



Signal® Mirror Installation Instructions

2005 -2015 Toyota Tacoma



THE safety accessory of the 21st Century.™

P/N 210-0115-0

Rev. A4 (3/11/15), BTV

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PROFESSIONAL INSTALLATION RECOMMENDED

Warranty does not cover damage to the vehicle or mirror housing due to improper installation. Muth Mirror Systems, LLC (MMS) assumes no responsibility with regard to the accuracy of this information. MMS assumes no liability or responsibility resulting from improper installation, even in reliance upon this information. Proper installation is the responsibility of the installer. It is your responsibility to verify any circuit before interfacing with it using a digital multimeter.

INCLUDED ITEMS:

- 1 left and 1 right *Signal*® mirror
- 1 left and 1 right wire harness
- 2 wire taps
- 2 foam wrappers
- 2 housing connectors
- 2 ring connectors
- 1 instruction manual
- 8 cable ties (Not Required)
- 1 dielectric grease (Not Required)

REQUIRED TOOLS:

- Ratchet with extension or ratcheting screwdriver
- 11mm socket
- Socket wrench
- T-25 Torx wrench
- Large slotted screwdriver
- Small slotted screwdriver
- Large Phillips screwdriver
- Small Phillips screwdriver
- Small pry bar
- Gopher rod (wire)
- Electrical tape
- Wire crimper and stripper
- Needle nose pliers
- Multimeter or wire tester
- Sturdy gloves
- Safety glasses or goggles
- Utility knife

Please read instructions prior to installation.

PROBLEMS OR QUESTIONS?

Technical Assistance is available by calling
Muth Mirror Systems Technicians at:

1-800-844-6616

Monday through Friday
Between 8:00 a.m. and 5:00 p.m. CST

Or through the Muth web site: www.muthco.com

Or via E-mail: techsupport@muthco.com

DOOR PANEL REMOVAL



Start with opening the driver's side door and lowering the window (A). Unsnap corner plastic triangular cover (B). Carefully remove door handle cover using a slotted screwdriver (C). Remove screw in door handle with a Phillips screwdriver (D). With the slotted screwdriver, remove plastic covering on the grab bar (E). Release the revealed screw using a Phillips screwdriver. Using a plastic pry bar, carefully unsnap and lift the control console (F). Disconnect all wiring connections behind control console and remove it.

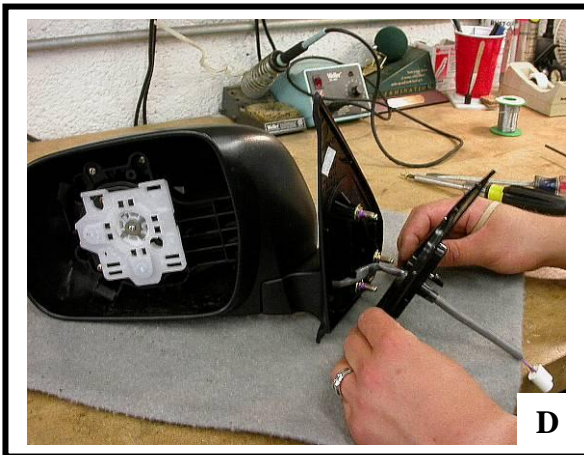
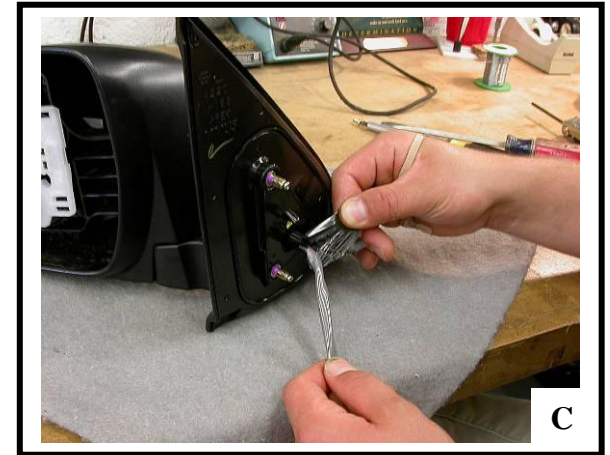
DOOR PANEL & MIRROR HOUSING REMOVAL CONTINUED



Using a small Phillips screwdriver, push in the center post on the plastic dowel pin and release the dowel pin from the door panel (G). Carefully pry on the lower outboard corner of the door panel using a small plastic pry bar (H). Continue prying around the door panel until it unsnaps from the door frame. Lift up and pull door panel out a few inches away (I). Disconnect tweeter and wiring connection. Remove door panel and set it aside. Disconnect mirror harness (J). Secure the mirror housing with one hand, remove the (3) nuts holding the mirror housing to the door frame using a 11mm socket (K). **WARNING: Not securing mirror housing with one hand before loosening the nuts could cause the mirror housing to fall and become damaged.** Carefully remove mirror housing from door frame and set mirror housing on a cloth covered surface.

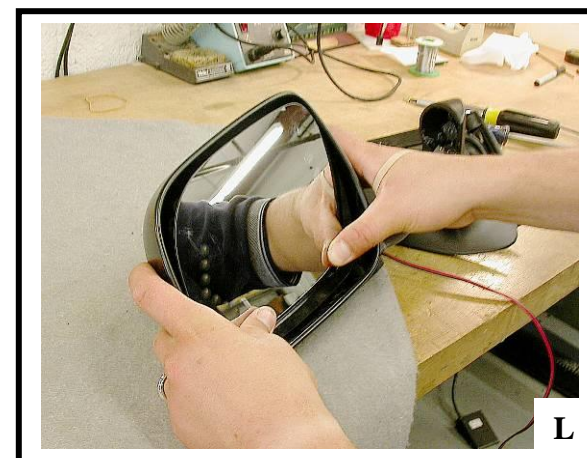
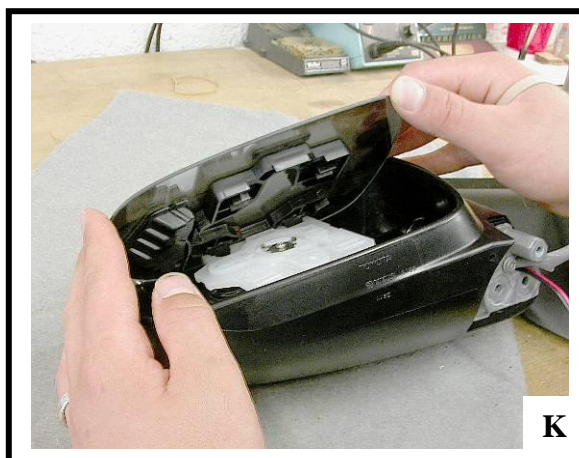
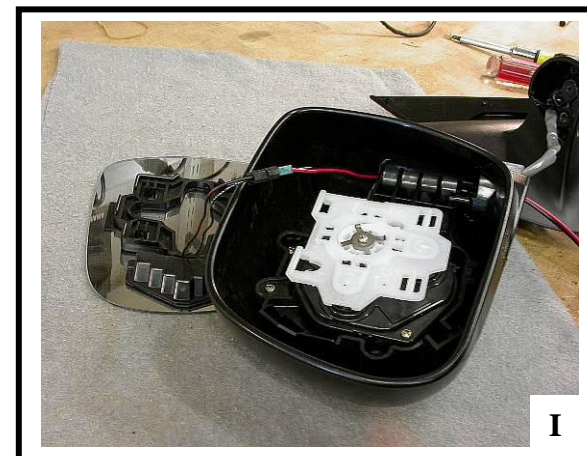
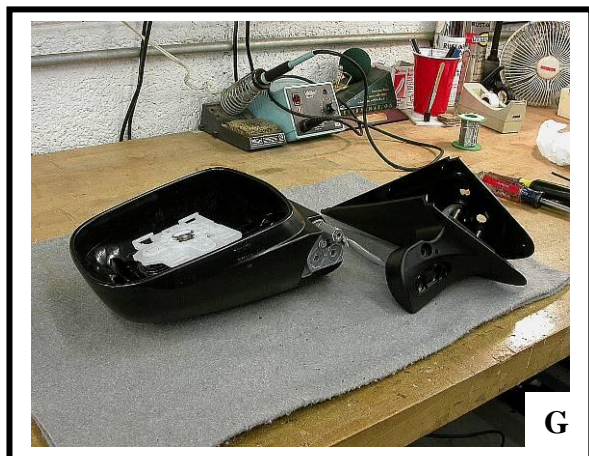
MIRROR REPLACEMENT

WARNING: Safety glasses and sturdy gloves are required for mirror replacement.



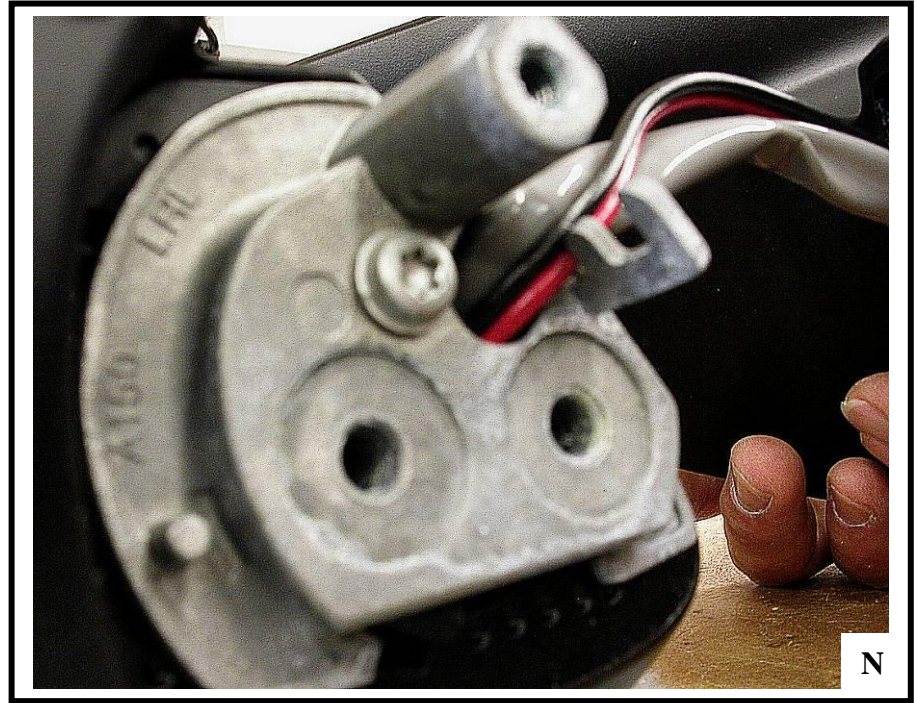
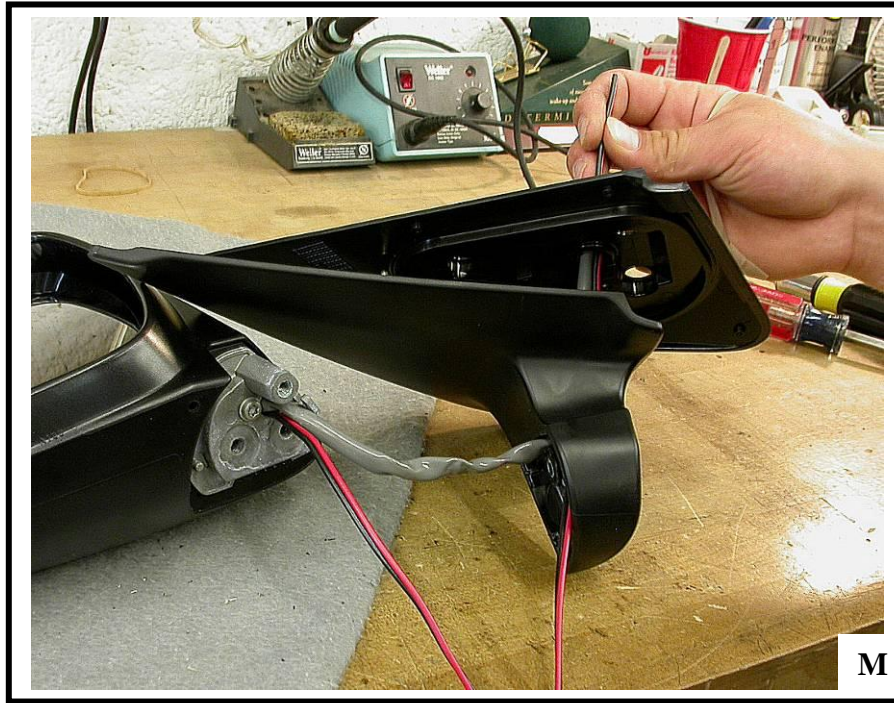
Push down on the upper outboard edge of glass until mirror pivots fully outward. Insert a large slotted screwdriver in between the mirror backing plate and motor actuator (A). Carefully pry and twist screwdriver until original mirror pops off. **If heated**, disconnect heater wires from heater terminals and remove mirror. Unscrew and release the strain relief on the wire harness (B). Un-wrap the electrical tape around the wire harness (C). Remove the plastic insulation on the housing sail (D). Turn the mirror housing over so you are looking at the bottom of the mirror housing. Carefully pry open the plastic cover (E). Unscrew and remove the (2) screws on the bottom of the mirror housing using a T-25 Torx wrench (F).

MIRROR REPLACEMENT CONTINUED



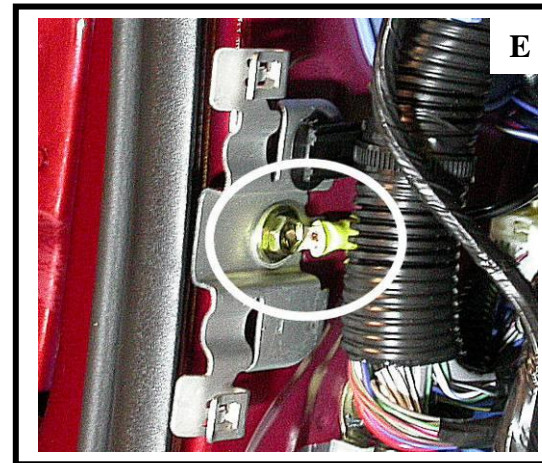
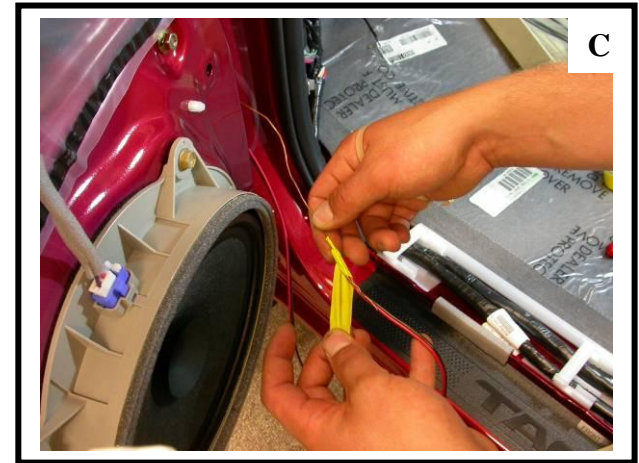
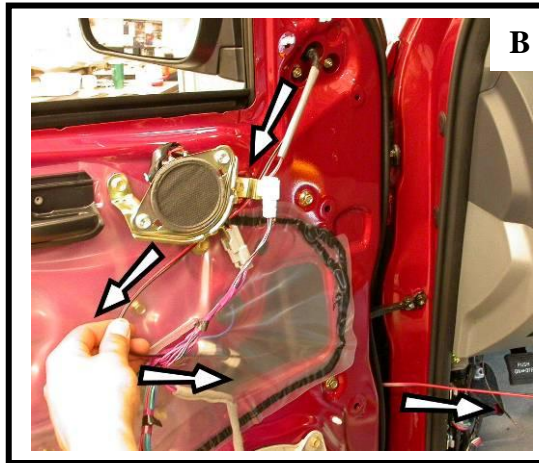
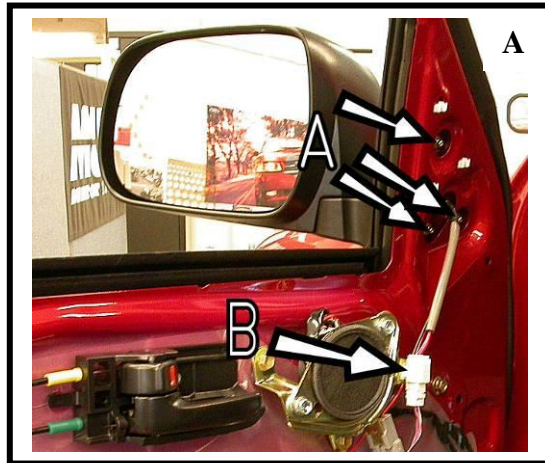
Remove sail from mirror housing (G). Remove the revealed remaining screw on mirror housing with a T-25 Torx wrench (H). Remove sail mount from mirror housing. Using the shorter of the two harnesses from the supplied wiring kit, start from inside mirror housing, guide the end without the connector thru the narrow passage down and out of the mirror housing. **TIP: A gopher rod may be use to guide the Signal® mirror wire harness thru narrow passage.** Pull the Signal® mirror wire harness thru leaving about 4"-6" of slack inside mirror housing for connection purposes. Re-attach sail mount back onto mirror housing. Connect the mating connectors on the new Signal® mirror and the Signal® mirror wire harness (I). **If heated,** reconnect the heater wires to the heater terminals on the back of the new Signal® mirror. **NOTE: There is no polarity so the heater wires may be interchanged.** Wrap one of the supplied foam wrappers on the Signal® mirror mating connectors (J). Carefully tuck all wiring behind motor actuator. **Not doing so, could result in wiring interfering with mirror travel.** Align and insert the tongues on the motor mount [black] with its corresponding slots on the motor actuator [white] (K). With the palm of your hand, slowly push down on the glass until the new Signal® mirror snaps into position. Press down on all sides to ensure the new Signal® mirror is fully seated and functional (L).

MIRROR REPLACEMENT CONTINUED



Continue routing the *Signal*® mirror wire harness thru the sail and plastic insulation (M). **CAUTION:** When replacing the sail, make sure to position all wire harnesses as shown on (N). Not doing so could result in wiring harnesses being crushed by the sail, when re-assembling, causing shortage in the long run. Re-assemble the sail back onto the mirror housing. Replace the plastic insulation onto the housing sail.

WIRE ROUTING



WARNING: When routing wire into vehicle, it is extremely important to not let wire get pinched or crushed at any time. Avoid window track and sharp edges at all times. Not doing so may cause circuit shortage problems in the long run.

Guide all wire harnesses thru the hole in the door frame and position the mirror housing assembly onto the mirror mount. Attach the mirror housing to the mirror mount with three mirror mounting nuts (AA). **WARNING!** Do not over tighten the mirror mounting nuts. Reconnect mirror harness (AB). Find the rubber boot located between the door frame and vehicle frame. Push in and pull out on both ends of the rubber boot. Guide the *Signal*® mirror wire harness alongside original wire harness down and thru clear protective covering and out the hole vacated by the removal of the rubber boot (B). Remove floor trim and kick panel. Tape the open end of the *Signal*® mirror wire harness to the gopher rod (C). Push the gopher rod thru the rubber boot, thru the hole on the vehicle frame and into the vehicle (D). Gently pull the *Signal*® mirror wire harness thru, removing any slack in the *Signal*® mirror wire harness. Cut the tape with a utility knife and remove the gopher rod. Using a utility knife, slice between the red and black wire on the *Signal*® mirror wire harness. Gently and carefully pull on each wire to separate the two. Locate the grounding bolt near the kick panel area. Route the black wire on the *Signal*® mirror wire harness to the grounding bolt location. Cut the black wire to length making sure enough slack is left for splicing. Strip about 3/8" off of the black wire. Bend about half of the stripped portion of the black wire back onto itself. Insert the black wire into one of the supplied ring connectors and crimp it into place. Secure the ground ring to the metal framework of the vehicle using the bolt as shown (E).

WIRE ROUTING CONTINUED



Before proceeding, please read remainder of instructions for information regarding wiring identification and options.

The vehicle's electrical wirings are located on the driver side, behind the fuse box. To gain access to the wiring location, remove the stash tray on the knee panel (F). Route the red wire on *Signal*® mirror wire harness on the driver side to the wiring location behind fuse box.

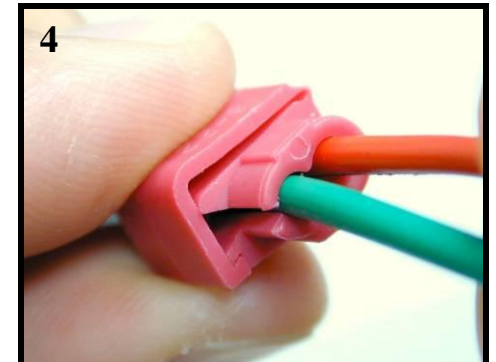
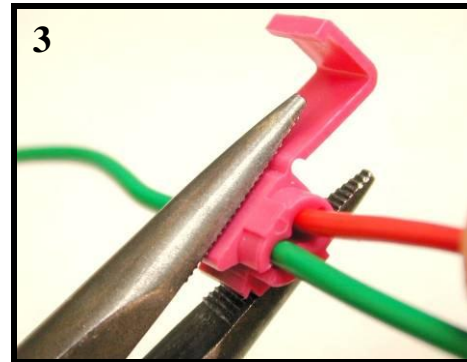
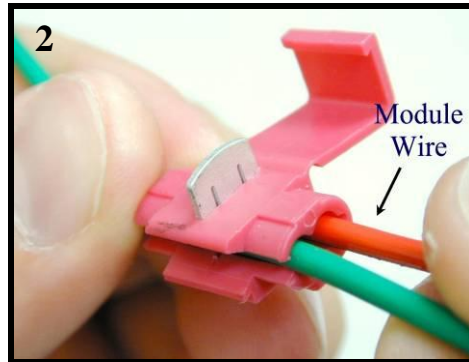
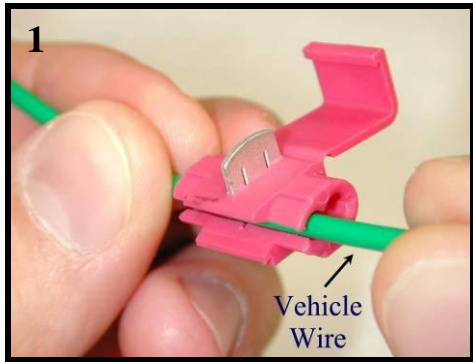
Repeat all of the previous steps to replace the factory mirror on the passenger side door with the new *Signal*® mirror.

WIRE IDENTIFICATION



NOTE: On models without daytime running lights, the BLUE w/ BLACK STRIPE and the BLUE w/ YELLOW STRIPE trigger both the front and rear turn indicators.

The vehicle's electrical wirings for the TURN directional are located behind the fuse box on the driver side knee panel. **FOR MODEL YEARS 2005-2011:** Locate the BLUE w/ BLACK STRIPE wire behind fuse box. Turn the ignition key so that electrical power is on and activate the driver side turn indicator. Probe the wire with the wire tester to verify that flashing turn directional power is present. Label that wire as 'driver side indicator'. Find the BLUE w/ YELLOW STRIPE wire behind the fuse box. Turn the ignition key to on. Activate the passenger side turn indicator. Probe the wire with the wire tester to verify that flashing turn directional power is present. Label that wire as 'passenger side indicator'. **FOR MODEL YEARS 2012-2015:** Locate the YELLOW wire behind fuse box. Turn the ignition key so that electrical power is on and activate the driver side turn indicator. Probe the wire with the wire tester to verify that flashing turn directional power is present. Label that wire as 'driver side indicator'. Find the LIGHT GREEN wire behind the fuse box. Turn the ignition key to on. Activate the passenger side turn indicator. Probe the wire with the wire tester to verify that flashing turn directional power is present. Label that wire as 'passenger side indicator'.



USE THE INCLUDED WIRE TAPS AND FOLLOW THE FOUR STEPS ABOVE TO SPLICE INTO THE TURN INDICATOR WIRES

- A. Make sure the harnesses are routed securely and enough slack is left for splicing.
- B. Splice the BLACK WITH RED TRACE (RED SHOWN) wire from the driver side harness into the wire previously labeled 'driver side indicator'.
- C. Splice the BLACK WITH RED TRACE (RED SHOWN) wire from the passenger side harness into the wire previously labeled 'passenger side indicator'.
- D. Activate each turn indicator to verify that the *Signal*® mirrors are working properly.
- E. Reconnect all original wiring. Turn the ignition power to on, check to verify all features are working properly.
- F. Replace the plastic door frame moldings, trim, door panels, and all accessories.

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WARRANTY STATEMENT

The Signal® Mirror is warranted to be free from defects in materials and workmanship for a period of three years or 36,000 miles (whichever comes first) from date of sale to original purchaser. This warranty excludes labor, broken glass, or other situations that cause harm to the product after it has been shipped from the factory, such as damage, unreasonable use, modifications, or alterations. In the event of a defect, Muth reserves the right to evaluate the problem through Quality Control and, at Muth's discretion, replace the defective product. Any warranty or replacement part will be charged to the customer when shipped. Credit will be given when the defective part is returned to and received by Muth, and the replacement is warranted.

Muth products are protected by these, and other pending, United States Patents: 6,076,948; 6,257,746; 7,104,676; 7,327,321; 6,749,325; 7,241,037; 7,192,172; 7,273,307; 7,416,318; 6,045,243; D394,833; D409,540; D428,373; D426,506; D430,088; D426,507; D428,372; D429,202; D428,842; D425,466; D427,128