New *Molykote*® G-3407 Caliper Pin Grease

Reduce fretting corrosion and wear on caliper guide pins at high brake temperatures

Proven performance

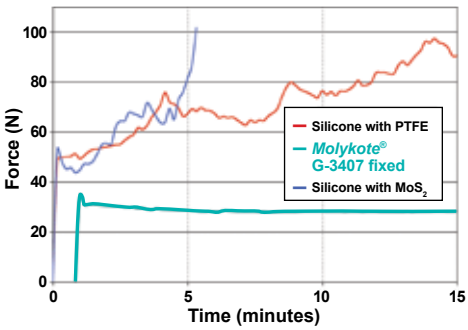
Customer: Tier 1 supplier manufacturing disc brakes for a global OEM small-car platform.

Problem: Excessive corrosion and wear of caliper pins in vehicle durability testing is traced to improper metal-to-metal lubrication using a silicone grease with PTFE (polytetrafluoroethylene) from a Dow Corning competitor.

Solution: Dow Corning application engineering developed a new high-temperature PAG (polyalkylene glycol) grease. Tests proved superior corrosion and wear performance over the previous lubricant.

Product: *Molykote*® G-3407 Caliper Pin Grease is OEM-approved and specified as the caliper-pin lubricant for the high-volume global vehicle program.

Caliper Pin Fretting Test



Caliper-pin fretting tests showed that *Molykote*® G-3407 Caliper Pin Grease maintained lower frictional force than either a silicone with PTFE or a silicone with molybdenum disulfide (MoS_2).

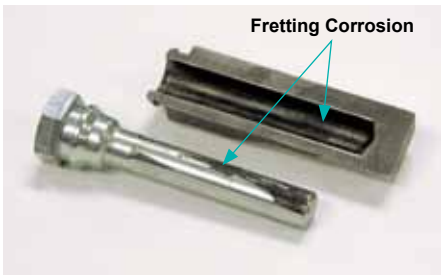
Braking performance relies on durable caliper-pin lubrication

Today's automotive braking systems are precisely matched to each vehicle application. Disc brake calipers are integrated and work in harmony with other brake-system components to:

- Optimize pedal feel and braking performance
- Limit abnormal pad and rotor wear
- Control NVH (noise, vibration, harshness)
- Prevent brake sticking or unbalanced application

Each caliper has two guide pins in a slide mechanism that applies and releases the brake pads. Durable caliper-pin lubrication helps reduce or eliminate these potential problems:

- Fretting corrosion and possible sticking, binding or grabbing
- Excessive pin wear and resulting noise and operation issues
- High-temperature seizure and loss of braking power



Excessive fretting corrosion and wear on caliper guide pins can result from using the improper guide pin lubricant.

Get the advantages of *Molykote* G-3407 Caliper Pin Grease

Molykote® G-3407 Caliper Pin Grease is especially formulated for durable metal/metal lubrication. This PAG-based grease can help reduce fretting corrosion and wear on caliper guide pins exposed to high braking temperatures. It offers disc-brake designers these proven advantages:

- Enhanced thermal stability at high temperatures
- Wide service temperature range, from -40 to 200°C (-40 to 392°F)
- Good corrosion resistance
- Excellent anti-fretting performance
- Enhanced elastomer compatibility at 150°C (302°F)
- OEM-specified for global vehicle platform

Molykote G-3407 Caliper Pin Grease maintains low frictional force between the caliper pin and its bore in the anchor bracket. Very quick micro-sliding movements are prevented from causing fretting corrosion and excessive wear. It also is an effective lubricant for caliper pins with elastomeric boots or sleeves.

MOLYKOTE® FROM DOW CORNING

Typical Properties

Specification Writers: These values are not intended for use in preparing specifications. Please contact your local Dow Corning Sales Application Engineer or Dow Corning Customer Service before writing specifications on this product.

Standards		Property	Unit	Molykote® G-3407 Caliper Pin Grease
CTM*	ASTM			
		Color		Light green
		Composition		Polyalkylene glycol (PAG) base oil with lithium complex thickener
		Temperature Range	°C (°F)	-40 to 200°C (-40 to 392°F)
0191	D 217	Penetration, Unworked Penetration, Worked	mm/1 mm/1	260 - 310 260 - 310
0044		Specific Gravity @ 25°C (77°F)	g/ml	1.00 ± 0.10
	D 6184	Bleed, 24 hr. @ 150°C (302°F)	%	< 5
0033A		Evaporation, 24 hr. @ 150°C (302°F)	%	< 5
	D 566	Dropping Point	°C (°F)	> 250°C (482°F)
	B 117	Corrosion Protection, 120 hr.		No rust
	D 1748	Low Temperature Torque -20°C (-4°F), Starting -20°C (-4°F), Running	 gf-cm gf-cm	 2000 max. 800 max.
	D 1264	Water Washout @ 80°C (176°F)	%	< 5
0130	D 4289	Elastomer Compatibility, 72 hr. @ 150°C (302°F) EPDM, Volume Change EPDM, Hardness Change	 % Shore A	 8 max. 8 max.

*CTM: Corporate Test Method; copies of CTMs are available upon request.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Proper Lubricant Use

MolykoteG-3407 Caliper Pin Grease can be easily applied using a clean brush or automated dispensing equipment.

Product Packaging

MolykoteG-3407 Caliper Pin Grease is available in 18 kg (40 lb) pails and 180 kg (400 lb) drums. Test samples can be provided.


AV14952

Learn More: Contact Us

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