E-Brake Maintenance by Fred Munro

Seized rear caliper guide pins

The rear caliper carrier is bolted to the wheel bearing housing and is fitted with two guide pins. The caliper bolts to these pins. The pins move in and out in the carrier and allow the caliper to center itself on the rotor.

These rear pins typically seize up due to degradation of the lubricant and intrusion of water. With the pins seized, the caliper can no longer center itself on the rotor. The outer brake pad idles and the inner pad on the caliper piston does all the work, resulting in rapid wear of the inner pad and inner surface of the rotor**.**

Sticky E-brake Cams

The emergency (parking) brake cam shafts can rust and get “sticky”, causing the parking brake to stay on even after the lever has been released. You usually don't need to get a rebuilt caliper; this can often be repaired. I just freed up both of the parking brake cams on my S4 this morning (and found a sticky cable - drat!)

Procedure

1. Pry the parking brake cam back to the stop ("off" position).
2. Remove the return spring.
3. Remove the 10 mm stop bolt. Note it is secured with blue loctite on re-assembly.
4. Use a screwdriver to pop the parking brake cam out of the caliper 1/2" (that's as far as it comes out).
5. Clean the rust off the cam shaft with thin strips of emery cloth. Clean well with brake cleaner or similar quick-dry solvent.
6. Lubricate with water-resistant lube. I use Corrosion Free Formula 3000", a water displacing, “creeping” oil designed for rust proofing and undercoating.
7. Pop the cam in & out a few times, liberally applying lube. The cam should now return to the stop on its own, even without the assistance of the return spring.
8. Re-assemble and enjoy a fully functional e-brake (if the cables are OK, that is).

Note that if you crank the cam back and forth several times to free it up, you will lock the pads to the rotor - it adjusts the piston out. Remove the caliper and turn the piston back in and all will come back into adjustment. Based on my experience with the 200q, the rear brakes seem to function better if the parking brake is used regularly. Using the parking brake adjusts the clearance on the rear brake pads and keeps the brake pedal nice and high.

photos

fig. 1

fig. 2

fig. 3

fig. 4

fig. 5

fig. 6

fig. 7

fig. 8

fig. 9

fig. 10

Fred Munro


A somnolent e-brake cam, sluggish and dozy
after snoozing all winter in a salt bath

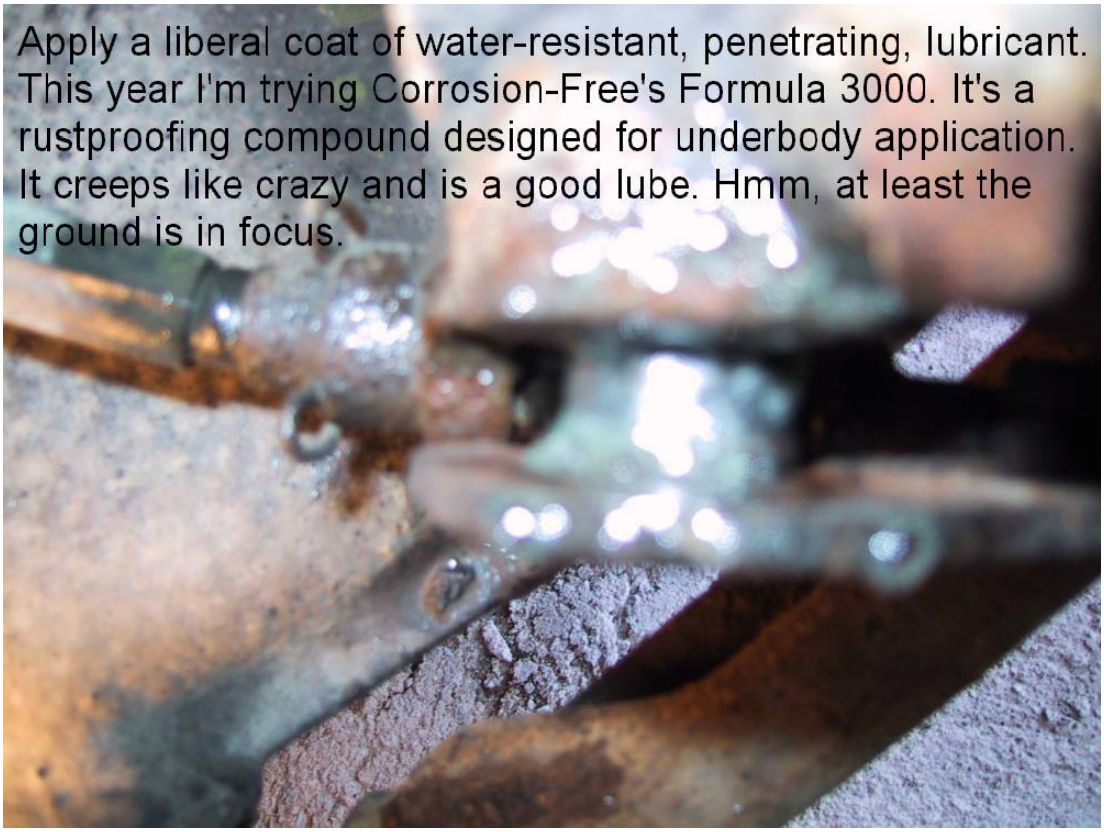

Remove the 10 mm bolt and
hairpin spring. The cable
remains connected.


Insert screwdriver between
cam and caliper.

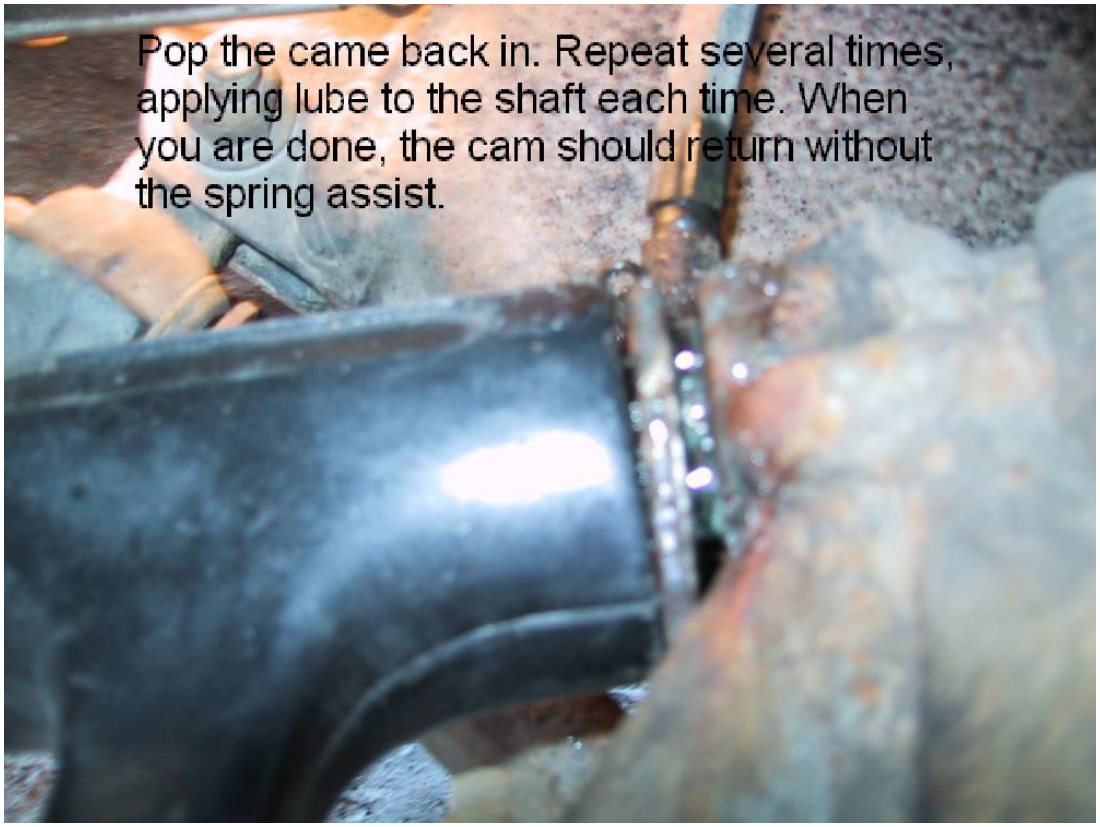

Pop cam out


Look at all that rust. Little wonder
the cam is sticky. These were
cleaned and lubed last spring.

Cleaned up and ready to go. I used a thin strip of fine emery cloth wrapped around the shaft.



Apply a liberal coat of water-resistant, penetrating, lubricant. This year I'm trying Corrosion-Free's Formula 3000. It's a rustproofing compound designed for underbody application. It creeps like crazy and is a good lube. Hmm, at least the ground is in focus.


Pop the came back in. Repeat several times, applying lube to the shaft each time. When you are done, the cam should return without the spring assist.


Loctite the bolt. Uh, you don't need quite this much. You try doing this through a camera viewfinder!
LOCTITE
THREAD


One happy cam(per)