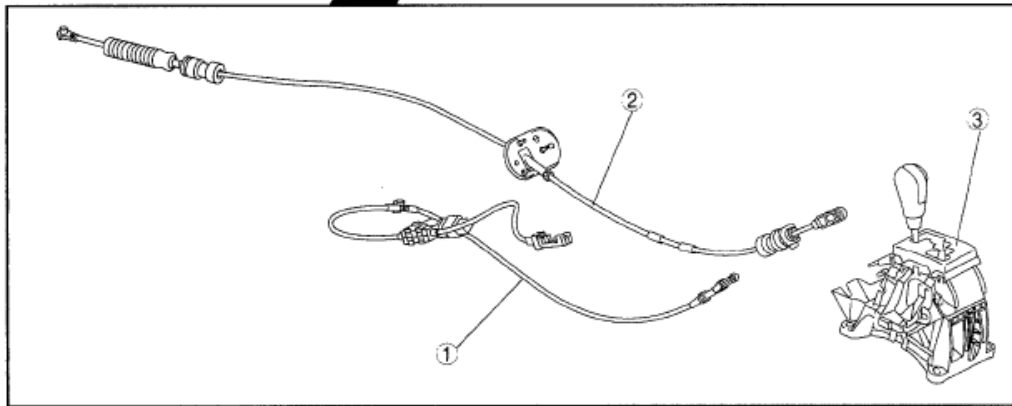
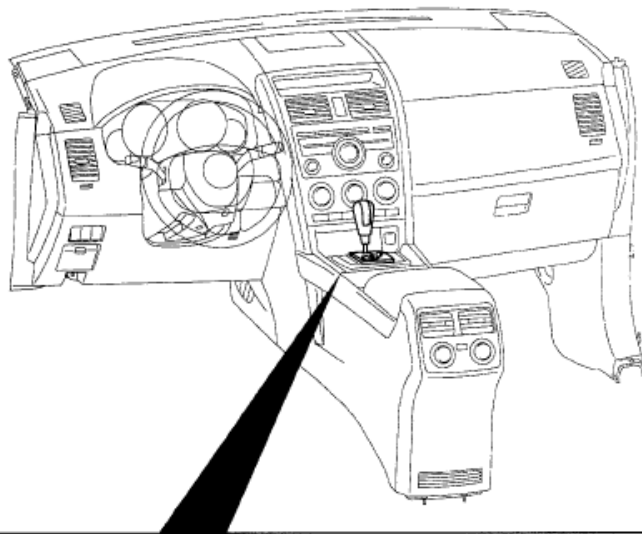


2008 TRANSMISSION

Automatic Transaxle Shift Mechanism - Mazda CX-9

AUTOMATIC TRANSAXLE SHIFT MECHANISM LOCATION INDEX



ac95uw0001608

1	Interlock cable (See 05-18-2 KEY INTERLOCK INSPECTION.) (See 05-18-2 INTERLOCK CABLE INSPECTION.) (See 05-18-3 INTERLOCK CABLE ADJUSTMENT.)
2	Selector cable (See 05-18-7 SELECTOR CABLE ADJUSTMENT.)

3	Selector lever (See 05-18-2 SHIFT-LOCK INSPECTION.) (See 05-18-6 SELECTOR LEVER INSPECTION.) (See 05-18-6 SELECTOR LEVER COMPONENT INSPECTION.) (See 05-18-8 SELECTOR LEVER COMPONENT REMOVAL/INSTALLATION.)
---	--

Fig. 1: Identifying Automatic Transaxle Shift Mechanism Location Index
Courtesy of MAZDA MOTORS CORP.

SHIFT-LOCK INSPECTION

1. Turn the ignition switch to the ON position.
2. Verify that the selector lever is in the P position.

3. Verify that the selector lever cannot be shifted from the P position without depressing the brake pedal.
4. Depress the brake pedal and verify that the selector lever cannot be shifted from the P position.
 - If there is any malfunction, inspect the interlock cable. (See **INTERLOCK CABLE INSPECTION.**)

KEY INTERLOCK INSPECTION

1. Verify that the ignition key cannot be pulled out except in the P position.
 - If there is any malfunction, inspect the interlock cable. (See **INTERLOCK CABLE INSPECTION.**)

INTERLOCK CABLE INSPECTION

1. Turn the ignition switch to the ON position. (Engine off)
2. Remove the clip of the selector lever base plate, then remove the interlock cable from the U-groove.
3. Remove the interlock cable from the selector lever.

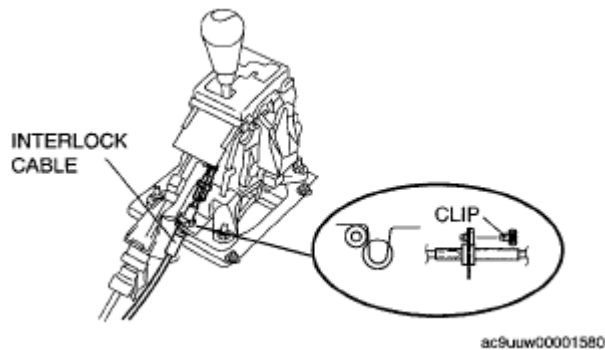
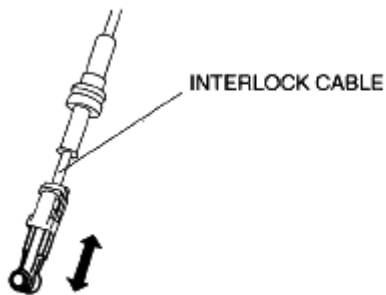


Fig. 2: Identifying Clip Of Selector Lever Base Plate And Interlock Cable
Courtesy of MAZDA MOTORS CORP.

4. Verify that the interlock cable moves freely with the brake pedal depressed.
 - If there is any malfunction, inspect the interlock cable for abnormal winding. If any abnormal winding found, correct it.
 - If the malfunction persists after correcting the interlock cable winding, replace it.

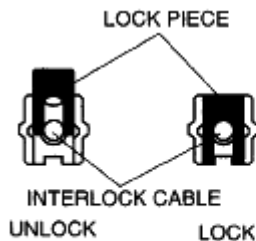


ac9uuw00002009

Fig. 3: Inspecting Interlock Cable
Courtesy of MAZDA MOTORS CORP.

INTERLOCK CABLE ADJUSTMENT

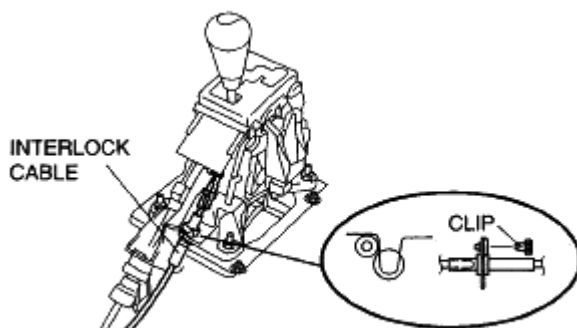
1. Turn the ignition switch to the ON position. (Engine off)
2. Pull up the lock piece of the interlock cable to release the lock.



ac9uuw00002010

Fig. 4: Identifying Lock Piece Of Interlock Cable
Courtesy of MAZDA MOTORS CORP.

3. Remove the clip of the selector lever base plate, then remove the interlock cable from the U-groove.
4. Remove the interlock cable from the selector lever.



ac9uuw00001581

Fig. 5: Identifying Clip Of Selector Lever Base Plate And Interlock Cable
Courtesy of MAZDA MOTORS CORP.

5. Remove the lock unit from the bracket.

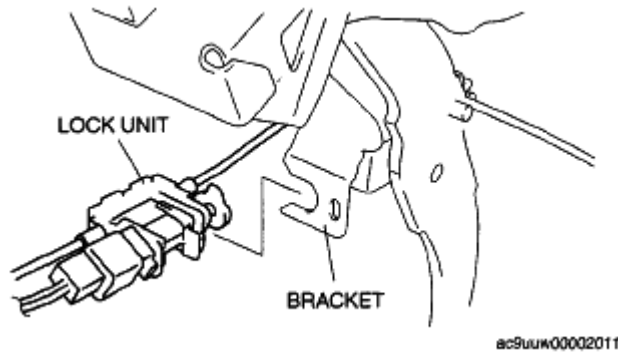


Fig. 6: Identifying Lock Unit And Bracket
Courtesy of MAZDA MOTORS CORP.

6. Verify that the marking on the slider pin is positioned as shown in the figure.

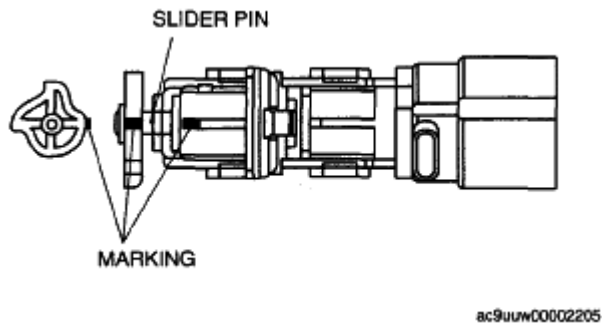


Fig. 7: Inspecting Marking On Slider Pin Is Positioned
Courtesy of MAZDA MOTORS CORP.

7. Push the interlock cable.

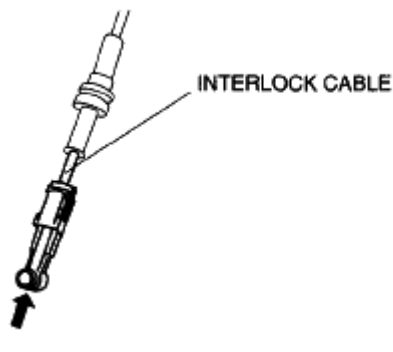
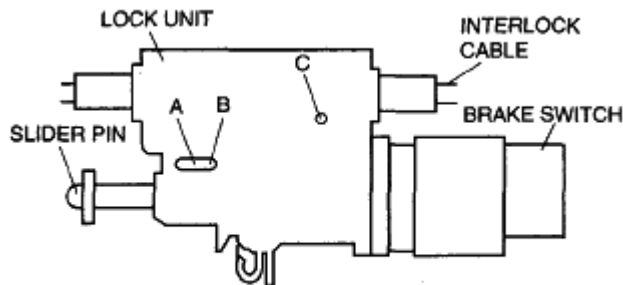


Fig. 8: Pushing Interlock Cable
Courtesy of MAZDA MOTORS CORP.

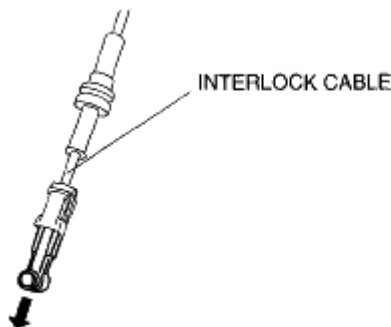
8. Insert the a 1.5 mm {0.059 in} round bar or similar into hole A with the slider pin fully pushed in.



ac9uuw0002014

Fig. 9: Identifying Hole A And Slider Pin
Courtesy of MAZDA MOTORS CORP.

9. Fully pull the end of the interlock cable.



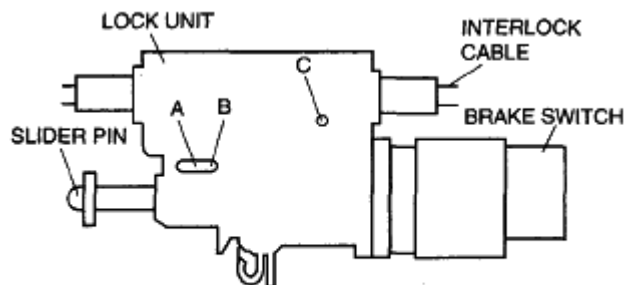
ac9uuw0002015

Fig. 10: Pulling End Of Interlock Cable
Courtesy of MAZDA MOTORS CORP.

10. Push the a 1.5 mm {0.059 in} round bar or similar into hole B and hole C of the lock unit until it passes through.
11. Disconnect the brake switch connector.
12. Remove the brake switch. (See **BRAKE PEDAL REMOVAL/INSTALLATION** .)
13. Install a new brake switch. (See **BRAKE PEDAL REMOVAL/INSTALLATION** .)

CAUTION:

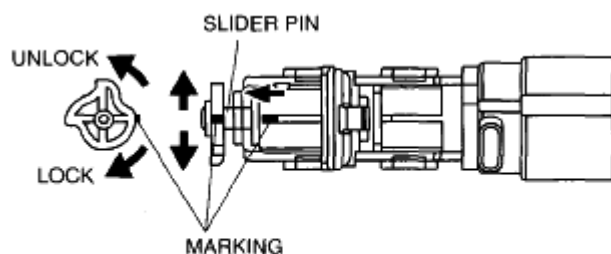
- Do not connect the brake switch connector until the interlock cable adjustment is completed.



ac9uuw00002014

Fig. 11: Identifying Hole B And Hole C Of Lock Unit
Courtesy of MAZDA MOTORS CORP.

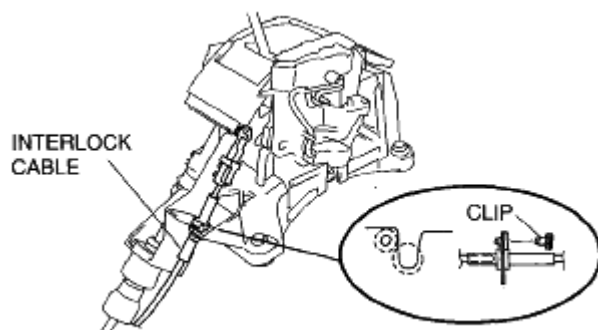
14. Install the lock unit to the bracket. (See **SELECTOR LEVER COMPONENT REMOVAL/INSTALLATION.**)
15. Rotate the slider pin to release the lock and verify that it slides freely.
16. Verify that the slider pin contacts the brake pedal stopper rubber and rotate the slider pin to lock.



ac9uuw00002206

Fig. 12: Inspecting Slider Pin Contacts Brake Pedal Stopper Rubber
Courtesy of MAZDA MOTORS CORP.

17. Install the interlock cable end to the interlock link on the selector lever.
18. Fit the interlock cable in the U-groove in the selector lever base plate and install the clip.



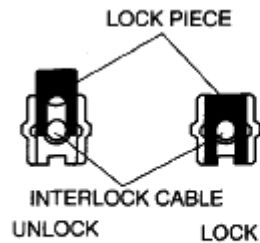
ac9uuw00002017

Fig. 13: Identifying Interlock Cable And Clip Of Selector Lever Base Plate

Courtesy of MAZDA MOTORS CORP.

19. Press the interlock cable lock piece in until it is locked.

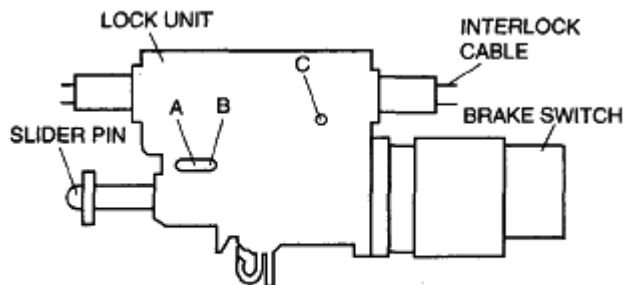
- CAUTION:**
- Applying a load to the interlock cable while pressing the lock piece in can affect the lock unit operation.



ac9uurw00002013

Fig. 14: Identifying Interlock Cable Lock Piece
Courtesy of MAZDA MOTORS CORP.

20. Remove the a 1.5 mm {0.059 in} round bar or similar from the lock unit holes A, B, and C.
21. Connect the brake switch connector with the brake pedal released.



ac9uurw00002014

Fig. 15: Identifying Lock Unit Holes A, B, And C
Courtesy of MAZDA MOTORS CORP.

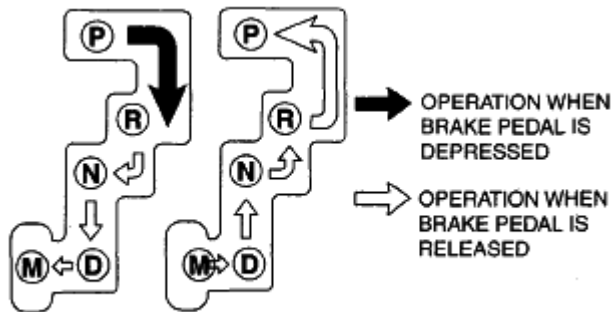
- CAUTION:**
- The clearance between the brake switch and the brake pedal is automatically adjusted to the correct amount when the brake switch connector is connected after the brake switch has been properly installed. If the brake switch is not properly installed or the connector is connected before installation, the clearance may be incorrect, causing a brake light malfunction. Therefore, always verify that the brake switch is properly installed before connecting the connector.
 - Once the brake switch clearance has automatically been

adjusted, it cannot be adjusted again. Therefore, replace the switch with a new one when replacing the power brake unit or the pedal, or performing any procedure that changes the pedal stroke.

22. Inspect shift lock operation. (See SHIFT-LOCK INSPECTION.)

SELECTOR LEVER INSPECTION

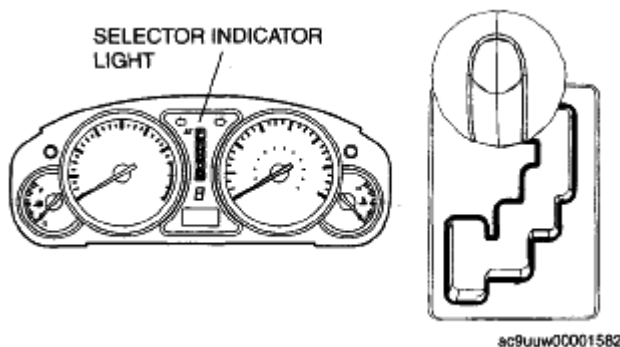
1. Turn the ignition switch to the ON position, (engine OFF)
2. With the brake pedal depressed, verify that there is a "click" at each range when shifted.
3. Verify that the selector lever can be shifted.
4. Verify that there is a "click" at each position when shifted from P position to M range.



ac9uuw00002019

Fig. 16: Inspecting Click At Each Position When Shifted From P Position To M Range
 Courtesy of MAZDA MOTORS CORP.

5. Verify that the positions of the selector lever and the indicator are aligned.
 - If there is any malfunction, adjust the TR switch. (See TCM REMOVAL/INSTALLATION [AW6A-EL, AW6AX-EL] .)
6. Verify that the vehicle operates in each selected range.



ac9uuw00001582

Fig. 17: Inspecting Positions Of Selector Lever And Indicator Are Aligned
 Courtesy of MAZDA MOTORS CORP.

SELECTOR LEVER COMPONENT INSPECTION

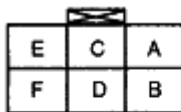
1. Disconnect the negative battery cable.
2. Remove the center console.
3. Remove the dashboard completely. (See **DASHBOARD REMOVAL/INSTALLATION** .)
4. Disconnect the selector lever component connector.
5. Inspect for continuity at the selector lever component.
 - If there is any malfunction, adjust the selector cable. (See **SELECTOR CABLE ADJUSTMENT**.)

○—○ : Continuity

Selector lever position/range	Connector terminal					
	A	B	C	D	E	F
M range	- M		○	—	○	
	center M			○	—	○
	+ M	○	—		○	
Other						

ac9uuw00002021

Fig. 18: Selector Lever Component Connector Terminals Continuity Chart
Courtesy of MAZDA MOTORS CORP.

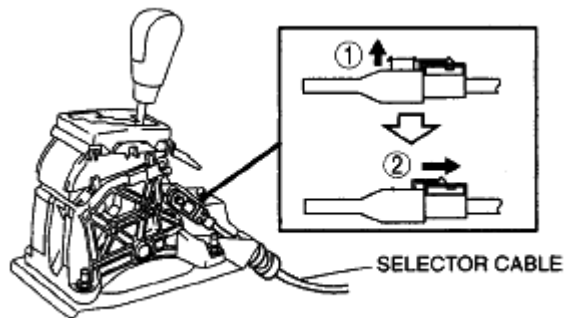


ac9uuw00002020

Fig. 19: Identifying Selector Lever Component Connector Terminals
Courtesy of MAZDA MOTORS CORP.

SELECTOR CABLE ADJUSTMENT

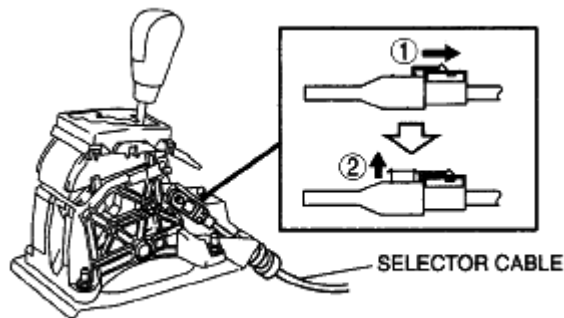
1. Remove the center console.
2. Shift the selector lever to P position.
3. Unlock the lock piece of the selector cable (selector lever side) in the order shown in the figure.
4. Verify that the manual shaft is in P position.



ac9uuw00002022

Fig. 20: Unlocking Lock Piece Of Selector Cable (Selector Lever Side)
 Courtesy of MAZDA MOTORS CORP.

5. Lock the lock piece of the selector cable (selector lever side) in the order shown in the figure.
6. Install the center console.
7. Shift the selector lever from P position to M range, and make sure that there are no other components in that area to interfere with the lever.



ac9uuw00001594

Fig. 21: Locking Lock Piece Of Selector Cable (Selector Lever Side)
 Courtesy of MAZDA MOTORS CORP.

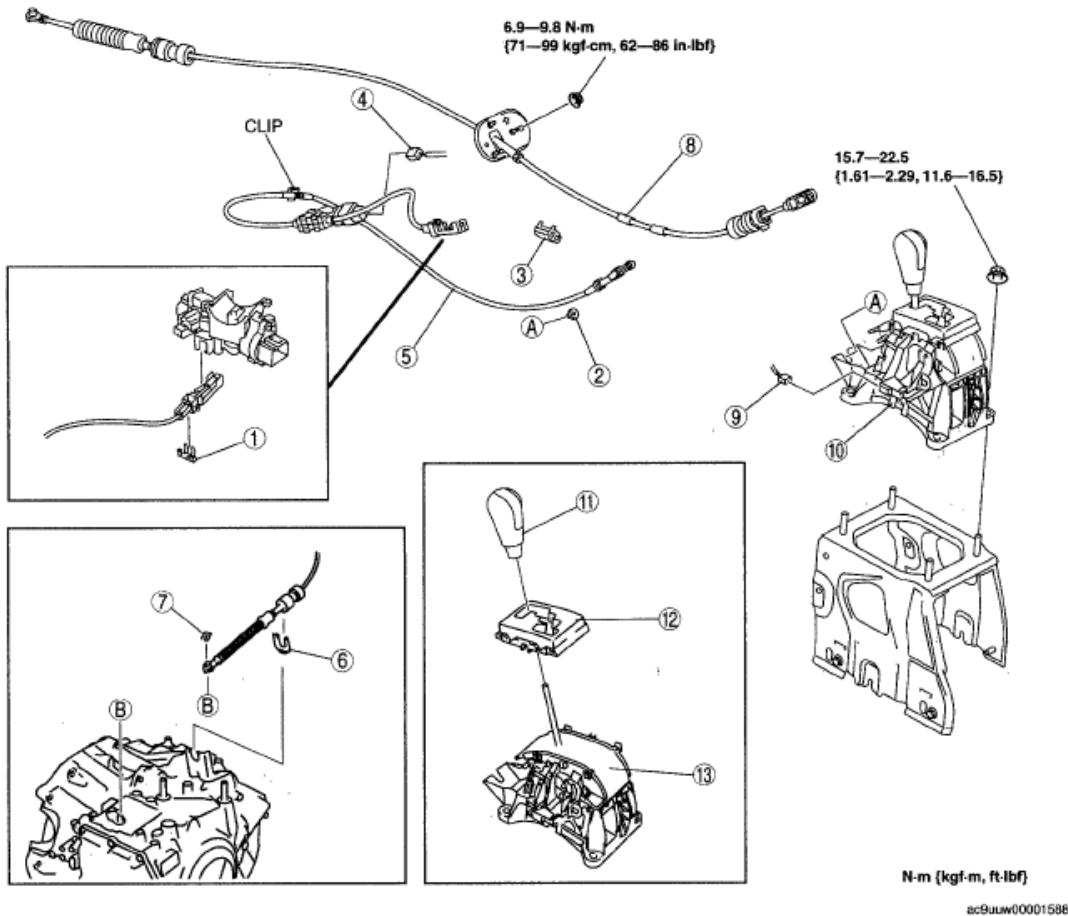
SELECTOR LEVER COMPONENT REMOVAL/INSTALLATION

1. Disconnect the negative battery cable.
2. To remove the interlock cable, remove the following parts.
 1. Column cover (See **COLUMN COVER REMOVAL/INSTALLATION** .)
 2. Driver side under panel
 3. Accelerator pedal (See **ACCELERATOR PEDAL REMOVAL/INSTALLATION [MZI-3.7]** .)
3. To remove the selector cable, remove the following parts.
 1. Battery and battery tray
 2. Air cleaner component (See **INTAKE-AIR SYSTEM REMOVAL/INSTALLATION [MZI-3.7]** .)
 3. Dashboard (See **DASHBOARD REMOVAL/INSTALLATION** .)

2008 Mazda CX-9 Grand Touring

2008 TRANSMISSION Automatic Transaxle Shift Mechanism - Mazda CX-9

4. Front A/C unit (See **FRONT A/C UNIT REMOVAL/INSTALLATION** .)
4. To remove the selector lever, remove the following parts.
 1. Console (See **CONSOLE REMOVAL/INSTALLATION** .)
5. Remove in the order shown in the figure.
6. Install in the reverse order of removal.



1	Clip
2	Clip
3	Clip
4	Lock unit connector
5	Interlock cable (See05-18-10 Interlock Cable Installation Note.)
6	Clip
7	Clip

8	Selector cable (See05-18-9 Selector Cable Removal Note.) (See05-18-9 Selector Cable Installation Note.)
9	Selector lever component connector
10	Selector lever component
11	Selector lever knob
12	Selector lever panel
13	Selector lever

Fig. 22: Identifying Selector Lever Component Removal/Installation & Torque Specifications
 Courtesy of MAZDA MOTORS CORP.

SELECTOR CABLE REMOVAL NOTE

1. Remove the clip.

2. Remove the selector cable.

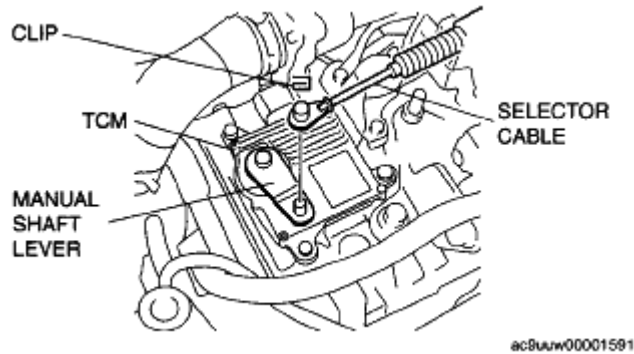


Fig. 23: Identifying Selector Cable
Courtesy of MAZDA MOTORS CORP.

3. Remove the selector cable from the cable bracket.

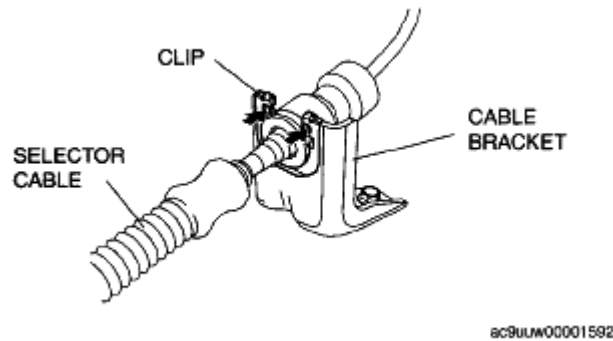


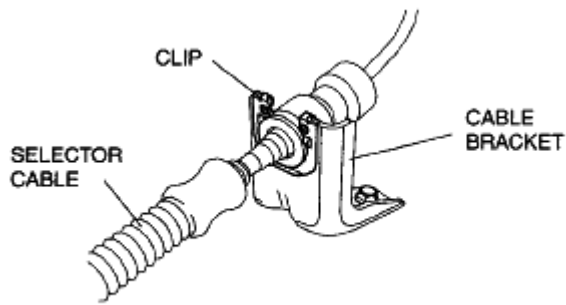
Fig. 24: Identifying Selector Cable And Cable Bracket
Courtesy of MAZDA MOTORS CORP.

SELECTOR CABLE INSTALLATION NOTE

1. Install the selector cable and clip to the bracket as shown in the figure.

NOTE: • **Steps 2 and 3 are for the selector cable replacement only.**

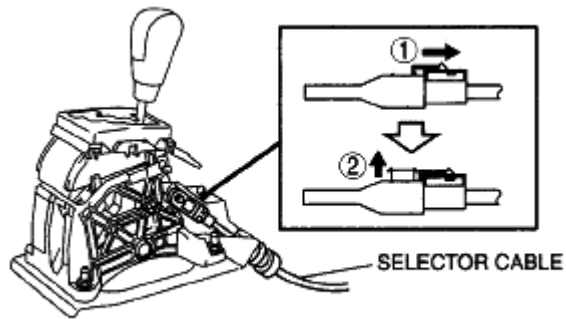
2. Verify that the selector lever is in the P position.



ac9uuw00001593

Fig. 25: Identifying Selector Cable And Cable Bracket
Courtesy of MAZDA MOTORS CORP.

3. Lock the lock piece of the selector cable (selector lever side) in the order shown in the figure.



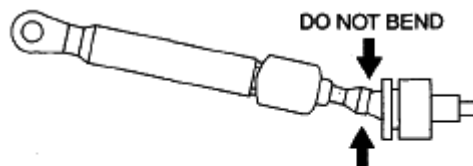
ac9uuw00001594

Fig. 26: Locking Lock Piece Of Selector Cable (Selector Lever Side)
Courtesy of MAZDA MOTORS CORP.

4. Verify that the manual shaft is in the P position.

CAUTION:

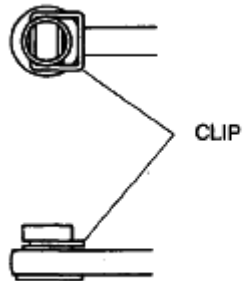
- Bending the selector cable in the manner shown in the figure will damage the cable and it may become loose when shifted. When installing the selector cable, hold it straight.



ac9uuw00001595

Fig. 27: Inspecting Manual Shaft Is In P Position
Courtesy of MAZDA MOTORS CORP.

5. Install the clip as shown in the figure.



ac9uww00001596

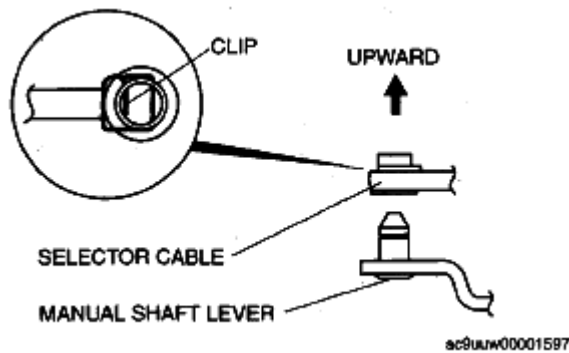
Fig. 28: Identifying Clip

Courtesy of MAZDA MOTORS CORP.

NOTE:

- Install the selector lever to the manual shaft lever with the clip side of the selector cable end facing up.

6. Install the selector lever to the manual shaft lever so that no load acts on the selector cable.
7. Confirm that the tip of the manual shaft lever projects out of the end of the selector cable.
8. Securely install the selector cable to the selector cable bracket.



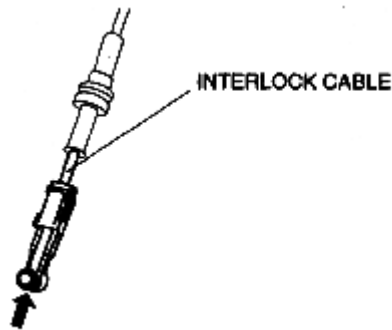
ac9uww00001597

Fig. 29: Inspecting Clip Side Of Selector Cable End Facing Up

Courtesy of MAZDA MOTORS CORP.

INTERLOCK CABLE INSTALLATION NOTE

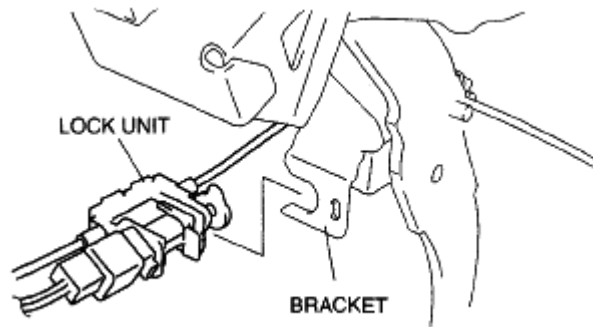
1. Push the interlock cable.



ac9uuw00001598

Fig. 30: Pushing Interlock Cable
Courtesy of MAZDA MOTORS CORP.

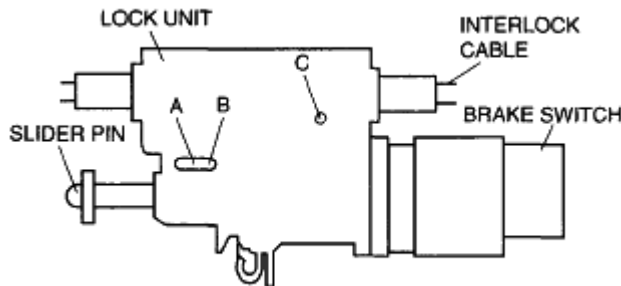
2. Verify that the marking on the slider pin is positioned as shown in the figure.



ac9uuw00001599

Fig. 31: Inspecting Marking On Slider Pin Is Positioned
Courtesy of MAZDA MOTORS CORP.

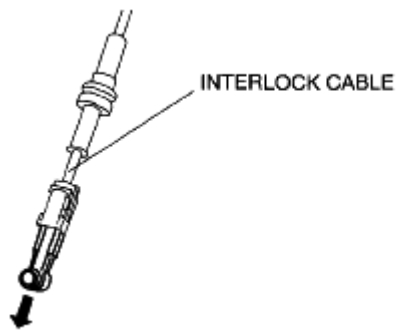
3. Push the a 1.5 mm {0.059 in} round bar or similar into hole A by fully pushing the slider pin in.



ac9uuw00001600

Fig. 32: Identifying Hole A And Slider Pin
Courtesy of MAZDA MOTORS CORP.

4. Fully pull the end of the interlock cable.



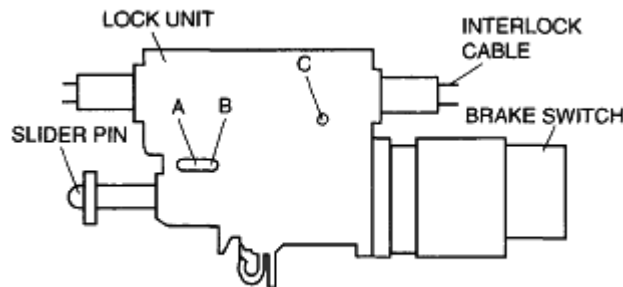
ac9uuw00001601

Fig. 33: Pulling End Of Interlock Cable
Courtesy of MAZDA MOTORS CORP.

5. Push the a 1.5 mm {0.059 in} round bar or similar into hole B and hole C of the lock unit until it passes through.
6. Disconnect the brake switch connector.
7. Remove the brake switch. (See **BRAKE PEDAL REMOVAL/INSTALLATION** .)
8. Install a new brake switch. (See **BRAKE PEDAL REMOVAL/INSTALLATION** .)

CAUTION:

- Do not connect the brake switch connector until the interlock cable is installed.



ac9uuw00001600

Fig. 34: Identifying Hole B And Hole C Of Lock Unit
Courtesy of MAZDA MOTORS CORP.

9. With the slider pin pressed, slide the lock unit to fix the lock unit hook into the bracket hole securely as shown in the figure.

CAUTION:

- Allowing the interlock cable to be bent or twisted during installation can affect the lock unit operation.

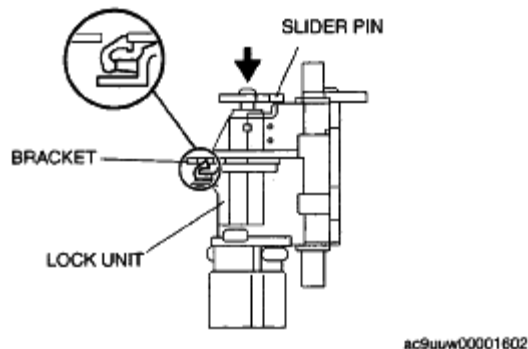


Fig. 35: Pressing Slider Pin
Courtesy of MAZDA MOTORS CORP.

10. Rotate the slider pin to release the lock and verify that it slides freely.
11. Pull the slider pin outward until it contacts the brake pedal stopper rubber and rotate the slider pin to lock.
12. Verify that the selector lever is in the P position.

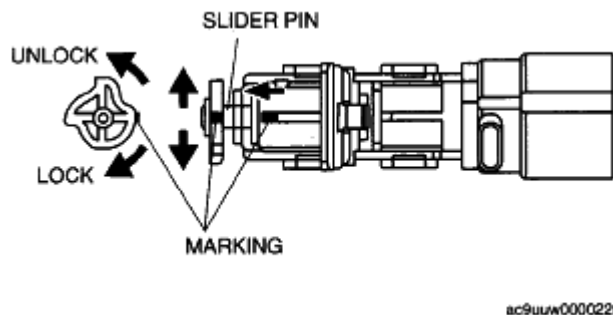


Fig. 36: Pulling Slider Pin Outward Until It Contacts Brake Pedal Stopper Rubber
Courtesy of MAZDA MOTORS CORP.

13. Install the interlock cable end to the cam pin on the selector lever.
14. Fit the interlock cable in the U-groove in the selector lever base plate and install the clip.

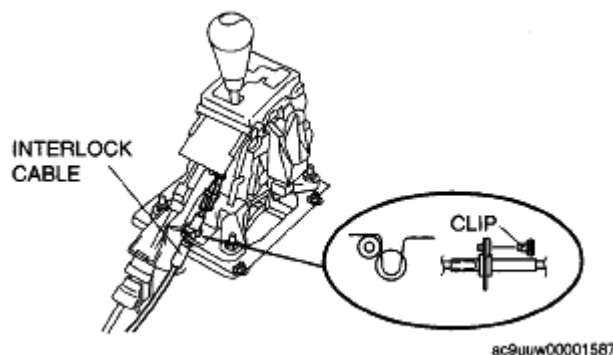
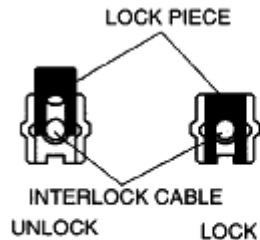


Fig. 37: Identifying Interlock Cable And Clip
Courtesy of MAZDA MOTORS CORP.

15. Press the interlock cable lock piece in until it is locked.

CAUTION:

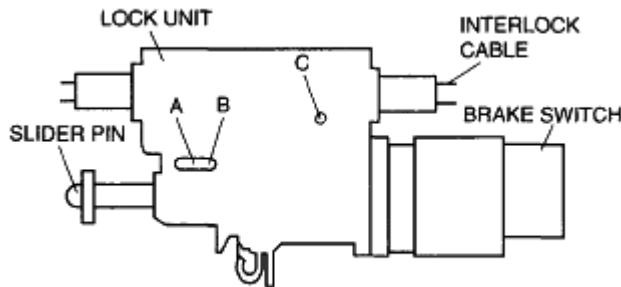
- Applying a load to the interlock cable while pressing the lock piece in can affect the lock unit operation.



ac9uuw00001604

Fig. 38: Identifying Interlock Cable Lock Piece
Courtesy of MAZDA MOTORS CORP.

16. Remove the a 1.5 mm {0.059 in} round bar or similar from the lock unit holes A, B, and C.



00910000wrtf6ca

Fig. 39: Identifying Lock Unit Holes A, B, And C
Courtesy of MAZDA MOTORS CORP.

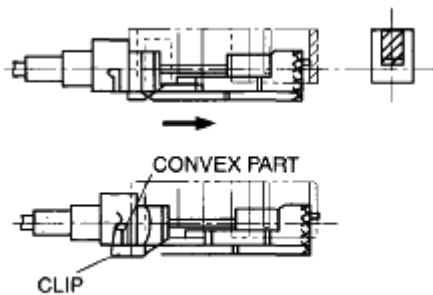
17. Connect the brake switch connector with the brake pedal released.

CAUTION:

- The clearance between the brake switch and the brake pedal is automatically adjusted to the correct amount when the brake switch connector is connected after the brake switch has been properly installed. If the brake switch is not properly installed or the connector is connected before installation, the clearance may be incorrect, causing a brake light malfunction. Therefore, always verify that the brake switch is properly installed before connecting the connector.
- Once the brake switch clearance has automatically been adjusted, it cannot be adjusted again. Therefore, replace the

switch with a new one when replacing the power brake unit or the pedal, or performing any procedure that changes the pedal stroke.

18. Turn the ignition switch to ON position.
19. Install the interlock cable to the steering lock.
20. Slide the outer casing to the steering lock and insert the clip over the convex part of the outer casing.



ac9uuw00001605

Fig. 40: Identifying Clip And Convex Part
Courtesy of MAZDA MOTORS CORP.