

# INSTALLATION GUIDELINES for

2904, 2905 2916, 2917 2918, 2919 2960, 2961



# 1990-2005 Mazda Miata, MX5 Zipperless Convertible Tops

PART NO.	DESCRIPTION
2904	1990-97 ONE PIECE DESIGN, ONE PLASTIC WINDOW - NO RAIN RAIL
2905	1990-97 ONE PIECE DESIGN, ONE PLASTIC WINDOW - WITH RAIN RAIL
2916	1990-05 ONE PIECE DESIGN (*2006-ON STYLE), HEATED GLASS - NO RAIN RAIL
2917	1990-05 ONE PIECE DESIGN (*2006-ON STYLE), HEATED GLASS - WITH RAIN RAIL
2918	1990-05 ONE PIECE DESIGN (*2006-ON STYLE), NON-HEATED GLASS - NO RAIN RAIL
2919	1990-05 ONE PIECE DESIGN (*2006-ON STYLE), NON-HEATED GLASS - WITH RAIN RAIL
2960	1990-05 (*1999-05 STYLE) TOP WITH HEATED GLASS - NO RAIN RAIL
2961	1990-05 (*1999-05 STYLE) TOP WITH HEATED GLASS - WITH RAIN RAIL

#### PROFESSIONAL INSTALLATION IS STRONGLY ADVISED

\*2916 - 2919 tops have 2006-On Styling, but will not fit 2006-On models. 2960, 2961 tops have 1999-05 Styling, but will retrofit all earlier models.

#### **INTRODUCTION - READ BEFORE INSTALLATION**

Before beginning top installation read through the guidelines in order to familiarize yourself with the frame, top, vehicle, and installation procedures. For best results we strongly recommend that the top be professionally installed by a reputable trim shop.

#### **IMPORTANT NOTES**

Bow Straps supplied with top are for use on 1990-97 model years, except when using Part Numbers 2904 and 2905 which do not require straps. 1999-2005 factory tops are already equipped with similar straps, which should be reused.

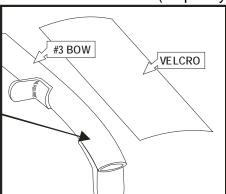
Our redesigned 2916-17 and 2960-61 tops will now fit 1990-05 models. Look for range of years specified on product label.

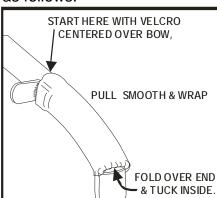
Spacers (lower frame stop risers) are no longer needed, and have been discontinued.

## **SUPPLEMENT TO PAGE 4**

1999-05 Models: Be sure to install Velcro (loop only) as follows.







**1999-05 Models:** Cover #3 bow ends with adhesive back Velcro strips as shown. (Do not trim salvage, wrap over edge of metal bow end and tuck into the holes at the ends.)

#### HARDWARE INCLUDED



17 SPEEDY RIVET POSTS \*

(for 2904, 2916, 2918, 2960 Only)





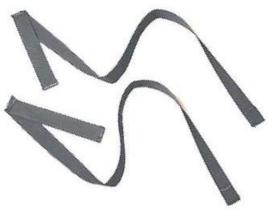
(10 for top, 2 for 99-05 small side straps, 8 for new webbing straps)



STUD SEAL KIT



2 P.S.A. BACK VELCRO STRIPS (for 1999-05 models)



\*\* LH & RH WEBBING STRAPS

(For 1990-97 models, except 2904/2905 tops which do not need straps, and 1999-On models on which original straps should be reused)





2 BOW END CAPS

\* NOT REQUIRED OR INCLUDED WITH COMPLETE TOP WITH RAIN RAIL. \*\* 1999-2005 MODELS ARE ALREADY EQUIPPED WITH BOW STRAPS.

# TOOLS REQUIRED

**AWL** 

DRILL W/ 1/8" & 5/32" BITS (1990-97 Only)
FLAT FORKED PRYING TOOL

RATCHET

SHORT EXTENSION 10mm. DEEP SOCKET

10mm. SHORT SOCKET

POP RIVET GUN

PHILLIPS SCREW DRIVER

FLAT SCREW DRIVER (2904, 2916, 2918, 2960 only)

SIDE CUTTERS (2904, 2916, 2918, 2960 only)

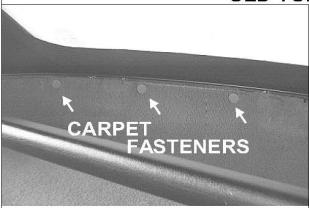
**BALL PEAN HAMMER** (2904, 2916, 2918, 2960 only)

ANVIL BLOCK (2904, 2916, 2918, 2960 only)

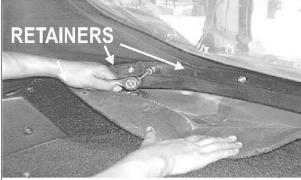
**BRUSH APPLICATOR** 

3M 08011 WEATHERSTRIP ADHESIVE

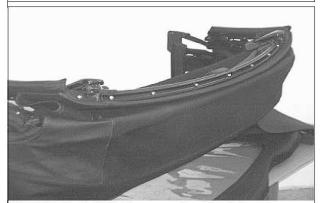
#### **OLD TOP REMOVAL**



**CARPET FASTENERS:** Use a forked prying tool to remove the 12 carpet fasteners.



**RETAINERS:** Pull back carpet to access the 3 retainers. Use a 10mm socket to remove the 3 retainers. Remove the 2 push fasteners from the ends of the rain rail and pull top from studs.



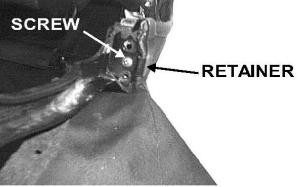
**HEADER BOW:** Remove the 7 retainer screws and 4 weather seal (2 each) screws,



**WEATHER SEALS:** Remove the weather seals from their retainers.



**B PILLAR SEAL FASTENERS:** Pull the 2 push type fasteners from lower B pillar.



**B PILLAR RETAINER:** Remove the screw and retainer from the lower B pillar.

# **IMPORTANT**

MAZDA PART NOS.

( RIGHT SIDE )
NA01-R1-272
(shown)
( LEFT SIDE )
NA01-R1-271

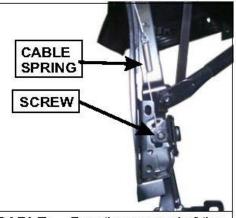


B PILLAR RETAINER: Early models may not have the B pillar retainer shown above.
THESE MODELS MUST BE UPDATED!



**SEAL RETAINERS:** Remove the weather seal retainers and the 4 rivets holding the the 2 flaps.

#### OLD TOP REMOVAL



**TENSION CABLE:** Free the rear end of the cables from the B-piller by removing the screw. The tension cables can be pulled back through their sleeves when removing the top from the frame. Inspect and replace cables if necessary

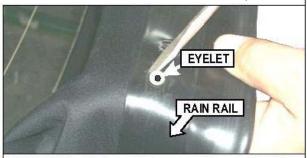


**LISTINGS**: Use a flat forked prying tool to pry the listing away from the bow just enough to free the listing from the bow.

**CAUTION - DO NOT KINK THE RETAINERS.** 

#### **REMOVE and REINSTALL RAIN RAIL; 2904, 2916, 2918, 2960 Only**

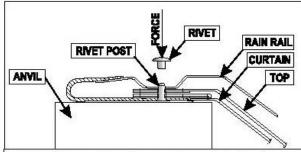
CAREFULLY EXAMINE THE RAIN
RAIL BOTH BEFORE REMOVAL
AND AFTER INSTALLATION.
IF THE BLACK ABS PLASTIC IS
BROKEN OR CRACKED IT MUST BE
REPLACED WITH A NEW ONE.



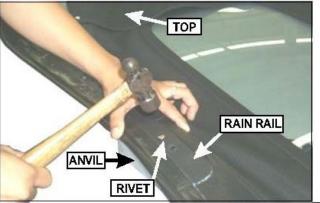
RAIN RAIL: Using a flat screw driver pry back the 15 eyelets that hold the rain rail to the old top.



**RAIN RAIL**: Using side cutters, cut and remove the 15 rivets from the rain rail and remove the rain rail from the old top.



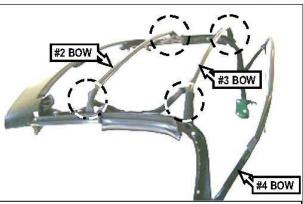
**RAIN RAIL**: Align the rivet holes in the top assembly with the corresponding holes in the rain rail over using the speedy rivet posts.



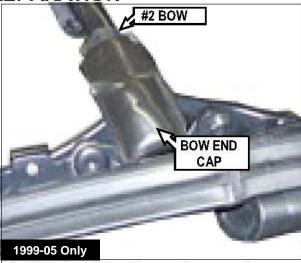
**SPEEDY RIVETS:** Use a ball pean hammer and anvil to *carefully* join the speedy rivet to the speedy rivet post.

CAUTION - USE LIGHT GENTLE TAPS TO FLARE THE RIVETS A LITTLE AT A TIME AS OPPOSED TO USING HEAVY BLOWS. THE BLACK ABS PLASTIC MATERIAL IS VERY BRITTLE AND THE RAIN RAIL WILL LEAK IF IT IS CRACKED OR DAMAGED.

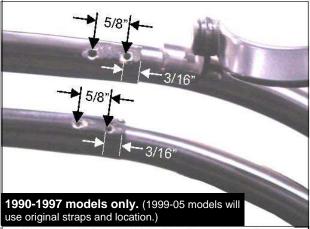
#### FRAME PREPARATION



**FRAME:** Examine the ends of bows #2 and #3 for potential cutting or abrading conditions such as rough welds, burrs, sharp corners etc. and Correct the condition by filing it smooth. Close the gap between the listing retainer and the #3 bow. For 99-05 models also refer to Supplement on inside of front cover, before moving to next step.



**FRAME:** Install the 2 bow end caps on the ends of the #2 bow.



**FRAME**: Drill two 5/32" holes through each end of the #3 and #4 bow listing retainers for webbing strap insertion as shown. Be sure the drill goes through the retainer and the wall of the bow. Do not drill all the way through the bow itself.

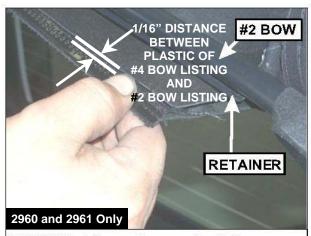


**WEBBING STRAPS:** Insert both ends of the short segment of the strap into the ends of the #3 and #4 bow listing retainers as shown. Install the pop rivets through the retainer and strap, and through the wall of the bow.

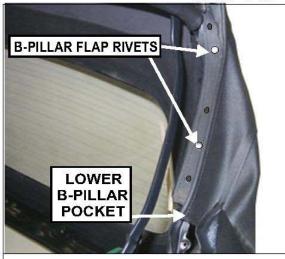
#### **NEW TOP INSTALLATION**



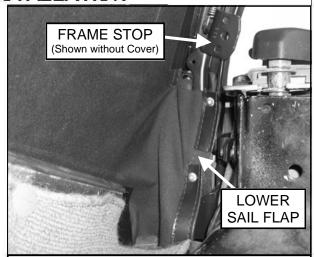
**LISTINGS:** Align the front edge of #2 listing with the rear edge of the plastic strip on the #4 listing, make sure the side edges are in alignment and press the velcro together.



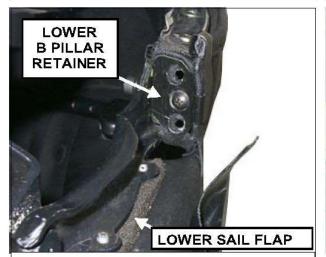
**LISTINGS:** After making sure the listings are aligned, drape the top over the top of the #3 and #4 bow and pull the joined listings under the #2 bow for insertion into the #2 bow listing retainer.



**B-PILLAR:** Fit the lower b-pillar pocket over the lower b-pillar, align and rivet the b-pillar flap to the b-pillar as shown.



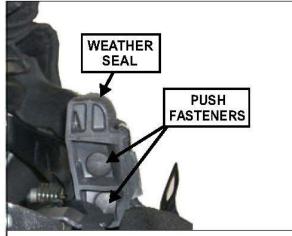
**LOWER SAIL PANEL:** Pop rivet the lower portion of the sail panel to the frame behind the lower B-pillar as shown.



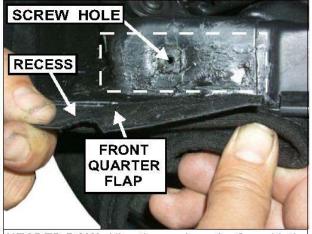
**B-PILLAR:** Align holes and install lower b-pillar retainer to the underside of the B-pillar as shown.



**B-PILLAR:** Install the weather seal retainer to the B-pillar as shown.



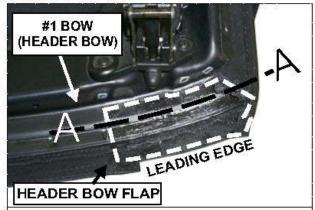
**B-PILLAR:** Install weather seal to the lower b-pillar with the 2 push fasteners. Then insert the weather seal into the interlocking B-pillar retainer



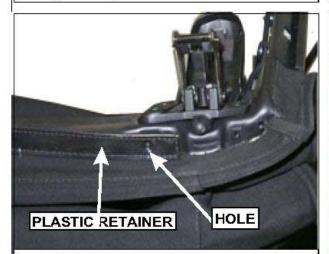
**HEADER BOW:** Align the mark on the flap with the screw hole in the header bow, and align the recess in the flap over the radius in the header bow.



**HEADER BOW**: Use 3M 08011 weatherstrip adhesive and a small applicator brush to glue the front quarter flaps to frame as shown.



**HEADER BOW:** Apply adhesive to the outlined area shown on the #1 bow and flap. When tacky pull the flap forward so the plastic retainer holes will be in alignment with the corresponding holes in the #1 bow, and the leading edge of the flap will lay flush against break line A-A.



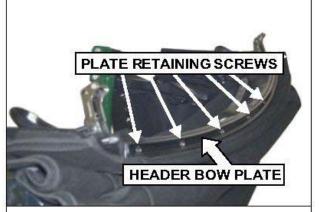
**HEADER BOW:** Align the retainer holes with corresponding hole in the #1 bow. Press the two coated surfaces together firmly and smooth out any wrinkles in the flap.



**DOOR GLASS SEAL RETAINER**: Reinstall the door glass seal retainer with the (3) screws.

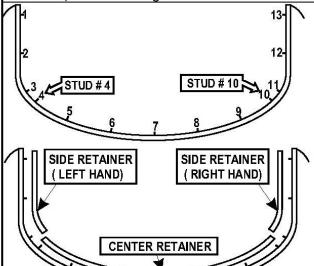


**DOOR GLASS SEAL**: Reinstall the door glass seal into the interlocking retainer. Secure the front of the seal to the #1 bow with the (2) screws.

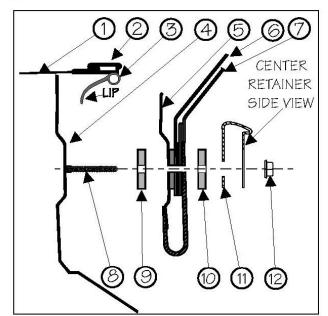


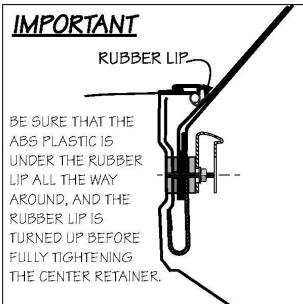
**HEADER BOW PLATE**: Align the holes in the plastic retainer with the corresponding holes in the header bow. Reinstall the header bow plate with the 7 screws.

**RAIN RAIL, STUD SEALS, WEBBING STRAPS:** Use the diagrams and images below as a reference guide to install the rear portion of the top. You may choose to modify the sequence in which some of the steps are performed. It is important however to make sure all steps are done to prevent leakage into the vehicle.



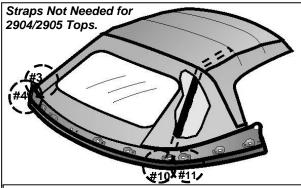
- (1) BODY
- 2) BELT MOLDING
- 3 BELT MOLDING WEATHER SEAL
- (4) INNER PANEL (SHEET METAL)
- 5 RAIN RAIL (ABS PLASTIC & VINYL)I
- (6) TOP (SAIL/WINDOW SECTION PANEL)
- 7 WINDOW CURTAIN
- (13 TOTAL)
- 9 STUD SEAL (13 OUTER)
- O STUD SEAL (13 INNER)
- (1) RAIN RAIL RETAINER (3 SECTIONS)
- 2 RAIN RAIL RETAINER HEX NUT (10 mm)







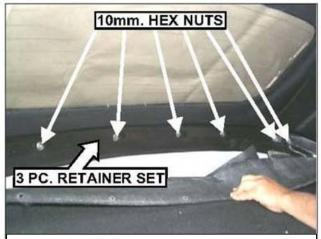
**RAIN RAIL:** 1. Place the 13 outer seals over the studs. 2. Set the rain rail into position with the rain rail over the studs. 3. Install 13 inner seals.



**WEBBING STRAPS:** Before installing inner stud seals install webbing strap long ends between rain rail, over studs #4 and #10 on 1999-05 models. Install over studs #3 and #11 on 1990-97 models



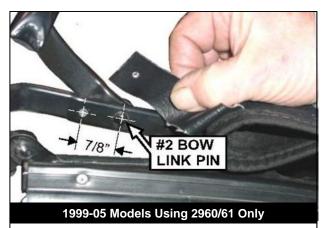
WEBBING STRAPS: Be sure to install the 2 webbing straps over the correct studs. The two straps will be at the ends of the center retainer.



**RETAINER SET:** After the stud seals and webbing straps have been placed on the studs, reinstall the retainer nuts—hand tight only, latch the top, then use a 10mm Socket to tighten the retainer nuts. Use caution so as not to damage the threads.



**CARPET FASTENERS:** Align the 6 holes in the lower edge of the window curtain with the corresponding holes in the retainer and carpet. Reinstall all of the carpet fasteners.



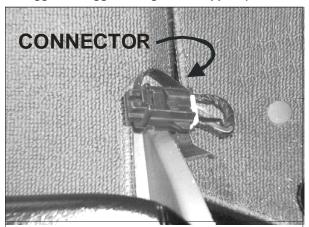
**SIDE STRAPS:** Use original screws to attach side straps (L&R) to the frame, located 7/8" in front of the #2 bow link pin. *Side straps can be cut off when installing 2960/61 on 1990-97 models* 

### **HEATER DEFOGGER CONNECTION FOR 2916/17 & 2960/61**

(Instruction assumes vehicle is wired for rear defogger. Defogger wiring is not supplied)

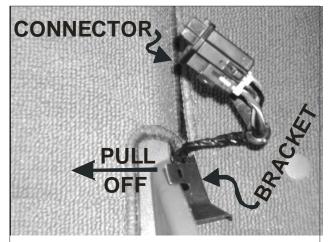


Jumper attached to glass is for 99-05 models. Remove it when installing top on 90-97 models.

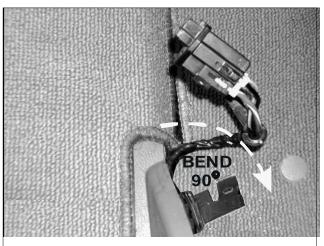


Locate the defogger connector on the trim panel behind the drivers seat.

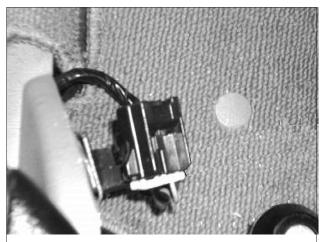
#### **HEATER DEFOGGER CONNECTION CONTINUED**



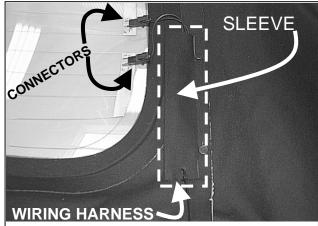
Pull connector in direction shown to remove from mounting bracket tab.



Use pliers to bend bracket as shown.



Reinstall defogger connector to the mounting bracket.



Route wiring harness through the sleeve as indicated, and connect to the heater grid connectors.



Connect wiring harness to defogger connector.

