OpsPilot

Maintenance Manual — User Manual

CMMS-Importable, RCM-Driven Manuals · ISO 14224 · AI Engineering Co-Pilot

What this guide covers — what this maintenance manual is, how the OpsPilot module builds one, what to have ready, and the document you receive.

1. What is this maintenance manual?

This is not a re-typed OEM manual — it's a plant-ready, CMMS-importable maintenance manual where every preventive task traces to a failure mode and every step has a quantitative pass/fail value. The OEM manual tells you what the manufacturer thinks; this captures what your equipment expert knows the OEM gets wrong — the bearing that wears at 18 months not 24, the seal plan that needs upsizing, the alignment gotcha on cold start. That hard-won ground truth is what makes the manual worth more than the one in the box.

OpsPilot builds to *ISO 14224, SAE JA1011/JA1012 (RCM), API 670, ISO 10816 and ASTM D7720*, routes on equipment type to the correct ISO 14224 class, and forces RCM logic so every PM traces to a failure mode.

2. What the OpsPilot module does

Role	Responsibility
🎯 **AI Maintenance Manual Coach (OpsPilot)**	Builds a CMMS-importable manual, assigns the correct ISO 14224 class, forces RCM logic (every PM traces to a failure mode), and challenges any vague step or “check condition” that lacks a quantitative pass/fail value.
👷 **Equipment Expert (you)**	You've worked on this specific equipment and seen its real failure modes. That ground truth — what the OEM manual gets wrong — is what makes the manual valuable.

3. What you will be asked — have this ready

- The equipment and its type (for the ISO 14224 class).
- The real failure modes you've seen — and the symptoms that precede them.
- The maintenance tasks, and the measurable pass/fail value for each check.
- The OEM guidance — and where your experience says it's wrong.

4. What you receive — the output

A complete, plant-ready Maintenance Manual (Word/CMMS-importable): the ISO 14224 equipment taxonomy, the failure modes, the PM tasks each traced to a failure mode with quantitative accept/reject criteria, and the condition-monitoring, lubrication and spares detail.

5. Worked example (illustrative)

A manual for a critical pump. The OEM book says “replace bearings every 24 months.” But the equipment expert knows this duty wears the drive-end bearing at around 18 months because of a piping load the OEM never anticipated. The manual captures that — the PM interval is set to the real wear-out, not the catalogue number, and it traces to the actual failure mode (bearing degradation under piping load). Every check carries a value: not “inspect coupling” but “measure coupling gap, accept 2–4 mm.” Because it's structured to ISO 14224 and built for CMMS import, it loads straight into the maintenance system as PM tasks rather than sitting on a shelf as a PDF nobody opens.

6. Getting the best result

- **Capture what the OEM gets wrong.** Your real failure history is the manual's whole value over the catalogue.
- **Trace every PM to a failure mode.** A task that addresses no failure mode is a task to question.
- **Quantify every check.** “Check condition” with no pass/fail value isn't maintainable.
- **Build it for the CMMS.** A manual that imports as PM tasks gets used; a PDF gets forgotten.