



Retractable Roof Drive System Trouble shooting Guide

Observation	Possible Causes	Possible Solutions
Motor does not operate in automatic or manual mode	No electricity to the motor	Check power supply to the motor
	Overload has tripped	See below for mechanical reasons why the overload may have tripped. If nothing is observed, reset the overload. Operate the roof using the manual selector switch and observe the roof movement both cover and uncover before returning to automatic control
	Limit switch is stuck in an engaged position	Have an electrician check the primary and back up limit switches to see if they are mechanically stuck in an engaged position or if the limit switch is defective
	Electrical motor has damage due to water accumulation inside the motor or was damaged by the power surge	Have an electrician check the motor. If the motor is under warranty, do not remove the electromotor from the gearbox since removal will void any warranty from the motor manufacture
Roof or internal curtain system motor overload is tripping	Thermal overload in control panel has not been properly set	Have electrician check amp draw when roof travels to full covered and uncovered position
	Electromotor is not receiving required volts	Check power supply at the motor
	Roof is over travelling either in the covered or uncovered position due to improper setting of the limit switches	Review installation instructions to ensure that the roof stops at the appropriate position
	Something is obstructing the travel of the roof system	Check for obstructions (i.e. ladders)
	Excessive resistance when the roof covering moves due to improper installation.	See below for potential causes.
Roof is noisy when closing or retracting or amp draw of the motor approaches the maximum specified on the electromotor (continued on next page)	Roof suspension wires are too loose	Use Cravo tool to increase the tension of suspension wires
	Peak roof suspension wire may be improperly positioned above or below the bolt on the tab, causing the wire to wear into the leading edge	Ensure wires are installed correctly in tabs on the truss - above on A-Frame and Rafter, below on X-Frame
	Wire vises were not installed at the correct location on the <u>end member</u> causing excessive stress on the roof curtains	Verify that the wire vices are installed in the correct holes on the end member and the suspension wire is lined up with the tab on the adjacent truss

Troubleshooting Guide Continued

Observation	Possible Causes	Possible Solutions
Roof is noisy when closing or retracting or amp draw of the motor approaches the maximum specified on the electromotor (continued)	Black tape is not centered underneath the suspension wire causing excessive friction between the suspension hooks and the suspension wire.	Reclip the roof onto the leading edge to position the black tape underneath the suspension wire
	Black suspension tape is rubbing on roof suspension wire	Reclip front flap on curtain so that the black tape is not in contact with the suspension wire
	Drive cables may have been over tensioned during installation.	Check to see if the cable spring collapses at all when the roof is almost fully retracted. If it does not, then the drive cables may have been over tensioned.
Drive cables are fraying at the drive shaft	The delay bracket is not positioned properly causing the drive cable to wear excessively when wrapping onto the drum when the roof is almost fully closed	Adjust the position of the delay bracket to that the drive cable is lined up with where it is wrapping on the drum
	Drive cables were pretensioned excessively during installation and preventing the cable spring from collapsing at all when the roof is retracted	Adjust the drive drum for the upper return cable to reduce the cable tension.
	Drive cable tension when roof in fully closed or retracted was excessive	Limit switches need to be adjusted to reduce travel
Drive cables are fraying at the return pulley	Return pulley is worn	Replace the pulley
	Pulley bearing has seized	
	Cable is entering the pulley on an angle	Adjust the tube carrier on the leading edge
Mount for the pillow block bearing is oscillating when the drive shaft is rotating	Bolt and nut securing the mount to the end member is loose	Tighten nuts that are securing the bearing. Check to ensure that lock washers have been installed
Broken roof suspension wire	Roof suspension wire is loose	Replace wire and retention using the tightening tool and wire tension measuring gauge.
	Tab on top chord is loose	
A complete section of roof is in a different position	Weld broke on flat roof drive or universal broke on peaked roof	Repair weld or replace universal joint
All tube carriers on one drive cable are misaligned from the rest of the system	Drive cable has walked off the drive drum or the drive drum has slipped on the drive shaft.	Inspect drive drums to ensure cables are wrapping properly on the drive drums and that set screws holding the drum to the drive shaft have been tightened as per the installation instructions. In the event that a thread in the drum has been stripped, secure with a self tapping screw

Troubleshooting Guide Continued

Observation	Possible Causes	Possible Solutions
Drive cable has broken	Drive cable has double wrapped	Splice cable back together or replace cable using cable tension tool
	Drive cable was not tensioned enough	
	Cable spring collapsed completely	
	Roof may be retracting too far	
The tube carrier came off the leading edge or broke	Leading edge at one tube carrier location is misaligned	Install new jaw or complete tube carrier ensuring alignment with other tube carriers and tighten nut according to the installation or maintenance instructions
	Nut on the tube carrier was either overtightened or under tightened at time of installation	
Leading edge at delay bracket is misaligned	Eye at end of delay bracket has opened up	Reinstall and realign delay bracket and securely tighten delay bracket eyes or cable clamps
	Cable clamps on the drive cable have slipped	
Cable spring has completely collapsed when roof is retracted	Roof is retracting too far	Adjust limit switches setting or increase pretension on drive cable
	Drive cable pretension is insufficient	
Leading edge is bent	There was an obstruction which impeded the free movement of the leading edge	Straighten or replace the damaged leading edge and adjust the tube carrier so that the leading edge is straight with adjacent sections

For any technical questions feel free to reach out to our Builder Success Coordinator:

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