



## Way Cover - Troubleshooting Guide

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### Introduction

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Way covers keep chips and coolant away from the ballscrew, guiderails, and home switch. Machines can have three types of way covers.



- 1. Telescopic Style:** Telescopic way covers use interlocking sheet metal sections with wipers at the joints.
- 2. Shielded Style:** Shielded way covers use rubber straps to connect sheet metal shield strips that overlay each other.
- 3. Roll Shade Style - EC Machines:** Roll shade way covers use a tensioner to keep the rubber sheet rolled up on a spool. The spools rotate with tension to allow the sheet to be pulled out and retracted back in.

### Symptom Table

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SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
The wipers are worn or damaged.	Normal wear on wipers.	Replace the wipers.
	Incorrect coolant being used.	Refer to the <a href="#">Improper Coolants</a> section in the manual.
The way covers are damaged or worn.	A part or other heavy object dropped on the way cover.	Remove the dents from the way cover.
	Cutting abrasive or absorbent materials.	Extra protection is necessary when you cut abrasive or absorbent materials.
	The way covers are not lubricated correctly.	
	Chip build-up around the base of roll shade way covers.	Clear debris from the base of the covers and adjust the tension on the spring-loaded canisters.
Way covers "pop," or do not move evenly.	Normal operation.	These symptoms are normal during operation and do not require troubleshooting.
Way cover has trouble extending or retracting.	Way cover is full of chips.	Perform normal machine maintenance.

The way covers are rusty or make excessive noise.	There is a low coolant concentration.	Increase the coolant concentration.
	Way cover movement during dry machine operation creates friction.	Lube the way covers with oil.
	The rail screws are loose.	Tighten the loose rail screws.

## Way cover Galvanneal Coating Removal

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### The Wipers are Worn or Damaged

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**Symptom:** The wipers are worn or damaged.

**Possible Cause:** Normal wear on wipers.

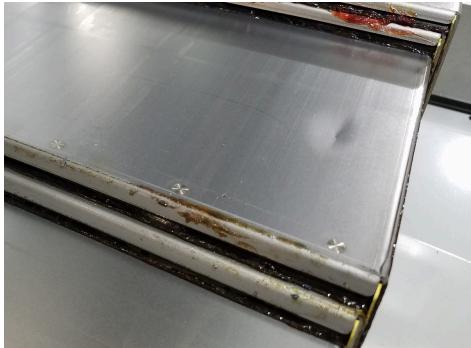
#### Corrective Action:

Replace the damaged wipers where possible.

Replace the damaged wipers on telescopic way covers with the correct kit for your machine. Go to [PARTS.HAASCNC.COM](https://PARTS.HAASCNC.COM).

### The Way Covers are Damaged or Worn

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**Symptom:** The way covers are damaged or worn.

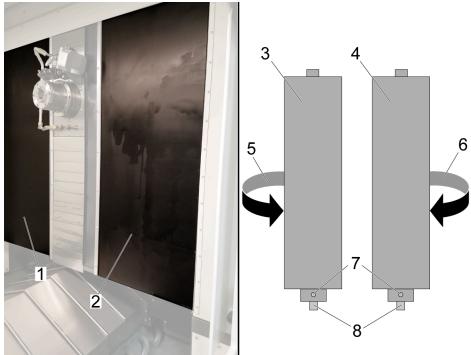
**Possible Cause:** A part or other heavy object fell on the way cover. Cutting abrasive or absorbant materials. The way covers are not lubricated correctly. Chip build-up around the base of roll shade way covers.

#### Corrective Action:

Remove the way cover and hammer out the dents with a rubber mallet. Replace the way cover if the dents are too severe. Go to [DIY.HAASCNC.COM](https://DIY.HAASCNC.COM), and search for the way cover replacement procedure that is correct for your machine.



**Cutting abrasive materials:** Haas machines are designed and built to cut metal. If you cut abrasive or absorbant material, it causes premature wear of the way covers. This is not covered under warranty. Install aftermarket bellows that wrap around the way covers to protect them from abrasive material.



**The shielded way cover sections are separated:** There is a rubber link between the shielded way cover sections. If one of these links is broken, the shielded way cover sections separate. Replace way covers that have broken rubber links.

**Roll Shade Way Covers - EC machines:** Both sides of the spindle are covered by heavy roll shade way covers [1,2]. The shades are kept taut by spring-loaded canisters [3, 4]. Chip build up around the bottom of the spring loaded canisters causes insufficient tension on the roll shade way covers. This causes the components to be contaminated by coolant.

Remove the chips on and around the shades.

To re-tension the way covers:

Clamp the flat section of the steel shaft [8] with clamping pliers or a clamp. This holds the shaft when you adjust the spring tension. Loosen the set screw [7]. The shaft rotates when the set screw is loose. Rotate the shaft one complete revolution against the force of the spring.

**Note:** Rotate the shaft counter clockwise [5] for the left canister [3] and clockwise [6] for the right canister [4].

Tighten the set screw. Make sure the set screw [7] is seated on the flat section of the steel shaft. Check the tension of the roll shade way covers. Repeat this process as needed one revolution at a time. Do not over-tighten the spring.

## Way Covers "Pop" or Do Not Move Evenly

**Symptom:** Way covers "pop," or do not move evenly.

**Possible Cause:** Normal operation.

### Corrective Action:

Tight way covers can sometimes make a "popping" noise when they move. This is normal, and does not require troubleshooting.

If there is an excessive amount of noise from friction, go to Section 4 to troubleshoot the "excessive noise" symptom.

## Way Cover has Trouble Extending or Retracting



**Symptom:** Way cover has trouble extending or retracting. Way cover sections may pop apart.

**Possible Cause:** Way cover is full of chips.

**Corrective Action:** Perform normal machine maintenance.

Remove way cover and clean out the chips. Re-assemble way cover once clean if necessary. Re-install way cover when finished.

## The Way Covers are Rusty or make Excessive Noise



**Symptom:** The way covers are rusty or make excessive noise.

**Possible Cause:** The coolant concentration is low. Way cover movement during dry machine operation creates friction. The rail bolts are loose.

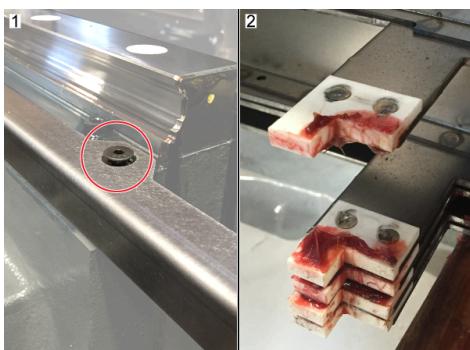
**Corrective Action:**

When the machine operates normally, way covers are lubricated by the coolant. It is critical to maintain the correct coolant concentration. For instructions, refer to the link for [STANDARD COOLANT – MAINTAINING YOUR COOLANT MIXTURE](#)



**Dry machining:** If you cut parts without flood coolant, make sure that you lubricate all of the way covers with lightweight oil. Fully extend the way cover. Spray an even coat of lightweight oil on the way cover.

The way covers slide on the rails that are attached to the casting. If you lubricate the way cover on the outside, and it still makes noise, apply grease to the rails.



**The way cover rails are loose:** Tighten loose rail bolts.

If the bolts [1] that hold the way cover rails to the casting are loose, the way covers make "popping" noises when they move. This eventually damages the plastic tabs [2] that slide on the rails. This causes sections of the way cover to separate and to leak coolant.

As soon as the way covers start to make "popping" noises, inspect the rails for loose screws. Tighten the loose screws to prevent damage to the tabs.