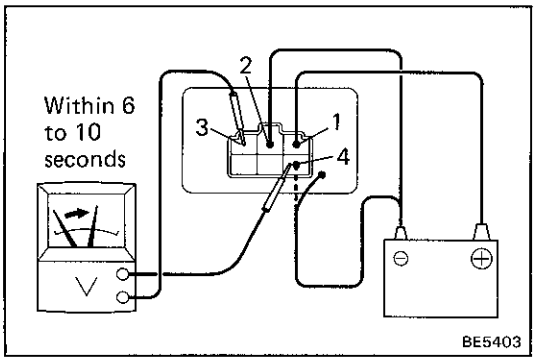
(Operation)

(c) Connect the positive (+) lead from the battery to terminal 1 and the negative (—) lead to terminal 6.

(d) Connect the positive (+) lead from the voltmeter to terminal 2 and the negative (—) lead to terminal 6, check that the meter needle indicates to 0 volts.

(e) Connect the positive (+) lead from the voltmeter to terminal 3 and the negative (—) lead to terminal 6, check that the meter needle indicates to battery boltage.

If operation is not as specified, replace the relay.



(Operation at Intermittent)

(a) Connect the positive (+) lead from the battery to terminal 1 and the negative (—) lead to terminal 2.

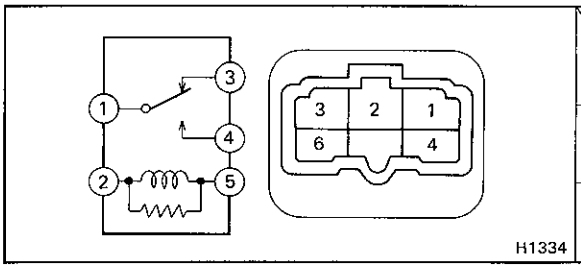
(b) Connect the positive (+) lead from the voltmeter to terminal 3 and the negative (—) lead to terminal 4.

(c) After connecting the negative (—) lead from terminal 4, connect it to terminal 1, and then, check that the meter needle rises from 0 volts to battery voltage within 6 to 10 second.

If operation is not as specified, replace the relay.

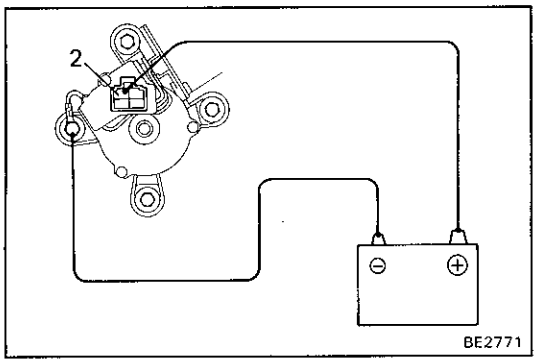
(Wiper Lock Relay: w/ Collapsible Wiper)

(Continuity)



Terminal / Condition	1	2	3	4	6
Constant					
Apply battery voltage to terminal 2 and 6					

If continuity is not as specified, replace the relay.

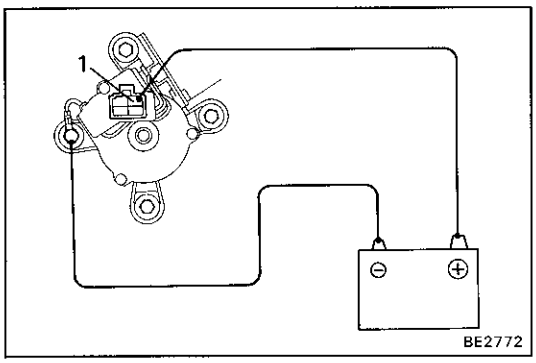


3. **INSPECT MOTOR**

(Front Motor/Operation at Low Speed)

Connect the positive (+) lead from the battery to terminal 2 and the negative (—) lead to the motor body, check that the motor operates as low speed.

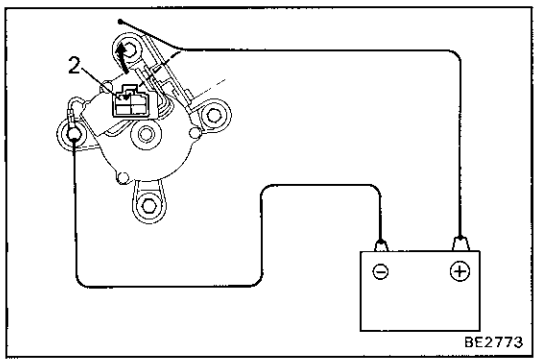
If operation is not as specified, replace the motor.



(Front Motor/Operation at High Speed)

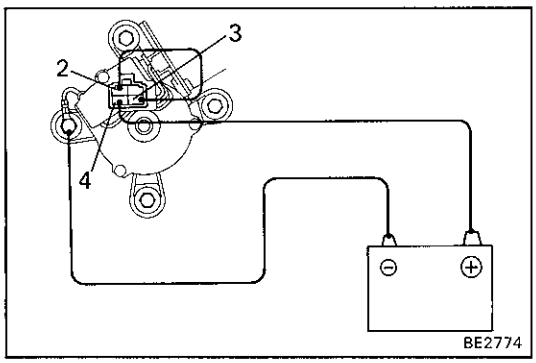
Connect the positive (+) lead from the battery to terminal 1 and the negative (—) lead to the motor body, check that the motor operation at high speed.

If operation is not as specified, replace the motor.



(Front Motor/Operation, Stopping at Stop Position)

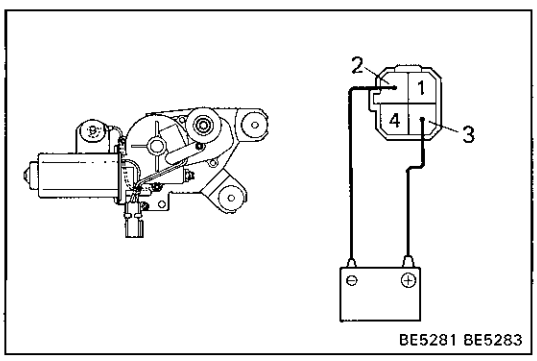
(a) Operate the motor at low speed and stop the motor operation anywhere except at the stop position by disconnecting positive (+) lead from terminal 2.



(b) Connect terminals 2 and 3.

(c) Connect the positive (+) lead from the battery to terminal 4 and the negative (—) lead to the motor body, check that the motor stops running at the stop position after the motor operates again.

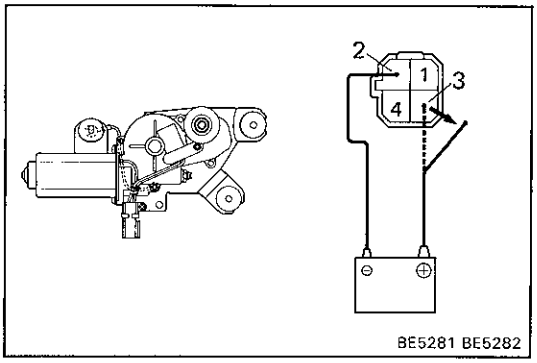
If operation is not as specified, replace the motor.



(Rear Motor/Operation at Low Speed)

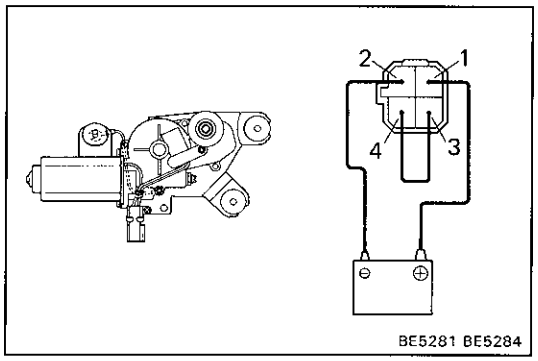
Connect the positive (+) lead from the battery to terminal 3 and the negative (—) lead to terminal 2, check that the motor operates as low speed.

If operation is not at specified, replace the motor.



(Rear Motor/Operation, Stopping at Stop Position)

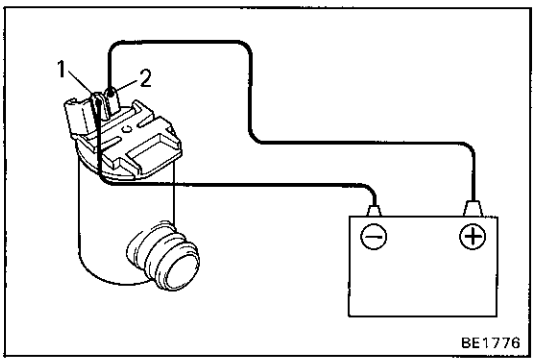
(a) Operate the motor at low speed and stop the motor operation anywhere except at the stop position by disconnecting positive (+) lead from terminal 3.



(b) Connect terminals 3 and 4.

(c) Connect the positive (+) lead from the battery to terminal 1 and the negative (—) lead to terminal 2, check that the motor stops running at the stop position after the motor operates again.

If operation is not as specified, replace the motor.



Washer System

1. INSPECT WASHER SWITCH (Washer Switch)

See Wiper and Washer Switch on page BE-41.

2. INSPECT WASHER MOTOR

Connect the positive (+) lead from the battery to terminal 2 and the negative (—) lead to terminal 1, check that the motor operates.

NOTICE: These tests must be performed quickly (within 20 seconds) to prevent the coil from burning out.

If operation is not as specified, replace the motor.