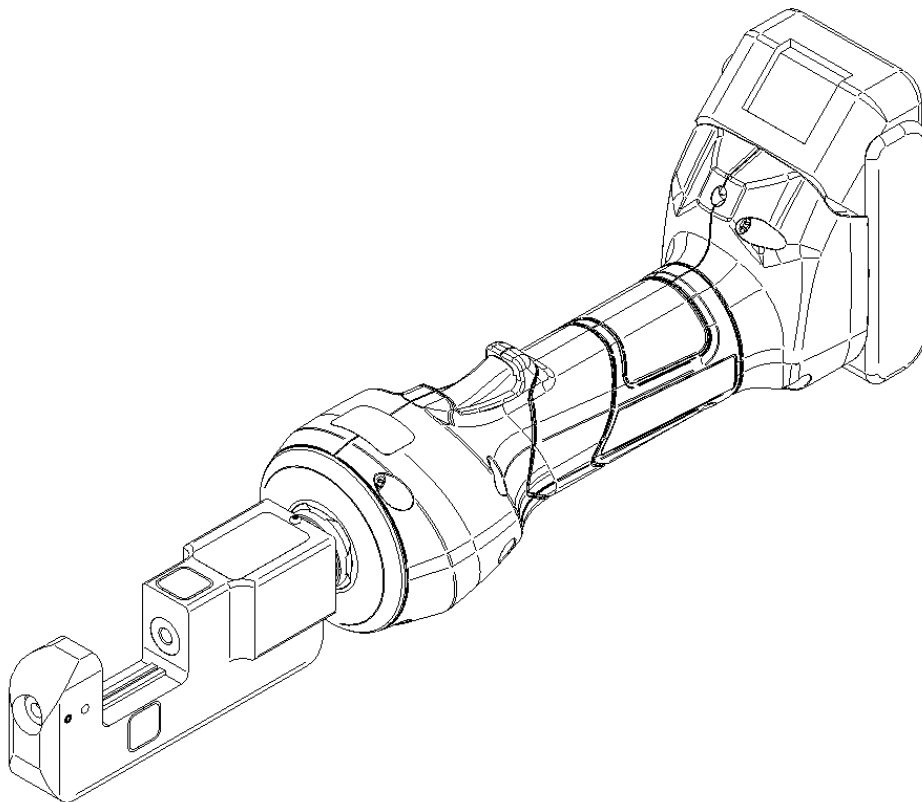


# HXE4C BATTERY POWERED CRIMP TOOL



### Description

The HXE4C Battery Powered Crimp Tool is a hand held, self contained crimp tool intended to crimp copper and aluminum cable with DMC Y dies.

### Safety

Safety is essential in the use and maintenance of DMC tools and equipment. This manual and any markings on the tool provide information for avoiding hazards and unsafe practices related to the use of this tool. Observe all of the safety information provided.

### Purpose of this Manual

This manual is intended to familiarize all personnel with the safe operation and maintenance procedures for the following DMC tool:


#### **HXE4C Battery Powered Crimp Tool**

Keep this manual available to all personnel. Replacement manuals are available upon request at no charge.

**All specifications are nominal and may change as design improvements occur. DMC shall not be liable for damages resulting from misapplication or misuse of its products.**


## ***KEEP THIS MANUAL***


### Important Safety Information


	<b>⚠ WARNING</b>
	Read and understand all of the instructions and safety information in this manual before operating or servicing this tool. Failure to observe this warning can result in severe injury or death.

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	<b>⚠ WARNING</b>
	<p>Electric shock hazard: This tool is not insulated. When using this unit near energized electrical lines, use proper personal protective equipment. Failure to observe this warning can result in severe injury or death.</p>


	<b>⚠ WARNING</b>
	<p>Wear eye protection when operating or servicing this tool. Failure to wear eye protection can result in serious eye injury from flying debris or hydraulic oil.</p>


	<b>⚠ WARNING</b>
	<p>Keep hands away from the crimping head when crimping. Failure to observe this warning can result in severe injury or death.</p>

<b>⚠ WARNING</b>
<p>Do not dispose of batteries in a fire. They will vent fumes and may explode. Failure to observe this warning can result in severe injury from harmful fumes or burns from flying debris.</p>

<b>⚠ WARNING</b>
<p>Inspect tool and dies before use. Replace any worn or damaged parts. A damaged or improperly assembled tool can break and strike nearby personnel. Failure to observe this warning can result in severe injury or death.</p>

### Important Safety Information

	<b>⚠ WARNING</b>
	<p>Skin injection hazard: Do not use hands to check for oil leaks. High pressure oil easily punctures skin causing serious injury, gangrene, or death. If injured, seek medical help immediately to remove oil.</p>

	<b>⚠ WARNING</b>
	<p>Do not use solvents or flammable liquids to clean the crimping tool. Solvents or flammable liquids could ignite and cause serious injury or property damage.</p>

<b>⚠ WARNING</b>
<p>An incomplete crimp can cause a fire.</p> <ul style="list-style-type: none"> <li>Use proper die, connector, and cable combinations. Improper combinations can result in an incomplete crimp.</li> <li>The relief valve will sound to indicate a completed crimp. If you do not hear the sound of the relief valve, the crimp is not complete.</li> </ul> <p>Failure to observe these warnings can result in severe injury or death.</p>

<b>⚠ CAUTION</b>
<ul style="list-style-type: none"> <li>Do not operate the tool without dies. Damage to the ram or crimping head can result.</li> <li>Do not operate with the crimping head open. Damage to the ram or seals can result.</li> <li>This tool is not designed for continuous use. After 100 crimping cycles, allow the crimping tool to cool for 15 minutes.</li> <li>Do not place the tool in a vise. The crimping tool is designed for hand-held operation.</li> <li>Protect the crimping tool from rain and moisture. Water will damage the crimping tool and battery.</li> <li>Use this tool for the manufacturer's intended purpose only.</li> </ul> <p>Failure to observe these precautions can result in injury or property damage.</p>

**DO NOT REMOVE TOOL HEAD**

**DO NOT OPERATE TOOL  
WITHOUT HEAD INSTALLED**

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### Important Safety Information

**⚠ CAUTION**

Do not allow anything to contact the battery terminals.

- Do not immerse the batteries in liquid. Liquid may create a short circuit and damage the battery. If batteries are immersed, contact your service center for proper handling.
- Do not place the battery into a pocket, tool pouch, or tool box with conductive objects. Conductive objects may create a short circuit and damage the battery.
- Do not place a battery on moist ground or grass. Moisture may create a short circuit and damage the battery.

Failure to observe these precautions can result in injury or property damage.

**⚠ CAUTION**

- Do not store the battery at more than 60 °C (140 °F). Damage to the battery can result.
- Do not use another manufacturer's charger. Other manufacturers' chargers may overcharge and damage the battery.
- Do not attempt to open the battery. It contains no user-serviceable parts.

Failure to observe these precautions can result in injury or property damage.

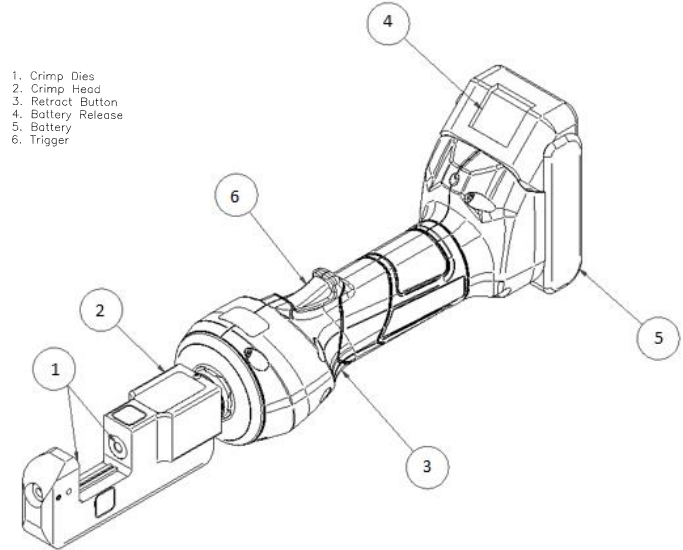
**⚠ CAUTION**

Do not perform any service or maintenance other than as described in this manual. Injury or damage to the tool may result.

Failure to observe this precaution can result in injury and property damage.

*Note: Keep all decals clean and legible, and replace when necessary.*

### Identification



### Specifications

#### Crimp Tool

Length=15.7" (399mm)  
Width=2.9" (74mm)  
Depth=4.5" (114mm)  
Mass/Weight (with battery)=3.95lb (1.79kg)  
Sound Level=75db (A) at 1 meter  
Vibration=<2.5m/s<sup>2</sup>  
Hydraulic Oil=Shell Tellus® T-15

#### Crimp Capacities

Crimp Force=1.5 tons (13kN)  
Avg. Crimp Time=2 seconds  
Avg. Crimps per Charge=Approx. 150

#### Battery

Charging Voltage=18VDC  
Charging Time=22 minutes

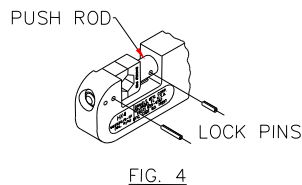
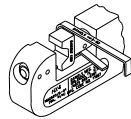
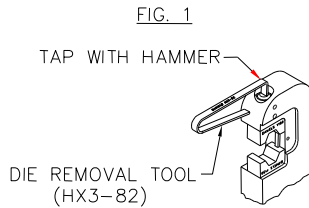
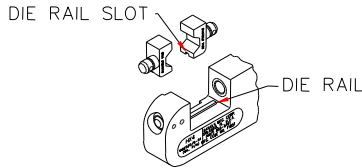
**US Pat. No. 7,254,982**

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### Operation



### Installing Dies

1. Align die rail slots in die halves with the rail in the crimp tool and push shank of dies into holes. Dies will snap into place. (See Figure 1)
2. Cycle the tool to make sure dies are properly seated. The tool is now ready for use.

### Die Removal

1. With the crimp dies open, place die removal tool against end of knockout pin and tap gently with small hammer. (See Figure 2) The die will be released from the front die holder. It can now be removed by hand.
2. Activate the tool until the movable die extends, but the tool does not cycle fully. Slide the die removal tool between the die and tool body. (See Figure 3) Press the emergency release button to retract the

tool pushrod. The die will be released and can be removed by hand.

### Permanent Die Assembly

1. Install dies in crimp tool.
2. Drive lock pins, supplied with dies, through holes and flush with outside surfaces. Long pin through tool body and short pin through push rod. (See Figure 4)

### Preparing Cable

Follow the lug/connector manufacturer's instructions for appropriate cable strip length, and contact/wire assembly.

### Crimping Cable

1. Insert the properly assembled connector into the crimping head.
2. Pull the trigger to make the crimp.
3. Hold the trigger down until crimping tool achieves pressure relief, which is accompanied by an audible "pop".
4. The crimp tool push rod retracts automatically.

### CAUTION! DO NOT OPERATE TOOL WITHOUT DIE SET IN PLACE

*Note: If it is necessary to retract the tool push rod before a crimp cycle is completed, push and hold the **Retract** button. Pushing and holding the **Retract** button will result in the complete retraction of the push rod.*

### Gaging Die sets in the tool

1. Ensure die set is properly installed in the tool
2. Remove fingers/hands/ etc. from crimping area
3. Jog the trigger by pulling and letting go quickly until the die faces are touching and will not slide on each other with moderate hand pressure.
4. Use appropriate GO/NO-GO gage for the die set to check conformance to appropriate dimensions.
5. Remove GO/NO-GO gage from die
6. Hold the trigger down until the cycle completes and the dies retract to the open position.

### Maintenance

#### Each Operating Day

Before Use:

1. Inspect dies for wear or damage such as cracks, gouges, or chips.

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- Inspect the tool for damage or leaks. If damage is detected, return the tool to the DMC repair center for inspection.

### After Use:

- Wipe all tool surfaces clean with a damp cloth and mild detergent.
- Charge the battery.
- Fully retract the tool push rod.
- Place the tool in the carrying case.
- Store in a cool dry place.

### Monthly

- Thoroughly clean all surfaces.
- Oil the push rod outer surface.

What Happens...	Signal	What it Means...
Red service LED illuminates constant for 20 seconds after	—————	Battery charge is low, Charge Battery
Red service LED flashes for 20 seconds at rate of 2Hz after a tool cycle	....	Return tool to DMC for Maintenance Service
Red service LED flashes for 20 seconds at rate of 5Hz after a tool cycle	.....	Unit is too hot, let cool for 15min and try again
Red service light illuminates, White work light illuminates and an audible tone is heard	—————	Full tool pressure was not achieved, because the operator interrupted the crimp cycle
Red service light flashes 3 times, White work light flashes 3 times and an audible tone is heard	... ...	Full tool pressure not achieved due to internal error, Return tool to DMC for Repair Service

### Annually or after 10,000 Crimps

- Return the tool to the DMC repair center for inspection & calibration.

## Trouble Shooting

### Before You Begin

- Make sure that the battery is charged. Recheck the battery after several minutes to make sure the battery is holding its charge.

- Use a nonflammable contact cleaner or pencil eraser to clean the electrical contacts on the battery and crimp tool.
- Reinstall the battery and check the tool again.

Problem	Probable Cause	Probable Remedy
Tool is inoperative	Dirt, contaminants, etc, in ram area of tool.	Clean tool.
	Crimping tool battery contacts damaged.	Reform contacts.
	Tool components worn or damaged.	Return tool to DMC.
Dies stop during operation.	Oil level is low.	Return tool to DMC.
	Air in hydraulic system.	Pull trigger and hold emergency release button simultaneously. Hold for approximately 10 seconds.
Tool loses oil.	Damaged internal seal.	Return tool to DMC.

## LED LIGHTS

### LED Work Light (White)

This LED automatically turns on when the trigger is pulled. It remains on for 10 seconds after the trigger is released.

### LED Indicator (Red)

As well as the Tool Information Display, this tool is equipped with a special circuit board incorporating several important features to inform the user about the current status of the unit. The Red LED on the side of the tool signals in the following cases:

### Pressure Sensor

This tool is equipped with a pressure sensor that alerts the user of an incomplete crimp.

- If the tool is manually retracted before completion of a crimp, the red LED and audible beep will be active for 2 seconds.
- If the tool is unable to reach the required crimp force, the red LED, work light, and an audible beep will pulse until after the trigger is released.

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### BATTERY CHARGER OPERATING INSTRUCTIONS

#### Operating Environment

The charger is designed for use in dry areas. All ventilation slots must be kept free of debris. Keep away from heat sources, and if possible, out of direct sunlight. As ambient temperatures in excess of 95°F (35°C) may increase charging times significantly.

#### AC Connection

Before connecting the charger, check that the AC supply voltage is the same as what is indicated on the charger.

#### Specifications

Frequency = 50Hz – 60Hz  
Output Voltage = 7.2 – 18VDC  
Weight = 2.2lb (1.0kg)

#### Safety Instructions

The charger is designed only for Li-ion and Ni-MH batteries with voltages ranging from 9.6-18VDC, and capacities from 1.7 – 3.0Ah.

- Before you use the charger, check the power cord, and connectors for any signs of damage or aging.
- DO NOT open up the batteries, or the charger.
- DO NOT puncture, or expose to heat as there is RISK OF EXPLOSION.
- Only store in dry areas. Protect from moisture and dampness.
- Do not use if charger is defective, and never insert defective batteries.
- Observe the symbols on the charger's nameplate.
- DO NOT throw old batteries into a fire, or dispose of as domestic waste.
- Keep metal objects that could cause shorts away from the charger.
- DO NOT dismantle the charger, or batteries.

#### Battery Charger Operation

**Green L.E.D.** – If the charger is connected to AC line, the green L.E.D. will flash repeatedly until a battery is installed for charging.

**Charging a Battery** – When battery is inserted on to the charger, the red L.E.D. will illuminate, and stay on while

charging occurs. The green L.E.D will turn off while the battery is less than 80% charged. Both green and red L.E.D.'s will illuminate when the battery is greater than 80% charged, but not fully charged. When charging is complete, the red L.E.D. will turn off, and the green L.E.D. will stay on. If you leave the battery on the charger after it is charged, the charger will switch to its trickle charge mode for 24 hours.

**Yellow L.E.D.** – Flashing indicates trouble with the cooling system. Ensure that all cooling vents, and the battery connections are free of dust, or debris. If flashing continues, return the unit to DMC for repair. Continuous illumination indicates that a conditioning charge is occurring. This happens when the battery being charged is at either a very low, or very high temperature. This can also occur if you attempt to charge a fully charged battery. These conditions will increase charging times.

**Other Possible Conditions Displayed** – Flashing red with green off indicates the charger is overheated. Unplug the charger and allow it to cool down. Flashing red with flashing green indicates a defective battery.

#### Spare Battery Parts

120 VAC Battery Charger	HDE-LI-120C
230 VAC Battery Charger	HDE-LI-230C
18V Replacement Battery	HDE-LI-B
120 VAC Power Adapter	HDE-120AC-A
230 VAC Power Adapter	HDE-230AC-A

DMC offers complete refurbishing and recalibration services.

DMC specially engineers and manufactures complete tool kits to satisfy individual customer requirements, such as total aircraft support general shop maintenance or production, on board ship and vehicle service, etc.

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## BATTERY POWERED CRIMP TOOL

### BLUETOOTH CONNECTIVITY

This tool features Bluetooth connectivity for tool monitoring via the Klauke Tool Link app.

Tool Link features include:

- Exporting all tool data to check the tool status.
- Providing proof of quality in the form of a project record.
- Free downloading

Tool Link app:

- Made easy - Your Next Generation tool connects to the Tool Link app via Bluetooth - you can now use the comprehensive range of functions.
- Everything under control - You can, for example, display the last service date, the last five pressure values, the device temperature, or the number of crimps you can still make with the connected tool.
- Record, verify and archive - Once the project is complete, you will receive an overview containing all information and pressure values as an attachment. Very clearly arranged and revamped as a PDF for printing and submitting.

The desktop software can be downloaded at:

<https://www.klauke.com/gb/en/klauke-software#dvTables>

The mobile App can be downloaded at:

<https://www.klauke.com/gb/en/klauke-link-connectivity>

or at:

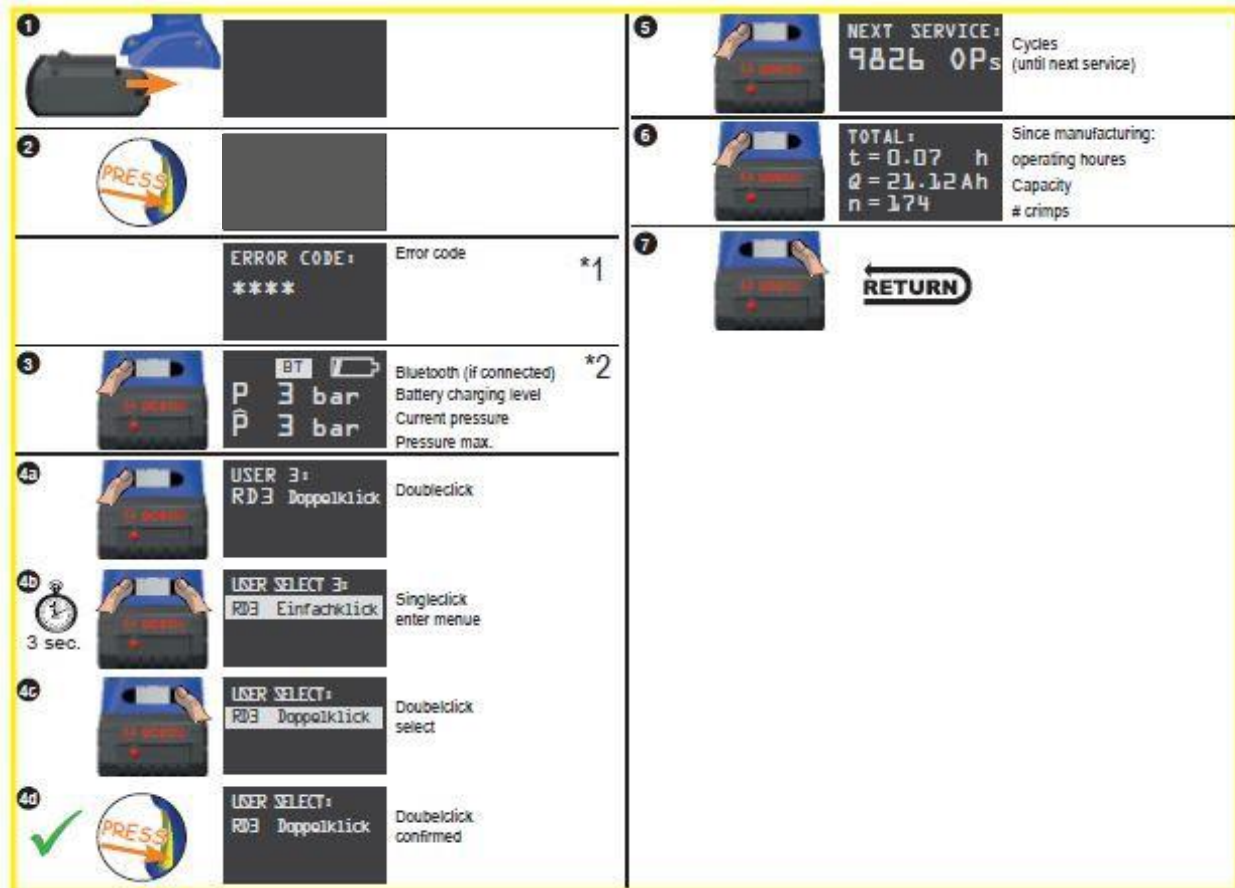


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### TOOL INFORMATIONAL DISPLAY

When a battery is installed onto the tool, the following information can be accessed.



Install a charged battery onto the tool.

1. Press the tool trigger to activate the display. Any applicable error codes will be display. The 17 possible error codes are listed below. If an error code is displayed, the tool's red LED will also flash.
2. The first screen will display whether tool is connected via Bluetooth, the battery charge level, current pressure & max pressure.
3. Pressing the left button once will display the firmware version, and tool serial number.
  - a. Pressing the left button again displays the current user.
  - b. Pressing and holding both button lets you
    - c. select a current user.
    - d. Use the right button to select the desired user.
    - e. Press the tool trigger to confirm selection and return.
4. Pressing the left button once again will display the number of cycles and days until the next service interval.
5. Pressing the left button once again will display the total operating hours, total Amp Hours (Ah) and the total number cycles.
6. Press the right button will allow you to go back to the previous screen.



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### Error Codes

1. Overcurrent Fuse
2. Overcurrent Comparator
3. Overheat Board
4. Overheat Battery
5. Battery Empty, Operation Stop
6. Faulty Crimp with Motor in Operation
7. Faulty Crimp without Motor in Operation
8. Low Battery
9. Battery Empty
10. Battery Low
11. Tool Deactivated
12. Service Necessary
13. RTC not Found
14. BT Unit not Found
15. Pressure Sensor not Found
16. Burst Pressure Exceeded
17. Battery Temperature Too Low

tampering, neglect or accident. This warranty is in lieu of all other warranties express or implied. No warranty, express or implied, is made or authorized to be made or assumed with respect to products of Daniels Manufacturing Corporation other than those herein set forth.

### ***Limitation of Liability***

DANIELS MANUFACTURING CORPORATION IS NOT LIABLE FOR CONSEQUENTIAL OR SPECIAL DAMAGES OF ANY NATURE OR KIND RESULTING FROM THE USE, OR MISUSE, OF ANY OF ITS PRODUCTS. OWNERS AND USERS OF DMC PRODUCTS ASSUME FULL RESPONSIBILITY FOR INSTRUCTING THEIR EMPLOYEES IN THE PROPER AND SAFE USE OF SUCH PRODUCTS.

### ***Limited Warranty***

DMC (Daniels Manufacturing Corporation) warrants each new product sold by it to be free from defects in material and workmanship under normal use and service. DMC's obligation under this warranty is limited to the free correction or, at DMC's option, the refund of the purchase price of any such product which proves defective in normal service within ninety (90) days after delivery to the first user, provided that the product is returned to DMC with all transportation charges prepaid and which shall appear to DMC's satisfaction, after DMC's inspection, to have been defective in material and workmanship, it being understood that DMC products are not consumer products. This warranty shall not cover any damage to any product which, in the opinion of DMC, was caused by normal wear, misuse, improper operation,