FOCUSED DIY MANUAL

Brake Pads, Rotors, Calipers & EPB

Kia Stinger | Genesis G70 | Kia K5

> Brake hardware is selected by what is physically on the car, not by engine trim alone. This edition makes you identify floating versus fixed calipers before choosing a procedure.

START HERE

Choose the exact procedure

Identify the brake hardware actually installed on the car, then open the matching procedure. Each line below is a clickable jump. The selector uses a plain one-column layout.

Label rules

Factory/OEM = Kia or Genesis service material. Field access = practical tool/reach guidance.
Unverified exact torque values remain marked for KGIS or Genesis TechInfo verification by VIN.

QUICK REFERENCE

Parts, tools and torque

CORE TOOLS

- Floor jack and rated stands or lift
- Wheel chocks
- Breaker bar and wheel socket
- Torque wrench
- Caliper hanger
- Piston compressor or spreader
- Pin punch and small hammer for fixed calipers
- Scan tool for EPB service where required

MATERIALS

- Correct pads and rotors by VIN/hardware
- Hardware kit where required
- Brake cleaner
- Fresh specified brake fluid if hydraulic system is opened
- Rubber-compatible brake lubricant where approved

Torque rule: Wheel nuts, slide pins, caliper carriers and fixed-caliper mounting bolts vary by vehicle and brake package. Use the current KGIS or Genesis TechInfo value for the exact hardware. Do not transfer the older G80/G90 TSB torque values to G70/Stinger/K5.

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VEHICLE-SPECIFIC PROCEDURE

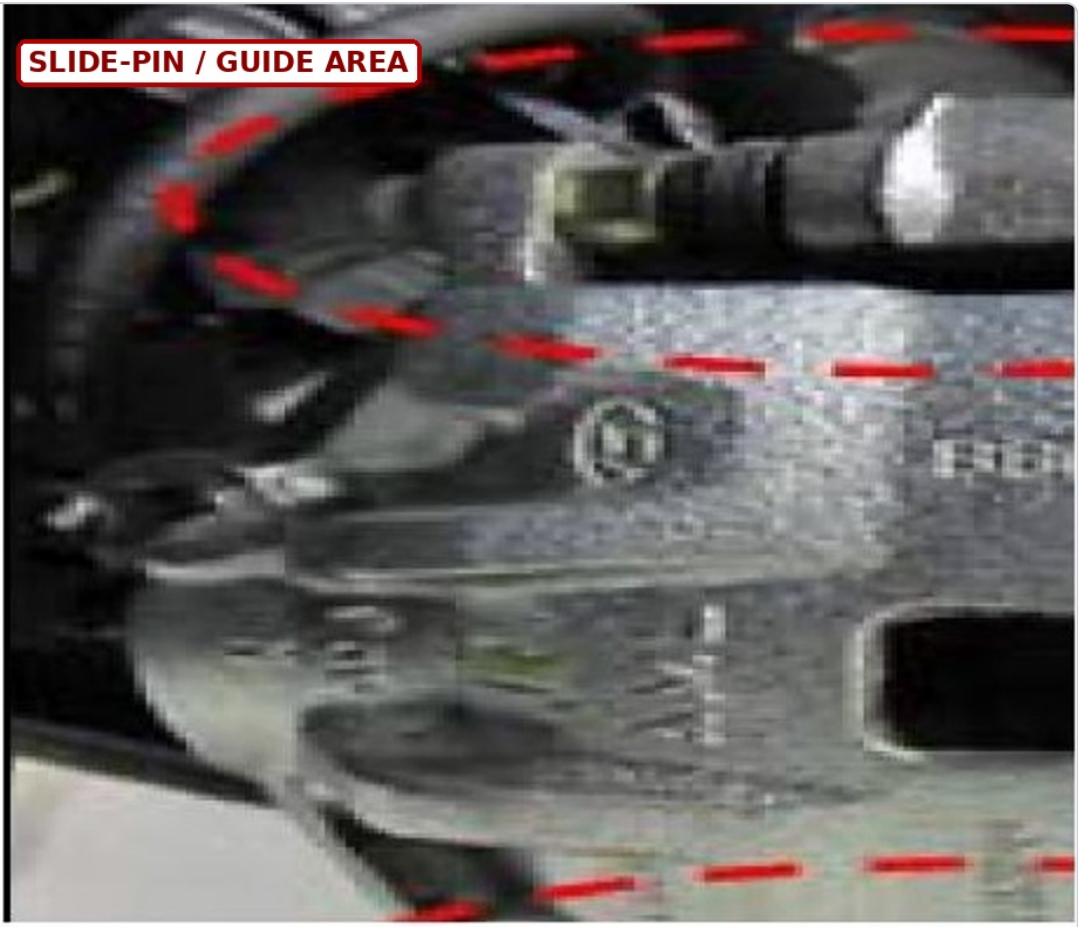
Floating front caliper: pads and service

Applies to: Use only when the vehicle has a sliding/floating caliper

DIFFICULTY
Moderate

TYPICAL DIY TIME
1-2 hr per axle

MAIN RISK
Vehicle support, piston retraction, hose protection.



OEM reference photo showing a floating caliper and slide-pin service area.

Floating front caliper - pads and service

Floating caliper

FLOATING

CALIPER

Slide pin / guide bolt

Carrier stays on knuckle unless rotor is removed

ROTOR

HUB

Genesis OEM brake TSB reference photo showing a floating caliper and slide-pin areas. The TSB itself applies to 2017-2018 G80/G90, so use the image for hardware identification and the service method, not G70 torque values.

Detailed procedure

Step-by-step procedure

1. Park on level ground, chock the opposite axle, release the parking brake if servicing the front axle, and loosen wheel nuts slightly before lifting.
2. Lift at an approved jacking point and support the vehicle on stands or a lift. Shake-check support before removing a wheel.
3. Remove the wheel and place it flat away from the work area.
4. Photograph hose routing, wear sensor routing if equipped, and caliper orientation before disassembly.
5. Inspect the brake hose for cracking, twist, wetness, or tension. If the hose is damaged, stop the pad-only job and plan hose replacement/bleeding.
6. Remove the lower and/or upper guide-pin bolt(s) required by the specific caliper design. Hold the slide pin flats with a wrench if the pin rotates.
7. Pivot or lift the caliper away from the pads. Never allow the caliper to hang by the hose. Use a hanger.
8. Remove the inner and outer pads and keep them labeled by position so wear patterns can be compared.
9. Remove pad clips/retainers from the carrier. Photograph their orientation first because inner/outer or upper/lower clips can differ.
10. Remove, clean, and inspect the caliper slide pins and boots. Genesis brake-service best practice calls for slide-pin inspection and silicone paste on floating caliper slide pins where specified.
11. Check each slide pin for straightness, corrosion, dry spots, pitting, and free movement through the boot.
12. Clean carrier abutment surfaces without removing structural metal. Heavy rust under a clip can clamp a pad and cause taper wear.
13. Install new pad clips/retainers supplied with the pad kit when applicable. The Genesis TSB says not to reuse shims on new pads in its covered applications.

14. Before compressing the piston, check reservoir fluid level. If the reservoir was topped off while pads were worn, remove excess fluid so piston retraction does not overflow the reservoir.
15. Compress the piston slowly using a proper spreader. Watch the boot for twisting or pinching and watch reservoir level.
16. Install the new pads in the correct inner/outer orientation. Where a wear indicator is used, confirm its specified location rather than copying the opposite side.
17. Swing/lower the caliper over the new pads without forcing it. If the caliper will not fit, verify piston retraction and pad/clip seating.
18. Install guide-pin bolts by hand first. Use exact factory torque for that caliper package.
19. Verify the hose is not twisted and that the caliper slides freely on its pins.
20. Clean the rotor friction surfaces with approved brake cleaner if contaminated.
21. Reinstall the wheel, snug in a star pattern, lower until the tire just contacts the ground, and torque to the exact vehicle specification in a star pattern.
22. Before moving the vehicle, pump the brake pedal until firm. The first strokes may travel farther as the piston takes up pad clearance.
23. Verify brake-fluid level and inspect for leaks. Perform burnish procedure if new pads/rotors require it.

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VEHICLE-SPECIFIC PROCEDURE

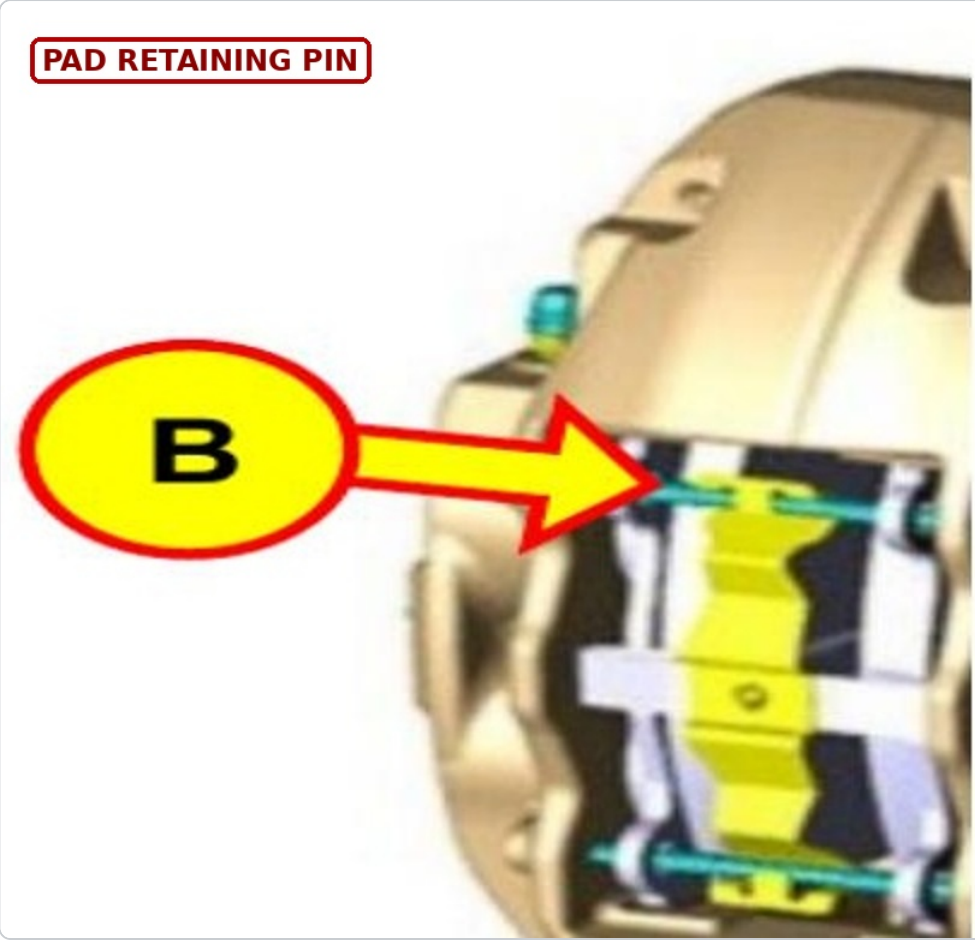
Fixed Brembo-style front caliper: pad service

Applies to: Use only when the vehicle has fixed multi-piston Brembo-style hardware

DIFFICULTY
Moderate

TYPICAL DIY TIME
1-2 hr per axle

MAIN RISK
Spring-loaded retaining hardware and multi-piston retraction.



OEM reference image showing the pad retaining-pin hardware on a fixed caliper.

Fixed Brembo-style front caliper - pad service

Fixed Brembo-style caliper

FIXED

CALIPER

Pad retaining pin

Anti-rattle spring

Pads slide out of caliper body

ROTOR

HUB

Genesis OEM fixed-caliper reference image. It labels the guide/retaining pin and locking retainer. TSB applicability is G80/G90, so verify G70/Stinger fastener values separately.

Step-by-step procedure

1. Lift and support the vehicle safely, remove the wheel, and photograph the fixed caliper before removing any retaining hardware.
2. Inspect the caliper for pad-retaining pins, anti-rattle/locking spring, wear sensor wiring, and pad orientation.
3. Place a shop rag around the pin exit area so a spring-loaded retainer cannot launch into the work area.
4. Use the correctly sized pin punch on the retaining pin. Support the caliper and tap the pin only hard enough to move it. Do not mushroom the pin end.
5. As the first pin clears the spring/retainer, control the spring by hand. Note which face points outward.
6. Remove the remaining pin and spring/retainer. Keep pins in order if they will be reused.
7. Slide the pads out of the caliper. If they are tight, inspect for edge corrosion, lip interference, or piston pressure instead of prying against the rotor.
8. Label inner/outer and left/right pads and compare wear. Uneven wear across a fixed caliper can indicate piston or pad-movement issues.
9. Inspect retaining pins for bending, corrosion, grooves, and deformation. Genesis fixed-caliper best practice says to clean them non-abrasively and not grease unless the shop manual/TSB directs it.
10. Inspect anti-rattle spring/locking retainer. Replace damaged hardware and use hardware supplied with the new pads when specified.
11. Place the old pads or a suitable spreader against the pistons and retract opposing pistons gradually. Work evenly so one piston does not overextend while another is pushed in.
12. Monitor brake-fluid reservoir level during piston retraction.
13. Clean the pad channels and contact surfaces. Do not put grease on friction material. Do not apply lubricant to retaining pins unless the exact service information allows it.

14. Slide new pads fully into the caliper. Confirm friction surfaces face the rotor and all shims remain seated.
15. Install the spring/retainer in the photographed orientation.
16. Insert the retaining pins through the caliper, pads, and spring without forcing them through misaligned holes.
17. Seat pins to the same designed depth/retention condition as original. Use any specified clips/locks.
18. If the caliper itself was removed for rotor service, reinstall mounting bolts by hand and torque to the exact brake-package factory value.
19. Reinstall the wheel and torque by the vehicle specification in a star pattern.
20. Pump the brake pedal to firm before moving the vehicle. Check fluid level and leaks.
21. Perform pad/rotor burnish and a low-speed functional brake check before normal driving.

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VEHICLE-SPECIFIC PROCEDURE

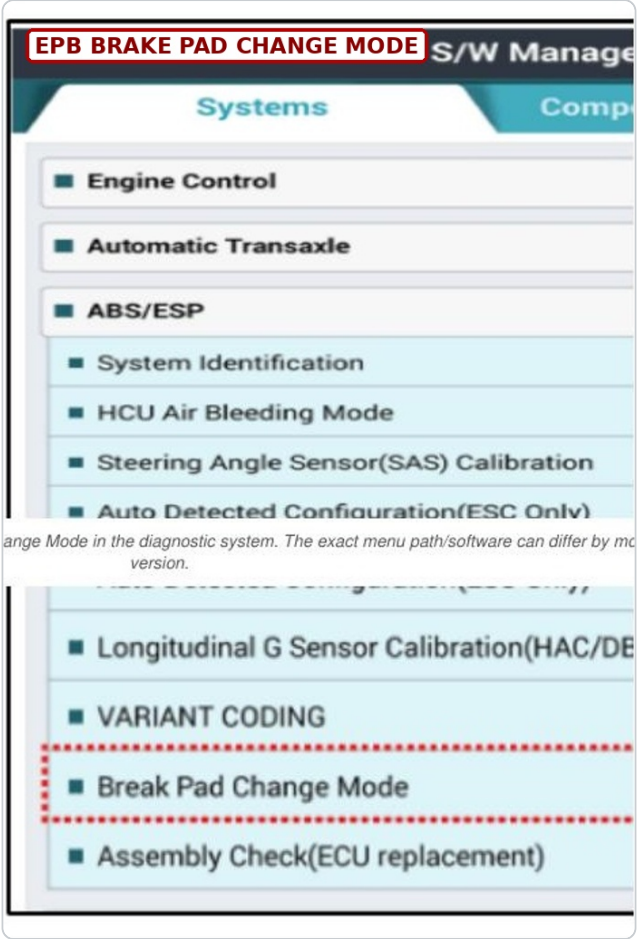
Rear brakes with electronic parking brake

Applies to: Use only after confirming the exact rear caliper type and required EPB service mode

DIFFICULTY
Moderate-Advanced

TYPICAL DIY TIME
1.5-3 hr per axle

MAIN RISK
Do not force an EPB piston without the required service procedure.



OEM reference screenshot showing brake-pad change/service mode in the diagnostic system.

OEM reference image showing the rear EPB actuator connection area.

Genesis OEM TSB screenshot showing Brake Pad Change Mode in the diagnostic system. The exact menu path/ software can differ by model and tool version. Genesis OEM TSB reference image showing an EPB actuator connection at the rear caliper.

Step-by-step procedure

1. Connect a capable scan tool and verify it can command the EPB Brake Pad Change/Service Mode for the exact vehicle before lifting the car. Do not begin if you cannot put the rear brakes into the required service state.
2. With stable battery voltage, command Brake Pad Change Mode / EPB service release according to the tool instructions.
3. Confirm the EPB is released and no service-mode error is displayed. Turn ignition state off only as directed by the tool procedure.
4. Chock the vehicle because the parking brake is released. Lift and support the rear safely, then remove the wheel.
5. Photograph the EPB actuator connector, brake hose, sensor routing, and caliper position.
6. Disconnect the EPB actuator electrical connector before removing the caliper when the applicable service procedure requires it. Genesis brake best practice explicitly calls for actuator disconnection on its covered applications.
7. Remove caliper guide bolts / retaining hardware for the actual brake type and hang the caliper securely.
8. Remove pads and hardware, label their positions, and inspect wear patterns.
9. For screw-in piston rear calipers, use the correct piston wind-back tool and rotate/retract in the specified direction. Do not clamp and force a screw mechanism straight back.
10. For fixed rear performance calipers, follow the fixed-caliper pad hardware method instead. Do not assume every EPB-equipped rear caliper is a floating screw-in design.

11. Clean slide pins and abutments if the rear caliper is floating. Replace damaged boots/hardware.
12. Install new pads/hardware. Reinstall caliper and torque fasteners using the exact vehicle shop-manual values.
13. Reconnect the EPB actuator connector and ensure harness routing cannot rub the wheel or suspension.
14. Reinstall and torque wheel.
15. Use the scan tool to exit Brake Pad Change Mode. Genesis best practice for its covered vehicles calls for applying/releasing the EPB three times and performing an Assembly Check after certain rear brake/EPB replacements. Follow the exact G70/Kia procedure for your vehicle.
16. Pump service brake pedal firm, verify brake-fluid level, cycle EPB several times, check warning lamps, and scan for EPB/ABS faults.
17. Perform a low-speed brake test before normal driving.

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VEHICLE-SPECIFIC PROCEDURE

Rotor removal and installation

Applies to: Use after the correct caliper/pad procedure for the installed brake package

DIFFICULTY
Moderate

TYPICAL DIY TIME
1-2 hr per axle

MAIN RISK
Carrier bolts can be high torque; hub rust can create runout.

Step-by-step procedure

1. Complete pad/caliper removal for the actual caliper type and hang the caliper safely.
2. If the caliper carrier blocks rotor removal, remove its mounting bolts using a breaker bar while the vehicle is securely supported. These can be high-torque fasteners.
3. Mark rotor-to-hub orientation if investigating runout. This gives you a baseline for indexing tests.
4. Remove rotor retaining screw(s) if equipped using a fully seated bit/impact driver appropriate for the screw. Stop if the head begins to strip.
5. If the rotor is rusted to the hub, use the rotor service/jacking holes if provided or strike only the rotor hat with controlled blows. Do not hit wheel studs or the braking surface you intend to reuse.
6. Clean the hub face to bare, flat metal without removing material. Rust scale trapped between hub and rotor can create lateral runout.
7. If diagnosing pulsation, measure hub/rotor runout with a dial indicator and rotor thickness at eight evenly spaced points. Genesis brake best practice specifies eight thickness points, every 45 degrees, 5-10 mm inboard of the outer edge on its covered vehicles.
8. Clean new rotor protective coating from friction surfaces if the rotor manufacturer requires it.
9. Install rotor squarely against hub. Use a couple of lug nuts with washers backward by hand to hold the rotor flush during runout measurement, if needed.
10. Reinstall carrier/caliper to exact factory torque for that package, then pads and wheel.
11. Torque wheel in star pattern, pump pedal firm, verify fluid, and burnish.

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VEHICLE-SPECIFIC PROCEDURE

Brake fluid and bleeding best practice

Applies to: Hydraulic work only. A pad-only job does not automatically require bleeding.

DIFFICULTY
Moderate-Advanced

TYPICAL DIY TIME
Varies

MAIN RISK
Air in ABS/ESC hydraulic unit can require scan-tool bleed routines.

• Use only the brake-fluid specification listed for the exact vehicle. • Never reuse drained brake fluid. • Keep the reservoir well above MIN during bleeding. Genesis best-practice TSB says never allow it below halfway between MIN and MAX on its covered vehicles. • Use the exact wheel/bleeder sequence and ABS/ESC bleed routine in KGIS/Genesis TechInfo if the hydraulic unit was opened or air entered upstream. • Do not confuse a normal pad replacement, where the hose remains closed, with a hydraulic repair requiring bleeding.

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VEHICLE NOTE

Kia Stinger brake notes

• Identify Brembo fixed vs floating caliper visually. • Do not assume 3.3T automatically defines every front/rear hardware detail for every year. • Confirm rotor diameter, pad shape, and caliper package by VIN before ordering.

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VEHICLE NOTE

Genesis G70 brake notes

• Genesis states the 2024 G70 2.5T includes Brembo braking system as standard equipment. • Current G70 product page also identifies Brembo brakes as a performance feature. • Older years/packages require VIN verification. Do not use the older G80/G90 TSB torque values as G70 torque.

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VEHICLE NOTE

Kia K5 brake notes

• K5 trim and year affect brake dimensions. • GT hardware should not be assumed identical to GT-Line/LXS. • Confirm whether rear EPB service mode is required before attempting piston retraction.

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AFTER THE REPAIR

Post-service burnish and checks

1. Pump pedal until firm before selecting gear.
2. Check reservoir level and inspect all calipers/hoses for leaks.
3. Cycle EPB if rear work was performed.
4. Perform low-speed stops first and confirm no pull, grinding, or warning lamps.
5. Follow the pad/rotor manufacturer bedding process. Genesis brake best practice describes a moderate repeated-stop burnish process for its covered vehicles, but use the friction manufacturer procedure when supplied.
6. After the road test, recheck wheel torque when required by your shop policy and inspect for abnormal heat at one wheel.

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SOURCES

Verification trail

- KGIS and Genesis TechInfo for exact brake-package torque and scan-tool procedures.
- Genesis TSB 21-BR-002HG used only as a hardware/service-method reference. Its covered vehicles are older G80/G90, so its torque values are not treated as G70/Stinger/K5 specifications.
- Genesis public 2024 G70 documentation for Brembo packaging.

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