

# A-LINE™

*The Fleet's First Choice*

## CL-20 GUIDE PIN KITS DOUBLE GUIDE PIN LIFE

A-Line has re-engineered air disc caliper guide pin kits for continuous lubrication, higher thermal resistance, longer life and cost savings.

Seized guide pins that cause caliper failure can now be a thing of the past.

The CL-20 guide pin kit is a systematic approach to optimizing air disc guide pin kit components so they can receive continuous lubrication during preventive maintenance intervals.

This patent-pending process withstands higher heat, more abrasive environments, and provides up to 20 times the volume of original lubrication during the caliper's lifetime.



• **DOUBLES PIN LIFE**

• **UP TO 20 X GREASE**

• **50% SAVINGS**

• **MADE IN USA**

# CONTINUOUS LUBRICATION GUIDE PIN KITS

# CL-20 GUIDE PIN KITS SOLVE RUSTED, SEIZED GUIDE PIN PROBLEMS, INCREASE CALIPER LIFE

## THE PIN FAILURE PROBLEM

Air disc caliper guide pins become “tarred” when an air disc caliper’s high heat of 1,000° F (540° C) and torque of 15,000 lb-ft. cause lubrication starvation that results in restriction of the caliper’s sliding motion on the caliper bracket.

This “tarring” is also known as polymerization of the grease, and happens when the grease breaks down under high heat and begins to crystallize.

If the caliper cannot slide, it cannot provide clamping force. This results in catastrophic failure of the brake system.



## WHY GUIDE PINS FAIL

Guide pins fail because of three main factors:

1. OE-designed guide pin kits are designed for only one lubrication until caliper failure.
2. OE grease is prone to polymerize (turn to tar) at 292° C or 557° F. The OE grease will have zero mass and lubricity remaining when heated to 473°C for 45 minutes.
3. The loss of lubrication and/or penetration of the pin boot creates moisture in the pin cavity and rusts the guide pin.

## FEATURES COMPARISON

Component	A-LINE®	OE Kit	Aftermarket Kit
<b>Guide Pin Kit</b>	CL-20 Kit provides continuous lubrication at preventative maintenance (PM) cycles with up to 20 times the grease volume over the life of the guide pin.	Designed for one time lubrication only.	Designed for one time lubrication only.
<b>Sealing Cap</b>	Engineered with integrated hydraulic stop valve to allow continuous lubrication during PM cycles.	Designed to prevent continuous lubrication.	Designed to prevent continuous lubrication.
<b>Guide Pins</b>	Engineered with three radial grease supply grooves to efficiently supply grease across the face of the pin and bushing assembly.	No supply grooves. Inefficient lubrication supply to pin and bushing assembly.	No supply grooves. Inefficient lubrication supply to pin and bushing assembly.
<b>Lubrication Directional Plug</b>	Engineered to direct lubrication to the pin’s radial supply grooves, while filling cavity and preventing gaseous lock out.	None included	None included.
<b>Rubber Pin Boots</b>	Engineered to withstand temperatures of 300° C (572°F) to withstand high temp failure.	Engineered to 150° to 200°C. Prone to high temp failure.	Engineered to 150°C. Prone to high temp failure.
<b>Guide Pin Grease</b>	A-LINE MAX-A-SIL 998 high temp Silicon/PTFE synthetic designed specifically for air disc caliper pins.	PAO/lithium soap hydrocarbon grease designed for low to medium temps.	Clay/hydrocarbon grease designed for low to medium temps.
	A-LINE MAX-A-SIL 998 engineered to withstand mass loss onset at temperatures of 537°C (998°F).	Tested to mass loss onset at 339°C (642°F).	Tested to mass loss onset at 283°C (542°F).
	A-LINE MAX-A-SIL 998 engineered to initiate thermal event onset at temperatures exceeding 300°C (572°F).	Tested to thermal event onset at 239°C (462°F).	Tested to thermal event onset at 207°C (405°F).

## WHICH OF THESE SEIZED CALIPERS WAS THE LEAST COSTLY?

A seized caliper causes the pad to continuously ride against the rotor generating heat in excess of 2,000° F.

A talented driver knows the feel of a dragging wheel, and knows its time to pull over. But what then?

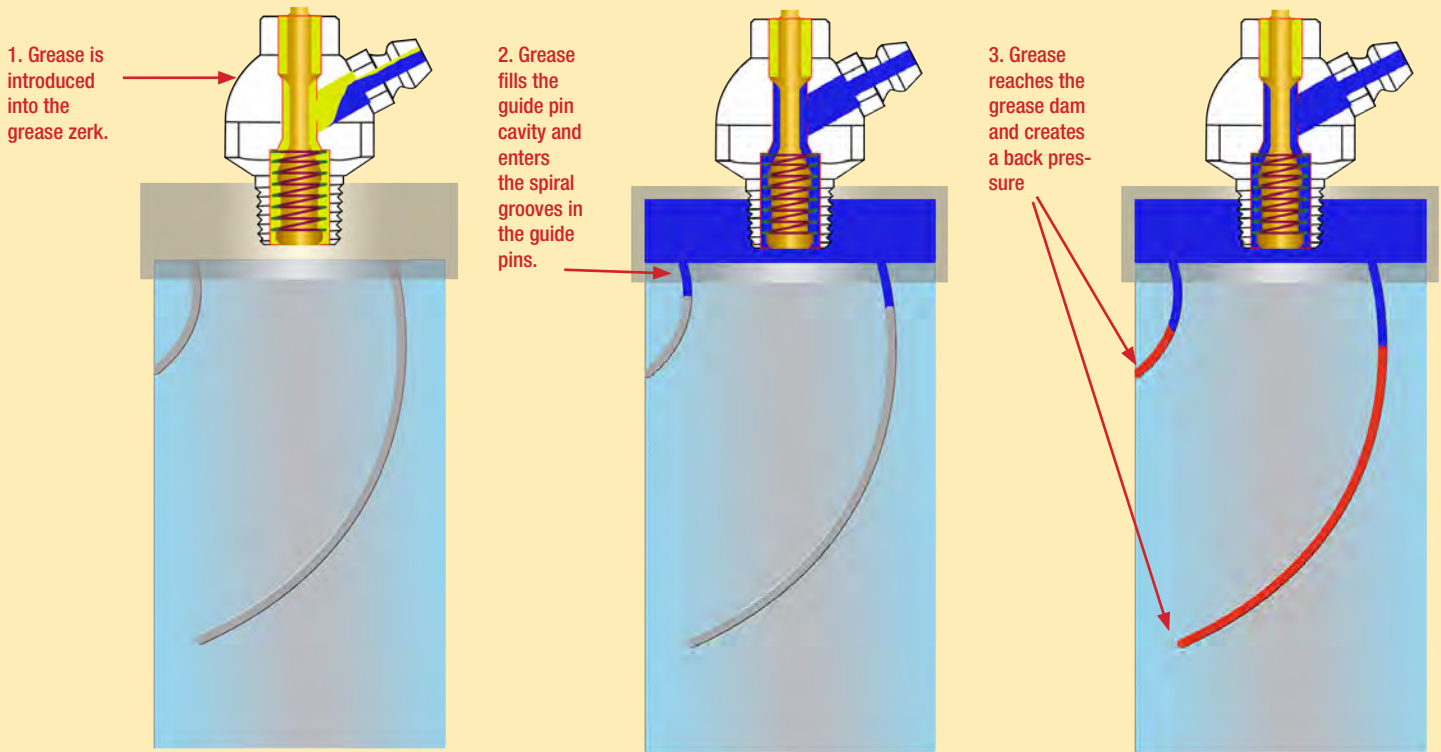
Here's the real costs of a seized caliper:

- **Delayed delivery:** Your customer satisfaction suffers right along with your ability to make money while your vehicle is stuck roadside.
- **Roadside Service:** It's the quickest way to get you on your way, but you need someone who knows air disc brakes, has the equipment, and it is extremely costly.
- **Towing:** Towing your vehicle to a repair facility that has the parts and equipment for the job will get you on your way, but it will cost a lot of time and money.
- **Ignore it:** Ignore the problem while the caliper causes pad-to-rotor contact to generate up to 2,000° of heat. Then you can really watch profits go up in smoke.



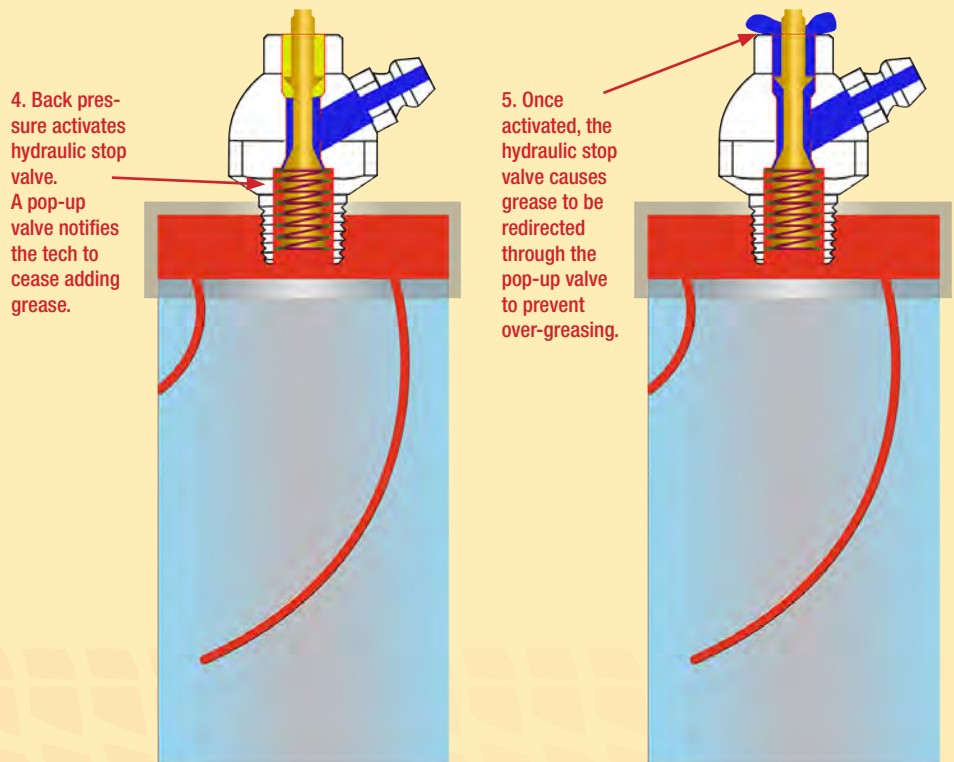


# HOW THE CL-20 KITS WORK TO CONTINUOUSLY LUBRICATE YOUR CALIPERS



When used with A-LINE MAX-A-SIL 998™ Silicon/Teflon air disc grease, the CL-20 kit provides long-lasting lubrication across the face of the guide pin bushing repeatedly throughout the life of the caliper.

This engineered system is designed to provide up to 20 times more lubrication than OE-designed kits throughout the life of the caliper.



# MAX-A-SIL 998™ OUTPERFORMS OE CALIPER GREASES IN TEMPERATURES UP TO 998° F

Unlike OE hydrocarbon greases that liquify, polymerize and turn to tar in low temperatures, A-LINE® MAX-A-SIL 998™ Silicon/Teflon grease maintains its lubricity long after

the competition will cause caliper guide pins to seize.

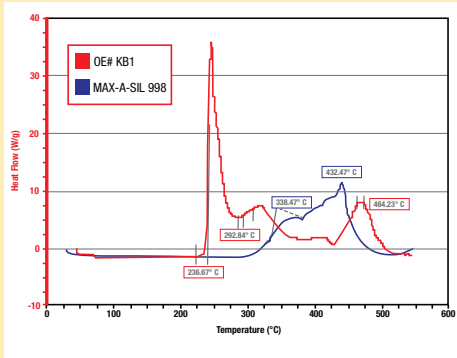
The photos below show the OE Sample and MAX-A-SIL 998™ in a side-by-side comparison in tem-

peratures from 150°C to 539°C (or 998°F). Notice that the MAX-A-SIL 998™ maintains its lubricity through the highest wheel end temps.

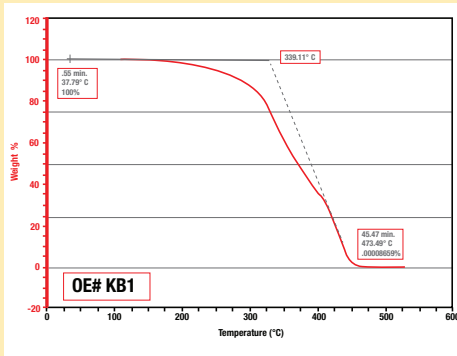
This Silicon/Teflon formulation is specifically designed for air disc caliper guide pin applications.

Used in conjunction with the A-LINE® CL-20 continuous lubrication guide pin kit, MAX-A-SIL 998™ doubles guide pin life.

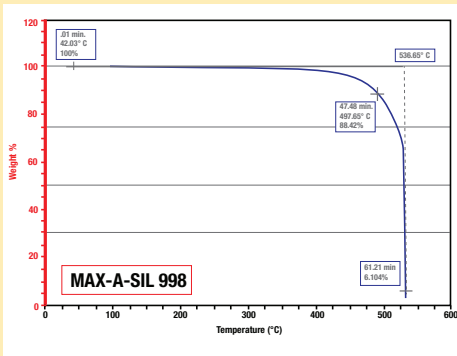
See the comparison video at [www.a-lineairdisc.com](http://www.a-lineairdisc.com).



OE grease (red) reaches its first exothermic peak for tarring at 237°C (458°F), compared to A-LINE MAX-A-SIL 998 (blue) that doesn't begin tarring until 432°C (810°F).



OE grease loses all mass after 45 minutes of exposure to temperatures reaching 473°C (883°F). Under high temp exposure no lubrications remains.



A-LINE MAX-A-SIL 998 maintains almost 90% of mass after 47 minutes of exposure to temps reaching 498°C (928°F). This is ideal for longer life and continuous lubrication during PMs.

OE Sample	A-LINE MAX-A-SIL 998™
150° C No Effect	
225° C OE Sample Liquifies	
270° C OE Sample Polymerization Begins	
310° C OE Sample Tars MAX-A-SIL separation begins	
400° C OE Sample Tars MAX-A-SIL 95% lubricity	
500° C OE Sample Tars MAX-A-SIL 88% lubricity	
539° C 998°F MAX-A-SIL outperforms OE sample	



# KEEP YOUR CL-20 KITS PERFORMING THEIR BEST WITH THESE TOOLS AND TIPS

## DON'T MIX LUBRICANTS

Mixing lubricants with your new CL-20 continuous lubrication kit can cause premature failure of your air disc caliper guide pins.

Even though MAX-A-SIL 998™ is engineered to withstand temperatures up to 539°C (998°F), if it is mixed with a hydrocarbon petroleum-based grease, or other incompatible lubricants, it can have undesirable effects.

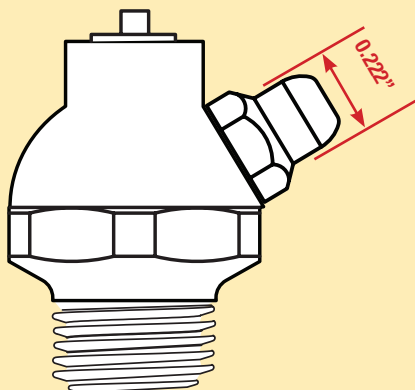
Make sure you have a dedicated grease gun. For vehicles traveling

to other maintenance facilities, use the A-LINE® ALCL20-200 kit that comes with a bullet head grease fitting. This fitting will not receive grease from standard grease zerk couplings.

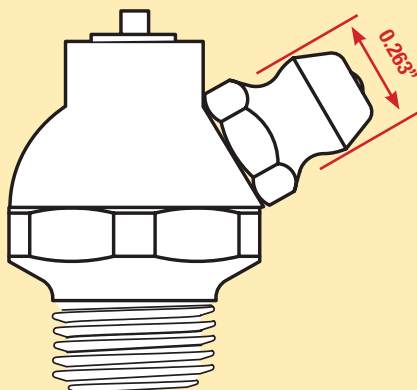
The bullet head fitting is uniquely matched to A-LINE's ALCK-BZH11 bullet head coupling which will not deliver grease into a standard grease fitting.

To maximize the life of your CL-20 kit, order the ALCL20-200 kit with ALCK-BHZ11 coupler.

Standard grease zerk fittings are available in the ALCL20-201 kit to be compatible with standard grease couplers. This is only recommended for maintenance facilities that can insure lubricants won't be mixed.



**ALCL20-200 comes with Bullet head grease fitting**

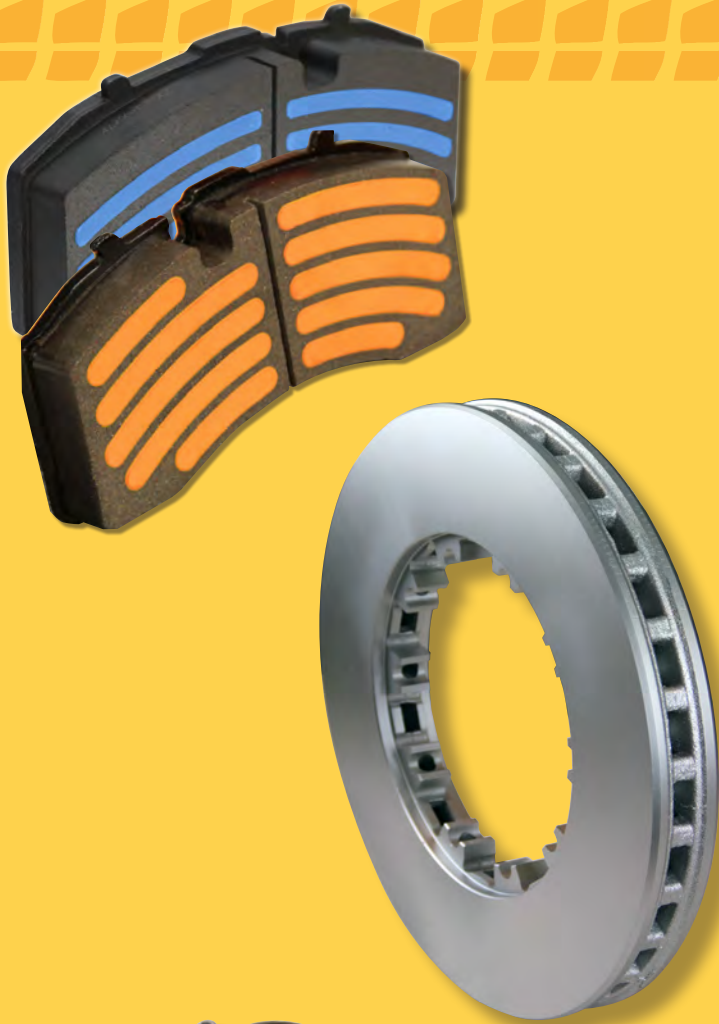


**ALCL20-201 comes with Standard head grease fitting**



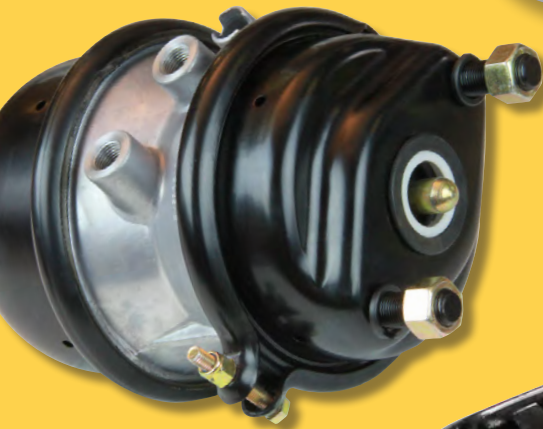
**ALCK-BHZ11 bullet head coupler delivers only to bullet head fittings**

Part #	Description	Comments
<b>ALCL20-200</b>	CL-20 continuous lubrication guide pin kit for Bendix ADB22x and Knorr Bremse SK7 calipers. (Bullet head zerk)	Bullet head zerk prevents mixed lubrication from standard grease guns.
<b>ALCL20-201</b>	CL-20 continuous lubrication guide pin kit for Bendix ADB22x and Knorr Bremse SK7 calipers. (Standard grease zerk)	Standard zerk allows grease from any grease gun.
<b>ALCK-BHZ11</b>	Female grease coupling for standard grease gun. Fits bullet head grease zerk.	Will only supply grease to bullet head fittings.
<b>ALCG-MX998-14</b>	14.1oz (410 gram) tube of A-LINE Max-A-Sil 998™ Silicon/Teflon grease for air disc caliper guide pin assemblies.	For use with A-LINE CL-20 continuous lubrication guide pin kit (Part #ALCL20-200 ALCL20-201).



# Durable Engineering For All Your Air Disc Braking Needs

- Transit
- Class 8 Truck and Trailer
- School Bus
- Fire Truck
- Refuse Vehicles
- Severe Service Vehicles



5620 West 51st Street  
Forest View, IL 60638

225 Sheldon Drive, Unit 13  
Cambridge, Ontario N1T 1A1

**Toll Free 844-4AIR DISC  
(424-7347)**



[www.a-lineparts.com](http://www.a-lineparts.com)

©2021 ACR Holdings Delaware, ULC  
Pub Lot. ALCL80217  
Reorder Part No. ALCLB8