

# How To: Replace Brembo front discs & pads

## Necessary Tools required

Good quality socket set.  
T55 Torx/spline bit of very good quality.  
T30 Torx/spline bit.  
T27 Torx /spline bit  
WD40  
Mallet.  
Punch.  
Brake cleaner.  
Screwdrivers.  
Threadlock.  
Emery paper.

Below is a picture of what will be replaced.



One pair of Brembo front discs (305mm diameter), One set of OEM Pads which include 2 sachets of grease & 2 new pipe clips (Part No - 425251)

### Removal

Untighten all the wheel bolts.  
Jack the car up and fix an axle stand underneath to secure.  
Remove wheel bolts and then remove wheel.  
Here you can see disc and pads underneath.



Firstly, disconnect pad wear indicators from sockets shown.





Remove wires from spring and remove spring. Here are the pins and spring. It would be advisable to renew the 2 pins as they have a compression ring at one end which compresses when they are driven into the caliper.



This is what you are left with once the pins and spring are removed.



You now need to pull the worn pads out of the caliper. This can be tricky because of the rim that is worn on the edge of the brake disc. I used a screwdriver like in the picture below to prise the pads away from the discs and force the pistons into the caliper which enabled the outside pad to freely pull out. The inside pad was still stuck in the caliper, even when I had pushed the piston back in, caused by a problem I found later.

Here you can see the outside pad removed and using a screwdriver between pad and disc to prise the pad and piston away from disc.



As I was replacing the discs as well, I had to remove the caliper so I left the stuck pad in and would remove the pad after the caliper was off the car.

To remove the caliper, there are 2 bolts holding it to the strut. These bolts are very, very tight and would have been fitted with threadlock.

This is why you require a very good T55 bit for use in a socket set. I used a Halfords Professional bit with a 3/8 inch square drive, added a 3/8 inch to 1/2 inch adaptor and the longest wrench I had which happened to be my Torque wrench.

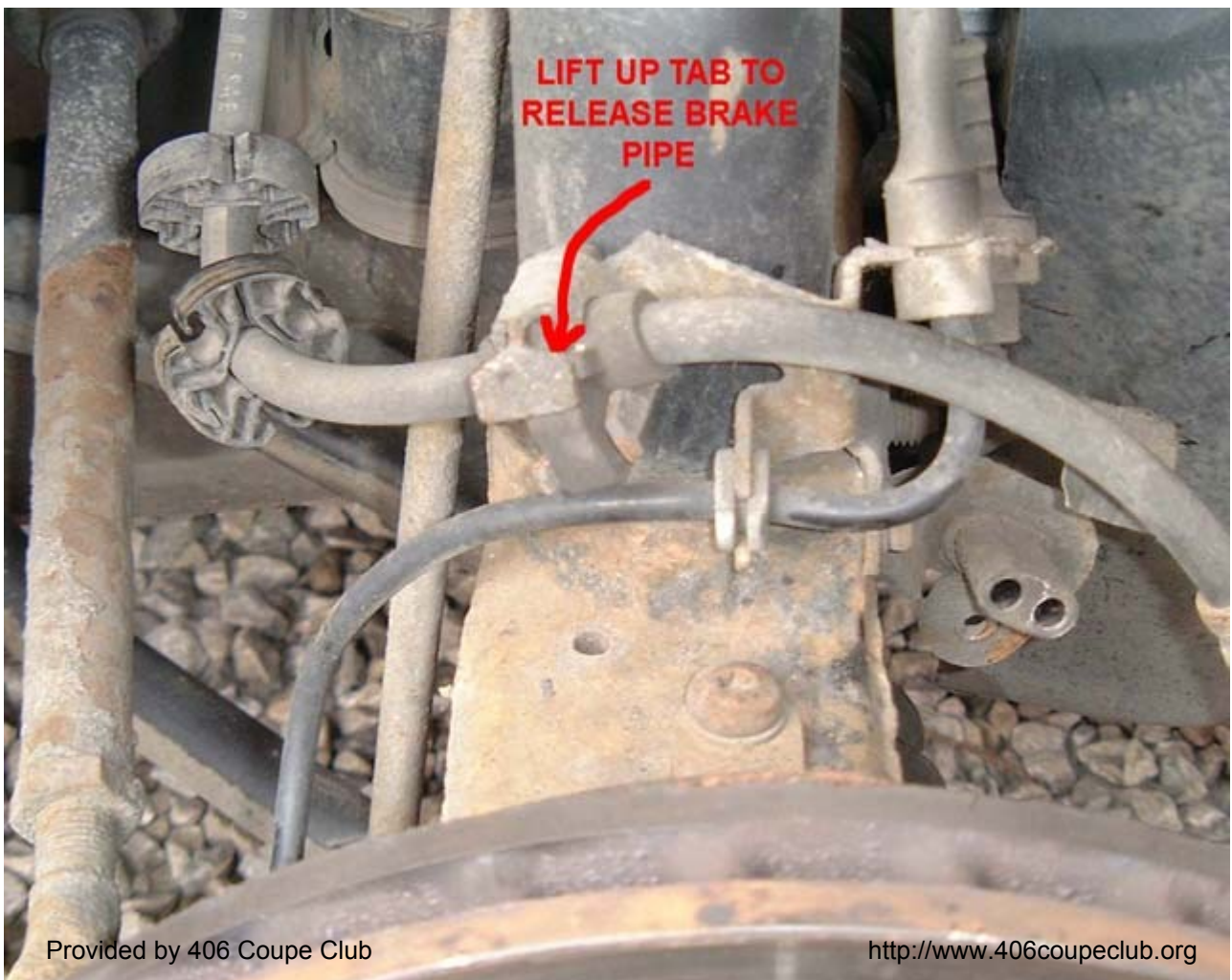
Below is a picture of the T55 bit socket and 3/8 inch to 1/2 inch adaptor.



Below is the location of the 2 bolts that need to be undone to release the caliper from the strut.



When you have eventually undone the bolts the caliper will come away from the disc. Pull up the tab shown below to release the brake pipe from the strut.



I then knocked out the pad from the caliper using a mallet and assessed the problem as to why the pad was stuck.

Firstly, clean the caliper off with a brake cleaner to remove all brake dust.

Where the pads sit in the caliper, there are 4 metal plates that are screwed into the caliper shown.

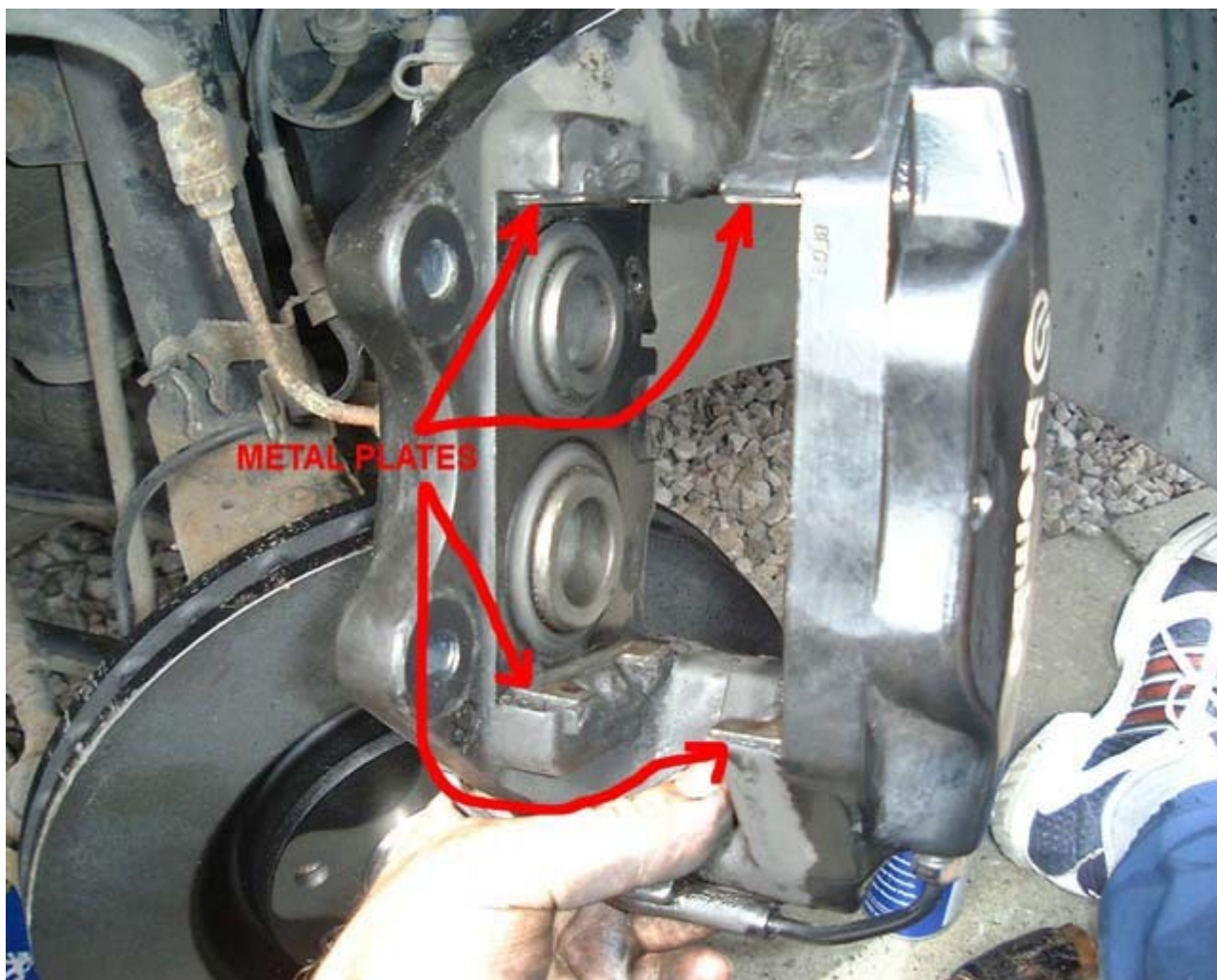
Over time, the paint underneath the inside plates had corroded and had forced the ends of the plates to rise up from the caliper which had a pinching effect on the pads. As the pads are supposed to move freely, this isn't wanted.

The plates are held onto the caliper with a T27 torx/spline bolt which is difficult to get at and on mine corroded badly.

I managed to get one of the plates off and clean all the corrosion away underneath and then refit the plate, but couldn't budge the other.

So to get the pad to slide freely into the caliper, I filed a little off each end of the pad until it would easily slide into the caliper.

The picture below shows the 4 metal plates the pads sit in. The inside 2 above and below the pistons you can see were the ones that were curved.



The next picture shows the bottom inside plate and you can just see the curvature of it.



This is a good time to push the four pistons back into the caliper to aid fitting later. Undo the bleed nipple which will release a bit of fluid but it will make pushing back the pistons easier. Tighten the bleed nipple when the pistons are flush with the caliper.

Also at this time, check all the pistons and seals for any leakages.

Using a box or rag, set the caliper out of the way without stressing the pipework whilst you remove the brake disc. To remove the brake disc, you must undo the screws that hold them onto the axle. On mine which were probably original, the screws are a T30 torx screw, so you'll need a relevant bit to undo it.

They shouldn't be too tight and you should be able to undo them whilst just holding the disc to stop it from spinning. If not, there is another method of stopping the disc from spinning. Put 2 wheel bolts into the axle and stand a bar or similar to chock the disc to stop it from spinning as shown in the picture. You should then easily be able to undo the screws.





### **Refitting**

Once the disc has been removed, you are left with just the axle as shown below. Before fitting the new disc, clean all meeting surfaces and remove any rust with a piece of emery cloth.



Fit the new disc and secure with the 2 screws as shown below.



When you are happy that the pads will fit into the caliper freely, you can then refit the caliper to the strut. Clean the threads of the 2 bolts to remove any remains of the the threadlock that was used and reapply some new threadlock to the thread. Offer up the caliper and the bolt to the strut. Refit the brake pipe to the strut and fold the tab back down. Below is the caliper bolted to the strut ready for the pads to be fitted.



Before fitting the pads, apply the copper grease supplied to the back of the pads ensuring non gets on the pad itself.



Note on the pads that one pad has a thin wear indicator cable and the other has a thicker cable. On mine, the pad with the thicker cable went to the side nearest the car (inside) and the other obviously to the outside. You will also notice that the cables are not on centre of the pad lengthways, and the pads need to go in the caliper with the cables to the top. (I only noticed this after I greased the pads up, that's why the picture above shows an odd pair).

You can then slide the pads into the calipers being careful not to transfer any grease to the face of the disc.

Drive the lowest pin through the caliper securing the pads through the bottom holes and then fit the spring underneath the bottom pin ensuring the cable clip is at the top. Now you can push the spring down with one hand whilst pushing the top pin through the caliper to secure the top half of the pads, making sure the pin passes over the top of the spring at the top.

Now you need to clip the thin cable into the cable clip on the spring, and the thicker cable into the slot on the side of the caliper. Release the grease nipple cap and feed the cables together through the gap and refit the cap to the grease nipple.

Fit the plugs of the wear indicators into the sockets. On mine, the thicker cable went into the socket nearest the front of the car and the thinner cable in the other, although I wouldn't imagine it would make a difference.

Here is a picture of everything put back together.

Check the brake fluid reservoir and top up level if necessary.



### **EXTREME CAUTION**

**BEFORE DRIVING/MOVING THE VEHICLE AFTER REFITTING THE PADS, YOU MUST PUMP THE BRAKE PEDAL SEVERAL TIMES UNTIL IT IS FIRM IN ORDER TO FILL THE BRAKE CALIPERS BACK UP WITH FLUID**

## Bedding In

Bedding in is a vital part of fitting your new brake kit. Without adequate bedding in the discs will warp.

If the discs and pads are not properly bedded in pad material will be transferred unevenly to the surface of the disc. This uneven deposit will result in thickness variation or run-out due to hot spotting that occurs at high temperatures and vibration under braking. The only way to prevent this is to properly bed in your new brakes.

Discs must go through several warming up and cooling down cycles and the bonding resins in the pads must be burned off slowly to avoid uneven deposits and fade.

The most effective way to bed in new brakes is to drive gently and careful for 200-300 miles allowing for brief cooling periods between brake application. Do not come to a complete stop with hot brakes and never leave your foot on the brake pedal after you have used the brakes hard.