

WIPER/WASHER SYSTEM

1988 Toyota Celica

1988 ACCESSORIES/SAFETY EQUIPMENT
Toyota Wiper/Washer Systems

Toyota; All Models.

DESCRIPTION & OPERATION

All models are equipped with a 2-speed wiper motor. An optional intermittent wiper system is also available. Front wiper motors are protected by an internal circuit breaker.

TESTING

FRONT WIPER MOTOR

Tercel

1) Connect battery positive lead to terminal No. 2. Connect negative lead to motor body. Motor should operate at low speed.

2) Connect battery positive lead to terminal No. 1. Connect negative lead to motor body. Ensure motor operates at high speed.

3) To check automatic park operation, connect battery positive lead to terminal No. 2. Connect negative lead to motor body. Operate motor at low speed. Disconnect terminal No. 2 and stop motor operation anywhere except "stop" position.

4) Connect a jumper wire between terminals No. 2 and 3. Connect battery positive lead to terminal No. 4. After motor operates, ensure motor stops running at "stop" position.

All Other Models

1) Connect lead from negative battery terminal to wiper motor body. Connect lead from battery positive terminal to terminal No. 2. Motor should operate at low speed. Disconnect positive lead.

2) Connect positive lead to terminal No. 1. Motor should operate at high speed. If operation is not as specified, replace wiper motor.

3) Ensure motor stops at correct position. Run motor at low speed. Stop motor at any position except "stop" position by disconnecting positive and negative leads.

4) Connect positive lead from battery to terminal No. 4. Connect negative lead to motor body. Install jumper wire between terminals No. 2 and 3. Motor should stop running at same position after motor operates again. Replace motor as necessary.



TERCEL
WAGON



ALL OTHERS

Courtesy of Toyota Motor Sales, U. S. A., Inc

Fig. 1: Front Wiper Motor Terminal Identification
Courtesy of Toyota Motor Sales, U.S.A., Inc.

REAR WIPER SWITCH

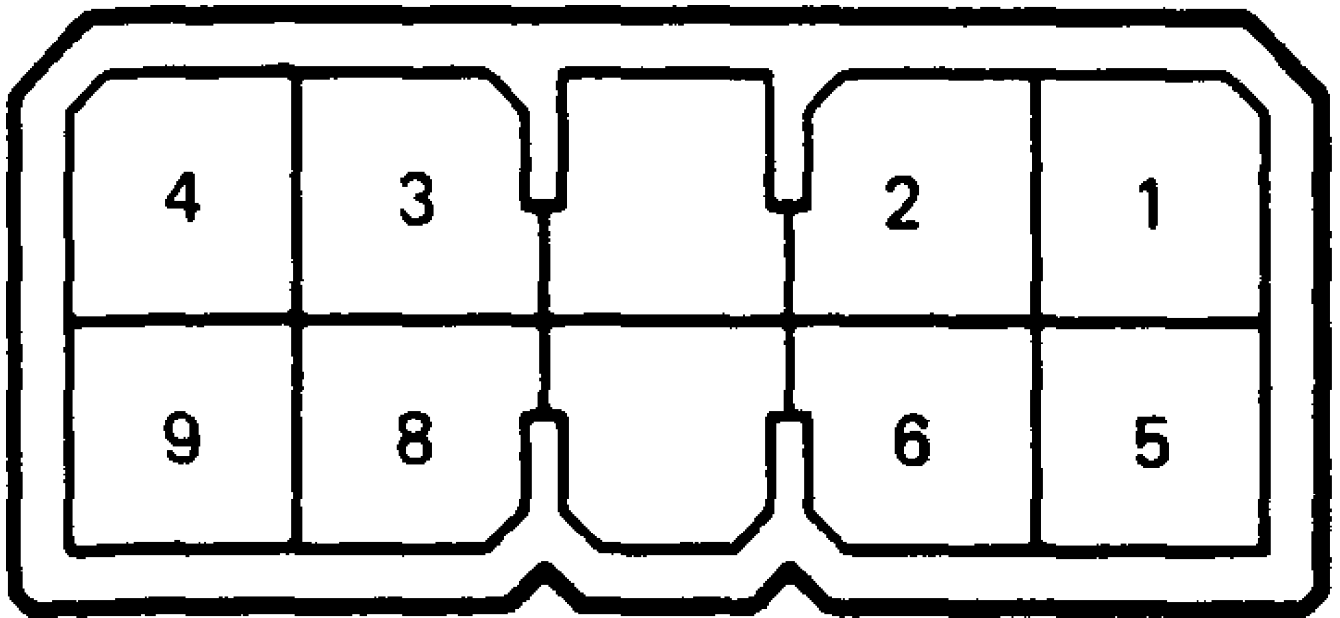
4Runner

Inspect continuity between terminals for each switch position shown in REAR WIPER SWITCH TABLE below. If continuity is not as specified, replace switch or bulb and retest.

REAR WIPER SWITCH TABLE

Switch Position	Continuity Between Terminals
OFF	(1) 1 & 2 3 & 5 6 & 9
ON	(1) 1 & 2 8 & 9
WASHER	(1) 1 & 2 4, 8 & 9

(1) - For illumination light.



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Fig. 2: Rear Wiper Switch Terminal Locations
Courtesy of Toyota Motor Sales, U.S.A., Inc.

REAR WIPER MOTOR

Camry & Supra

1) Connect battery positive lead to terminal No. 1 and negative leads to terminal No. 3 and motor body. Motor should operate normally.

2) To check motor intermittent operation, connect positive lead from battery to terminal No. 1 and negative leads to terminal No. 2 and motor body. Motor should operate intermittently for 9-15 seconds. If motor does not operate as specified, relay should be replaced.

3) To check motor automatic stop, start motor by connecting battery positive lead to terminal No. 1 and negative leads to terminal No. 3 and motor body. Stop motor operation anywhere except

"stop" position by disconnecting terminal No. 1.

4) Connect positive lead from battery to terminal No. 1 and negative lead to motor body. After motor operates, ensure motor stops running at "stop" position. If motor does not operate as specified, replacement is necessary.

Celica

1) Ensure motor operates after connecting positive battery lead to terminal No. 1 and negative leads to terminal No. 3 and motor body. To check intermittent operation of relay, connect positive battery lead to terminal No. 1 and negative battery leads to terminal No. 2 and motor body. Motor should operate intermittently for 10-15 seconds.

2) To check automatic park operation, start motor by connecting positive battery lead to terminal No. 1 and negative lead to terminal No. 3 and motor body. Stop motor operation anywhere except "stop" position by disconnecting terminal No. 1.

3) Connect positive battery lead to terminal No. 1. Connect negative battery lead to motor body. After motor operates, ensure motor stops running at "stop" position.

Corolla, Cressida, Supra & Van

1) Ensure rear wiper switch is in "OFF" position. Disconnect wiring connector from wiper motor. Connect negative lead from battery to wiper motor body.

2) Connect positive lead from battery to terminal No. 3. Motor should operate.

3) Check automatic park operation by connecting positive lead from battery to terminal No. 3. Connect negative lead to motor body. Motor should operate. Stop motor operation anywhere except "stop" position by disconnecting terminal No. 3.

4) Install a jumper wire between terminals No. 3 and 4. Connect positive lead from battery to terminal No. 2. Ensure motor stops running at "stop" position.

Land Cruiser & Tercel Sedan

1) Connect battery positive lead to terminal No. 3. Connect negative lead to motor body. Ensure motor operates.

2) To check automatic park operation, connect battery positive lead to terminal No. 3. Connect negative lead to motor body and operate motor. Disconnect terminal No. 3 and stop motor operation anywhere except "stop" position.

3) Using a jumper wire, connect terminals No. 3 and 4. Connect battery positive voltage to terminal No. 1 and negative voltage to motor body. After motor operates, ensure motor stops running at "stop" position. If motor fails to operate as specified, replacement is necessary.

Tercel Wagon

1) Connect positive battery lead to terminal No. 2. Connect negative lead to motor body. Ensure motor operates.

2) To check automatic park operation, connect battery positive voltage to terminal No. 2. Connect negative battery voltage to motor body. Ensure motor operates. Disconnect terminal No. 2 and stop motor operation anywhere except "stop" position.

3) Using a jumper wire, connect terminals No. 2 and 3. Connect battery positive lead to terminal No. 1. After motor operates, ensure motor stops running at "stop" position. If motor does not operate as specified, replacement is necessary.

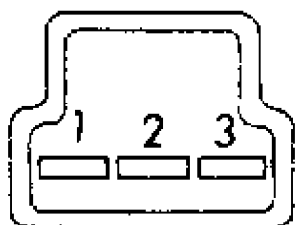
4Runner

1) Disconnect wiring connector from wiper motor. Connect positive lead from battery to terminal No. 6. Connect negative lead to

terminal No. 5. Motor should operate.

2) Operate motor as described in step 1). Stop motor operation anywhere except "stop" position by disconnecting battery terminals.

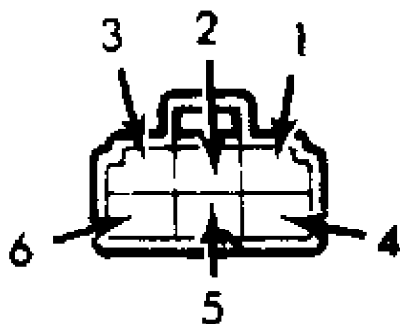
3) Connect positive lead to terminal No. 3. Connect negative lead to terminal No. 5. Run jumper wire between terminals No. 2 and 5. After motor operates again, it should stop running at "stop" position. Replace motor as necessary.



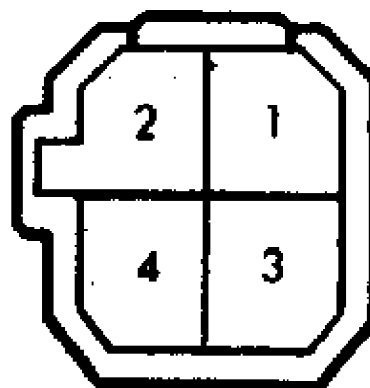
CAMRY



CELICA



4RUNNER



COROLLA, CRESSIDA,
LAND CRUISER, TERCEL & VAN

Courtesy of Toyota Motor Sales, U. S. A., Inc.

Fig. 3: Rear Wiper Motor Terminal Identification
Courtesy of Toyota Motor Sales, U.S.A., Inc.

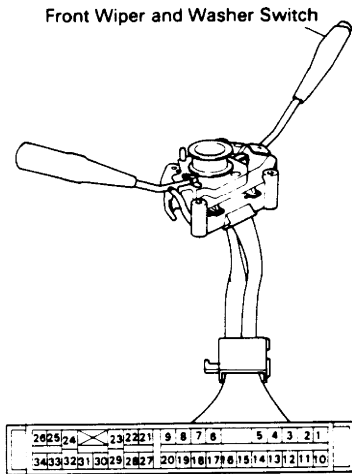
WIPER CONTROL RELAY

If all components are operating as specified but intermittent wipers do not operate properly, replace relay.

WIPER SWITCH TESTING

Camry

Inspect the switch continuity between terminals. See Fig. 4. If continuity is not as specified, replace wiper switch.



Switch	Terminal		18	13	7	4	16	8
	Switch position							
Wiper	OFF	OFF				○		
		MIST	○		○			
	INT	OFF				○		
		MIST	○		○			
	LO	OFF	○		○			
		MIST	○		○			
HI	OFF	○	○					
	MIST	○	○	○				
Washer	OFF							
	ON							○

Fig. 4: Wiper Switch Testing (Camry)
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 Courtesy of Toyota Motor Sales, U.S.A., Inc.

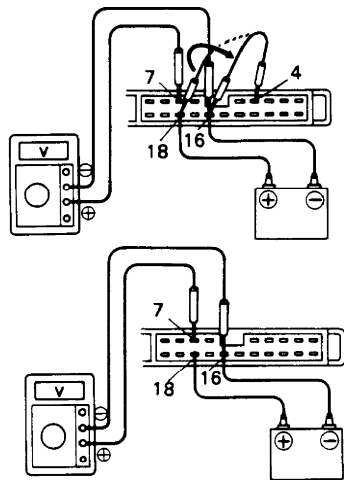
INTERMITTENT WIPER SWITCH

Camry

1) Turn the wiper switch to INT position. Turn the INT switch to FAST position (Variable type). Apply battery voltage to terminal 18 and ground terminal 16.

2) Connect positive (+) lead of voltmeter to terminal 7 and the negative (-) lead to terminal 16. Voltmeter should indicate battery voltage.

3) Connect terminal 4 to terminal 18, then connect it to terminal 16. next, check that the voltage rises from 0 volts to battery voltage as specified in Fig. 5. If operation is not within specification, replace the washer and wiper switch.



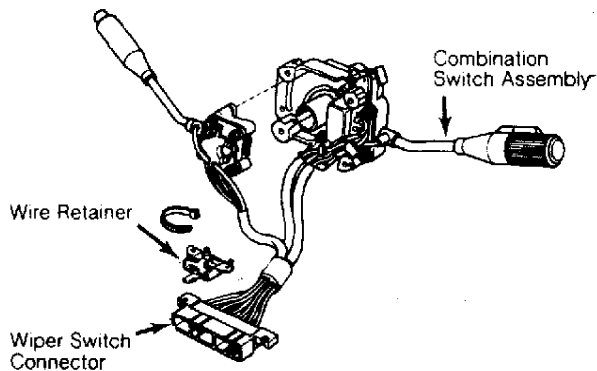
INT time control switch position	Voltage
FAST	<p>Approx. 3 sec.</p> <p>Battery voltage 0 volt</p>
SLOW	<p>12 ± 5 sec.</p> <p>Battery voltage 0 volt</p>
Non variable type	<p>4.1 ± 1 sec.</p> <p>Battery voltage 0 volt</p>

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 Fig. 5: Intermittent Wiper Switch Testing (Camry)
 Courtesy of Toyota Motor Sales, U.S.A., Inc.

REMOVAL & INSTALLATION

WIPER SWITCH

1) Disconnect battery ground. Remove trim panel under steering column. Remove column covers. If necessary, remove horn button and pull off steering wheel.



Courtesy of Toyota Motor Sales, U.S.A., Inc

Fig. 6: View of Toyota Combination Switch
 Courtesy of Toyota Motor Sales, U.S.A., Inc.

2) Note position of all wiper/washer switch wires in harness connector. Press in locking tabs on connector wires and remove wires

from harness connector. Remove mounting screws and wiper/washer switch. To install, reverse removal procedure.

WIRING DIAGRAMS

NOTE: For wiring diagrams, see chassis wiring in WIRING DIAGRAMS section.