

Dutch MX5 CUP – Spring Change

This document is intended to be a guide of the spring change for the Mazda MX5-cup ND.

New spring specs: **te be ordered via sales@intrax.nl**

- 220mm unloaded height
- 80N/mm springrate
“220-80”

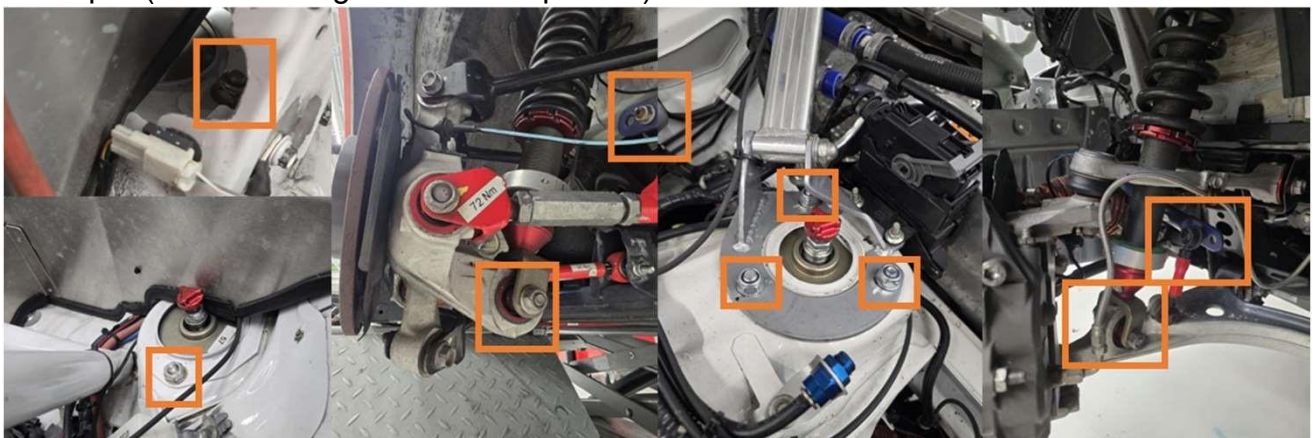
The following steps need to be done:

- Measure your ride heights!
- Remove rear springs and replace with the new type springs
- Remove front springs and replace with previous rear springs

Step by step guide:

Tools required:

- Impact wrench (to speed up the process)
- Wheelnut socket (19mm or 17mm)
- Deep socket 18
- Socket 14, 17 & 19
- Spanner 14, 17, 18 & 19
- Thin 18 spanner
- Allen key 2mm
- Torque wrench Tools required for the actual spring change
- 2 coilover adjustment spanners
- Caliper (for measuring the thin 18 spanner)



Overview of nuts and bolts to remove, rear top mount nuts can be accessed from the boot, these are behind some chassis plates.

Removal of dampers, start with the rear suspension:

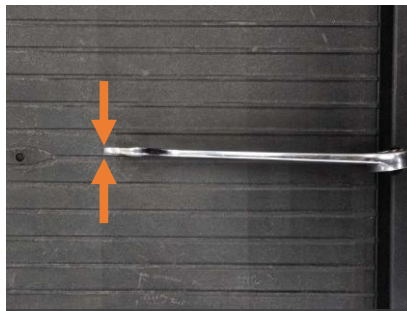
- Jack the car and remove the wheels

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- Undo the anti-rollbar [spanner 14] (48Nm front & 38Nm rear)
- Remove top mount nuts [socket and spanner 17] (45Nm front & 50Nm rear)
- Lower the suspension carefully, *check tension on wires and brake lines!*
- Remove the lower damper bolt [socket and spanner 19] (58Nm front & 72Nm rear)
- Remove damper from chassis, suspension needs to be dropped quite significantly to do this with ease.

Removal of springs:

For the correct removal, make sure you have a **thin** 18 spanner with a height between 4-5mm. A cheap normal 18mm spanner can be grinded down to create a thin spanner. As long as the open end has a height between 4 and 5 mm, see below



- Measure the spring platform height to any reference. (use this measurement before installing the damper back to the chassis, this way you should be close to your previous used ride height.)
- Unwind the spring platform until the helper spring is fully extended



- Remove damper adjuster [Allen key 2mm] (hand tight)
- Remove the top nuts [thin spanner 18 & spanner 18 (deep socket 18 and an impact wrench can be used here)] (50Nm), installation by Intrax used loctite here, first removal may need some help from a torch.
- Remove top mount from the damper shaft, this should slide off with ease, use wd40 if necessary.

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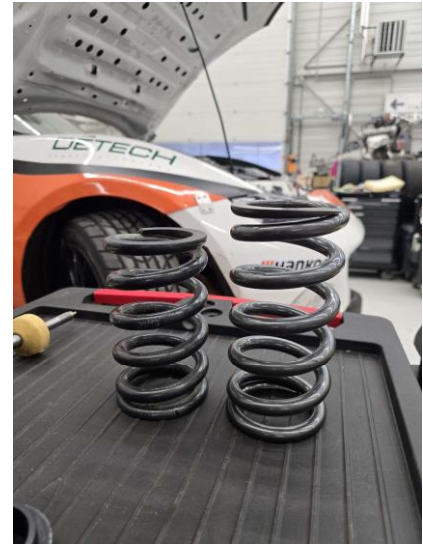
- Remove the top spring plate
- Remove helper spring
- Remove middle spring plate
- Remove the main spring
- Remove lower spring plate

- Clean all parts thoroughly before installation

Attention!

There is some height difference between the original front and rear, and the original and new rear main springs.

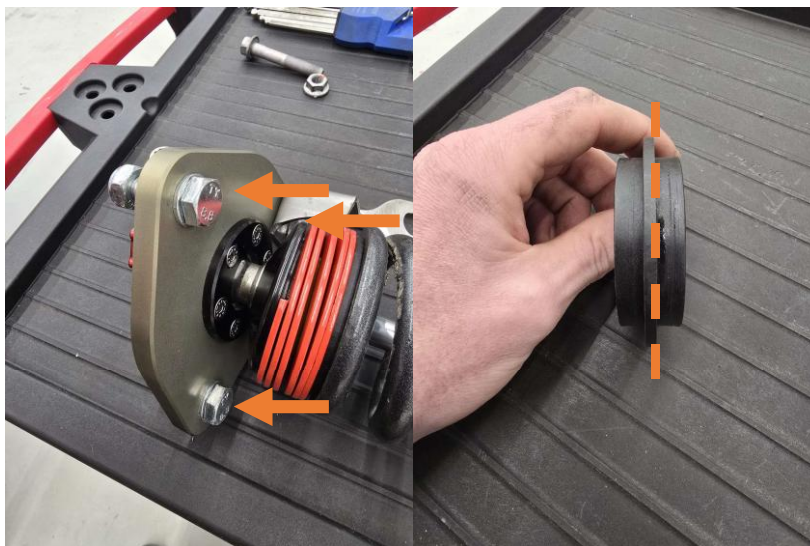
The choice of a longer new rear spring is for more ease in adjustment as the spring platform was always in the middle of the top suspension arms, which made adjusting difficult.



Additional adjustments:

- Replace top mount pan head bolts with regular 8.8 M8 bolts, and place additional washers. This makes installation easier and more reliable as you can torque the nuts better when installing the dampers to the chassis.
- Remove helper spring from spring system (not tested), this needs some adjustments to the middle spring plate as the top plate needs protection from the main spring (aluminium to steel). Flatten one end of the middle spring plate to ensure correct fitment of the main spring and full support on the top spring plate.

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Installation:

Simply use the dismounting guide for installation in reverse, all torque specs are listed for front and rear suspension. Make sure all aluminium spacers are back in place when installing the lower end of the damper to the lower wishbones. Advise; use paint markers to mark all torqued bolts and nuts for easier inspection after the first outing.

