

Installing AVID X12 Titanium Kingpins

Tools Needed:

4mm drill and tap
2mm Allen wrench
Needle nose pliers
Dremel Tool
Sanding Drum for Dremel

XRAY Parts Needed:

QTY 1 - XRA372221 – Composite Steering Block Left
QTY 1 - XRA372211 – Composite Steering Block Right
QTY 2 - XRA372662 – Composite Ball-Joint 4.2mm



Step 1 – Drilling out steering block:

It is recommended to start with brand new XRAY steering blocks. Drill/Ream Steering blocks by hand with the supplied 4mm Tap drill bit. Do this to both steering blocks (Left and Right)



Step 1

Step 2 – Tapping steering block with M4 Thread:

Slowly start to tap the steering block with the 4mm tap from the top, making sure the thread goes in straight. **DO NOT fully tap through the steering block and this will cause the kingpin to fit loosely into the steering block.** Only tap the steering block until you can see the tip of the tap come out the bottom of the steering block. (See Figure 2).



Step 2

Step 3 – Prepping front axles:

Using the standard XRAY front axles (XRA375220). Dremel away material from axle behind the key in the axle for the steering block. This is needed because of close fitment between the AVID X12 Kingpin thread and the axle.



Step 3

Step 4 – Installing Axle

Install axle into steering block. Do this first so that it will be easier to thread the Kingpin into the block.

NOTE: ORIENTATION OF THE NOTCH ON THE AXLE. NOTCH GOES TOWARDS THE KINGPIN HOLE ON THE STEERING BLOCK.



Step 4

Step 5 – Installing AVID X12 Kingpin

Install supplied AVID 0.5mm shim onto kingpin before threading into steering block. This will give you similar geometry as factory XRAY Suspension. Using a 2mm Allen Wrench, carefully thread kingpin into suspension block from the top. It should thread easy at the beginning but should start to bite into the plastic about halfway through the steering block. Fully tighten the kingpin into the steering block.



Step 5

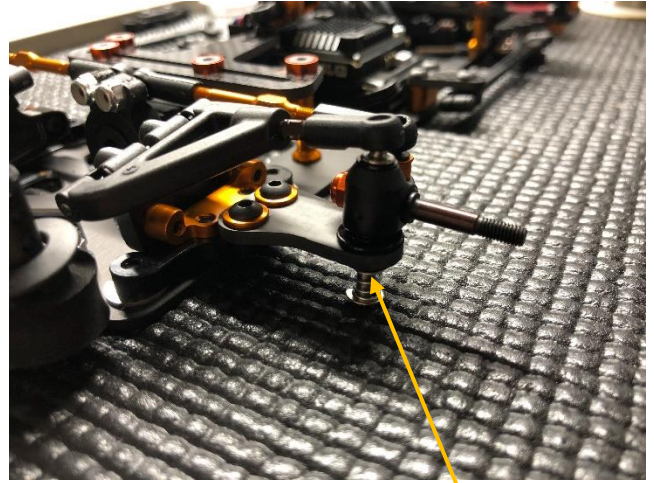
Step 6 – Installing Ball Cup and Steering Block

Remove the upper eyelet (XRA372150) from the turnbuckle and thread on 4.2mm ball-cup (XRA372662).

Install steering block and kingpin assembly into lower pivot ball on lower A-arm. Press 4.2mm ball-cup onto kingpin ball end.

Front droop is adjusted with standard kingpin shims in-between lower arm ball and spring. To start, put (XRA372290) 0.5mm shim on before you put spring on. Then snap the included E-clip into the E-Clip groove

Check camber before running car.



Step 6

Droop is adjusted **here** with shims

