| REVISION | CHANGE | APPROVED | DATE |
|---|---|---|---|
| 1 | Published release | JTS | 27/11/2025 |
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# ASI-3-1-3

# PROPELLER INSTALLATION & SETUP CHECKLIST

| SUBJECT: | |
|---|---|
| Preparing for Installation | |
| **ASSEMBLY NO:** | **APPLICABILITY:** |
| AP-*xxx* | All propeller models |

## 1. TOPIC

### 1.1 Introduction

Airmaster manufactures a wide range of propeller models to suit various aircraft and engine combinations. While the general sequence of installation and setup tasks are consistent, some propeller models require additional steps.

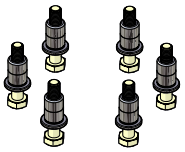
A flowchart, checklist and other relevant information is provided herewith, to assist installers in navigating the sequence of tasks required before, during and after the installation process.

### 1.2 Checks Prior to Installation

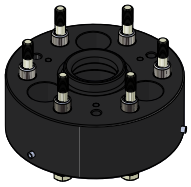
Perform the following checks before commencing the installation process:

- Inspect the condition of all propeller components for signs of damage or defect.
- Review propeller documentation in accordance with the checks provided in ***ASI-3-1-1***.
- Verify that propeller model is approved for aircraft and engine combination in accordance with ***ASI-2-3-6.***
- Review material requirements (tooling and consumables) for propeller installation in accordance with ***ASI-3-2-1.***
- Ensure all precision instruments (e.g. torque wrenches), are recently calibrated and in reliable working condition.
- It is recommended that installers dry-fit the mount kit assembly (i.e. spacer, adapter or extension, if applicable) to the engine flange and verify that propeller spacing requirements appear suitable.

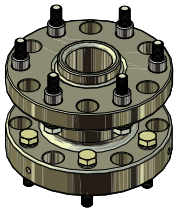
- Check which type of mount kit is used for the propeller from the four options below (refer to mount kit assembly drawing *AE-xxx*). This will help to determine which installation steps are applicable.



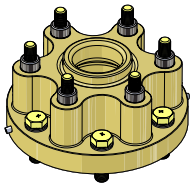
**ZERO MOUNT KIT (BOLTS, WASHERS & DRIVE LUGS ONLY)**



**SPACER KIT ASSEMBLY**



**EXTENSION KIT ASSEMBLY**



**ADAPTER KIT ASSEMBLY**

## 1.3 General Notes for Installation

Review the notes below before commencing the installation process:

- Use appropriate PPE when handling consumables. Protective gloves and goggles should be used when handling any anti-seize or thread locking compound, cleaning agent, grease or lock-wire.
- Ensure that workspace is well-illuminated, ventilated, clean, dry, and sheltered from the elements.
- Before applying thread-locking or anti-seize compound to a part (as directed), it is recommended that the surface is prepared by application of a pre-assembly cleaning agent (e.g. Loctite ® SF 7063) to clean and de-grease the surface. This will ensure optimal bonding of subsequent agent.
- The recommended method for applying thread-locking compound to a fastener and ensuring optimal activation is to apply a thin stripe along the threaded length of the fastener and a drop into the bottom of the corresponding hole.
    - Primer (e.g. Loctite 7471) may be applied to the male and female parts beforehand to expedite curing times in cool conditions. Refer to direction on product label.
    - Torque fastener as directed, wipe excess compound, indicate with torque-seal if feasible.
- Nord-Lock® washers are used in various instances for propeller installation. They may only be reused once. Review ***ASI-3-2-3*** which describes and covers correct use of these washers.
- Nyloc nuts may only be reused once.
- The following parts may be supplied with the propeller's control system assembly. These are not required for installation or general operation of the propeller. Store these parts in a safe place, ensuring they are identifiable for future use:
    - Spare set of (3) carbon brushes (*P0265*)
    - USB-Serial cable (*A0117*)
    - AC200 bypass loom (*A0118*)
- Always refer to the relevant propeller assembly drawing when installing or servicing the propeller. These can be found in the assembly drawings booklet supplied with the propeller.

## 1.4 Propeller Installation and Setup

### 1.4.1 Introduction

This section is intended to be printed and used as a record of correct propeller installation and setup. Complete all tasks or checks in the sequence shown, and in accordance with the indicated procedure.

### 1.4.2 Asset Details

| | |
|---|---|
| **PROPELLER MODEL:** | AP- |
| **PROPELLER (HUB) SERIAL NUMBER:** | |
| **BLADE SERIAL NUMBERS:** | |
| **CONTROLLER SERIAL NUMBER:** | |
| **ENGINE MAKE:** | |
| **ENGINE MODEL:** | |

### 1.4.3 Propeller Installation Checklist

| STEP | TASK OR CHECK | APPLICABILITY | PROCEDURE | ☑ |
|---|---|---|---|---|
| **1.** | Unpack propeller boxes. | *All* | ***ASI-3-1-1*** | ☐ |
| **2.** | Check all parts and review documentation. | *All* | ***ASI-3-1-1*** | ☐ |
| **3.** | Check propeller is suitable for engine/aircraft combination. | *All* | ***ASI-2-3-6*** | ☐ |
| **4.** | Check mount kit requirements. | *Recommended if applicable.* | ***ASI-3-1-2*** | ☐ |
| **5.** | Replace OEM engine flange with Airmaster-supplied flange. | *Currently only applicable for Jabiru 2200 / 3300 engines.* | ***ASI-4-1-1*** | ☐ |
| **6.** | Remove OEM drive lugs from engine flange (if installed). | *All, unless an extension assembly is used (AE-xExx).* | ***ASI-4-1-2*** | ☐ |
| **7.** | Install Airmaster drive lugs in engine flange. | *All, unless an extension assembly is used (AE-xExx).* | ***ASI-4-1-3*** | ☐ |
| **8.** | Prepare engine flange. | *All* | ***ASI-4-1-4*** | ☐ |
| **9.** | Attach spacer or adapter assembly to propeller hub. | *Only applicable for spacer or adapter assemblies exceeding 0.5inch (i.e. AE-xS/Ax(>0.5)).* | Spacer: ***ASI-4-2-1***<br>Adapter: ***ASI-4-2-2*** | ☐ |
| **10.** | Attach plated slipring assembly to mount kit (spacer, extension, or adapter) assembly. | *Only applicable for plated mount kit assemblies (i.e. AE-xxPxx).* | Spacer: ***ASI-4-3-2-2***<br>Adapter: ***ASI-4-3-2-3***<br>Extension: ***ASI-4-3-2-4*** | ☐ |
| **11.** | Install mini slipring assembly. | *Only applicable for Rotax mini slipring assembly (i.e. AR-RM(E)).* | ***ASI-4-3-1*** | ☐ |
| **12.** | Mount extension assembly to engine flange. | *Only applicable for extension assemblies (i.e. AE-Exx).* | ***ASI-4-2-3*** | ☐ |
| **13.** | Install hub assembly.<br><br>*Lockwire hub mounting bolts. | *All (applicable procedure depends on mount kit type).*<br><br>** If Nordlock washers aren't used.* | *With 0 mount kit:* ***ASI-4-4-1***<br>*With spacer:* ***ASI-4-4-2***<br>*With adapter:* ***ASI-4-4-3***<br>*With Extension:* ***ASI-4-4-4*** | ☐ |

| | | | | |
|---|---|---|---|---|
| **14.** | Lubricate hub assembly. | *All* | ***ASI-4-5*** | ☐ |
| **15.** | Lubricate blade assemblies. | *All* | ***ASI-4-5*** | ☐ |
| **16.** | Install blade assemblies. | *All* | ***ASI-4-6*** | ☐ |
| **17.** | Check blade installation. | *All* | ***ASI-4-6*** | ☐ |
| **18.** | Check spinner cone fitting and install spinner cone. | *All* | ***ASI-4-7-1*** | ☐ |
| **19.** | Adjust spinner front support as required. | *Only If spinner fitting is incorrect.* | ***ASI-4-7-2*** | ☐ |
| **20.** | Mount sensor-brush block to engine. Adjust mounting position as required. | *All (applicable procedure depends on engine/slipring type)* | *Rotax mini:* ***ASI-4-8-2***<br>*Rotax standard:* ***ASI-4-8-3***<br>*ULPower:* ***ASI-4-8-4***<br>*Jabiru:* ***ASI-4-8-5***<br>*Lycoming:* ***ASI-4-8-6*** | ☐ |
| **21.** | Install control system. | *All. Sequence of this step is non-critical.* | ***ASI-4-9-1*** | ☐ |

**Name:** _____ **Signature:** _____ **Date:** _____

### 1.4.4 Propeller Setup Checklist

| STEP | TASK OR CHECK | APPLICABILITY | PROCEDURE | ☑ |
|---|---|---|---|---|
| **1.** | Check propeller function with engine off. | *All* | ***ASI-5-1-1*** | ☐ |
| **2.** | Check propeller function with engine running. | *All* | ***ASI-5-1-2*** | ☐ |
| **3.** | Dynamically balance propeller. | *All* | ***ASI-5-2*** | ☐ |
| **4.** | Check adjustable pitch limit settings via static ground tests. Adjust pitch stops if required. | *All* | ***ASI-5-3*** | ☐ |
| **5.** | Calibrate DSD propeller hub. | *Applicable for DSD propeller models only.* | ***ASI-5-4*** | ☐ |
| **6.** | Verify fine / coarse pitch limit settings and test general propeller performance in flight. | *All* | - | ☐ |
| **7.** | Sign off propeller installation in propeller logbook. | *All* | - | ☐ |

**Name:** _____ **Signature:** _____ **Date:** _____