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## DEUTSCH Crimp Tool HDT-48-00 & DANIELS Crimp Tool AF8 M22520/1-01 Maintenance and Lubrication Guide

This guide provides the information required for basic maintenance of the DEUTSCH Crimp Tool HDT-48-00 and & DANIELS Crimp Tool AF8 M22520/1-01 (these tools are functionally identical for maintenance purposes) as modified by C. Davis Systems & Software, LLC's (CDSS) for use in our GWT and LC lines of Crimping Machines.

NOTE: the DEUTSCH Crimp Tool HDT-48-00 & DANIELS Crimp Tool AF8 M22520/1-01 are hand tools modified by CDSS for use in our various automated Crimping Machines. Although the tool was designed to be 'maintenance free,' the extremely high cycle counts and throughput of automated crimping in our customer's various wire processing applications necessitate periodic maintenance, especially cleaning and lubrication.

We recommend Krytox GPL 206 Grease for all Crimp Tool lubrication. Krytox is stable at high temperatures, chemically inert, insoluble in most common solvents, non-flammable, and compatible with plastics, metal, rubber and ceramics.



### Step 1: Disassembly & Cleaning of the Deutsch HDT-48-00

To disassemble the DEUTSCH HDT-48-00 or DANIELS AF8 M22520/1-01, you will first need to remove it from the crimp head itself. Start by removing the funnel jaws: first remove the Funnel Jaw Strap (or shoulder-bolts on some models), and then lift the jaw assemblies off of their dowel pins. Then remove the 4 Torx bolts which hold the Positioner Body to the Indenter Housing with a T10 Torx tool, and CAREFULLY remove the Positioner Body (and Positioner Insert on some models) from the back of the Crimp tool being careful not to damage the delicate tip of the Positioner. LEAVE THE 4 TORX BOLTS IN THE INDENTER HOUSING. Then remove the two socket head bolts that secure the crimp tool to the Crimp Head's mounting plate (some models will have an adapter plate or shim between the Deutech Crimp tool and the Mounting Plate, for these, carefully note the location and orientation of this part for ease of later reassembly. Some models will also require detaching the pneumatic cylinder clevis from the Lever Arm.

At this point the Crimp Tool should be detached from the Crimp Head. Now remove the 4 Torx bolts from the Indenter Housing. With the Torx Bolts removed, the Crimp Tool should easily come apart. BE CAREFUL TO NOTE THE ORIENTATION OF THE INDENTOR CAM LOBES, THE MACHINED SLOT IN THE INDENTER HOUSING AND THE ORIENTATION OF THE LEVER ARM IN RELATION TO THEM PRIOR TO DISSASSMBLY. For the purposes of basic maintenance, the Crimp Tool is completely disassembled:



NOTE: the cylindrical part circled in **blue** is the CDSS Positioner Body, which is attached to the Indenter Housing by the 4 Torx Bolts. The Two cylinders circled in **red** are the CDSS Retention Bushings, which securely attach and precisely align the Crimp Tool body to the Mounting Plate.

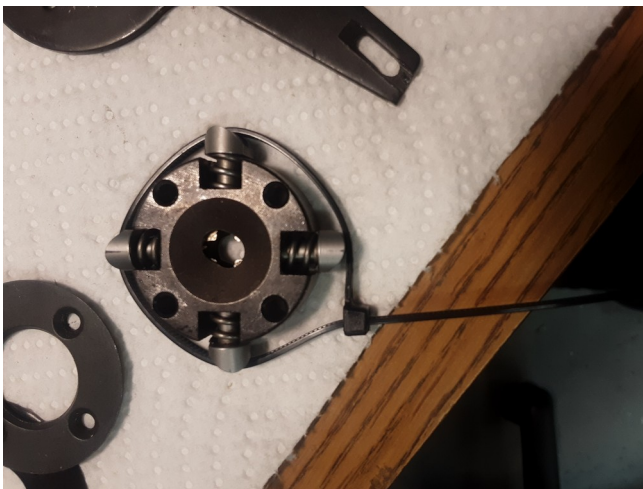
## Step 2: Cleaning and Lubrication of the DEUTSCH HDT-48-00 & DANIELS AF8 M22520/1-01

Carefully clean all the various components, paying special attention to the Lever Arm, Indenter Housing, Indenters and Springs and the various shim plates, using a solvent like rubbing alcohol alcohol being sure to remove all old grease, and any debris or particulate. Be especially sure to carefully clean the passages in the Indenter Housing and the cam grooves on the Lever Arm. Compressed air is especially good for this task. You should also examine all components for wear -- excessive wear to the Indentors or cams will result in out-of-spec crimps. These parts cannot be repaired -- if excessively worn the, crimp tool must be replaced. However, regular cleaning and lubrication will greatly extend the life of the crimp tool.

When you have finished cleaning the components, reassemble the Indenters and Springs in the Indenter Housing, WITH CARE TO RETURN THE INDENTER CAM LOBES AND THE MACHINED SLOT TO THE CORRECT ORIENTATION. You are now ready to reinstall the Indenter assembly in the Lever Arm.



Reinstalling the Indenter assembly in the Lever Arm is tricky as the Indenter's Cam lobes must be correctly oriented and the springs must all be simultaneously compressed. We have found that the best way to accomplish this tricky operation is to compress the assembly (taking care to preserve cam lobe orientation) with a zip tie, and then insert it into the Lever Arm compressed:



After the Indenter Assembly is reinstalled in the lever arm, reinstall the Indenter Housing Plates on both sides of the assembly:



The DEUTSCH HDT-48-00 or DANIELS AF8 M22520/1-01 Crimp Tool assembly is now ready for lubrication. Apply fresh Krytox Grease to the Indenter cams, the Indenter springs, and the body of the Indenter Housing:



### Step 3: Reassembly of the DEUTSCH HDT-48-00 or DANIELS AF8 M22520/1-01 Crimp Tool

After completing cleaning and lubrication, you are ready to Reassemble the Crimp Tool. Reassembly of the tool is moderately difficult, and requires care and a steady hand.

First, place the Shims back on the Lever Arm and Indenter Assembly, one on each side. Note the orientation of the cutout on the shim which interfaces with a pin in the Crimp Tool's Body. Apply a thin bead of Krytox Grease to the Shims on both sides -- this will aid in re-installation by making the shim stick to the Indenter Assembly, and also will help lubricate the tool in use:



Carefully keeping the shims aligned, insert the assembly into the Crimp Tool's Body. You can temporarily insert the Torx Bolts BACKWARDS through the assembly to help keep it aligned during insertion:



After you have the Arm/Indenter assembly in the Tool body, rotate the arm and insert the Ratchet Arm which is attached to the Lever Arm into the Ratchet Pawl assembly attached to the Tool Body.

Now, carefully insert Crimp Depth Arm by sliding it between the Arm/Indenter Assembly and the Tool Body on the side of the tool with the Crimp Depth Gauge. While sliding the Depth Arm into place you must hook the Depth Gauge Spring into the recess on the Crimp Depth Arm:



At this point the Tool should be largely assembled, with alignment and orientation held by the Torx Bolts. You can now reinstall the Faceplate in front of the Indenter Housing and reverse the Torx Screws to their proper alignment:



Now that the tool is reassembled you can reinstall the Positioner Body and Positioner

After reassembly, cycle the crimp tool manually to confirm function. The tool should articulate freely, the ratchets should engage and disengage smoothly, and the the crimp depth selector should function as before.

**NOTE:** if the crimp tool is sticky, articulates poorly, requires excessive pressure to close or sticks in position a piece of debris may have gotten caught om the cams or springs -- disassemble and clean tool again with careful attention to debris which may be caught in the Indenters, the cams or the Indenter springs. If this occurs the tool must be disassembled, cleaned and lubricated again.

After confirming good function, re-install tool into your CDSS Automated wire termination machine and resume crimping.