



## INSTALLATION INSTRUCTIONS

# 54525-FXUCA FORGED UPPER CONTROL ARMS

2005-20XX NISSAN FRONTIER  
2005-2015 NISSAN XTERRA  
2005-2012 NISSAN PATHFINDER





# SAFETY

## READ ALL SAFETY INFORMATION BEFORE INSTALLATION

- FOLLOW ALL INSTRUCTIONS FOR PROPER ASSEMBLY
- WEAR APPROPRIATE EYE PROTECTION
- USE APPROPRIATE TORQUE FOR BOLTS
- IT IS RECOMMENDED THAT YOU HAVE YOUR VEHICLE'S ALIGNMENT CHECKED WHENEVER INSTALLING NEW SUSPENSION.
- IT IS ALSO RECOMMENDED THAT YOU ADJUST YOUR HEADLIGHTS WHENEVER THE VEHICLE'S RIDE HEIGHT IS ALTERED.

# TOOLS & MATERIALS

| REQUIRED   |
|--|
| 12 mm socket/wrench (to remove steering pinch bolt)                              |
| 17 mm socket/wrench (to remove and install UCA bolts)                            |
| 19 mm socket/wrench (to install new ball joint nuts)                             |
| 21 mm socket/tire iron (to remove lug-nuts)                                      |
| 22mm socket/wrench (to remove UCA / spindle nut)                                 |
| Torque wrench (rated to at least 150 FT-LBS)                                     |
| Needle nose or equivalent pliers (to remove cotter pins from spindle ball joint) |
| 3-4 lb. sledge hammer (to get ball joint and LCA bolts loose)                    |
| Floor/pole jack  |
| Jack stands  |
| Tire chocks (or blocks)  |

| RECOMMENDED / OPTIONAL   |
|--|
| Penetrant oil  |
| Hanger or strap (to hold up spindle when removed from UCA)             |
| Pitman arm Puller (to get ball joint loose)                            |
| Air impact wrench (to give your muscles a break from turning wrenches) |

### NOTE

Please double check the parts list before beginning installation, to ensure all parts are present. If there is something missing, please contact Nissan Motorsports [Motorsports@nissan-usa.com](mailto:Motorsports@nissan-usa.com).

#### PRIOR TO INSTALLATION:

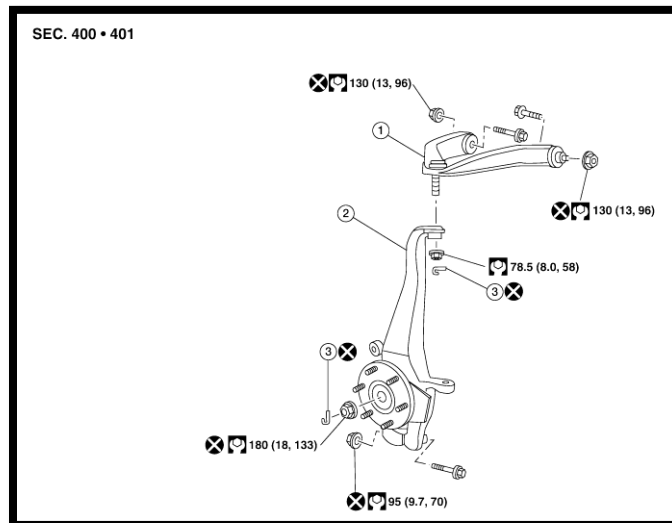
1. Factory service manual is recommended to have on hand.
2. Secure and properly block vehicle prior to beginning installation
3. Always wear safety glasses when using power tools or working under the vehicle

 Modifications to any part will void the warranty associated with that product. AFTER REMOVING PARTS FROM

VEHICLE, SAVE HARDWARE FOR REINSTALLATION.

# PARTS LIST

| QTY | ITEM                 | DESCRIPTION                               |
|-----|----------------------|---|
| 1   | SMX54525-D           | DRIVER SIDE CONTROL ARM                   |
| 1   | SMX54525-P           | PASSENGER SIDE CONTROL ARM                |
| 2   | BALL JOINT NUTS      | 19MM NYLOCK NUTS                          |
| 2   | BALL JOINT           | OE SPEC TITAN BALL JOINT W/RETAINER CLIPS |
| 4   | BUSHINGS             | PRESSED BUSHINGS                          |
| 2   | BALL JOINT DUST CAPS | ALUMINUM DUST CAP WITH NISMO LOGO         |



**INSTALLATION TIME: 1.5 HR**

## INSTALLATION STEPS

### 1. PREPARE POTENTIALLY DIFFICULT BOLTS AHEAD OF TIME

- a. Apply penetrant oil to any bolts, nuts, or vehicle hardware for a few days in a row prior to lift install. This is especially important if you live somewhere where road salt is used.

### 2. SECURE TRUCK

- a. Park on level ground
- b. Firmly set parking brake
- c. Chock tires

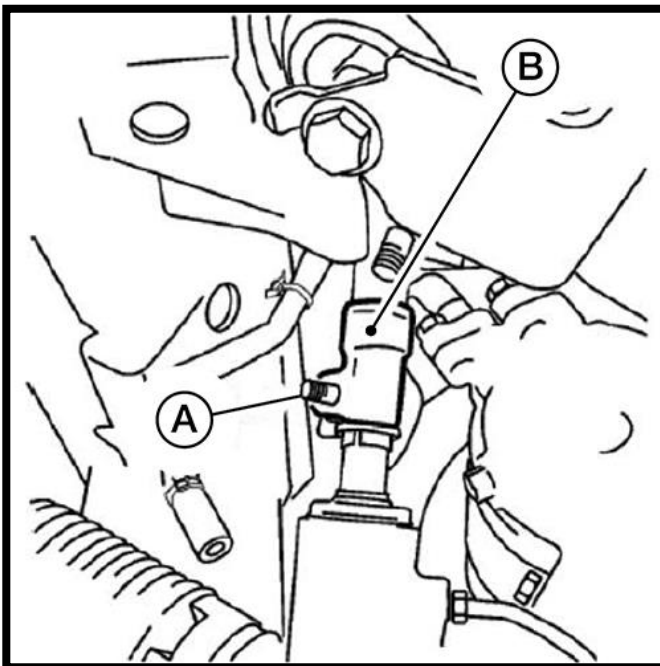
### 3. RAISE TRUCK AND REMOVE WHEEL / TIRE

- a. Break lug nuts loose (21mm), while the tires are still on the ground. NOTE: Just break them loose. Do not fully loosen until the tire is off of the ground.
- d. Jack up truck so tire is about 3 in off the ground.
- c. Place jack stands under the frame at appropriate points then lower the truck down onto the jack stands. NOTE: Ensure the tires are not touching the ground.
- d. Remove lug nuts.
- e. Remove both front wheels/tires.

**\*\*NOW WORK ON ONE SIDE AT A TIME\*\***

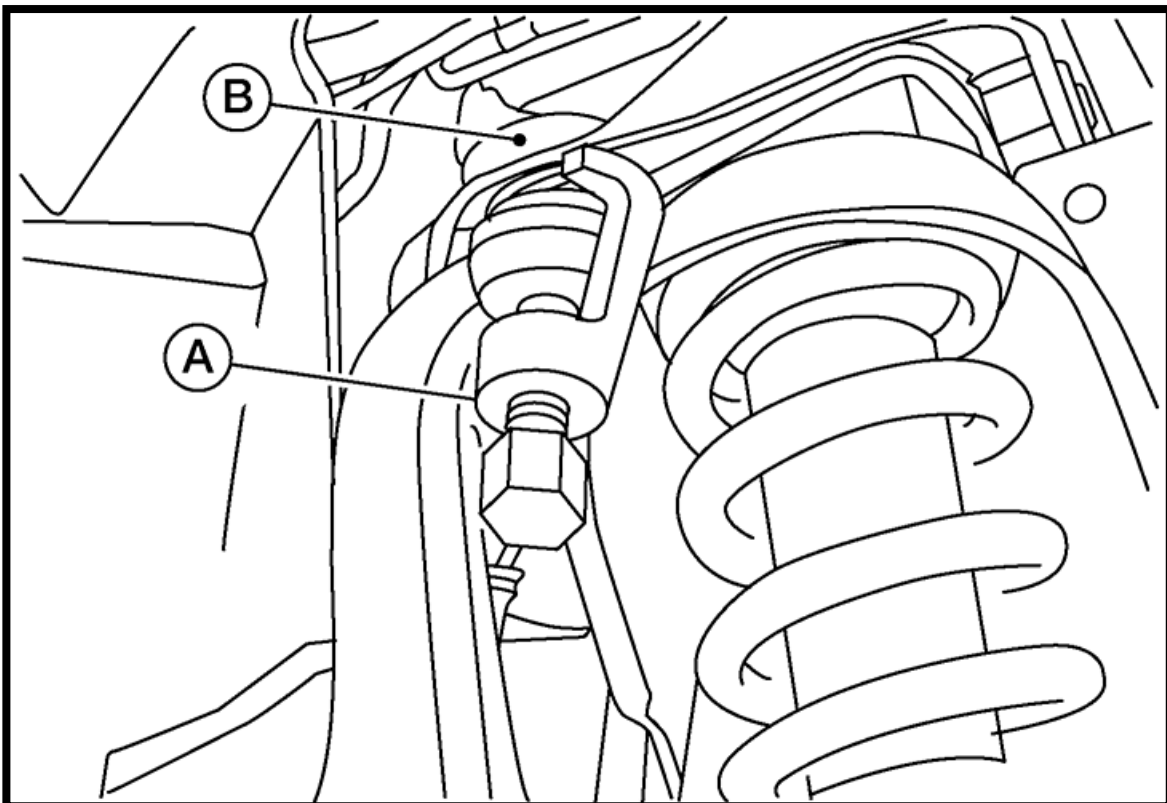
### 4. REPOSITION STEERING GEAR JOINT SHAFT

- a. For the LH side only, remove the pinch bolt (A) from the lower joint shaft at the steering gear (B), and position the lower joint shaft out of the way.



## 5. SEPARATE SPINDLE FROM UCA BALL JOINT

- a. Place floor/pole jack under the LCA and lift the arm slightly to relieve tension.
- b. Locate the nut that retains the upper ball-joint to the spindle.
- c. Remove and discard the cotter pin using needle-nose pliers.
- d. UCA is under tension, so pull down on control arm to loosen the nut (22mm) that retains the upper ball-joint to the spindle but do not remove it.
- e. Support spindle (using wires, bungee cords, zip ties, straps, etc.) to prevent it from falling forward and snapping the brake lines, etc. when it is separated from the UCA.
  1. Pitman Arm Puller Removal Method
    - a. Place prongs of Pitman Arm Puller (A) between spindle ball joint and upper control arm (B), with the Pitman Arm Puller bolt against the spindle ball joint bolt.
    - b. Tighten slowly until it pops.
  2. Hammer Removal Method
    - a. After the nut has been loosened, tap the front of the spindle (at the ball joint cup, where the blue mark indicates in the picture above) with a hammer, swinging from the FRONT of the vehicle rearward until the upper ball-joint pops free from the spindle.
- f. Remove the 22mm nut. Remember to have secured the spindle with something to keep it upright



## **6. REMOVE / REPLACE CONTROL ARM**

- a. Remove the 17mm bolt and nuts from the control arm bushing mounting locations
- b. Once bolts are removed, slide out complete control arm from vehicle body.
- c. Replace with NISMO control arm using removed OE bolts and nuts.
- d. Snug fit the 17mm bolts to attach control arm to vehicle. Do not overtighten.



## **7. REATTACH SPINDLE TO BALL JOINT**

- a. Will need to raise the lower control arm and/or push down on the upper control arm.

**NOTE:** Be careful when raising the lower control arm and go slow. The upper control arm bushings may be tight and this will cause some resistance when pushing down on the upper control arm. This is normal.

1. Once you are sure the ball-joint is properly seated into the spindle you can secure the assembly using the supplied NISMO ball-joint 22mm nut.
  - a. When installing the NISMO UCA, the supplied ball-joint bolt does not require cotter pin.
2. Torque the ball-joint nut to 58 FT-LB per Nissan Service Manual.

**NOTE:** Be careful not to over tighten this nut as thread damage can occur. If you strip these threads you may have to replace the entire UCA.

## **8. REINSTALL WHEEL / TIRE**

- a. Reinstall lug nuts to each wheel
- b. Lower vehicle to ground
- c. Remove jack stands from appropriate points
- d. Torque lug nuts (21mm) to recommended 98 FT-LB.

## **9. REPEAT PROCESS ON THE OTHER SIDE OF THE TRUCK**

## **10. TORQUE UCA BOLTS**

- a. Final torque on UCA bolts (96 FT-LB) should be done with all 4 tires on ground.

## **11. ALIGNMENT**

- a. Follow Nissan recommended alignment process for both front and rear of vehicle.

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- b. Install cam alignment bolts if needed and turn the cams so that the control arm is as far outward as possible

## **12. RETORQUE**

- a. After 1000 miles driven, Nissan service manual specifies to retorque all bolts, nuts, and hardware to prevent any torque tightness loss.

**NOTE:** Included ball joints and bushings are all serviceable Nissan parts using the following:

- 2004-current Titan ball joints
- 2005-current Frontier control arm bushings

**YOU HAVE NOW INSTALLED YOUR NISMO Off Road Forged UCA's!**



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