

Note – High Oil flow

This filter system has been designed for filters with a 1"-12 UNF thread in order to maximise the oil flow without restriction to the lubrication system.

This system should not be compared with systems, which use spin on filters with smaller threads. These smaller thread filters will restrict some of the oil flow. This will have an adverse effect in the long term of excessive wear and contamination within the engine.

Preparation

Ensure that the area around the original Oil Filter Housing is clean.

Drain the engine oil.

Remove the original 2BA Nut & Washer, Locking Washer, Domed Nut, Filter Can, Filter and Rectangular Seal.

Clean Installation Area

Before fitting the new Assembly, clean the installation area, the groove for the Rectangular Seal and ensure that the 1/2"-20 thread in the Domed Nut (Item 4) is clean and not damaged.

Install a new Rectangular Ring Seal (item 8).

Fit a new Rectangular Seal (item 8) into position in the Filter Head, making sure that it is correctly seated in a clean groove. **Do not use the old seal.**

Install O-Rings (Items 9 & 11) onto the Thread Adaptor (Item 10)

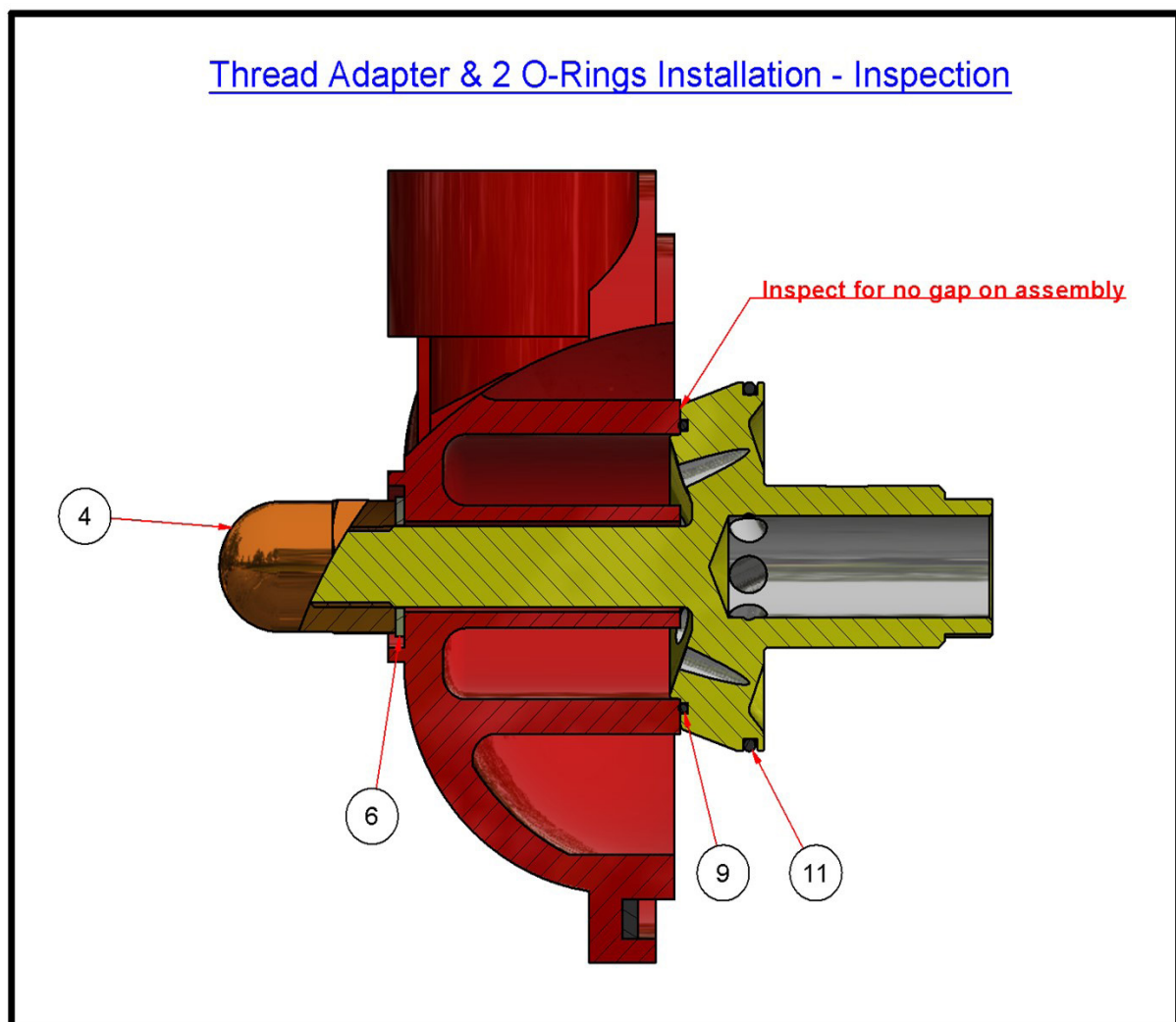
Install the O-Ring (Item 9) to sit in the inner, face groove of the Thread Adaptor and O Ring (Item 11) in the outer, radial groove. See below for a view of these O Rings as installed.

Install the Thread Adaptor (Item 10)

Apply Loctite 243 or Bondloc B243 thread locker to the small thread of the Thread Adaptor, as indicated in the picture above.

Install the Thread Adaptor into the original Filter Head (item 7) until it sits flush and firm against the filter head.

With this assembly held in position, as above, install the Aluminium Washer (item 6) onto the 1/2" thread of the Thread Adaptor and screw the Domed Nut (item 4) onto the same thread until it is finger tight. Check that that there are no gaps between the Thread Adaptor and the Filter Head. These faces must make a full contact – see the picture of the 'Thread Adaptor & 2 O-Rings Installation – Inspection' below.



If this operation cannot be implemented by hand without the use of a spanner or socket, it is possible that there is damage to the 1/2"-20 UNF thread within the Domed Nut. Remove all components and inspect. This thread must be in good condition to accept the high torque load applied during installation. **If there is damage, do not fit this adaptor.** Rectify any damage to the 1/2"-20 UNF thread in the Domed Nut or replace this component. Domed Nut part number is A42994.

Use a calibrated Torque Spanner with a 21mm AF or 13/16" AF Socket Spanner onto the hexagon of the Domed Nut (item 4). Use a 21mm spanner to hold the thread adapter (item 10) and prevent it turning.

Apply a maximum torque of 50Nm to the Domed Nut.

Exceeding this torque value may cause irreparable damage to multiple components

Install Locking Washer (item 5) & fixings.

Install the Locking Washer (item 5) and fix in position with the original Spring Washer (item 2) and 2BA Nut (item 3).

Install the Disc Adaptor (Item 12).

Apply a film of engine oil on the outer O Ring (Item 11). Install the Disc Adaptor (Item 12) onto the Thread Adaptor passing over this O Ring, as shown on the left in the picture below and engage completely into the Rectangular Ring Seal groove.

Apply Loctite/Bondloc and the UNF Lock Nut (Item 13).

Apply Loctite 243 or Bondloc B243 as indicated by the Blue area on the left in the picture below.

Install the UNF Lock Nut (Item 13) onto the Thread Adaptor and lock in position while rotating the Disc Adaptor to ensure correct seating onto the Rectangular Ring Seal as shown on the right in picture below.

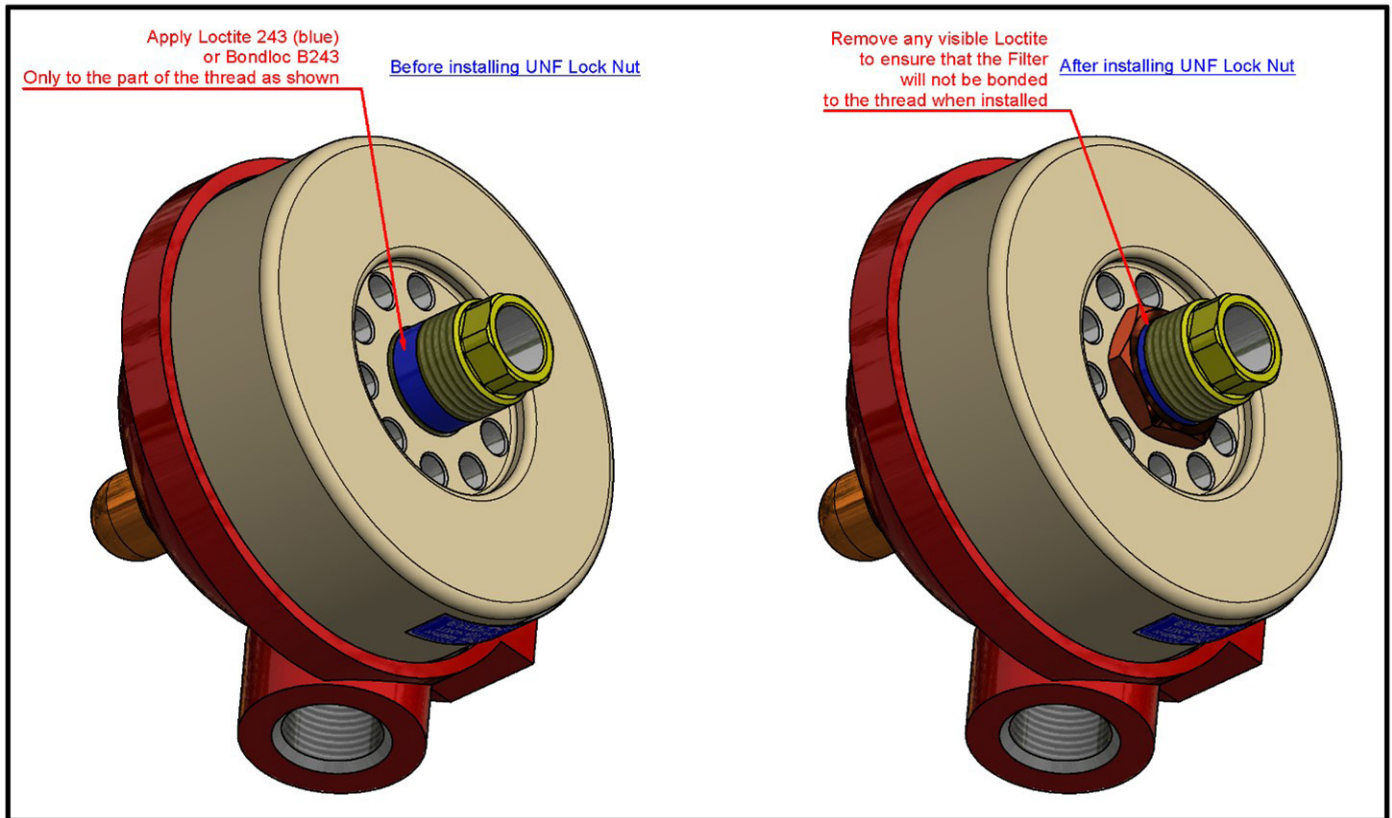
Use a 30 AF Socket Spanner, which is deep enough to completely cover the hexagon of the 6mm thick UNF Lock Nut.

Apply a maximum torque of 45Nm to the Lock Nut.

Exceeding this torque value may cause irreparable damage to multiple components.

Remove any excess Loctite/Bondloc visible on the Thread Adaptor or the outside of the UNF Lock Nut.

There must not be any Loctite/Bondloc on the portion of thread where the Oil Filter is installed. This could bond the Filter to the new system.v



Oil Filter (Item 15).

Apply a thin film of engine oil onto the Oil Filter Sealing Ring.

Screw the Oil Filter (item 15) onto the Thread Adapter until the seal lightly contacts the Disc Adapter. Note – there is an alignment diameter as part of the hexagon on the end of the Thread Adapter to aid alignment and installation and prevent cross threading.

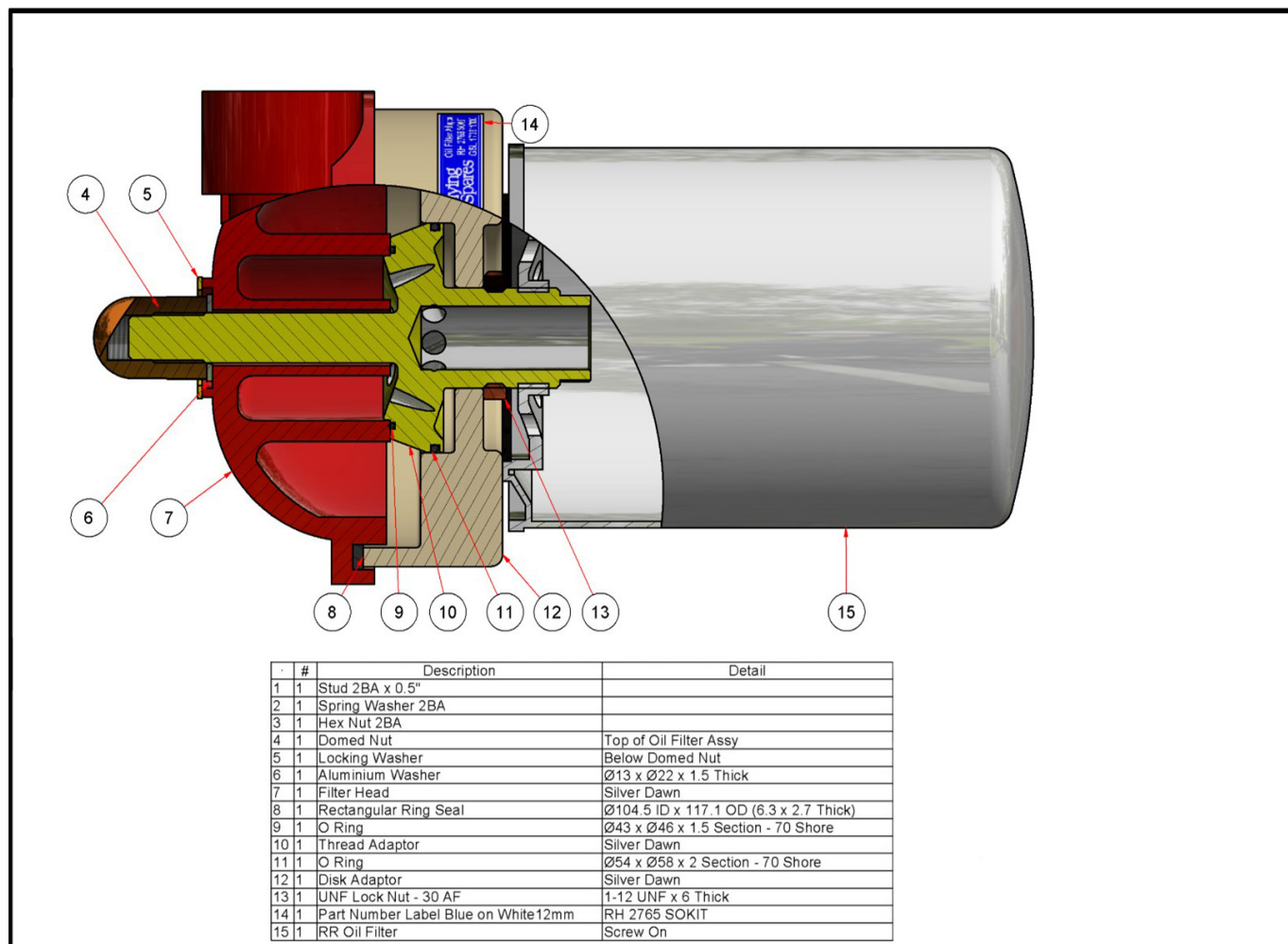
Check that the Oil Filter has a minimum of 3.5 turns of engagement on the Thread Adapter.

If there is less than 3.5 turns, there is an assembly error. Check the installation.

Turn filter by hand through a further half turn.

Do Not Overtighten or use additional tools to tighten.

The Completed Assembly



After Installation

Fill the sump with the correct engine oil. Start the engine and check oil pressure and ensure that there are no leaks on the assembly. On completion check the Oil Level.

Oil Filter change

Change the engine oil and filter as specified in the manual or at least once per year.