BRANDMOTION
seamless vehicle personalization

INSTALLATION INSTRUCTIONS

OEM Lip Mount Camera with Prismatic Mirror (Kit part number 9002-8720)

Please read thoroughly before starting installation and check that kit contents are complete.

Items Included in the Kit:

- Manual Dimming Mirror with 3.5" Video Display
- Mirror Harness
- Bubble bag containing:
  - Camera with Mount
- Chassis Harness
- Zip lock bag containing:
  - 2 Rubber Well Nuts
  - 2 Bolts
- Zip lock bag containing:
  - These Instructions
  - Self-adhesive Template

Tools & Supplies Required:

- T20 Torx Bit
- Phillips Screwdriver
- Center Punch
- 5/16" Drill Bits
- 7/8" or 22mm Center Hole Saw
- Power Drill
- Deburring Tool or Round File
- Multi-meter or computer safe test light
- Wire Ties or Electrical Tape
- Wire Crimper
- Ground Eyelet (Recommended)
- Rust Inhibitor (Recommended)
- Soldering Iron (Recommended)
- Solder (Recommended) or T-taps
- Plastic Trim Removal Tool
- Mirror Removal Tool # OTC8200 or Brandmotion part # CTAA585 (Required for non-screw type mirrors)
- Vehicle service manual (If needed)

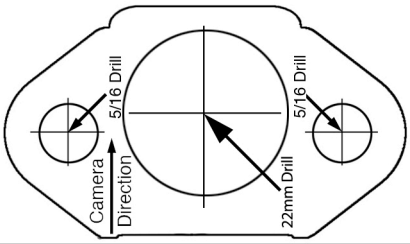
Safety Precautions:

- Work in a well ventilated area that is clear of obstructions.
- Secure vehicle with tire chucks in both front and rear of tires.
- Turn vehicle accessories OFF and ensure ignition key is in OFF position.
- Wear safety goggles and snug fitting clothes.
- Use tools only for their intended purpose and which are in good repair.
- Only perform this task if confidence, skill, and physical ability permit.

NOTE: We strive to provide accurate and up-to-date installation instructions. For the latest full color instructions, please visit www.brandmotion.com

Step 1: Place Camera Mount in desired position to confirm fitment. (**IMPORTANT**: Some states prohibit items blocking the vehicle license plate; check local authorities to confirm legal status for your specific application).

Step 2: Peel adhesive backing from supplied Camera Mount Template and apply to the desired location making sure that the camera direction is correct.



NOTE: If self-adhesive Template is missing or damaged, cut out the image above and affix with Masking Tape.

Step 3: Use a Center Punch to mark the centers of the required three holes. NOTE: If your vehicle has a liftgate panel/trunk trim cover, it must be removed.

Step 4: Drill two 5/16" holes for the camera mounting bolts and one 7/8" hole for the camera harness**.** Use a Deburring Tool or Round File to smooth edges.

Step 5 (if necessary): Using a 5/8" drill bit, drill an opening in the trunk or liftgate for the head of the Camera Harness to pass through. Insert Camera Harness head through hole so that the gray connector end of the Camera Harness is inside the trunk or liftgate. (**RECOMMENDED:** Protect Camera Harness with a rubber grommet or by applying a small amount of silicone caulk to the area that comes into contact with the edges of the hole. Additional recommendation: If drilling through sheet metal, apply a Corrosion Inhibitor.).

Step 6: Mount the Camera using the supplied hardware. Insert the two Rubber Well Nuts into the outer 5/16" camera mount holes.

Step 7: Thread the two supplied Bolts through the Camera Mount and into the Well Nuts using a Phillips Screwdriver but do not tighten the Bolts all the way down just yet.

Step 8: Determine location of vehicle Ignition power and Ground. Using a vehicle specific service guide/wiring diagram and a multi-meter or computer-safe test light, locate which side of the vehicle contains the wires into which you will connect Chassis Harness wiring (see chart below).

Chassis Harness Connection Chart

Wire Color	Polarity	Function	Description	Location note
Red	12v **+**	Ignition controlled power	This lead displays 12 volt + when the key is in the RUN position	Commonly found on main Ignition harness.
Black	(–)	Ground	Chassis ground	A ground bolt is commonly found in the front kick panel area with other wires attached.
Green	12v +	Reverse trigger	This lead is activated when the vehicle is engaged into Reverse	Commonly found in front kick panel area on harness coming from rear of vehicle.*
*If Reverse cannot be located, connect BOTH the Red and Green wires to Ignition power.				

Step 9: Route Camera Harness towards the side of the vehicle that supplies power.

Step 10: Connect Camera Harness to supplied Chassis Harness. The optimal location for this junction may occur at the top of the liftgate or the inner edge of the trunk. (**Note:** Most vehicles have existing wires passing through this area; use this route if at all possible).

Step 11: Route Chassis Harness forward. It may be necessary to remove sill plates, pillar covers, seat bases, side panels, etc. using a Plastic Trim Removal Tool. In some cases, seatbelt bolts must be removed. (**CAUTION:** Any bolts removed for safety devices must be retightened to manufacturer's torque specifications).

Step 12: Secure Camera Harness to existing vehicle wiring. This will minimize chance of binding or otherwise damaging the harness. **RECOMMENDED:** Wire Ties or Electrical Tape.

Step 13: Remove vehicle inside rearview mirror. Most OEM mirrors are secured using a T20 Torx screw. Loosen the screw and slide the mirror up; do not twist. **NOTE:** some Ford vehicle mirrors are not secured with a screw and require Mirror Removal Tool # OTC8200 or Brandmotion part # CTAA585.

CAUTION: Removing the mirror can cause damage to the windshield.

Step 14: Slide supplied Mirror down onto windshield tab and secure using a T20 Torx Driver. This mirror has a Wedge/ D-tab style mounting base. Please check our compatibility chart to make sure it is compatible with your vehicle (adapters are available for specific applications separately).

IMPORTANT: Torque for the mirror screw that attaches to the windshield tab is 1.8 Nm (16 lb-in) and cannot exceed 2.2 Nm (19.5 lb-in).

Step 15: Insert 16-pin mirror connector of supplied Mirror Harness into Mirror.

Step 16: Route Mirror wiring. Tuck the harness beneath the vehicle headliner and down the A-pillar toward the Chassis Harness which you installed previously.

Step 17: Connect Mirror Harness as follows:

Red - Ignition controlled power 12v+ when key is turned ON and 14.4v or better when vehicle is running.

Black - Ground (**RECOMMENDED**: Add an Eyelet and secure to chassis with a sheet metal screw or with a nut on an existing stud.).

Green - Connect to Reverse + power (reverse lamp)

RECOMMENDED: Solder & cover with Heat Shrink Tubing or T-taps as optional connection method.

Mirror Voltage Requirement: The Mirror must see a voltage of 12.5 DC or better on the Reverse trigger lead. In the event that the signal is too low the signal quality may be affected drastically when the vehicle is running.

In order to correct this, Reverse voltage must be raised using a Single Pull Dual Throw Relay.

Relay Wiring (if required)	
30	To Mirror Reverse trigger (Green lead)
85	Chassis Ground (–)
86	Reverse trigger from vehicle (reverse lamp)
87	High current Ignition controlled power lead (+)
87a	Not used

Connect rest of the Mirror Harness as indicated in Step 20.

For Ford vehicles only: If the vehicle has a separate display on the instrument panel for the compass and it displays – – after the OE mirror is removed you must follow online steps in Section 6 of instructions 1008-9520 in order for it to function again.

Step 18: Connect supplied Chassis Harness RCA to supplied Mirror Harness RCA.

Step 19: Test system. Inspect that all connections are proper and secure. Clear all loose items removed from the area around the vehicle and turn ignition key ON to test system. Once reverse gear is engaged the camera image should appear on the Mirror.

Step 20: Secure Chassis Harness and Mirror Harness with supplied Wire Ties. If necessary, coil excess harness wire and secure with Wire Ties. Attach to existing vehicle wiring where possible.

Step 21: Adjust camera aim. With the aid of an assistant, move Camera to desired view, and tighten the screws that hold the Camera in place.

Step 22: Reassemble vehicle. Follow your disassembly steps in reverse order, taking care not to bind the harness wiring when reinstalling

Pinout Reference Chart			
PIN #	**FUNCTION**	**CAMERA HARNESS COLOR**	**CHASSIS HARNESS COLOR**
1	Video (+)	Yellow	White
2	Shield	White	Blue
3	Reverse	Brown	Green
4	Video (–)	Grey	Brown
5	Ground	Black	Black
6	Ignition	Red	Red