CHAOSFAB.COM

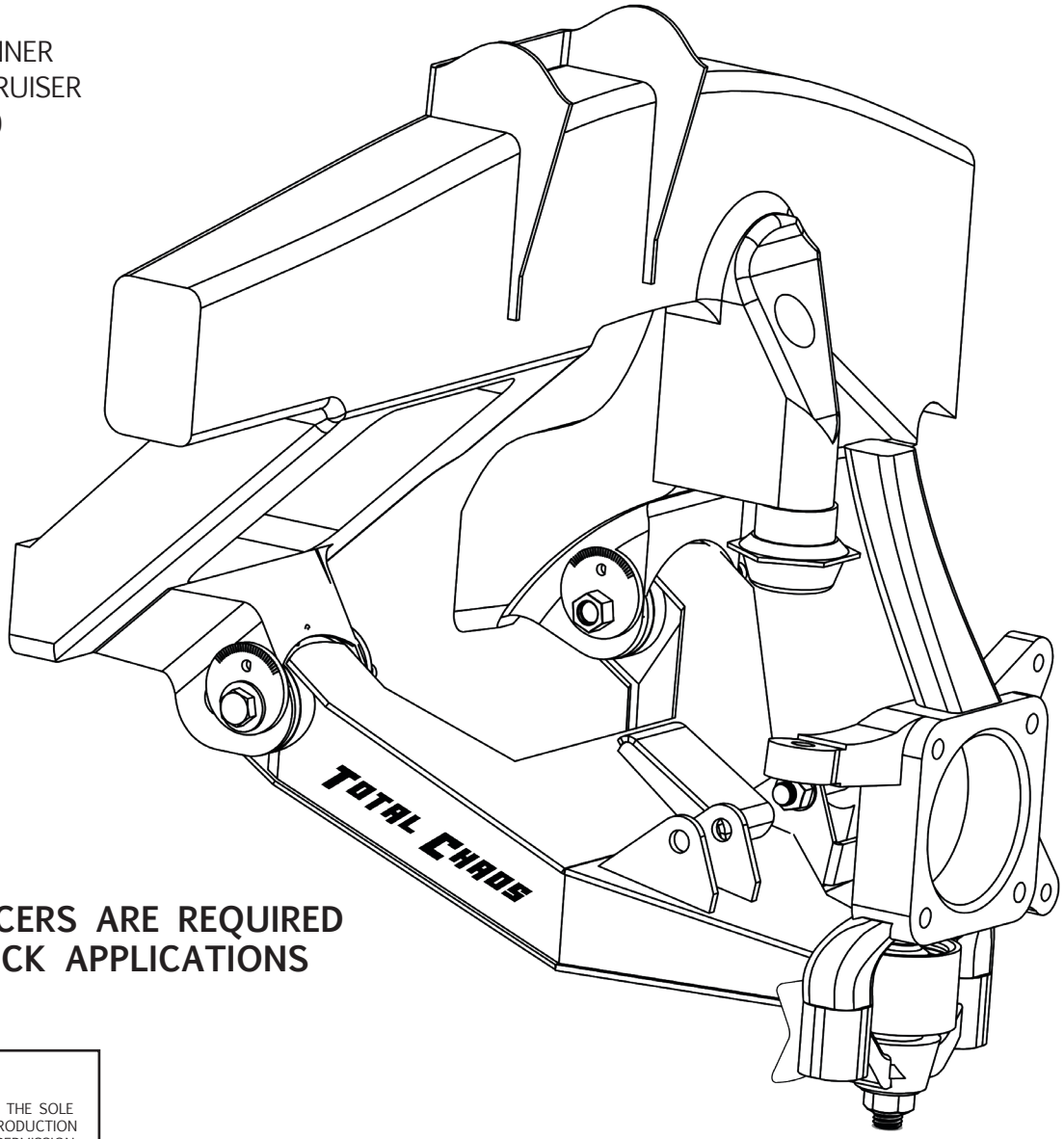
INSTALLATION INSTRUCTIONS
EXPEDITION SERIES LOWER CONTROL ARMS

86555-E
86555-E-NSS

DATE: 4.24.19
REV: 01
SCALE: N.T.S.
PAGE: 1 OF 4
DRAWN: CM

DESIGNED TO FIT:

2003-2009 TOYOTA 4RUNNER
2007-2009 TOYOTA FJ CRUISER
2003-2009 LEXUS GX 470



1.25" WHEEL SPACERS ARE REQUIRED FOR DUAL SHOCK APPLICATIONS

PROPRIETARY AND CONFIDENTIAL

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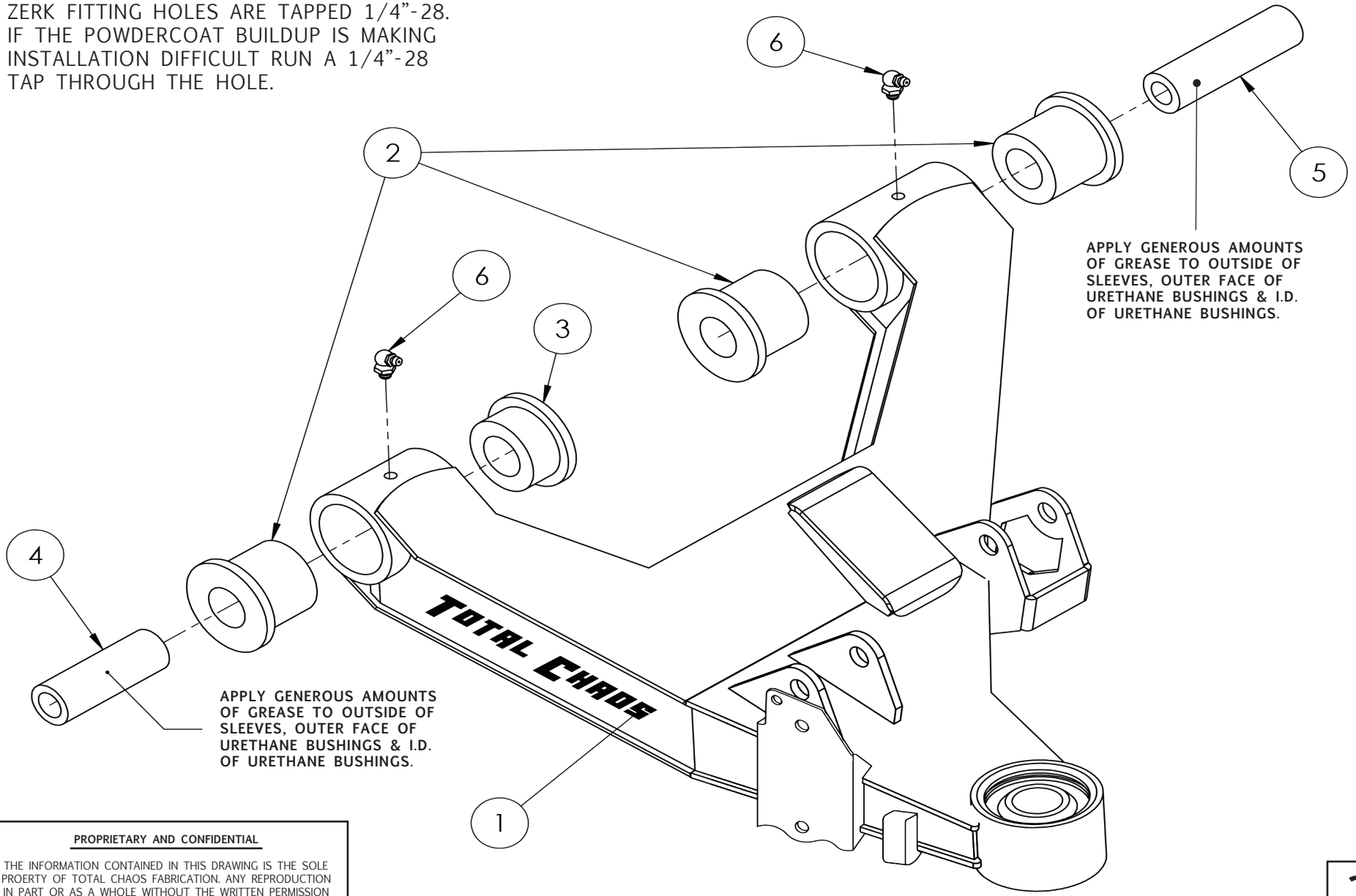
ZERK FITTING HOLES ARE TAPPED 1/4"-28. IF THE POWDERCOAT BUILDUP IS MAKING INSTALLATION DIFFICULT RUN A 1/4"-28 TAP THROUGH THE HOLE.



APPLY GENEROUS AMOUNTS OF GREASE TO OUTSIDE OF SLEEVES, OUTER FACE OF URETHANE BUSHINGS & I.D. OF URETHANE BUSHINGS.

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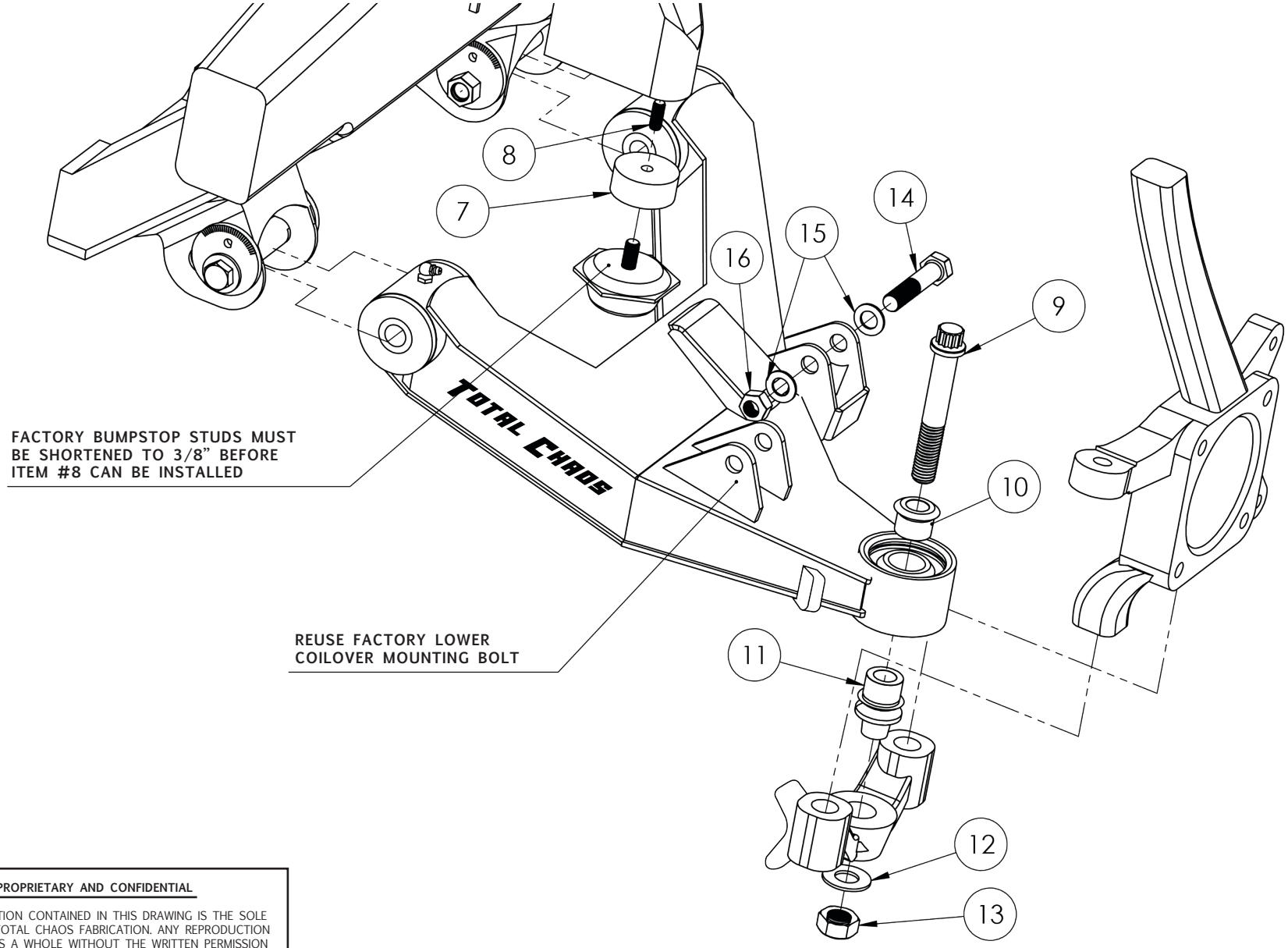

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INSTALLATION NOTES

- THE FACTORY MANUAL IS REQUIRED FOR TORQUE SPECIFICATIONS ON ALL HARDWARE. THIS PROCEDURE WILL INVOLVE THE REMOVAL AND RE-INSTALLATION OF MANY PARTS. ALWAYS USE FACTORY REPLACEMENTS FOR WORN OR DAMAGED PARTS. ALWAYS USE NEW COTTER KEYS DURING RE-INSTALLATION.
- SOME ITEMS ARE NOT SHOWN FOR CLARITY
- PAGE 2
  APPLY GENEROUS AMOUNTS OF GREASE TO OUTSIDE OF SLEEVES, OUTER FACE OF URETHANE BUSHINGS & I.D. OF URETHANE BUSHINGS
- PAGE 3
  TORQUE ITEM #9 TO 100 FT/LBS
- FACTORY BUMPSTOPS STUDS MUST BE SHORTENED TO 3/8" BEFORE ITEM #8 CAN BE INSTALLED.

PARTS LIST:

ITEM #	PART #	QTY	ITEM DESCRIPTION
1	86525-E-L	1	LOWER LEFT CONTROL ARM
	86525-E-R	1	LOWER RIGHT CONTROL ARM
2	60293	6	BUSHING - URETHANE LONG HALF
3	60685	2	BUSHING - URETHANE SHORT HALF
4	68608	2	INNER SLEEVE - LOWER ARM FRONT
5	68609	2	INNER SLEEVE - LOWER ARM REAR
6	10005	4	FITTING - GREASE (ZERK)
7	68610	2	SPACER - BUMP STOP
8	10611	2	STUD - 10MM X 1.00"
9	10141	2	BOLT - 5/8"-18 X 4.00" 12-POINT
10	10058-C	2	HIGH MISALIGNMENT SPACER: 1-5/8" CUSTOM
11	10058-4RN	2	TAPERED ADAPTER: LOWER A-ARM
12	12103	2	WASHER - 5/8" AN (GOLD ZINC)
13	11102	2	NUT - 5/8"-18 GRADE C-LOCK
14*	10025	2	BOLT - 1/2"-20 X 2.50" GRADE 8 (ZINC)
15*	12003	4	WASHER - 1/2" AN
16*	11001	2	NUT - 1/2"-20 NYLOCK (ZINC)
Pre-Installed	FK-WSSX16T-1	2	1" UNIBALL STAINLESS W/ PTFE LINER
Pre-Installed	30604	2	SNAP RING: 1" UNIBALL

*DUAL SHOCK APPLICATIONS ONLY

TOTAL CHAOS FABRICATION
159 N. MAPLE ST. UNIT J
CORONA, CA 92880
951.737.9682

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Frequently Asked Questions & Important Things To Read About TC Equipment and Parts

1. Uniballs:

TC uses a 100% stainless steel uniball and race for maximum corrosion resistance in all our equipment. The uniballs feature a military grade PTFE Liner that makes much less noise than the standard lined uniballs used in competing brands. This military grade PTFE Liner is self-lubricating and does not require any additional lubrication or grease. If you have a ball that is making some noise apply either a layer of Tri-Flow Superior Dry Lubricant (No. TF21013) or CRC Dry PTFE Lube (No. 03044).

Uniballs are a consumable item and will need to be replaced when the military grade PTFE Liner wears away. Grabbing your wheel and applying force to see if the ball is moving in the race will determine their maintenance schedule. Each uniball is retained in the uniball cup at the end of the arm with a large snap ring. . Wiping the uniballs down with a damp cloth to remove any built up dirt and debris will help extend the life of these parts Replacement parts are available directly from TOTAL CHAOS Fabrication Inc.

2. Polyurethane Bushings:

Poly bushings can and will make some noise. They offer many benefits vs. a factory style rubber bushing. To reduce as much noise as possible, TC uses a synthetic grease that contains PTFE called Superlube (No. 41150). If Superlube is not readily available use a good synthetic grease (Mobil 1, Valvoline, etc.).

When greasing your pivot bushings on the vehicle it is very important not to force too much grease into the zerk fittings. This will cause excess pressure to become trapped in the pivot and will result in mushrooming the bushing shoulders out of the pivots. To prevent this, first loosen the factory bolt that holds the arms to the frame and separate the washers from the face of the bushings when applicable. This will allow any excess pressure and grease to escape. Don't forget to re-torque the factory bolt when you are finished to a factory torque specification!

3. Zerk Fittings:

The grease nipples or zerk fittings that are supplied with our arms are ¼"-28 in size. Should you have a tapped hole that has an excess amount of powder coat in it, use a ¼"-28 tap to clean it up. When installing the zerk fittings take care not to over tighten them as they are hollow and can snap off. When fully installed they will not sit all of the way flush with the pivot, just insert them two or three rotations until they are snug. Don't forget to have them pointing in the right direction so you can get a grease gun onto them once the arms are installed onto the vehicle.

4. Anti-seize:

To aid in future disassembly of components, we recommend that you liberally apply an anti-seize to all metal on metal contact surfaces such as the ID of the uniball, hi-mis spacers, and inner sleeves. Also, apply it to the threads on any C-lock or Stover nut. This will prevent the C-lock portion of the nut from galling onto the bolt.

5. Black Oxide Coated Parts:

Some components (such as 4340 axle shafts and lower uniball conversion cups) are coated with Black Oxide. While this will help to prevent rust, depending on your climate you may want to further coat these parts. For axle shafts we wrap a layer of electrical tape the length of the shaft (excluding the splines). For lower uniball conversion cups you can use black spray paint, just be sure to mask of the uniball before painting.

6. Hardware Torque:

All hardware should be re-torqued after an initial break in period of 50 miles and again at 500 miles. Periodically after that you should inspect your suspension to ensure that nothing is loose, worn, or damaged.

7. Uniball Caps:

We do not use any sort of cap or cover over our uniballs as these actually lead to premature wear and corrosion. With a cap installed moisture and containments work their way up through the underside of the uniball and then become trapped. With no cover this moisture can evaporate and you have easy access to wipe down the uniball periodically.

TOTAL CHAOS FABRICATION INC.

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WARNING

TOTAL CHAOS FABRICATION'S aftermarket suspension products and accessories modify a vehicle for uses which exceed conditions anticipated by the vehicle manufacturer. The uses include the high-performance demands required during off-road. These conditions vary in the degree of severity and cannot be controlled by the vehicle or product manufacturer. If the components within the suspension system or accessories become worn due to frequent on-road and/or extreme off-road use, the safety and reliability of the vehicle is at risk. The maintenance of aftermarket equipment to ensure the vehicle occupants safety is entirely your responsibility. Do not purchase TOTAL CHAOS manufactured products or components unless you are willing to accept this responsibility. Do not install any TOTAL CHAOS suspension products or accessories unless you are certified and/or competent at installing the product without causing present or future injury to yourself or other vehicle occupants, other vehicles and their occupants, pedestrians and motorcyclists; seek an authorized installation center.

TOTAL CHAOS FABRICATION long travel suspension systems were designed for off-road use only. This suspension system is not to be modified from its original design in any way. TOTAL CHAOS is not liable nor held responsible for any injury's or death that can occur from off-road use or as the result of product failure. Customer/driver assumes all liability in assuring that the suspension system is properly installed, maintained, and operating in safe conditions. The following are guidelines for maintaining a safe operating vehicle. Safety and reliability are our number one concern.

Visually inspect all equipment for clearance and unusual wear.

Regularly clean and inspect equipment such as suspension components, heim joints, polyurethane bushings and all hardware. Replace items as necessary. All suspension components are available for individual replacement direct from TOTAL CHAOS. We strongly recommend the suspension system be installed by an authorized installation center. TOTAL CHAOS FABRICATION reserves the right to warranty any components that we have determined to be product or material defective. Off-road abuse can damage suspension components.

BREAK IN PERIOD. After every installation we recommend checking the torque of all nuts and bolts to assure that the torque has taken after driving 500 miles. Some minor adjustments may need to be made.

The customer assumes all responsibility for the use of all equipment and the proper maintenance of said equipment. This equipment will alter the center of gravity of your vehicle and also the handling characteristics that you may be accustomed to. Even though your vehicle may have a wider track width it is capable of rolling over. Please wear your seat belt and demand that all passengers do so as well.

Please remember that no matter how well your vehicle is built it is only as safe as you drive it. This equipment is designed to improve the performance of your vehicle. INCREASING PERFORMANCE ALSO INCREASES YOUR RISK WHILE OPERATING THIS VEHICLE. The operator must know and understand the vehicles handling characteristics. None of this equipment is guaranteed to be free of defect or to protect the driver or occupants from death or injury in the event of a collision. Please drive in a safe and sane manner.

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Recommended Alignment Procedure

All vehicles equipped with TOTAL CHAOS suspension systems should be taken to an alignment shop that is familiar with off-road suspension systems. There is increased caster angle built into most TOTAL CHAOS suspension systems. When setting alignment, camber and toe should be set as close to factory spec as possible, while caster will usually be higher than factory specifications. Attempting to bring caster to factory spec will likely result in camber and toe being out of factory specifications which will result in poor driveability and uneven tire wear. The caster that is built into TOTAL CHAOS suspension systems is sufficient, attempting to add excessive caster into the alignment may result in the inability to adjust camber and toe. Alignment specifications will vary depending upon:

- Vehicle model
- Suspension kit purchased
- Prior vehicle modifications
- Desired coilover spring pre-load and or ride height

TOTAL CHAOS' suspension products are designed to align with aftermarket shocks that are set to the recommended amount of lift. Some vehicles may not correctly align if the ride height is altered from the recommended settings. If you have followed all of the instructions and the vehicle still won't align correctly, it's likely that there is something installed wrong, or the frame mounting points and/or knuckles may be bent or damaged.

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Returns

Contact customer service to issue an RMA number. All items returned must be within 60 days of the date of purchase and must be accompanied by the original sales invoice. Items must be shipped freight pre-paid. Photo copy the original receipt for your personal records. A 20% restocking fee will be applied to **ALL** returned products. Refunds are issued same method as the original payment. **No refunds after 60 days of purchase.** There are no refunds or exchanges on any special ordered items.

Core Charges

All cores must be received within 45 days of purchase date for a full core credit. Cores cannot be damaged or modified in any way.

Replacement Parts

TOTAL CHAOS attempts to stock all items associated with a suspension system for individual replacement. Off Road use can damage individual parts and associated components. Demand peaks can occur which can delay delivery and availability. You will be kept informed on the status of your delivery in the event that your items ordered are not in stock. You will be notified when items become available before shipment.

Back Orders

All back orders remain on file and will be shipped upon availability. Notify your sales representative if you do not wish to have back ordered items held. All items are billed prior to shipment without notification.

Finishes

All products that are manufactured by TOTAL CHAOS have undergone thorough steps of quality control throughout the production, assembly, and packaging processes. TOTAL CHAOS offers no warranty on finishes and no items are refundable for an unsatisfactory finish. If any items are damaged in shipping, see UPS CLAIMS. Items that come with a black finish are coated with a black oxide to protect against corrosion; paint color of your choice should be applied over the oxide coating. Items that are raw should be oiled to prevent rust or can be painted to preference.

UPS Claims

TOTAL CHAOS is not responsible for any damages or losses incurred during shipping. If a package appears to be damaged during shipping, the customer must notify the UPS driver or a UPS facility immediately before opening and start a claim. TOTAL CHAOS will not warranty any damages caused during shipping. Failure to immediately notify UPS can result in a loss of recourse to the damaged items.

Limited Warranty

TOTAL CHAOS warrants only parts and components that we manufacture to the original retail purchaser who owns the vehicle in which the products were originally installed. There is no warranty on any manufactured parts or components if they have been modified from their original design in any way. Copies of the original purchase receipt may be required to warrant any items. *TOTAL CHAOS's* obligation under this warranty is limited to the repair or replacement of the part at *Total Chaos's* discretion. Components requiring warranty by outside suppliers may be subject to returning the item for inspection by the vendor. Each vendors warranty policy applies to these items. This warranty does not include reimbursement for shipping of the product to or from TOTAL CHAOS and DOES NOT include any costs incurred during down time of the vehicle or any other consequential losses.

Uniball's, Heims, Bushings, Hardware

Items such as uniballs, heim joints and bushings require maintenance. Inspect these items periodically for unusual wear and to ensure they are performing properly, replace as necessary. Replacement is required when you notice that the ball has slop while seated in the race. Longevity of these components varies on each vehicles application. These items vary in tolerances by the manufacturer. Some production runs will produce parts that have tighter tolerances. It is recommended that 100-110ft lbs. of torque be placed on uniballs and heims when assembling. There can be a break in period for uniballs and heims associated with some production runs for the ball to wear into the Teflon liner. Clunking or creaking can be associated with these components after installation. This does not warrant component replacement. Contact TOTAL CHAOS if you are concerned of noise. It is at the discretion of the manufacture or supplier to determine if the item should be replaced. This does not include reimbursement for shipping of the product to or from TOTAL CHAOS and DOES NOT include any costs incurred during down time of the vehicle or any other consequential losses. All parts that come pre-assembled, such as steering, must have the hardware torqued after installation. All components should be checked periodically after the installation and re-tightened as necessary.

LOWER CONTROL ARM INSTALL TIPS

The following tips are intended to make installation of your TOTAL CHAOS Fabrication lower control arms smoother. We try to answer some of the frequently asked questions that we get during an LCA installation.

PIVOT POCKET ADJUSTMENT

If the LCA pivots are not aligning you may need to use a large crescent wrench or rubber mallet to open up the frame pockets where the lower control arm will mount.

CAUTION: Only a small adjustment may be necessary. You will not need to bend it very much.

GREASE THE PIVOT POCKETS

Greasing the control arm pockets where the bushings pivot on the frame will help when installing the LCA. This will also provide a layer of grease on the flat shoulder side of the bushing.

GREASE THE PIVOT POCKETS CONTINUED

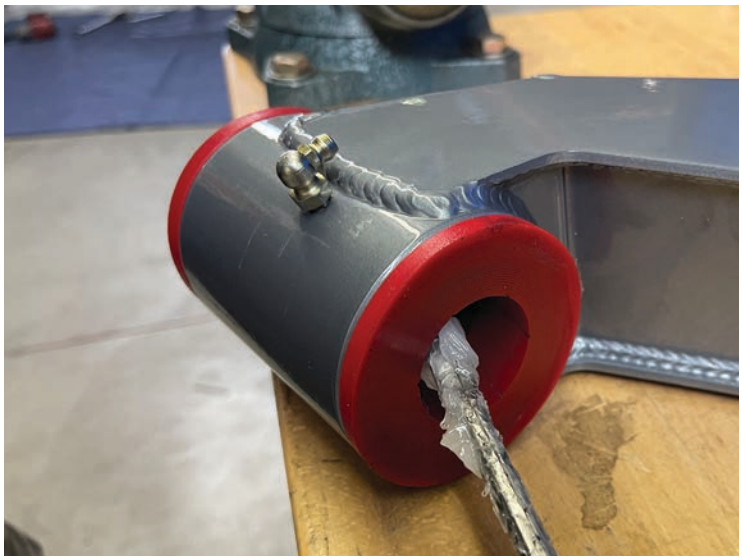
BUSHING PREP AND INSTALLATION

Apply generous amounts of grease to the inside of the lower control arm pivots. Then install the bushings using a dead blow hammer.

(Continued on next page...)

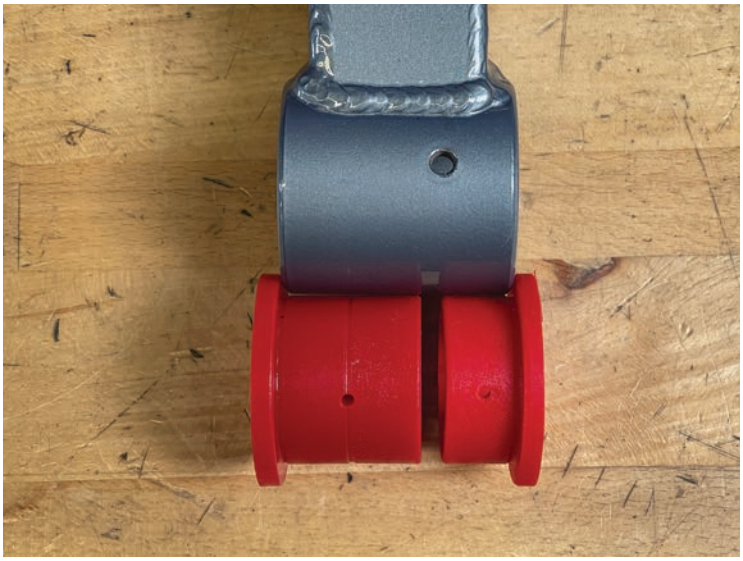
BUSHING PREP AND INSTALLATION

Apply grease to the inner bushing and insert the inner sleeve. It will be a tight fit so a deadblow hammer will be necessary.



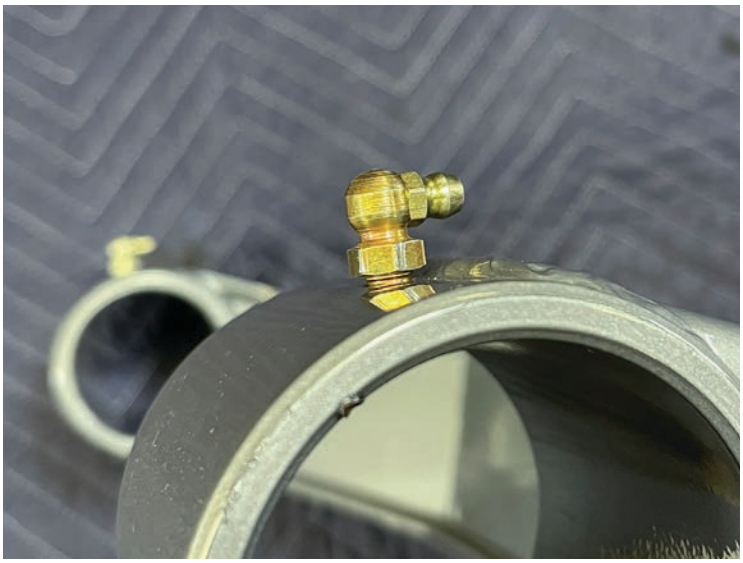
BUSHING ALIGNMENT

Some lower control arm pivots have an offset zerk fitting hole. Be sure to install the bushings in the correct orientation where the gap lines up with the zerk hole.



ZERK FITTINGS

Powder coat can build up in the threaded holes – run a ¼"-28 tap through it to chase it when needed. When tightening the zerk, DO NOT tighten the zerk to the bottom of the thread. Stop when it gets snug. Then rotate as needed to make the fitting accessible for a grease gun.



UNIBALLS

Brand new uniballs are designed to be much tighter to rotate than a ball joint. Rotating the uniball will not be as easy as the ball joint you just removed. You may also notice this when driving the vehicle, especially at low speeds – a heavier steering wheel feel and it may not return to center as fast. If you are replacing a set of worn out ball joints, a new uniball might feel tighter than you were anticipating. There is a break in period associated with these new parts. They will begin to loosen up as break in occurs. Mileage of break in can vary.

FOR INSTALL QUESTIONS OR CUSTOMER SERVICE INQUIRIES:

Call 951.737.9682 or email info@chaosfab.com