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Installation Instructions

Clutch Kit MX-5 NC

Date:	9.09.2021	**Revision:**	0
Editer:	Nico Hafner	**Vehicle:**	Mazda MX-5 NC

Scope of delivery:

- 1x friction disc fitting MX-5 NC
- 1x pressure plate fitting MX-5 NC
- 1x release bearing fitting MX-5 NC
- 1x pilot bearing fitting MX-5 NC
- 1x centering tool for MX-5 NC

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.

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Preparation:

- Park the vehicle, switch off the engine and let the engine cool down
- Lift the car up
- Remove the underbody tray all the way to the rear crossing strut
- Remove the exhaust system (header and rear silencer can stay in the car)
- Disconnect the battery negative lead
- Drain the transmission oil

Removing the gearbox:

- Remove the shift knob
- Remove the center console and also disconnect the electric window switch
- Remove the upper shift lever sealing that is attached to the chassis, so you can remove the shift lever
- Remove the screws that attach the shift lever to the gearbox, after that remove the shifter from the gearbox
- Lift the car all the way up to work from underneath the car
- Remove the 4 screws that connect the driveshaft to the differential and pull the driveshaft out of the gearbox
- Remove the clutch slave cylinder from the gearbox
- Loosen but don´t remove the screws that attach the gearbox to the starter until the starter is loose. You don´t need to remove the starter itself
- Disconnect the speed sensor´s connector from the gearbox
- Disconnect the connectors for the neutral sensor and reverse gear sensor
- Remove the wiring loom from the gearbox
- Remove the frame between gearbox and differential
  - ➔ Before removing the frame support the gearbox and the differential
- Remove the screws that attach the gearbox to the engine
  - ➔ Mark them which screw was in which hole so you can´t accidently swap them while reassembling
- Carefully remove the gearbox from the car

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Removing the clutch:

- Secure the flywheel from twisting
- Loosen the crossing screws of the pressure plate by one rotation and after this remove all screws completely
- Remove the pressure plate and friction disc
- Loosen the screws of the flywheel and dismantle the flywheel from the crankshaft
- Check the now visible crankshaft sealing for leakage and renew it if needed
- Press the pilot bearing out of the flywheel

Installation of the new clutch:

- Press the new pilot bearing into the flywheel
- Clean the flywheel and check for cracks and other wear marks
- Fit the flywheel to the crankshaft
- Fit the flywheel screws into the crankshaft using medium strength screw locking and tighten them in a crossing order (Tightening torque according to manufacturer's advice 108-116 Nm)
- Fit the centering tool into the friction disc, watch out for the installation direction
- Fit the centering tool including the friction disc into the flywheel and watch out for a secure fit of the centering tool in the flywheel
- Line up the pin holes in the pressure plate to the pins in the flywheel and place the pressure plate on the flywheel
- Tighten the screws of the pressure plate in a crossing order (tightening torque according to manufacturer´s advice 25-33 Nm)
- Pull the centering tool out of the friction disc
- Clean the gearbox bell and check for leakages in the area of the input shaft, renew Input shaft sealing if necessary
- Remove the old release bearing from the release lever and remove the old grease from the shaft where the release bearing runs on
- Apply a small amount of the new grease onto this shaft, after this set the new release bearing in position
- Apply a small amount of grease to the input shaft

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Installation of the gearbox:

- Carefully place the gearbox in the car. Watch out that the gearbox has to sit flush to the engine before you can tighten the screws. In case that the gearing of the input shaft does not fit into the friction disc, rotate the engine a little bit on the crankshaft until the input shaft fits clean into the friction disc. In case that this does not work either, remove the gearbox and recenter the friction disc using the centering tool
- Put the gearbox flange screws in and tighten them evenly (Tightening torque according to manufacturer´s advice 37-52 Nm)
- Install the frame between gearbox and differential and tighten the nuts (Tightening torque according to manufacturer´s advice 126-154 Nm). Also watch out, that the differential and gearbox align
- Tighten the screws that connect the starter (Tightening torque according to manufacturer´s advice 38-51 Nm)
- Reconnect the wiring loom to the gearbox
- Connect the connectors for neutral and reverse gear sensor
- Connect the speed sensor´s connector to the gearbox
- Fit the clutch slave cylinder to the gearbox (Tightening torque according to manufacturer´s advice 18,6-25,5 Nm)
- Place the driveshaft into the gearbox and tighten the screws that connect the driveshaft to the differential (Tightening torque according to manufacturer´s advice 49-59 Nm)
- Install the shift lever and tighten these screws (Tightening torque according to manufacturer´s advice 7,8-11 Nm)
- Reinstall the upper shift lever sealing and tighten the nuts (Tightening torque according to manufacturer´s advice 8,9-12,7 Nm)
- Install the center console and reconnect the connector for the electric window switch
- Install the shift knob

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Final work on the vehicle:

- Fill in the gearbox oil (5 speed about 2.0L, 6 speed about 2.1L)
- Reconnect the battery negative lead
- Install the exhaust system
- Install the underbody tray and struts you were removing before
- With the car lifted, check if the gearbox shifts nice in every gear
- Check the reverse gear sensor, if the reverse light come on while in reverse
- Check if the speed sensor is working correct while you are on your test drive
- After your test drive check for any leakage or failure on the parts you removed and reinstalled

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