

2007-2010 BMW X3 | Advanced | 2-4 hours per side

TOOLS

Floor jack Jack stands Socket set
Torque wrench Spring compressor
Penetrating oil Hex key set Wire brush

PARTS

Front shock strut (pair recommended)
Strut top mount and bearing (if worn)
Sway bar end links (if worn)

STEPS

- 1 Confirm the E83 X3 and diagnose the strut - This tutorial covers the first-generation E83 X3**, which spans the 2007-2010 hub years. Confirm the strut is actually bad: bouncing that does not settle, knocking over bumps, or visible oil leaking down the strut body. Replace struts in a...
- 2 Loosen hardware and raise the front - Break the front wheel bolts loose on the ground**, then raise the front and support it securely on jack stands. Remove the wheel to access the strut. Spray the strut's lower pinch bolt and the top-mount nuts with penetrating oil ahead of tim...
- 3 Disconnect the sway bar link and ABS wire - Unbolt the sway bar end link from the strut** and unclip the ABS sensor wire and brake hose from their strut brackets. Do not stretch or kink the ABS wire; a damaged wire means a new sensor. Note the routing of every clip for reassembly.
- 4 Remove the lower pinch bolt - Remove the bolt clamping the strut into the steering knuckle**, as shown in the AUTODOC tutorial. Spread the knuckle slot slightly if needed and work the strut downward out of the knuckle. Support the knuckle so it does not hang from the bra...
- 5 Remove the top-mount nuts - From under the hood, remove the three nuts holding the strut top mount to the strut tower**, while an assistant supports the strut from below. Lower the complete strut and spring assembly out through the wheel well. Never remove the top-moun...
- 6 Transfer the spring to the new strut - Compress the coil spring with a proper spring compressor** before loosening the top nut; a released spring under load can cause serious injury. Transfer the spring, top mount, and bump stop to the new strut in the same orientation. If the to...
- 7 Install the new strut assembly - Guide the new assembly up into the strut tower and start the three top nuts**, then seat the strut into the steering knuckle and install the pinch bolt. Torque all fasteners to the values in the video. Reconnect the sway bar link, ABS wire,...
- 8 Refit the wheel and align - Refit the wheel, lower the car, and torque the wheel bolts.** Bounce the suspension and recheck every bolt after a short drive. Get a wheel alignment promptly, because strut replacement changes camber and toe settings.