Telefon: 06432/6409960 Fax: 06432/6409966

Web: http://sps-motorsport.com E-Mail: info@sps-motorsport.com



# **Installation Instructions**

## Suspension Bushings MX-5 NA/NB/NBFL

Date:	2.09.2021	Revision:	0
Editer:	Nico Hafner	Vehicle:	Mazda MX-5
			NA/NB/NBFL

## **Scope of delivery:**

- 1x Suspension bushing set MX-5 NA/NB/NBFL
- Installation grease for the bushings

## **Warning:**

Please read this instruction before installation and get in touch with the work on the car! Ideally, have the installation done by a professional workshop. Tighten all screws with the torque recommend by the manufacturer. The assembling company is liable for installation mistakes. In case of manufacturing defects, the corresponding components will be replaced without any costs within the warranty period.

Nico Hafner	gez. Nico Hafner
Name of editer	Signature

Telefon: 06432/6409960 Fax: 06432/6409966

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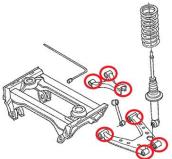


### **Preparation:**

- Park the vehicle, switch off the engine and let the engine cool down
- Lift the car up
- Remove all 4 wheels

### Removing the wishbones on the rear axle:

- Lift the car fully up
- Remove the screw that is connecting the coupling rod of the anti roll bar to the lower wishbone
- Secure the wheel hub and brake system from falling down. Do not let the hub hang on the brake lines
- Loosen and remove the lower suspension screw
- Loosen and remove the outer screw of the lower wishbone. They most likely are rusted and hard to remove, but should work with a little patience. In case you can not remove it, try to spray some rust solvent on the screw and let it work over night
- Loosen and remove the inner eccentric screws of the lower wishbone
- You should now be able to remove the lower wishbone
- Loosen and remove the inner and outer screws of the upper wishbone
- You should now be able to remove the upper wishbone
  - Check your secure method of the wheel hub to avoid damage to those parts



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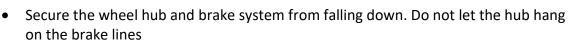
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### Removing the wishbones on the front axle:

- Lift the car half way up so you can work from the wheel arches
- Remove the securing pins on the upper and lower ball joint
- Remove the castle nuts of the upper and lower ball joints
- In case the ball joints don't come off of the wheel hub on their own, use a hammer on the hub connection to loosen them



- Remove the screw that is connecting the coupling rod of the anti roll bar to the lower wishbone
- Loosen the screws that connect the anti roll bar to the chassis, so the upper wishbone screw can fit through this space
- Loosen and remove the lower suspension screw
- Loosen and remove the inner eccentric screws of the lower wishbone
- You should now be able to remove the lower wishbone
- Loosen and remove the inner screw for the upper wishbone, pull this to the front until you are able to remove the upper wishbone
  - → Check your secure method of the wheel hub to avoid damage to those parts



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### **Rebuilding the suspension bushes:**

- Remove the old bushes using a hydraulic press. Watch out not to damage the wishbone itself while doing this
- Clean the rust off the inner surface of the wishbone so your new bushes can sit nice, clean and tight
  - → Because you have the wishbones out of the car right now, you also can renew the ball joints. The upper ball joint is pressed into the wishbone, the lower ball joint is secured by one horizontal and one vertical screw
- Die gereinigten Lagerhülsen mit dem mitgelieferten Buchsenfett bestreichen
- Put some grease on the inside of the wishbone where your new bushes will fit in
  - → From now on you'll better work on one wishbone after the other, because these bushes are easy to accidentally swap
- Put some grease on the outside of the respective bushes and press them into the wishbone using a vice. Always watch out for installation directions if applicable
- Put some grease on the inside of the bushes and the metal sleeve
- Put the metal sleeve on the inside of the bushing
- Check the correct fit of the bushing and the metal sleeve
- You can change the outer bushes of the upper wishbone on the rear axle using the same procedure while the wheel hub is fitted to the car. Use a puller / mechanical extrusion tool for those bushes

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### <u>Installation of the wishbones on the rear axle:</u>

- Place the upper wishbone in the car and secure it from falling down with the fastening screws. Don't tighten them yet
- Place the lower wishbone in the car and secure it from falling down with the fastening screws. Don't tighten them yet
- Tighten the lower suspension screw
- Tighten the screw that connects the coupling rod to the lower wishbone
- Tighten all fastening points of the wishbones

### Installation of the wishbones on the front axle:

- Place the upper wishbone in the car and secure it from falling down with the fastening screw. Don't tighten this screw yet. Also place the ball joint in the wheel hub
- Place the lower wishbone in the car and secure it from falling down with the fastening screws. Don't tighten these screws yet. Also place the ball joint in the wheel hub
- Tighten the lower suspension screw
- Connect the coupling rod to the lower wishbone and tighten the screw
- Tighten the screws of the wishbone's fastening points
- Tighten the nuts of the ball joints and secure them from loosing with a securing pin
- Tighten the screws that connect the anti roll bar to the chassis

### Final work on the vehicle:

- Install the wheels and tighten the nuts
- AN WHEEL ALIGNMENT IS NECESSARILY NEEDED!

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## **Our Alignment overview:**

### **Daily Driver Alignment:**

#### Rear axle:

• Toe: +18 minutes total (+9 minutes per side)

• Camber: -1°30 per side

### Front axle:

Caster: 6°00 minutesCamber: -1°20 per side

• Toe: +12 minutes total (+6 minutes per side)

## **Sport Alignment:**

#### Rear axle:

• Toe: +20 minutes total (+10 minutes per side)

• Camber: -2°00 per side

### Front axle:

Caster: 6 ° 30 minutesCamber: -1°45 per side

• Toe: +12 minutes total (+6 minutes per side)

## **Racing Alignment:**

### Rear axle:

• Toe: +20 minutes total (+10 minutes per side)

• Camber: -2°30 per side

### Front axle:

Caster: 7°30 minutesCamber: -2°45 per side

• Toe: -10 minutes total (-5 minutes per side)

Name of editer	Signature
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