



A better way
to track parts & labor



An Explanation for Excel Users

If you consider yourself a “Power User” or at least very fluent in using Excel®, this analogy/explanation *may* be very insightful as it delves into the technical *features*. But if not, please refer to the *benefits* documents.

For people who are comfortable with “Rows and Columns” of an Excel spreadsheet:

- Think of TSO as ‘an Excel spreadsheet’, on Steroids
- Every Part taken, or Labor entry made is a Row on this spreadsheet
- Columns include “P/L (is this row for a “Part” or ”Labor””, Tail#, SN, Tech, DateTime, PN, Cost, free-form description, and links to pictures attached to that row/entry
 - Rows for physical ‘Parts’ are imported into TSO as they come in the door by the Purchase Order screen and are immediately tagged with a unique barcoded label and “SKU ID#”,
 - This bar coded label identifies everything about that Part:
 - Mfr PN
 - Individual Serial Numbers (if applicable)
 - Vendor
 - PO
 - Price/Cost
 - Description
 - This bar coded label is scanned as the Tech takes it out of the parts room, and in under 10 seconds they also scan their Employee ID, the Tail # - and the Parts row is added.
 - Labor is much like a “Part” on this spreadsheet, It is coded as ‘L’ in the P/L column on that Row, but is otherwise much like any other Row.
 - Rows for Labor can have a Part Number be the generic PN called “Squawk” or “Clock In” which uses the Memo/Description column to describe the detail of the work done.
 - Or you can define a list of labor PNs that categorically describe pre-defined labor tasks, like “Oil Chg”, “IFR Check”, “TopOverhaul”, etc., in addition to the Memo/Description of specific time spent there in.
 - This allows you to track “*What did we spend time on?*” by looking at Labor ‘Part Numbers’
 - Furthermore, Labor can be added either of two ways
 - Just like the ‘scan as you go by’ way that parts are tracked via bar code coming out of the parts room, Tech’s scan this “Labor PN” just as easily.
 - The American Bonanza Society uses the “Speech-to-Text” function built into the phone’s email at their Service Clinics so Techs literally just talk into their phones as they send an eMail to the TSO computer, optionally attaching picture(s) to the email that will be included in the final Report for that plane.

So, like a ‘hub and spokes’:

- Part and Labor transactions are added into this spreadsheet in any of many ways (cell phone, PC, bar code scanner, even from an Outlook email)
- This goes into this ‘central repository’ that we are modeling as a ‘spreadsheet’



- Now, just ‘slice and dice’ this data in any way you want for
 - Pilot dossier report (what is given to Pilots at the end of the ABS Service Clinic)
 - In a for-profit shop, this is your formal “What your plane needs repaired” report, before you begin any work on the plane.
 - A “Parts list used to fix your plane “ for the customer when billing for their Annual, etc
 - ‘Rows’ are filtered by “Tail# = N78HF and PL = ‘P’ (‘P’ for Parts)
 - Report can be printed with Cost for you, and Price for the customer
 - This includes EVERY screw, wire, fastener, bulb and circuit breaker
 - Since Techs just scan the barcode as they walk out the parts room, you should be able to track-and-bill every cotter pin, circuit breaker, etc. ever taken.
 - Besides a static “Qty on Hand”, every Inventory item displays a grid of “When we received these pieces” as well as “the scans that removed this part for an airplane” to see the ‘story behind the qty’, not just a number.
 - This is invaluable for A/Ds and Recalls: If Part Number ABC for SNs between 100 and 500 are recalled, you can find which planes used these affected parts within 2 minutes.
 - Similarly a ‘time spent’ for hours billable for each job, These are the ‘L’ (abor) rows in the spreadsheet model
 - ‘Rows’ are filtered by “Tail# = N78HF and PL = ‘L’ (‘L’ for Labor)
 - And if you want, you can even document your Labor issues by industry standard ATA code numbers, or a numbering scheme of your own for ‘Labor Part Numbers”
 - Payroll reports
 - Simply re-sort the rows by Employee ID instead of Tail #, and you have all that person’s time

And of course, TSO formats all of this for you, it doesn’t just leave it in Excel format.

Notably, you *can* also Export this data into Excel spreadsheets, for either further DIY manipulation and analysis, or to use the powerful graphing tools in Excel



The *American Bonanza Society* and *Continental Motors* use TSO to document Service Clinic findings.

Scan the QR code to see videos, sample reports, and more

