

# Fitting Instructions Group 4 kit

**IMPORTANT:** Whiteline Group 4 shock/strut kits are designed for race or off-road use but may be used on-road depending on specific vehicle registration regulations in your area. Extreme care must be taken when adjusting ride height to ensure correct operation of the suspension and any adjustments are at the owners own risk. It is recommended that installation and adjustment be carried out by qualified suspension and chassis specialists.

**NOTE:** Ride Height denotes adjustment range available only. It is NOT a height setting recommendation.

## Fitting Whiteline Group 4 Coil Over Kits

Whiteline Group 4 kits are generally designed as direct replacement struts or shocks. That is, fitting and installation should be done in conjunction with the relevant manufacturers stock or OEM instructions. Use manufacturer torque settings unless otherwise stated. Where relevant, vehicle and application specific instructions will be provided on supplementary pages.

Group 4 kits are ride height and shock rate adjustable for precise fine tuning of the shock absorber/spring combination through changes to shock rate and ride height. As supplied, the height adjustment is generally set to the lowest ride position to avoid excessive pre-load on components while in transit. This will ALWAYS BE TOO LOW for practical use and will need to be adjusted during fitting.

**Always read the complete instruction before fitting. Make sure you first check and adhere to any relevant rules and regulations pertaining to ride heights.**

1. Examine all parts and check for suitability. Contact Whiteline or your dealer prior to fitting if you have any questions.
2. Remove existing springs and shocks according to stock or OEM instructions. Retain all original mounting hardware and strut tops unless otherwise specified in supplementary pages.
3. Group 4 kits are generally designed as a direct replacement and should be fitted according to stock or OEM instructions unless otherwise specified.
4. Refer to height and rate adjustment pages for correct procedure. Be careful to check bonnet clearance as this may vary with different style or brand strut tops.
5. Tension all fittings according to manufacturers settings unless otherwise specified. Perform a wheel alignment.

## Rate Adjusting Whiteline Group 4 Shocks

Whiteline Group 4 shocks are rate adjustable for bump (compression) and rebound (extension). There are 14 adjustment steps or "clicks" available and the adjustment knob is marked accordingly. Turn adjustment knob clockwise for "hard" (H) and anti-clockwise for "soft" (S).

Changes affect both rates but valving is specially designed to disproportionately change rebound for improved control. Whiteline recommend that the "softest" settings is always used first and tested before increasing rate.

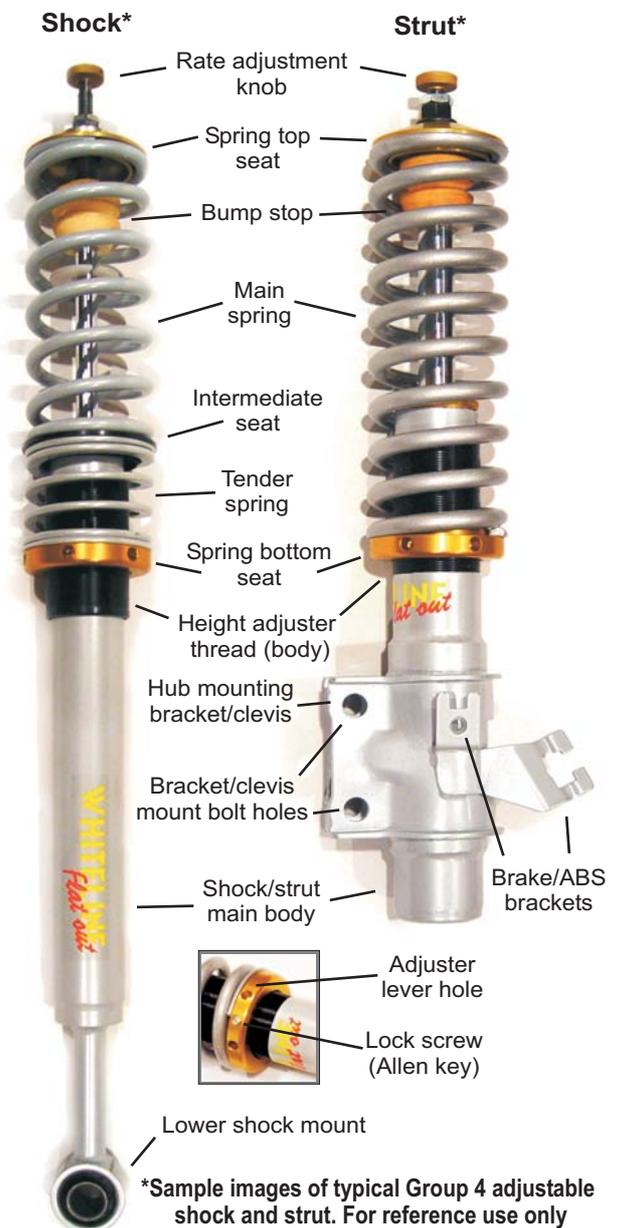
*Tip: We recommend that all rate changes be made from the full soft position. IE, to increase by 2 clicks, return back to full soft while counting clicks. Add additional 2 then adjust up to new total.*



**Always start with softest adjustment, increase in small steps and only after testing. Excessive or inappropriate adjustment can lead to erratic, unpredictable and dangerous dynamic behaviour.**

Refer <http://www.whiteline.com.au/faqintro.htm> for information and "how-to" guides on shock adjustment.

**Warning:** Please drive carefully while you accustom yourself to the changed vehicle behaviour.



### Standard Group 4 Tool Kit

Rate adjuster knob lock screw Allen key tool. Used to lock grub screw

Spring seat height adjuster lock screw Allen key tool. Used to lock grub screw

Adjuster lever hole tool. Used to wind spring seat.

Anti seize grease. Use on metal adjusting threads



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**NOTE:** Ride Height denotes adjustment range available only. It is NOT a height setting recommendation.

## Adjusting Ride Height with Whiteline Group 4 Coil Over Kits

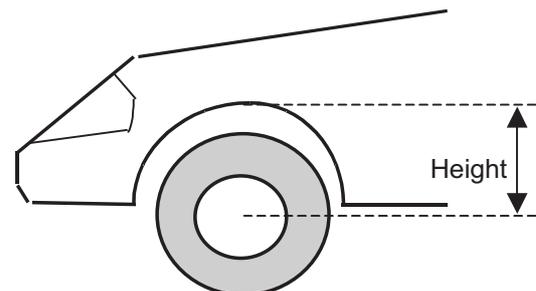
The Whiteline Group 4 kits are designed for precise fine tuning of the shock absorber/spring combination through changes to shock rate and ride height. Ride height can be changed for a variety of reasons including ground clearance, lowering of centre of gravity, optimising corner weight distribution and overall setup balance. As supplied, the height adjustment is generally set to the lowest ride position to avoid excessive pre-load on components while in transit. This will ALWAYS BE TOO LOW for practical use and will need to be adjusted during fitting.

**Always ensure that coil springs remain captive at full droop. Make sure you first check and adhere to any relevant rules and regulations pertaining to ride heights.**

Ride height is adjustable by raising or lowering of the threaded spring seat. Note the use of a rubber tipped lock screw integrated with the threaded seat. We recommend that you keep this sheet for future reference of original and changed ride heights

Left side	FRONT	Right side
BEFORE mm		BEFORE mm
AFTER mm		AFTER mm
BEFORE mm		BEFORE mm
AFTER mm		AFTER mm
	REAR	

Measuring from the centre of the wheel  
to the bottom of the guard, (see below)



what is the height at each wheel in mm's before  
and after fitting the springs?

### To adjust the height:

1. Refer to the shock component picture to familiarise yourself with the various components, their name and function.
2. Park the vehicle on a firm level surface and measure the ride height at each wheel in mm's to establish the existing height and desired change. Whiteline recommend that this process is ideally conducted in conjunction with corner weight scales to establish individual corner heights and weights.
3. Raise each corner of the vehicle in turn so that the wheel is free to droop at full travel. Support the body and remove the road wheel if necessary to access the adjustable spring seat.

**Caution:** Thoroughly clean adjusting thread and platform of all dirt, road grime and debris prior to rotating spring platform (seat). Failure to do this may result in damage to thread. Penetrating agents (eg; WD40) and compressed air can be used.

5. Measure distance from base of thread to bottom of spring seat to provide a reference. Release tension on Allen key head lock screw. If in doubt, remove completely and refit after adjustment is finished. Wind spring seat up or down to change height.

**Tip:** Most suspension systems locate the spring slightly inboard relative to the wheel creating a motion ratio that must be taken into account. Most strut equipped vehicles will have a motion ratio of between 1:0.9/0.9. IE, 10 mm of travel at the wheel would equate to 9 to 9.5 mm at the spring. Therefore, as an example, a height change of 9 mm at the spring seat would deliver a 10 mm height change at the wheel.

6. Refit the road wheels and/or lower the vehicle to test changes and adjust as required. It is not necessary to tighten lock screw until satisfied with ride height.

**Tip:** Its a good idea to roll the car back and forward and/or bounce the suspension between height changes to bed the springs and components. When close to ideal, tighten all fittings and use a short test drive to settle the springs prior to final check.

7. Once satisfied, tighten all fittings including spring seat lock screw. Note that this is rubber tipped and must not be over tightened to function correctly. We suggest rubber tip to body thread contact plus 1/2 to 1 turn.

8. As an important final check, lower the vehicle on to the road wheels and turn the steering through full lock in both directions to check clearance between chassis, steering components, tyres and body work.

9. Any height change to most modern suspension system will alter alignment angles. This and component clearance are almost always linked so you may need to find a compromise between height, clearance and optimal alignment settings.

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