

MyTana M224 | Flexible Drive Shaft Re-termination Procedure



A failed flex drive shaft may twist off and will need to be re-terminated.

This can be done in your shop by following these procedures

The shaft will always need to be cut to repair the shaft assembly, but the plastic jacket may not need to be cut as described in step 1.

Tools needed:

- Propane torch
- Locking pliers
- Knife or tube cutter
- 4" grinder with metal cutting wheel
- Hex wrench
- Locktite 263
- Rags

IMPORTANT

The outer panel or center hub covers may need to be removed to replace the flexible shaft cable.

CAUTION MUST BE USED AS THESE COVERS PROTECT THE OPERATOR FROM ROTATING MACHINERY HAZARDS AND ELECTRICAL SHOCK.

- ▶ Before doing any work to the shaft, disconnect the machine from the power source.

LET UNIT STAND 5-10 MINUTES BEFORE REMOVING PANELS TO DE-CHARGE THE CIRCUITRY.

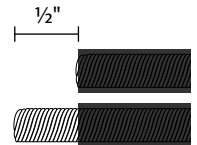
- ▶ Continue to use caution as you remove the center cover as the circuit board can remain energized for a period of time.

ALWAYS ASSUME THE CIRCUIT BOARD IN THE M224 IS ENERGIZED AND DANGEROUS. DO NOT TOUCH WITH HANDS OR METAL TOOLS THAT COULD SHORT OR DISCHARGE THE CAPACITORS. THIS POWER SUPPLY STORES ENERGY FOR A PERIOD OF TIME AFTER BEING CONNECTED TO POWER AND SHOULD ALWAYS BE ASSUMED TO BE A RISK FOR ELECTRICAL SHOCK.

1. Assess the length of the flex drive shaft relative to the outer plastic jacket.

Unspool the full 75 feet of M224 flex drive shaft and lay on the ground flat and straight.

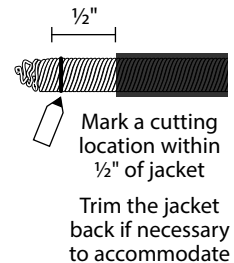
When undamaged, the metal shaft should be flush with or extend no more than $\frac{1}{2}$ " beyond the end of the jacket.



Any damaged shaft needs to be cut off at a location so the clean end returns to this $\leq \frac{1}{2}$ " distance from the jacket.

Undamaged shaft should be flush or within $\frac{1}{2}$ " of jacket when fully extended

If the flex drive shaft extends beyond the plastic jacket, mark the cutting location with a sharpie so the trimmed shaft will fall within the $\leq \frac{1}{2}$ " guideline above.



If the shaft is retracted inside the jacket, use a sharp knife or tube cutter to cut the jacket at a spot so that the trimmed shaft will fall within the $\leq \frac{1}{2}$ " guideline.

- Cut the jacket perpendicular
- Then mark the cutting location of the shaft with a sharpie

2. Retract the flex drive shaft back into the M224 drum, leaving 1-3 feet out to work with.

Once the cable is back into the spool, the metal shaft will extend 1" to 4" further from the jacket than when the assembly was laid out flat. This is normal and will help eliminate heat damage to jacket during step 5.

3. Use a grinder with a metal cutting wheel to cut the shaft at a 90° angle.

Cut at the mark made in step 1.



4. Deburr the cut end

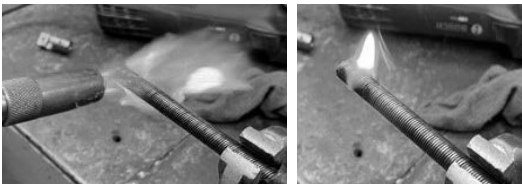
Use the metal cutting wheel to put a slight taper around the new cut end.



5. Use a torch to remove excess grease and oil trapped in the wire wraps on the prepared end.

Attach locking pliers or a bench vise somewhat loosely near the plastic jacket to help protect jacket from heat damage. Do not crush the wire cable.

Use a propane torch to heat only the first $\frac{3}{4}$ " of the shaft just until a flame will sustain itself briefly when the torch is pulled away. Don't let the heat transfer up the cable and melt the plastic jacket.



The flame will extinguish momentarily and briefly emit smoke.

Allow it to cool completely.

An air hose may be used to cool. Blow TOWARD the jacket, or oil will be blown back into the region that was just cleaned, requiring step 3 to be repeated.



6. Prep the connector

Once the shaft is cool, slide the new connector on and off to ensure it will fit before Loctite is applied in step 7.

If necessary, put set screws into the fitting, be careful not to screw them so far that the shaft will not slide in.



Set screws: 3 socket set, cup point, 8/32x1/8"

7. Apply Loctite

Apply Loctite 263 liberally onto the shaft where the oil was burned off making sure it can be absorbed into the under layers.

Next apply Loctite all the way around the interior hole of the connector itself.

Slide the connector all the way onto the cable end making sure it is fully seated to the bottom of the hole.

Quickly tighten the 3 set screws to make firm contact with the cable. Do not over tighten.

Wipe off excess Loctite.

We recommend letting the Loctite cure for 24 hours to reach maximum strength. Operation can continue after 3-5 hours for partial strength at temperature 70°F or above.



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