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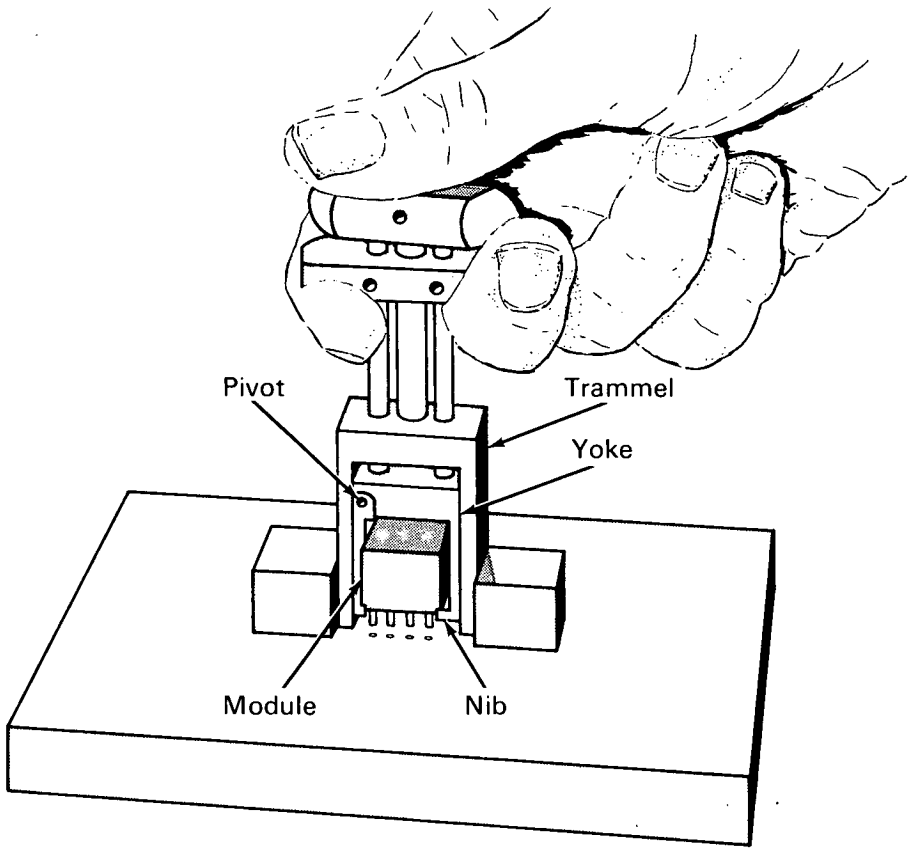
NASA TECH BRIEF

Handtool Facilitates Extraction of Circuit Modules



The problem: Electronic modules held down by contact pins in circuit board sockets are difficult to remove for testing or replacement. In order to avoid bending the pins and damaging the circuit board, a module must be extracted with a uniformly applied force in line with the pins.

The solution: A compact handtool designed for use on modules that have four small notches cut into the base of the plastic housing.

How it's done: The tool incorporates a U-shaped yoke with a hinged arm. Four nibs at the base of the yoke are designed to engage the notches in the base of the module housing. The upper part of the yoke is secured to two pins that extend through mating holes in a trammel. When the handtool is placed over a module on a circuit board, with the nibs engaging the notches in the base of the module, a pull applied to the finger

(continued overleaf)

grip draws up the yoke, which easily and quickly extracts the module connector pins from their sockets.

Notes:

1. This tool can be modified for use in extracting electronic tubes and components of similar configuration.
2. Inquiries concerning this invention may be directed to:

   Technology Utilization Officer
   Langley Research Center
   Langley Station
   Hampton, Virginia, 23365
   Reference: B65-10231

Patent status: NASA encourages the immediate commercial use of this invention. Inquiries about obtaining rights for its commercial use may be made to NASA, Code AGP, Washington, D.C., 20546.

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