



# CL-20 INSTALLATION GUIDE

CONTINUOUS LUBRICATION GUIDE PIN KITS  
FOR ADB22x®, SK7® AIR DISC CALIPERS



# A-LINE CL-20 CONTINUOUS LUBRICATION GUIDE PIN KIT INSTALLATION GUIDE



## SAFETY FIRST

Before beginning any caliper maintenance be sure to use all safety equipment including, but not limited to, eye protection, ear protection and gloves for skin protection.

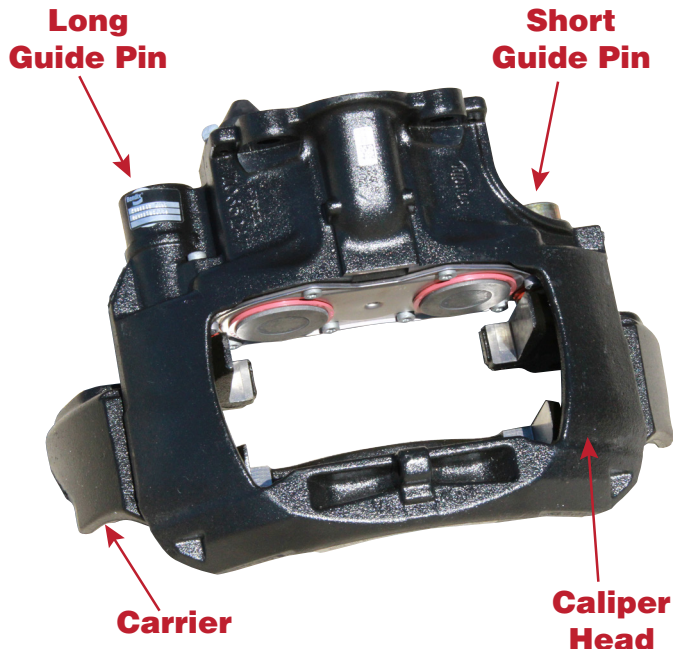
Installation of the CL-20 continuous lubrication guide pin kit **should be done with the air disc caliper removed from the vehicle.**

It can also be done without completely removing the caliper from the vehicle (although this method is much more difficult). If you have chosen to install the CL-20 kit while the caliper remains partially attached to the vehicle, make sure to observe the following safety standards:

- Park the vehicle on level ground
- Chock the wheels
- Cage the chamber

Follow all safety regulations as required Federal, State, Provincial, local, corporate and shop mandates.

## TERMINOLOGY



## TOOLS NEEDED

Tools needed for the removal and installation of guide pins, and the installation of the CL-20 continuous lubrication guide pin kit, include:

- Ball peen hammer
- Long shanked flat head screw driver (or pry bar)
- 1/4" metal chisel
- 14mm hex bit
- Mechanic's telescoping magnet pickup tool
- 1/2" impact driver
- 24mm socket
- Ratchet driver
- (2) 24mm open end wrenches
- 26mm open end wrench
- 13mm open end wrench
- Torque wrench (200 ft-lb capacity)
- Grease applicator brush
- Grease gun
- Ken Tool Kit 80002 (See page 2)
- CL-20 Guide Pin Kit (See page 3)
- Max-A-Sil 998™ Silicon Teflon grease (See page 4)

## DISCLAIMER

Information regarding the installation, replacement or repair of the components mentioned in this document may be updated from time to time. The technician must use his or her own professional judgment as it relates to issues of proper safety, maintenance and component repair or replacement. The technician assumes all responsibility and risk for the use of the information available in or through this document or any associated instruction, whether given in person or through video presentation. ACR Holdings Delaware, ULC and A-LINE® does not assume any liability for the materials, information and opinions provided in, or available through, this document. No advice or information given by ACR Holdings Delaware, ULC or its employees shall create any warranty. Reliance on such advice, information or the content of this document is solely at your own risk, including without limitation any safety guidelines, resources or precautions related to the installation, operation, maintenance or repair of air disc calipers or any other information related to safety that may be available on or through this document or related instructional materials. ACR Holdings Delaware, ULC disclaims any liability for injury or damages resulting from the use thereof.

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# KEN TOOL BUSHING AND CAP REMOVAL/INSTALL TOOLS

Ken Tool Number	Description	Tool Image	Ken Tool Number	Description	Tool Image
80105 KT05	KT05 1-3/8" Black Disc		80114 KT14	KT14 Brass Nut	
80106 KT06	KT06 1-1/2" Black Disc		80116 KT16	KT16 Dimpling Tool made up of KT16-1 Main Body, KT16-2 Crimper Screw, KT16-3 Expansion Ring, KT16-4 Plunger, KT16-5 Dimpling Pins, and KT16-6 Set Screw	
80107 KT07	KT07 2" Dia. Sleeve		80120 KT20	KT20 8" Bolt	
80108 KT08	KT08 2-1/8" Dia. Disc		80121 KT21	KT21 Half Sleeve	
80110 KT10	KT10 8" Bolt		80126 KT26	KT26 Cap Tool made up of KT26-1 Retaining Ring, KT26-2 Mandrel and KT26-3 Sleeve	
80112 KT12	KT12 3-7/8" Long Sleeve		80127 KT27	KT27 Cap Tool made up of KT26-1 Retaining Ring, KT26-2 Mandrel and KT27-3 Sleeve	
80113 KT13	KT13 10" Bolt		No Part Number	Washer	



**CL-20 KIT CONTENTS**

Item #	Qty	Description
1.	2	Guide Pin Boots
2.	1	Brass Long Guide Pin Bushing
3.	1	Grooved Long Guide Pin
4.	1	Grooved Short Guide Pin
5.	1	Steel Short Guide Pin Bushing
6.	1	Aluminum Plug
7.	1	Long Guide Pin Cap with Stop Valve
8.	1	Short Guide Pin Cap with Stop Valve
9.	2	Plastic Retainer Rings
10.	1	Long Guide Pin Bolt
11.	1	Short Guide Pin Bolt
12.	1	15gm Grease Tube



# MAX-A-SIL 998 for air disc calipers

## USING MAX-A-SIL 998 SILICON GREASE

Max-A-Sil 998™ is a silicon/Teflon grease specially formulated for air disc calipers in combination with the A-LINE® CL-20 continuous lubrication kit.

This grease has been formulated for its special flow rate, thermal resistance and water wash out.

DO NOT MIX with any other lubricant unless specifically authorized by A-LINE. Mixing lubricants will void your warranty.

Max-A-Sil 998™ is available in 15 gram tubes (packaged with each CL-20 kit) and 400 gram (14.1 oz) cartridges for use in grease guns.

In case of contact with skin, wash with citrus-based cleaner. Rinse with warm water and soap.

BASE OIL CHARACTERISTICS		TYPICAL VALUE	
Type		Silicon	
Temperature Service Range (sustained without degradation)		-58° - 392° F -50° - 200° C	
Thermal Event Onset (DSC)		572° F 300° C	
Mass Loss Onset (TGA)		998° F 537° C	
GREASE CHARACTERISTICS			
Thickener		PTFE	
Color		White	
Appearance		Smooth	
NLGI Grade		1	
Penetration (ASTM D217 / DIN 51804-T1)	Unworked	265 - 295	
Dropping Point (ASTM D2265 / DIN ISO 2176)	minimum	500° F 260° C	
Oil Separation (ASTM D6184)	24h at 212°F 100°C	0%	
Evaporation (CTM-1)	24h at 212°F 100°C	0.10%	
Water Washout (ASTM D1264 / DIN 51807-T2)	60 min. at 100°F 38°C	0.24%	
	176°F 80°C	1.5%	
Apparent Viscosity (Brookfield Viscometer, 1 rpm)	-40°F -40°C T-C Spindle	2,360,000 cP	
	77°F 25°C T-A Spindle	1,169,600 cP	
Specific Gravity (CTM-2)	77°F 25°C	1.2	
Coefficient of Friction		0.087	
Low Temperature Torque (ASTM D1478)	-40°F -40°C	Start	442 g/cm
		Run 10 min.	265 g/cm
		Run 60 min.	177 g/cm
Material Compatibility*	ABS, EPDM, HDPE, LDPE, Neoprene, Nylon™ 66, Polypropylene, Polystyrene, Cross-Linked PE, Teflon™ E. *This lubrication may adversely affect some silicon-based materials. Contact the manufacturer for additional details.		
Comments	This product is a PTFE thickened silicon grease. <b>DO NOT MIX</b> with petroleum-based or hydrocarbon-based lubricants. Thoroughly clean the surface free of all previous lubricants. Your dispensing equipment should be chosen carefully when dispensing this product, as the combination of air entrainment and high pressure buildups within your choice of dispensing equipment may cause oxidation and decomposition of this product. We recommend you contact your application equipment manufacturer for further specifications.		



# A-LINE CL-20 GUIDE PIN KIT INSTALL GUIDE

## 1. REMOVE THE CALIPER

1.1 To remove the caliper from the vehicle, remove the disc pads. Discard if 3mm or less of friction remains.

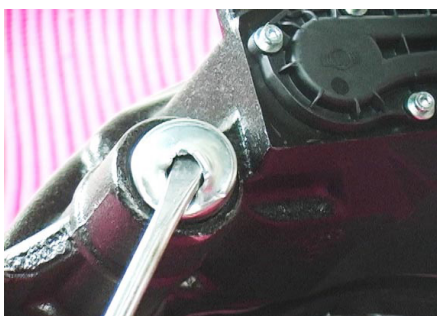
1.2 Disconnect the air chamber and remove the chamber mounting nuts. Discard the mounting nuts, and replace with new nuts upon reinstallation.

1.3 Remove the caliper mounting bolts from the torque plate. Discard the mounting bolts and replace with new mounting bolts upon reinstallation.

1.4 The removed caliper should either be placed on a flat level surface or suspended in a vice so that it hangs 90 degrees perpendicular to the floor.

## 2. REMOVE GUIDE PIN CAPS

2.1 Using a ball-peen hammer and screw driver (or chisel) pound a small hole into the face of the long guide pin cap. Be careful not to penetrate more than 1/4" as this could damage the bushing bore.



**Figure 1.** Pry the cap from its seat.

2.2 Using a long-shanked screwdriver or prybar, insert it into the hole and pry the cap from its seat. (Fig. 1.) It may help to drive the cap from the side (Fig. 2).



**Figure 2.** Drive the cap from the edge to help unseat it.

When caps are removed, discard them. New caps are supplied in the CL-20 guide pin kit.

## 3. REMOVE GUIDE PIN BOLTS

3.1 With the caps removed, insert a 14mm hex bit into the 14mm internal hex Allen bolt in each guide pin cavity. Using a 1/2" drive impact driver, remove the guide pin bolts.

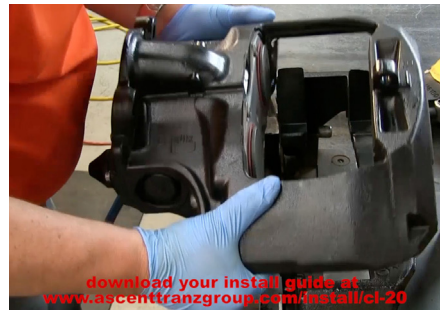


**Figure 3.** Use 14mm hex bit and impact driver to remove guide pin bolts.

The bolts are torque-to-yield and not suitable for reuse. After removing the bolts, discard them. New bolts are supplied in the CL-20 guide pin kit.

## 4. REMOVE THE CARRIER

4.1 After removing the guide pin bolts, grip the caliper head and rock it until it loosens from the carrier. If excessive rust buildup is present, use a hammer and flathead screwdriver to separate the guide pins from the carrier.



Remove the carrier and clean any rust or debris from the bolt holes.

**Figure 4.** Rock the caliper until it loosens from the carrier and separate the unit.

## 5. REMOVE THE GUIDE PINS

5.1 Remove the white plastic retaining rings that seal the guide pin boots to the guide pins. (See Figure 5).

When rings are removed, discard them. New rings are supplied in the CL-20 guide pin kit.



**Figure 5.** Remove the white retainer rings that seal the boot to the pin.

5.2 Push the pin from the boot end until it visibly emerges from the guide pin cavity and extract it.

If the pin is rusted into the guide pin cavity you may have to use a hammer and driver to remove



**Figure 6.** Push the pin from the boot side and extract from the cavity.

the pin. Be careful not to damage the guide pin bore as this could ruin your caliper.

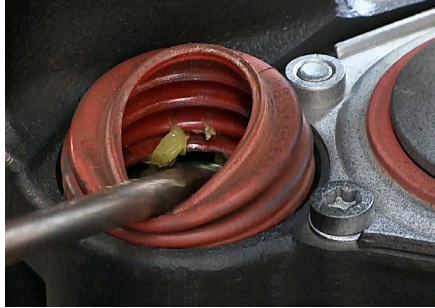
Discard the removed pins. New pins are supplied in the CL-20 guide pin kit.

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## 6. REMOVE THE GUIDE PIN BOOTS

6.1 After guide pins are removed, insert a flathead screwdriver into the bushing cavity just below the boot's inner seal. Pry upwards and the boot will pop free.

Once removed, discard both boots. New boots will be provided in your CL-20 Kit.



**Figure 7.** Use a flathead screwdriver to pry guide pin boots from their seat.

## 7. REMOVE SHORT GUIDE PIN BUSHING

7.1 Find the bushing's securing tab and use a 1/4" metal chisel and ballpeen hammer to lightly tap the tab until it is separated from the bushing.



**Figure 8.** Use a 1/4" metal chisel to remove the short bushing's metal tab before removing the bushing.

After the tab is removed, use a mechanic's pickup magnet to remove any metal debris from the guide pin cavity.



**Figure 9.** Assemble the Ken Tool components as shown to remove the short guide pin bushing.

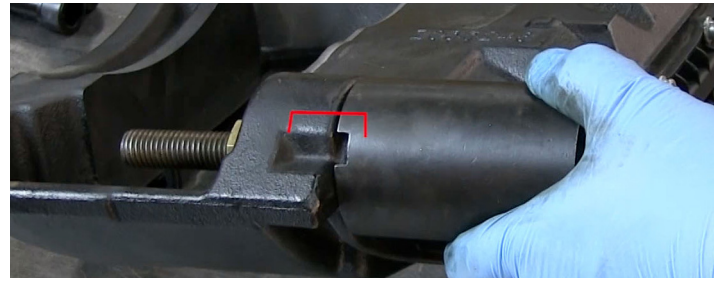
7.2 Assemble the Ken Tool removal tool including:

- KT 13 Long Bolt
- Washer
- KT21 Half Sleeve
- KT14 Brass Nut
- 24mm Socket
- 24mm Open End Wrench
- Max-A-Sil 998™ grease

Generously grease the KT13 long bolt and assemble the tool as shown in Figure 8. Place the washer between the

KT13 Long Bolt and KT21 Half Sleeve. Use the 24mm open end wrench to keep the brass nut from turning. Do not try to turn the KT14 brass nut as it will damage the nut.

7.3 Align the notches on the KT21 Half Sleeve to the notches in the caliper casting as shown in Figure 10.



**Figure 10.** Align the notches in the tool and casting.

7.4 Use an impact driver to drive the bolt until the bushing spins freely. Then remove the KT14 Brass Nut and remove the bushing. Discard the removed bushing. A new bushing is provided in the CL-20 Guide Pin Kit.

## 8. REMOVE THE LONG GUIDE PIN BUSHING

8.1 Assemble the Ken Tool removal tool including:

- KT 13 Long Bolt
- Washer
- KT12 Long Sleeve
- KT14 Brass Nut
- 24mm Socket
- 24mm Open End Wrench
- Max-A-Sil 998™ grease

Generously grease the KT13 long bolt and assemble the tool as shown in Figure 11. Place the washer between the KT13 Long Bolt and KT12 Long Sleeve. Use the 24mm open end wrench to keep the brass nut from turning. Do not turn the KT14 brass nut as it will damage the nut.



**Figure 11.** Assemble the Ken Tool components as shown to remove the long guide pin bushing.

8.2 Use an impact driver to drive the bolt until the bushing spins freely. Then remove the KT14 Brass Nut and remove the bushing. Discard the removed bushing. A new

bushing is provided in the CL-20 Guide Pin Kit.

8.3 Using a clean cloth and brake clean, thoroughly remove all grease from both bushing cavities.

If rust is present, a light application of emery cloth or steel wool is necessary.



Figure 11. Thoroughly clean bushing cavity.

Do not grind or over-abrade, as this will ruin the caliper.

## 9. INSTALLING THE SHORT GUIDE PIN BUSHING

9.1 Assemble the Ken Tool install tool including:

- KT 10 Short Bolt
- Washer
- KT05 1-3/8" diameter disc
- KT06 1-1/2" diameter disc
- KT14 Brass Nut
- KT08 2-1/8" diameter disc
- (2) 24mm Open End Wrench
- Max-A-Sil 998™ grease

Generously grease the KT10 Short Bolt and assemble the tool as shown in Figure 12. Place the washer between the KT10 Short Bolt and KT05 1-3/8" diameter disc. Use the 24mm open end wrench to keep the brass nut from turning. Do not turn the KT14 brass nut as it will damage the nut.

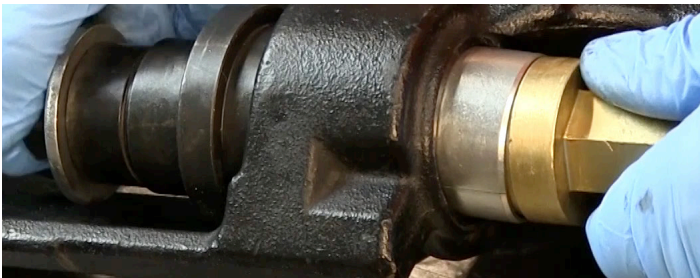


Figure 12. Align the notches in the tool and casting.

**IMPORTANT!** The tab in the Short Guide Pin Bushing must be aligned with the tab receiving hole in the casting. To assure proper alignment before installation, make sure the seam on the bushing aligns with the seam on the casting as shown in Figure 13.

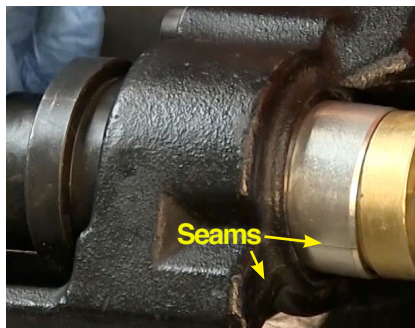


Figure 13. Align the bushing seam to the casting seam.

9.2 Using hand pressure only, use a ratchet or wrench to turn the KT10 Short Bolt and draw the bushing into the bushing cavity. Stop when you feel the bushing bottom out.



Figure 14. Use punch to bend tab.

9.3 Using a metal punch and ballpeen hammer, bend the metal tab into the tab receiver slot in the casting as shown in Figure 14.

## 10. INSTALL THE LONG GUIDE PIN BUSHING

10.1 Assemble the Ken Tool install tool including:

- KT 13 Long Bolt
- Washer
- KT14 Brass Nut
- KT08 2-1/8" diameter disc
- 24mm Socket
- (2) 24mm Open End Wrench
- Max-A-Sil 998™ grease

Generously grease the KT13 Long Bolt and assemble the tool as shown in Figure 15. Place the washer between the KT13 Long Bolt and KT08 2-1/8" diameter disc. Apply a small amount of grease to the outside of the bushing to ease installation. Use the 24mm open end wrench to keep the



Figure 15. Assemble the Ken Tool components as shown to install the long guide pin bushing.

brass nut from turning. Do not turn the KT14 brass nut as it will damage the nut.

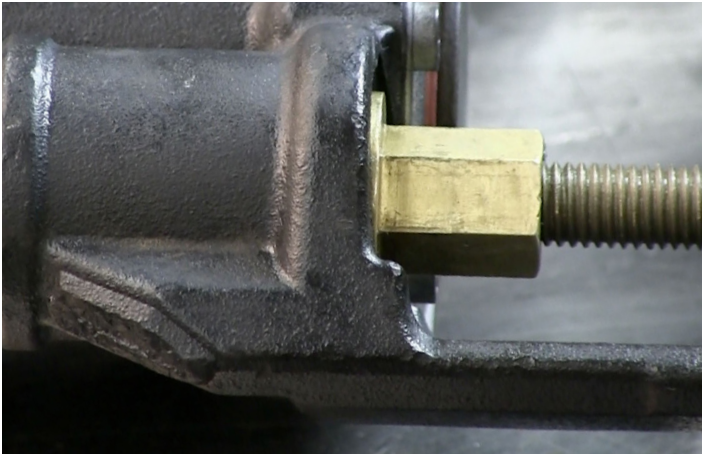
9.4 Using an impact wrench with 24mm socket, make sure the bushing is aligned straight to the bushing cavity and drive the KT13 Long Bolt so that it draws the brass Long Guide Pin Bushing into the bushing cavity.

**IMPORTANT!** The brass bushing must be precisely drawn into the bushing cavity so that it can be later dimpled

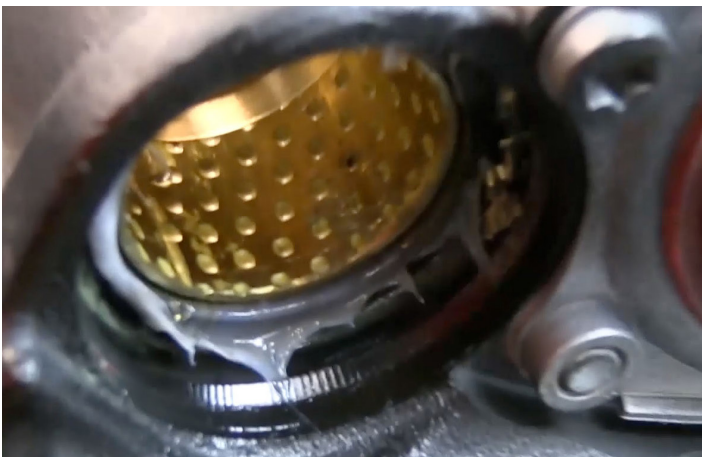


with the KT16 Dimpling Tool.

The bushing will be correctly seated when the KT14 Brass Nut is flush with the lip of the casting as shown in Figure 15. If the bushing protrudes from the casting, then repeat this step until it is flush with the inside lip of the casting.



**Figure 16.** When the KT14 Brass Nut is flush with the casting lip, the brass bushing is properly seated.

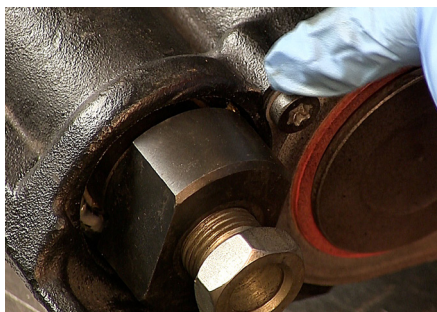


**Figure 17.** Proper seating of the Long Guide Pin Bushing seen here where the bushing is flush with the inner lip of the bushing cavity.

## 11. DIMPLING THE LONG GUIDE PIN BUSHING

Dimpling is a process that stresses the brass long guide pin bushing from the inside so that it keeps the bushing from sliding.

11.1 Turn the nut on the KT26 Dimpler Tool counter-clockwise until all dimplers are retracted. DO NOT unscrew the bolt too far or the dimplers may cease to function.

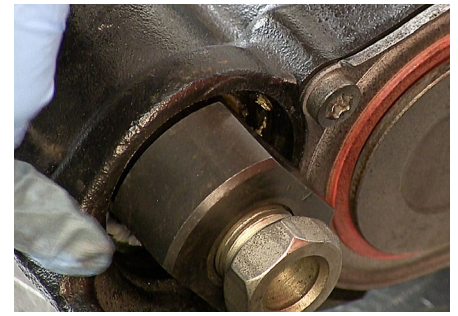


**Figure 18.** Clock the KT16 Dimpler Tool so the flat side points toward the bolt.

11.2 Insert the KT16 Dimpler Tool into the Long Guide Pin

from the boot end. Orient the flat edge so it points to the cover plate bolt as seen in Figure 18. Then tighten the silver nut with a 26mm wrench until hand tight. This applies the first three dimples.

11.3 Unscrew the bolt and rotate the KT16 Dimpler Tool 60 degrees as shown in Figure 19. Retighten the bolt to activate the dimplers. You now have six dimples, each 60 degrees apart.



**Figure 19.** Clock the KT16 Dimpler Tool so the flat side points to the outer edge of the caliper.

## 12. INSTALLING GUIDE PIN BOOTS

12.1 Insert a Guide Pin Boot into the KT07 2-inch Sleeve as shown in Figure 20. Be careful to tuck every bellows of the boot into the KT07 Sleeve so that only the lip of the boot protrudes from the sleeve.



**Figure 20.** At left, boot bellows protrude from the KT07 sleeve. This will cause damage and improper installation. At right, the bellows are completely tucked into the sleeve and the boot is ready for installation.

12.2 Assemble the Ken Tool install tool as shown in Figure 21, including:

- KT 13 Long Bolt
- Washer
- KT05 1-3/8" diameter disc
- KT06 1-1/2" diameter disc
- KT08 2-1/8" diameter disc
- KT07 2" diameter sleeve
- (2) 24mm Open End Wrench
- Max-A-Sil 998™ grease

12.3 Use one wrench to hold the nut on the KT07 Sleeve so it does not slip and gouge the boot. Use the other to drive the KT13 Long Bolt and **advance the bolt with hand pressure only**. When you feel the bolt is tight and the boot supplies resistance, release pressure and check the seat of the

boot by gently tugging it from several angles, as shown in Figure 22. If the boot comes loose, repeat Section 12.

Once successfully installed, repeat the procedure to install the second Guide Pin Boot.



Figure 21. Assembly of Ken Tool components for install of Guide Pin Boots.



Figure 22. Gently tug on Guide Pin Boots to test seating.

### 13. INSTALLING THE GUIDE PINS

#### IMPORTANT!

When installing the guide pin bushing, some burring may occur from the tool. First, insert a dry guide pin into the bushing to be sure it slides freely without obstruction.

If a burr or obstruction is detected, use fine steel wool to remove the burrs in the bushing. Blow out the bushing, taking care to remove all metal fibers, and re-insert the bushing until it slides freely.

13.1 Using a small brush, generously apply Max-A-Sil 998™ Silicon/Teflon grease sufficient to fill all dimples and grooves in the brass Long Guide Pin Bushing, as shown in Figure 23. Also, generously apply in the Short Guide Pin Bushing to fill the gaps between Teflon panels.

13.2 Using a small brush completely grease the face of both guide pins, paying special attention to fill all grooves with Max-A-Sil 998™ Silicon/Teflon grease.



Figure 23. Using a brush, completely fill all dimples and grooves with Max-A-Sil 998™ grease.

13.3 Insert both Guide Pins into their bushings with the tapered end toward the boot. Once inserted, slide the boot over the pin until the lip of the boot nests into the groove of the guide pin.



Figure 24. Using a brush, completely fill all Guide Pin grooves with Max-A-Sil 998™ grease.

13.4 Secure the Guide Pins to the boot by installing the white plastic retainer ring over the lip of the boot with the flat side of the ring point outward, as seen in Figure 25.

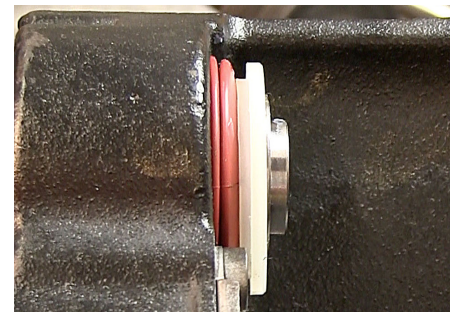
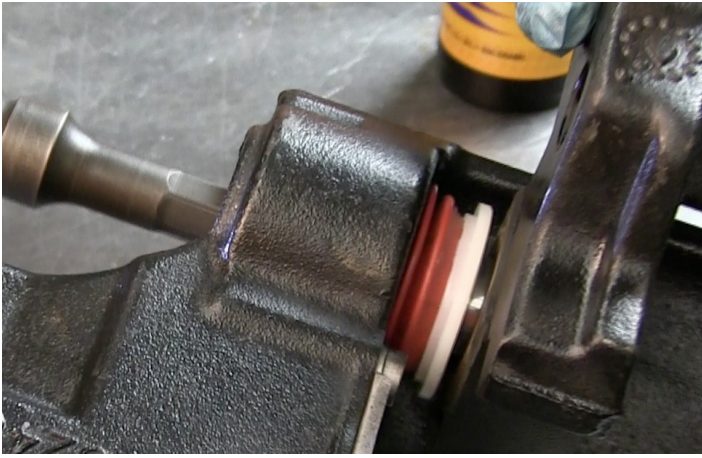


Figure 25. Install the white retaining ring over the lip of the boot with the flat side facing out.

### 14. INSTALL THE GUIDE PIN BOLTS

14.1 Align the tapered nipple on the end of the guide pin to mating holes on the caliper carrier. Be sure the carrier holes and threads are clean and free of rust and debris. Also be careful not to dislodge the white plastic retaining rings during installation.



**Figure 26.** The nipple on the guide pin and hole in the carrier must be precisely aligned.

14.2 Using the 14mm hex bolt and half-inch impact driver, moderately tighten each of the guide pin bolts.

14.3 Use a torque wrench and 14mm hex bolt to torque each bolt to 133 ft-lbs.

14.4 Slide the caliper and carrier to test freedom of slide. If the caliper cannot slide freely, add a partial turn of the torque wrench on the binding side until it slides freely.



**Figure 26.** Torque the guide pin bolts to 133 ft-lbs, and add a 90-degree turn.

14.5 Continue to add partial turns to each side until an additional 90-degree turn has been completed for each bolt.

## 15. INSTALL THE LUBRICATION PLUG

The Lubrication Directional Plug is an aluminum cylinder designed to fit inside the Long Guide Pin. This prevents excess grease from being pumped into the Long Guide Pin, which might otherwise result in a gas lock in the guide pin boots.



**Figure 27.** Install the aluminum lubrication directional plug into the long guide pin with the hole facing out.

One end of the plug has a small hole drilled into the center. This is designed to help you remove the Lubrication Directional Plug.

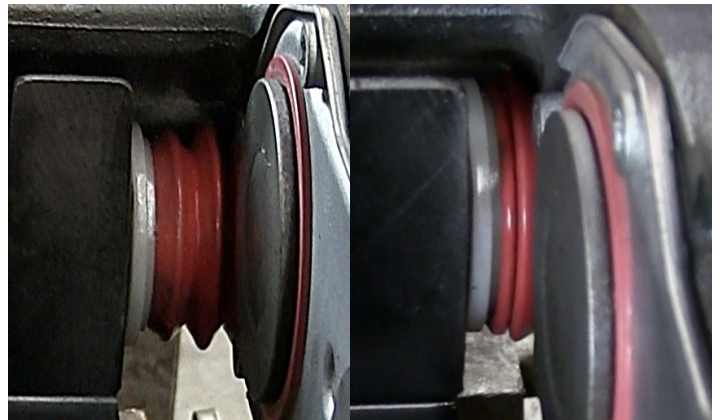
15.1 Using Max-A-Sil 998™ silicon/Teflon grease, generously apply grease to the entire aluminum plug. This will avoid corrosion inside of the guide pin.

15.2 Install with the hole facing outward, so that when removal is necessary, a small angled pick can be used to remove the plug.

## 16. INSTALL THE GUIDE PIN CAPS

Gather the guide pin caps BEFORE installation. Notice, one has a shallow profile, and the other has a deeper profile. The shallow or short cap is installed onto the Long Guide Pin, while the deep or long cap is installed onto the Short Guide Pin.

16.1 Before installing either cap, make sure the caliper is completely compressed, as shown in Figure 28. This will exhaust all air from the guide pin boots. If the air is not exhausted, the boots will be bloated with air, and may cause the caliper to hang up or not retract entirely.



**Figure 28.** At left, the caliper is not compressed. This will cause bloating of the boot. At right, the caliper is compressed and is ready for cap installation.

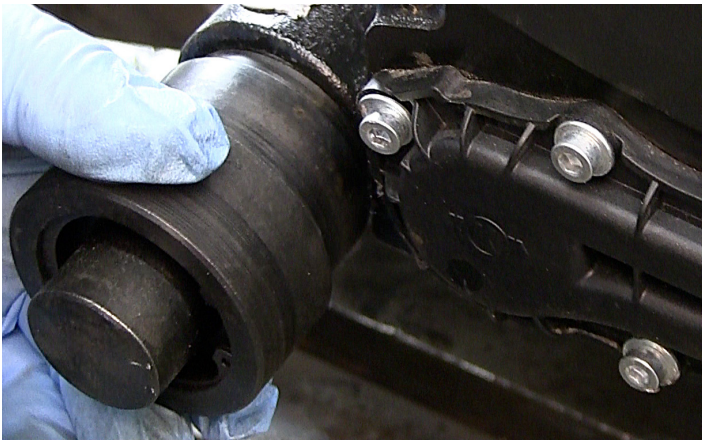
16.2 Insert the shallow guide pin cap into the KT26 long guide pin cap install tool so that the open end of the cap is facing outward. REMEMBER, THE SHALLOW CAP GOES IN THE LONG GUIDE PIN SIDE.

16.3 Place the loaded KT26 tool firmly against the caliper housing as shown in Figure 29 so that it is squared to the opening.

16.4 Using a ballpeen hammer, tap the KT26 tool and cap several times to lightly seat the cap. Remove the tool and check to see that the cap is properly seated and not angled. If correct, continue hammering in place with the KT26 tool until the cap bottoms out.

16.5 Insert the deep guide pin cap into the KT27 short guide pin cap install tool so that the open end of the cap is facing outward. REMEMBER, THE DEEP CAP GOES IN THE SHORT GUIDE PIN SIDE.

16.6 For installation of the short guide pin cap, repeat steps 16.3 and 16.4 using the KT27 and deep cap instead.



**Figure 29.** Place the KT26 and KT27 cap install tools firmly against the caliper housing so they are squared to the opening.

## 17. INSTALL THE STOP VALVES

Keep the caliper compressed.

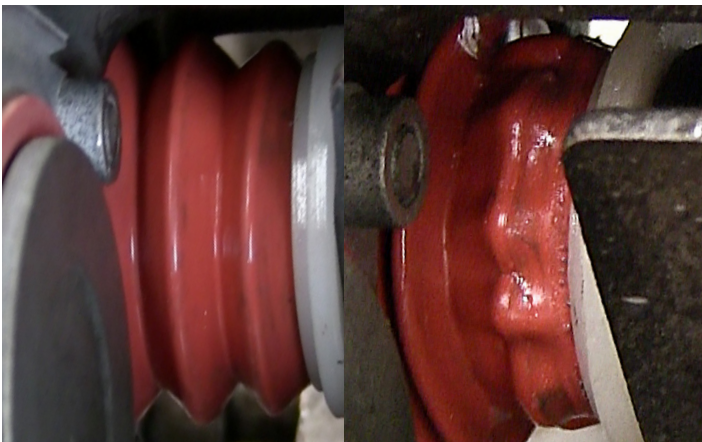
17.1 Insert one hydraulic stop valve into each of the threaded guide pin caps, turning clockwise with hand pressure. When firmly seated, use a wrench to tighten an additional half turn. Be careful not to overtighten as this will ruin the cap.

17.2 Check to see that both boots appear to be vacuum-sealed and are clinging to the guide pin. This vacuum look proves proper installation.

If they appear bloated, then air has been trapped in the boot and they may hinder proper caliper function.



**Figure 30.** Firmly hand tighten the hydraulic stop valve. Then use a wrench to tighten an additional half turn. Be careful not to over-tighten.



**Figure 31.** At left, the guide pin boot is bloated. This can inhibit proper caliper function. At right, the guide pin boot appears “vacuum-sealed” as it clings to the pin. This indicates proper installation.

## IMPORTANT!

If after cap installation, air is bloated in the boot as shown in Figure 31, you can remove the air by pumping it from the boot (see Figure 32), with the following steps:

1. Compress the caliper
2. Remove the hydraulic stop valve
3. Place finger over the cap hole, sealing the hole
4. Extend the caliper
5. Compress the caliper and remove finger so air can exhaust from boot.
6. Repeat steps 3, 4 and 5 until the guide pin looks sealed.
7. Compress caliper
8. Re-install the valve



**Figure 32.** Only the CL-20 kit allows you to drain air from the guide pin boots by removing the valve and using your finger to pump air from the cavity.

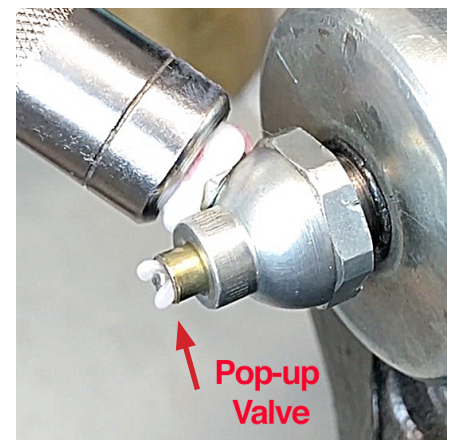
## 18. ADDING GREASE

18.1 To finish the installation of the CL-20 kit, add grease to the hydraulic stop valve by fitting the grease coupler over the valve and hand pumping grease until the pop-up valve alerts you to stop.

**BE SURE TO KEEP THE CALIPER COMPRESSED!**

If the caliper does not remain compressed, then pressure from the grease will extend the caliper and render it inoperable.

If this happens, see section 18.2 to exhaust grease from the assembly.



**Figure 33.** Firmly hand tighten the hydraulic stop valve. Then use a wrench to tighten an additional half turn. Be careful not to over-tighten.

18.2 If you have over-greased your caliper, then the caliper will extend and will be unable to retract. **DO NOT FORCE** the caliper to retract as this may damage the boots.

Remove the hydraulic stop valve from either one or both of the overgreased chambers. If both chambers are over-greased, you must remove **BOTH** valves at the same time. Slowly apply hand pressure only to completely compress the caliper. This will exhaust the excess grease.

18.3 When the grease has been completely exhausted, re-install the valve or valves.



**Figure 34.** If the caliper was not properly compressed during greasing, you can exhaust excess grease by removing the valve and compressing the caliper.

## 19. ADDING GREASE DURING PREVENTIVE MAINTENANCE

Depending on the severity of use, your caliper may need to be re-greased every 30, 60 or 90 days.

Because Max-A-Sil 998™ is engineered for high temperature environments, you may only use between 2-3 grams per application.




If some wheel ends are consuming more grease than others, this may indicate a mechanical issue with the caliper.



**DO NOT MIX MAX-A-SIL 998™ WITH ANY OTHER LUBRICANTS! THIS WILL VOID YOUR WARRANTY.**

If you do mix lubricants, you must remove the guide pin caps and guide pins and thoroughly clean the all components and the guide pin cavity.

## RECOMMENDED LUBRICATION INTERVALS

Application	Lubrication interval (months)	Replacement interval (miles)
	Every 3 - 6 months	5,000 - 10,000 miles
	Every 3 months	15,000 - 20,000 miles
	Every 1 - 3 months	5,000 - 10,000 miles

## NEED TECHNICAL HELP?



**CALL 1-844-4AIR-DISC  
1-844-424-7347**

