

DFV | Club Race Damper Set Setup Addendum



This Öhlins damper set features adjustable shock length and spring preload. These independent adjustments provide significant tuning flexibility, but incorrect use will result in poor performance—even if ride height appears correct.

This addendum outlines the correct setup process for establishing shock length and spring preload.

Key Concepts

Shock Length — Sets Maximum Compression Travel

Determines how far the tire can travel into the fender.

- Shorter → More compression travel → Increased risk of contact and over traveling
- Longer → Less compression travel → Acts as a mechanical limit

Must be set based on actual vehicle (e.g. modified fenders, tire size, travel limitations, etc.).

Spring Preload — Sets Ride Height & Balance

Used to set ride height and corner balance.

- Does **not** control suspension travel
 - Must not compensate for incorrect shock length
-

Setup Procedure

1 — Set Shock Length (First)

- Install damper with loose length adjuster **without spring or bumpstop** (if possible)
- Install wheel/tire and fully compress suspension to bottom-out
- Check total tire clearance

Adjust length to eliminate contact while maximizing travel.

Suggested length is a starting point only and must be verified on the vehicle.

2 — Set Spring Preload

- Install spring package
 - Adjust preload for ride height
 - Finalize with corner balancing
-

Spring Package Requirements

- Main spring alone may be loose at full droop (normal for higher spring rates)
- **Helper spring may be required** to maintain seating

Critical: Total available spring travel (main + helper) remaining after preload, must **exceed damper stroke** to prevent coil bind. Damper strokes listed in mounting instruction.

Installation & Setup Record



Vehicle Suspension Installation & Initial Setup Documentation to be given to the installer to complete.

Vehicle Year	Make	Model	VIN (Optional)
Product Part No.	Installer / Dealer	Install Date	Mileage
Wheel/Tire Setup	Alignment Notes	Customer Name	Phone/Email

1. Original Ride Height Measurements

Measure vertically from wheel center to fender lip on level ground with proper tire pressures set.

LF	RF	LR	RR
mm / in	mm / in	mm / in	mm / in

2. Compressed Shock Length Comparison

Measure top of mount to center of hardware with shock compressed and bumpstop removed where applicable. Otherwise, take bumpstop length into account.

	OEM Shock	Öhlins Shock
Front	mm	mm
Rear	mm	mm

Note: Some applications may not allow bump stop removal due to internal bump stop design or integrated strut construction.

3. Initial Damper Settings

Measured from full stiff: turn adjuster fully clockwise, then back off desired number of clicks.

LF	RF	LR	RR
clicks	clicks	clicks	clicks

4. Spring Rate and Preload

Measure spring package length on the bench excluding hardware after preloaded.

Front Rate	N/mm / lb/in	Preload	mm
Rear Rate	N/mm / lb/in	Preload	mm

5. Final Installed Setup

Final ride height after installation and corner balance.

LF	RF	LR	RR
mm / in	mm / in	mm / in	mm / in

Important Information: This product is intended for off-road use only and not intended for street use. For installation, setup, ride height, fitment, or clearance questions, contact the installing dealer or the authorized Öhlins dealer the product was purchased from. Vehicle ride height, wheel/tire fitment, alignment settings, and suspension travel clearance are the responsibility of the installer.

Installer Signature	Customer Signature
Date	Customer Copy Retained
	Yes / No

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



Kit Contents		
Description	Part No	Pcs
Shock absorber		2
Dust boot	10216-01	2
Main spring	U00159-44	
Tender spring	U00159-32	
Spring support	05193-05	
Tee-nut	U00225-01	2
Lower spring seat	24635-03	2
Lock ring	24636-03	2
Rebound adjuster	24631-02	2
Spacer 1	U00223-01	2
Spacer 2	U00226-01	2
Top mount (left)	U00215-01	
Top mount (right)	U00216-01	
Used for both front and rear		
C-spanner 1		1
C-spanner 2		1
Öhlins sticker		1
Öhlins Owner's Manual		1

⚠ Warning!

For off-road use only. Damper Sets have been designed specifically for track use and should never be used on the streets.

👁 Note!

Springs and top mounts are not included. A custom package must be specified separately in collaboration with an authorized Öhlins dealer. The installer is responsible for verifying proper fitment and safe operation.

👁 Note!

Please note that there can be small differences between your product and the images in these instructions.

👁 Note!

Before you install this product, check the kit contents. If anything is missing, please contact an Öhlins dealer.

⚠ Warning!

Before you install this product, read the Öhlins Owner's manual. This product is an important part of the vehicle and the vehicle stability.

Club Race | DFV Damper Set for BMW M3 & 3-Series (E46)

U40033-01 FRONT

Mounting Instructions



MOUNTING INSTRUCTIONS

⚠ Warning!

We strongly recommend to let an Öhlins dealer install this product.

⚠ Warning!

If you work with a lifted vehicle, make sure that it is safely supported to prevent it from tipping over.

👁 Note!

When you work with this product, see the vehicle service manual for vehicle specific procedures and important data.

👁 Note!

Before you install this product clean the vehicle.

*Use kit in conjunction with a 30mm front bar and stock rear bar.

*Test Car had 275/35/18 Toyo R888 with 18x9.5 et35 wheels. No spacer

***Tire clearances near the damper must be checked!**

1

Raise the vehicle and put it on jack stands.

⚠ Warning!

Ensure that it is securely supported.

2

Remove the front wheels.

3

Loosen the bolts for the lower strut attachments.

👤 Caution!

Support the wheel hubs in an appropriate way on each side of the vehicle so that the brake hoses can not be damaged.

4

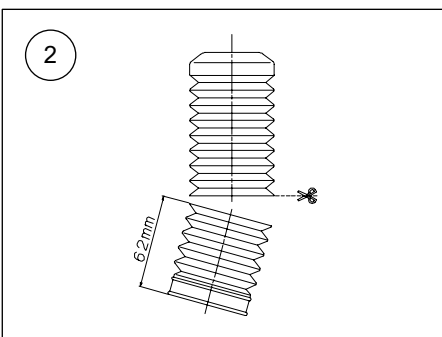
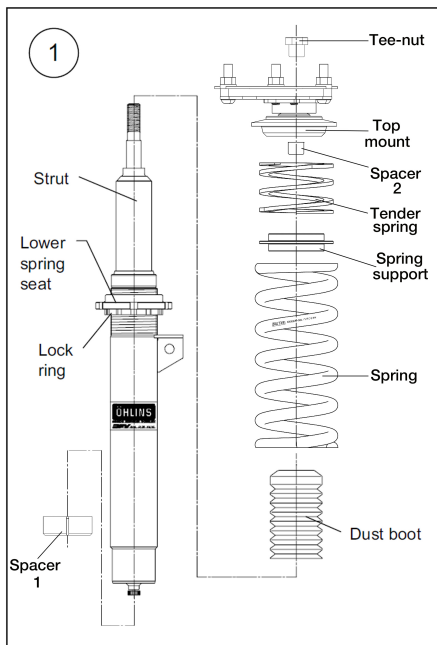
Loosen the upper attachments. Remove the original struts from the car.

5

Cut the dust boots 62mm from the lower end with a pair of scissors according to fig 2.

👁 Note!

When tightening the top mount tee nut, the shock absorber shaft must be held in position with a 6 mm Allen key.



6

Tighten the lower spring seat and the lock ring to 50-60Nm. Fit the dust boot, the Main spring, spring support, tender spring, spacer 2, the correct top mount for that corner to the strut according to fig 1. Apply a small amount of Loctite 243 to the tee-nut and install and tighten to 35-40Nm. Install spacer 1 on the lower body of the strut making sure it seats properly with the external chamfer facing away from the shock body.

MOUNTING INSTRUCTIONS

7

Install the Öhlins McPherson struts on the vehicle according to fig 4.

Rotate the strut until the centerline of the alignment tab is centered within the visible gap of the carrier as shown in fig 3. There should be approximately a 20mm gap between the top of the carrier and the alignment tab.

8

Fasten the upper attachments.

👁 **Note!**

The alignment tab should always be centered in the carrier in order to ensure the sway bar end link tab is correctly oriented on each side of the vehicle.

9

Raise the wheel hub with a floor jack to remove any free play between the lower portion of the strut and carrier while making sure the strut is properly seated, this can be confirmed by checking that the lower lip of Spacer 1 is making contact with the bottom lip of the carrier. Tighten lower attachment bolts to secure the strut.

10

Attach the sway bar end link to the tab on the strut and tighten accordingly to factory specifications.

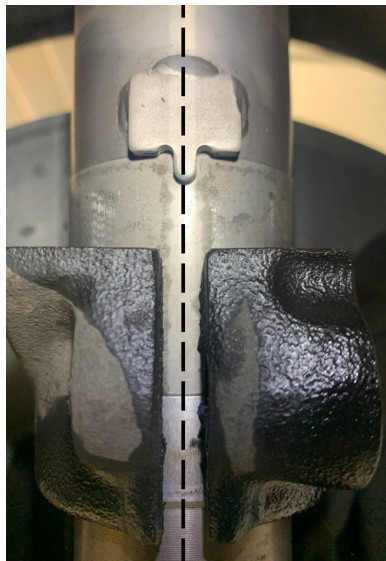
👁 **Note!**

Make sure that all bolts are tightened to the correct torque and that nothing fouls or restricts movement of the strut when it is being fully compressed or extended. Test this over the whole steering range from lock to lock.

11

Make sure that all removed parts are reinstalled in the same way as they were before the installation of the Öhlins shock absorber.

3



⚠ **Warning!**

Before you ride/drive, always make sure that the setup is according to the recommended setup data. Read about adjustments and setting up in the Öhlins Owner's Manual before you make any adjustments. Contact an Öhlins dealer if you have any questions about setting up.

ADJUSTMENTS

Strut Length (Sets Bottom-Out Point) For setup, install the damper with lower spacer installed and the spring removed, then fully compress the suspension until the shock bottoms out. Check tire clearance at this point. If additional bump travel is preferred, remove spacer and retest. NOTE: the internal bumpstop is 20mm.

Spring Preload (Sets Ride Height)
After shock length is set, use spring preload to set ride height and corner balance.

With the high spring rates this kit is tuned for, the main spring may be loose at full droop (car lifted). A helper spring is required to keep the spring seated.

Target approximately 60% bump / 40% droop (~38 mm at wheel). This is a guideline, not exact.

SETUP DATA

Spring package stroke	>93	mm
Minimal spring rate	100	N/mm
Maximum spring rate	140	N/mm
Clicker range	20	clicks
Target droop at wheel	38	mm

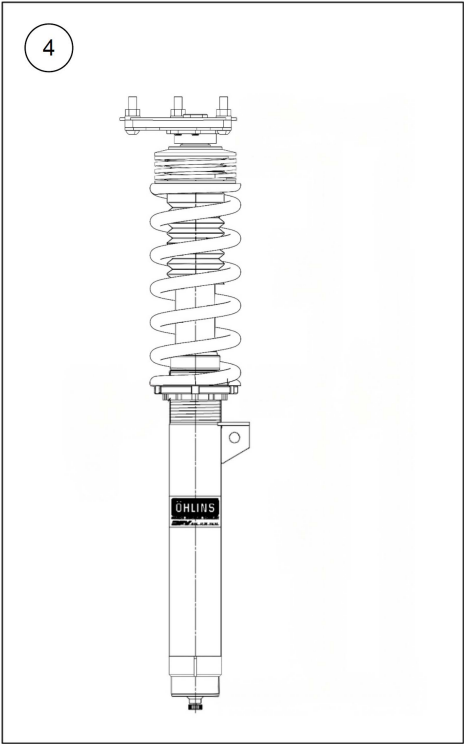
Öhlins products are subject to continuous improvement and development, therefore, although these instructions include the most up-to-date information available at the time of printing, minor updates may occur.

To find the latest information contact an Öhlins distributor. Please contact Öhlins if you have any questions regarding the contents in this document.

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⚠ Warning!

For off-road use only. Dedicated kits have been designed specifically for track use and should never be used on the streets.

👁 Note!

Please note that there can be small differences between your product and the images in these instructions.

👁 Note!

Please note that during storage and transport, especially at high ambient temperature, some of the oil and grease used for assembly may leak and stain the packaging. This will not cause damage to the product, wipe off the excessive oil or grease with a cloth.

Kit Contents		
Description	Part No	Pcs
Shock absorber		2
Spacer	24629-01	2
Lock nut M10	24626-01	2
Screw (M4)	24633-02	2
Handle	24633-01	2
Control wire	24632-04	2
Rebound adjuster	24631-03	2
Top mount	U00217-01	2
Allen key		1
Bushing spacer	U00148-01	4
Lock ring	24636-03	4
Dust boot	10216-01	2
Spring	U00159-33	2
Spring preload adjuster	25618-01	2
Rubber seat	25601-03	2
Rear upper spring seat	U00227-01	2
O-ring for U00227-01	U00307-01	2
Lower plastic seat	24635-03	2
Mounted on shock adjuster		
Adjuster		2
Used for both front and rear		
C-spanner 1		1
C-spanner 2		1
Öhlins sticker		1
Öhlins Owner's Manual		1

👁 Note!

Before you install this product, check the kit contents. If anything is missing, please contact an Öhlins dealer.

⚠ Warning!

Before you install this product, read the Öhlins Owner's manual. This product is an important part of the vehicle and the vehicle stability.

Club Race | DFV Damper Set for BMW M3 & 3-Series

(E46) **U40033-01 REAR**

Mounting Instructions



MOUNTING INSTRUCTIONS

⚠ Warning!

We strongly recommend to let an Öhlins dealer install this product.

⚠ Warning!

If you work with a lifted vehicle, make sure that it is safely supported to prevent it from tipping over.

👁 Note!

When you work with this product, see the vehicle service manual for vehicle specific procedures and important data.

👁 Note!

Before you install this product clean the vehicle.

1

Raise the vehicle and put it on jack stands.

⚠ Warning!

Ensure that it is securely supported.

2

Remove the rear wheels.

3

Remove the lower and the upper attachments and remove the original shock absorbers.

4

Remove the spring.

5

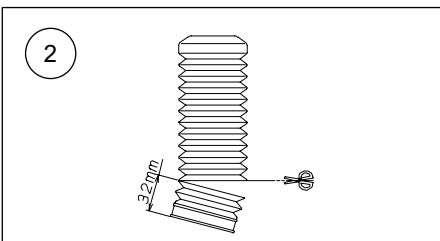
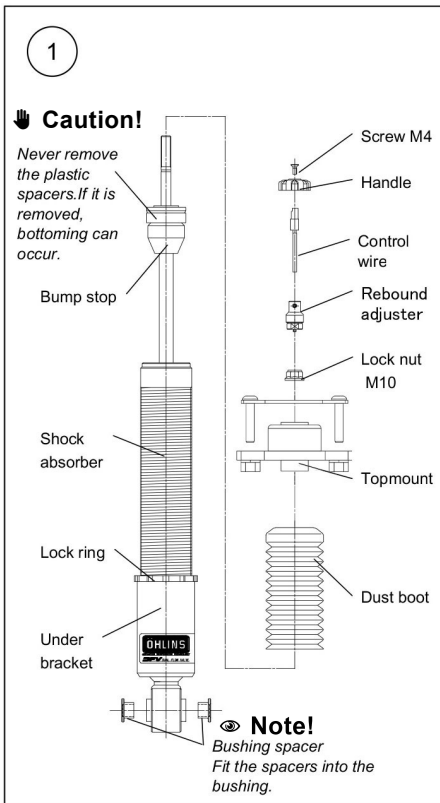
Set the spring seat of the spring preload adjuster to the position according to fig 5.

6

Making sure to install the O-ring (U00307-01) into the Rear upper spring seat, install the Öhlins spring and the spring preload adjuster on the vehicle according to fig 3.

7

If intending to utilize, Cut the dust boot 32 mm from the lower end with a pair of scissors according to fig 2.



MOUNTING INSTRUCTIONS

8

Fit the bushing spacers, the dust boot, the spacer, the top mount, the lock nut and the adjuster according to fig 1.

Tighten the lock nut to 30 Nm.

👁 **Note!**

When tightening the lock nut, the shock absorber shaft must be held in position with a 5 mm Allen key.

9

Install the Öhlins shock absorbers on the vehicle.

10

Make sure that all removed parts are reinstalled in the same way as they were before the installation of the Öhlins shock absorber.

👁 **Note!**

Make sure that all bolts are tightened to the correct torque and that nothing fouls or restricts movement of the shock absorber when it is being fully compressed or extended.

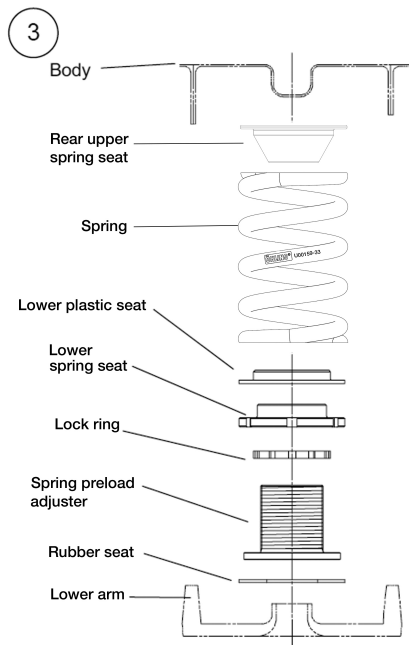
11

Sub-assemble the wire.

(Fasten the handle by tightening the M4 screw.) As shown in fig 4, insert the wire through the Ø10 hole which is made in the side panel, and run it inside the panel. Insert the top end of the wire into the adjuster and fasten it with the supplied Allen key.

⚠ **Warning!**

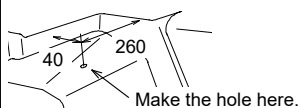
Before you ride/drive, always make sure that the setup is according to the recommended setup data. Read about adjustments and setting up in the Öhlins Owner's Manual before you make any adjustments. Contact an Öhlins dealer if you have any questions about setting up.



4

Make a Ø10 hole in the side panel in the shown position and pass the control wire through it.

←Left side



Right side→



ADJUSTMENTS

Shock Length (Sets Bottom-Out Point)

Start with a shock length of 200 mm (top of shock body to height adjuster lock ring).

For setup, install the damper with the length adjuster nut loose and the spring and bump stop removed, then fully compress the suspension until the shock bottoms out. Check tire clearance at this point.

If contact occurs, lengthen the shock. If additional upward travel is desired and clearance allows, the shock may be shortened at installer discretion.

Spring Preload (Sets Ride Height)

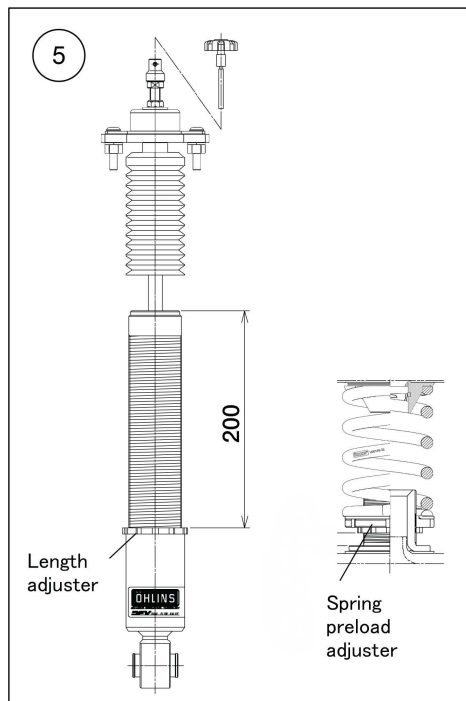
After shock length is set, use spring preload to set ride height and corner balance.

With the high spring rates this kit is tuned for, the main spring may be loose at full droop (car lifted). A helper spring is required to keep the spring seated.

Target approximately 60% bump / 40% droop (~50 mm at wheel). This is a guideline, not exact.

SETUP DATA

Spring package stroke	>70	mm
Minimal spring rate	140	N/mm
Maximum spring rate	180	N/mm
Clicker range	20	clicks
Target droop at wheel	50	mm



⚠ Warning!

The shock adjustment range is limited to the thread indication line on the threaded shock body. Do not drive the car with this extended limit line exposed. Main spring should be retained at full droop.

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