



STAGE I COIL-OVER SUSPENSION KIT INSTALLATION INSTRUCTIONS

PART NUMBER DI90-8220

APPLICATION: 2023-24 M2 (G87)

Congratulations for being selective enough to use a Dinan Coil-Over Suspension Kit. We have spent many hours developing this kit to assure that you will receive maximum performance and durability with minimum difficulty in installation. Please take the time to read these instructions and call us if you have any difficulties during the installation.

NOTE: This kit is designed to work in conjunction with stock BMW EDC front and rear shocks in a G87 M2. DO NOT use this kit for any other application!

DO NOT WORK ON VEHICLES SUPPORTED BY A JACK ONLY. USE SECURE JACK STANDS!

The components in this kit allows for increased suspension travel, enabling the vehicle to be lowered beyond what is normally possible with stock components, yet retaining a civilized ride.

**** However, this additional travel opens the possibility of tire to vehicle contact under heavy compression. Tire clearance must be carefully evaluated:**

- **During and after installation of this kit;**
- **After any ride height change;**
- **After any alteration to the original tire/wheel package.**

If you determine there is insufficient clearance, the vehicle must be raised, or safety will be compromised! Dinan is not responsible for any damages or injury!

INSTALLATION NOTES:

Dinan's recommended ride heights were developed for a vehicle with the following specifications:

- 19" x 9.5" front wheels with 275/35-19 Michelin Pilot Sport 4S tires
- 20" x 10.5" rear wheels with 285/30-20 Michelin Pilot Sport 4S tires

Dinan's target ride height measurements are as follows:

	G87 M2	
	Center of wheel to fender measurement	Approx. Lowering
Front	14.63"	0.75"
Rear	14.38"	0.75"

The above measurements will result in the optimal bumpstop clearance, which has a significant impact on handling and ride comfort.

If your vehicle is configured differently, you may alter the target values as needed for your situation. Note that proper bumpstop clearance is vital, and Dinan's values should be maintained if at all possible – even an 1/8" change will be noticeable! More bumpstop clearance improves comfort, but also has a negative effect on handling. Less bumpstop clearance results in a harsh ride. Bumpstop clearance is adjustable using the included packers, and/or by altering the ride height.

PARTS LIST

Qty	Part #	Description
2	D103-0866	Front Springs
2	D100-1012	Rear Springs
2	D113-0034	Front Threaded Perch Assy., G8x
2	D113-0035	Rear Spring Mount Assy., G8x
1	D113-0036	Endlink Mount Kit, G8x
1	D113-0037	Hardware Kit, G8x

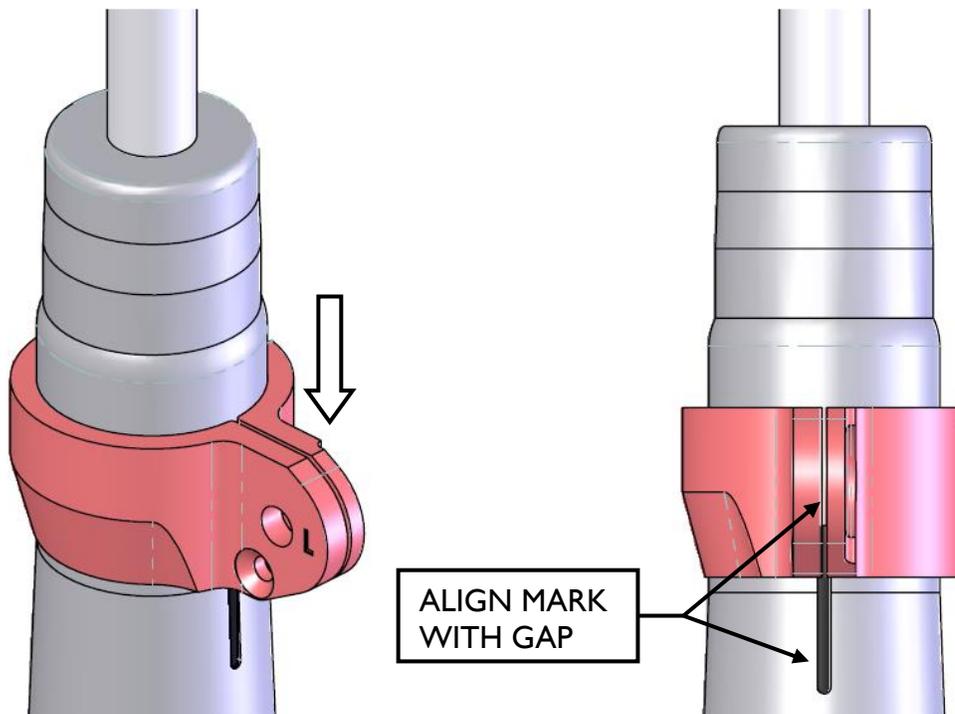
FRONT INSTALLATION:

1. Remove front struts from vehicle per BMW procedure. Mark the struts with an “L” or “R” so they will not get mixed up. The struts will be reinstalled on the same side that they came out of.
2. Disassemble strut assemblies and set aside the upper mounts, springs, and spring pads. The upper mounts and pads will be reused.
3. Remove the accelerating sensors from under the spring perch and set aside. These sensors will be reused.
4. The Dinan swaybar endlink mounts will be installed in place of the stock pieces. Before proceeding, place a mark on the strut body at the middle of the stock swaybar mounting tab as shown. It is vital that the locations are properly marked so the Dinan mounts can be installed in the correct locations. Double-check your work! See photo.

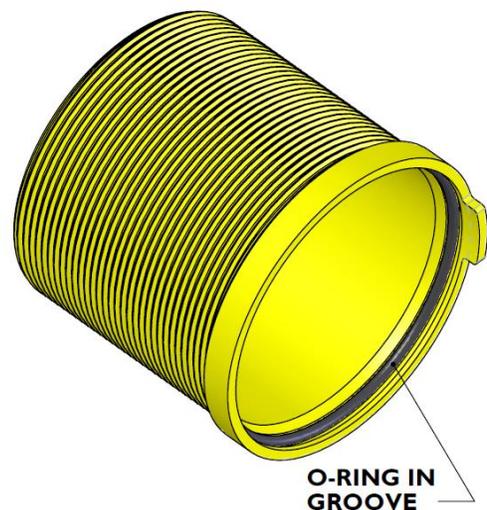


5. Once the tab locations have been marked, remove the plastic caps from the top of the struts. These will not be reused.
6. Remove the stock endlink mounts from the struts by tapping them upward. They will release after sliding about 10mm or so. Set the stock endlink mounts aside – they will not be reused.

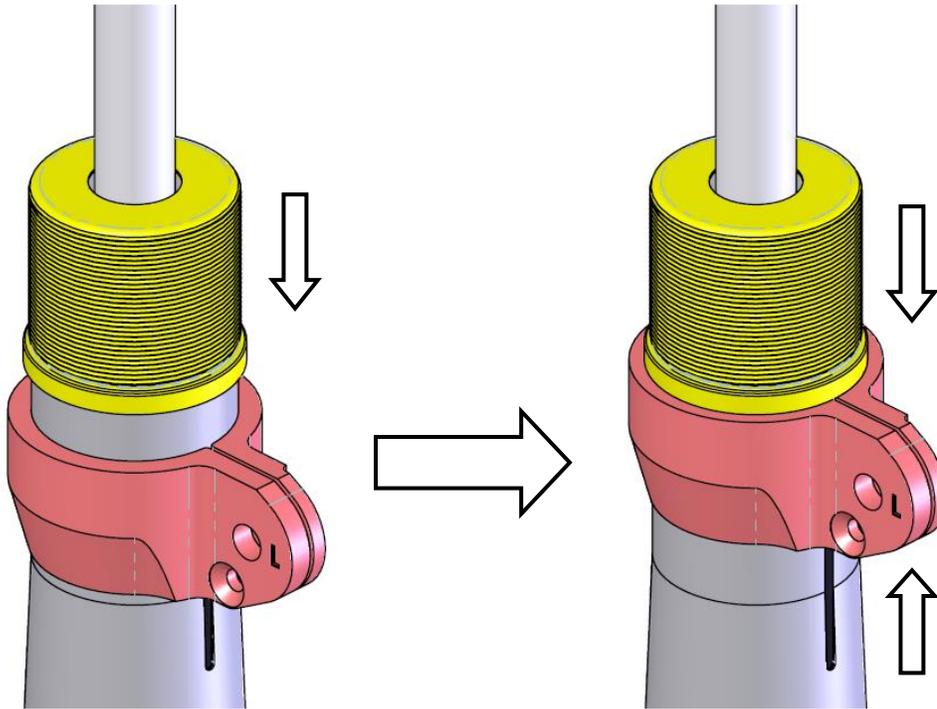
7. Locate the Dinan Endlink Mount Kit. This package contains two Dinan swaybar endlink mounts, and two 6mm flathead screws. The mounts are engraved “L” and “R” to indicate which side of the car they are for.
8. See figure below. Slide the mounts onto your struts as shown. At this time, you will slide them down as far as they will go (they will be raised to their final location during a subsequent step). Please verify that:
 - The “L” endlink mount is on the left-side strut, and the “R” endlink mount is on the right-side strut.
 - The gap in the Dinan mount is aligned with your mark as shown.
 - Do not tighten the 6mm flathead screws yet.



9. Locate the two Front Threaded Perch Assemblies. These are the same for left & right. Verify that the O-rings are properly located in the grooves as shown in figure.

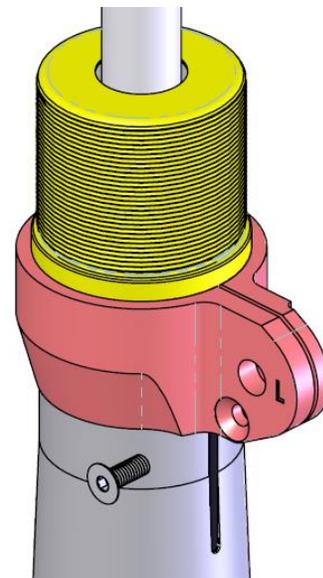


10. See figure below. Slide the threaded sleeves onto the struts as shown. Turn the sleeve to align the tab with the notch in the endlink mount. Note that the O-ring may make the sleeves spring upward slightly. This is OK.

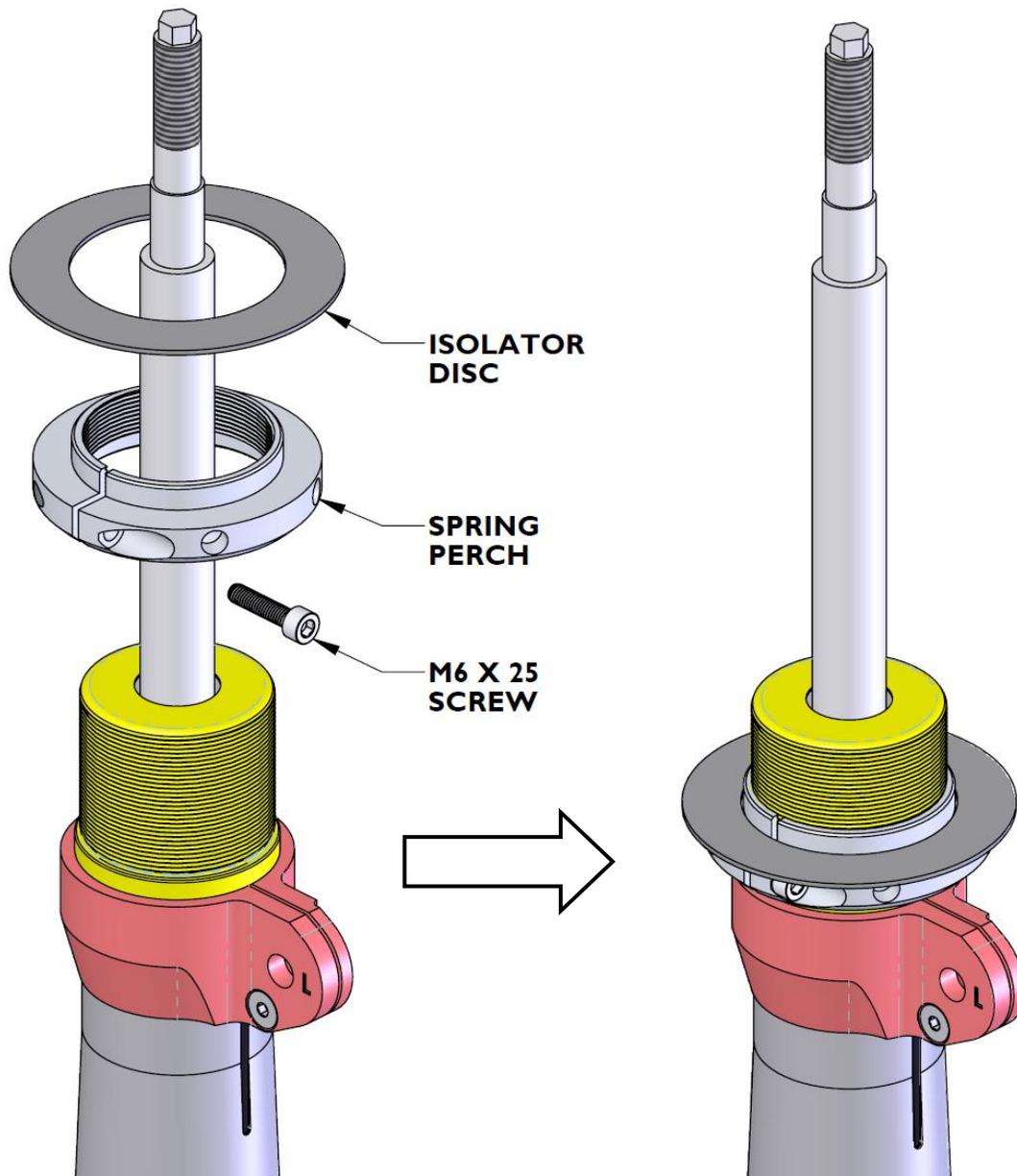


11. See figure above. While pushing down on the threaded sleeve, slide endlink mount straight upward until it just contacts the sleeve, and no further. This is the proper height for the endlink mount. Verify that the gap in the endlink mount is still aligned with your mark.

12. Install the 6mm flathead screw and torque to 95 in-lbs to lock the mount into place. When you release the threaded sleeve, it may spring upward and there may be a small gap with the endlink mount. This is OK for now – the gap will disappear when the strut is loaded in the car.

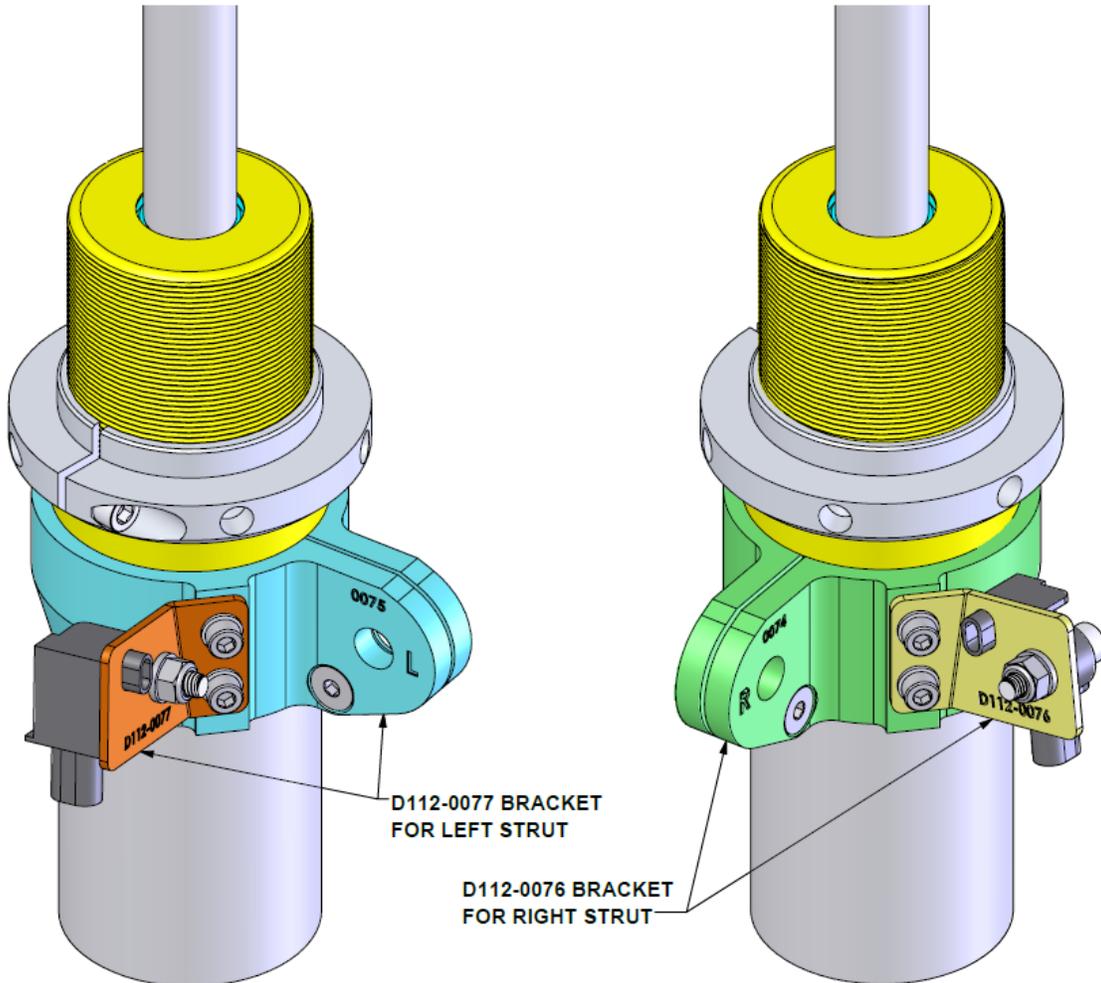


13. Install the spring perch and black plastic isolator disc (in Coil-Over Hardware Kit) as shown. Adjust the perch to about 3/8" up from bottom. This will be the starting ride height setting, and should get you close to Dinan's target ride height. Snug the 6mm screw to lock the perch into place.



14. Locate the two sensor brackets and remaining 5mm and 6mm hardware in the Endlink Mount Kit. Secure the brackets and sensors to the struts using the hardware as shown below. Study the diagrams carefully – do not misapply the brackets!

- The D112-0076 bracket is for the right strut.
- The D112-0077 bracket is for the left strut.

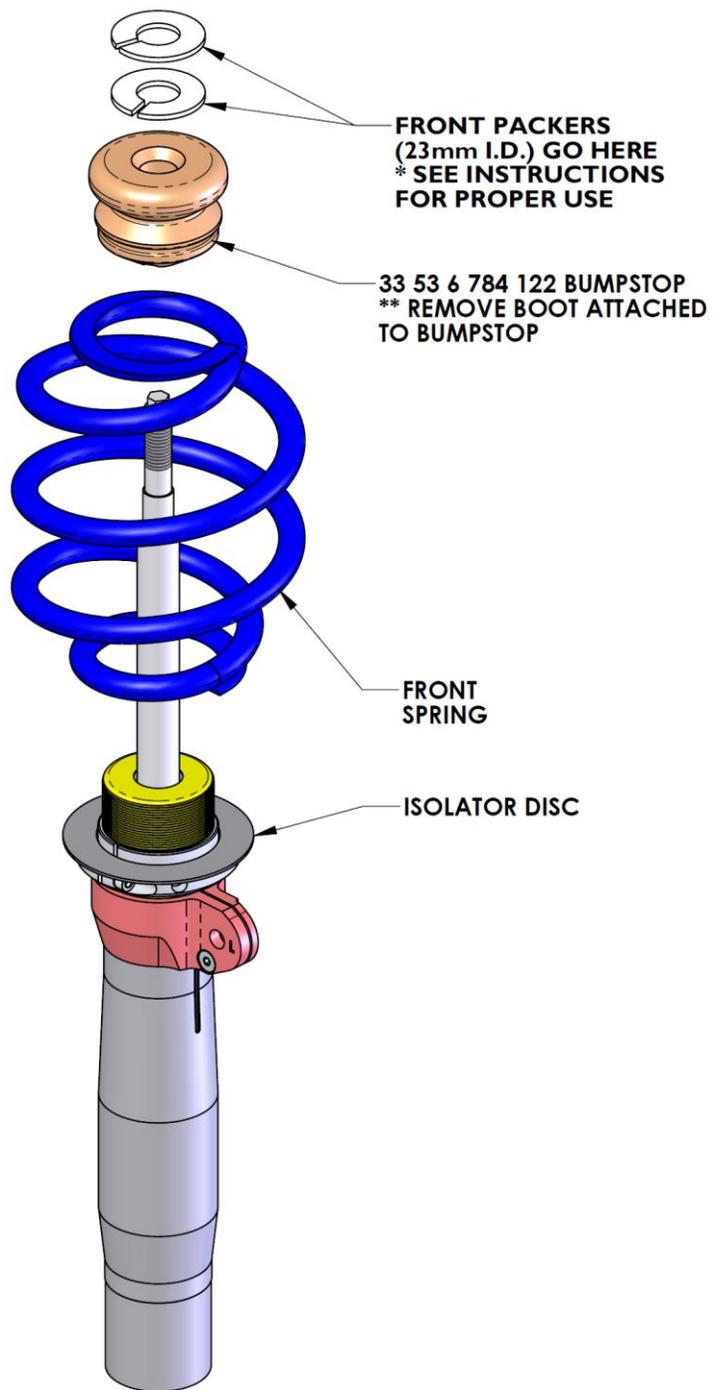


15. Install the rest of the front strut components as shown. Please note:

- If present, remove the dust boot attached to the Dinan bumpstops. These dust boots will not be used.
- No packers are needed to start. Adjust this quantity as required, depending on your bumpstop clearance requirements (please refer to warnings at the beginning of these instructions).
- The factory dust boot with integrated upper spring pad are reused.

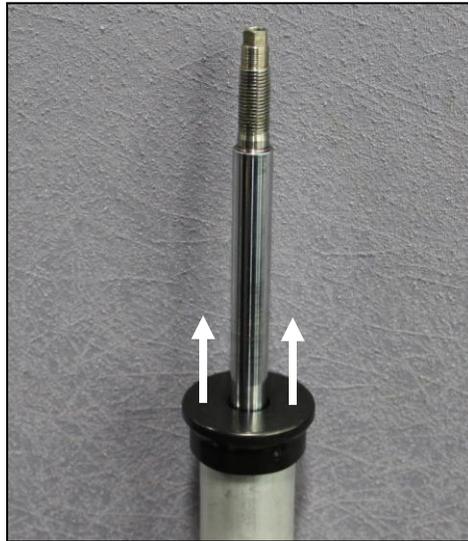
16. Install strut assemblies into vehicle.

17. **IMPORTANT** -- After attaching the swaybar link, retighten the 6mm flathead screws on the Dinan endlink mounts to 95 in-lbs.

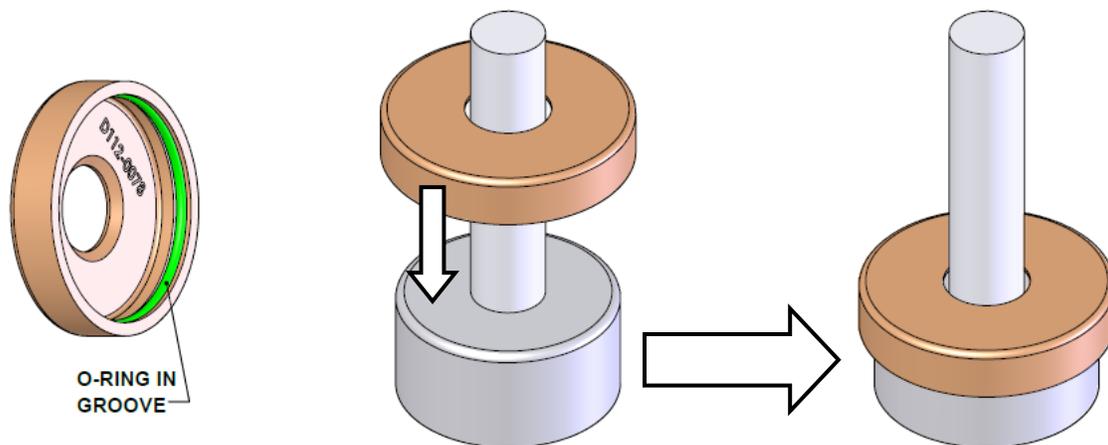


REAR INSTALLATION:

18. Remove rear shocks and springs from vehicle per BMW procedure. Leave the lower spring pad in the control arm, as this will be reused.
19. Disassemble rear shock assemblies per BMW procedure.
20. Remove plastic shock cap by tapping upward until it comes free.



21. Locate the D112-0078 Dinan Shock Cap and D671-0254 O-ring in the hardware kit. Insert the O-ring into the groove inside the cap, and install cap onto shock. If needed, add a small amount of lubricant to ease assembly.



22. Install a Dinan bumpstop onto the shock shaft. No rear packers are needed to start. Adjust this quantity as required, depending on your bumpstop clearance measurements (please refer to warnings at the beginning of these instructions).
23. Remove the stock upper spring pad and steel “pocket”. These will not be reused.

24. The Dinan components will be adhered into place. Clean off the area around the steel pocket to give the adhesive a clean surface to bond to.
25. Peel off the liner from the double-sided foam adhesive and install the Dinan Rear Spring Mount assemblies.

26. Install the rear springs as shown.

Please note:

- Adjust the spring perch to about 1-1/8" from the top. This will be the starting ride height setting, and should get you close to Dinan's target ride height. Snug the 6mm screw to lock the perch into place.
- The bottom of the rear main springs fit onto the stock lower spring pads. Rotate the main spring until the end of the coil best fits into the spring pad.

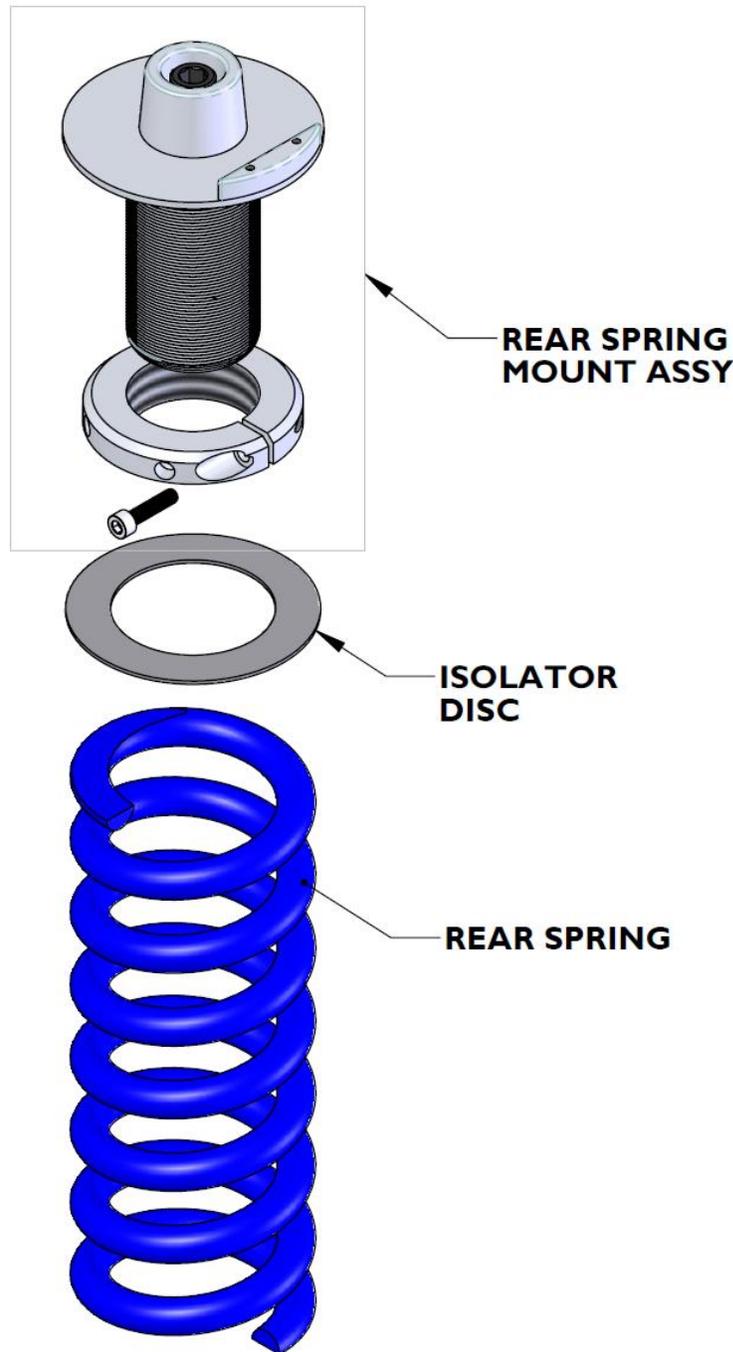
27. Install rear shock assemblies per BMW procedure.

SET RIDE HEIGHT:

28. Take the car for a short test drive to settle the suspension.

29. Take center-of-wheel-to-fender measurements, and adjust the spring perches as necessary to obtain your target ride height. Make sure you roll the car forward & backward after each adjustment to settle the suspension. Tighten the spring perch screws once you obtain your target ride height.

30. An alignment must be performed after installation of this kit.



ALIGNMENT:

Notes:

- These alignment specifications are for a vehicle with full fuel tank and driver inside the vehicle.

<u>Alignment:</u>		
FRONT	Setting	Tolerance
Camber	-1.70°	± 0.42°
Caster	8.2°	± 0.5°
Total Toe	0.17°	± 0.07°
REAR		
Camber	-1.80°	± 0.2°
Total Toe	0.33°	± 0.07°