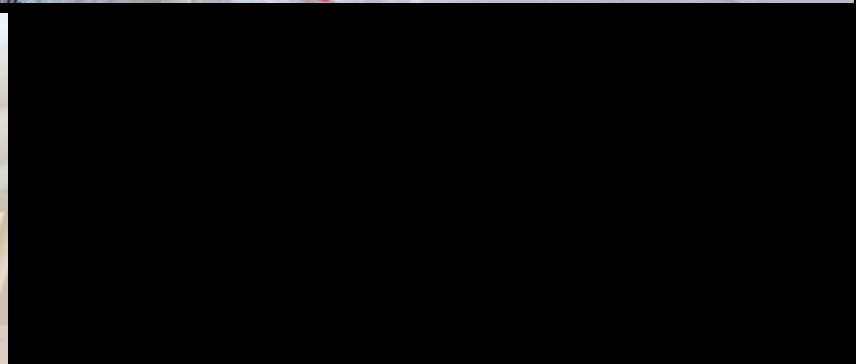
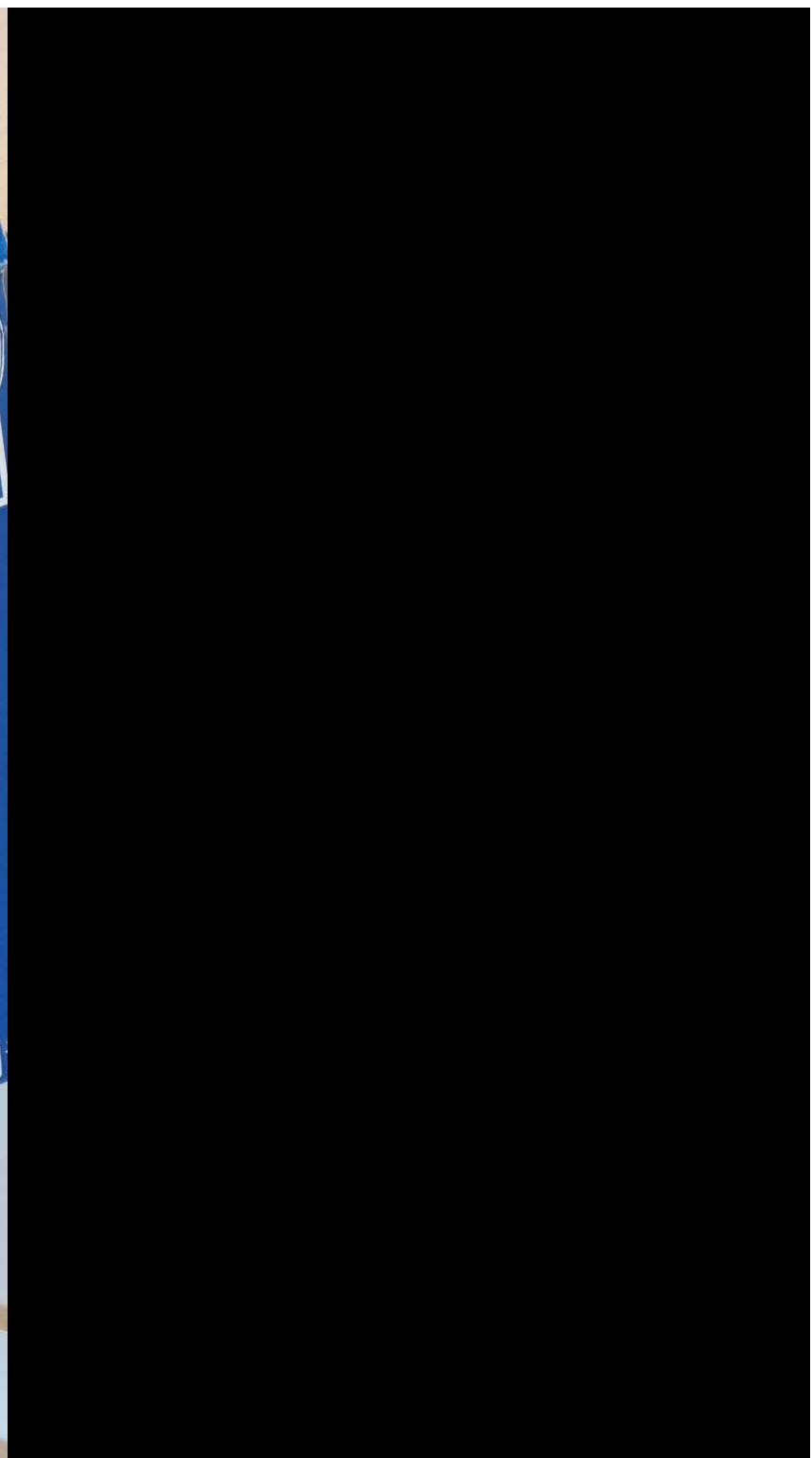
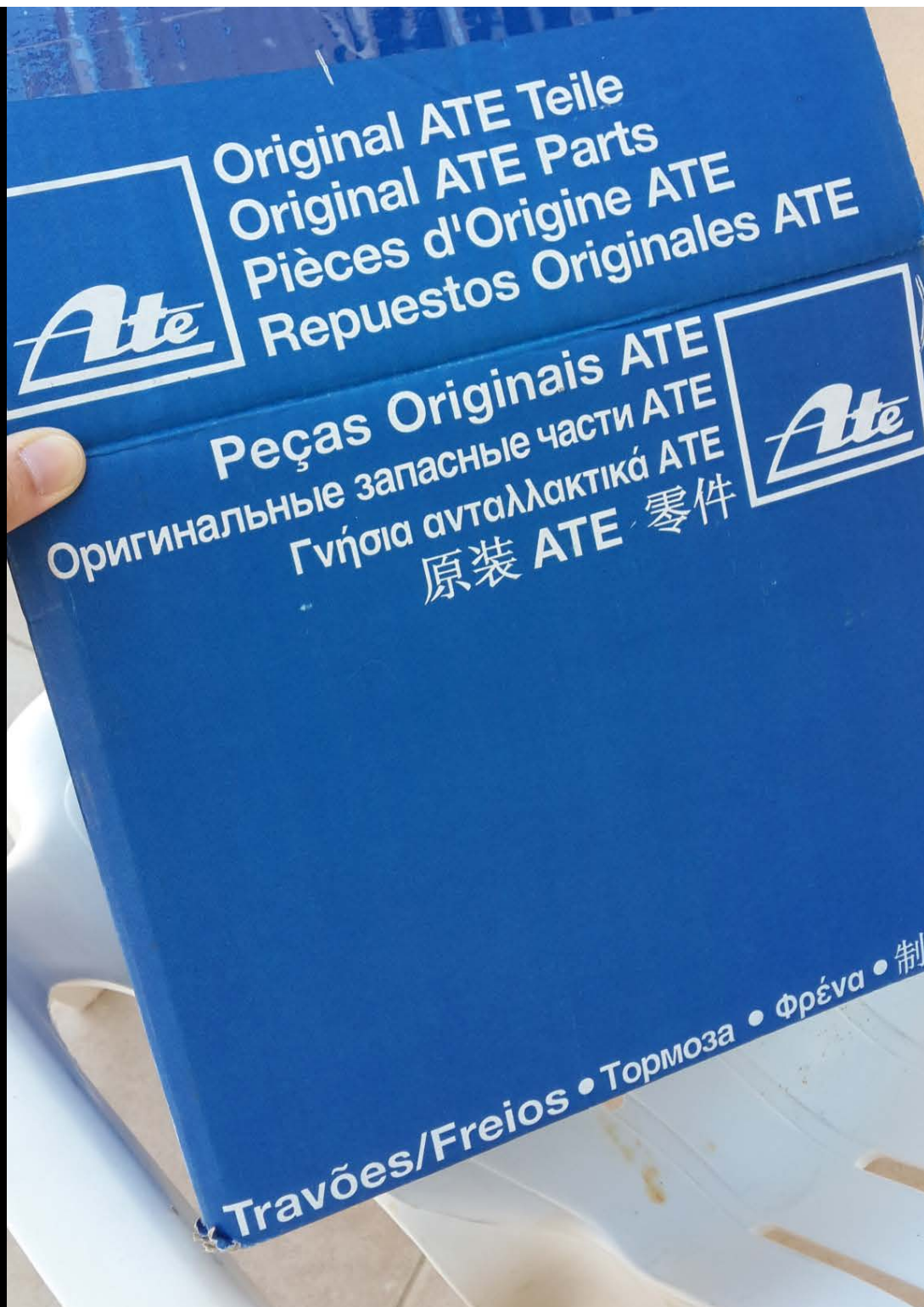


ATE Brake Servo Replacement

All of a sudden I started hearing an air leak noise down the footwell. Upon research I concluded that the brake servo was slowly failing, which eventually would lead to the well-known ultra-stiff brake pedal (no brake assistance). Having inspected the intake manifold to brake servo hose and connecting parts and gaskets for leaks and discovering nothing at all, it confirmed that the problem was indeed within the brake servo unit.

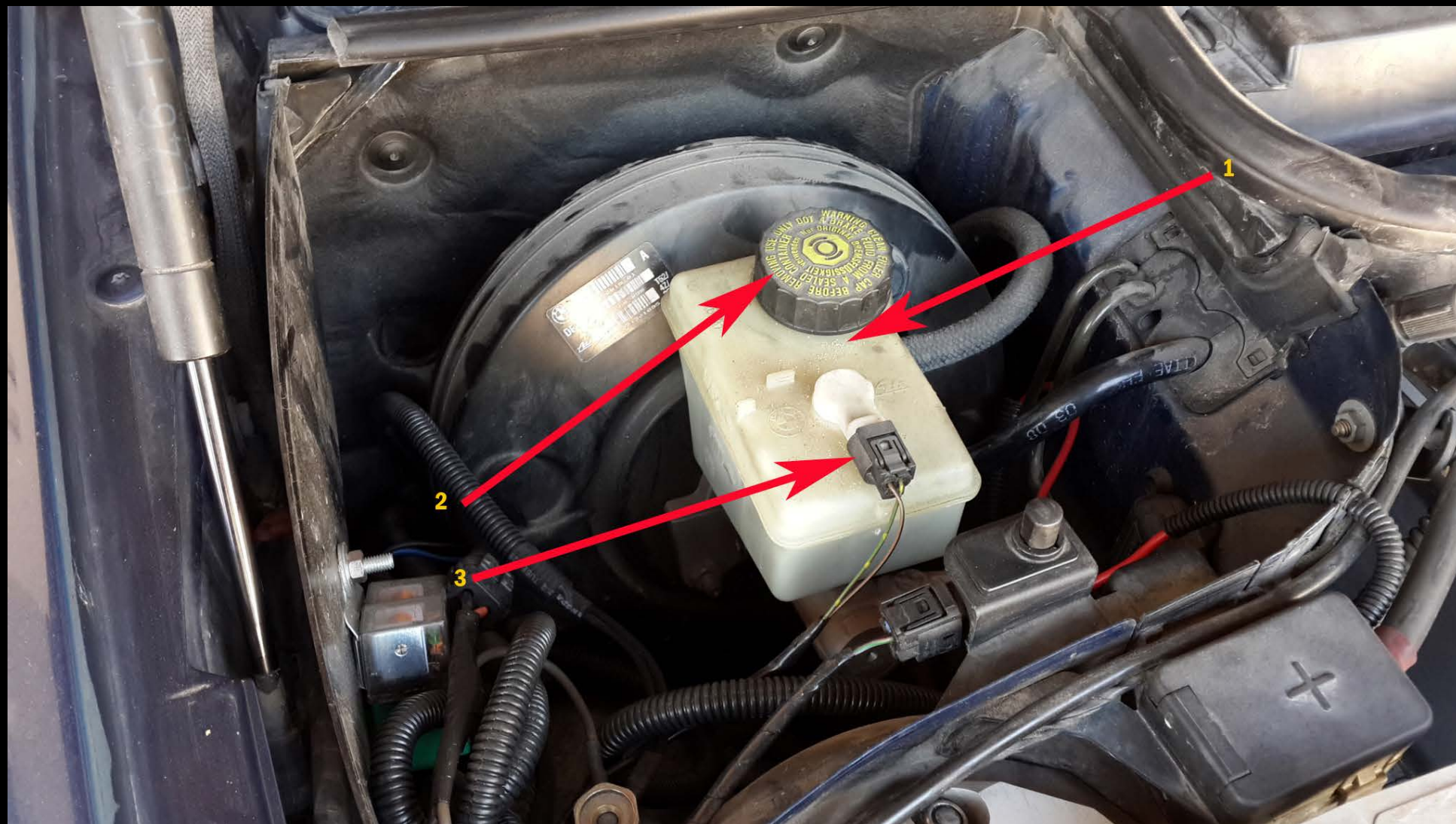
New servo unit from ATE and brake fluid



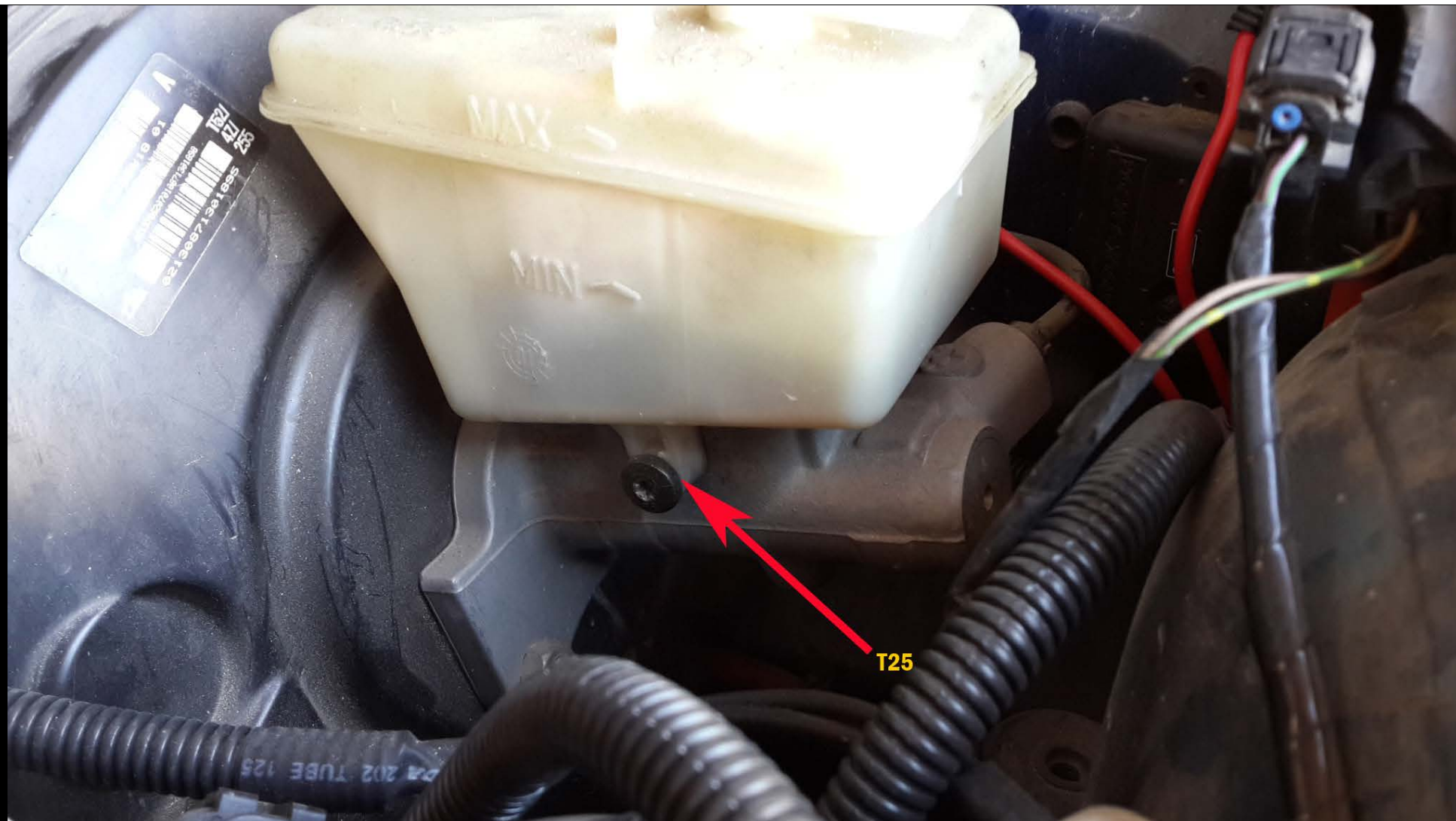




1. Clean the surrounding area, nobody wants dust inside the brake lines/cylinder
2. Remove cap and carefully siphon brake fluid.
3. Disconnect brake fluid level sensor plug

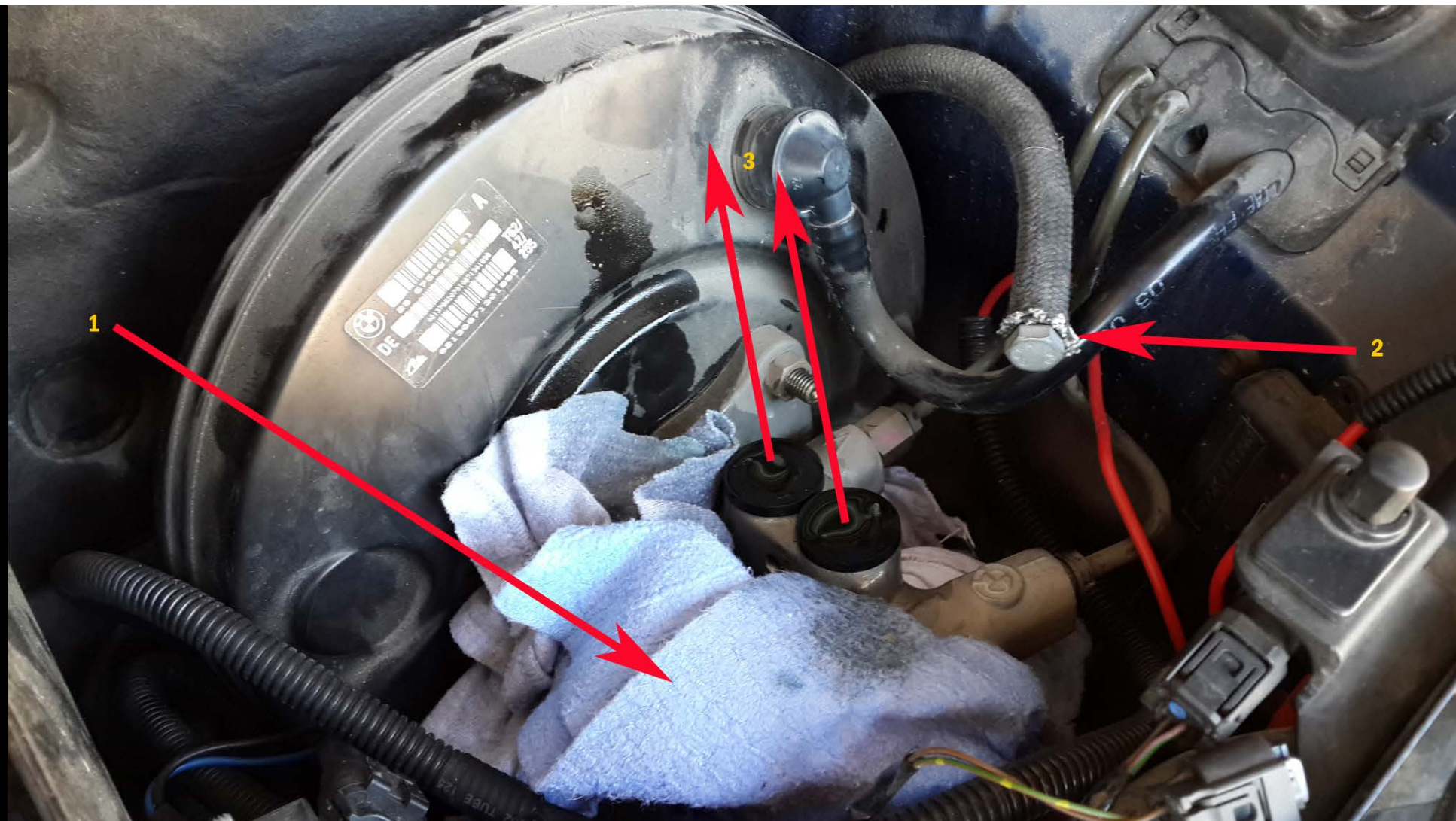


Remove T25 Torx screw



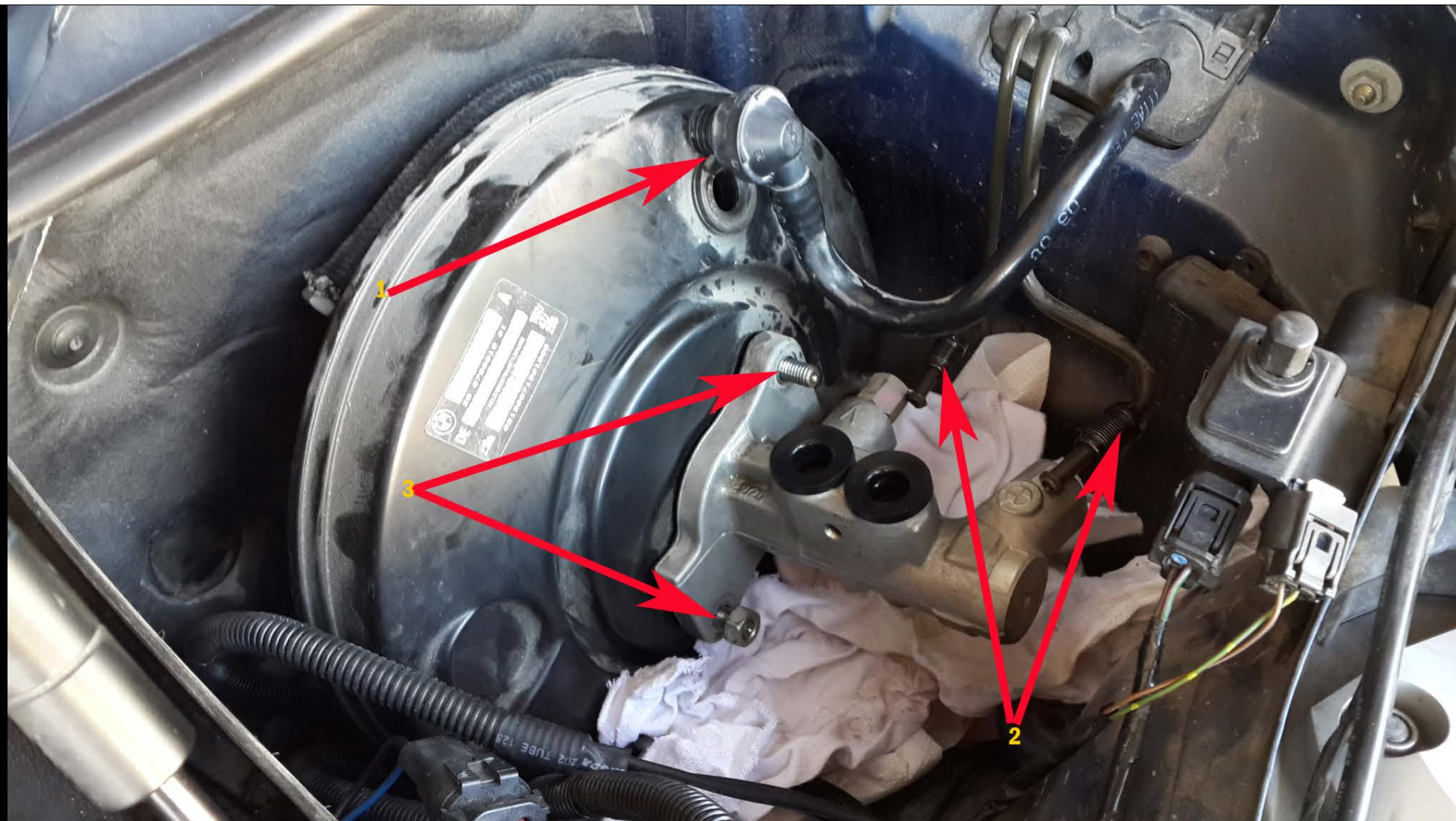
1. Insert lots of rags to absorb possible leak of brake fluid
2. Pull clutch fluid line and cap it with a bolt
3. Pull brake fluid reservoir upwards





1. Remove brake booster vacuum line, just pull it.
2. Remove 2x brake line nuts, 11mm
3. Remove 2x brake cylinder nuts, 13mm





1. Gently pull brake cylinder outwards and put it somewhere clean



1. Preventive maintenance: Replaced one-way check valve
2. Preventive maintenance: Replace Brake cylinder to servo o-ring
3. Preventive maintenance: Replace brake fluid reservoir to brake cylinder gaskets/grommets
4. Preventive maintenance: Replace brake cylinder 13mm nuts



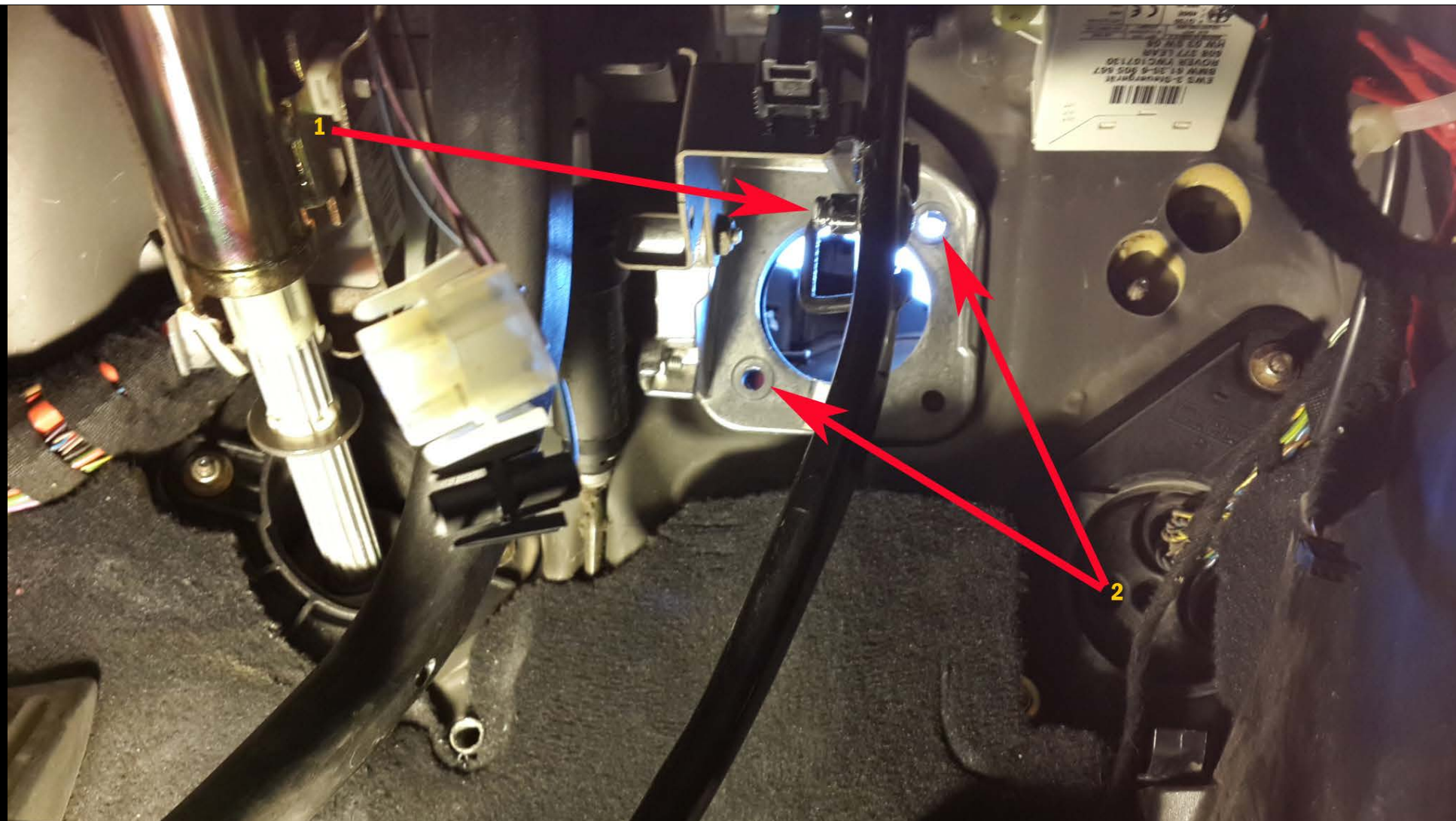


Remove lower steering wheel cover.

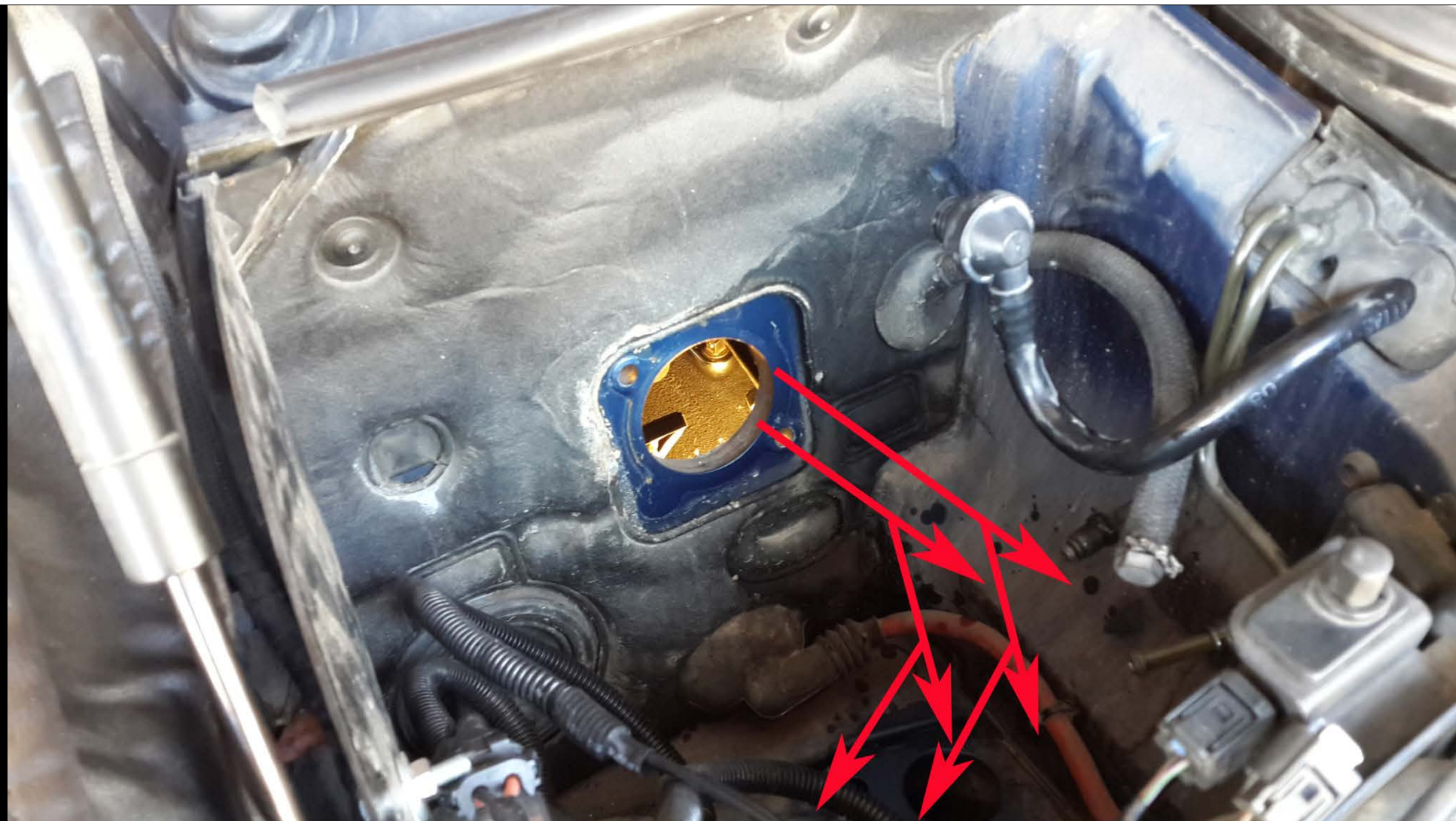
1. Remove springclip securing brake pedal to servo. Replace springclip with new genuine BMW. It is nearly impossible to disconnect the brake pedal even without the spring clip, but we do not take any chances!

2. Remove 2x13mm nuts that hold the servo in place





Wiggle the servo out of the car. Installation is exactly the reverse procedure, which also includes a full 4-wheel brake bleeding. I had a lot of air trapped inside the system from this job so I spend a good amount of time to bleed the system. After bleeding, all problems gone!



Faulty servo opened.





Rubber diaphragm and other parts.



Leak was from that point.



