24/04/2025 - Engine assembly day at PMM (part 2) - 6h

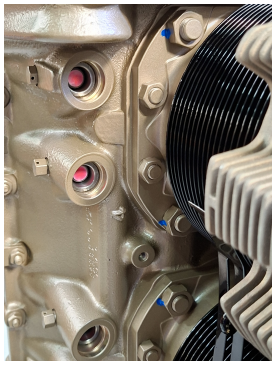
Category: 6.2 Engine Hanging
Published: Wednesday, 14 May 2025 15:57
Hits: 770

Assembly day 2 at PMM Wingservice.

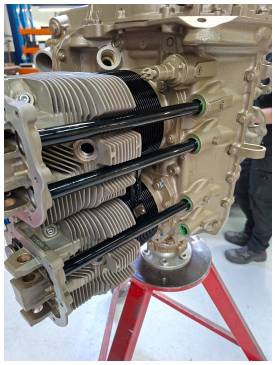
The engine and covers are now painted in Continental engine scheme having a gold colored engine block and black shiny covers and pipes. The look is absolutely beautiful.

Now it's back to assembling parts.
Next step is the installation of the parallel valve pushrods.
Between the actual pushrods and the roller tappets (see previous day article), some small push style devices are inserted. They fit right behind each roller tappet.

Here you can see them inserted in the engine case.



Then the rods and rovers are installed.



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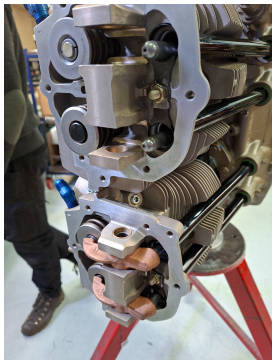
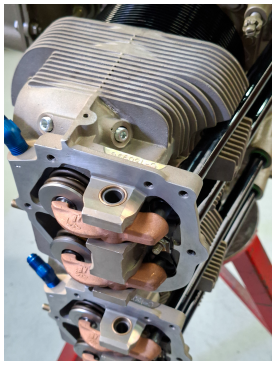
In the image below you can see the heads of the pushrods sticking out and the lower cylinder already has the little pink colored hammers inserted.
These hammers transfer the pushing movement from the rods on the actual cylinder valves.



There is a special tool from lycoming that is used to test the spacing between the hammer and the valve head. This distance has to be within a defined range. Too little and you get problems with the opening and closing of the valves. Too wide points to wear on the pushrods or the camshaft lobs.



In the image below, the oil return line is installed on the blue AN fitting. In the top center of the image, you can see the oil pressure regulation valve.

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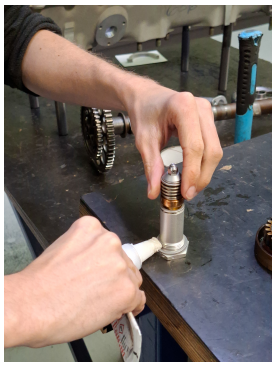
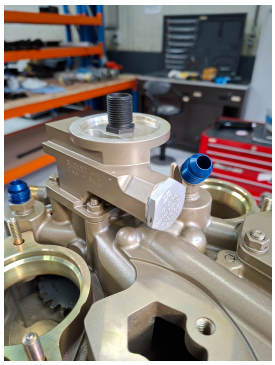
Some muffs are installed on the cold air induction air intake exists before the tubing is installed that connect the sump to the cylinder air intake.

The image below shows the installation of the oil thermal valve. This mechanism is installed close to the air filter and regulates the amount of oil that is sent to the oil cooler.



You can see it installed here underneath the connection point of the oil filter.



For the fuel line between the injector spider and the TBI, I had the option to go behind the cylinder nr 4 or in between 1 and 2. Patrick showed me the last option on another engine. Advantage of this is that it's a much shorter line. You can see the hole on the baffle plate between the cylinders here.

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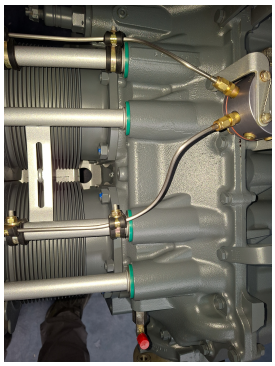

The fuel injectors themselves are installed on the cylinder head. This is the place where fuel gets sprayed in the cylinder by the injector body.
Important detail here is that the little A marking on the injector has to be on the bottom side, otherwise it won't work.

Here Patrick is installing the spider on the top of the engine. It's amazing how he just bends away on these fixed length pre-flared fine tubes and gets the job done within minutes. It would probably take me 3 days and 5 mess-ups to get one of those done. This guy is a true magician.

As I also opted for the in between cylinder pass through for the fuel line, they were so kind to take it back appart and make the holes in the inter cylinder baffle. A grommet will be installed here to protect the fuel line.

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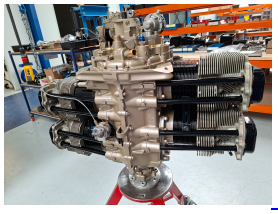
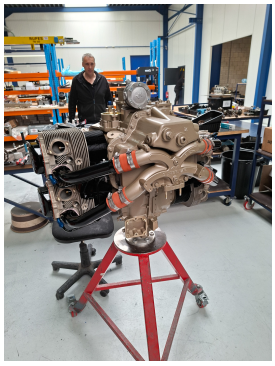
Then the fuel pump was installed and some fittings which they already installed like the oil restrictor fitting, the AN oil fittings.
And that's as far as it got at this day.





There some minor remaining work to be done like the magneto's and couple more fuel injector tubes but it's close to completions.

Next week I can go and pick it up to bring it home.

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