

Carpet Cutter Troubleshooting Guide



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Note: Always wear protective gear that fits the situation. Safety is up to you.

Carpet Cutter Troubleshooting Guide

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Carpet Cutter Power Shut Off

Note: Before beginning any electrical work on the Carpet Cutter be sure to disconnect the breakaway plug from the power or shut off the overhead power through the festoon cable at the throw switch. Some throw switches are out of reach so Management will need to trip the breaker to the off position and the breaker locked out tagged out while working on the Carpet Cutter.

Disclaimer:

These product training resources are not all inclusive and should not be considered a substitute for reading and following the Manufacturer's operations manual. This guide is offered as information and guidance only. Users of the information contained in this training manual use that information at their own risk. OME does not accept any liability for any loss, costs, damage or injury which may be sustained by any person in reliance upon information contained in this manual. The information provided is not provided on behalf of any manufacturer.

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!!! It is important to read all Manufacturer Safety Warnings before operating machinery. !!!

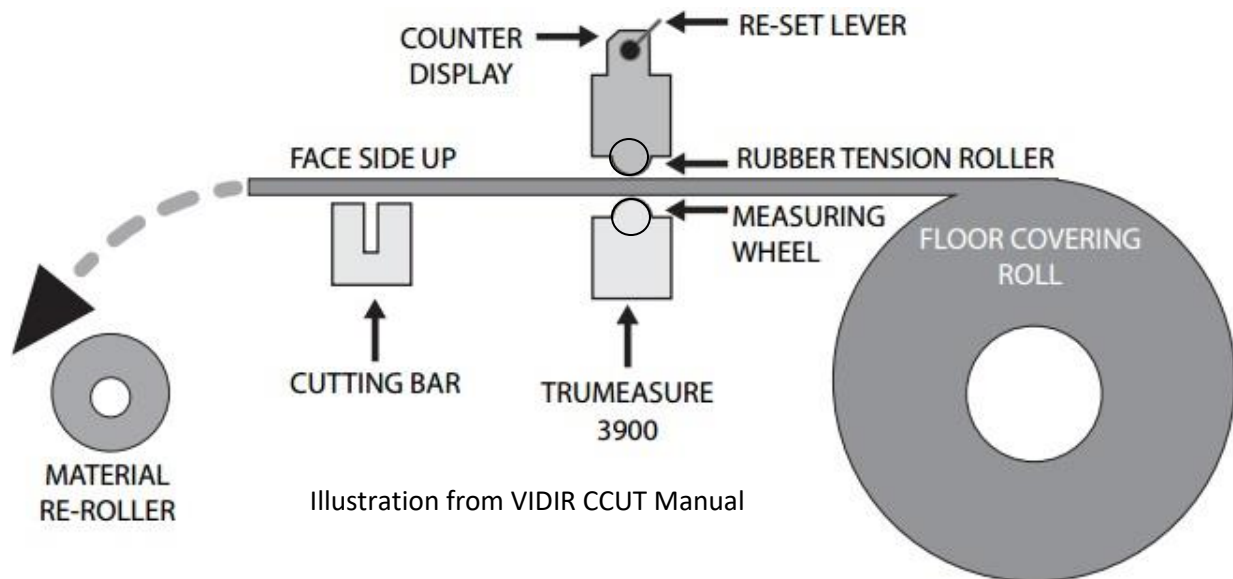
Operate machinery fully to determine the extent of problems experienced unless it has been indicated by store staff that it would be dangerous to do so. There may be a combination of issues present. Focus on one problem at a time in order to discover what you did that caused the problem to go away. Problems can be categorized as **Mechanical** or **Electrical** on the Carpet Cutter. Photograph close up and full view shots of the machine when you determine abuse or accident for the cause of the problems. You will need to upload these photos in your service report.

Mechanical Issues

Parts will wear out over time. Heavy equipment is present in the store and can cause accidental damage when run too close to the machine. Improper training or careless abusive practices while using the machine will cause damage to the components. Deferred maintenance and poor housekeeping will cause bearings to go bad, dirt to accumulate, parts to wear due to a lack of grease or oil. Chains will become slack due to stresses of constant use.

Roller Issues:

The carpet is fed through the pinch roller (Top) and feed roller (Bottom) and rolled up on the front 3 cradle rollers. The top of the carpet roll on the Carpet Carousel should be level with the top of the feed roller when feeding carpet. This will eliminate a bunch of feed problems as well as counter problems.

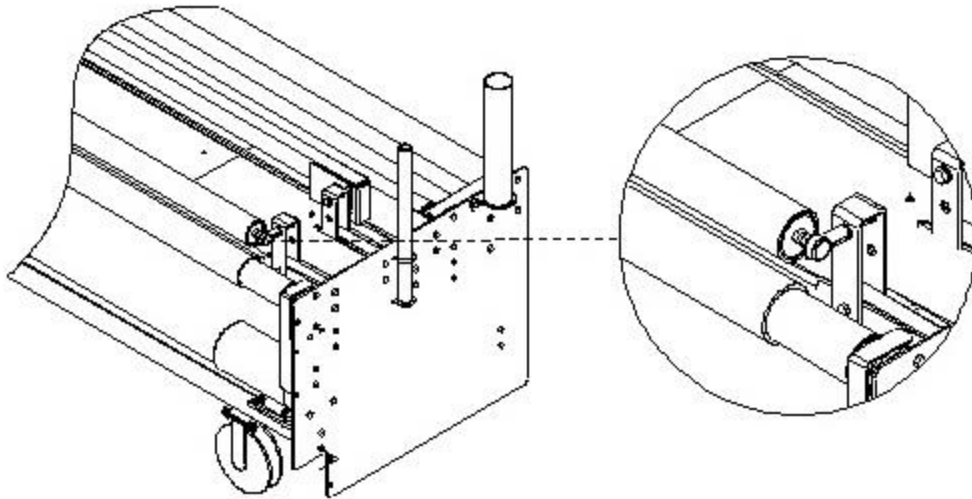


Carpet Feeds Diagonally

Determine what is causing this problem. Check friction tape placement, wear, or absence. Add or replace friction tape as needed.

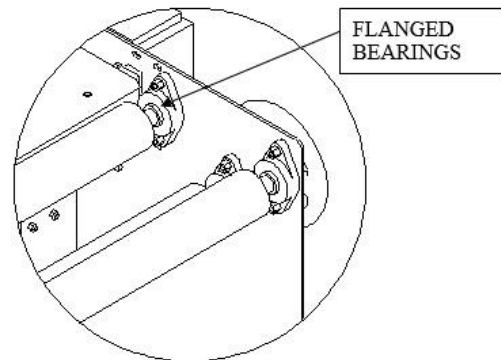
Check Pinch roller mounting Tie Rods, bearings, and flanged brass bushings. Over time these will wear out, loosen at one end or the other causing uneven tension to pull harder on one side of the carpet than the other. Adjust as needed. If tie rod bearings or bushings are bad order and replace. See illustration below.

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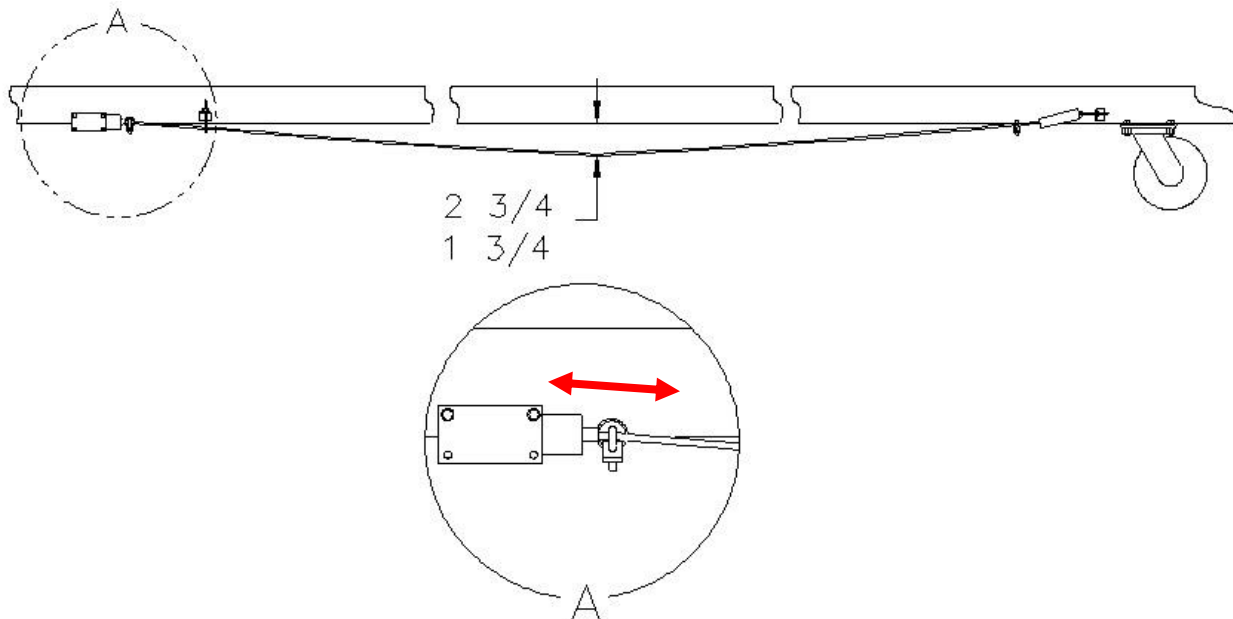
Rollers are squeaking loudly when operated

Inspect the individual rollers at the flanged bearings. Add grease to the zerks using a grease gun. If you still hear the squeaking in the flanged bearings you may need to order and replace them. If the issue of squeaking is found on a **J & D Couch Cutter**, you may need to replace the entire roller as the bearings are inside the roller.



Footswitch cord Issues rollers run constantly

If the machine (**J & D Couch/Ginsu**) begins rolling when you enter the code into the keypad, you may have an issue with the Footswitch cord being too tight and the switch will not release. Inspect the footswitch



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and the foot cord. Check the tension and adjust as needed. The cord should be 1 ¾" to 2 ¾" down from the front bar.

If the cord is too close to the floor it won't activate when using the footswitch cable. Make adjustment as shown above. If the switch still won't operate but you are able to run the rollers using the forward/reverse switch at the control box test the switch for continuity as you operate it on and off. With Cutter unplugged or power disconnected open the main electrical box to test for continuity at the wire connections. Wire B3 connects to A1 on the **reversing contactor** and wire W3 (White) connects to -22 on the **Roll/Cut switch** block T3, right side, bottom block. Replace the switch if it is bad. Be sure to replace all covers once you have completed your tests.

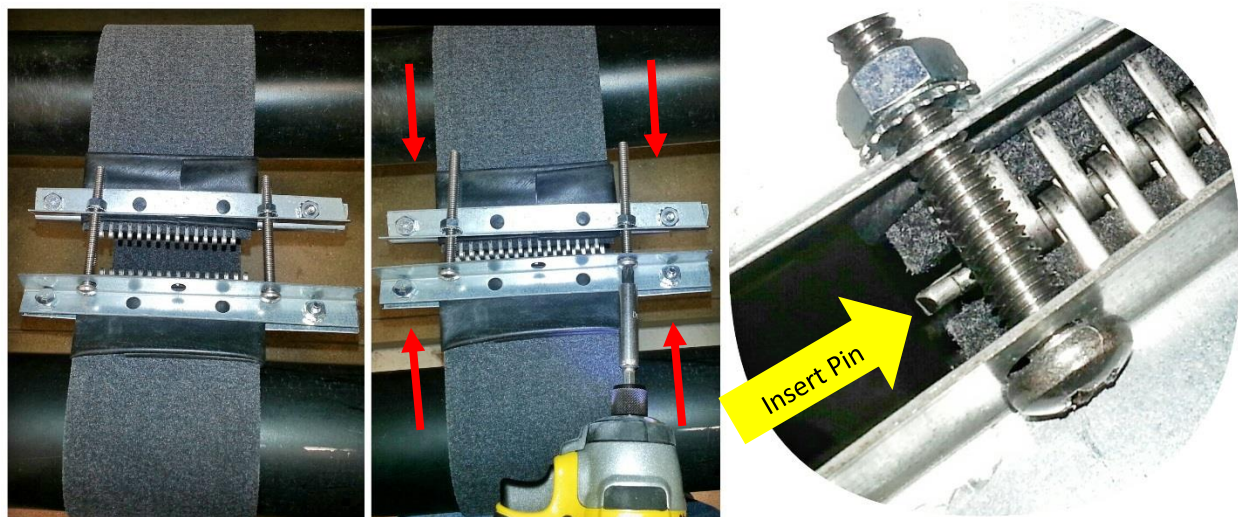
If you are working on a **VIDIR** and the cord will not activate the rollers you may have to adjust the footswitch lever so that it will cause the switch to work when the cord is stepped on.

Roller chain is too loose (J & D)

Many of the older **J & D Ginsu** machines have an insert on the chain to create tension while the rollers are operating. It was found that these ended up causing problems with the chains. If you find these tensioners present and causing issues remove the tensioner assembly and remove 1 link from the number 35 chain and add a half link. You can do this with a small grinder or a chain break. Bags of size 35 chain master and half links can be purchased locally at most hardware stores.

Belt Issues J & D Couch Cutter

The **J & D Couch Cutter** was designed specifically for use at Lowes and is designed with the cradle that looks like a couch. It catches the carpet as it is rolled up using Nitrile Belts. There are two sizes of belts, longer belts are vertical and shorter belts are horizontal. Belts will eventually wear out and the metal loops will catch on carpet and tear apart. When belts become stretched they no longer roll the carpet due to being too loose. These will need to be removed and new belts will need to be installed. The new belts are installed wrapping around two rollers, meshing the loops together and inserting a pin. A simple device to help in the installation can quickly be assembled from 4 pieces of angle steel and bolts available in the hardware department. You can also use sections of an old inner tube to add gripping power on the belts. See the illustrations below.



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Belt issues VIDIR

The VIDIR Carpet Cutter has belts that drive the chains that run both the rollers and blade assembly. As these belts wear out it's possible for them to form a break in the material and continue to work for a while. When this happens you can hear a distinct regular thumping noise as the broken part of the belt hits the small roller.

If belts are too loose they can be easily tightened. Check the tension on the belt and apply pressure using reasonable effort with your fingers. The belt should deflect no more than 3/8". If too tight or too loose, loosen the roller motor mounting bolts and tighten or loosen the tension manually till you achieve 3/8" deflection. Re-tighten the motor mounting bolts. Check the tension on the blade drive motor the same way. The blade drive motor has a tensioner bolt to make the adjustments. Loosen the mounting bolts on the motor, make the proper adjustments on the tensioner using the pinch test. Re-tighten the mounting bolts.

Cutter Issues:

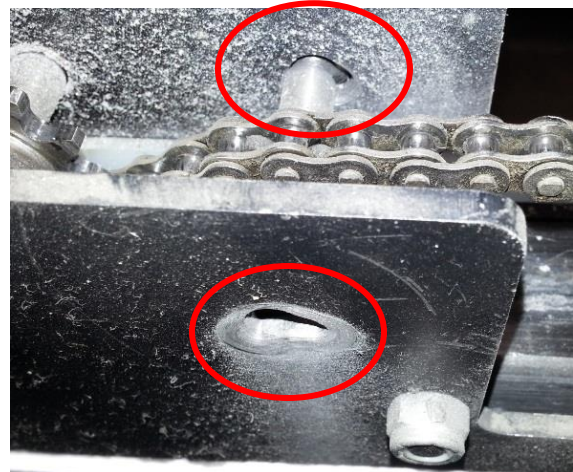
Everyday use will cause wear and tear on the cutter head. Problems are quickly compounded by dull blades, delayed housekeeping, and poor operator practices. A variety of problems will begin to surface as symptoms.

Cutter head jumps

J & D Ginsu Cutter head jumping can occur when carpet fibers accumulate in the cutter head and on the surface of the cutter beam. There are nylon rollers installed on the shoulder bolts that contact the cutter beam. When these roll over the debris, they can act like a brake holding the cutter head for a second till the pressure of the chain can power over the debris. Eventually the nylon roller will wear out and then the steel shoulder bolt will be dragged along the top of the beam creating a flat spot on the bolt.

Another issue could be the upper chain that feeds through the cutter head is too loose and has caused one or both of the idler sprockets to become out of round or even broken the sprockets. Pieces of the broken sprocket can cause problems with the smooth operation of the cutter head on the beam. Check the tension on the upper chain, remove and inspect the plastic idler sprockets, look for burn marks on the sprocket shoulder bolts, check the nylon rollers on the shoulder bolts. Replace parts as needed.

A third problem is that once idler sprockets have deteriorate the shoulder bolt will now act like a drill and drill out the front and back plates. When this occurs you will need to rebuild the entire cutter head.



Cutter Not Cutting

Generally the cutter is not cutting due to a dull blade. On the **J & D Ginsu Cutter**, check the sharpening stone for debris that may have accumulated and melted onto the stone preventing the blade from coming into contact with the abrasive surface. Scrape the debris and dress the stone so that the blade will once

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again contact the stone. Check the angle and tension on the spring on the sharpener. Make adjustments so that the tension is correct. Adjust the sharpening assembly up or down to the correct angle.

It's the same issue with the **J & D Couch Cutter**. Remove the dull blade and flip it to expose the sharp edge then re-install. If both edges of the blades are bad, replace the blades. Most stores carry the cutter blades off the shelf.

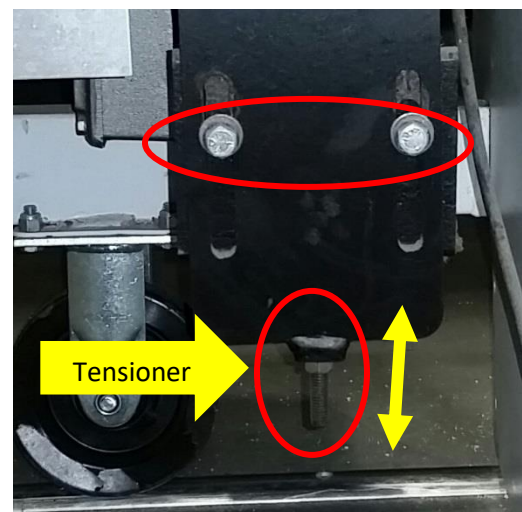
The **VIDIR** machine is slightly different in that store associates must be intentional about sharpening the blade after every 50 cuts. Since there are no counters to indicate that it's time to sharpen the blade, it rarely happens, or associates don't know how the sharpener works. Run the cutter head to the far end of the machine. Continue to run the machine for 30 seconds while the blade is sharpening. Inspect the blade for sharpness. Repeat if needed. Inspect the sharpening pads to make sure they are making good contact with the blade so it will sharpen. Make adjustments as necessary. **Note: The cutter shuttle assembly may become hot during sharpening. Allow to cool down between attempts to sharpen or damage could result.**

Cutter Shuttle stops mid cut

Carpet fibers accumulate in the grooves of the **J & D Couch Cutter** extruded aluminum bar and act like a brake on the cutter shuttle. Clean the grooves of all fibers and run the shuttle back and forth. If the shuttle continues to stop at the same spot every time there may be a bolt or machine part that is catching the shuttle. If after inspecting the path of the shuttle you don't find anything interfering with the shuttle travel, you will need to replace the extruded aluminum slotted beam. You will also need to rebuild the shuttle head so that the shuttle slides are smooth.

Chain is rattling or clanging, too loose

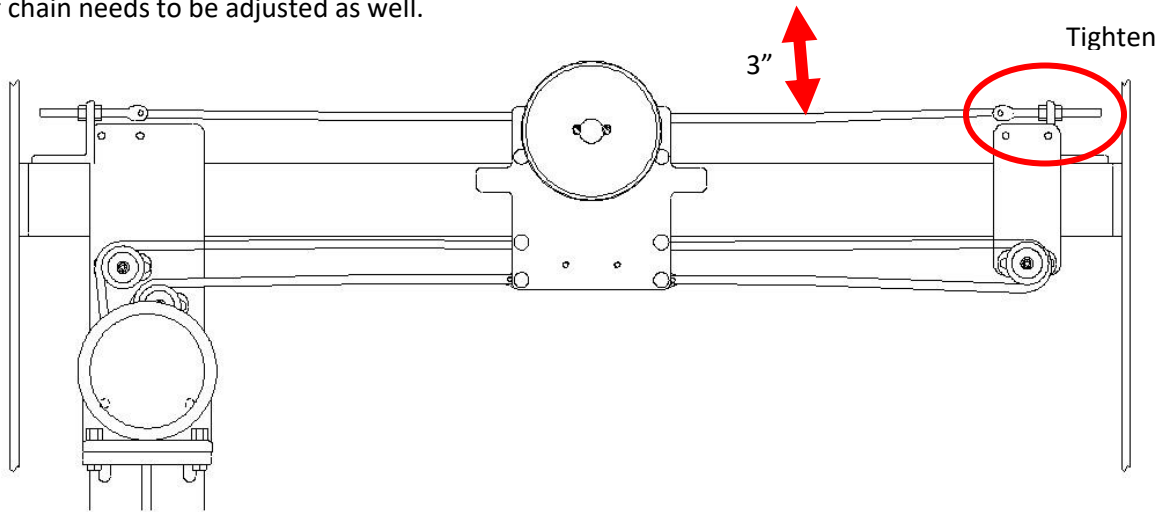
Run the machine while watching the cutter head moving with the chain. Check the tension of the chain to see if it is rubbing against parts or the frame of the cutter. Over time, the chain can become slack due to a number of reasons. To remove the slack in the cutter drive chain on the **J&D Ginsu**: loosen the left and right bolts on the mounting plate so adjustments can be made on the tensioner bolt. Tighten the tensioner bolt to remove the slack. Do a turn at a time and test the results until you see the slack removed from the chain. Once you have achieved removing the slack from the chain, tighten the left and right bolts on the mounting plate.



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Upper Chain Tensioner & Chain Routing J&D Ginsu Cutter

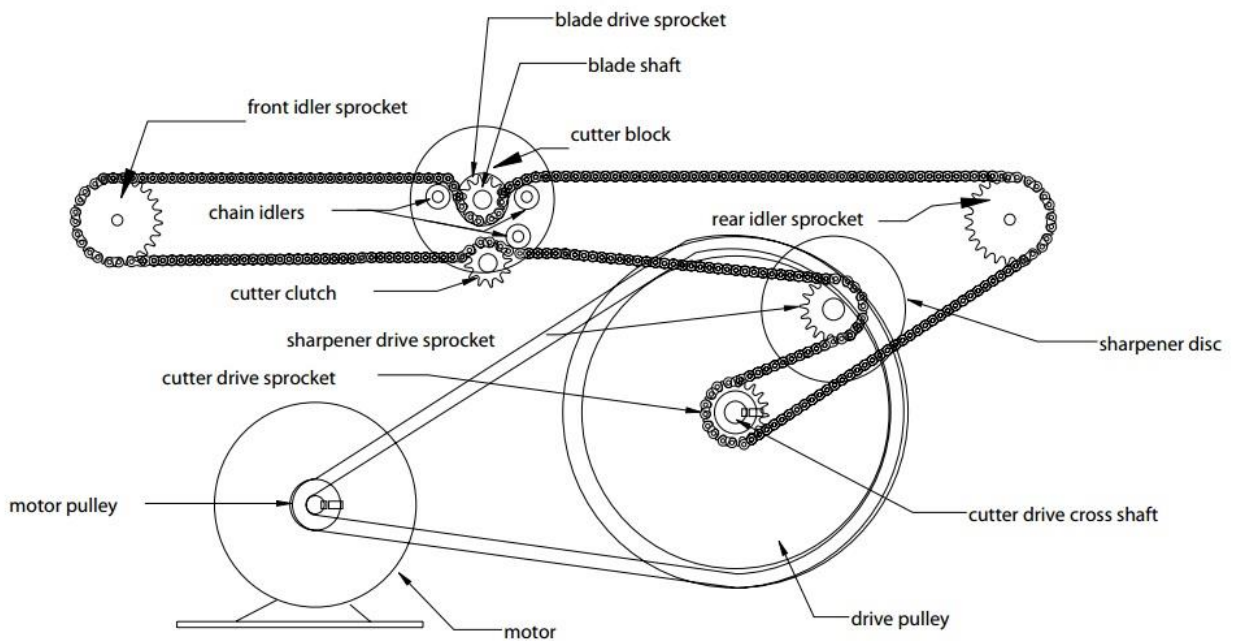
After completing repairing the cutter drive chain tension problem you still hear chain issues, it may be the upper chain needs to be adjusted as well.



Move the Cutter shuttle near the control box. Tighten the upper chain. Test by pulling the chain up 3'' then release. It should not bounce off the beam more than two times.

Chain Routing for the VIDIR

If you have to replace components on the Vidir Cutter head and have to remove the drive chain, follow this chain routing guide from Vidir to reinstall the chain.



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Cutter Floor track and U-groove caster issues

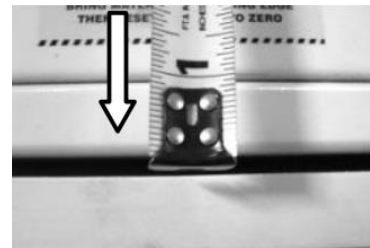
When heavy machinery hits the Carpet Cutter there are great stresses put on the U-Groove Casters and the floor track. The floor track can become bent or bolts shear off and the floor track is no longer bolted down. As well the casters will crack and chunks will break off. These will need to be replaced. The floor track will need to be ordered if damaged. U-groove casters can be replaced by lifting the one end of the CCUT using a bottle jack. When replacing sections of the floor track please designate which machine is present in your service report as the sizes of the track are different between VIDIR and J & D. Also you will need to use a hammer drill to start holes in the concrete before installing concrete screws to install the floor track. NOTE: If you find that you can't make progress with the drill, you may be drilling into rebar. You will have to drill in another location. Remove all carpet fibers from casters.



Counter Issues: (Note: WE DO NOT CALIBRATE THE TRUMEASURE COUNTER)

Carpet is cut shorter than measured

Problems with measuring when the Trumeasure is off usually end up only being in inches. If there is a problem where the machine is rolling out lengths of several feet there may be a training issue. Perform the following test with an accurate tape measure: Standing facing the machine and counter assembly, place your tape measure between the hold down weight and the counter wheel. Advance your tape toward you until the zero is at the edge of the cutting bar (see photo.) Reset the counter to zero. Pull the tape through till the 10' mark is at the cutting bar. Compare the reading on the counter. Record your results whether short or long. Run the test several times to develop a consistent measure.



Counter should be within $\frac{1}{2}$ " over a ten foot section. If you find that the measurements are accurate, the problem may be that someone is not resetting the counter before rolling a new section of carpet.

Carpet is cut longer than measured

If the carpet is consistently longer than measured there could be an issue with the spring holding down the counter weight roller against the counter wheel. This can occur when the carpet roll is higher than the counter wheel or your carpet roll causing the carpet to raise the hold down weight off of the counter. Inspect the counter assembly for hold down weight issues and run the Tape Measure test. If you find a variance of greater than $\frac{1}{2}$ " you will need to order a new Trumeasure counter.

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Electrical Issues:

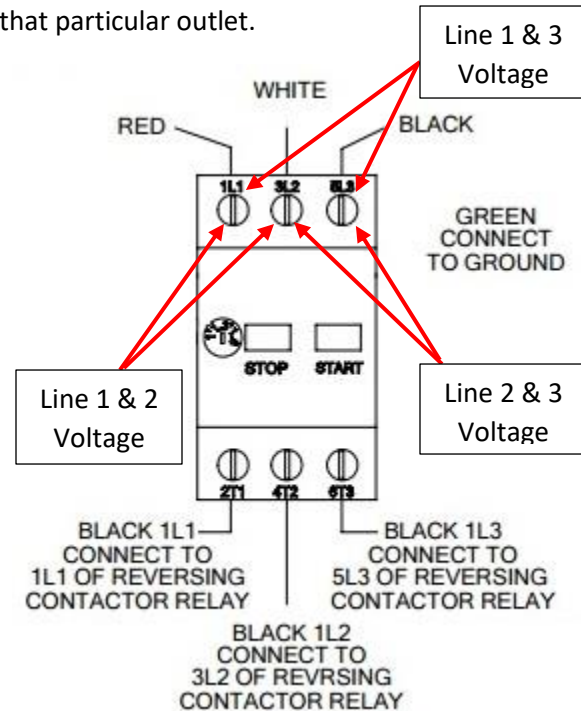
The majority of Carpet Cutters in the field are powered via three phase electric. There are a few single phase units, but these are becoming increasingly rare. Inspect your electrical system and investigate the data plate if present on the carpet cutter to determine single phase or three phase.

Inspect the incoming electrical setup. Is the electric supplied through a Festoon Cable? Does the CCUT plug into outlets at each Carpet Carousel? If electric is supplied through a Festoon Cable then there is a dedicated circuit for the Carpet Cutter. If electric is supplied at twist-lock outlets on the Carousels then electric is often tied into the power in the Carousels. For instance, if you press the e-stop on the carousel, you cut power to the carpet cutter that is plugged into that particular outlet.

No power or intermittent power to unit

Festoon Cable: If the power is set up with overhead festoon power, check the main throw switch on the supply power box. Is it in the “on” position? If not, flip the throw switch to the on position. Check E-stop on the CCUT. Reset if needed. If lights do not light on the keypad test for power at the overload switch. Remove overload switch cover. Using your multi-meter test for voltage across the Legs of power (3 phase) or test power to ground (single phase). If there is still no power at the Overload Switch then have management check the breaker in the electrical room.

Test incoming voltage once power is restored according to the diagram to the right. Record your findings on the three legs in your service report. Voltage values should match. If there is a significant variance then there is an electrical issue with one of the legs of power and you will need to instruct store management to contract with their electrical contractor to repair the three phase electrical.



Breakaway Cord: If the power is set up to plug into the carousel, follow this procedure to test for power.

1. Run the Carpet Carousel forward and backward. If there is no power at the carousel have management check the breaker in the electrical room.
2. If the carpet carousel operates properly then begin to check the twist lock power plug. Does the twist lock outlet appear to be in good shape? Are the strain relief cables intact and connected on the power cord? If the strain reliefs are missing, it's possible the screws holding the legs of power inside the twist lock plug have come loose and one or more of the wires have pulled free of the contacts. Loosen the screws and inspect each of the screws on the three legs of power and ground. Tighten the screws if loose. If the strain reliefs are missing, replaced the breakaway cord assembly with a new cord
3. Remove the overload switch cover (E-stop.) Using your multi-meter, check the continuity between the three legs of power to their connections on the overload switch. Then check the ground inside the electrical control box. See the procedure on the next page for troubleshooting.

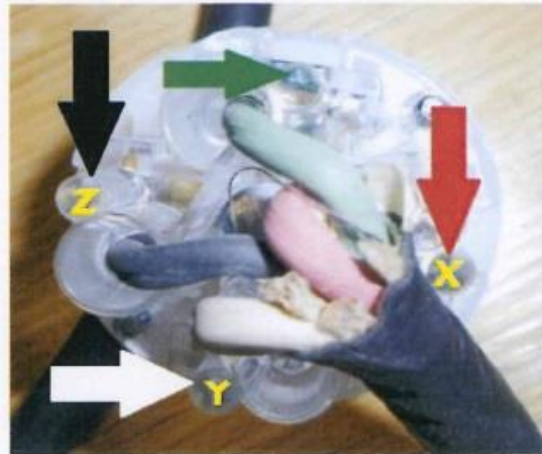
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J&D Breakaway Cord Wire Troubleshooting

If you are not getting a complete and proper circuit from the ground prong (G) to the Green wire in the Control box, you will need to test the path/circuit of the green ground wire through both 0402 and 0403 cord assembly. You will need to disassemble the insulating cover for each plug/socket to verify the wiring path. All new cords should come to you in the following consistent configuration. Some stores may have had other electricians in and changed the configuration in the store so you may have to change an existing functioning cord to match the OEM configuration. As was noted before the cord configurations should all be the same with the rotational issue taken care of at the motor contactor terminal.

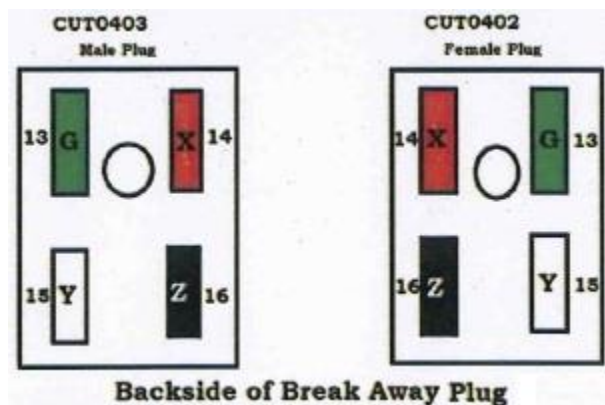
Wire diagram on the male plug (**CUT0402**) is as follows. The letters are clearly marked on the inside of the plug.

- Green wire to Hooked prong (G).
- Red wire to X.
- White wire to Y.
- Black wire to Z.



Wire Diagram on the square breakaway plug **male/female** is as follows for the 0402 and 0403 as shown.

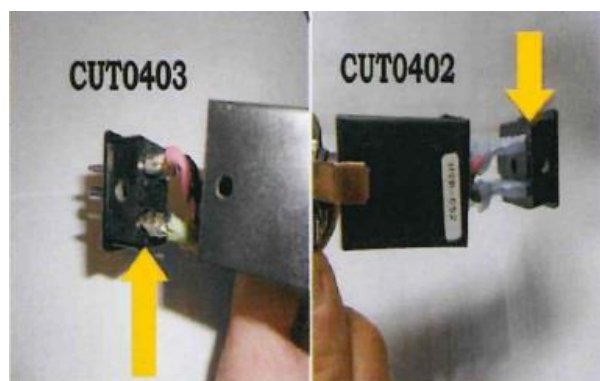
- 13 Green (G)
- 14 Red (X)
- 15 White (Y)
- 16 Black (Z)



Once you remove the insulated cover, these numbers are stamped on the side near the prongs on both plugs. You will need a flashlight to see them clearly. Assure that the configuration is correct.

If you have any questions on these procedures please contact your RSM.

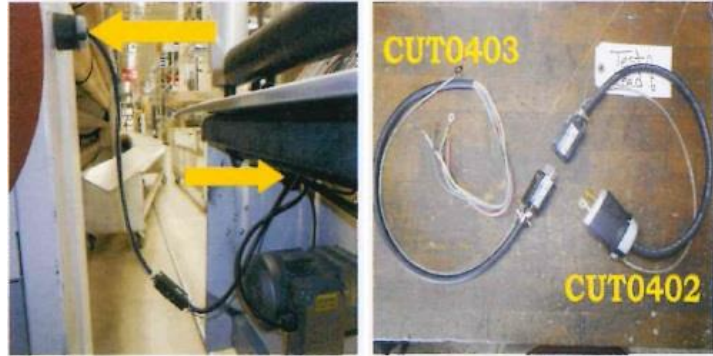
If you still have no power or intermittent power, check all wiring connections inside the electrical control box for any loose or disconnected wires.



J&D Breakaway Cord Installation Protocol

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The J&D CUT0402 breakaway cord carries 3 phases 110v per leg and a ground from the socket on the leg of the carpet carousel to the male breakaway plug on the carpet cutter

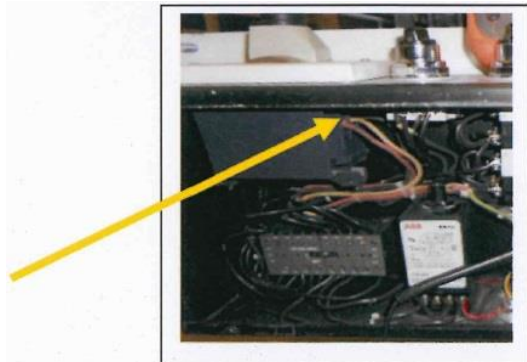


The J&D CUT0403 cord is a square male bladed plug with pig tails. The pigtails are wired to the motor contactor-starter on the carpet cutter and plugs into the CUT0402 square female socket.

It is absolutely essential that power is NEVER running through the green ground wire in either cord.

On occasion the power legs may be switched to address a motor rotation issue but NEVER should the ground and a power be switched.

Additionally the switch of the power legs should be done at the motor contactor on the cutter, not by switching wires in the plugs.



EVERYTIME you install a new 0402 or 0403 cord you will need to test the continuity from the ground hooked prong (G) on the twist lock plug to the green wire leading into the control panel and screwed to the base of the box. See picture on right demonstrating the meter lead location. If you find there is not continuity proceed to the "J&D Breakaway Cord Wire Troubleshooting" below.

Having confirmed the continuity of the ground wire you then can plug the breakaway cord assembly into the carousel socket. Run a functional test on the carpet cutter verifying rotation and direction of the roller and cutter blade unit. If there is a motor rotation/direction issue, see the note above regarding the changing of wires.



Power to unit, but Keypad won't respond

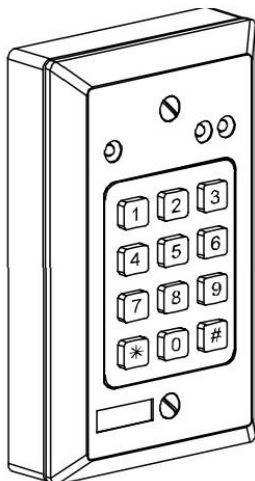
Once you have verified that you have good power, and you see lights at the keypad, enter the code into the keypad. If the keypad does not respond, verify the code with the store associates. If you still get no response, follow the procedures in Tech Manager Pro for the specific brand and model of keypad for resetting to factory settings using the jumpers on the printed circuit board and for reprogramming. Below

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are the various Keypads you may find on the carpet cutters. Below each find the address on Anyview to locate the data sheets for each.



Equipment/Visonic/
CL-4 Keypad.pdf



Equipment/Visonic/CL-8A
Installation Guide.pdf
PN: 410-0024



keypad instructions and
Wiring.pdf PN: 410-0024HT



th Wiring.pdf PN: 410-0014

as different wiring color coding. Consult the keypad instructions and wiring sheets to determine the original wiring setup. Photograph the current connections on the existing keypad before disconnecting any wires. If you are replacing the old keypad, make sure you match the correct keypad to the application.

Keypad times out after a couple seconds

There are a couple possibilities with this symptom. One is that the keypad has somehow been reset to a short time-out but is still functional. After you identify the keypad manufacturer and model and find the correct programming instruction sheet, reset the timer to 90 seconds. If after following the programming directions and confirming the new allotted time you are successful, test 5 times to make sure the keypad is repaired. If the keypad is still not functioning, verify incoming power from the transformer. If you have correct voltage at the transformer per schematics of the Carpet Cutter electrical box, then replace the keypad.

Keypad works but motor hums when trying to operate rollers/cutter

This is a symptom of low power on one of the legs of incoming power. See above for troubleshooting no power or intermittent power. Test across the three legs of power at the overload switch to verify incoming voltage. If there is a difference in the voltages you have an electrical supply problem and will need to notify store management to contract with an outside contractor to repair the three phase electric problem.

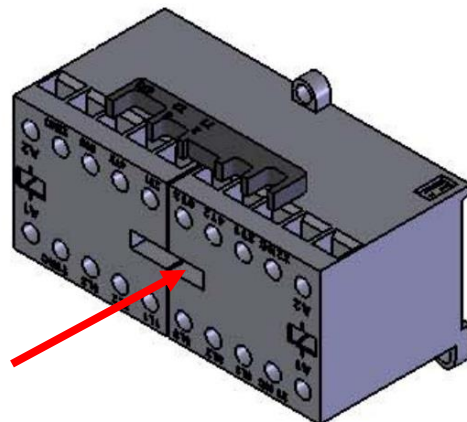
If there is good consistent voltage values across all three legs of incoming power, inspect inside the electrical control box for loose connections or loose wires. If all wiring is intact, check the switches for

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broken housings. Sometimes an individual switch component can crack causing the power not to be made at that junction. Replace switch parts as needed.

Rollers work in one direction only

If you can only roll in one direction but not the other inspect the electrical box. Check the switches for cracks in the plastic and operate the switches with the cover off the box. If your switches appear to be working and not damaged, check the operation of the reversing contactor. Depress the contact to see if you can manually move the rollers by actuating the switch. If you have power at the reversing contactor but still cannot operate the rollers/cutter via the switches then you have a bad reversing contactor. Replace as needed.



Switch not operating, handle spins

This indicates the switch mechanism has broken free and no longer operates. You will need to replace the switch handle, and switch mechanism.

