Compression Flange Wrinkles

Wrinkles occur in a flanging operation if the original length of line is larger than the final length of line. These wrinkles are referred to as compression flange wrinkles.

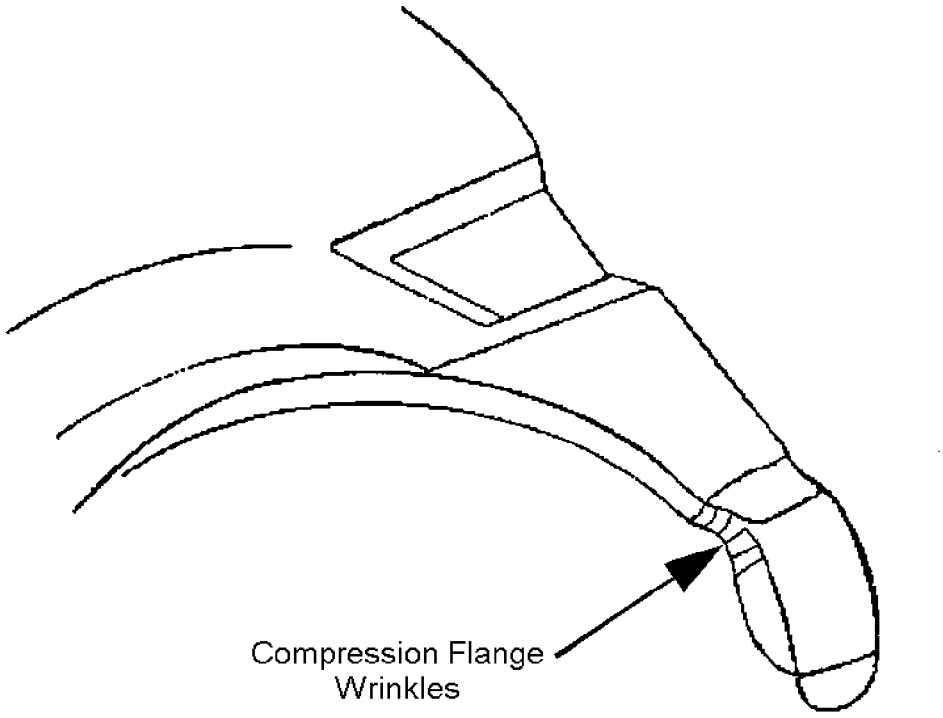


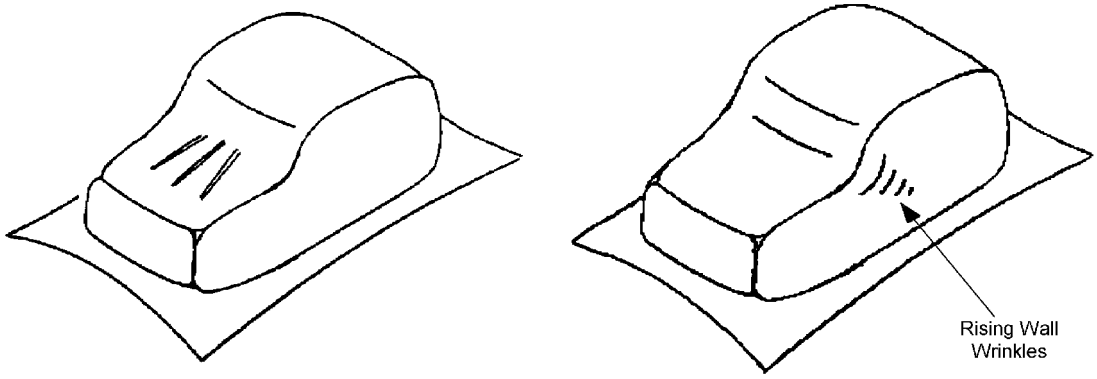
Figure 3-12. Compression Flange Wrinkles

- Compression forces are generated in the flange when the material is bent along a curved line. The material thickens at the outer edge, and if the forces are substantial, this thickening leads to a wrinkling of the flange.

- A possible solution for the fender is to scallop the flange in order to reduce the length (compression) in this area.

Rising Wall Wrinkles

Wrinkles may occur in areas where the drawing depth changes rapidly (i.e., an oil pan). These wrinkles are referred to as rising wall wrinkles.



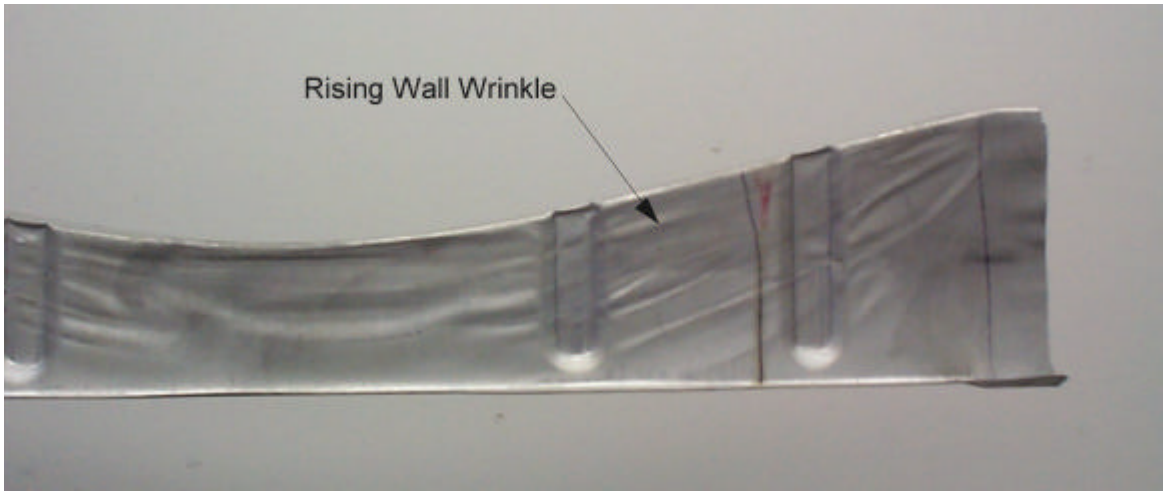


Figure 3-13. Rising Wall Wrinkles

- Due to the effect of the transition geometry, wrinkles may occur as the material is subject to both twist and shear.