



Power BI setup guide

Connect MRO Tracker to Power BI and Excel

For organization admins and report builders · MRO Tracker 2.2

MRO Tracker gives your organization **report-ready data** for Power BI and Excel: aircraft and availability, maintenance due, squawks, work orders, labor, flights, invoices and stock. A **reporting key** lets your reports refresh on their own, on your schedule, with no database access and no gateway. A reporting key can only **read**; it can never change anything in MRO Tracker.

Setup takes about 15 minutes. An organization admin creates the key once. Whoever builds the reports then adds the tables in Power BI Desktop and publishes them.

ORG ADMIN · ONCE

1. Create a reporting key

In MRO Tracker: Admin
→ Users → API Partners.

REPORT BUILDER

2. Add the tables

In Power BI Desktop:
one small query per table.

REPORT BUILDER

3. Publish and refresh

In the Power BI service:
Anonymous credentials
and a refresh schedule.

OPTIONAL

4. Excel

The same queries in
Excel's Power Query.

Before you start

- **An organization admin in MRO Tracker** to create the key (step 1).
- **Power BI Desktop** (free, Windows) to build the reports, and a Power BI license that lets you publish and share them (usually Pro) for step 3.
- **What the key sees.** The key reads your organization and its sub-organizations, and sees exactly what the admin who set it up can see in MRO Tracker.

1 Create a reporting key ORG ADMIN

1. Sign in to MRO Tracker at <https://login.mrotracker.com>.
2. Open **Admin → Users → API Partners**. Organization admins go straight to **Reporting keys**. Super admins click **Reporting keys (Power BI)** at the top of API Partners.
3. If you're admin of more than one organization, pick the organization.
4. Type what the key is for, for example *Power BI – fleet dashboard*, and click **Create reporting key**.
5. Click **Copy** and keep the key somewhere safe, such as your password manager. **It's shown only once.** If you lose it, create a new one and revoke the old one.

Treat the key like a password. Anyone who has it can read this organization's report data. Give it only to the people who build the reports. To stop a key, click **Revoke** next to it; reports using it stop refreshing within about a minute. Every key you create or revoke goes to the Audit Log.

What a key can read

Table (resource)	What's in it
rpt_aircraft	One row per aircraft: make, model, serial, base, owner, status, availability (Available / Down / AOG), hours, landings, in service.
rpt_maintenance_due	Active maintenance items: type, intervals, last done, next due date / hours / cycles, remaining, status (OK / Coming due / Overdue / Not set).
rpt_squawks	Squawks and discrepancies: reported on and by, grounding, deferred, status (Open / Deferred / Closed), closed on, days open.
rpt_work_orders	Work orders: aircraft, customer, status, opened / closed, days open, clocked hours, labor / parts / total invoiced in your base currency.
rpt_labor	Clock-ins on task cards: date, person (name only), work order, task card, ATA, hours, customer work (yes/no).
rpt_flights	Flight log, plus bookings without a flight log entry: PIC, rule, customer, planned and actual times, block and flight hours, landings, from / to.
rpt_invoices	Invoices: customer, source, issue and due dates, status, totals, paid, balance, base-currency totals, labor / parts, days overdue, aging bucket.
rpt_stock	Stock: part, condition, serial / batch, location, quantity, unit cost, value, certificate, shelf life, status.

People appear by name only, never with an email or phone number. No payment links, signatures or file locations are included. Stock of export-controlled parts (ITAR / EAR) is left out unless an admin ticks *Include export-controlled parts* in the Reporting keys window.

2 Add the tables in Power BI Desktop REPORT BUILDER

a. Add the key as a parameter

1. In Power BI Desktop, click **Home** → **Transform data** to open Power Query.
2. Click **Manage Parameters** → **New Parameter**. Name it `ApiKey`, set Type to **Text**, paste your key as the Current Value, and click **OK**.

b. Add the reader function (once)

1. Click **New Source** → **Blank Query**, then **Advanced Editor**.
2. Replace everything with the code below and click **Done**.
3. Rename the query to `MroTable`. It reads every page of a table, 500 rows at a time.

```
(resource as text, optional filters as record) as table =>
let
    BaseUrl = "https://login.mrotracker.com/api/v1",
    Extra = if filters = null then [] else filters,
    GetPage = (offset as number) =>
        Json.Document(Web.Contents(BaseUrl, [
            RelativePath = resource,
            Query = Record.Combine([limit = "500", offset = Text.From(offset)], Extra)),
            Headers = [{"X-API-Key" = ApiKey}])),
    Pages = List.Generate(
        () => GetPage(0),
        each _ <> null,
        each if _[meta][next_offset] = null then null else GetPage(_[meta][next_offset]),
        each _[data]),
    Rows = List.Combine(Pages)
in
    Table.FromRecords(Rows, null, MissingField.UseNull)
```

c. Add one query per table

1. Click **New Source → Blank Query**. In the formula bar, type `= MroTable("rpt_aircraft")` and press Enter.
2. Rename the query, for example to *Aircraft*, and set the column types (dates, numbers) as usual.
3. Repeat for each table you need, for example `= MroTable("rpt_work_orders")`.
4. The first time, Power BI asks how to connect to `login.mrotracker.com`. Choose **Anonymous** at the level `https://login.mrotracker.com/api/v1`, then click **Connect**. The key travels in the `X-API-Key` header, so no sign-in is needed. If it asks for a privacy level, choose **Organizational**.
5. Click **Close & Apply**.

Only the history you need. Large tables refresh faster with a filter, given as a record:

```
= MroTable("rpt_flights", [flight_date = "gte:2025-01-01"])
```

```
= MroTable("rpt_invoices", [updated_since = "2026-01-01T00:00:00Z"])
```

Filters take `field = "op:value"`, where `op` is one of `eq`, `neq`, `gt`, `gte`, `lt`, `lte`, `like`, `in`, `is`.
`updated_since` works on every table except `rpt_aircraft`.

d. Relationships

From	To	Column
Maintenance due, Squawks, Work orders, Labor, Flights, Invoices	Aircraft	aircraft_id
Labor, Invoices	Work orders	work_order_id
Work orders, Labor, Flights, Invoices	A Customer table (optional)	customer_id

Add a Date table, mark it as the date table, and relate it to the date you report on, such as *opened_on*, *work_date*, *flight_date* or *issue_date*.

3 Publish and refresh on a schedule REPORT BUILDER

1. In Power BI Desktop, click **Publish** and pick the workspace.
2. In the Power BI service, open the workspace and find the semantic model (dataset). Click **...** → **Settings**.

- Under **Data source credentials**, click **Edit credentials** for `login.mrotracker.com`. Choose **Anonymous**, set the privacy level to **Organizational**, tick **Skip test connection**, and click **Sign in**.
- Under **Refresh**, turn on scheduled refresh, choose how often and when, and click **Apply**. No gateway is needed.
- Click **Refresh now** once to check it works.

Why "Skip test connection"? The test calls the address without your key, and MRO Tracker refuses calls without a key. The real refresh sends the key and works. Also keep the key in the `X-API-Key` header as in the code above, not an `Authorization` header.

4 Excel (optional)

Excel for Windows uses the same Power Query:

- Click **Data → Get Data → From Other Sources → Blank Query**.
- Add the `ApiKey` parameter, the `MroTable` function and one query per table, as in step 2.
- Click **Close & Load**. To update the data, click **Data → Refresh All**.

If something goes wrong

What you see	What to do
401 "Unknown API key" or "has been revoked"	Check the <code>ApiKey</code> parameter has the whole key, starting with <code>mrot_</code> . If the key was revoked, create a new one.
403 "This key may not read ..."	Use one of the eight <code>rpt_</code> tables. Reporting keys can't read anything else.
400 "Can't filter ... by ..."	That column can't be used as a filter. Filter in Power Query after loading instead.
429 "More than 120 requests this minute"	Too many refreshes at once. Wait a minute and refresh again, or stagger refresh times.
Refresh fails in the service, but works in Desktop	Set the credentials to Anonymous with Skip test connection ticked (step 3).
A table is empty or missing records	The key sees what the admin who set it up sees. Ask an admin to check that person's access, or which organization the key belongs to.

Security and data

- Read-only.** A reporting key can only read the eight report tables, never change or delete anything.
- Your organization only.** Every request is limited to your organization and its sub-organizations. MRO Tracker's own access rules apply exactly as in the app.
- Logged and limited.** Every request is logged, and each organization can make up to 120 requests a minute.
- Sharing files.** The key is saved in the Power BI file. Share the published report, not the .pbix file, with people who shouldn't have the key.

Need help? Email support@mrotracker.com and we'll help you connect. · www.mrotracker.com

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