Engineering Drawings: Step by Step

Setting up who checks and approves, then storing, reading, signing, revising and issuing drawings and drawing packages, and turning them into work order forms

November 10, 2026 · Avistrata 2.2

PREPARED FOR

Engineers, drafters, checkers and the mechanics who work from the drawings

Website: Engineering → Drawings · Phones: Engineering → More → Drawings and packages

FROM

Leesburg Aviation LLC
1001 Sycolin Rd, Leesburg, VA 20175
703.520.5040 · mrotracker.com

How to use this guide

One step per section: where to click and what the screen looks like. It follows the Demo organization's sample drawings for N5287S: **DEMO-D-1001** (antenna doubler), **DEMO-D-1002** (G5 panel cutout), **DEMO-D-1003** (ELT bracket, a new drawing) and the package **DEMO-PKG-01**.

- **Drop a drawing file** (PDF, photo or scan) and Avistrata reads its title block, revision block, parts list and notes and fills them in for you to check.
- Every revision is **drawn** by an engineer, **checked** by one of the organization's **drawing checkers** (not the drafter), then **approved and released** by a **drawing approver** (not the checker), each signed with the signing PIN. An organization admin picks the checkers and approvers. Releasing a revision supersedes the one before.
- Released drawings go into **packages** (drawings plus documents, with their own revision), are **issued** with a transmittal, and become **work order forms** for the shop.
- Screens are from Avistrata 2.2 with sample data. The organization, people, aircraft and drawings are invented. The sample drawing PDFs are in docs/sample-drawings.

Set up — Step 1: who checks, who approves
Home — Step 2: what's waiting
Add — Steps 3–4: drop a file
Sign — Steps 5–6: drawn, checked, approved
Revise · package — Steps 7–9
Build — Steps 10–11: work order forms

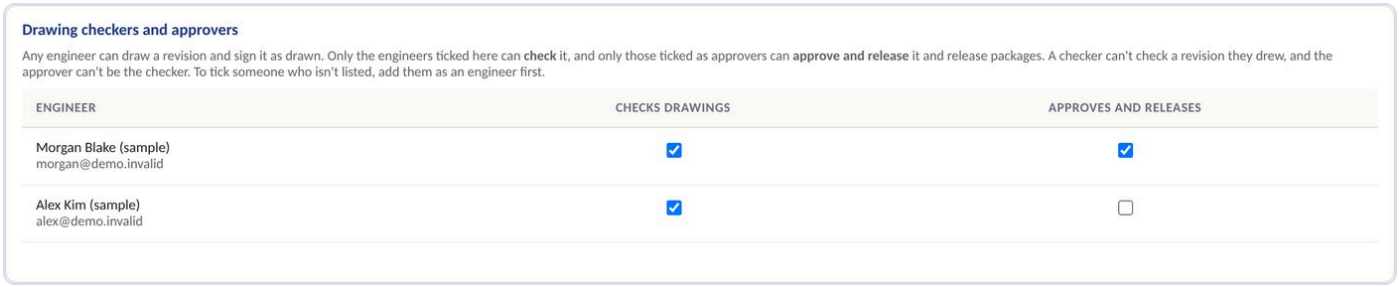
Who	What they do
Organization admin	Sets up the engineers, and which of them are drawing checkers and drawing approvers (step 1).
Engineer	Adds drawings and packages, signs a revision as drawn, issues drawings and makes work order forms. Engineers are set in Engineering → Settings → Engineers.
Drawing checker	An engineer ticked as a checker. Signs a revision as checked, or sends it back to draft. Can't check a revision they drew.
Drawing approver	An engineer ticked as an approver. Approves and releases revisions and releases packages. Can't approve a revision they checked.
Mechanic	Works a work order form: starts it and completes it. Sees released drawings and packages on the phone.

1 Set up who checks and who approves ORGANIZATION ADMIN · ONCE

Being an engineer isn't enough to check or approve a drawing: an admin picks who may. Until someone is ticked, nobody can check or approve, and revisions wait.

1. Open **Engineering → Settings → Engineers** and add everyone who works on drawings as an engineer.
2. In **Drawing checkers and approvers** on the same page, tick **Checks drawings** and/or **Approves and releases** for each engineer. The change takes effect straight away.
3. Pick at least two people: the checker can't be the drafter, and the approver can't be the checker. The section warns when nobody is ticked for a step, or only one person is ticked for both.

4. Each person sets their own **signing PIN** under **My Preferences** (the gear icon at the top right). Every signature asks for it.

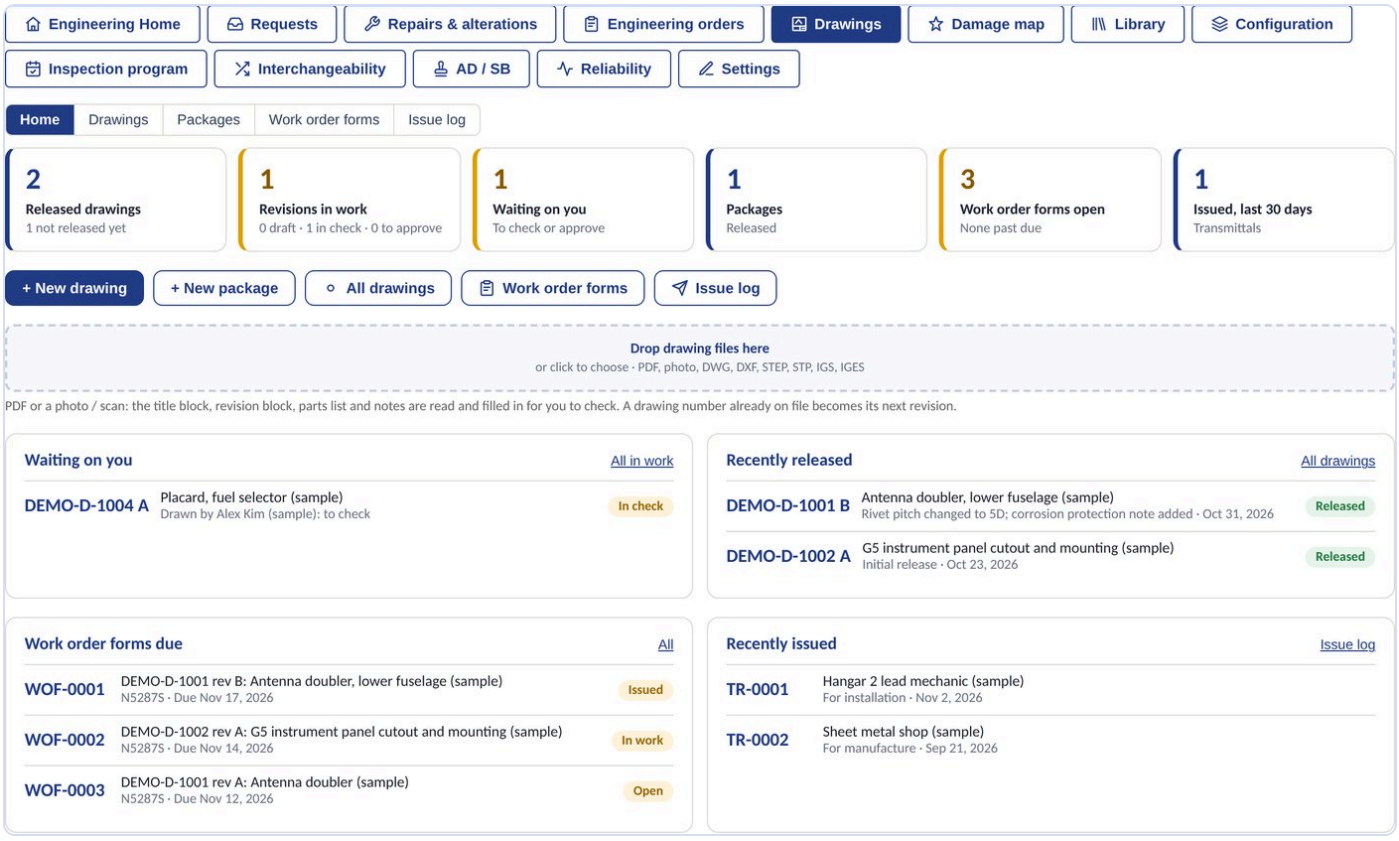


Morgan Blake (sample) checks and approves; Alex Kim (sample) checks.

2 Open Drawings Home ANYONE IN ENGINEERING

Open **Engineering → Drawings**. It opens on **Home**: the same summary as the other workspaces.

1. **Tiles:** released drawings, revisions in work (draft, in check, to approve), **waiting on you** (a check or approval you can sign), packages, open work order forms (red when one is past due) and what was issued in the last 30 days. Click a tile to open that list.
2. **Waiting on you** lists the revisions you can check (as a drawing checker) or approve (as a drawing approver); when nothing waits, it shows all revisions in work. Next to it: **Recently released**, **Work order forms due** and **Recently issued**. Click a row to open it.
3. Along the top: **Home**, **Drawings**, **Packages**, **Work order forms** and **Issue log**.



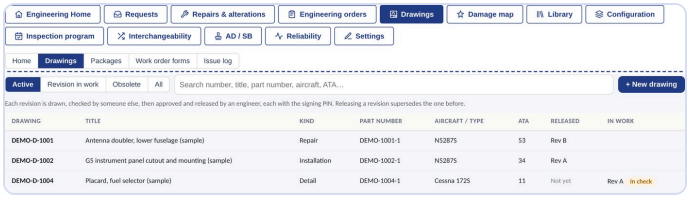
Drawings Home in the Demo organization: one revision waits for a check, three work order forms are open.

3 Drop a drawing file ENGINEER · 1 MINUTE

The quickest way to add a drawing is to drop its file. You can also click **+ New drawing** and fill in the form by hand.

1. Drag one or more drawing files onto the **Drop drawing files here** box on Home, or onto the drawings list (it lights up), or click the box to choose them. Several files are taken one after the other.

2. A **PDF** or a **photo / scan** is read: the title block, revision block, parts list and notes. This takes about half a minute; a large drawing set (an E-size, many-sheet CAD PDF) can take up to two. Other files (DWG, DXF, STEP, IGES) are attached but not read.
3. If the drawing number is **already on file**, the file becomes that drawing's next revision instead (step 7).



Dragging a file over the drawings list.

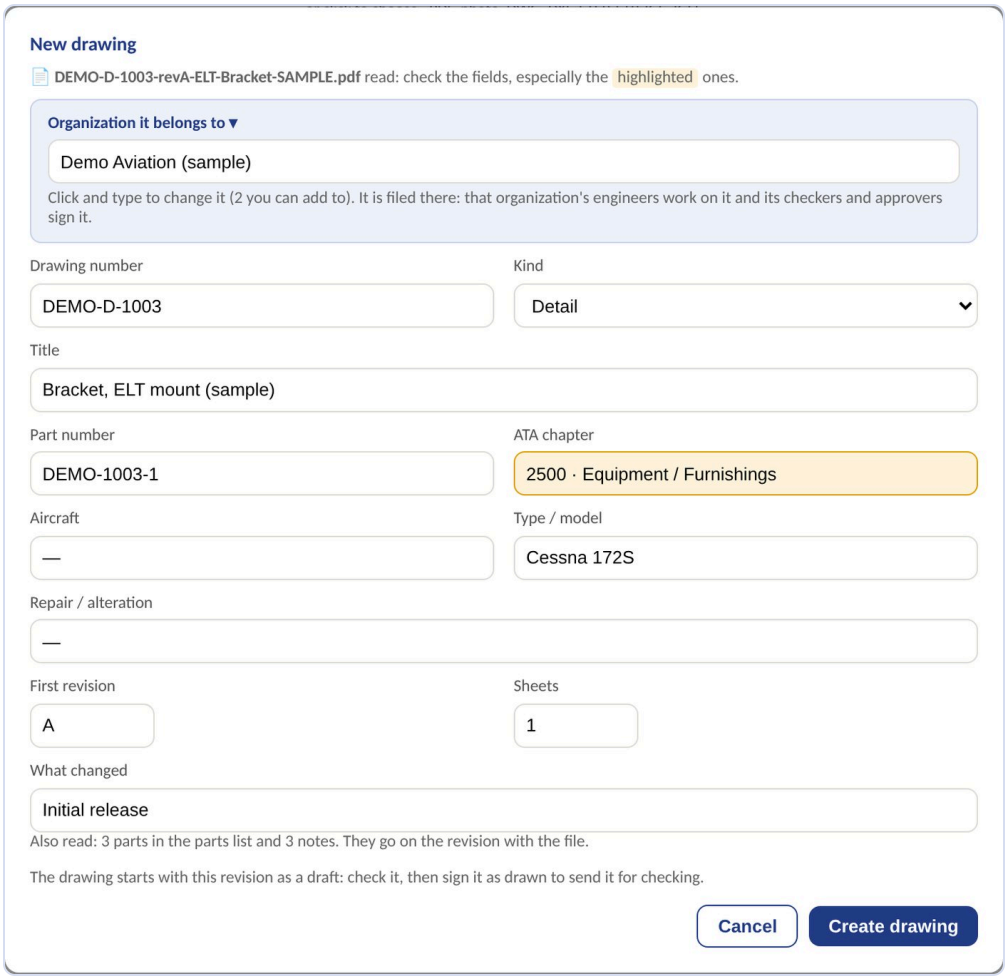


Reading the drawing.

4 Check what was read and create the drawing ENGINEER

New drawing opens filled in from the file. Check each field before you create it: reading is a help, not a substitute for looking.

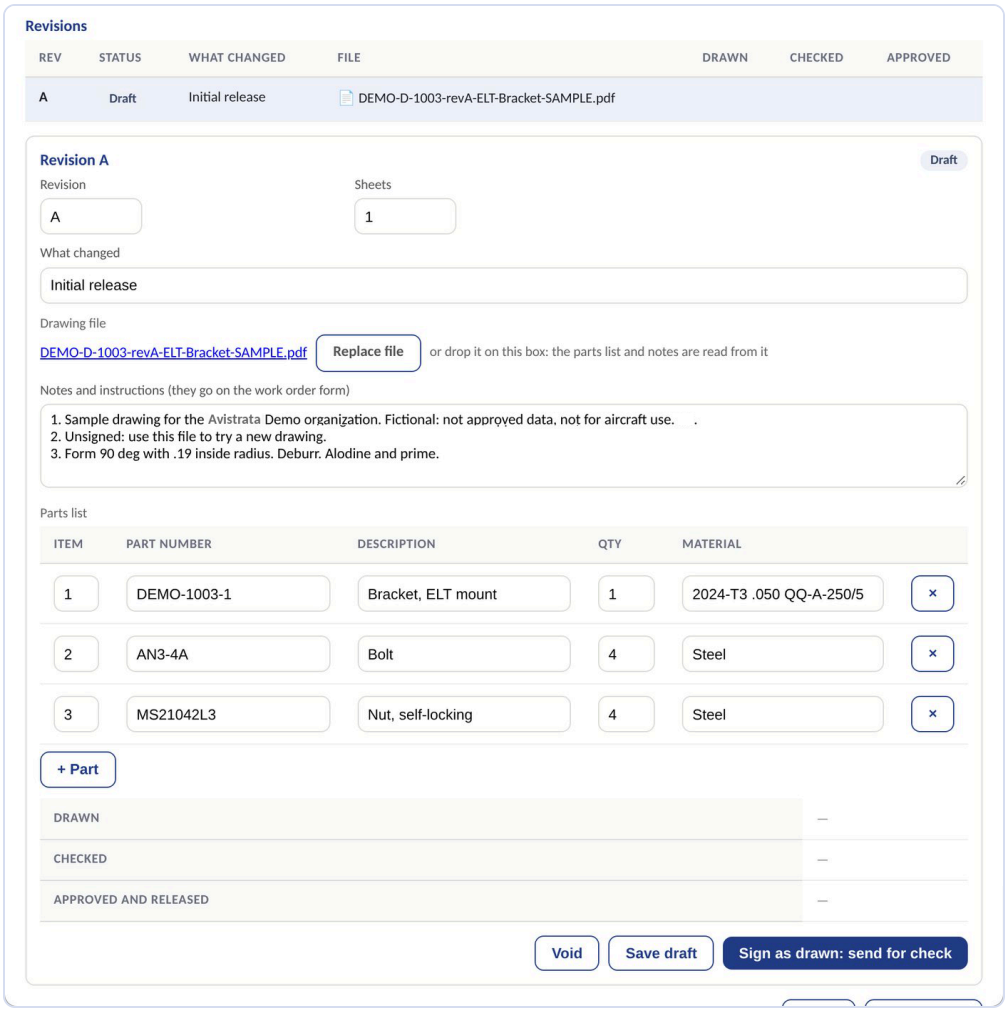
1. **Organization:** when you can add drawings to more than one organization (a super admin, or an admin or engineer in several), pick the one the drawing belongs to. It starts on the organization you're viewing, else your own. Changing it changes the suggested number and the ATA and aircraft lists.
2. **Drawing number, kind, title, part number, ATA chapter, type / model**, the **first revision** letter, **sheets** and **what changed** come from the title and revision blocks. A field the reading wasn't sure of is **highlighted in yellow**.
3. **ATA chapter** is the standard searchable list (the organization's ATA list in Aircraft & Lookups, or the standard ATA chapters): type a number or a word. What the drawing says (for example "25" or "53-10") is matched to the list (2500, 5310).
4. **Aircraft** lists the organization's own aircraft. When the drawing names one of them, it is picked. Link a **repair / alteration** if the drawing belongs to one.
5. The line under the form says what else was read (for example **3 parts in the parts list and 3 notes**); those go on the revision with the file.
6. Click **Create drawing**. The drawing opens with its first revision as a **draft** and the file attached.



DEMO-D-1003 read from its PDF, for Demo Aviation (sample). The ATA chapter was matched to 2500 but the reading was uncertain, so it is highlighted to check.

5 Finish the draft and sign it as drawn DRAFTER (AN ENGINEER)

1. In the draft revision, check the **parts list** (add rows with **+ Part**, remove with ×) and the **notes and instructions**: both are copied onto every work order form made from the drawing.
2. To change the file, click **Replace file** or drop a new file on the revision box. An empty parts list, notes or sheet count is filled in from the new file; nothing you typed is changed.
3. Click **Save draft** as you go. When it's ready, click **Sign as drawn: send for check** and enter your **signing PIN**. The revision moves to **In check**.



Revision A of DEMO-D-1003 as a draft: file, notes and the parts list read from the drawing.

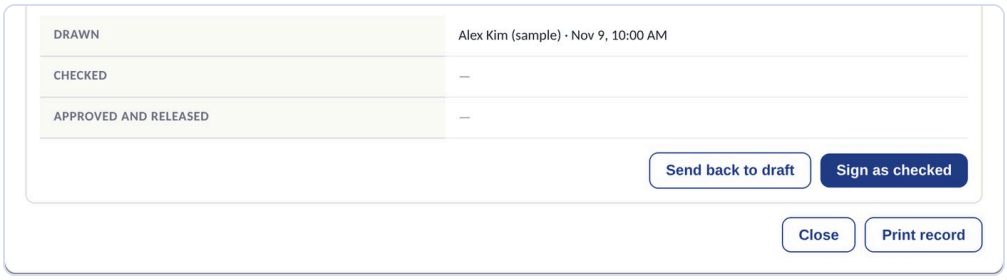


Each signature asks for the signer's signing PIN.

6 Check it, then approve and release it CHECKER, THEN APPROVER

The checker finds the revision under **Waiting on you** on Home, or the **Revision in work** filter on the Drawings list. Only drawing checkers and approvers (step 1) get the sign buttons; everyone else sees who the revision is waiting for.

1. **Drawing checker** (not the person who drew it): open the file, compare it with the design data, then click **Sign as checked**. If something is wrong, click **Send back to draft** and say why; the drafter sees the note on the draft.
2. **Drawing approver** (not the checker): click **Approve and release**. The revision is **Released**, the drawing shows **Released rev ...**, and the revision before it is **Superseded**.
3. A released revision can't be changed. **Print record** prints the drawing's revision history with every signature and its signing-PIN reference.



A drawing checker's view of DEMO-D-1004 rev A, drawn by Alex Kim (sample).

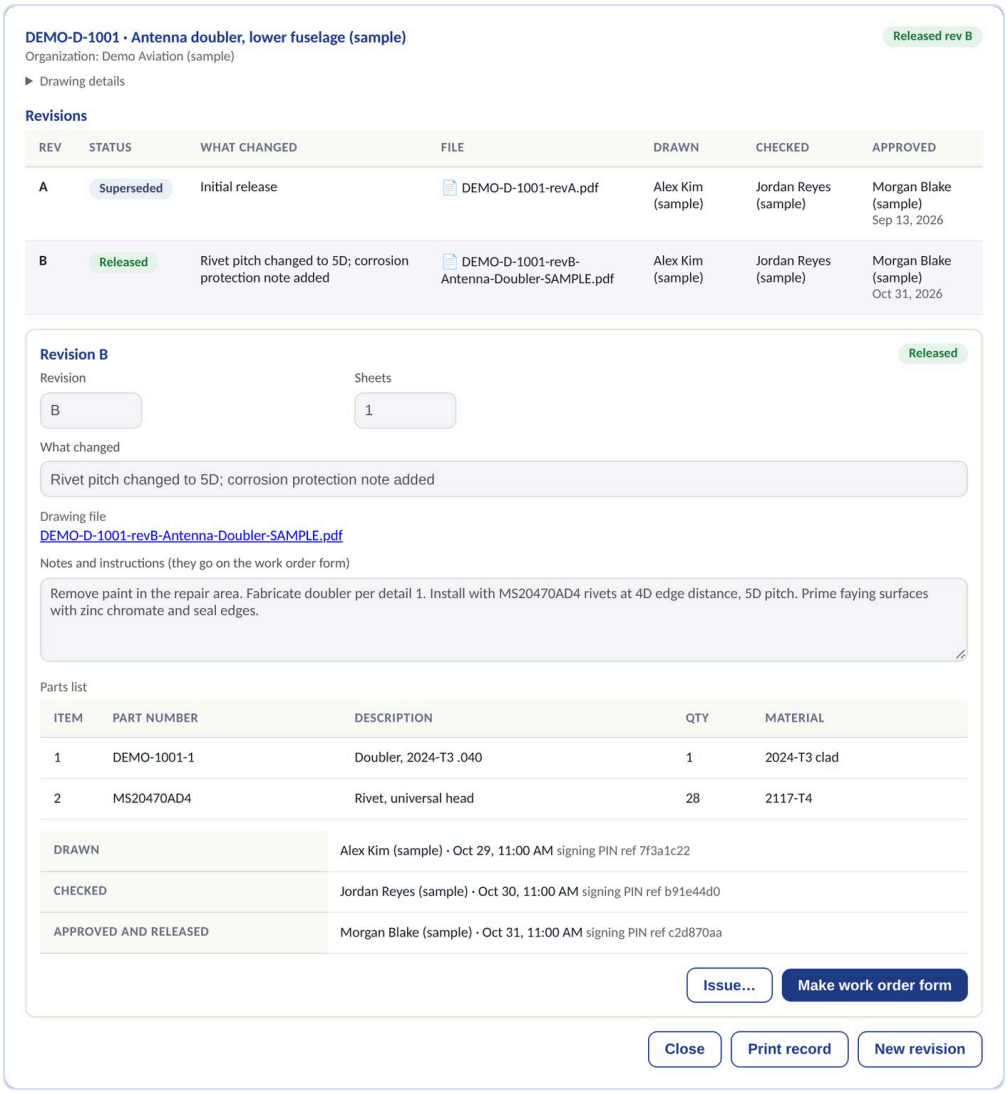
The same revision for an engineer who isn't a checker.

7 Make the next revision ENGINEER

1. **From a file:** drop the new revision's file on Home or the list. Its drawing number is found, and **… is already on file** offers the next revision letter (or the one printed on the drawing) and what changed, read from the revision block. Click **Add revision**. If a draft is already in work, the file goes on that draft instead.
2. **By hand:** open the drawing and click **New revision**, then say what will change. The new revision starts as a copy of the released one (file, parts and notes).
3. Either way the new revision goes through steps 5 and 6. The released revision stays in use until the new one is approved.



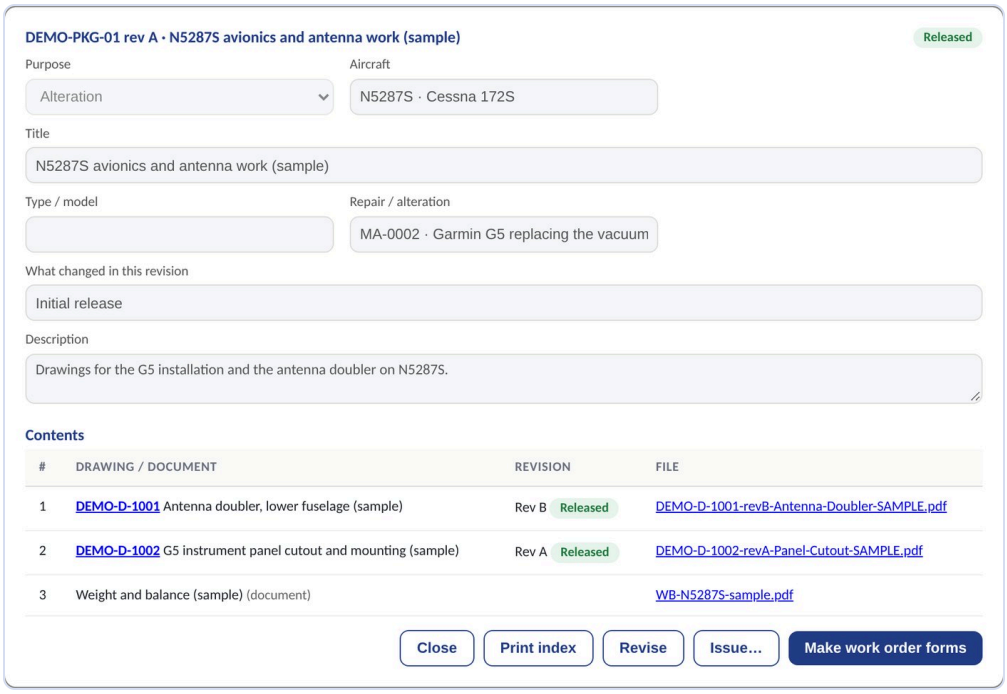
Dropping a new file for DEMO-D-1001: it becomes revision C.



DEMO-D-1001: rev A superseded, rev B released with its three signatures. From here: Issue... and Make work order form.

8 Put drawings in a package ENGINEER

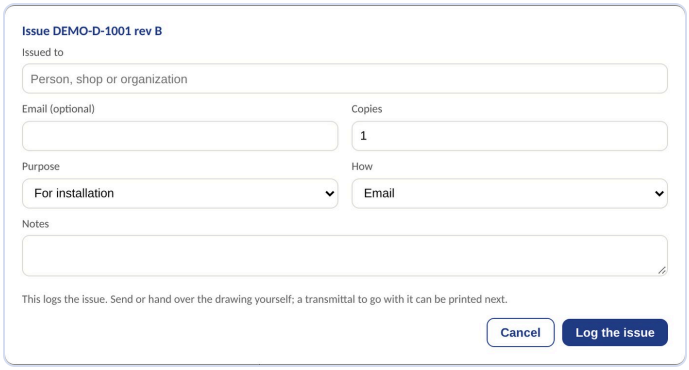
1. Open **Packages** and click **+ New package** (or **+ New package** on Home). Pick the organization if you have more than one, and give it a number, title, purpose (repair, alteration, STC ...), and the aircraft or type and repair / alteration it belongs to.
2. Add **released drawings** (at their released revision) and **supporting documents** (weight and balance, test procedure, ICA ...), then a drawing approver clicks **Release (signing PIN)**. Every drawing in it must be released.
3. To change a released package, click **Revise**: a new package revision starts as a draft. **Print index** prints the contents list.



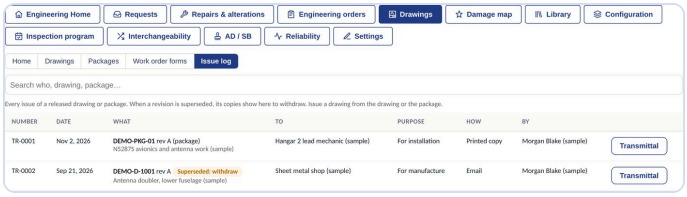
DEMO-PKG-01 rev A: two drawings and a document, released.

9 Issue a drawing or package ENGINEER

1. On a released revision or package, click **Issue...**. Say who it goes to, the purpose (for installation, manufacture, approval, to the customer or the FAA ...), how (email, printed copy, portal, by hand) and how many copies.
2. **Log the issue** records it in the **Issue log** with a transmittal number (TR-...). Print the transmittal to go with the drawings; sending or handing them over is up to you.
3. The Issue log shows what went to whom, and when a revision is superseded its issued copies are marked **Superseded: withdraw**, so they can be called back.



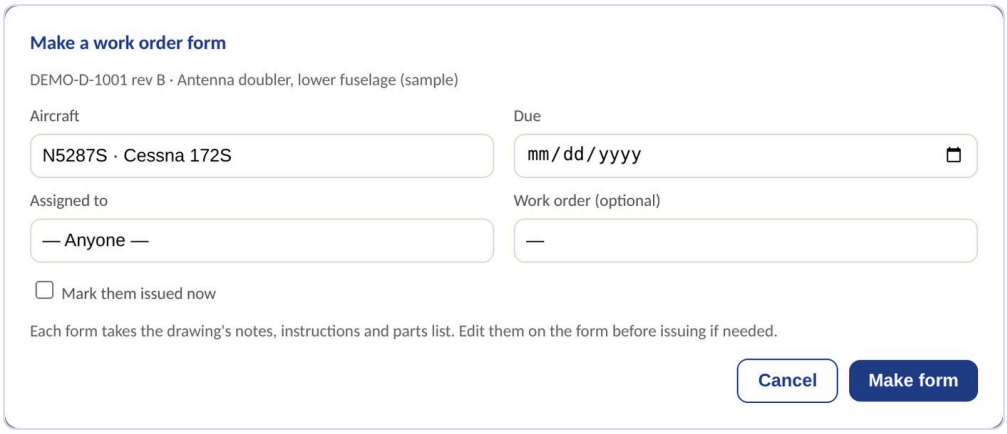
Issuing DEMO-D-1001 rev B.



The Issue log.

10 Make work order forms ENGINEER

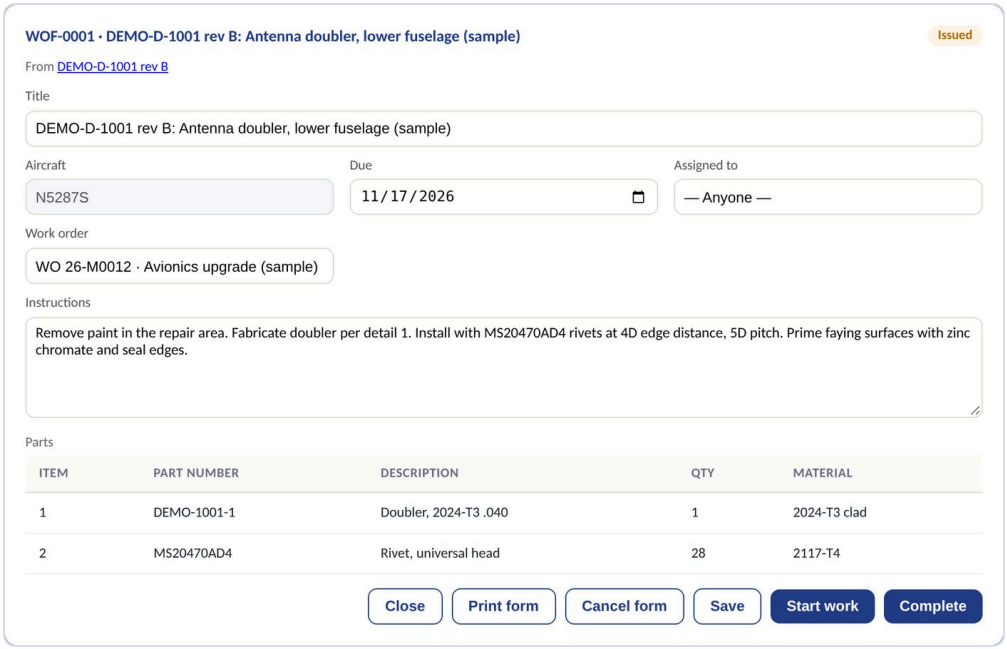
1. On a released revision, click **Make work order form**; on a released package, **Make work order forms** makes one per drawing.
2. Pick the **aircraft**, **due date**, who it's **assigned to** and, if you like, the **work order** it belongs to. Tick **Mark them issued now** to hand them straight to the shop.
3. Each form takes the drawing's notes, instructions and parts list. Edit them on the form before issuing if this job needs something different.



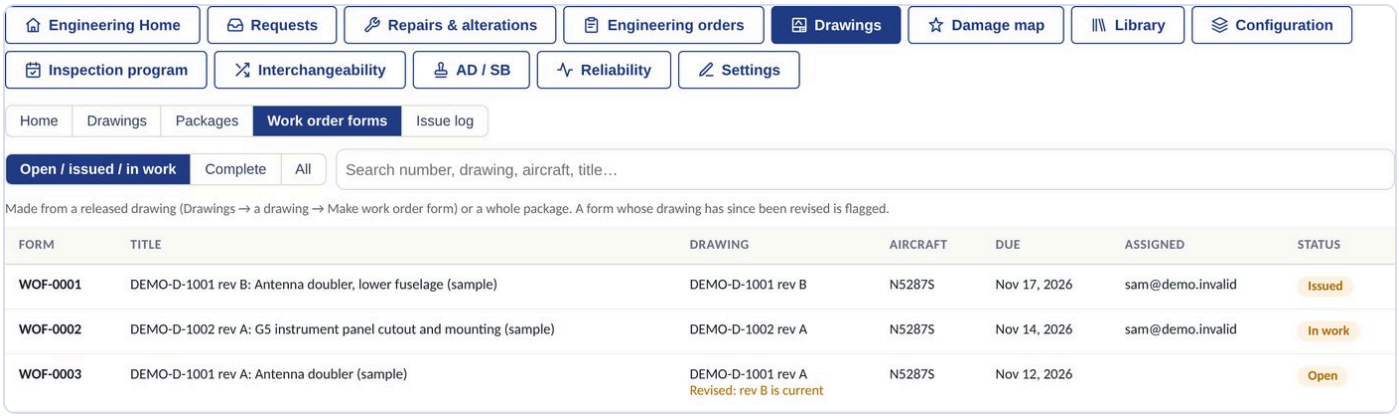
A work order form from DEMO-D-1001 rev B for N5287S.

11 Work and complete a work order form MECHANIC OR ENGINEER

1. Open **Work order forms** (or a row under **Work order forms due** on Home). A form goes **Open → Issued → In work → Complete**.
2. **Print form** prints it for the shop floor with the instructions, parts and signature lines. **Start work** marks it in work; **Complete** records who finished it and when, with a note.
3. A form made from a revision that has since been superseded says so, on screen and on the printout, so it can be cancelled or remade from the released one.



WOF-0001, issued, linked to work order 26-M0012.



The Work order forms list.

ON THE PHONE In the MRO Tracker Admin app (iPhone and Android), **Engineering → More → Drawings and packages** shows the released drawings and packages to open and read: handy at the aircraft. Adding, signing and issuing are on the website.

Good to know. Reading a drawing uses AI pages from your license, like the other "read it for me" features. It fills in fields for you to check; it doesn't approve anything. The signatures (drawn, checked, approved) are the record: each one is checked on the server and needs the signer's own PIN; only the organization's drawing checkers can check and only its drawing approvers can approve; and the same person can't draw and check, or check and approve, the same revision. Avistrata keeps and controls your drawings; whether a drawing is approved data for a repair or alteration is decided under your own procedures and the FAA's rules.

Setting up drawings for your shop?

Call us and we'll load your first drawings with you and set up your engineers, checkers and approvers.

Avistrata support
703.520.5040
mrotracker.com

More detail: the in-app Help (the ? icon) and user guide 8, Engineering and Technical Services. The organization, people, aircraft and drawings shown are fictional samples. Screens may differ slightly in your version. © 2026 Leesburg Aviation LLC. All rights reserved.