

# CV BRAKE PAD FITMENT INSTRUCTIONS

## GENERAL:

Brake maintenance should only be done by a qualified technician! Working on brakes means working on life & limb items. Your own safety & those of others are in your hands!

Please handle all brake components carefully. Remember, cleanliness is absolutely vital in all brake maintenance & service operations. New pads in sets of 4 must be fitted if: Any one pad is worn down to 2mm of friction material, if pads are unevenly worn or if pads are contaminated with grease or brake fluid.

These fitment instructions are a guideline only. Please refer to vehicle or brake system manufacturers specifications in the case of special features. Do not use brake pads other than those specified for the particular vehicle. Do not modify pad set should it be different to the set removed or if they do not fit into caliper.

Do not use sharp tools to retract or remove any parts as this could cause damage to the caliper.

Check dust cover and caliper for damage. Replace dust covers if damaged. Replace disc if it is worn below minimum specification.

Check discs for wear. Worn discs can cause noise. Don't skim discs below the minimum thickness specifications as stipulated by the disc manufacturer or owner's manual.

## DISMANTLING:

Attach warning notice to drivers side of vehicle to notify that work on the brake system is underway to prevent any starting of vehicle or activation of brakes. Starting of the vehicle while working on brake system could result in damage to components or injury.

Chock the wheels of the vehicle not being worked on. Jack the vehicle on the specified jack points. Use axle stands and ensure vehicle is stable. Work on one side of the vehicle at a time, the other side may be used as a reference.

Refer to vehicle manufacturers specifications when working on airbrake systems. Some systems need to maintain air pressure while other systems need to be drained of all air pressure. Failure to adhere to manufacturers specifications could result in damage to brake system or severe injury. Always proceed with caution.

Remove any cover plates or retainers only when brakes are released and wheel can move freely. Note the order in which parts are dismantled. Remove any electronic or mechanical wear indicators. Remove worn pads and compare to replacement set to ensure the correct part is being fitted.

## Hydraulic Systems:

Check level of brake fluid in brake fluid reservoir. Fluid may be removed if fluid will overflow when pistons in calipers are retracted. Check moisture or dirt content of brake fluid.

Ensure the correct fluid type specified by manufacturer is used. Replace if necessary.

Check brake calipers for leakage. Calipers must be repaired or replaced if any leaks are found. Replace cracked or brittle dust covers.

Do not use sharp objects or levers to retract pistons or pads in caliper as this could cause damage. Use special tools only (Expanding Tool, Torque Wrench, Pull Out Hooks, Rewinding Spanner etc.)

**Floating calipers:** Remove the outer pad first then slide the caliper housing over to remove the inner pad. Any seized shafts or bushes must be cleaned with non mineral oil based cleaners or detergents. Be sure to use the specified grease when reassembling. Failure to do so can result in premature wear or seizing of components.

**Opposed piston calipers:** Check that automatic adjuster has been retracted according to manufacturers specifications before retracting pistons. Remove both inner and outer pad with pull out hooks. Check that retainers and clips are in a good condition and replace if necessary.

## Airbrake Systems:

Wind back the caliper using the required wind back tool. Disconnect any wear sensors and note position. Remove retainer or clips. Remove outer pad then slide caliper housing over to remove inner pad. Replace cracked or brittle dust covers. Any seized shafts or bushes must be cleaned with non mineral oil based cleaners or detergents. Be sure to use the specified grease when reassembling. Failure to do so can result in premature wear or seizing of components.

**ASSEMBLY:**

Brake pads must move freely in their guides. Any shims must be transferred from old pad to new unless supplied with new set. It is recommended to apply a very thin layer of ATE Plastilube to any contact surfaces where the brake pad backing plate makes contact with the caliper pistons, housing and clips. DO NOT APPLY ANY LUBRICANTS TO FRICTION MATERIAL.

Assemble in reverse order of removal. Insert clips, pins and springs in reverse order of removal. Re-connect the wear indicators. Ensure that the correct torque specifications are used on bolts and fixtures. Basic adjustment of brake components must be carried out according to manufacturers specifications. After adjustment the wheel must be able to rotate freely. Ensure that the airbrake system is fully charged and vehicle doesn't move while brakes are applied before test driving vehicle. observe and adhere to the vehicle manufacturers bedding in procedure. Do not attempt to do continuous or hard braking to bed pads in quickly.

## Easy Maintenance Guide

PROBLEM	SOLUTION NO.
Uneven pad wear	1, 2, 3, 10, 11, 12
Wedge shaped pad wear	3, 4, 6, 7, 8, 10, 11, 12
Seized pads	2, 11
Pads rub against disc – no Free play, brakes overheat	2, 6, 10, 11, 12, 14
Brakes pull to one side	1, 2, 3, 5, 11
Brakes squeal or judder	1, 2, 3, 5, 11
Brake pedal travel too great	7, 8, 9, 12, 13, 15
Piston seized in caliper bores	2, 8, 11, 12
No braking effect	13
Pulsing of brake pedal when braking	7, 8, 9
Poor braking performance under wet conditions	1, 10

## SOLUTION NO.

1. Check for correct type of pad
  2. Clean out pad guide surfaces: check for corrosion, check dust caps for damage ++
  3. Check position of piston recess with 20 degree – template
  4. Replace pads +++
  5. Grease or oil on brake pads (damage to seals!)
  6. Renew cross-leaf spring
  7. Adjust wheel bearing play
  8. Disc & caliper mountings out of line or loose
  9. Check disc run-out & thickness tolerance
  10. Check if disc is worn or badly distorted
  11. Remove corrosion traces from caliper.
  12. Check auto adjustment and/or main piston seal for "roll-back" effect
  13. Check for fluid/air leakage in brake system
  14. Master cylinder recuperation ports blocked preventing the line pressure from falling to zero, relay valve blocked, leak in spring brake booster, insufficient system pressure, handbrake not released or poor caliper condition.
- ++ Grind the pads with rough emery paper on a flat plate & skim the disc if needed
- +++ Pads can also cause various noises under extreme working conditions



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