

# Seradex White Paper

*A Discussion of Issues in the Manufacturing OrderStream*

## **Part Numbering**

The foundation of any manufacturing system is part numbers. Yet typically, very little thought is put into setting up a part numbering system. Every purchase order, inventory transaction, sales order, invoice and all your bills of material are composed of part numbers so it makes sense to put some thought into your system.

Basically, part numbering philosophy is split into two camps. One says use non significant digits, i.e. start at 1000, then 1001 and keep going until all parts have a number. This results in fewer digits and fewer digits means faster entry. They also point out that the more digits, the higher the opportunity for transcription error. They make the argument that modern computer systems can search on partial letters in the description and this is how you can locate the number you want. They also point out that every phone number in North America can be described in 10 digits

The second camp figures that the part number should describe the part as much as possible and they recommend something like PIPE-3/8-4ft for a part number. They argue that by looking at the part number you can tell what the part is.

So who is right?

I've tried it both ways and they both have their drawbacks. The major drawback of the first system is that similar components are not grouped together so you can have screws that have part numbers 1001, 5049 and 8978. With the second system you will inevitably run into problems, as

descriptive details require long part numbers. As well, it is difficult to maintain consistent numbers when many people are adding part numbers.

So what is the answer?

I recommend you combine both. Start off with 2 to 4 alpha characters that represent the category code and then go none significant. For example PI001 could be a pipe - 3/8 - 4 ft.

Just as important but frequently overlooked are the naming conventions for item descriptions. The simple rule to follow here is to put the most significant component of the description first. Here are a few examples:

- Screw, 3/8, Stainless  
Not
- 3/8 Stainless Screw.

When you sort on description, all the screws will be grouped together.

- Angle - 1.50 x 1.00 x 0.125  
Not
- 1.50 x 1.00 x 0.125 - Angle

## The process I use is as follows:

- 1) Export all part numbers and descriptions into a spreadsheet
- 2) Clean up your item descriptions. Use proper case - it is easier to read on documents  
i.e. Stainless Steel Pipe not STAINLESS STEEL PIPE
- 3) Sort on the description field
- 4) Add a new column for new part numbers
- 5) Break up logical groups of parts into categories. A category should have no more than 50 - 150 items. If it has more items, use sub categories.
- 6) Create a 2 to 4 digit code for each category
- 7) Begin at the first row of a category and enter the category code along with 005. For example AB005. Enter the second field and input AB010.
- 8) In Excel you can now highlight the two fields, grab the bottom right corner of the outline and drag down to the end of the category. The result will be part numbers in sequence.
- 9) Now examine the range of the suffix. If you have 005 up to 095 you could either redo the operation with a two digit suffix or expand the range from 5 to 20 and you would get something like AB020, AB040 etc.
- 10) The idea of the gaps is to allow you to add new items in the future and maintain the sort on descriptions in alphabetical order. Revamping Part Numbers
- 11) Repeat this for all categories. When you are finished all the categories import these numbers back into your system.

I generally get very little enthusiasm for renumbering parts. But using this system a data entry clerk can produce about 500 part numbers / day from scratch. If you have already begun the exercise, you may be able to salvage many descriptions with only minor touchup. It doesn't take too long and provides a quick payback.

What are the advantages of this system?

Using the "type ahead" feature found in most modern data bases like Microsoft Access, you need to type only 2 characters to get close to the part you are looking for. As you scan the list it is easy to quickly find your particular part because the list is sorted alphabetically on the description e.g. type PI you would get the following list:

Item	Description	Category Code	Category
PI05	Pipe - 0.50" Schedule 40 Alum 6063 - T5	PI	Pipe
PI10	Pipe - 0.75" Schedule 40 Alum 6063 - T5	PI	Pipe
PI15	Pipe - 1.00" Schedule 40 Alum 6063 - T5	PI	Pipe
PI20	Pipe - 1.25" Schedule 40 Alum 6063 - T5	PI	Pipe
PI25	Pipe - 1.25" Schedule 80 Alum 6063 - T5	PI	Pipe
PI30	Pipe - 1.50" Schedule 40 Alum 6061 - T6	PI	Pipe
PI35	Pipe - 1.50" Schedule 40 Alum 6063 - T5	PI	Pipe

By the way, the above list comes from a customer who has 5000 part numbers and yet with two keystrokes I have zeroed in the parts I am looking for.

Note: If I need to add another 1.00" pipe I can use the item number PI16. Leave the gaps according to the likelihood that you will add more items. If 2 number digits are inadequate, then go to 4 or 5 as necessary. I.e. PI0005.

## Vendor Part Numbers

Should you adopt the vendor part number as your own part number?

No, and for these reasons:

- 1) The computer can include the vendor part number cross reference between the vendor part number and your own.
- 2) The vendors numbering system may have all the problems you are trying to eliminate.
- 3) It is hard to adapt your vendor's part numbers to your own system.
- 4) You may switch to a different vendor or the vendor may go out of business and you want to avoid changing all your documentation.
- 5) Your vendor may hire me and I may revamp all their part numbers.

## Part Numbers and Drawing Numbers

The part number and the drawing number serve different purposes. The part number is the unique identifier of the item, while the drawing number leads you to the visual aid for making the item. If the drawing number and the part number are the same, you run into many new problems. Use separate numbering schemes for the following reasons:

- 1) Shorter part numbers.
- 2) Fewer bill of material errors.
- 3) Fewer drawings - one drawing number can relate to many part numbers.
- 4) New part numbers don't require a new drawing.
- 5) Drawing revisions don't require new part numbers to be issued

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