



# *SmartShift* another “Hardcore Product for Hardcore Projects”

*Please note, that modifying your OE parts is done at your own risk. US Rally Team, nor any reseller will be held liable to damages incurred on the installers behalf. If you have any questions or concerns in regards to this kit, please contact US Rally Team at [tech@usrallyteam.com](mailto:tech@usrallyteam.com).*

## Tools Required:

- 5/16” Drill Bit
- Drill
- Bench Grinder (optional)
- Vice/Press
- 13mm Wrench
- White Lithium Grease (maintenance & future lubrication of heim joints)

Note before starting this project:

It is **highly** advisable that before installing any links with heim ends, that they should be adjusted out of the car to the proper length based upon the links you remove. Failure to do this will result in a much more lengthy installation as it is possible for the linkage to bind.



This is the weighted rod. MK3 drivers will notice the stock weighted piece, which is interchangeable with the MK2 non-weighted link. Rabbit & Scirocco owners have a similar link to the factory MK2 link. The factory link can be removed entirely. The new link is provided with two long bolts and lock nuts, as well as a washer and two press-in spacers.



These are the two shift levers. On the ends of these levers are two rubber grommets. These grommets need to be removed entirely. The two press-in spacers found on the long bolts will be pressed into the holes. It should be pressed flush on one side, and should protrude on the side that has the heim joint of the weighted rod. On the opposing side of the heim, install the washer, and tighten the lock-nut firmly in place.



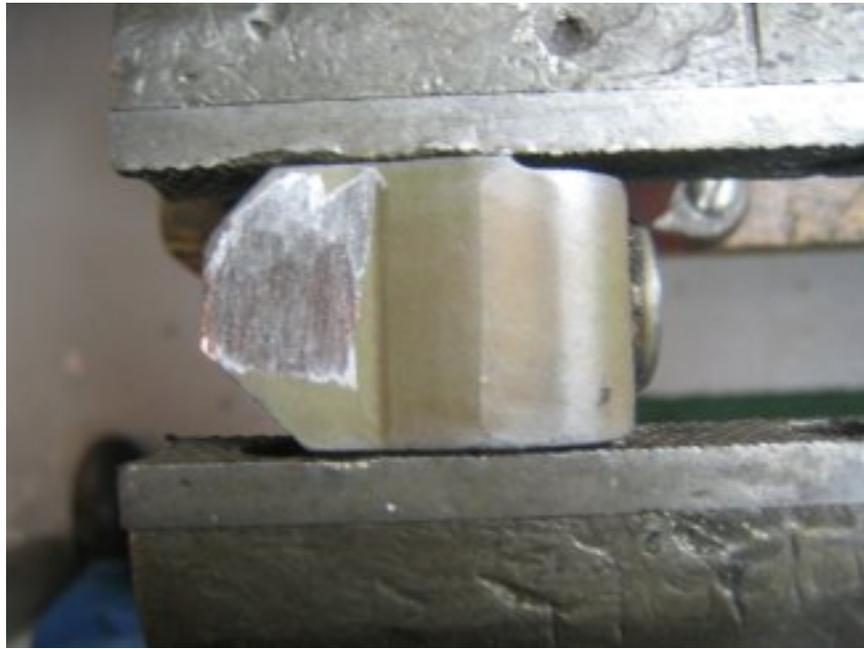
The lower piece will be found on all generation chassis. On the A1, it is slightly longer. This is the piece that goes between the lever on the transmission, and the pivot mechanism on the transmission. A1 kit owners will be provided with a complete aluminum link. This piece requires that the factory lever and transmission mount are modified. Installation should have a washer on either side of the heim joint.



This is the long link that goes between the two shift levers. It can be removed entirely, and is replaced with a solid aluminum link. The bolts should be installed by having a bushing on either side of the heim joint.

The next series of photos shows the process for removing the ball-stud that the original snap connectors went on.







Once the stud is removed, it is highly advisable to ream the hole with a 5/16" drill bit. This process needs to be followed for all of the ball-joints that the heim joints replace

The next series of photos shows the process for removing the relay ball on a MK2/3 style installation.

A MK1 install is similar to this process, but uses a different relay ball, and doesn't include a snap-ring as its merely pressed in place. For a MK1, simply cut off the old rubber ball, and press the Delrin® ball in its place.







Pictured on the left are the factory pivot bushings. The large ones are found on the relay shaft, the small ones are located on the pivot bolted to the transmission itself. These are replaced with solid Delrin® equivalences.

## **Maintenance:**

This kit was designed based upon the fact that the factory components simply required too much maintenance, were prone to failing and needed to be replaced in frequent intervals to get the same response when shifting.

Knowing this, we have designed this kit to require very little maintenance. For the life of this kit, all you will need to do is occasionally apply white lithium grease to the heim joints.

Delrin®, a material developed by DuPont, is designed for the most demanding applications, including both high/low temperatures. It has an amazingly low coefficient of friction. These factors make it an ideal product to use in an engine bay, where temperatures can vary from frigid winter, to an extremely hot exhaust setup.

We hope you enjoy your SmartShift kit, and as always, we'd love to hear your feedback.

– US Rally Team ([tech@usrallyteam.com](mailto:tech@usrallyteam.com))