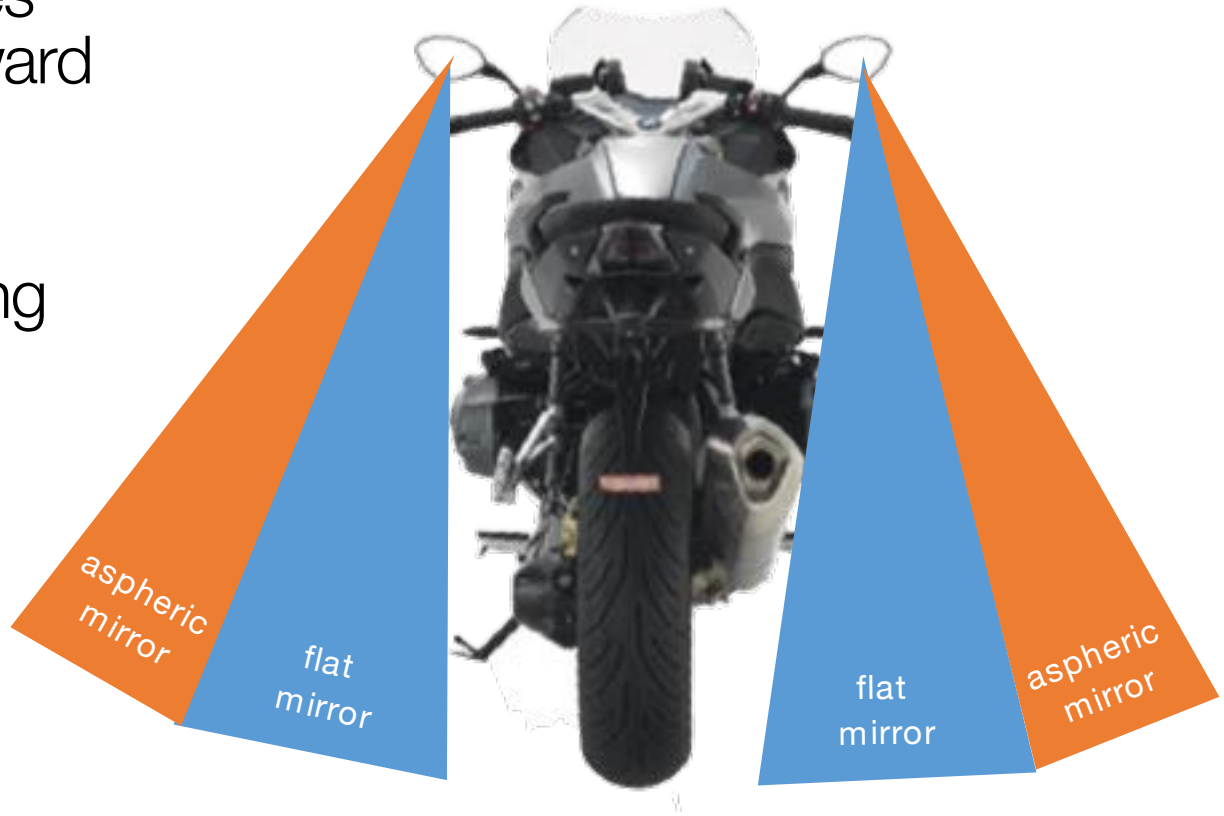
Applying Aspheric Mirrors to a BMW R1200RS Motorcycle

Richard Clompus
Trinidad, CA

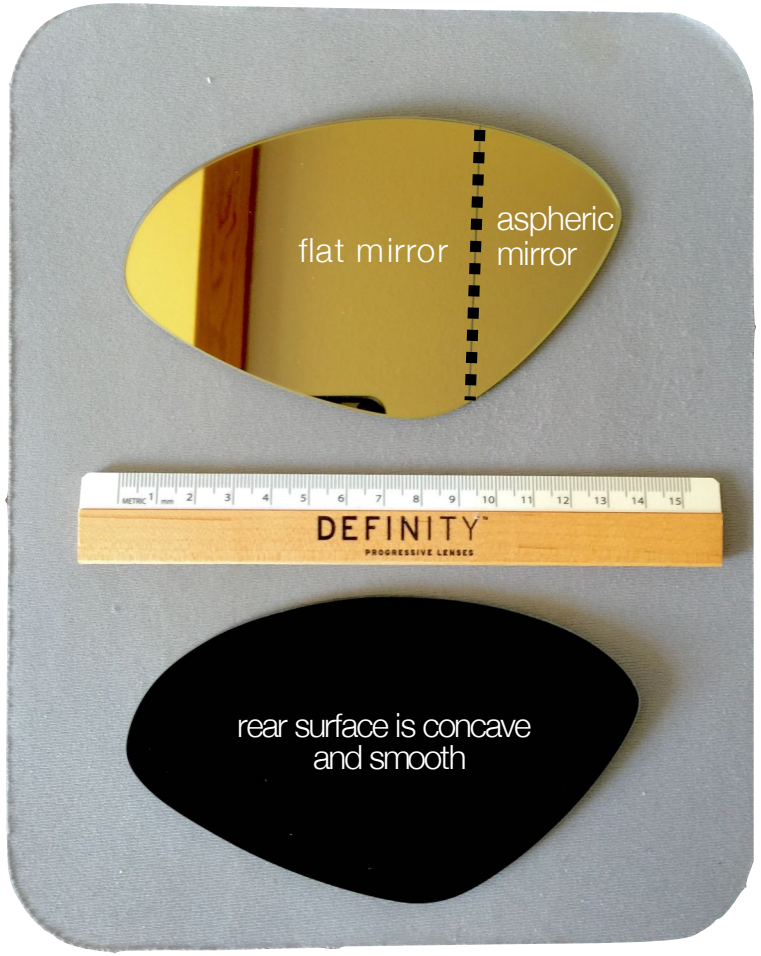
Motorcycle Mirrors

- Side mirrors on motorcycles provide limited views rearward with flat mirrors
- Aspheric mirrors provide a wider field of view increasing peripheral awareness



SaferView Aspheric Glass Mirrors

- Aspheric mirrors are available from Wunderlich
- The mirrors for the S1000RR have the same shape as the R1200RS
- They have a gold tint to reduce glare
- 2/3 of the mirror is flat (plano)
- The outer 1/3 is aspheric providing a wider view of the road
- The two sections are delineated with a vertical black line



Safe View Aspheric Glass Mirrors

- Hdready from Stuttgart, Germany shared this information on R1200RS Forum
  - Instructions are to clean the original mirrors and apply four well spaced beads of Cementit Flex adhesive about ½" in from the edge plus a bead in the center.
  - Firmly apply the SaferView Mirror to the original mirror glass and secure with masking tape. Allow to dry a minimum of 12 hours before riding.

cement spread over rear surface of mirror

pressing convex shaped mirror onto flat mirror with thin layer of cement caused the mirror to break where curvature changes from flat to aspheric

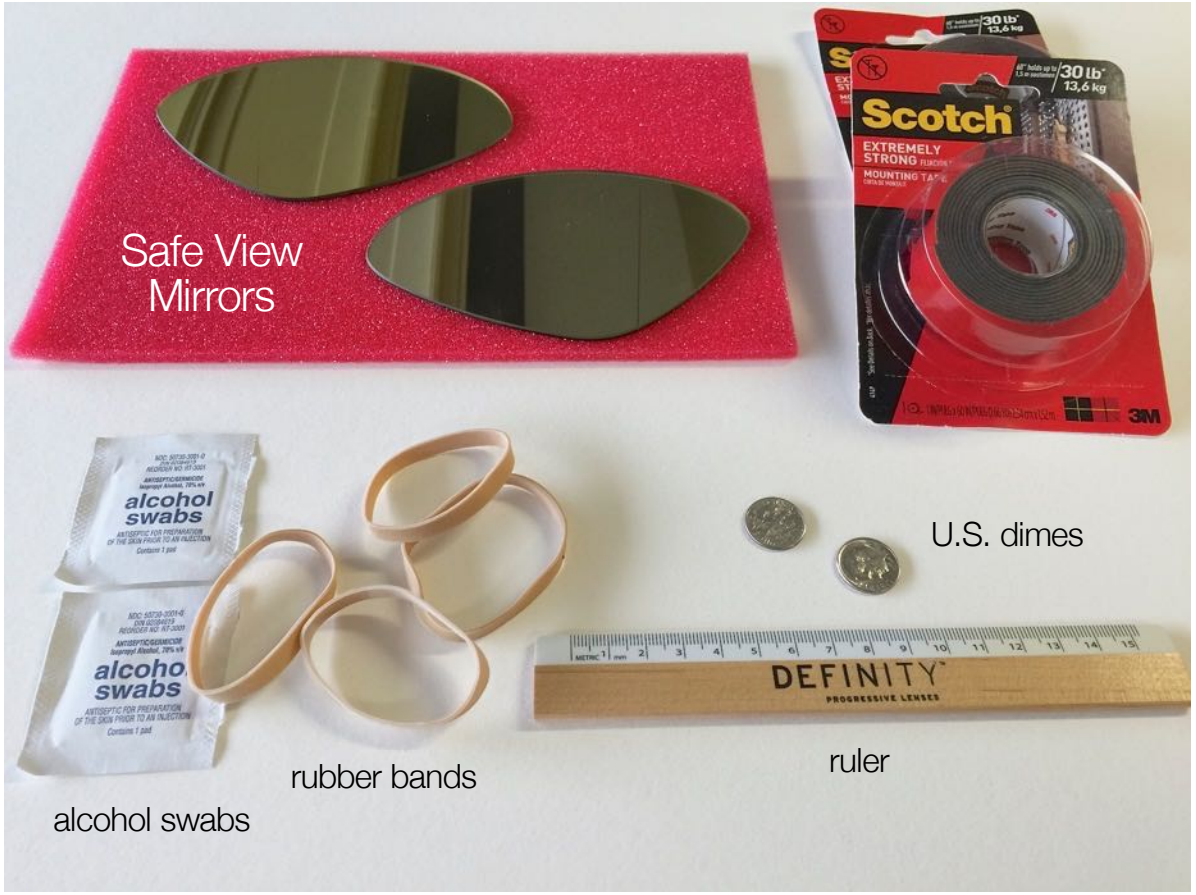
Previous Successful Attachment

- On a previous BMW motorcycle, I used strips of 3M double sided adhesive foam tape supplied with Multivex aspheric mirrors to attach to a flat stock mirror (Multivex is no longer in business)
- The foam strips were slightly compressible adjusting to the difference in curvature between the two glass mirrors
- The top aspheric mirrors remained in place for 12 years until I sold the bike

3M to the Rescue

- Consultation with 3M recommended a very high bond (VHB) closed cell foam tape that permanently bonds materials together
- It adheres quickly, cures in 24 hours and is stable over a wide range of temperatures and does not adsorb moisture
- It is used by the auto industry to attach molding and parts to various surfaces on cars
- The 3M consultant did not recommend a gel or silicone adhesive for attaching two glass surfaces together with different curves

Materials



Other items: scissors, X-Aacto razor blade trimmer

3M # 414 tape

Measure Depth of Aspheric Mirrors

- Determine the depth of the back sruface of the aspheric mirror so it can be filled in with tape
- The maximum difference will be in the center of the mirror
- Place a ruler over back surface of aspheric mirror and determine how many U.S. dimes will fit between ruler and mirror
- A dime and the 3M tape are both 1mm thick
- The difference in curvature is between 1 – 2 mm
- An extra piece of tape is needed in the center of the mirror to provide support, adhesion and reduce stress on the aspheric mirror when applied to a flat mirror

space created between mirrors due to difference in curvatures

Apply 3M Tape to Stock Mirror

- Clean surface of mirror with alcohol and dry removing oil, dirt and moisture from surface
- Apply 3M tape and cut with X-Acto razor blade so entire mirror is covered with a single layer of tape

Apply 2nd Layer of 3M Tape

- Remove red plastic backing tape revealing adhesive surface
- Place a second piece of 3M tape on top of base layer in center of mirror and remove plastic backing tape

Apply Aspheric Mirror to Tape

- Clean back surface of aspheric mirror with alcohol and dry
- Align carefully over stock mirror and gently press against 3M tape – it will adhere immediately
- Gently pressure is all that is needed over the surface of the mirror
- Secure with rubber bands for 24 hour (makes you feel better)

The edges of the new mirror are almost flush with the plastic housing of the stock mirrors

Ride Safe