

Toyota 4Runner

2009 -

Rear Sight

Part Number: 00016-00085
Accessory Code: CM90



Section I – Installation Preparation

Kit Contents

Item #	Quantity Req'd.	Description
1	1	MIRROR/MONITOR
2	1	REVERSE MINI-CAMERA
3	1	EXTENSION HARNESS
4	1	SACK PARTS
5	1	OWNER'S CARD
6	1	Mirror Power Harness
7		
8		

Hardware Bag Contents

Item #	Quantity Req'd.	Description
1	25	WIRE TIES
2	6	ADHESIVE FOAM
3	3	T-TAP, 18-22AWG
4	2	T-TAP, 14-18AWG
5	1	DOUBLE-SIDED MOLDING TAPE
6	1	SEALING PUTTY
7	1	ALCOHOL PAD
8	1	RUBBER GROMMET
	1	Adjustable Cable Cover

Additional Items Required For Installation

Item #	Quantity Req'd.	Description
1	N/A	ELECTRICAL TAPE

Conflicts

Note:

Recommended Tools

Safety Tools	
Special Tools	
IR Temp Probe	
Installation Tools	
FASTENER REMOVAL TOOL	WIRE CUTTERS
TRIM REMOVAL TOOL	TORX-20 WRENCH
10-MM DEEP SOCKET	PLIERS
Torque Wrench (36 in. lb.)	
Special Chemicals	
Soapy Water or Alcohol/water	

Color Applicability/Trim Level

Vehicle/Trim Color	Accessory Color																						

General Applicability

All Models

Recommended Sequence of Application

Item #	Accessory	
1		
2		
3		

Legend

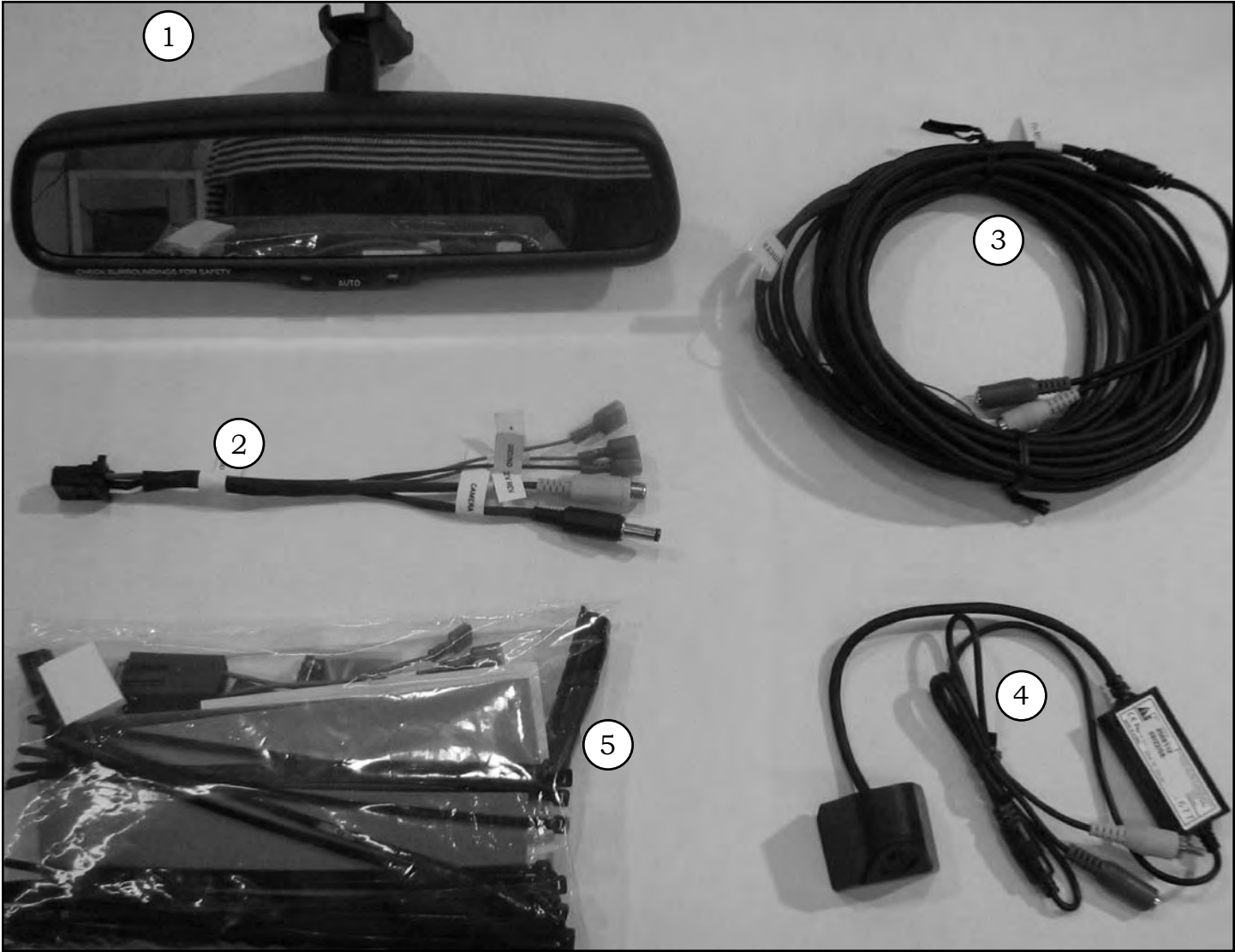
	STOP: Damage to the vehicle may occur. Do not proceed until process has been complied with.
	OPERATOR SAFETY: Use caution to avoid risk of injury.
	CAUTION: A process that must be carefully observed in order to reduce the risk of damage to the accessory/vehicle and to ensure a quality installation.
	TOOLS & EQUIPMENT: Used in Figures calls out the specific tools and equipment recommended for this process.
	REVISION MARK: This mark highlights a change in installation with respect to previous issue.
	SAFETY TORQUE: This mark indicates that torque is related to safety.

SPECIAL NOTE: Installation Sequences

After TMS and Safety mandated preparatory steps have been taken, the installation sequence is the suggested method for completing the accessory installation. In some instances the suggested sequence is written for one associate to install and in others the sequence is given as part of a team accessory installation. Unless otherwise stated in the document, the associates may perform the installation steps in any order to make the installation as efficient as possible while maintaining consistent quality.

PARTS IDENTIFICATION

ITEM	QUANTITY	PART NUMBER	DESCRIPTION
1	1	00016-00085-01	2.4" REARSIGHT MIRROR
2	1	00016-00085-02	MIRROR ADAPTER HARNESS
3	1	00016-00040-04	CAMERA EXTENSION HARNESS
4	1	00016-00040-02	REAR CAMERA ASSEMBLY
5	1	00016-00040-03	SACK PARTS: TIE STRAPS, T-TAPS, SEALING PUTTY



VEHICLE PREPARATION



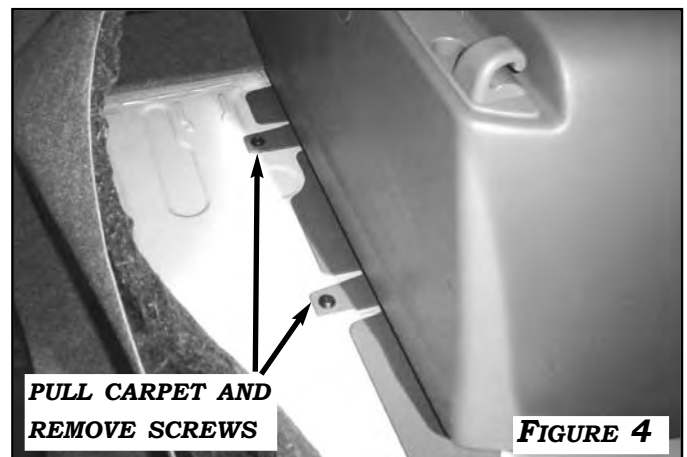
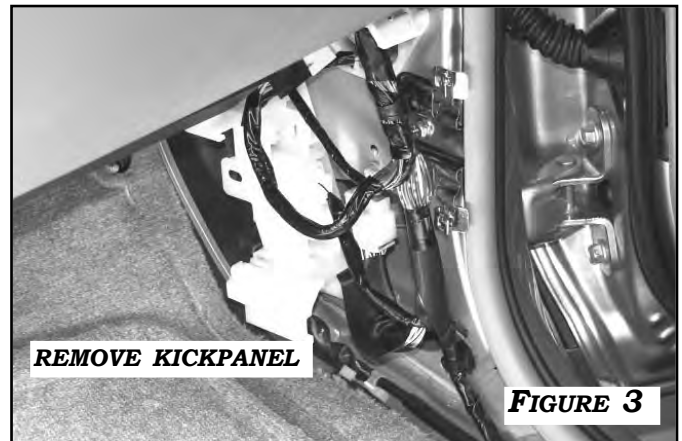
DIS-CONNECT THE NEGATIVE BATTERY CABLE BEFORE BEGINNING INSTALLATION.



VEHICLE PREPARATION



1. LOOSEN **Torx-20** WINDSHIELD LUG MOUNT SCREW AND REMOVE EXISTING REARVIEW MIRROR. **FIGURE 1**
2. REMOVE OVERHEAD CONSOLE BY REMOVING THE TORX SCREWS IN THE SUNGLASS HOLDER AND PULLING DOWN THE MAP LIGHT CONSOLE AS SHOWN **FIGURE 2**. REMOVE THE PASSENGER SUNVISOR RETAINING CLIP.
3. REMOVE OR LOOSEN PASSENGER SIDE TRIM PANELS INCLUDING: A-PILLAR TRIM, KICK PANEL AND DOOR SILL TRIM; B-PILLAR KICK PANEL AND REAR DOOR SILL TRIM. REMOVE THE PASSENGER SIDE CLIP HOLDING THE REAR CARPET AND PULL THE CARPET BACK TO EXPOSE THE METAL FLOOR. **FIGURES 3-5**
4. REMOVE THE MOLDED TRIM PIECE ABOVE THE LICENSE PLATE BY REMOVING SIX (6) 10MM NUTS AND THREE (3) PLASTIC CLIPS. (**FIGURE 6**) MASK THE DOOR AROUND THE TRIM PIECE TO PREVENT SCRATCHING DURING REMOVAL.



INSTALLATION

INSTALLING MONITOR/MIRROR



1. MOUNT REARSIGHT MIRROR ON EXISTING WINDSHIELD LUG AND TIGHTEN SCREW. (FIGURE 7) ROUTE MIRROR HARNESS UP WINDSHIELD AND BEHIND THE HEADLINER TO CONSOLE OPENING. ROUTE THE END OF THE CAMERA EXTENSION HARNESS MARKED “TO MIRROR” WITH THE MALE CONNECTORS UP THE CENTER OF THE WINDSHIELD AND BEHIND HEADLINER TO THE CONSOLE OPENING. FIGURE 8

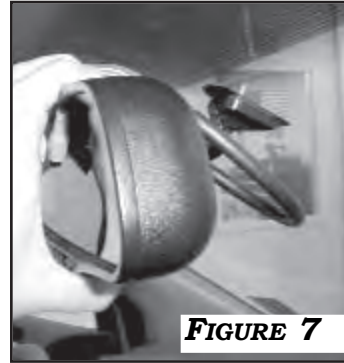


FIGURE 7

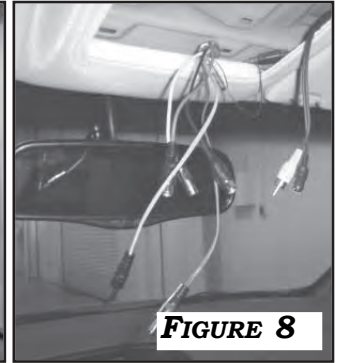


FIGURE 8

2. CONNECT MALE RCA VIDEO CONNECTOR OF CAMERA EXTENSION HARNESS TO VIDEO INPUT (Yellow Connector) OF THE MIRROR HARNESS. CONNECT MALE DC POWER CONNECTOR OF CAMERA EXTENSION HARNESS TO POWER OUTPUT (Red Connector) OF REARSIGHT MIRROR HARNESS. WRAP ALL RCA AND DC CONNECTORS WITH THE FOAM TAPE PROVIDED. FIGURE 9

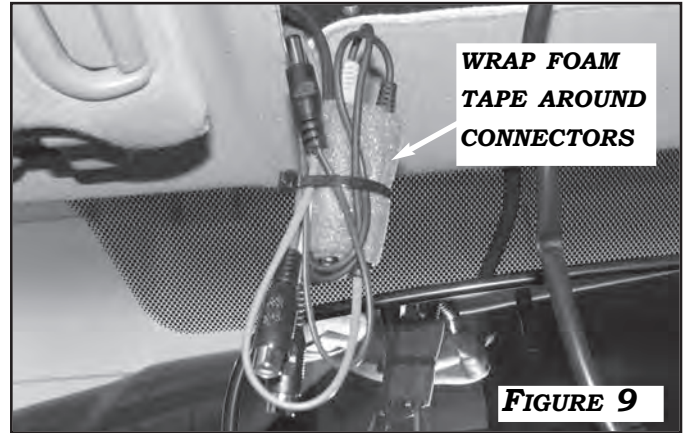


FIGURE 9

WIRE ROUTING AND CONNECTIONS

1. ROUTE CAMERA EXTENSION HARNESS AND MIRROR POWER HARNESS (RED, BLACK AND WHITE WIRES) ABOVE HEADLINER TO PASSENGER-SIDE A-PILLAR. ROUTE HARNESSES DOWN THE A-PILLAR USING THE FACTORY RETAINING CLIPS WHENEVER POSSIBLE. IF THE VEHICLE HAS SIDE CURTAIN AIRBAGS, BE SURE TO SECURE THE HARNESS SO THAT IT DOES NOT INTERFERE WITH AIRBAG DEPLOYMENT. ROUTE THE HARNESSES FROM THE A-PILLAR TO THE KICKPANEL. FIGURE 10

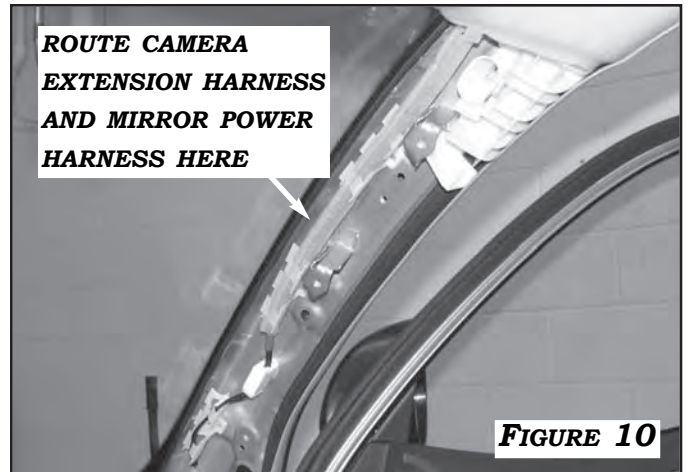


FIGURE 10

2. LOCATE WHITE CONNECTOR IP2 AT THE PASSENGER SIDE KICKPANEL. USE THE SUPPLIED BLUE AND RED T-TAP CONNECTORS TO CONNECT THE RED IGNITION WIRE OF THE MIRROR POWER HARNESS TO THE WHITE WIRE IN PIN 10 OF CONNECTOR IP2. CONNECT THE BLACK GROUND WIRE OF THE MIRROR POWER HARNESS TO THE WHITE/BLACK WIRE AT GROUND POINT IK. LOCATE WHITE CONNECTOR IM1 BELOW THE GLOVE BOX AREA NEAR THE KICKPANEL. USE THE SUPPLIED RED T-TAP CONNECTOR TO CONNECT THE WHITE REVERSE WIRE OF THE MIRROR POWER HARNESS TO THE RED/YELLOW WIRE IN PIN 1 OF CONNECTOR IM1. SECURE ALL HARNESSES WITH WIRE TIES. FIGURES 11-12

3. ROUTE THE CAMERA EXTENSION HARNESS FROM THE KICKPANEL UNDER THE FRONT AND REAR DOOR SILL TRIM AND BESIDE THE REAR SEAT TO THE CARGO AREA. USE THE FACTORY WIRE CHANNELS AND RETAINING CLIPS. ROUTE THE HARNESS ALONG THE FLOOR UNDER THE RIGHT REAR TRIM PANELS AND UP THE RIGHT D-PILLAR ABOVE THE HEADLINER TO THE REAR DOOR HOSE GROMMET. PULL THE HARNESS THROUGH THE HOSE, USING SOAPY WATER AS A LUBRICANT. ROUTE THE HARNESS INSIDE THE REAR DOOR TO THE AREA WHERE THE LICENSE PLATE TRIM PIECE WAS REMOVED. (FIGURES 13-14A) FOLLOW THE FACTORY HARNESSES WHERE POSSIBLE. SECURE THE HARNESS WITH WIRE TIES OR FOAM TAPE.

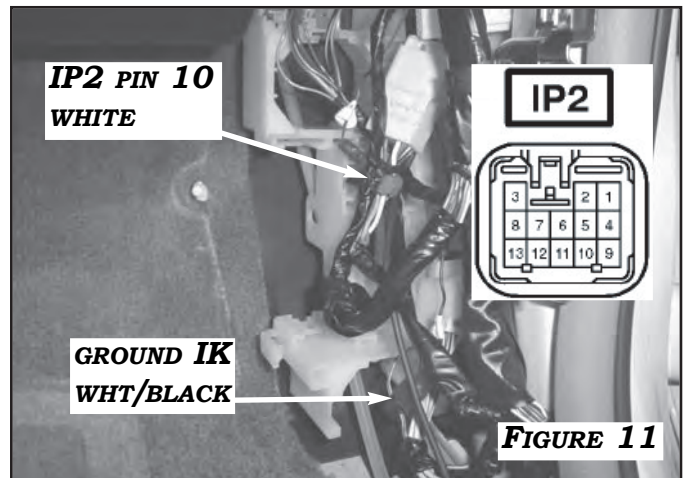


FIGURE 11

NOTE: THE REAR WINDOW ROLLS DOWN. ROUTE THE HARNESS AWAY FROM MOVING PARTS, INCLUDING THE GLASS.

INSTALLATION

MOUNTING CAMERA AND PCB



Installation Temperature



Surface temperature must be between 70° F and 110° F for optimum installation.

1. CLEAN THE RIGHT SIDE OF THE BOTTOM OF THE LICENSE PLATE TRIM PIECE WITH ALCOHOL. MATE THE TRIM PIECE TOGETHER WITH THE REARSIGHT 4RUNNER REAR CAMERA MOUNTING FIXTURE USING THE MOUNTING BOLTS AS A GUIDE AS SHOWN IN **FIGURE 15**. PEEL THE CLEAR LINER OFF OF THE DOUBLE-SIDED TAPE ON THE CAMERA ASSEMBLY AND MOUNT THE ASSEMBLY TO THE TRIM PIECE USING THE FIXTURE FOR ALIGNMENT. BE SURE TO PUSH THE CAMERA ASSEMBLY FIRMLY INTO THE GAP IN THE FIXTURE, AND PRESS DOWN FIRMLY ON THE TRIM PIECE FOR FIVE SECONDS BEFORE RELEASING. REMOVE THE MOUNTING FIXTURE FROM THE TRIM PIECE. ROUTE THE CAMERA HARNESS INSIDE THE TRIM PIECE AND MOUNT THE PCB TO THE BACK-SIDE USING THE SUPPLIED 1X2" DOUBLE-SIDED TAPE AS SHOWN IN **FIGURE 16**.

2. CUT A SLIT IN THE EXISTING TRIM PIECE HARNESS GROMMET AND INSERT THE CAMERA HARNESS. USE THE SUPPLIED SEALING PUTTY WHERE THE HARNESS ENTERS THE GROMMET. INSERT HARNESS AND GROMMET INTO THE REAR DOOR AND REINSTALL THE TRIM PIECE ONTO THE VEHICLE. BE SURE THE HARNESS IS NOT BOUND OR PINCHED. **FIGURE 16**

3. CONNECT **RCA** CONNECTOR AND **DC POWER** CONNECTOR OF CAMERA HARNESS TO THE EXTENSION HARNESS. WRAP **RCA** AND **DC** CONNECTORS WITH FOAM TAPE PROVIDED. PROPERLY BUNDLE AND SECURE EXCESS HARNESS INSIDE OF REAR DOOR. BE SURE HARNESS IS NOT BINDING AND IS CLEAR OF MOVING PARTS.

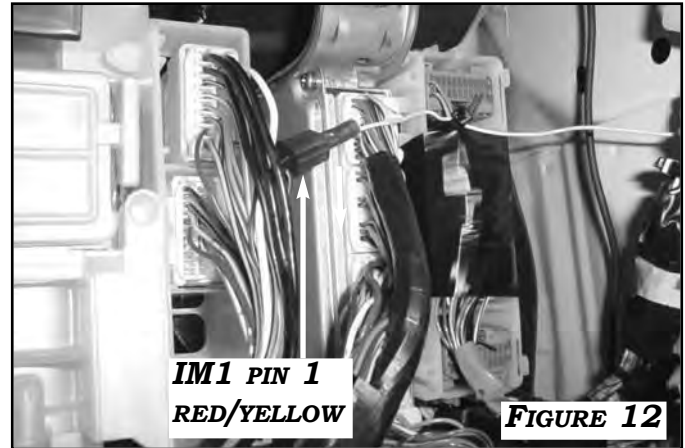


FIGURE 12



FIGURE 13



FIGURE 13A

SEPARATE LEADS OF HARNESS TO PULL THROUGH HOSE GROMMET; USE SOAPY WATER LUBRICANT

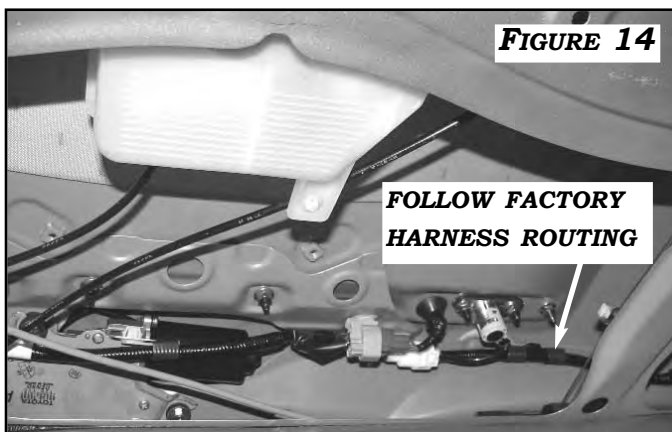


FIGURE 14

FOLLOW FACTORY HARNESS ROUTING

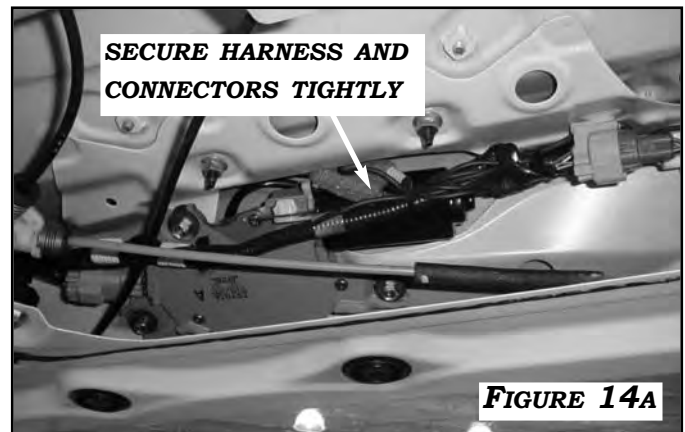


FIGURE 14A

TESTING AND REASSEMBLY

TESTING



1. RECONNECT NEGATIVE BATTERY CABLE AND TORQUE TO **3 FT LBS**. RE-ENTER ANY THEFT DETERRENT INFORMATION, IF APPLICABLE.



2. TURN THE IGNITION SWITCH **ON**. PUT THE VEHICLE IN REVERSE. VERIFY THAT THE REARSIGHT MIRROR IS ON AND THAT THE CAMERA'S PICTURE APPEARS.

3. IF THERE IS NO PICTURE, VERIFY ALL CONNECTIONS ARE SECURE.

REASSEMBLY



1. REINSTALL ALL TRIM PIECES TAKING SPECIAL CARE TO ENSURE HARNESSES AND WIRING CONNECTIONS ARE PROPERLY SECURED.

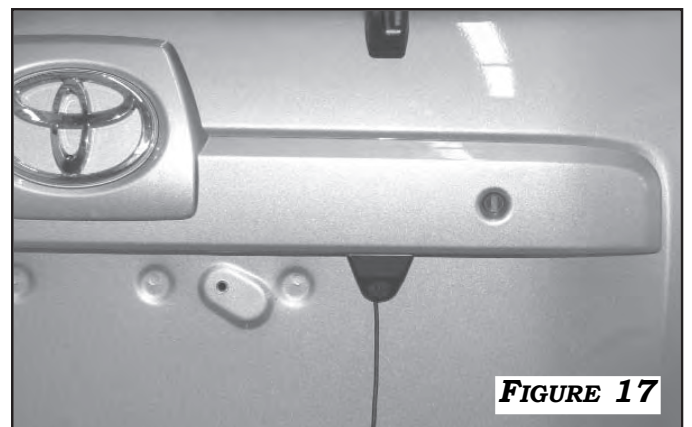
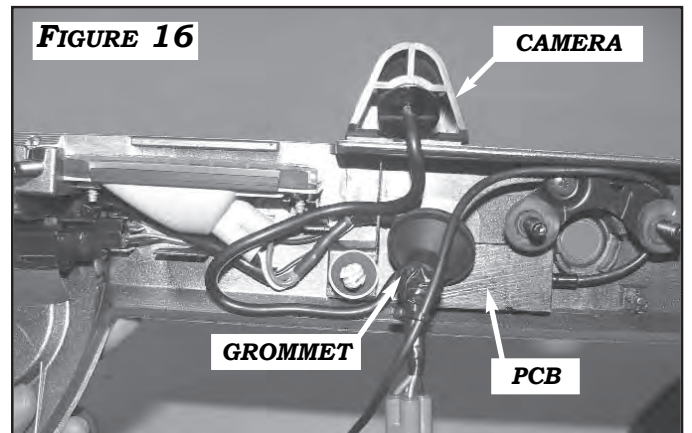
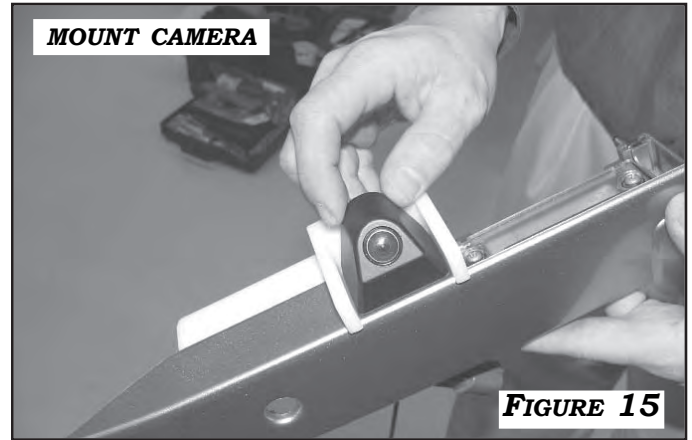
2. BE SURE HARNESS IS NOT PINCHED OR BOUND BY TRIM PIECES.

3. PLACE THE OWNER'S CARD IN THE GLOVE BOX.

4. RECONNECT ALL DISCONNECTED BULBS AND CHECK FOR FUNCTION.

VEHICLE FUNCTION CHECK

AFTER ALL PANELS, COVERS, AND COMPONENTS HAVE BEEN REINSTALLED, THAT WERE REMOVED, TEST THOROUGHLY, ALL MECHANICAL AND ELECTRICAL COMPONENTS DISCONNECTED AND/OR REMOVED FROM THE VEHICLE DURING THE INSTALLATION OF THIS ACCESSORY.





CHECK: _____

LOOK FOR: _____

ACCESSORY FUNCTION CHECKS

**TURN THE IGNITION SWITCH ON
AND PUT VEHICLE IN REVERSE**

**VERIFY CAMERA PICTURE COMES ON. (IMAGE WILL
DISAPPEAR WHEN VEHICLE IS TAKEN OUT OF GEAR)**

**TURN THE IGNITION SWITCH ON
AND PRESS "AUTO" BUTTON**

VERIFY LED LIGHT IS ON IN IGNITION

VEHICLE FUNCTION CHECKS

OVERHEAD MAP LIGHT OPERATION

MAP LAMPS SHOULD TURN ON/OFF

TRUNK RELEASE

VERIFY TRUNK RELEASE HANDLE OPERATES

BACK UP LIGHTS

**VERIFY BACK UP LIGHTS COMES ON WHEN
PLACED IN REVERSE**

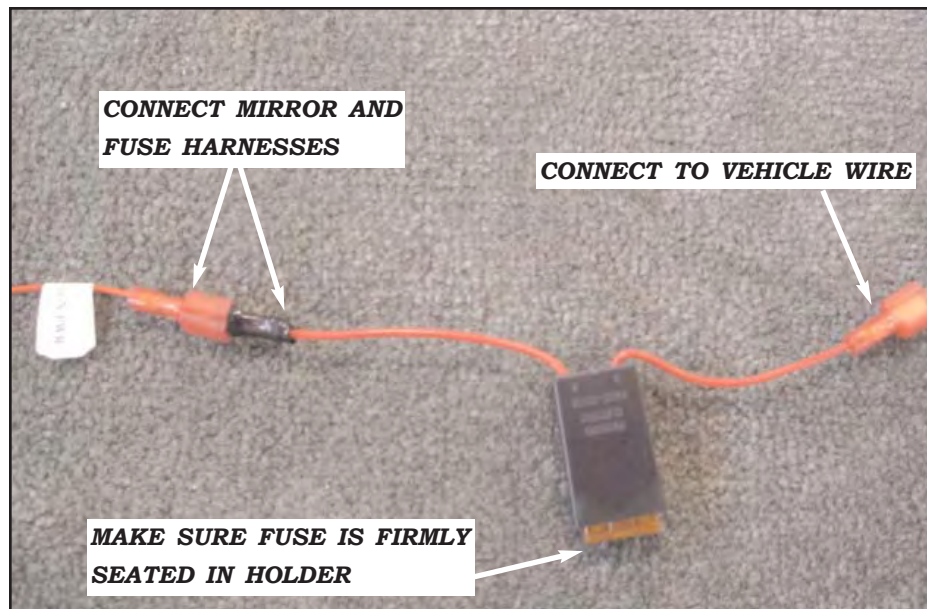
**RADIO OPERATION (CHECK BY PLACING VEHICLE
IN REVERSE GEAR)**

RADIO SHOULD OPERATE NORMALLY

APPENDIX

INSTALLING THE FUSE HARNESS

PRIOR TO CONNECTING THE RED WIRE OF THE REARSIGHT MIRROR POWER HARNESS TO THE SPECIFIED IGNITION WIRE IN THE VEHICLE, CONNECT THE SUPPLIED FUSE HARNESS TO THE RED "IGNITION" WIRE OF THE MIRROR POWER HARNESS BY MATING THE INSULATED CONNECTORS. THEN CONNECT THE OTHER END OF THE FUSE HARNESS TO THE SPECIFIED IGNITION WIRE IN THE VEHICLE.



REARSIGHT CAMERA TEMPLATES

