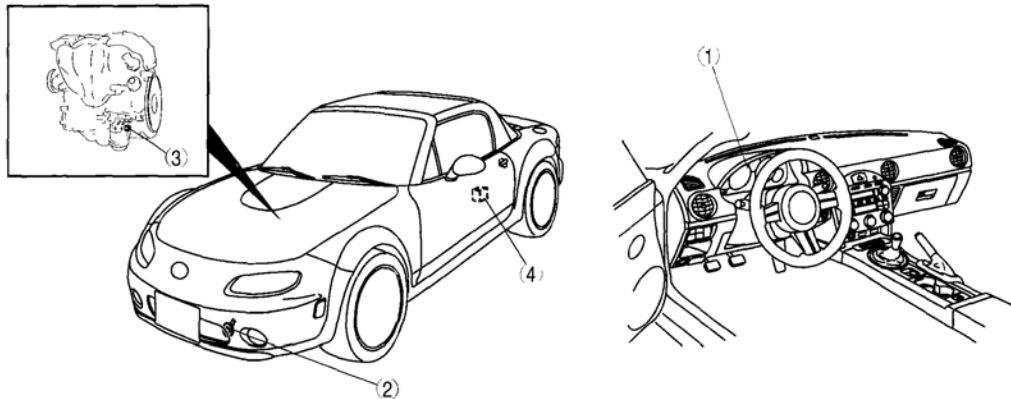


2007 ACCESSORIES & BODY, CAB

Instrumentation-Driver Info - MX-5 Miata

INSTRUMENTATION/DRIVER INFO. LOCATION INDEX



ESU922Z/W3001

1	Instrument cluster
2	Horn
3	Oil pressure switch
4	Fuel gauge sender unit

Fig. 1: Identifying Location Of Instrumentation/Driver Components

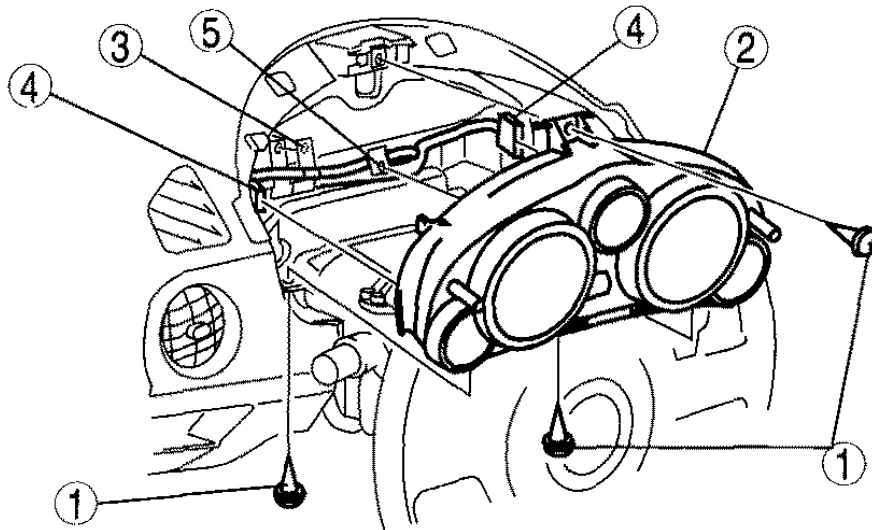
Courtesy of MAZDA MOTORS CORP.

INSTRUMENT CLUSTER REMOVAL/INSTALLATION

CAUTION:

- When replacing the instrument cluster, the configuration procedure must be performed before removing the instrument cluster. Replacing the instrument cluster without performing the configuration procedure will result in system malfunction.

1. Perform the instrument cluster configuration when replacing it. (See **INSTRUMENT CLUSTER CONFIGURATION** .)
2. Disconnect the negative battery cable. (See **BATTERY REMOVAL/INSTALLATION [LF]** .)
3. Remove the meter hood. (See **METER HOOD REMOVAL/INSTALLATION** .)
4. Remove the lower panel. (See **LOWER PANEL REMOVAL/INSTALLATION** .)
5. Remove the column cover. (See **COLUMN COVER REMOVAL/INSTALLATION** .)
6. Remove in the order indicated in **Fig. 2** .



E5U922ZW3002

1	Screw
2	Instrument cluster
3	Clip A
4	Connector
5	Clip B

Fig. 2: Removing/Installing Instrument Cluster
 Courtesy of MAZDA MOTORS CORP.

7. Install in the reverse order of removal.
8. When replacing the instrument cluster of vehicles with the immobilizer system, perform the following procedure:
 - See **IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING[ADVANCED KEYLESS SYSTEM]** and **IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING[KEYLESS ENTRY SYSTEM]**)

CAUTION:

- The removed instrument cluster should be placed with the display side up to prevent grease from leaking from the meters.

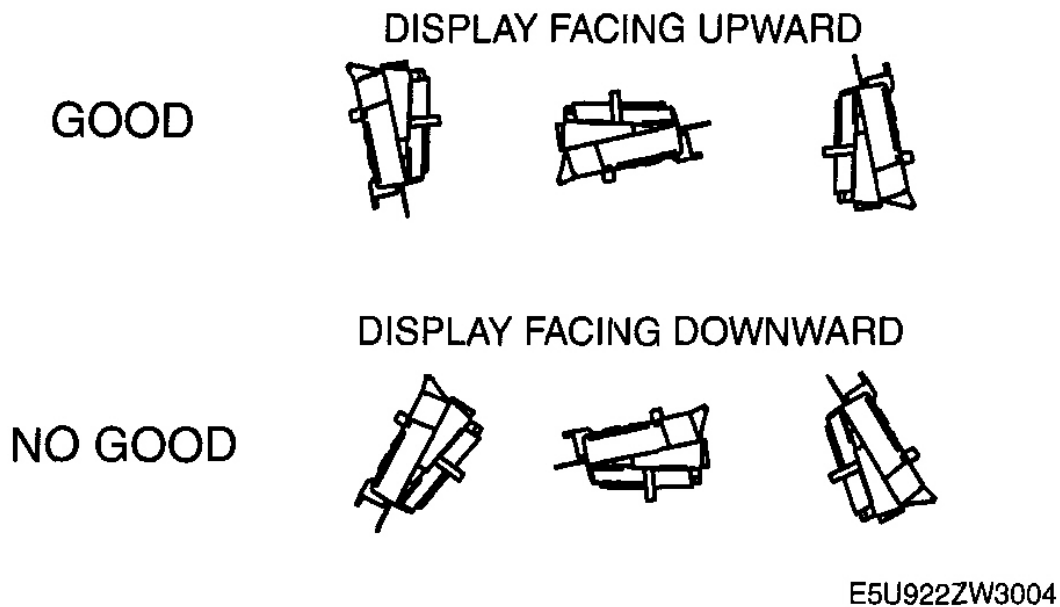
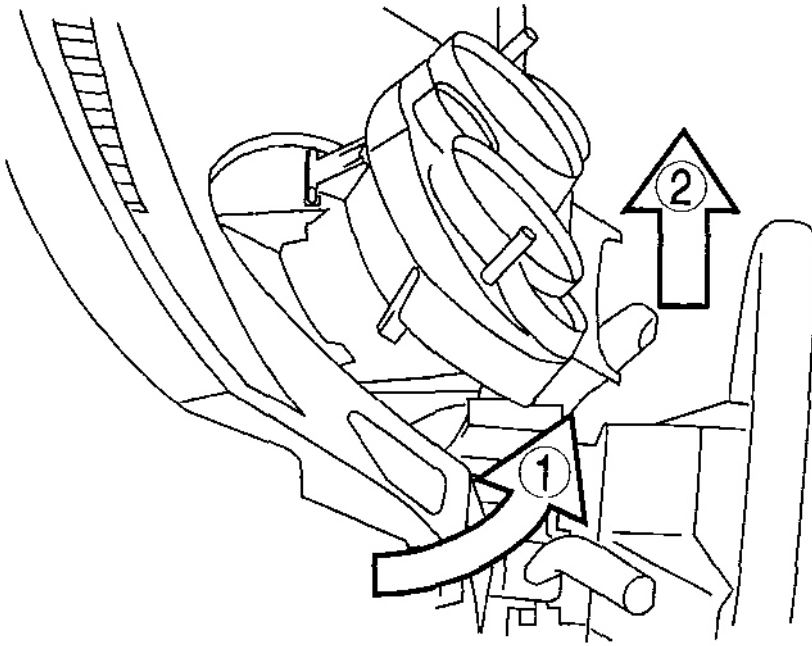


Fig. 3: Position For Placing Instrument Cluster
Courtesy of MAZDA MOTORS CORP.

INSTRUMENT CLUSTER REMOVAL NOTE

1. Rotate the instrument cluster in the direction of the arrow and remove the instrument cluster.

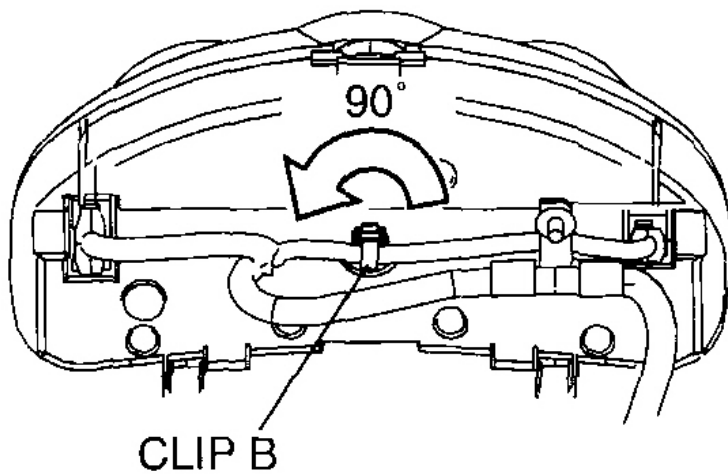


E5U922ZW3003

Fig. 4: Removing Instrument Cluster
Courtesy of MAZDA MOTORS CORP.

CLIP B REMOVAL NOTE

1. Rotate the clip B **90°**, then remove the clip B from the instrument cluster.

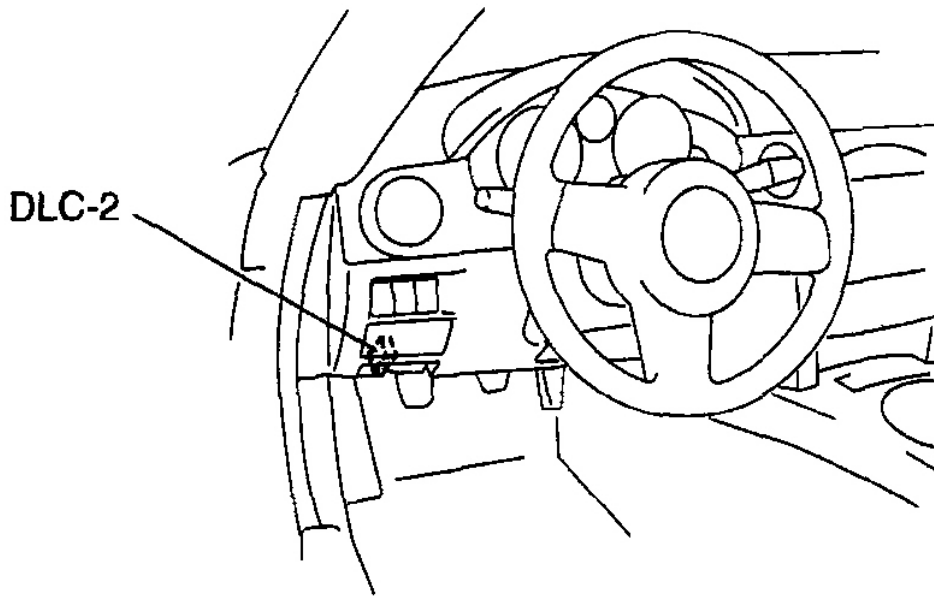


E5U922ZW3009

Fig. 5: Rotating Clip B 90° & Removing Clip B From Instrument Cluster
Courtesy of MAZDA MOTORS CORP.

INSTRUMENT CLUSTER CONFIGURATION

1. Connect the M-MDS to the DLC-2 connector.



E5U102ZW5861

Fig. 6: Locating DLC-2 Connector
Courtesy of MAZDA MOTORS CORP.

2. After the vehicle is identified, select the following items from the initial screen of the M-MDS.
 - When using the IDS (laptop PC)
 1. Select "Module Programming".
 - When using the PDS (Pocket PC)
 1. Select "Programming".
 2. Select "Module Programming".
3. Select "Programmable Module Installation".
4. Select "IC" and perform procedures according to directions on the M-MDS screen.
 - If odometer data is to be transferred to a new instrument cluster, perform the following procedure:
 1. Select "Programmable Parameters" from the menu.
 2. Select "Odometer Write", and perform the procedure following the screen.

NOTE: During the odometer data writing procedure, As-Built Data (VIN and Vehicle Data) input is requested. Obtain the As-Built Sheet for the vehicle, and input the necessary data.

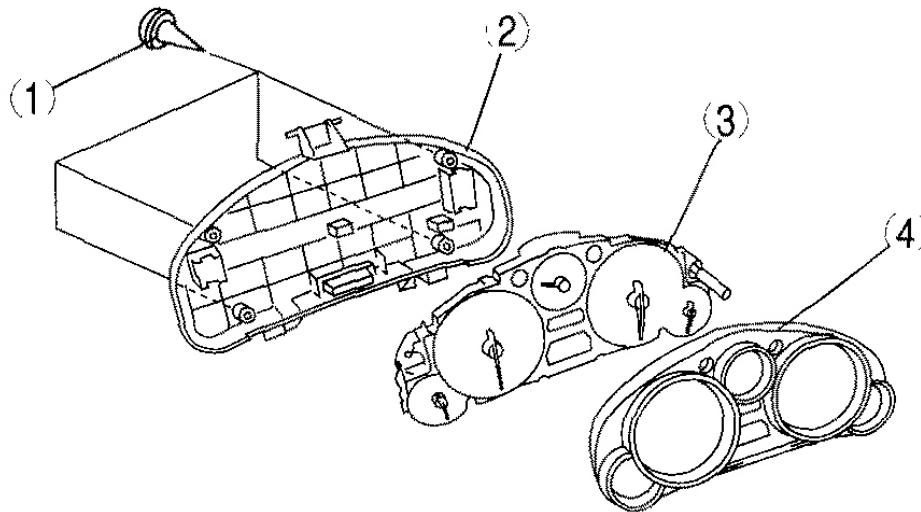
5. Retrieve DTCs using the M-MDS and verify that there is no DTC present.
 - If any DTC is present, perform applicable DTC inspection. See **DTC TABLE [INSTRUMENT**

CLUSTER] .

INSTRUMENT CLUSTER DISASSEMBLY/ASSEMBLY

CAUTION: • Do not drop the instrument cluster or damage the printed board. This will lead to a system malfunction.

1. Disassemble in the order indicated in **Fig. 7** .



E5U922ZW3005

1	Screw
2	Cover
3	Instrument cluster unit
4	Lens

Fig. 7: Exploded View Of Instrument Cluster Components
 Courtesy of MAZDA MOTORS CORP.

2. Assemble in the reverse order of disassembly.

INSTRUMENT CLUSTER INSPECTION

SPEEDOMETER

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Using the Input/Output Check Mode

1. Inspect the speedometer by setting it to check code 12 of the input/output check mode. (See **INSTRUMENT CLUSTER INPUT/OUTPUT CHECK MODE** .)

Using a Speedometer Tester

1. Adjust the tire pressure to the specification.
2. Using a speedometer tester, verify that the tester reading is as indicated in **SPEEDOMETER SPECIFICATION TABLE** .

SPEEDOMETER SPECIFICATION TABLE (KM/H)

Speedometer tester indication (km/h)	Allowable range (km/h)
20	17-23
40	37-42
60	57-63
80	76-83
100	96-103
120	116-123
140	135-143

SPEEDOMETER SPECIFICATION TABLE (MPH)

Speedometer tester indication (mph)	Allowable range (mph)
10	8-12
20	18-22
30	28-32
40	38-42
50	48-52
60	58-62
70	67-73
80	77-83

3. Verify that the speedometer reading is within the range indicated in **SPEEDOMETER SPECIFICATION TABLE** .
 - If the speedometer does not move or the indication is not within the allowable range, inspect the PCM and the related wiring harnesses.
 - If the PCM and the related wiring harnesses are normal, replace the instrument cluster.

TACHOMETER

Using the Input/Output Check Mode

1. Inspect the tachometer by setting it to check code 13 of the input/output check mode. (See

INSTRUMENT CLUSTER INPUT/OUTPUT CHECK MODE .)

Using M-MDS Or External Diagnostic Equipment

CAUTION:

- If the engine speed exceeds the allowable range, the engine could be damaged. Therefore, when inspecting the tachometer, do not allow the engine speed to exceed the allowable range indication on the tachometer.

1. Connect the M-MDS to the DLC-2 connector.
2. After the vehicle is identified, select the following items from the initial screen of the M-MDS.
 - When using the IDS (laptop PC)
 - Select the "Toolbox" tab.
 - Select "DataLogger".
 - Select "Module".
 - Select "IC".
 - When using the PDS (Pocket PC)
 - Select "Module Tests".
 - Select "IC".
 - Select "DataLogger".

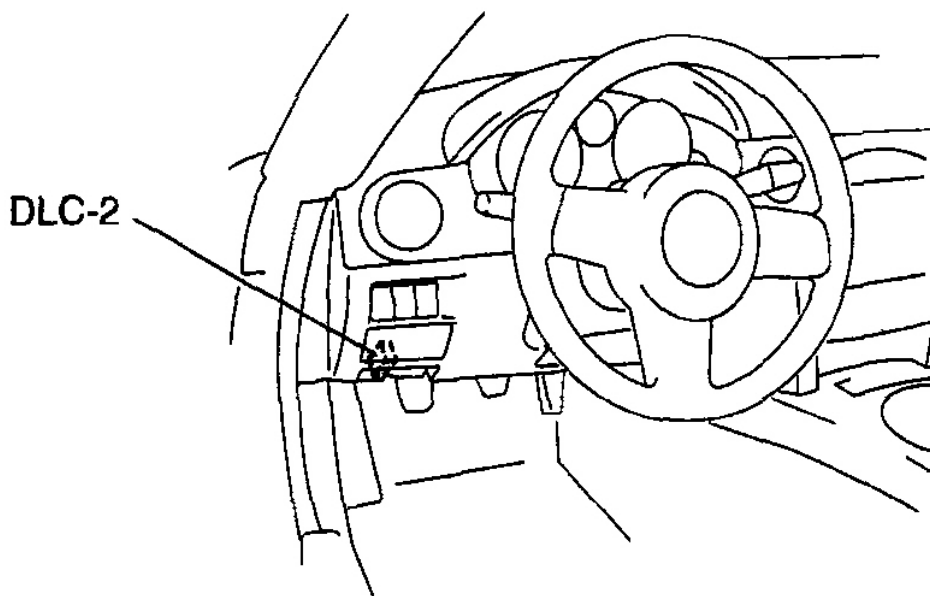


Fig. 8: Locating DLC-2 Connector
 Courtesy of MAZDA MOTORS CORP.

3. Compare the data monitor item (IC_TACHO) with the tachometer indication.
 - If the tachometer does not operate properly, inspect the PCM and the related wiring harnesses.
 - If the PCM and the related harnesses do not have any malfunction, replace the instrument cluster.

FUEL GAUGE

1. Inspect the fuel gauge by setting it to check code 23 of the input/output check mode. (See INSTRUMENT CLUSTER INPUT/OUTPUT CHECK MODE .)

WATER TEMPERATURE GAUGE

1. Inspect the water temperature gauge by setting it to check code 25 of the input/output check mode. (See INSTRUMENT CLUSTER INPUT/OUTPUT CHECK MODE .)

OIL PRESSURE GAUGE

1. Inspect the oil pressure gauge by setting it to check code 28 of the input/output check mode. (See INSTRUMENT CLUSTER INPUT/OUTPUT CHECK MODE .)

INSTRUMENT CLUSTER INPUT/OUTPUT CHECK MODE

NOTE: • In this mode, it is possible to verify the items in INSTRUMENT CLUSTER INPUT/OUTPUT SPECIFICATION TABLE .

CHECK CODE TABLE

INSTRUMENT CLUSTER INPUT/OUTPUT CHECK CODE TABLE

Check code	Check item	Related items
01	SAS control module	Seat belt warning alarm
04	Door switch	<ul style="list-style-type: none"> • Lights-on reminder warning alarm • Key reminder warning alarm
08	TNS relay	<ul style="list-style-type: none"> • Lights-on reminder warning alarm • Each illumination light
12	Speedometer	Speedometer
13	Tachometer	Tachometer
14	Buzzer	Buzzer
16	Fuel-level warning light	Fuel-level warning light
18	Ignition key illumination	Ignition key illumination

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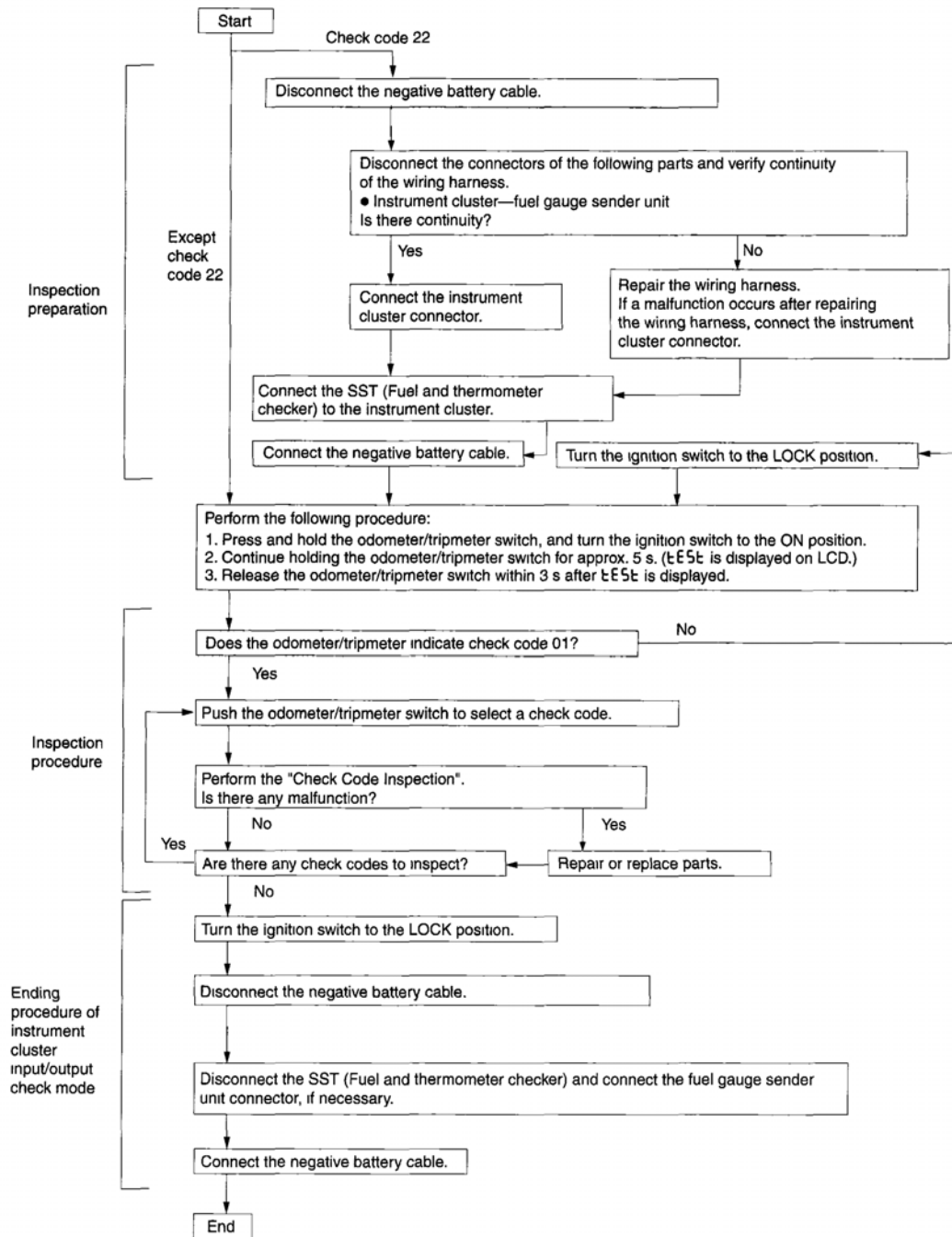
22	Fuel gauge sender unit	Fuel gauge
23	Fuel gauge	Fuel gauge
25	Water temperature gauge	Water temperature gauge
26	<ul style="list-style-type: none">• Odometer/tripmeter (LCD)• Warning and indicator light	<ul style="list-style-type: none">• Odometer/tripmeter (LCD)• Warning and indicator light
28	Oil pressure gauge	Oil pressure gauge
31	Key reminder switch	Key reminder warning alarm
57	Panel light control	Illumination light bulb
59	<ul style="list-style-type: none">• CAN system• Fuel gauge sender unit	<ul style="list-style-type: none">• CAN system• Fuel system

NOTE:

- Check codes which are not listed may be indicated, but they cannot be inspected.
- The check codes are displayed in numerical order. (While performing the inspection, if you want to inspect a check code with a number smaller than the code number you are currently inspecting, terminate the check mode then repeat the inspection from the beginning.)
- If a speed signal is input to the instrument cluster (the wheels are rotated), the input/output check mode will be cancelled.
- The check codes can be fast-forwarded by pushing and holding the odometer/tripmeter switch for 1 s or more.

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E5U922ZW3006

Fig. 9: Identifying Instrument/Driver Check Code Diag. Flow Diagram
Courtesy of MAZDA MOTORS CORP.

Checking Order

NOTE:

- When inspecting more than two check codes, begin with the code with the

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highest ranking.

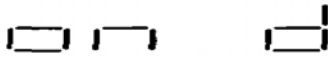
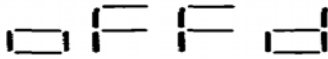
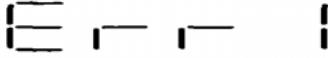
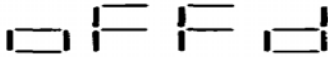

IGNITION SWITCH POSITION SPECIFICATION

Priority order of inspection	Ignition switch position	Check code
1	ON	22
2		01, 04, 08, 12, 13, 14, 16, 18, 23, 25, 26, 28, 57, 59
3	LOCK	31

CHECK CODE INSPECTION


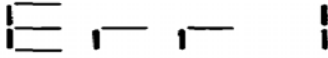
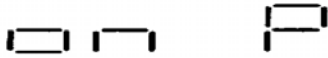
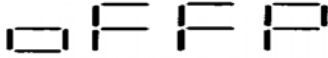
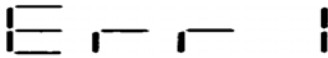
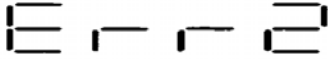
Check Code 01

CHECK CODE 01

Check code 01		Buckle switch and passenger sensing system	
STEP	INSPECTION CONDITION	DISPLAY	ACTION
1	Unfasten driver-side seat belt. (Buckle switch ON)		Go to the next step.
			Inspect the following parts: <ul style="list-style-type: none"> • Buckle switch (driver-side) • SAS control module • Wiring harness (Buckle switch (driver-side) - SAS control module)
			Using the DTC and PID of SAS control module, inspect the SAS control module, buckle switch and the related wiring harnesses. <ul style="list-style-type: none"> • If there is no malfunction, inspect for continuity between SAS control module terminal 1X and instrument cluster terminal 2A (wiring harness-side). <ul style="list-style-type: none"> ○ If there is continuity, replace the instrument cluster.
			Go to the next step.
			Inspect the following parts:

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2	Fasten driver-side seat belt. (Buckle switch OFF)		<ul style="list-style-type: none"> • Buckle switch (driver-side) <ul style="list-style-type: none"> • SAS control module • Wiring harness (Buckle switch (driver-side)-SAS control module)
			<p>Using the DTC and PID of SAS control module, inspect the SAS control module, buckle switch and the related wiring harnesses.</p> <ul style="list-style-type: none"> • If there is no malfunction, inspect for continuity between SAS control module terminal 1X and instrument cluster terminal 2A (wiring harness-side). <ul style="list-style-type: none"> ○ If there is continuity, replace the instrument cluster.
3	Seat one person in the passenger's seat, and unfasten passenger-side seat belt. (Seat weight sensor and buckle switch ON)		Go to the next step.
			<p>Inspect the following parts:</p> <ul style="list-style-type: none"> • Buckle switch (passenger-side) • Seat weight sensor control module <ul style="list-style-type: none"> • Seat weight sensor • SAS control module • Wiring harness (Buckle switch (passenger-side)-SAS control module, seat weight sensor-Seat weight sense control module-SAS control module)
			Using the DTC and PID of SAS control module, inspect the SAS control module, buckle switch (driver-side, passenger-side), seat weight sensor control module, seat weight sensor and related wiring harnesses.
			<ul style="list-style-type: none"> • If there is no malfunction, inspect for the continuity between SAS control module terminal 1X and instrument cluster terminal 2A (wiring harness-side). <ul style="list-style-type: none"> ○ If there is a continuity, replace

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			the instrument cluster.
4	<p>Seat one person in the passenger's seat, and fasten passenger-side seat belt. (Seat weight sensor ON and buckle switch OFF)</p> <p>Seat no person in the passenger's seat, and unfasten passenger-side seat belt. (Seat weight sensor OFF and buckle switch ON)</p> <p>Seat no person in the passenger's seat, and fasten passenger-side seat belt. (Seat weight sensor and buckle switch OFF)</p>		Input signal to the instrument cluster is normal.
			<p>Inspect the following parts:</p> <ul style="list-style-type: none"> • Buckle switch (passenger-side) • Seat weight sensor control module <ul style="list-style-type: none"> • Seat weight sensor • SAS control module • Wiring harness (Buckle switch (passenger-side)-SAS control module, seat weight sensor-Seat weight sense control module-SAS control module)
			Using the DTC and PID of SAS control module, inspect the SAS control module, buckle switch (driver-side, passenger-side), seat weight sensor control module, seat weight sensor and the related wiring harnesses.
			<ul style="list-style-type: none"> • If there is no malfunction, inspect for continuity between SAS control module terminal 1X and instrument cluster terminal 2A (wiring harness-side). <ul style="list-style-type: none"> ○ If there is continuity, replace the instrument cluster.

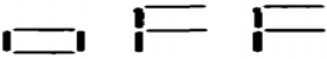

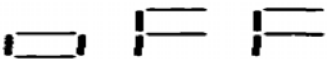
Check Code 04

CHECK CODE 04

Check code 04		Door switch ON/OFF signal	
STEP	INSPECTION CONDITION	DISPLAY	ACTION
1	Open the front driver-side door. (The door switch is		Close the front driver-side door, then go to the next step.
			<p>Verify that the voltage of instrument cluster terminal 2E is 1.0 V or less.</p> <ul style="list-style-type: none"> • If the voltage is as specified, replace the instrument cluster.


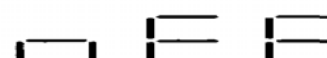
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	on.)		<ul style="list-style-type: none"> If the voltage is not as specified, inspect the following parts: <ul style="list-style-type: none"> Door switch Wiring harness (Instrument cluster-door switch)
2	Close all doors. (Door switches are off.)		<p>Verify that the voltage of instrument cluster terminal 2E is B+.</p> <ul style="list-style-type: none"> If the voltage is as specified, replace the instrument cluster. If the voltage is not as specified, inspect the following parts: <ul style="list-style-type: none"> Door switch Wiring harness (Instrument cluster-door switch)
			Input signal to the instrument cluster is normal.



Check Code 08

CHECK CODE 08

Check code 08		TNS relay ON/OFF signal	
STEP	INSPECTION CONDITION	DISPLAY	ACTION
1	Turn the headlight switch to the TNS position. (TNS relay ON)		Go to the next step.
			<p>Verify that the voltage of instrument cluster terminal 1B is B+.</p> <ul style="list-style-type: none"> If the voltage is as specified, replace the instrument cluster. If the voltage is not as specified, inspect the following parts: <ul style="list-style-type: none"> TNS relay Wiring harness (Battery-TNS relay-instrument cluster)
			Verify that the voltage of the instrument cluster terminal 1B is 1.0 V or less.



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2	Turn the headlight switch off. (TNS relay OFF)		<ul style="list-style-type: none"> • If the voltage is as specified, replace the instrument cluster. • If the voltage is not as specified, inspect the following parts: <ul style="list-style-type: none"> ○ TNS relay ○ Wiring harness (TNS relay-instrument cluster)
			Input signal to the instrument cluster is normal.



Check Code 12

CHECK CODE 12

Check code 12	Speedometer display signal		
INSPECTION CONDITION	DISPLAY	ACTION	
After selecting check code 12, wait for approx. 2 s.		The speedometer needle moves full scale then returns to approx. 60 km/h or approx. 60 mph.	The speedometer is normal.
		Except above	Replace the instrument cluster.
			

Check Code 13

CHECK CODE 13

Check code 13	Tachometer operation signal		
INSPECTION CONDITION	DISPLAY	ACTION	
After selecting check code 13, wait for approx. 2 s.		The tachometer needle moves full scale then returns to approx. 3,000 rpm.	The tachometer is normal.
		Except above	Replace the instrument cluster.
			


Check Code 14

CHECK CODE 14

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Check code 14	Buzzer operation signal		
INSPECTION CONDITION	DISPLAY	ACTION	
After selecting check code 14, wait approx. 2 s.		The buzzer sounds.	The buzzer is normal.
		The buzzer does not sound.	Replace the instrument cluster.


Check Code 16

CHECK CODE 16

Check code 16	Fuel-level warning light flashing signal		
INSPECTION CONDITION	DISPLAY	ACTION	
After selecting check code 16, wait approx. 2 s.	 (FLASHING)	Fuel-level warning light flashes three times.	The fuel-level warning light is normal.
		Except above	Replace the instrument cluster.

Check Code 18

CHECK CODE 18

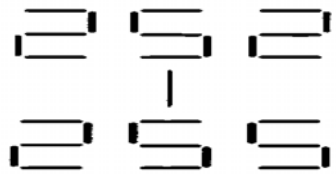
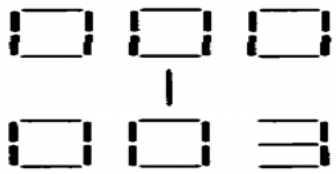

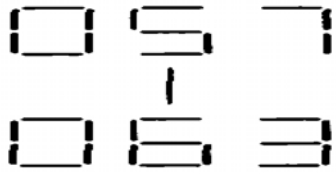
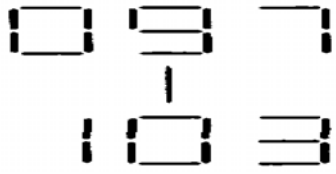
Check code 18	Ignition key illumination control signal		
INSPECTION CONDITION	DISPLAY	ACTION	
After selecting check code 18, wait approx. 2 s.	 (FLASHING)	Ignition key illumination flashes three times.	The ignition key illumination is normal.
		Except above	Verify that the voltage of instrument cluster terminal 1K is B+ . <ul style="list-style-type: none"> • If the voltage is as specified, replace the instrument cluster. • If the voltage is not as specified, inspect the following parts: <ul style="list-style-type: none"> ○ Ignition key illumination bulb ○ Wiring harness (Battery-ignition key illumination-instrument cluster)

Check Code 22

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CHECK CODE 22

Check code 22	Fuel level signal		
STEP	INSPECTION CONDITION	DISPLAY	ACTION
1	Select check code 22 with the fuel gauge sender unit connector disconnected.		Go to the next step.
		Except above	
2	Connect terminals 2R and 2T of the instrument cluster.		Go to the next step.
		Except above	
3	Using the SST (Fuel and thermometer checker) or resistor, input 20 ohms between instrument cluster terminals 2R and 2T.		Go to the next step.
		Except above	
4	Using the SST (Fuel and thermometer checker) or resistor, input 60 ohms between instrument cluster terminals 2R and 2T.		Go to the next step.
		Except above	
5	Using the SST (Fuel and thermometer checker) or resistor, input 100 ohms between instrument cluster terminals 2R and 2T.		Inspect the fuel gauge sender unit.
		Except above	
Inspect the wiring harness and connector between instrument cluster and fuel gauge sender unit.			

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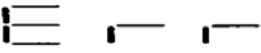
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- If there is any malfunction, repair or replace the wiring harness or connector.
- If there is no malfunction, replace the instrument cluster.


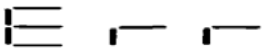
Check Code 23

CHECK CODE 23

Check code 23	Fuel gauge operation signal		
INSPECTION CONDITION	DISPLAY	ACTION	
After selecting check code 23, wait approx. 2 s.		The fuel gauge indicates status in the following order approx. every 2 s. <ul style="list-style-type: none"> • F --> 1/2 --> E --> F (fixed) 	The fuel gauge is normal.
		Except above	Replace the instrument cluster.
		Replace the instrument cluster.	

Check Code 25

CHECK CODE 25

Check code 25	Water temperature gauge operation signal		
INSPECTION CONDITION	DISPLAY	ACTION	
After selecting check code 25, wait approx. 2 s.		The water temperature gauge indicates status in the following order approx. every 2 s. <ul style="list-style-type: none"> • H --> Center --> C --> H (fixed) 	The water temperature gauge is normal.
		Except above	Replace the instrument cluster.
		Replace the instrument cluster.	


Check Code 26

CHECK CODE 26

Check code 26	Odometer/tripmeter display signal		
INSPECTION	DISPLAY	ACTION	


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CONDITION	DISPLAY	ACTION	
Select check code 26.		<ul style="list-style-type: none"> • Display is normal. • Warning and indicator light illuminated. <ul style="list-style-type: none"> ○ Generator warning light ○ AT warning light ○ DSC indicator light ○ DSC OFF light ○ ABS warning light ○ Brake system warning light ○ Selector indicator light ○ MIL ○ Cruise set indicator light ○ Cruise main indicator light ○ Security light ○ Keyless warning light ○ Keyless indicator light 	<ul style="list-style-type: none"> • The odometer/tripmeter is normal. • Warning and indicator is normal.
		Except above	Replace the instrument cluster.



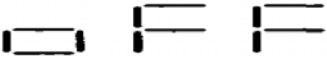

Check Code 28

CHECK CODE 28

Check code 28	Oil pressure gauge operation signal		
INSPECTION CONDITION	DISPLAY	ACTION	
After selecting check code 28.		<p>The oil pressure gauge indicates status in the following order approx. every 2 s.</p> <ul style="list-style-type: none"> • H --> Center --> L --> H (fixed) 	The oil pressure gauge is normal.

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wait approx. 2 s.		Except above	Replace the instrument cluster.
		Replace the instrument cluster	
1	Remove the key from the steering lock, then reinsert the key into the steering lock after selecting check code 31. (The key reminder switch is on.)		Go to the next step.
			<p>Verify that the voltage of instrument cluster terminal 2C is B+.</p> <ul style="list-style-type: none"> • If the voltage is as specified, replace the instrument cluster. • If the voltage is not as specified, inspect the following parts: <ul style="list-style-type: none"> ○ Key reminder switch ○ Wiring harness (Battery-key reminder switch-instrument cluster)
2	Remove the key from the steering lock. (The key reminder switch is off.)		<p>Verify that the voltage of instrument cluster terminal 2C is 1.0 V or less.</p> <ul style="list-style-type: none"> • If the voltage is as specified, replace the instrument cluster. • If the voltage is not as specified, inspect the following parts: <ul style="list-style-type: none"> ○ Key


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			reminder switch ○ Wiring harness (Key reminder switch-instrument cluster)
			Input signal to the instrument cluster is normal.

Check Code 57

CHECK CODE 57







Check code 57	Panel light control signal		
INSPECTION CONDITION	DISPLAY	ACTION	
Turn the headlight switch to the TNS position. After selecting check code 57, wait approx. 2 s.		Illumination light (hazard warning switch, center panel module, etc.) flashes three times.	The panel light control signal is normal.
		Except above	Verify that the voltage of instrument cluster terminal 1F is B+ . <ul style="list-style-type: none"> ● If the voltage is as specified, replace the instrument cluster. ● If the voltage is not as specified, inspect the following parts: <ul style="list-style-type: none"> ○ Illumination light (hazard warning switch, center panel module, etc.) ○ Wiring harness (Instrument cluster-illumination lights-TNS relay)

Check Code 59

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CHECK CODE 59

Check code 59	CAN system/fuel system		
STEP	INSPECTION	INDICATION	ACTION
1	The three digits number is indicated after selecting check code 59. Confirm the first digit from the right.	First digit from the right 	The CAN system is normal. Go to next step.
		First digit from the right 	The DTC of CAN system is detected. Perform the DTC inspection. (See DTC TABLE[MULTIPLEX COMMUNICATION SYSTEM] .) <ul style="list-style-type: none"> • If the CAN system is normal, replace the instrument cluster. Go to next step.
2	Confirm the second digit from the right.	Second digit from the right 	The wiring harnesses between the fuel gauge sender unit and instrument cluster are normal. Go to next step.
		Second digit from the right 	Inspect following parts. <ul style="list-style-type: none"> • Fuel gauge sender unit • Wiring harness (Fuel gauge sender unit-instrument cluster) <ul style="list-style-type: none"> ○ If fuel gauge sender unit and wiring harness are normal, replace the instrument cluster. Go to next step.
3	Confirm the third digit from the right.	Third digit from the right 	The fuel pulse signal from the PCM is normal.
			Inspect the PCM. (See DTC TABLE [LF] and PCM INSPECTION [LF])

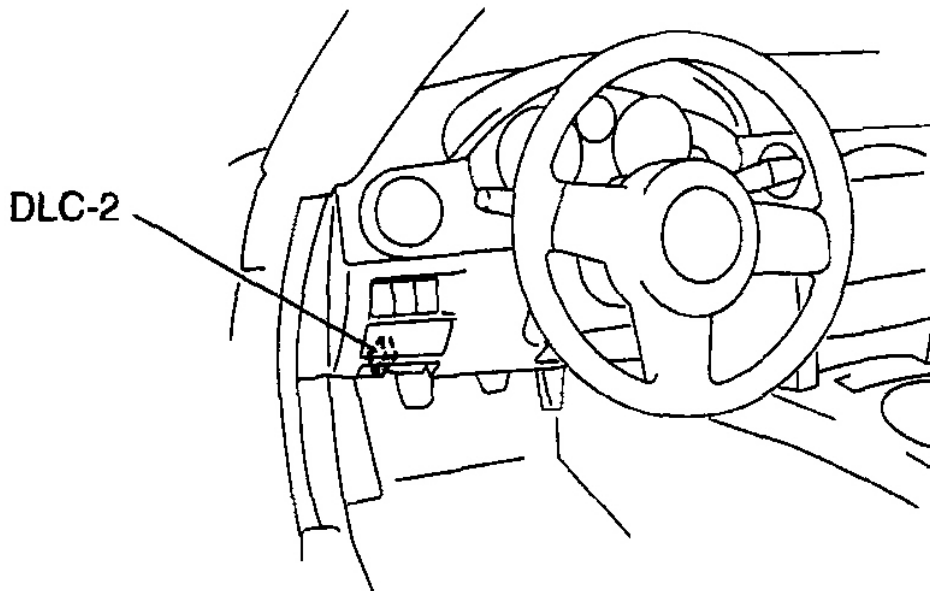
Third digit
from the right



- If the PCM is normal, replace the instrument cluster.

DATA MONITORING AND RECORDING PROCEDURE

1. Connect the M-MDS to the DLC-2 connector.
2. After the vehicle is identified, select the following items from the initial screen of the M-MDS.
 - When using the IDS (laptop PC)
 - Select the "Toolbox" tab.
 - Select "DataLogger".
 - Select "Modules".
 - Select "IC".
 - When using the PDS (Pocket PC)
 - Select "Module Tests".
 - Select "IC".
 - Select "DataLogger".



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Fig. 10: Locating DLC-2 Connector

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3. Select the applicable PID from the PID table.
4. Verify the PID data according to the directions on the screen.

NOTE: The PID data screen function is used for monitoring the calculated value. Therefore, if the monitored value of the output parts is not within the specification, inspection of the monitored value of input parts corresponding to applicable output part control is necessary. In addition, because the system does not display output part malfunction as abnormality in the monitored value, it is necessary to inspect the output part individually.

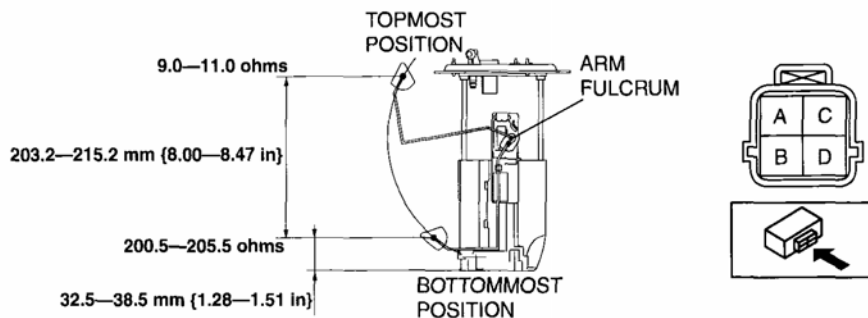
INDICATION ITEM TABLE

INDICATION ITEM TABLE

Monitor item	Input-output signal/part name	Unit/State	Terminal
IC_DTC_CNT	Number of continuous DTCs	-	-
IC_ECT	Water temperature gauge	°F °C	1J, 1L
IC_NUMKEYS	Number of key ID numbers registered with the vehicle	-	-
IC_ODO_CNT	Odometer	m	1J, 1L
IC_SPDMTR	Speedometer	MPH KPH	
IC_TACHO	Tachometer	RPM	
IC_VPWR	Power supply voltage	V	1C

FUEL GAUGE SENDER UNIT INSPECTION

1. Move the float to the topmost and bottommost positions, and verify that the resistance between terminals A and C of the unit and the position of the float are as indicated in **Fig. 11**.



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Fig. 11: Inspecting Fuel Gauge Sender Unit
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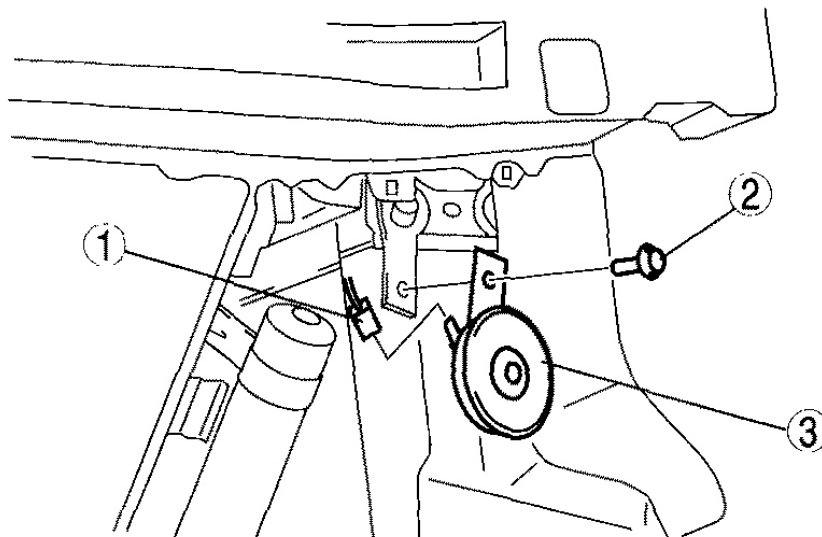
- If they are not as indicated, replace the fuel gauge sender unit.

OIL PRESSURE SWITCH INSPECTION

1. Turn the ignition switch to the ON position and verify that the oil pressure gauge reading indicates L or below.
2. Start the engine and verify that the oil pressure gauge operates.
 - If the oil pressure gauge does not operate, inspect the related wiring harness.
 - If the related wiring harness is normal, inspect the oil pressure. (See **OIL PRESSURE INSPECTION [LF]** .)
 - If the oil pressure is normal, replace the oil pressure switch.

HORN REMOVAL/INSTALLATION

1. Disconnect the negative battery cable. (See **BATTERY REMOVAL/INSTALLATION [LF]** .)
2. Slightly bend back the under cover.
3. Remove in the order indicated in **Fig. 12** .



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1	Connector
2	Bolt
3	Horn

Fig. 12: Removing/Installing Horn Components
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4. Install in the reverse order of removal.