

FITTING INSTRUCTIONS

VEHICLE Toyota Landcruiser 300 Series
PRODUCT Upper Control Arm
PN# UCA4861T
NOTE Ensure vehicle has a wheel alignment immediately after installation.
 Failure to do so may result in poor drivability and/or uneven tyre wear.

IMPORTANT NOTE

The H/D Ball joints fitted to Blackhawk UCA's have been manufactured in the Hard-to-Hard style and require regular greasing
 PLEASE ENSURE YOU GREASE THE BALLJOINTS AT FITMENT & AT REGULAR SERVICE INTERVALS

PLEASE ENSURE HD BALL JOINTS ARE GREASED PRIOR TO FITMENT

Tools Required:

- Spanners & Sockets
 - 12mm x 1
 - 22mm x 2
 - 19mm x 1
- Pry Bar/ Lever
- Clip Removal Tool/ Flat Blade Screwdriver
- Aluminium drift

Hardware Supplied:

- Left Hand Upper Control Arm x1
- Right Hand Upper Control Arm x1
- M8x1.25 nut x2
- 3mm Shim x 2

1. As the ECU will need to be removed as part of the installation process of the LHS Upper Control Arm, position vehicle in a suitable location where it will not need to be moved.

2. Open the vehicle bonnet (*image 1*). **DISCONNECT BATTERY.**
 a. Unplug the Mass Air Flow sensor
 b. Loosen the 10mm bolt clamping the air box lid to the intake Piping
 c. unclip the airbox lid. Remove and set aside

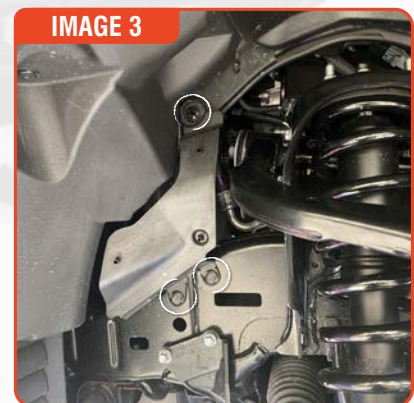
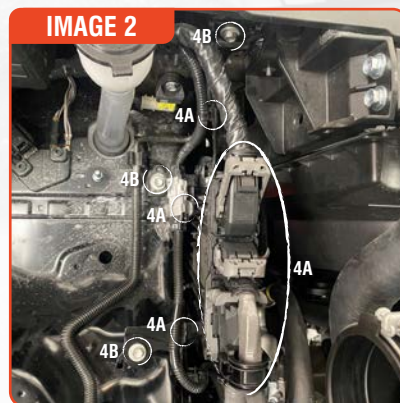
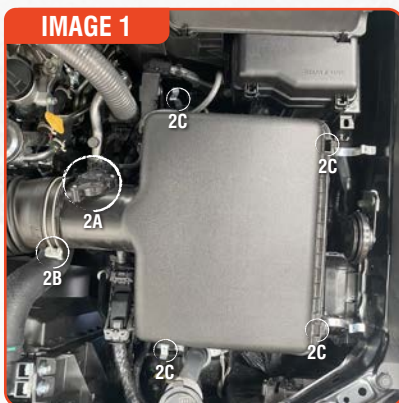
3. Carefully pull the lower airbox assembly upwards. Remove and set aside.

4. (*Image 2*)
 a. Disconnect the 3 large connectors on top of the ECU and the fir clips connecting the lower sensor wire to the ECU bracket.
 b. Remove the 3 x 10mm ECU bracket bolts. Remove ECU and set aside.

5. Lift vehicle using hoist or jack and support appropriately.

6. Remove wheels.

7. Unclip the 3 body clips from the front splash guard. Remove the splash guard and set aside. (*Image 3*)





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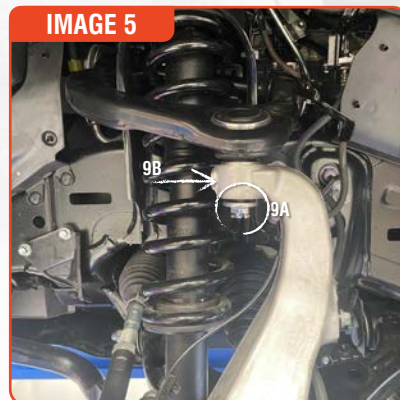
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- 8. (Image 4)**
- Undo 12mm bolt securing the ABS line bracket to the upper control arm.
 - To reduce risk of overextending the brake line when the steering knuckle is disconnected, undo the 12mm bolt securing the brake line to the steering knuckle.
- 9. (Image 5)**
- Remove the locking pin from the ball joint stud and loosen the 19mm nut securing the upper ball joint to the steering knuckle. Leave the nut on the last few threads and do not remove yet. FAILURE TO DO SO MAY DAMAGE THREAD.
 - Using an aluminium drift when striking to avoid damage to the knuckle, strike the steering knuckle using a large hammer or mallet to shock and release the ball joint taper.
- 10.** Using a pry bar or lever, apply downward force on the Upper Control Arm. Remove the 19mm nut and release the ball joint from the steering knuckle.
NOTE: Ensure not to let the knuckle overextend the brake line or drive shaft. Secure the knuckle in place as necessary.
- 11.** Remove and retain the 22mm head upper control arm bolt and remove the Upper Control Arm from the vehicle (**Image 6**).
- 12.** Grease new upper control arm ball joint on bench before fitting to vehicle if the ball stud does not accept grease, articulate and rotate the ball stud to allow grease passage through joint.





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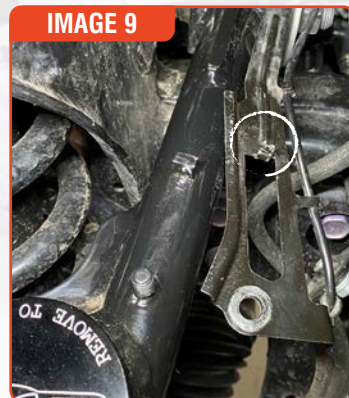
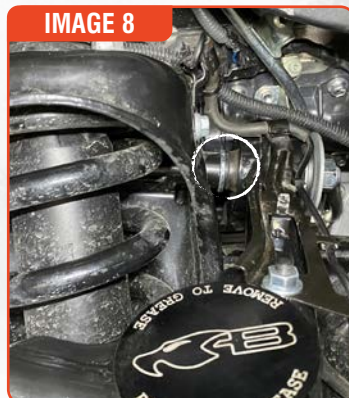
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- 13.** Blackhawk upper control arms are engineered to suit a wide range of vehicle suspension lifts whilst maintaining ideal castor. Depending on suspension height, the supplied 3mm shim is to be used as follows:
 - For vehicles with suspension lift of 25mm – 49mm, the shim is to be placed on the forward most mounting location. *(Image 7)*.
 - For vehicles with suspension lift 50mm – 75mm, the shim is to be placed on the rear most mounting location. *(Image 8)*.
- 14.** Fit Blackhawk Upper Control Arm to vehicle using the original bolt removed in step 13 ensuring the shim is used in the correct location. **Do not tighten the 22mm upper control arm bolt at this stage.**
- 15.** Connect ball joint to steering knuckle, fit new supplied 19mm flange nut and tighten.
- 16.** Reconnect the brake line bracket to the steering knuckle.
- 17.** Using pliers, bend the locating tab located on the ABS line bracket to allow it to sit flush on the new Upper Control Arm. *(Image 9)*.
- 18.** Reconnect the ABS bracket to the Blackhawk upper Control Arm via the 8mm stud and locator. This may require some light manipulation of the ABS bracket to ensure the ABS wire is not under any tension. Secure with supplied flange nut. *(Image 10)*.



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19. Repeat this process for the right-hand side.
20. Refit wheels and lower car to the ground. Jounce the vehicle several times to settle the suspension to ride height.
21. **NOW TIGHTEN THE UPPER CONTROL ARM BOLTS TO MANUFACTURERS SPECIFICATION**
22. Reinstall the ECU and air box.
23. **RECONNECT BATTERY**
24. Torque wheel nuts to manufacturers specification
25. Check wheel to rear of guard clearance on vehicles with large tyres.
26. Wheel align vehicle with camber as a priority. Vehicles with modified suspension will be able to achieve manufacturers wheel alignment specifications as a minimum when Blackhawk upper control arms are used between 30 mm - 70 mm of suspension lift. Modified suspension will be enhanced with enhanced alignment specifications, refer to your wheel alignment specialist to suit your vehicle.

