

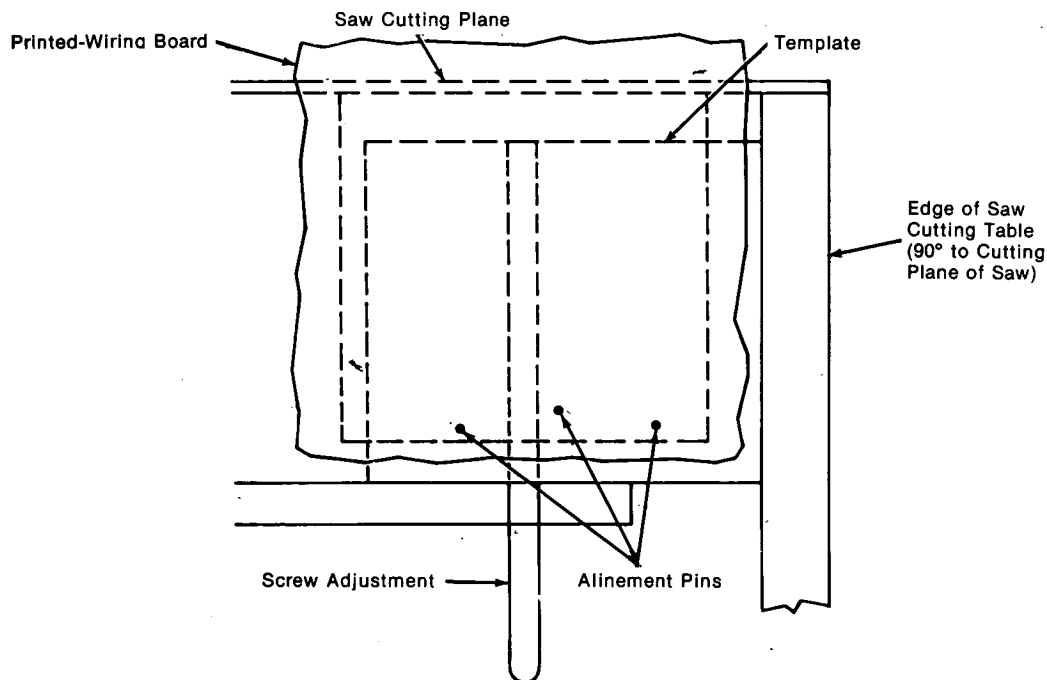
NASA TECH BRIEF

Langley Research Center



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Alignment Fixture for Precision Cutting of Printed-Wiring Boards



Alignment Fixture for Precision Cutting of Printed-Wiring Boards

Alignment fixtures are being used at Langley Research Center in preparing printed-wiring boards for use in flight packages. The boards must be cut to extremely close tolerances: Borders must be square, and the top and bottom edges must be parallel to the board connector or card edge fingers. This is necessary so that the boards will slide into slots machined in the case of the flight package and align the mating connectors precisely, so as not to damage the connector pins.

Six alignment templates are presently being used to trim-cut the majority of the boards fabricated at Langley. Their use has reduced considerably the time required for the cutting operation and has also

reduced a high rejection rate of cut boards to near zero.

The printed-wiring board is prepared for cutting by drilling out three of the connector pin mounting holes which match the three alignment pins on the template (steel plate). The board can also be prepared by laying out three points on the master artwork which align with the template pins and then drilling these points. The board and template are positioned in the saw (see figure), where the template automatically positions the board for two finish cuts as the saw carriage is moved to a preset point on its digital readout. After these cuts are made, the template is removed; and the opposite cuts are made after again positioning the saw carriage as indicated by the digital readout.

(continued overleaf)

Note:

No further documentation is available. Specific questions, however, may be directed to:

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Reference: B74-10290

Patent status:

Inquiries concerning rights for the commercial use of this invention should be addressed to:

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