28T EXTREME ANGLE CV JOINT INSTALLATION GUIDELINES

PROFORMANCE
MOTORSPORT

AMAROK EXTREME CV JOINT INSTALLATION GUIDELINES

Many factors can alter the suspension geometry, CV joint Articulation angle and CV Joint Axle Plunge including:

- Lift Kits
- Aftermarket Shocks
- Non Standard Shock Lengths
- Non Standard Shock Ends/Mounts
- Extended Shock Absorber Shafts
- Shock Spacers
- Diff Drops
- Aftermarket Arms
- Diff Relocation Systems
- Arm Pivot Relocation Systems
- Aftermarket Ball Joints
- Any many more

In addition to the above factors, as motor vehicles are mass produced, chassis components are not always perfectly straight, and components are not always positioned exactly from year to year

Aftermarket components, Diff Drops, Camber Correction Kits, or Arms that allow the CAMBER to be altered in any way can negatively affect the position of the CV balls in the joint and prevent correct operation resulting in Premature Wear, Noisy Operation, and/or CV Joint Damage.

For the above reasons, it is critical that the plunge of the Extreme Angle CV joint and the position of the CV balls in the CV Tracks are checked BEFORE driving the vehicle.

AXLE REMOVAL

Remove the OEM Axle with CV joints attached

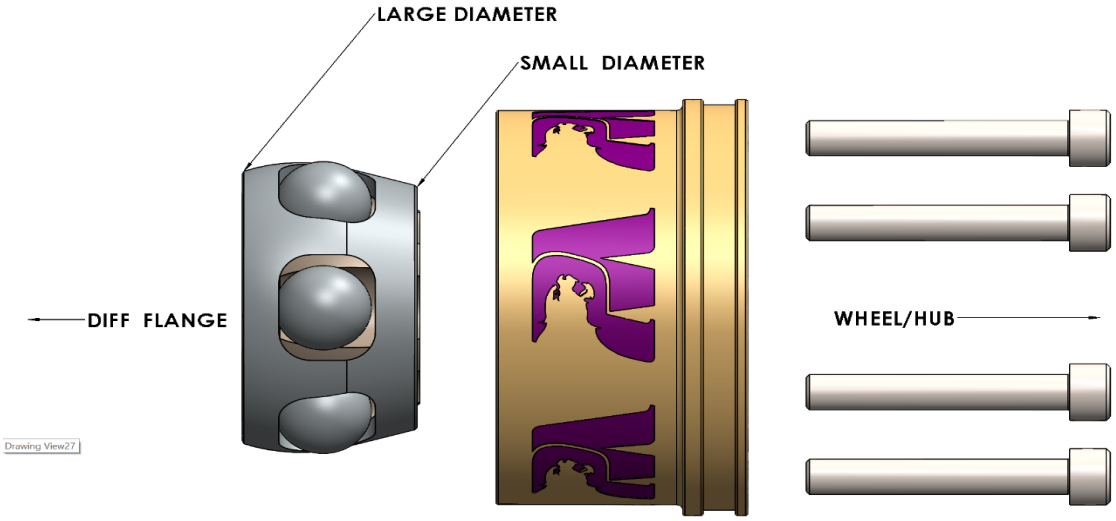
- Disconnect Upper Arm Ball Joint
- Lift and Support Upper Arm Joint
- Remove the Shock Absorber/Spring assembly
- Remove 6 x CV Joint Bolts at the Inner CV Joint
- Remove the Axle Retaining Bolt (At the hub)
- Remove the Axle Assembly with CV joints still attached

INNER CV JOINT REMOVAL

- Remove the Inner CV Joint End Cap (Steel Punch May Be Required)
    - **This will not be re used and can be discarded/disposed**
- Remove Axle Circlip and the OEM Inner CV joint
- Remove the Inner CV Joint Boot
- Clean the Axle spline
- **DISPOSE OF THE STEEL END CAPS**

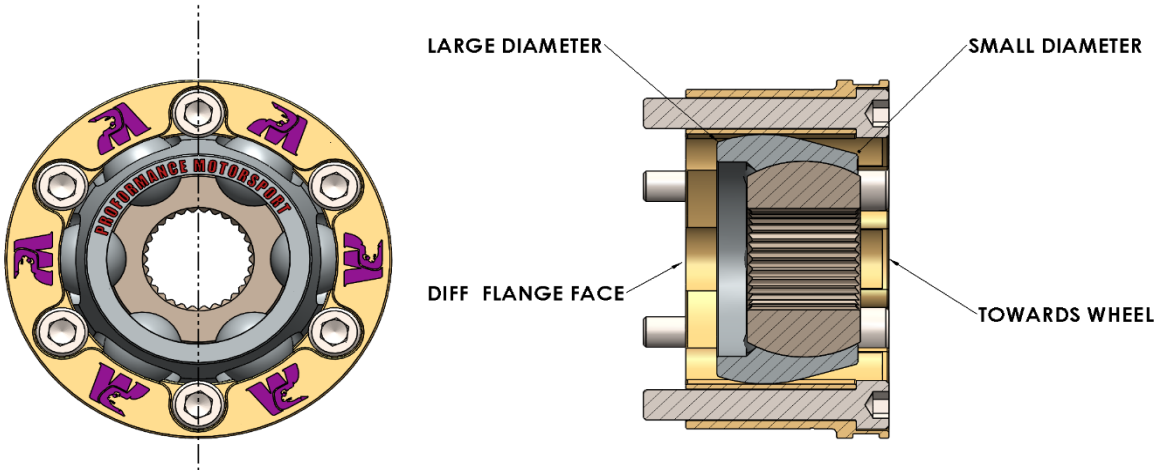
FITTING THE CV JOINT

- CV Joints are typically supplied assembled as MATCHED PAIRS in the correct orientation with a cable tie to retain the components during shipping
- **DO NOT MIX AND MATCH INTERNAL COMPONENTS**
    - **Interna Components are Matched by Hand for Maximum Performance**
- Install the CV Joint onto the axle as shown below (Starting Position)
    - Note the orientation of the Inner components:
- Install Axle Circlip
- **DO NOT APPLY GREASE**
- **DO NOT FIT THE BOOT**
- **DO NOT FIT THE STEEL END CAP (Dispose these items)**



ORIENTATION CONFIRMATION

- Ensure the new Extreme Angle CV Joint is fitted to the OEM Axle as shown below:
- The inner CV Cage must have the small end towards the wheel for initial plunge test
    - **DO NOT APPLY GREASE**
    - **DO NOT FIT THE BOOT**



CV BALL POSITION CHECK

- Install the 6 x CV Joint Bolts
- **DO NOT INSTALL THE AXLE BOLT into the end of the axle/wheel hub**
- Connect the Upper Arm Ball Joint – **DO NOT TIGHTEN**
- With the shock removed, ensure the CV Balls are operating in the Centre of the CV Tracks and not "binding up" when cycling the suspension and rotating the wheel at the following positions:
    - Full Droop (Simulate Extended Shock Length)
    - Axle Horizontal
    - Full Bump(Simulate Compressed Shock Length)
- *If the CV Balls are NOT sitting in the centre of the cv joint tracks at the above positions or if any part of the cv joint is striking the Diff Flange or the CV Balls are striking the CV Ball track end limit, please contact Proformance for advice.*

PLUNGE CHECK

- For each suspension position above, remove the upper control arm ball joint and Plunge the CV joint in and out (push and pull the wheel knuckle in and out) to cycle the CV joint throughout its plunge limit to ensure at least 10mm of plunge in each direction (beyond where the ball joint fits into the knuckle).
- *It may be necessary to remove the axle and "flip: the CV Joint Star/Cage 180 degrees on the axle spline to alter the position of the CV Balls in relation to the CV Tracks.*
- *If the Internal CV Components are NOT sitting in the optimal "Centre" position, with required plunge clearance and/or any components is striking the diff flange or the CV track stops, severe damage to the CV joint may occur if the vehicle is driven without rectification.*

FINAL INSTALLATION

After the plunge inspection has been completed:

- Remove the axle
- Remove the CV Joint
- Fit the boot to the axle
- Apply Grease to the CV joint ***(Min 100 gms PER Joint)***
    - ***NOTE:***
        - ***The Internal components of the CV joint must be removed from the outer body BEFORE packing the joint with grease.***
        - ***Failure to do so may result in premature joint wear and void warranty***
        - ***Pack the joint completely with grease, using your hands to push the grease fully onto the joint and articulate the CV joint while applying grease.***
- Fit the CV joint to the axle
- Fit the circlip
- Apply any remaining grease to the inner and outer faces of the CV joint
- Fit Boot Clamps, Reinstall Axle, Upper Arm and Shock Absorber/Spring Assembly

---

Proformance Motorsport

1405 Stoneville Road Mundaring

Western Australia 6073

www.proformance.com.au

info@proformance.com.au

+61 431 624 783

PROFORMANCE MOTORSPORT