PERCENT DEFECTIVE PLOT

PURPOSE
Generates a subsample percent defective versus subsample index plot.

DESCRIPTION
The subsample percent defective index is the percent defective of the data in the subsample. The percent defective plot is used to answer the question: "Does the subsample percent defective index change over different subsamples?" The plot consists of:

- Vertical axis = subsample percent defective index;
- Horizontal axis = subsample index.

In addition, a horizontal line is drawn representing the full sample percent defective value. The appearance of the 2 traces is controlled by the first 2 settings of the LINES, CHARACTERS, SPIKES, BARS, and similar attributes.

SYNTAX
PERCENT DEFECTIVE PLOT <y> <x> <SUBSET/EXCEPT/FOR qualification>
where <y> is the response (= dependent) variable;
<x> is the subsample identifier variable (this variable appears on the horizontal axis);
and where the <SUBSET/EXCEPT/FOR qualification> is optional.

EXAMPLES
PERCENT DEFECTIVE PLOT Y X
PERCENT DEFECTIVE PLOT Y X SUBSET X > 6

NOTE 1
The percent defective computes the number of defectives for a variable (i.e., the number of values that fall outside of some user specified tolerance limits) and expresses it as a percentage.

NOTE 2
The upper and lower specification limits must be specified by the user as follows:

```
LET USL = <value>
LET LSL = <value>
```

DEFAULT
None

SYNONYMS
None

RELATED COMMANDS

CHARACTERS = Sets the type for plot characters.
LINES = Sets the type for plot lines.
CP PLOT = Generates a Cp plot.
CPK PLOT = Generates a CpK plot.
EXPECTED LOSS PLOT = Generates an expected loss plot.
CAPABILITY ANALYSIS = Performs a capability analysis.
BOX PLOT = Generates a box plot.
XBAR CHART = Generates an xbar control chart.
PLOT = Generates a data or function plot.

APPLICATIONS
Quality Control

IMPLEMENTATION DATE
93/10
PROGRAM
SKIP 25
READ GEAR.DAT DIAMETER BATCH

TITLE CASE ASIS
LABEL CASE ASIS
TITLE Gear Diameter Analysis
Y1LABEL PERCENT DEFECTIVE
X1LABEL Batch
LEGEND 1 Process Capability
LEGEND 2 PERCENT DEFECTIVE Plot
XTIC OFFSET 0.5 0.5
YTIC OFFSET 2.0 2.0
CHARACTER CIRCLE BLANK
CHARACTER FILL ON
CHARACTER SIZE 1.2
SPIKE ON
SPIKE DOTTED
LINE BLANK SOLID

LET LSL = 0.99
LET USL = 1.01

PERCENT DEFECTIVE PLOT DIAMETER BATCH

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Gear Diameter Analysis

- Process Capability
- Percent Defective Plot

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Batch

PERCENT DEFECTIVE

0 5 10 15 20 25 30

1 2 3 4 5 6 7 8 9 10