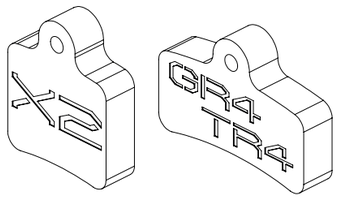
EVO BRAKE BLEED INSTRUCTIONS

We recommend using our Easy Bleed kit funnel for this process, this will allow the brake to be bled without removing the master cylinder lid for a cleaner more reliable process. The bleed can also be completed in an open method that can be tricker but allows the mechanic more visibility and control to achieve a perfect bleed. For this process please see BRAKES Tech Book 'Bleeding Your Brake'

BLEED SET-UP

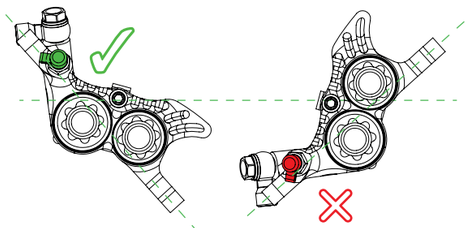
001_Hold the bike in a bike stand and remove the wheels



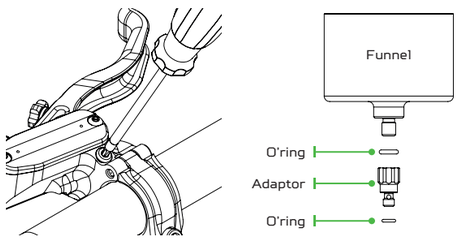
002_Remove the brake pads and install the relevant bleed block for the caliper or an old set of brake pads. Don't attempt to bleed the brake with no pads or bleed block as you risk the pistons coming out of the caliper.

NOTE: **Do not** use third party bleed blocks that fill the pad slot in the caliper and keep the pistons pushed back in the caliper housing.

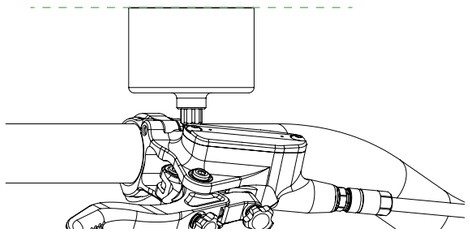
Link to printable Bleed Blocks



003_Make sure the caliper bleed nipple is positioned on the top of the caliper. Usually front calipers can remain attached to the bike while rear calipers should be removed and dropped below the bike. This is especially important where rear hose routings create a dip around the bottom bracket area; try to position the caliper so it sits at the lowest part of the system to avoid creating an air trap.

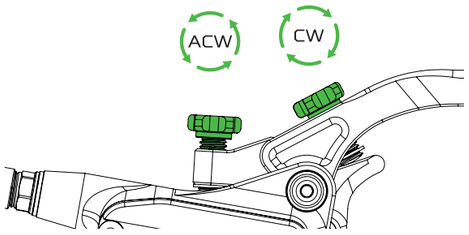


004_Remove the master cylinder bleed port screw using a T10 Torx driver. By hand, screw the EVO bleed port adapter onto the bleed funnel, don't be tempted to over tighten the adapter or use any tool. Thread the funnel/adapter assembly directly into the master cylinder bleed port, lightly tighten by hand, it just needs to seat to prevent any drips during bleeding.

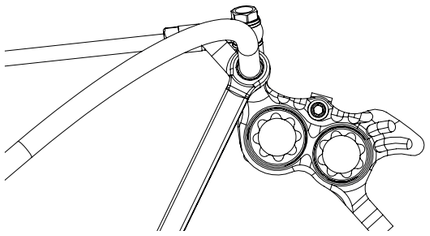


005_Rotate the master cylinder (M/C) so that the top of the bleed funnel sits in a level position. This position orientates the brake so that air will naturally rise out of the system during bleeding.
TIP: It can help to rotate the handlebars in a bike stand and strap them to the top tube of the bike.

006_Fill the funnel with **DOT 5.1 brake fluid** to approximately 50%.

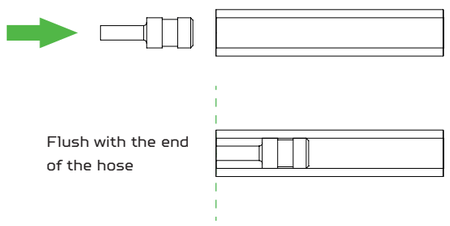


007_Position the lever adjustments so both reach and bite point are fully out (reach adjuster turned fully **clockwise** and bite point adjuster turned fully **anti-clockwise**)



008_Fit an 8mm spanner over the caliper bleed nipple and then push on either the bleed kit nipple adapter/hose or any piece of appropriate diameter clear hose. Route the other end of the hose into a waste bottle or jar.

NOTE: When using bleed kit nipple adapter; insert into end of waste hose until the thin end of the adapter sits flush with the end of the hose.



BLEED PROCEDURE

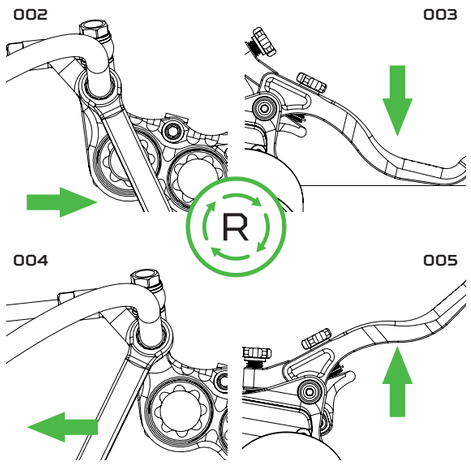
001_Remove the easy bleed kit reservoir plunger if fitted

002_Open the caliper bleed nipple (a quarter turn is usually enough).

003_Pull the brake lever all the way in until it contacts the handlebars. You may feel some resistance as fluid is pumped through system or on a dry system the lever will move freely all the way.

004_Keep the brake lever pulled in and close the bleed nipple.

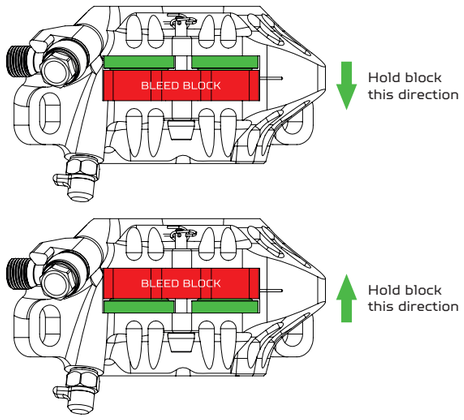
NOTE: Do not release the brake lever with the caliper bleed nipple open, this will draw air back into the system.



005_Release the brake lever. On a totally dry system no fluid will flow initially until **steps 002 to 005** are repeated several times.

R Repeat **steps 002 to 005** until clean oil flows out of the waste pipe with no air bubbles.

NOTE: Keep a check on the fluid level in the bleed funnel so it doesn't drop too low.



006_With the bleed nipple closed, pump the brake lever to move the pistons out of the caliper. Hold the piston/pistons on one side of the caliper back in the housing, using a flat blade screwdriver against the bleed block or pads, so that the opposite pistons come all the way out to contact the bleed block.

NOTE: Make sure there is enough fluid in the bleed funnel before pumping out the pistons

007_Open the bleed nipple and push the exposed pistons all the way back into the housing, forcing any trapped air out from behind the caliper pistons.

R Repeat **step 006 and 007** for the pistons on the other side of the caliper.

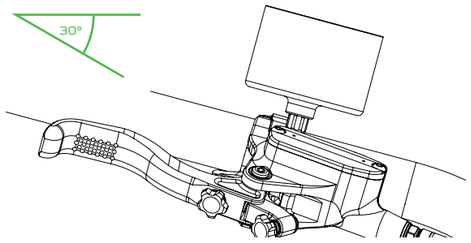
008_With the bleed nipple closed, pull the brake lever and check for a solid lever feel. If a good lever feel isn't achieved repeat **steps 002 through 007**.

009_Repeat **step 006** to move the pistons out on one side of the caliper.

010_Keeping the bleed nipple closed, push the exposed pistons all the way back into the housing, forcing fluid from the caliper back up the system into the bleed funnel.

R Repeat **steps 009 and 010** for the pistons on the opposite side of the caliper.
NOTE: Watch the fluid coming back up into the bleed funnel, if any bubbles are noticeable repeat **steps 009 and 010** until **no air bubbles** are visible.

011_Squeeze the brake lever with a force similar to a hard stop while riding. Keep the lever under pressure and look for any air bubbles forming in the bleed funnel. Repeat several times until no air bubbles can be seen.

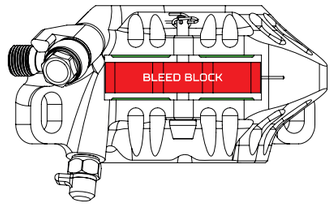


012_Rotate the bike in the stand so the lever end of the master cylinder points upwards around **30°** and repeat **step 011.**

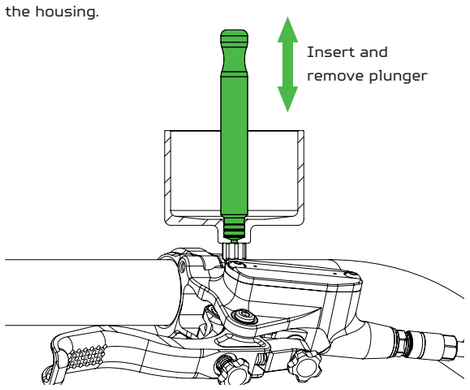
NOTE: Releasing and flicking the lever can also help to tease out any air bubbles trapped in the master cylinder.

FINISHING PROCEDURE

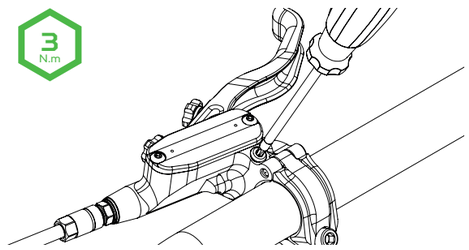
001_Tighten the bleed nipple taking care not to overtighten.
Recommend tightening torque: 8N.m
Remove the waste pipe and bleed nipple adapter.



002_Push the caliper pistons all the way back into the housing.



003_Rotate the master cylinder so the top of the bleed funnel sits level. Insert the bleed funnel plunger and then remove to create a suction action. Look for any air bubbles coming up into the funnel. Repeat several times until **no air** bubbles can be seen.



004_Insert the bleed funnel plunger and remove the bleed funnel. Use a cloth to catch any residual fluid.

005_Replace the bleed port screw, make sure that the O'ring is still located on the screw. Tighten using T10 Torx driver.
Recommended tightening torque: 3N.m

006_Clean up any residual brake fluid left on the brake using warm soapy water.

007_Remove bleed block or old pads from calipers

008_Re-fit calipers to bike if removed for bleeding and install the wheels.

009_Any calipers that have been removed will need re-aligning. See BRAKE Tech Book 'Installing and setting up your brake'.

010_Install new brake pads.

011_Align and centralise pads. See BRAKE Tech Book 'Installing and setting up your brake'

GENERAL ADVICE

- Use only DOT5.1 (or DOT4 brake fluid)
- It is highly recommended to use latex gloves and protective glasses when bleeding brakes.
- You shouldn't need to bleed your brake more than once a year.
- Always bleed the brake after shortening the hose.
- Pay particular attention to rear brakes, we always advise removing the caliper from the frame for bleeding.
- Always work caliper pistons to remove air from the caliper with bleed nipple pointing upwards.
- Be careful that the hose isn't creating a loop, especially inside the frame or around a motor if on an E-bike.
- At the end of brake bleed, make sure to fully push all caliper pistons back.
- If left on painted surfaces brake fluid can be corrosive.
- Always clean up thoroughly after bleeding.
- Dispose old brake fluid at a recycling centre, be responsible.

NOTES: