



## Steering Knuckle Bolt Repair Tool

022770SCH01A



- Complete steering knuckle pinch-bolt removal kit.
- Specifically designed to drill out a broken upper pinch bolt on VAG vehicles equipped with a 4-link front suspension.
- Requires the use of a power drill and a hammer.
- Integrated design clamps the knuckle and aligns the drill bit square to the bolt.

## Introduction:

This Steering Knuckle Bolt Repair Kit has been designed to assist in the removal of a broken steering knuckle pinch bolt with only a drill and a hammer. There are several steps required in this procedure, be sure to familiarize yourself with the kit contents below before continuing.

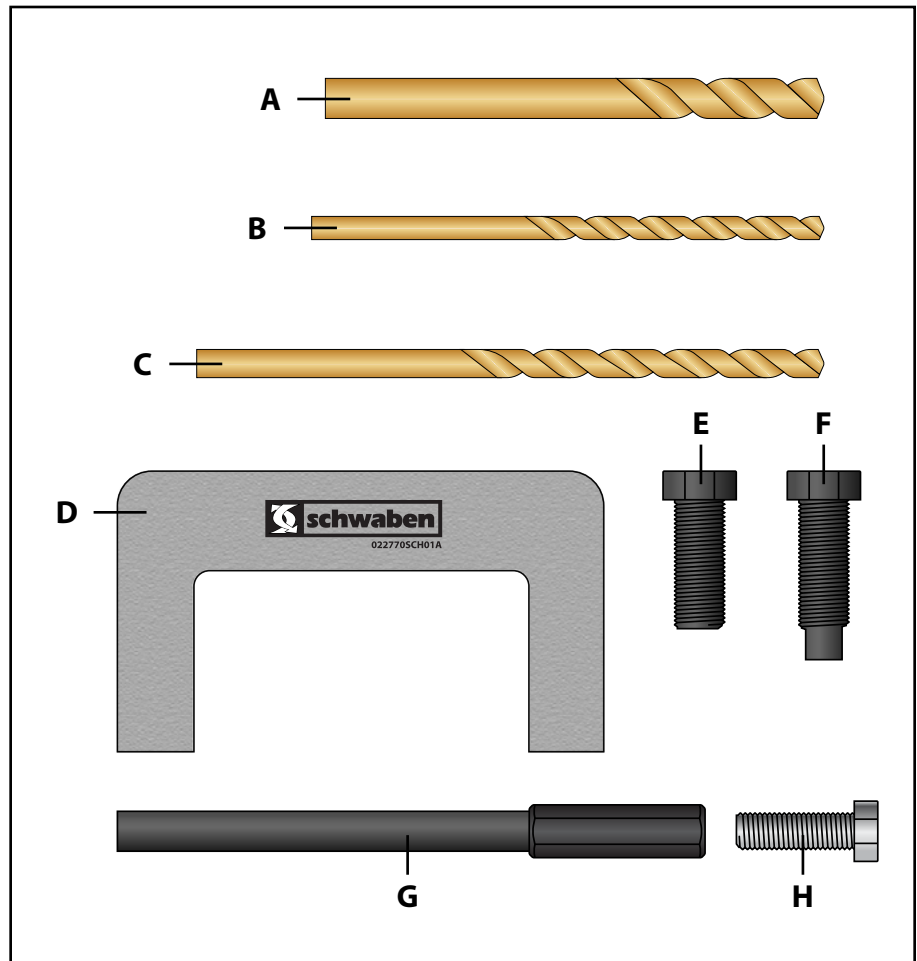
## Kit Contents:

Ref.	Part
<b>A</b>	10mm Drill Bit
<b>B</b>	6mm Drill Bit
<b>C</b>	8mm Drill Bit
<b>D</b>	Clamp
<b>E</b>	8mm Drill Bit Guide
<b>F</b>	6mm Drill Bit Guide
<b>G</b>	10mm Punch
<b>H</b>	M10x1.5x35mm Bolt

Replacement 6mm Drill Bit: [ES3187973](#)

Replacement 8mm Drill Bit: [ES3187972](#)

Replacement 10mm Drill Bit: [ES3187971](#)



\*The tools in the illustration above are organized exactly as they appear inside the blow molded tool case.

## Warnings:

Please read all of these instructions and familiarize yourself with the complete procedure before you begin.

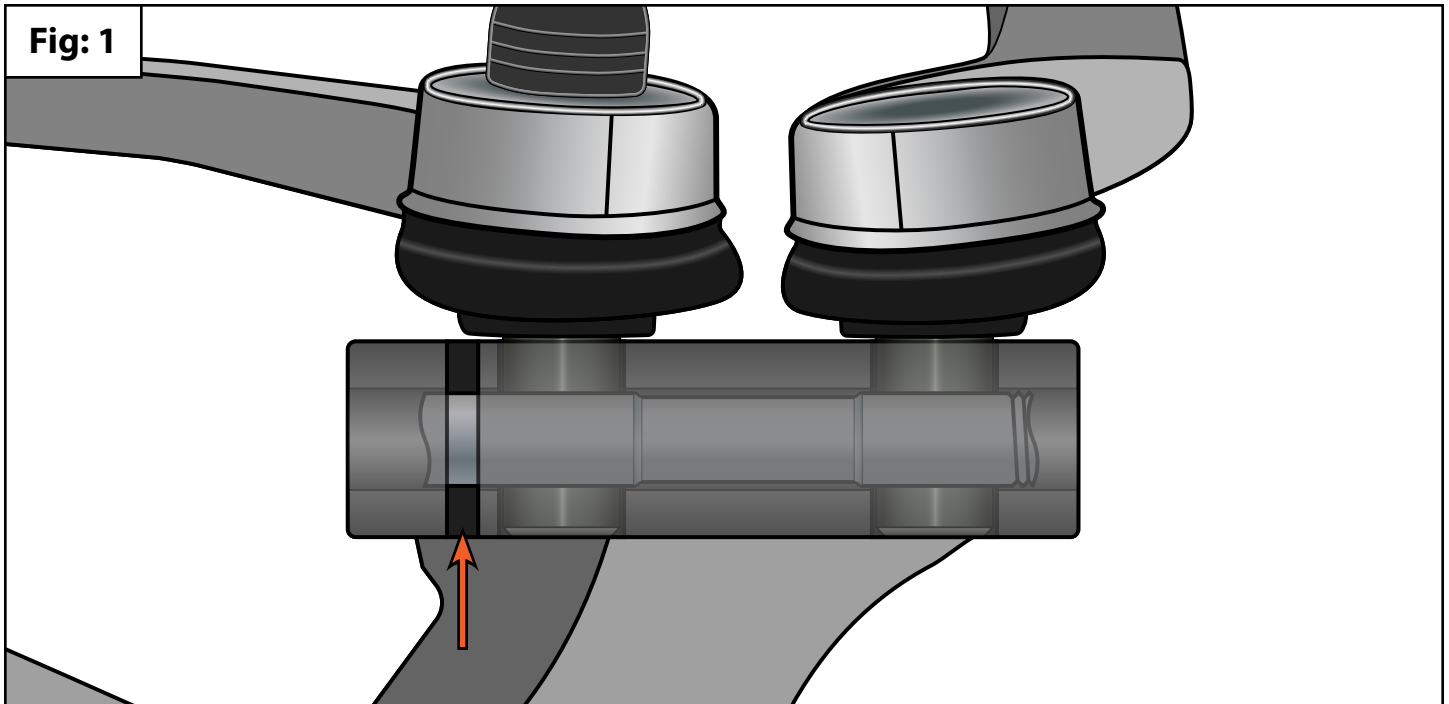
Perform this repair in a safe, well lit, level area.

Always wear safety glasses.

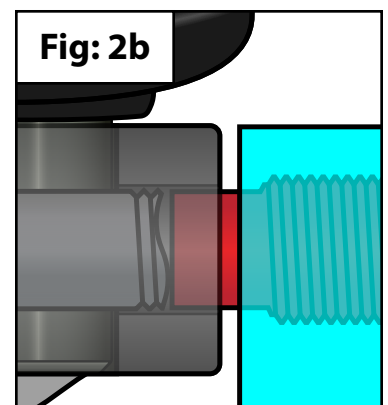
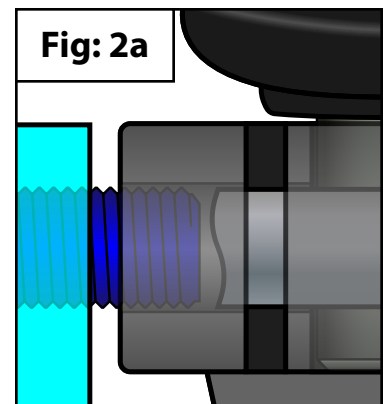
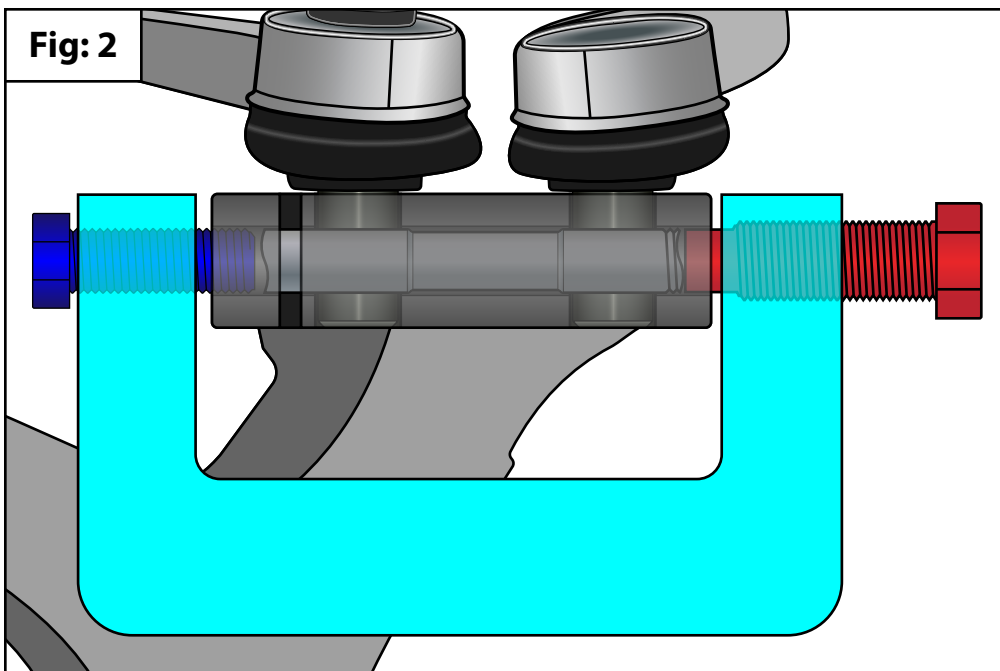
Always read and follow all safety information and warnings for the equipment you are using.

Please make sure to store this set of instructions in a safe location.

# Instructions:

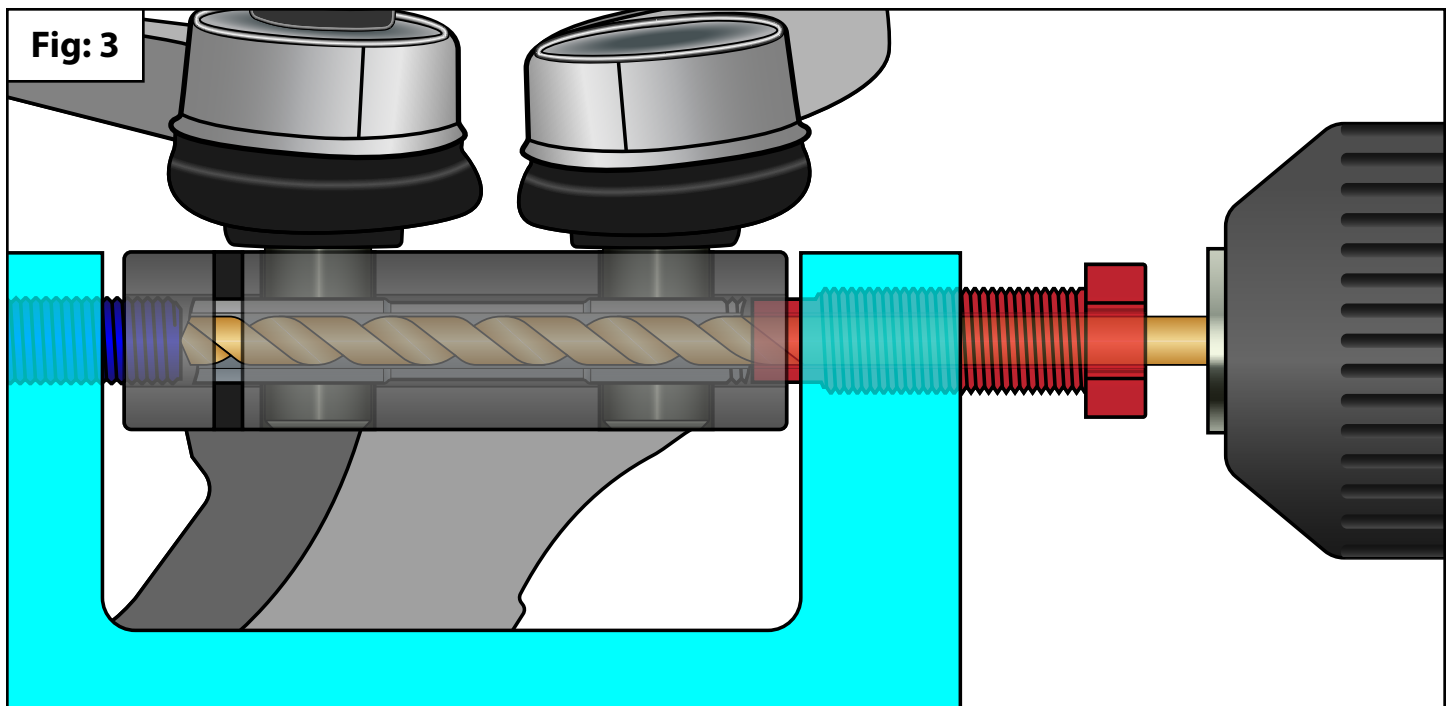


If necessary, rotate the steering wheel in order to access the pinch bolt. This tool is designed to remove pinch bolts which have broken. If yours is not broken you will need to cut the bolt shank through the slot in the knuckle (one slot is pointed out with an arrow in **Fig: 1**, the other side is not visible in the illustration). Doing this will create a recess inside the knuckle on both ends of the bolt bore, this tool kit will utilize these recesses in order to keep everything perfectly straight and true.



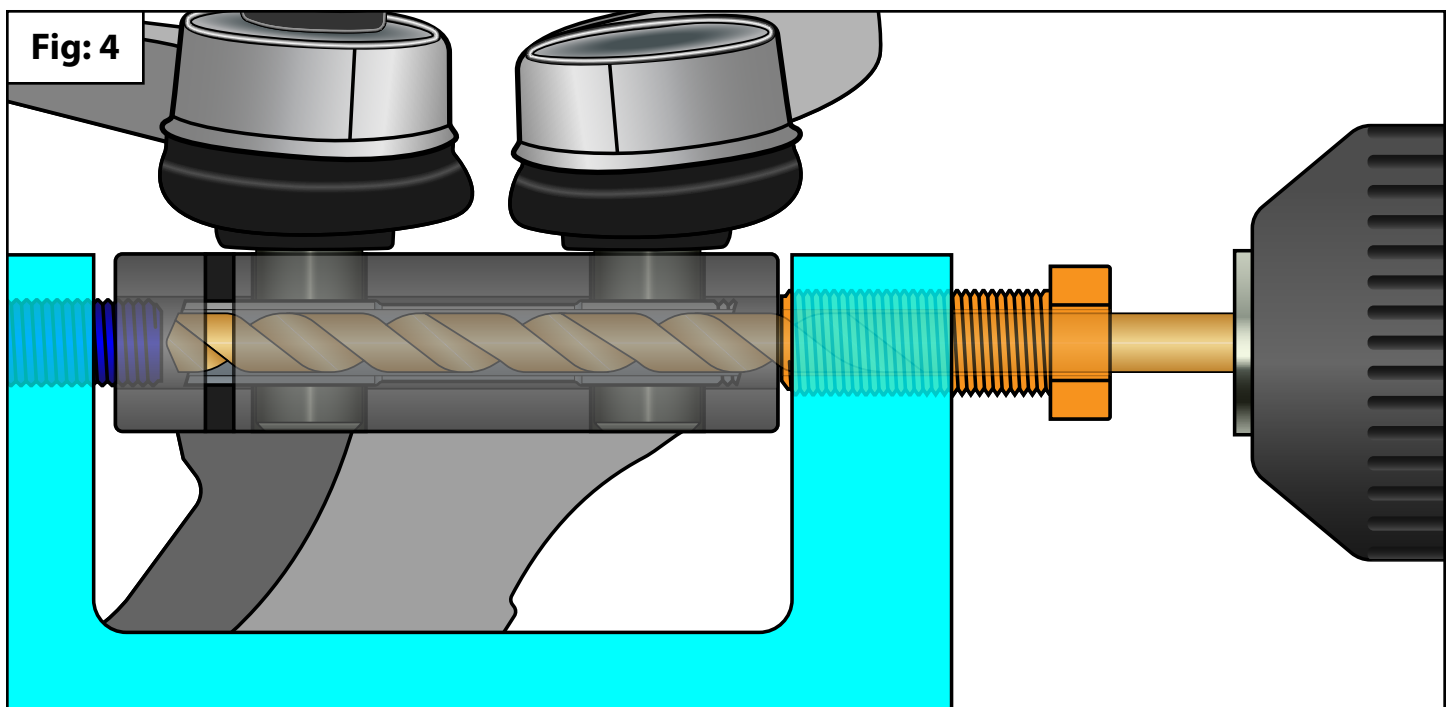
Place the **Clamp** over the knuckle as shown in **Fig: 2**, making sure that the **M10x1.5x35mm Bolt** is piloted into one side of the bolt bore as shown in **Fig: 2a**, and the nose of the **6mm Drill Bit Guide** is piloted into the other side of the bolt bore as shown in **Fig: 2b**. Both of these components **MUST** be inserted into the bolt bore in order to drill straight through the broken pinch bolt.

## Instructions:



Place the 6mm Drill Bit into a power drill, then slide the bit through the **6mm Drill Bit Guide** and drill a hole all the way through the broken pinch bolt (**Fig: 3**).

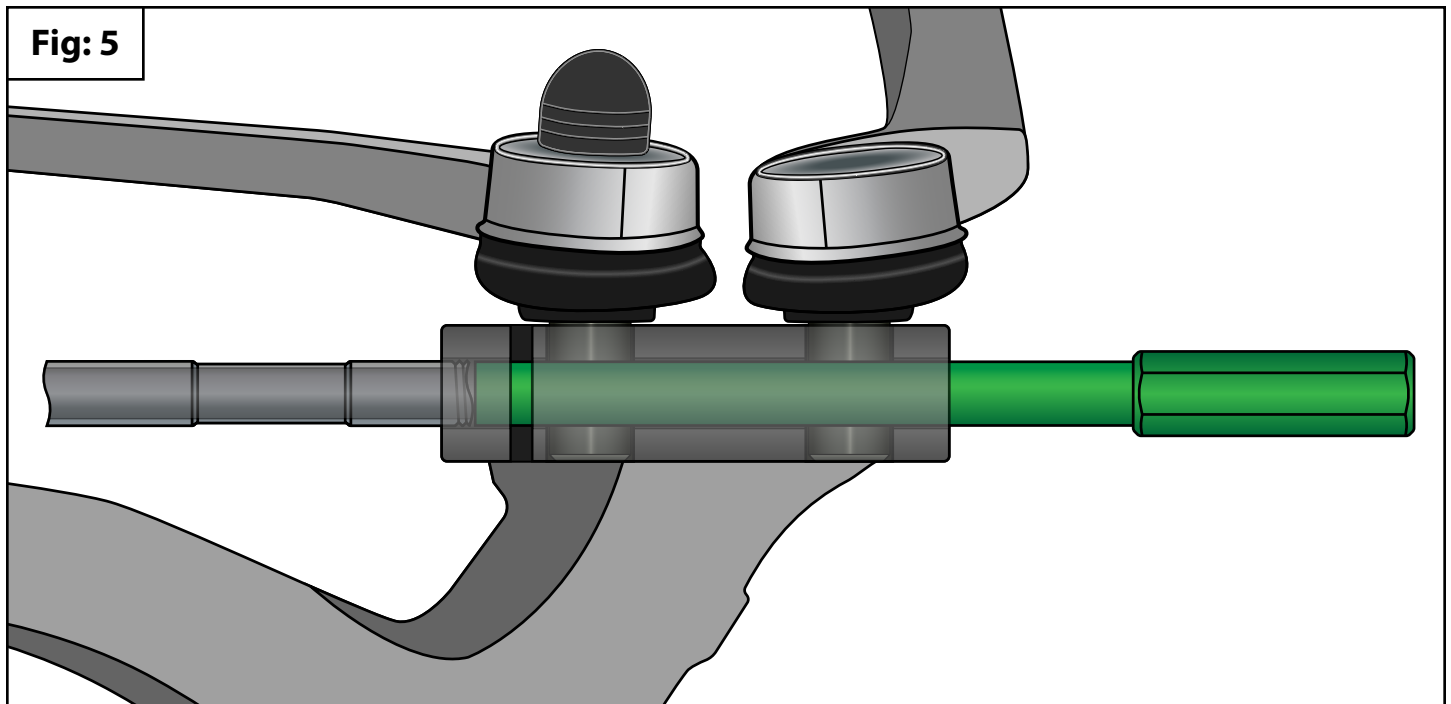
**TECH TIP:** Try applying a small amount of cutting oil while drilling. Don't put excess pressure onto the drill bit.



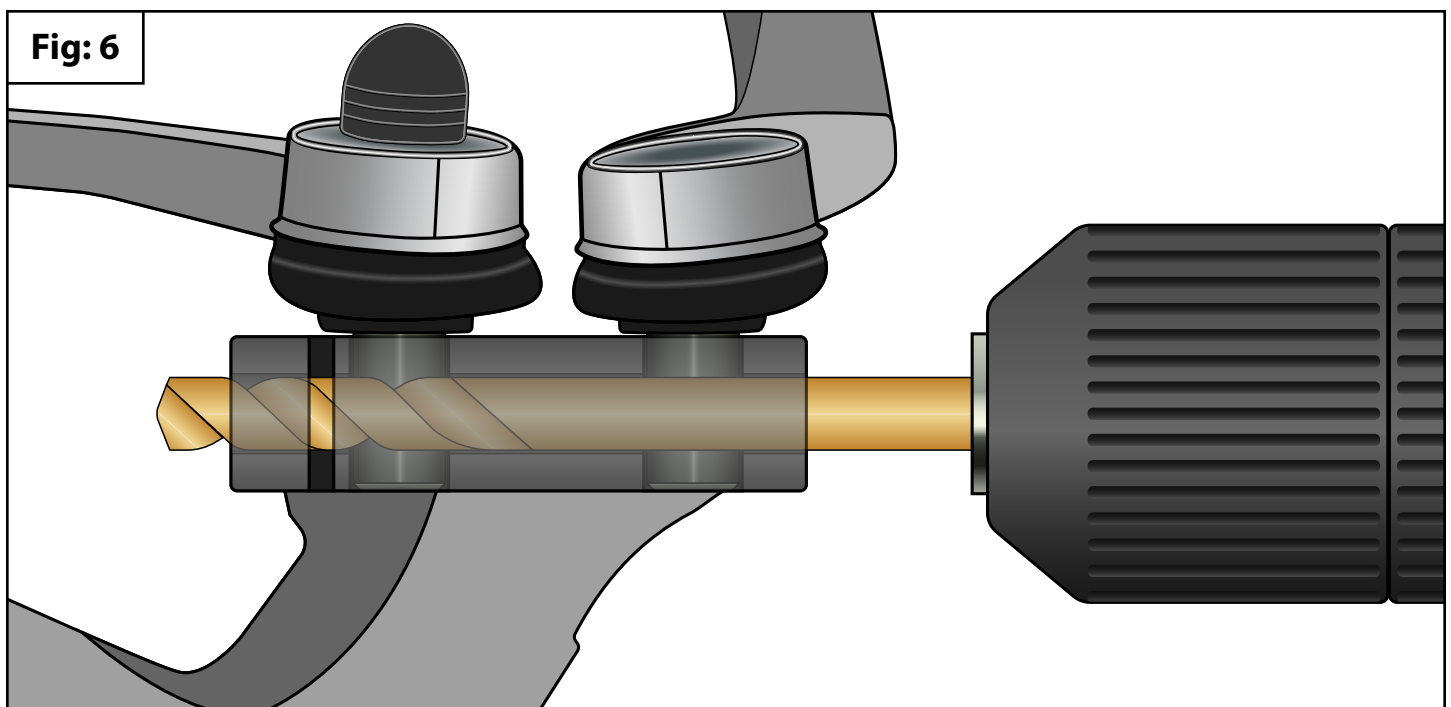
Remove the **6mm Drill Bit Guide** from the **Clamp** and replace it with the **8mm Drill Bit Guide**. Slide the 8mm Drill Bit through the **8mm Drill Bit Guide** and drill a hole all the way through the broken pinch bolt (**Fig: 4**).

**NOTE:** The **8mm Drill Bit Guide** does not thread into the knuckle, it simply makes contact with it.

## Instructions:



Loosen the **M10x1.5x35mm Bolt** and the **8mm Drill Bit Guide** from the **Clamp**, and remove all three from the knuckle. Use the **10mm Punch** and a hammer to remove the hollowed out pinch bolt (**Fig: 5**).



Use the 10mm Drill Bit to clean up any leftover burrs, corrosion, or debris from the bolt bore in the knuckle (**Fig: 6**). Pull the control arms out of the knuckle, remove any rust or corrosion from the knuckle and ball joints. Replace the pinch bolt and lock nut, coat the shank of the bolt with anti seize (not the threads), then torque them to specification.

***Repair is complete!***