

PW1100G-JM Engine Task

Judges: Mr. John Koza – P&W Flight Safety Investigations

Mr. Del Laughery – P&W Customer Training Center

Description: Inspect the oil tank for FOD – Remove FOD if present

Tools and Equipment List:



- 13/16" open end wrench
- 1/4" drive ratchet
- 1/4" drive 2" extension
- 1/4" drive 5/16" 12 point socket
- Flashlight
- 36" mechanical fingers
- 1/4" drive torque wrench (click-type, 40-200 in-lb.)

Team members required:

Two

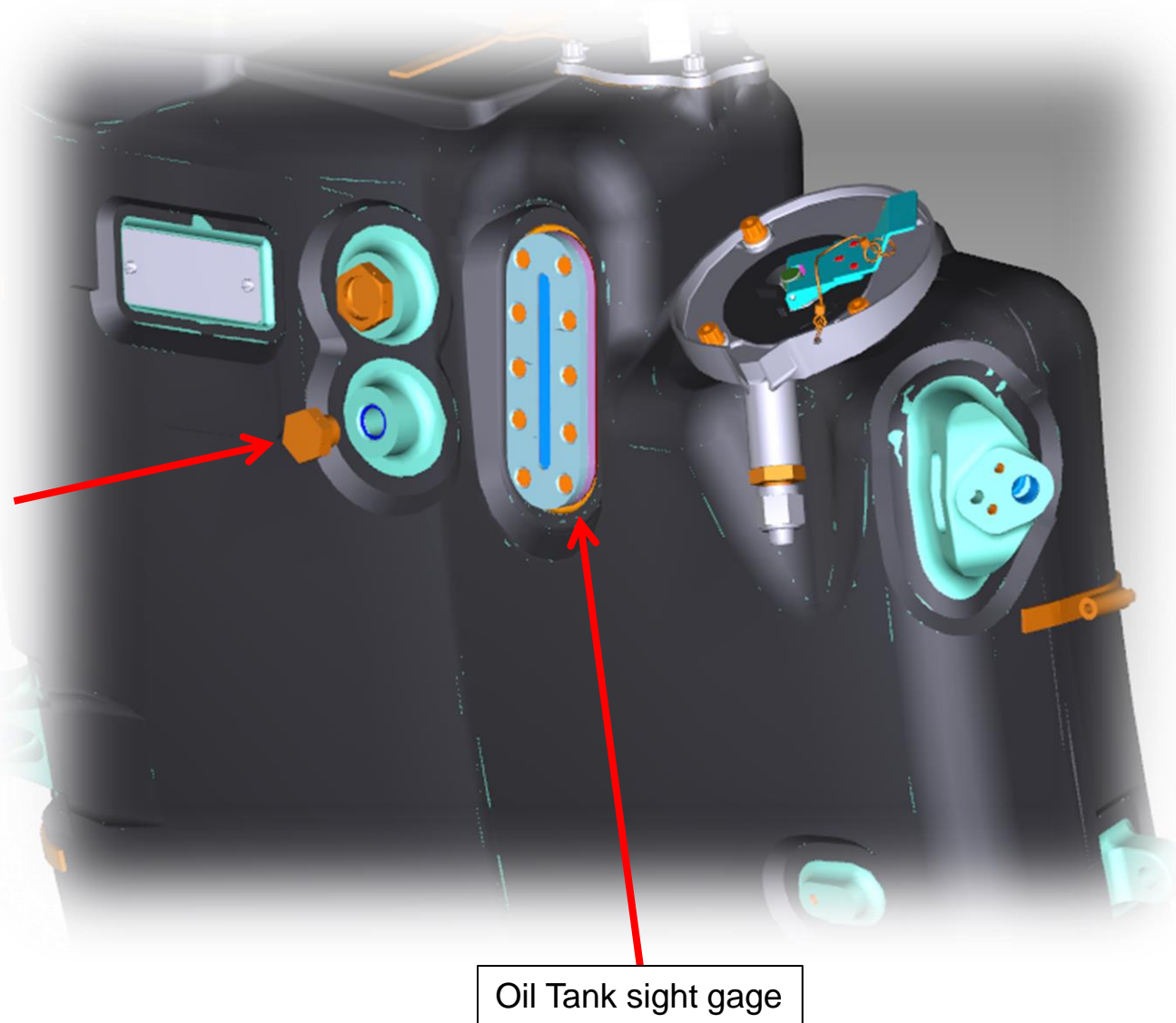
Instructions

Removal

The Oil Tank is located on the Fan Case of the engine at the 9 O'clock position Aft looking forward (ALF).

1) Remove the lower plug using a 13/16" wrench. The plug is located to the left of the Oil Tank sight gage.

2) Using the provided borescope equipment, inspect the inside of the oil tank for foreign objects via the lower plug hole access point.

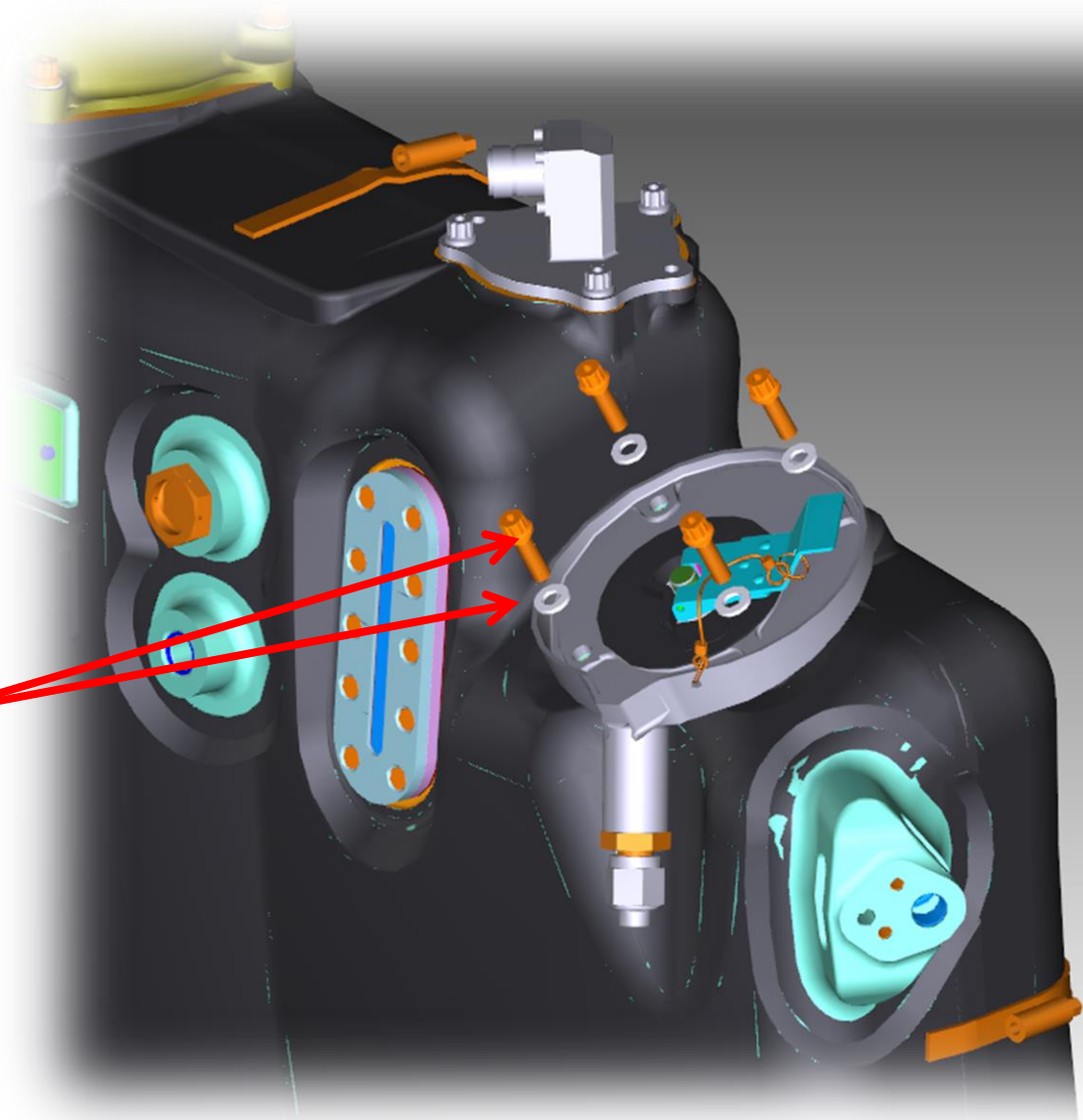


3) If FOD is present in the tank, notify judge for confirmation.

Once FOD is confirmed by judge, perform the following task for removal.

4) To ensure the oil tank is not pressurized, open the oil tank filler cap and then close.

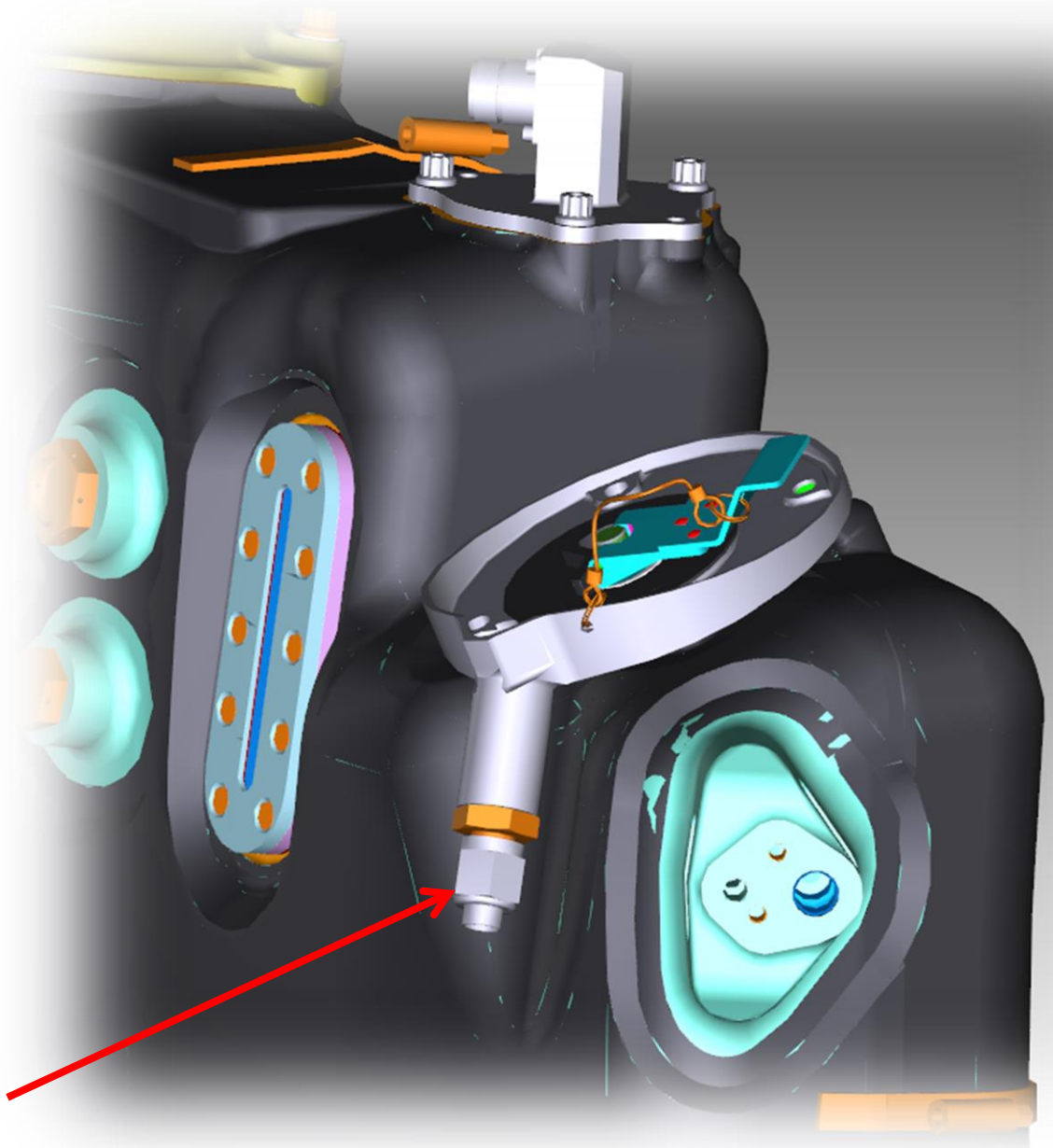
5) Using $\frac{1}{4}$ " ratchet with a 2" extension and $\frac{5}{16}$ " 12 point socket, remove four bolts, and four washers from the oil tank fill cap assembly.



6) Use a dead blow mallet to gently tap the protective cap and unseat the oil fill cap assembly from the oil tank body.

7) Using the provided Borescope equipment, mechanical fingers and flashlight, remove the FOD from the oil tank.

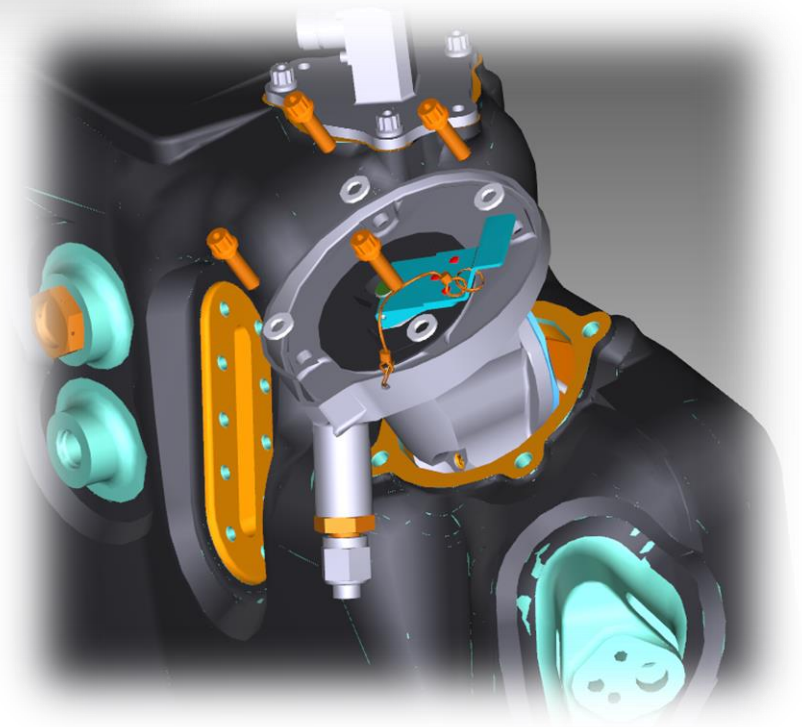
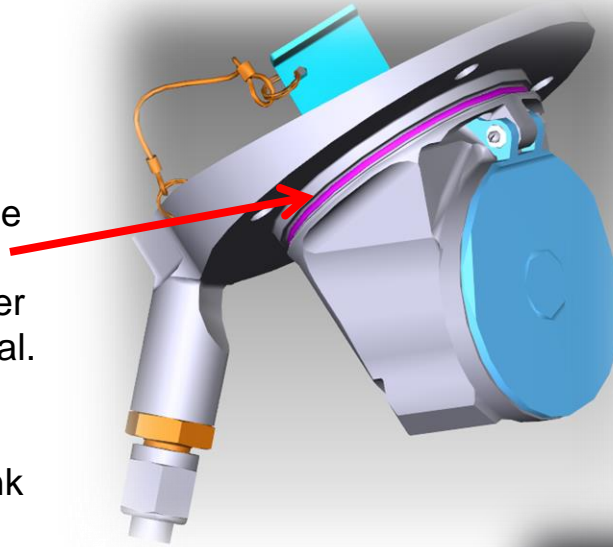
Protective
Cap



Instructions

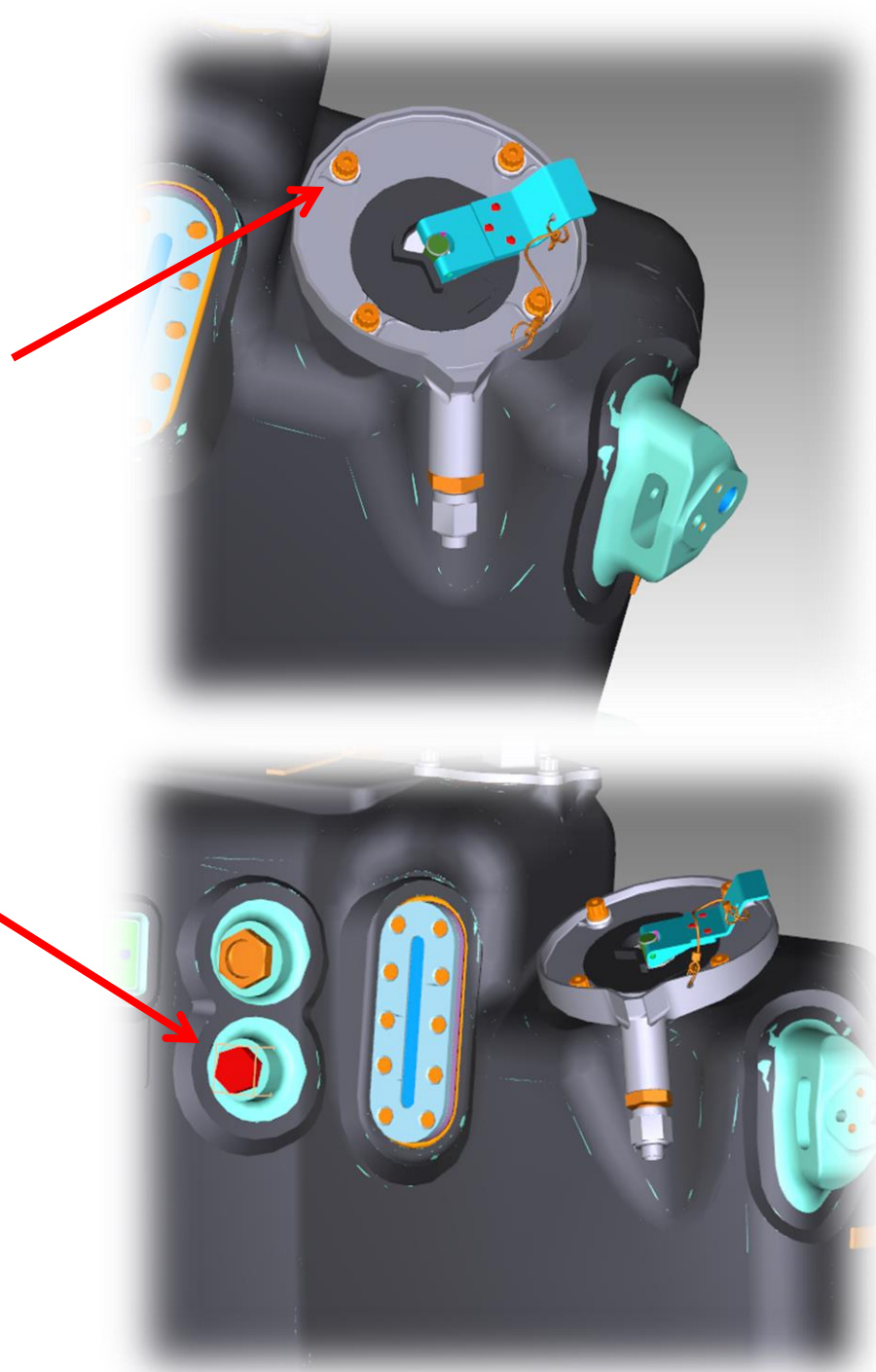
Installation

- 1) Simulate, by notifying the judge, that you are replacing the oil tank filler cap assembly O-ring seal.
- 2) Install the oil tank cap assembly into the oil tank housing.
- 3) Using a dead blow mallet, tap around the diameter of the filler cap assembly to properly seat the assembly to the oil tank.
- 4) Install four bolts and washers to the oil tank cap assembly.



5) Using a $\frac{1}{4}$ " drive torque wrench with a 2" extension and a $\frac{5}{16}$ " 12 point socket installed, torque the four bolts to 80 – 90 in lbs. in a diametric (alternating) manner.

6) Using a $\frac{13}{16}$ " wrench, install the oil tank plug that was removed to facilitate use of the borescope. Ensure the plug is tight (no torque value is required for this specific process).



Judging Criteria & Penalties:

- If a team does not attempt to complete the task, or abandons the task while in process
- Not wearing safety glasses while performing the task
- Settings on torque wrenches not validated by judge before use
- Task not fully completed when time is up
- FOD not recovered from Oil Tank
- Failure to simulate R/R of O-Ring
- Physically Damaging Borescope tip
- Failure to use acceptable methods per FAA AC 43.13-1B = Judges discretion
- Dropping a tool while performing the task