

Temporary Maintenance Instruction

TMI139-554

Power plant - Wet motoring - Operation

All AW139 Helicopters

The technical content of this document is approved under the authority of DOA nr. EASA.21J.005.

The present TMI will be evaluated for its introduction in the standard set of Technical Publication.

If no further notice is received, the present document expires on: 22nd March 2023

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Introduction

This TMI provides the instructions and requirements to execute the power plant wet motoring operation with MODEL PT6C-67C Engines number 1 and 2.

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Table 1 References

Data Module	Title
39-A-00-20-00-00A-120A-A	Helicopter safety - Pre-operation (make helicopter safe for maintenance)
39-A-09-11-00-00A-028A-A	Helicopter - Tow - General

Table 2 Access points

Access Panel / Door Id	Data Module
No Access Point	

Table 3 Zones

Access Panel / Door Id	Data Module
No Zones	

Preliminary Requirements

Required Conditions

Table 4 Required Conditions

Conditions	Data Module/Technical Publication
The helicopter must be safe for maintenance	39-A-00-20-00-00A-120A-A

Support Equipment

Table 5 Support Equipment

Nomenclature
No Support Equipment

Supplies

Table 6 Supplies

Nomenclature
No Supplies

Spares

Table 7 Spares

Nomenclature
No Spares

Safety Conditions

CAUTIONS

- During this operation the helicopter will release fuel from the fuel drain hoses below the belly. Make sure that the helicopter is out of the hangar in order to let the fuel vapors to safely disperse.
- Make sure that the 28 V DC power supply is disconnected from the ignition exciter unit. This is to prevent the start of an inadvertently sequence commanded.

Procedure

Note

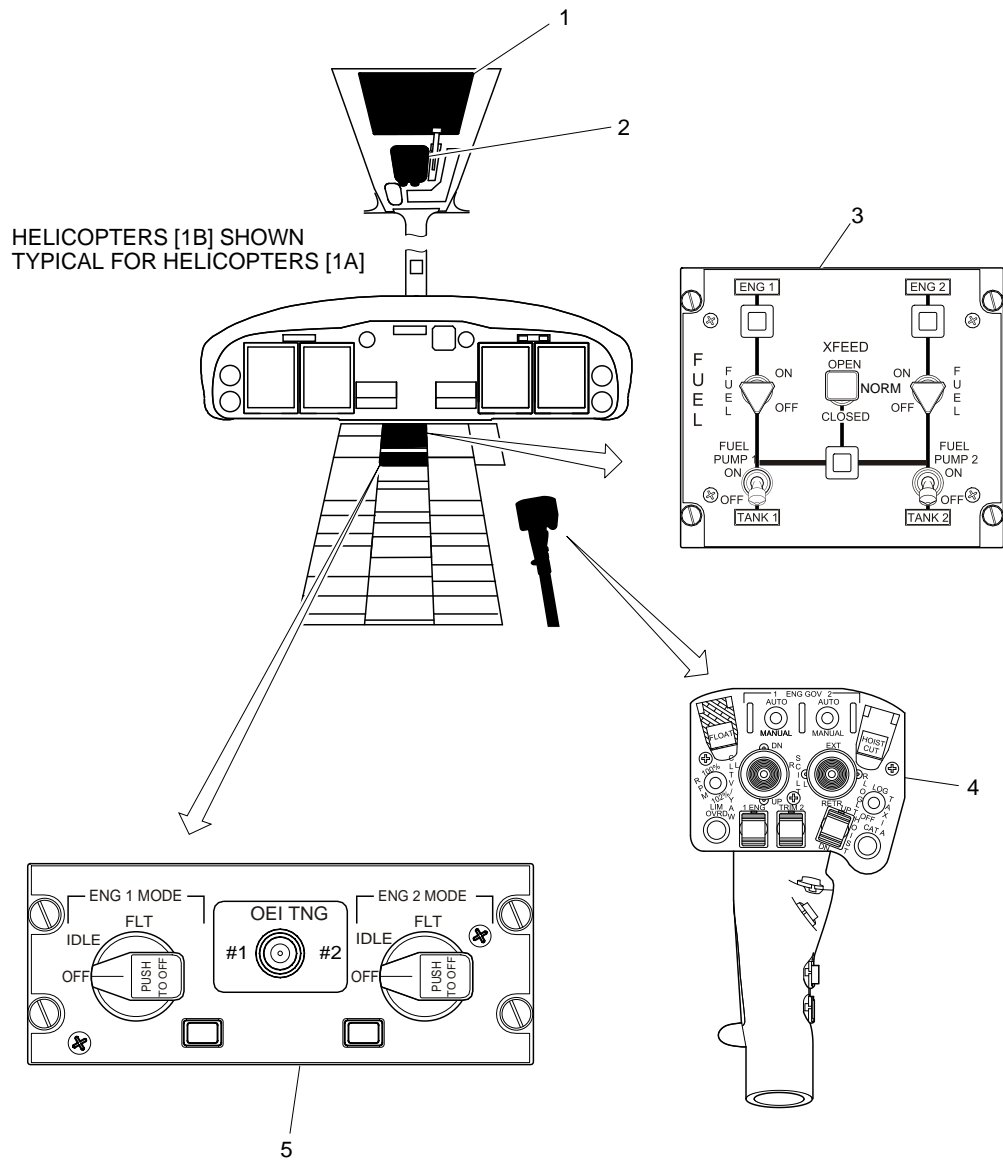
Refer to [39-A-09-11-00-00A-028A-A](#) when, during this procedure, you must move the helicopter.

- 1 Move the helicopter to the flight line.
- 2 Get access to the cockpit.
- 3 Do the wet motoring of the Number 1 engine as follows:
 - 3.1 Set the ENG GOV 1 switch on the pilot collective stick (4, [Figure 1](#)) to AUTO.
 - 3.2 Set the ENG 1 MODE switch on the engine control panel (5) to OFF.
 - 3.3 Put the Power Control Lever (PCL) (2) in the OFF position.
 - 3.4 Make sure that all the fuel indicators on the fuel control panel (3) are in the CLOSE position.
 - 3.5 Set the rotor brake lever to OFF
 - 3.6 Open these circuit breakers on the circuit breaker panel (1):
 - The ENGINE IGN 1
 - The ENGINE IGN 2.
 - 3.7 Set these switches on the fuel control panel (3) to ON:
 - The FUEL PUMP 1
 - The FUEL PUMP 2
 - The ENG 1 FUEL
 - The ENG 2 FUEL.
 - 3.8 Set the XFEED switch on the fuel control panel (3) to NORM position.
 - 3.9 Put the Power Control Lever (PCL) (2) in the FLIGHT position.

- 3.10 Set the ENG 1 MODE switch on the engine control panel (5) to IDLE. Do the dry run of the engine.
- 3.11 Let the rotor operate until the oil temperatures and pressures of the gearboxes increase to within the normal operating limits for approximately 15 s.
- 3.12 Set the ENG 1 MODE switch on the engine control panel (5) to OFF.
- 3.13 Set the engine controls to their initial condition.
- 4 Do the wet motoring of the Number 2 engine as follows:
 - 4.1 Set the ENG GOV 2 switch on the pilot collective stick (4) to AUTO.
 - 4.2 Set the ENG 2 MODE switch on the engine control panel (5) to OFF.
 - 4.3 Put the Power Control Lever (PCL) (2) in the OFF position.
 - 4.4 Make sure that all the fuel indicators on the fuel control panel (3) are in the CLOSE position.
 - 4.5 Set the rotor brake lever to OFF
 - 4.6 Open these circuit breakers on the circuit breaker panel (1):
 - The ENGINE IGN 1
 - The ENGINE IGN 2.
 - 4.7 Set these switches on the fuel control panel (3) to ON:
 - The FUEL PUMP 1
 - The FUEL PUMP 2
 - The ENG 1 FUEL
 - The ENG 2 FUEL.
 - 4.8 Set the XFEED switch on the fuel control panel (3) to NORM position.
 - 4.9 Put the Power Control Lever (PCL) (2) in the FLIGHT position.
 - 4.10 Set the ENG 2 MODE switch on the engine control panel (5) to IDLE. Do the dry run of the engine.
 - 4.11 Let the rotor operate until the oil temperatures and pressures of the gearboxes increase to within the normal operating limits for approximately 15 s.
 - 4.12 Set the ENG 2 MODE switch on the engine control panel (5) to OFF.
 - 4.13 Set the engine controls to their initial condition.
- 5 Do the dry motoring run (engine crank) before the next engine start.

Requirements After Job Completion

- 1 Remove all the tools and the other items from the work area. Make sure that the work area is clean.



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Figure 1 Power plant - Wet motoring - Operation

End of Data Module