SR20DET Cam Sync Install Guide
Part #200033

WARNING! Please read the whole guide before installing this part.

Legals:

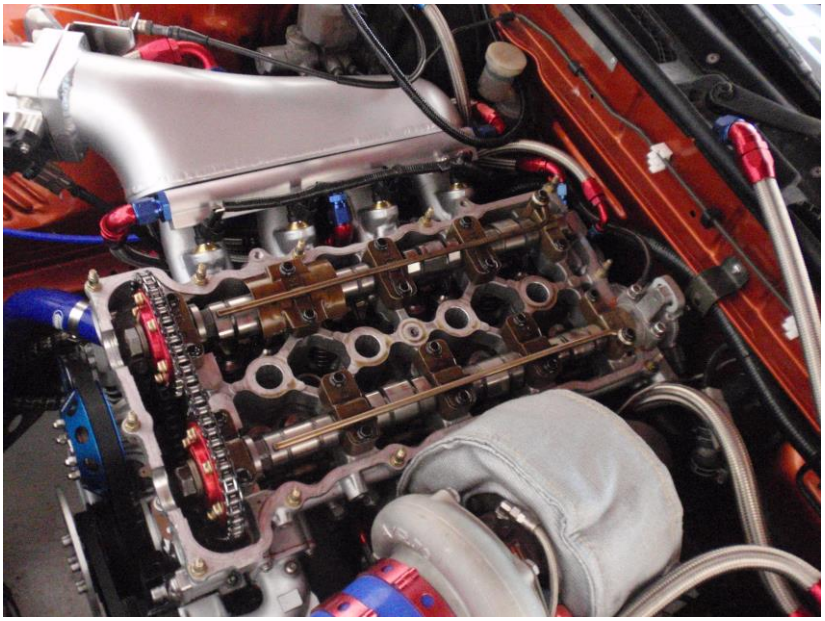
TAARKS SR20ve cam sync kit has been designed and is intended for off-road use only. The installation of this part on a vehicle intended for use on public roads may violate laws and regulations in your country/state. Additionally, this part is sold with a LIMITED warranty that only covers defects in manufacturing. This warranty does not cover any damage incurred by using this part. The installation of this part may also void any vehicle warranties. Refer to a performance specialist for proper installation.

After opening the packaging please check to see if any parts are missing or damaged. If something is missing or damaged please contact us immediately. Do not install the product.

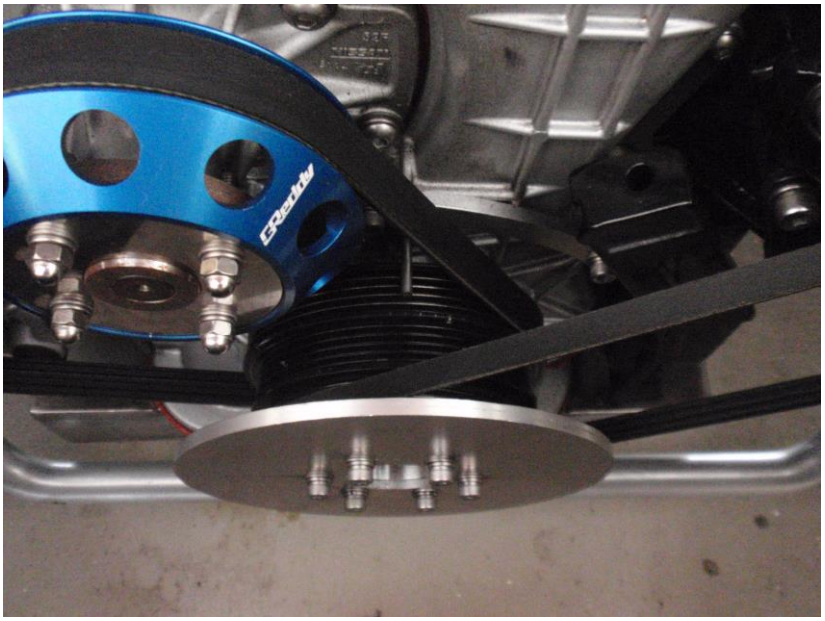
Do not modify this part in any way. Modifying the part may result in failure of the part and voids all possible warranties.

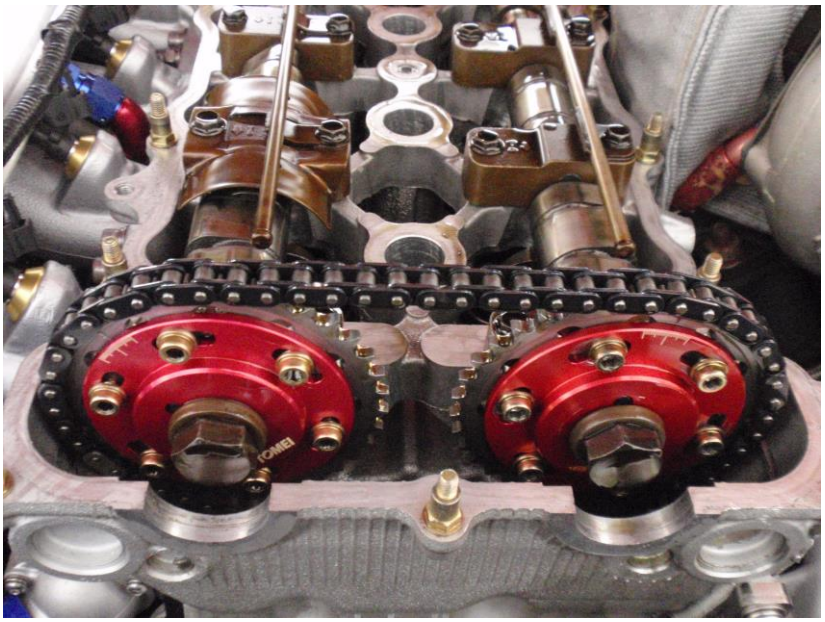
Installation Guide

Remove the rocker cover and everything attached to the rocker cover.

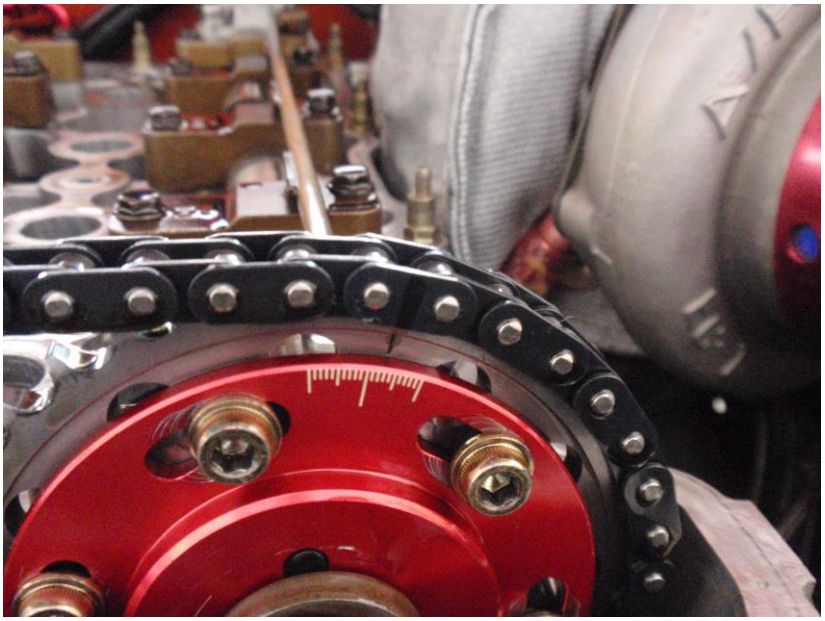


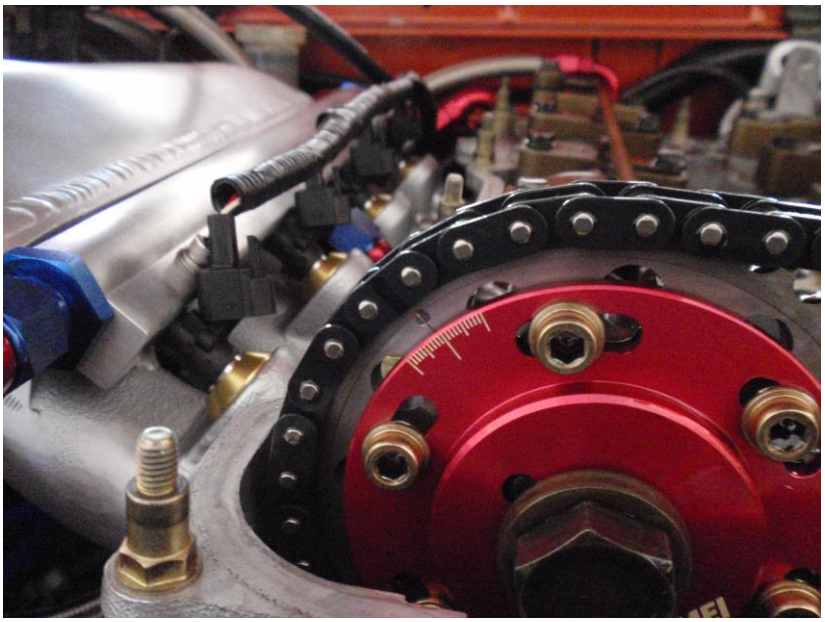
Set the motor to TDC on cylinder one. The lobes on the camshafts for cylinder one will face away from each other.



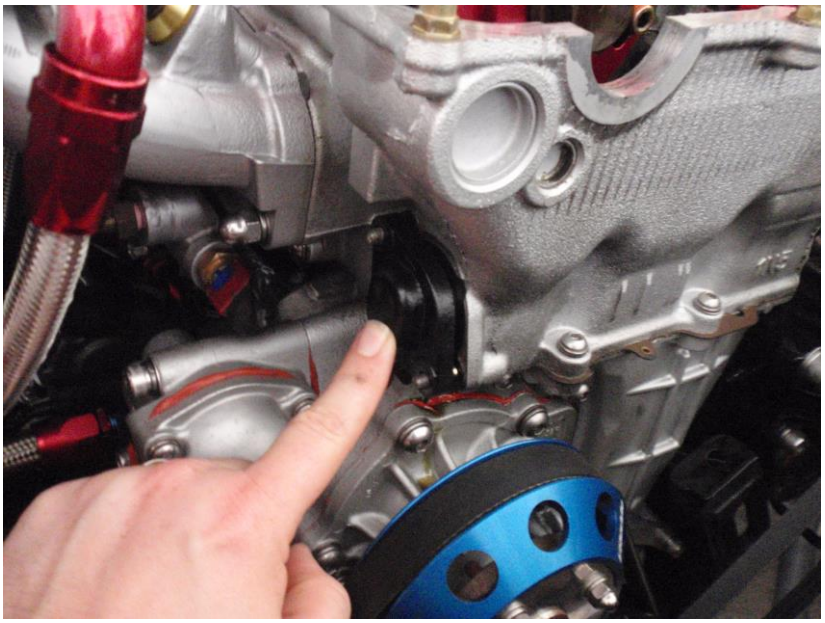


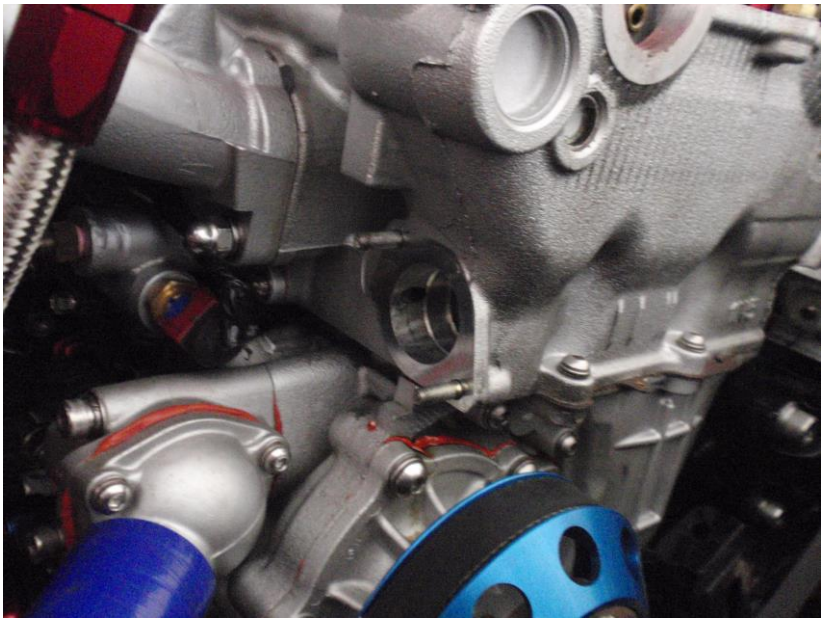
Mark the timing chain with a marker at the timing marks on the cams gears.



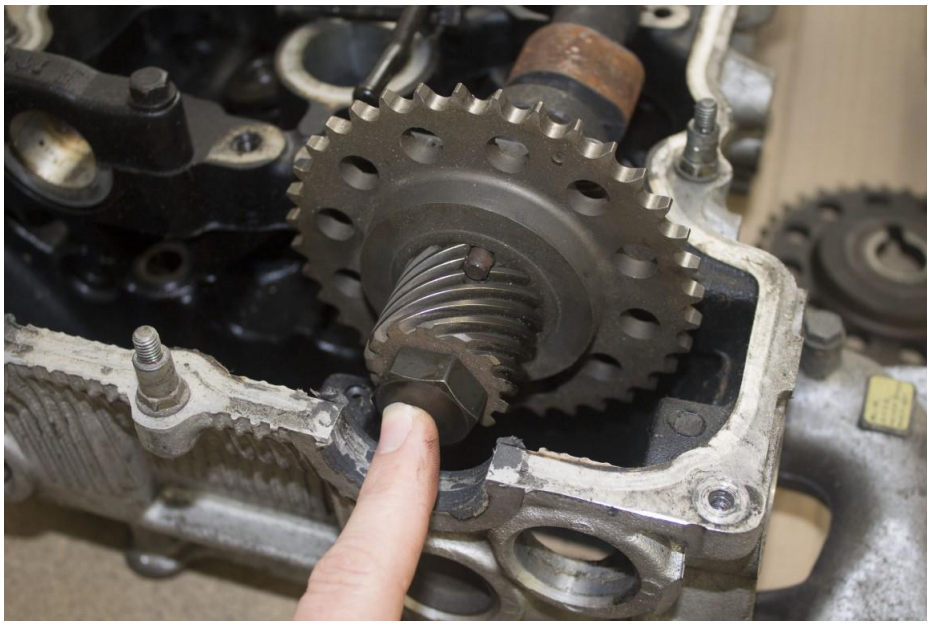


Remove the timing chain tensioner.





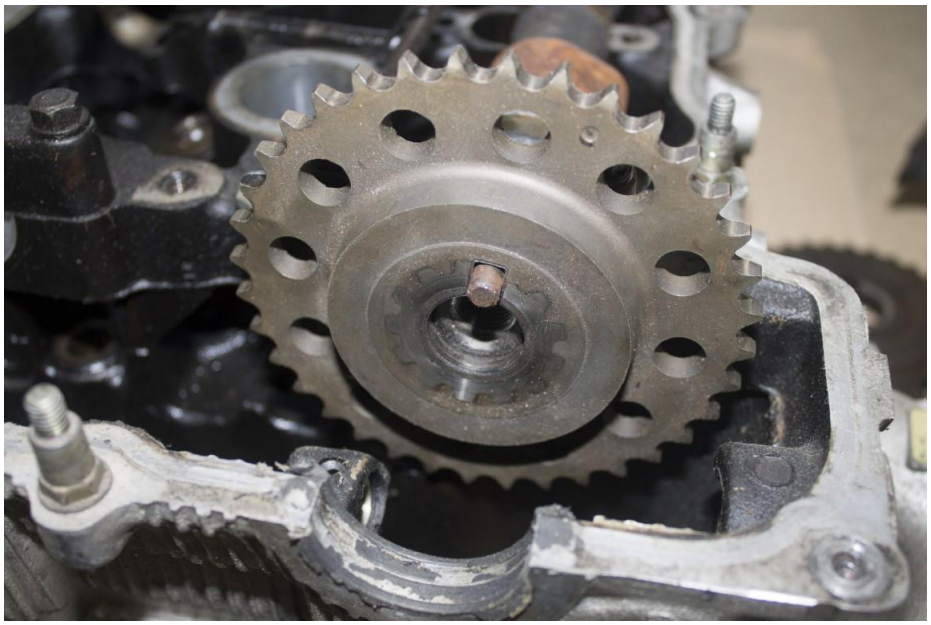
Remove the 24mm bolt from the front of the exhaust camshaft.



Remove the cam gear from the cam shaft, remember to support the chain and do not let it drop.

Remove the worm gear from the cam shaft, this is best done in a press.

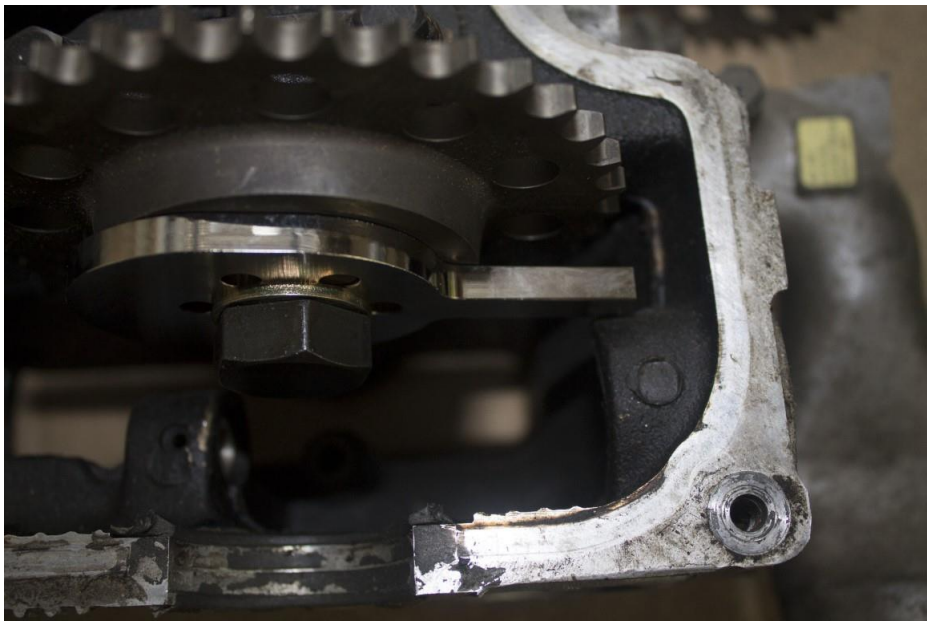
Re-install the cam gear and chain onto the camshaft, make the sure the mark you made earlier on the chain matches the mark on the gear. (Please note that all pictures from here on do not have a chain shown).



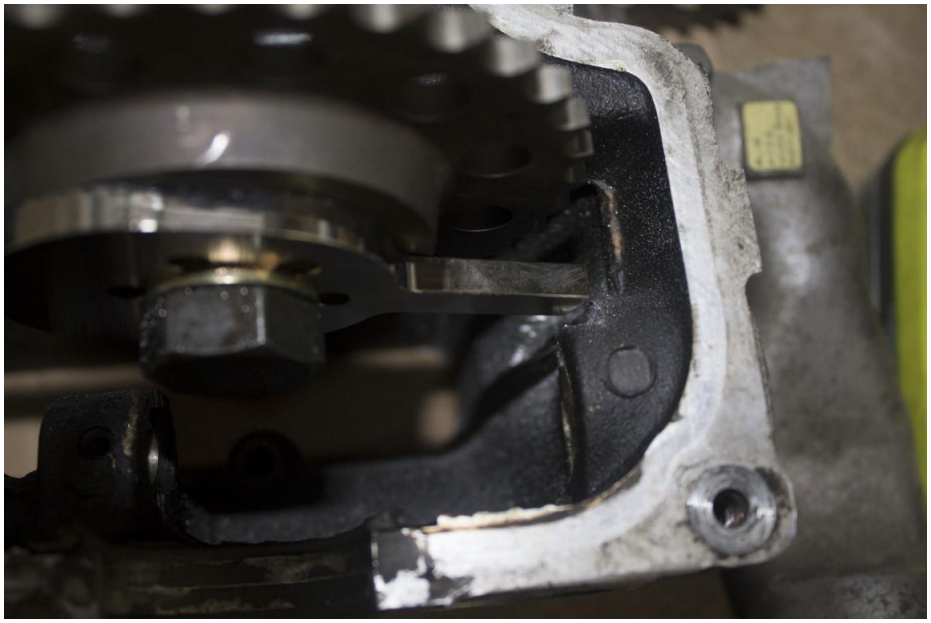
Install the cam sync finger onto the camshaft dowel. Any of the 6 holes can be used. Consult your ECU manufacturer to select the best location for the cam sync to occur in relation to TDC.

Use the supplied M14 bolt and washer and tighten to spec.

Gently rotate the motor and check for clearance near the old CAS hole, some SR’s require a small amount of aluminium casting to be removed. If your head requires this modification you can take this opportunity to mark the casting for removal.

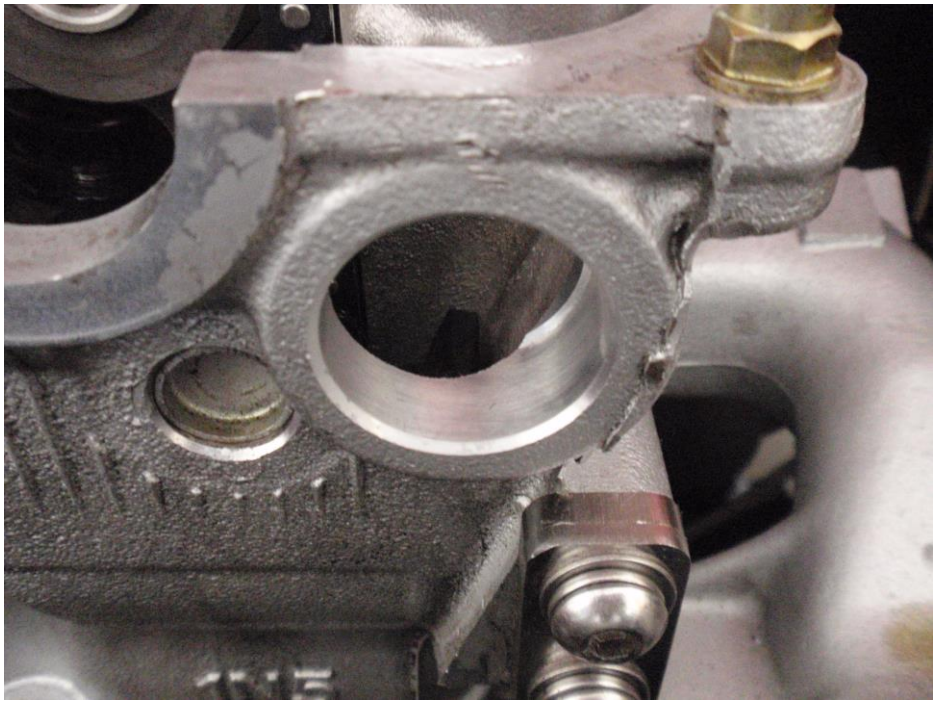


Material removed to create clearance:



Remove the welsch plug at the front of the head, this can be done by gently taping the plug from behind.

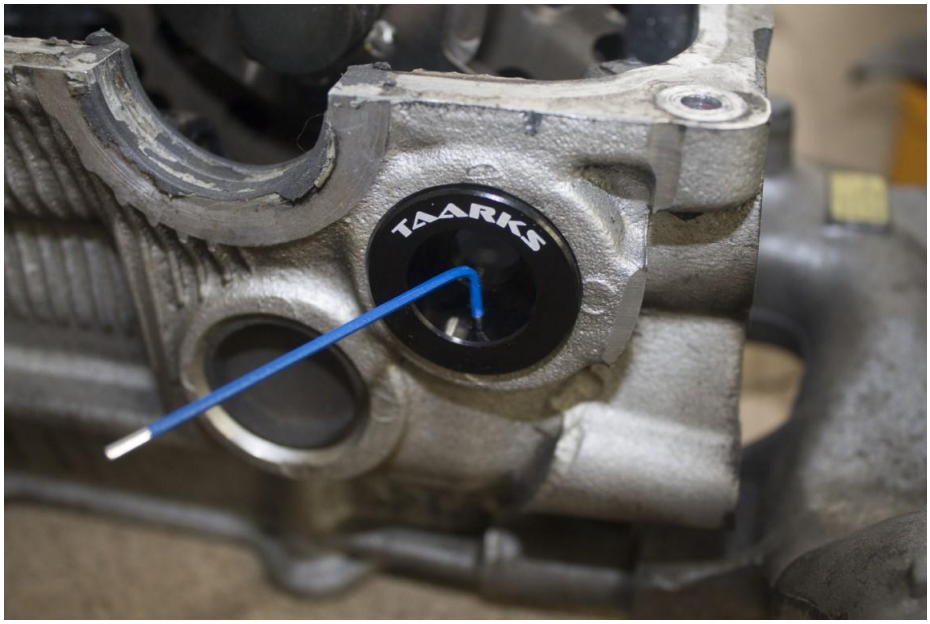
Clean the hole with some fine sandpaper or scotchbrite.



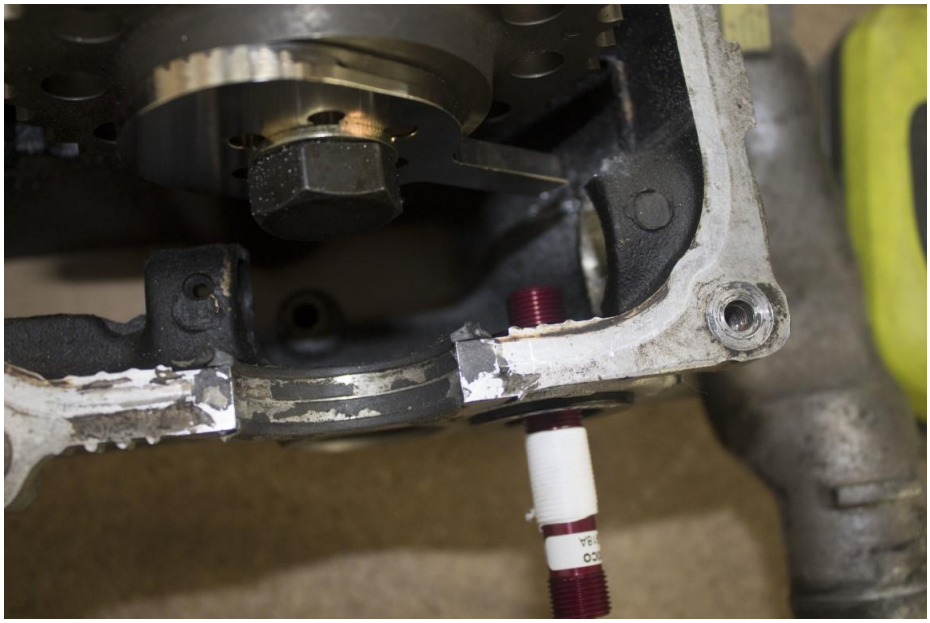
Install the supplied M3 grub screw into the hall sensor holder, this can be tricky and a tip is to install it backwards from the bottom.

Once you have wound it in as far as you can by hand, use a 1.5mm allen key to continue winding the grub screw in until it is below the surface of the holder.

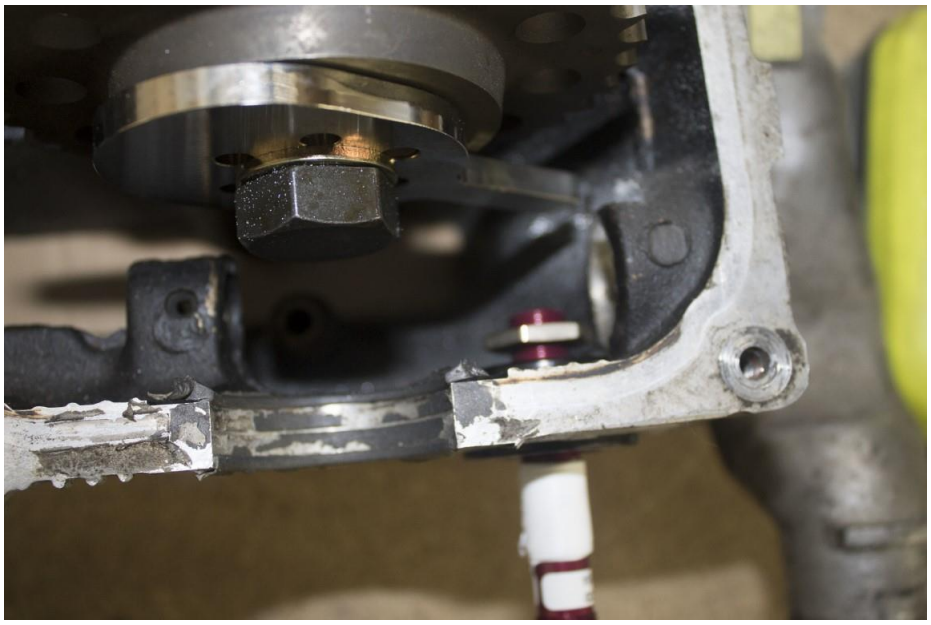
Install the supplied large o-ring onto the holder and then install the holder into the welsch plug hole and use the same 1.5mm allen key to tighten the grub screw securing the holder in place. A small amount of oil on the o-ring will help the holder slide in.



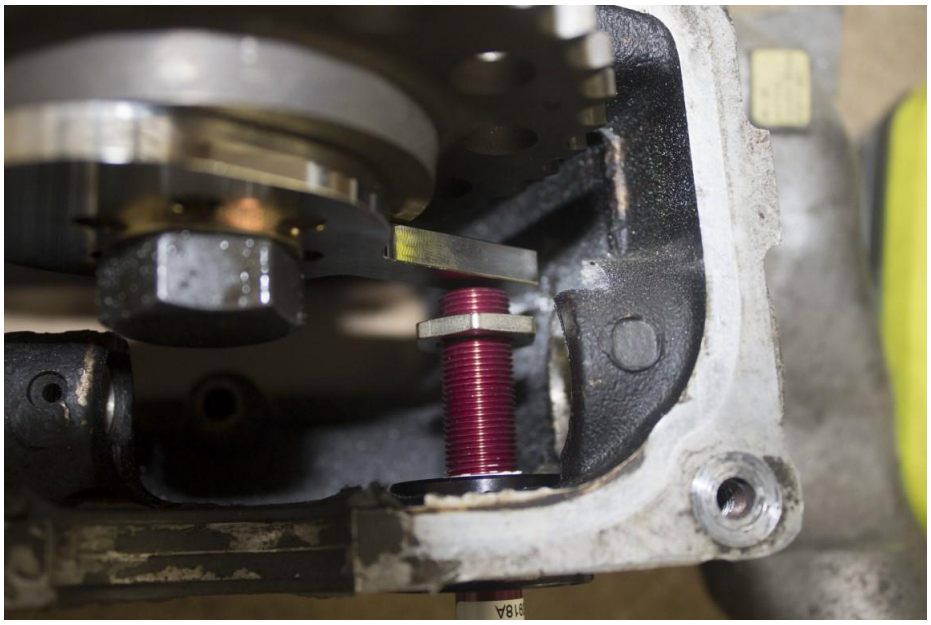
Apply 3-4 turns of thread tape around the sensors thread right after the gap in the thread. Start winding the sensor into the holder so around 10mm is protruding into the head.



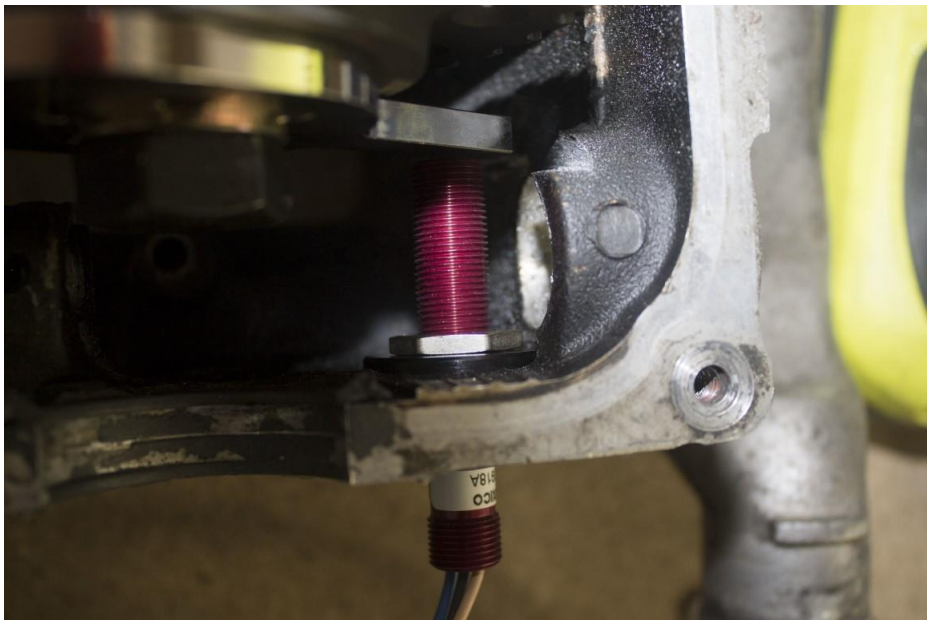
Wind one of the securing nuts supplied with the sensor onto the end of the sensor. Place some rags below the cam gear just in case the nut is dropped during install.



Rotate the engine so the sync finger is in front of the sensor. Continue winding the sensor in by hand until the tip of the sensor is 1 – 1.5mm away from the sync finger, use feeler gauges to confirm the air gap.



Wind the locking nut back up against the hall sensor holder and tighten, using the feeler gauges confirm the air gap once more. A few drops of the high temp Loctite in front of the locking nut will prevent it coming loose.



Install the 2 small o-rings onto the cas block off plug and install the plug onto the bracket using the supplied M8 screws.

Apply a small amount of oil to the o-rings and install, use the remaining 2 M8 screws to mount the bracket.

Sensor wiring:
Brown: 12v+ Filtered from ECU
Blue: GND
Black: Signal Output

Note: These sensors require the ECU pull up resistor to be turned on.

And that's it… You're all done. Enjoy & and thank you for supporting TAARKS.