

STEERING COLUMN SWITCHES

Article Text

1993 Mazda 929

For Techdoc Ltd.

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Thursday, March 25, 1999 12:11AM

ARTICLE BEGINNING

1993 ACCESSORIES/SAFETY EQUIPMENT

Mazda Steering Column Switches

929

WARNING: 929 is equipped with Supplemental Inflatable Restraint (SIR) system. To prevent air bag deployment, use extreme caution while servicing steering column. Ensure battery is disconnected before attempting any repair. DO NOT apply electrical power to any component on steering column without first disabling air bag. See DISABLING & ACTIVATING AIR BAG SYSTEM.

DESCRIPTION

Switches covered in this article include combination switch, ignition switch and hazard switch. Hazard switch is not part of combination switch but is covered in this article.

Combination switch includes turn signal switch, headlight switch and windshield wiper/washer switch. Ignition switch and lock cylinder are mounted on steering column.

DISABLING & ACTIVATING AIR BAG SYSTEM

WARNING: After disabling air bag system, wait at least 10 minutes before servicing system. Voltage is maintained for about 10 minutes after system is disabled. Failure to wait may cause accidental air bag deployment and possible personal injury.

Disabling System

Obtain radio code number from customer, and deactivate audio anti-theft function. Turn ignition off. Disconnect and shield negative battery cable. Disconnect diagnostic module connectors. Connect Short Circuit Connectors (49-H066-004) to diagnostic module harness connectors.

TESTING

WARNING: Before servicing steering column, see DISABLING & ACTIVATING AIR BAG SYSTEM.

COMBINATION SWITCH

Remove steering column covers. Remove combination switch (if necessary). See COMBINATION SWITCH under REMOVAL & INSTALLATION. Check continuity between specified terminals of combination switch connector. See Fig. 1. Replace switch if continuity is not as specified.

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HAZARD SWITCH

Remove hazard switch from instrument cluster cover. Check continuity between specified terminals of hazard switch connector. See Fig. 2. Replace hazard switch if continuity is not as specified.

IGNITION SWITCH

Disconnect negative battery cable. Remove covers from steering column. Disconnect ignition switch connector. Ensure continuity is present as indicated. See Fig. 3. If necessary, replace ignition switch.

TURN SIGNAL SWITCH

Turn signal switch is part of combination switch. See COMBINATION SWITCH under TESTING.

WIPER SWITCH

Front

Wiper switch is part of combination switch. See COMBINATION SWITCH under TESTING.

Rear

See appropriate WIPER/WASHER SYSTEM article in the ACCESSORIES/SAFETY EQUIPMENT section.

REMOVAL & INSTALLATION

WARNING: Before servicing steering column, see DISABLING & ACTIVATING AIR BAG SYSTEM.

STEERING WHEEL & HORN PAD

Removal

1) Set front wheels in straight-ahead position. Disconnect negative battery cable. Disable air bag system. See DISABLING & ACTIVATING AIR BAG SYSTEM. Remove air bag module.

2) Mark steering wheel and shaft for reassembly reference. Remove steering wheel nut or bolt. Remove damper (if equipped). Using appropriate puller, remove steering wheel.

Installation

1) Ensure front wheels are in straight-ahead position. Install steering wheel, ensuring reference marks are aligned. Ensure damper is aligned with holes of steering wheel. Tighten steering wheel bolt or nut to specification. See TORQUE SPECIFICATIONS. To install remaining components, reverse removal procedure.

HAZARD SWITCH

[illegible]

STEERING COLUMN SWITCHES

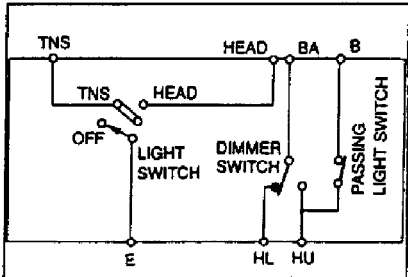
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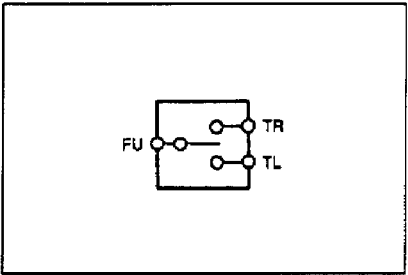


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LIGHT SWITCH

Position	Terminal						
	BA	HL	HU	B	E	TNS	HEAD
OFF							
Parking							
Headlight							
Flash-to-pass							

○-○: Indicates continuity.

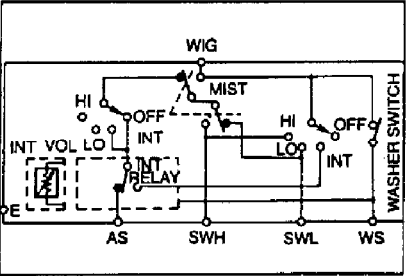


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TURN SIGNAL SWITCH

Switch	Terminal		
	FU	TL	TR
Left			
OFF			
Right			

○-○: Indicates continuity.



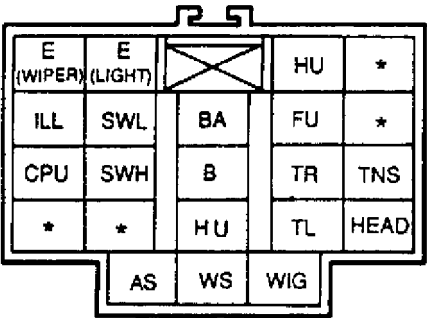
93G02422

WINDSHIELD WIPER & WASHER SWITCH

Position		Terminal				
		AS	SWL	SWH	WIG	WS
Wiper switch	One-touch OFF					
	One-touch ON					
	INT					
	I (Low)					
	II (High)					
Washer switch ON						

○-○: Indicates continuity.

Fig. 1: Testing Combination Switch Continuity
Courtesy of Mazda Motors Corp.



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Fig. 2: Combination Switch Connector Terminal ID
Courtesy of Mazda Motors Corp.

STEERING COLUMN SWITCHES

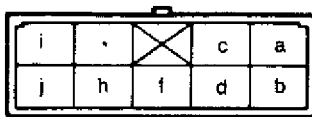
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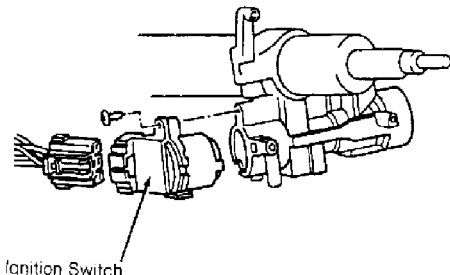
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					<table border="1"> <tr> <th colspan="2" rowspan="2">Switch</th> <th colspan="8">Terminal</th> </tr> <tr> <th>A</th> <th>B</th> <th>C</th> <th>F</th> <th>H</th> <th>I</th> <th>J</th> </tr> <tr> <td rowspan="2">Hazard warning switch</td> <td>OFF</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>ON</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>○—○</td> <td></td> </tr> <tr> <td colspan="2">Illumination</td> <td></td> <td></td> <td></td> <td></td> <td>○—○</td> <td></td> <td></td> </tr> </table>								Switch		Terminal								A	B	C	F	H	I	J	Hazard warning switch	OFF									ON						○—○		Illumination						○—○		
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Illumination						○—○																																																		

○—○ : Indicates continuity.

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Fig. 3: Testing Hazard Switch Continuity
Courtesy of Mazda Motors Corp.

		<table><tr><th colspan="2">Key position</th><th colspan="10">Terminal</th></tr><tr><th colspan="2"></th><th>B1</th><th>B2</th><th>ACC</th><th>IG1</th><th>IG2</th><th>ST</th><th>K1</th><th>K2</th><th>+B</th><th>COIL</th></tr><tr><td rowspan="2">LOCK</td><td>Key in</td><td></td><td></td><td></td><td></td><td></td><td></td><td>○</td><td>○</td><td>○</td><td>○</td></tr><tr><td>Key out</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>○</td><td>○</td></tr><tr><td colspan="2">ACC</td><td>○</td><td></td><td>○</td><td></td><td></td><td></td><td>○</td><td>○</td><td>○</td><td>○</td></tr><tr><td colspan="2">ON</td><td>○</td><td></td><td>○</td><td>○</td><td></td><td></td><td>○</td><td>○</td><td>○</td><td>○</td></tr><tr><td colspan="2">START</td><td>○</td><td></td><td>○</td><td></td><td></td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td></tr></table>										Key position		Terminal												B1	B2	ACC	IG1	IG2	ST	K1	K2	+B	COIL	LOCK	Key in							○	○	○	○	Key out									○	○	ACC		○		○				○	○	○	○	ON		○		○	○			○	○	○	○	START		○		○			○	○	○	○	○
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○-○ : Indicates continuity.

+B	K1
COIL	K2

ST	B1	IG2
ACC	B2	IG1

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Fig. 4: Testing Ignition Switch Continuity
Courtesy of Mazda Motors Corp.

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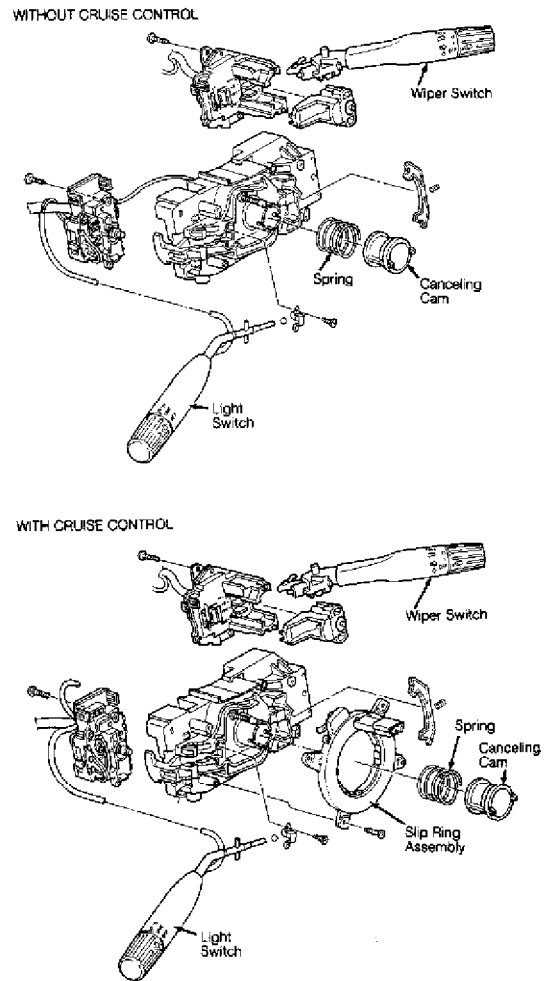


Fig. 5: Removing Combination Switch
Courtesy of Mazda Motors Corp.

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