



**INSTALLATION INSTRUCTIONS**  
**for**  
**Austin Healey Sprite MkI and MkII**  
**MG Midget MkI**  
**(all with ¼ elliptical rear springs)**

Thank you for purchasing our ***Fahrpass for Healey*** suspension upgrade kit, featuring Bilstein Gas Pressurized Shocks. We believe this is the finest kit of its kind and have taken great pains to ensure that your kit performs as well as, or better than, expected.

In order to ensure a trouble-free installation, please read and follow these instructions exactly. Don't take shortcuts, and if unsure of how to proceed **CALL**. Read the full instructions prior to commencing installation.

This kit can be installed by a competent DIY owner with basic hand tools. If you are not confident installing the kit, call us and we will recommend an experienced installer in your area.

## **Basic Safety Warning**

Installation requires raising the car off the ground. Always use an appropriate jack. **The car must be supported by jack stands at all times!** We suggest that you do the front installation first, lower the car, and then proceed with the rear installation.

During the installation the springs will be under compression. Compressed springs hold a tremendous amount of energy. If the installation instructions are not followed precisely, this energy may be released possibly resulting in bodily harm and vehicle damage. Follow the instructions and don't take short cuts.

*Failure to follow instructions voids the warranty. Fahrspass for Healey is not liable for injury or damages caused by failure to follow instructions or observe normal safety practices.*

## **BEFORE YOU BEGIN**

1. We recommend a thorough inspection of your car's steering and suspension systems prior to installation of our kit. Upgrading shock absorbers will not cure problems caused by worn ball joints, tie rod ends, steering components and suspension bushings. Also check wheel bearing adjustment when the vehicle is raised.

2. Check your kit contents. Your kit contains the following parts:
  - a. Two Bilstein Shocks, part number E4-BE3-E553-T0, FRONT
  - b. Two Bilstein Shocks, part number E4-BE3-E554-T0, REAR
  - c. Six brackets (see photos to ID)
  - d. One Hardware Kit – part number HWK-1
3. Open the Hardware Kit and identify each component.

**HARDWARE KIT CONTENTS**  
**KIT HWK-1, Sprite and Midget**

Item	Size	Quantity	Where Used
Bolt	5/16-24 x 1 1/2	2	Front Lower Bracket
Bolt	5/16-24 x 2 1/4	2	Front Lower Bracket
Bolt	3/8-24 x 2 1/4	4	Front Shock Eye, both
Bolt	3/8-24 x 2 1/2	2	Rear Lower Shock Eye
Bolt	7/16-20 x 4 1/2	2	Rear Top Bracket to Frame
Nut	5/16-24	4	Front Lower Bracket
Nut	3/8-24	8	Front and Rear on 3/8" bolts
Nut	7/16-20	2	Rear Top Bracket to Frame
SPACER, STEP	16x10x13	2	Rear Lower Shock Eye
SPACER	22x11x6	6	Rear Top Bracket to Frame
SPACER	22x11x26	2	Front Lower Bracket, with 2 1/4" bolt
SPACER	22x11x15	2	Front Lower Bracket, with 1 1/2" bolt
SPACER	16x11x13	6	Front Shock Eye, both; Rear Shock Eye Upper
Washer, split	5/16	4	Front Lower Bracket
Washer, split	3/8	14	Front and Rear on 3/8" bolts
Washer, split	7/16	2	Rear Top Bracket to Frame
Washer, flat	3/8	8	Front Shock Eye, both; Rear Shock Eye Lower
Washer, flat	5/16	4	Front Lower Bracket

4. Contact us if you are missing any components.

5. Brackets are handed, left and right. All brackets are marked with colored dots. **Red** dot means LEFT hand side. **Green** dot means RIGHT hand side (when viewed from the driver's seat).

6. Assemble the necessary tools:

- Jack and Jack Stands
- 3/8" or 1/2" Socket Set with ratchet
- Basic hand wrenches for 5/16", 3/8" and 7/16" bolts
- Torque Wrench to match socket set
- Small tube of BLUE Loctite or other thread locking fluid
- Cleaning supplies, rags, wire brush, etc.
- Large Crescent wrench or adjustable pliers (for removing the Armstrong shock valve body).
- 1" wide ratchet strap (for compressing shocks)

7. Consider giving your car's underside a thorough cleaning, at least around the areas you will be working.

## FRONT INSTALLATION



FRONT COMPONENTS WITH HARDWARE (Red = Left, Green = Right)

**Need new photo with correct upper mount**

### Front Lower Mount

1. Determine a suitable location for the work.
2. Pull the Emergency Brake and Chock the rear wheels to prevent vehicle from moving.
3. Raise the vehicle off the ground with the jack and support it with jack stands *under the frame* (both sides).
4. Remove the front wheels.



5. Loosen the two bolts which hold the lower spring plate to the **front of the** lower A-arm. **Loosen, do not remove!**
6. Remove the inner (frame/engine side) bolt and discard.
7. Place the new bottom bracket and the long spacer on top of the A-arm as shown above. Using the new 5/16" bolt, lock washer and nut supplied, tighten until you have metal to metal contact.
8. Remove the other bolt and swing the bottom bracket into position, with the short spacer between the bracket and the spring plate, as shown above. Install the new 5/16" bolt, lock washer and nut.
9. Check the spring clearance and pull the bracket away from the spring if necessary.
10. Tighten both bolts to 19 ft/lbs (25 Nm).

## Front Upper Mount

1. Support the lower control arm with a suitable floor jack.  
**Caution! Spring under compression! Control arm must be supported in a stable fashion.**
2. Remove the three bolts securing the original Armstrong lever action shock. Remove the Shock Arm from the King Pin Trunnion Bolt, **but Do Not remove the bolt.**
3. Remove the Armstrong Shock Assembly from the vehicle.
4. Remove the oil plug on the original Armstrong shock (big hex head) and extract the shock valve assembly. See photo below. Remove the spring and valve components. Save these in case a future owner wants to return the car to its original configuration.



4. Check the fluid level and top up with hydraulic fluid if needed (jack oil will do). While the Armstrong unit will no

longer function as a shock absorber, it will still serve as the upper control arm and the fluid lubricates the A-arm.

5. Reinstall the oil plug. Make sure the arm moves freely.
6. Check the threads on the shock tower for damage. Damaged threads must be repaired, or warranty is void.
7. Reinstall the Armstrong shock, with the new bracket on top, securing it with the old bolts. Clean threads and use Loctite.
8. Tighten all three bolts to 30 ft./lbs. (40 Nm).
9. If an aftermarket camber plate has been installed, the caster, camber and toe must be checked and adjusted.

### **Shock Installation**

1. Locate the front shocks, #F4-BE3-E553-T0.
2. The end with the blue cover is UP.
3. Install the shocks using 7/16" x 2 1/4" bolts, 7/16" split washers, 7/16" fender washers, and 7/16" nuts. The fender washers go on the outside of the shocks with the split washers in between the fender washers and the bolt heads.
5. Install the upper mount first. Shocks will have to be compressed in order to install the lower mount bolt. You can do this by hand, but a 1" ratchet strap works best.
5. Use Loctite and tighten to 30 ft./lbs. (40 Nm).



6. Reinstall the wheels and lower the car to the ground.  
Front installation complete.

## REAR INSTALLATION



REAR COMPONENTS WITH HARDWARE (right side shown)

### Lower Mount

1. Determine a suitable location for the work.
2. Chock the front wheels to prevent the vehicle from moving.
3. Raise the vehicle off the ground with the jack and support it with jack stands *under the frame* (both sides).
4. Remove the rear wheels.

5. Remove the entire Armstrong shock assembly along with the connecting link. Save components in case a future owner may wish to return the car to original.
6. Remove the bolt going through the Trailing Arm.

### **Upper Mount**

1. Install the upper shock bracket in the old Armstrong mounting holes using the spacers and one new 7/16 x 4 1/2" bolt. Torque to 33 lb/ft (44 Nm).



Rear Upper mount

## **Shock Installation**

1. Locate the rear shocks, #F4-BE2-E554-T0.
2. The step-down spacer may be needed on the lower mounting through the Trailing Arm.
3. The end with the blue cover is UP.
4. Install the shocks using 7/16" x 2 1/4" bolts (lower only), 7/16" split washers, 7/16" fender washers, and 7/16" nuts. The fender washers go on the outside of the shocks with the split washers in between the fender washers and the bolt/nut heads.
5. Install the upper shock first. Shocks will have to be compressed in order to install the lower mount bolt. You can do this by hand, but a 1" ratchet strap works best.
6. Use Loctite and tighten to 33 ft./lbs. (44 Nm).
7. Reinstall the wheels and lower the car to the ground. The rear installation is now complete.



**Rear Shock Mounting**

## FINAL NOTES

Congratulations on completing one of the most significant upgrades available for the Sprite/Midget. We are confident that you will notice a huge difference in the ride and handling of your vehicle.

Your comments about our product and/or these instructions would be most welcome. If we can make our kit better, we want to do so.

## CONTACT INFORMATION

Steve Kirby, owner and enthusiast

(01) 949-903-0957

[sackirby@pacbell.net](mailto:sackirby@pacbell.net)

22831 Avenida Empresa

Rancho Santa Margarita, CA 92679

### ***Limited Lifetime Warranty***

*Your **Fahrspass for Healey** suspension kit is warranted to the original purchaser for as long as he or she owns the vehicle. The warranty covers defects in materials or workmanship, including failure of the Bilstein shocks, under normal use. During the warranty period Fahrspass will repair or replace any defective components, at its option.*

*Improper installation, modification or other unintended usage voids warranty, as does racing, rallying and off-road use. The warranty is limited to replacement or repair of damaged components and does not include any compensation for labor or consequential damages (i.e. towing). Contact us if you have a potential warranty issue before attempting replacement or repairs.*