Apogee™ Mechanical Debonder – Troubleshooting and Diagnostics

Apogee ™ Typical Identified Failure Modes

System Performance Failures

Failure Mode	*Recommendation*
Drawer Will Not Open/Close	Ensure sufficient air pressure supplied to tool.
	Check for physical obstruction to drawer motion.
	Check for pinched airline or possible air leak.
Centering Mechanism Will Not Move Out/In	Ensure sufficient air pressure supplied to tool.
	Check for physical obstruction to centering mechanism motion.
	Check for pinched airline or possible air leak.
Clamping Mechanism Will Not Raise	Ensure sufficient air pressure supplied to tool.
	Check for physical obstruction to clamping mechanism motion.
	Check for pinched airline or possible air leak.
Tool is Unresponsive	Check Emergency Stop switch is not depressed.
	Check electrical (utility) supply to tool.
	Check Fuses
Chuck Vacuum Cannot be achieved	Check vacuum (utility) supply to tool.
	Check for pinched airline or possible vacuum leak.
	Check for damaged o-ring on chuck.
	Check flatness of film frame tape

Wafer Alignment Failures

Failure Mode	*Recommendation*
Wafer Slips Out of Clamping Mechanism	Check wafer centering correctly on the chuck.
	Check wafer centering on film frame.
Clamping Mechanism Does Not Clamp Wafer -Moves Past Wafer Edge	Check to ensure that alignment hardware is of the correct size and is installed in the correct location.
	Ensure sufficient air pressure supplied to chuck.
	Check for pinched airline or possible air leak.
	Check stroke limiter positions on vertical cylinders.
	Check wafers specs to clamping ring specs.
Clamping Mechanism Does Not Clamp Wafer -Does Not Move	Check to ensure that alignment hardware is of the correct size and is installed in the correct location.
	Check electrical connector to gripper.
	Reboot tool to home gripper.
	Check wafers specs to clamping ring specs.

Wafer Bonding Failures

Failure Mode	*Recommendation*
Broken Wafer – Debonding	Ensure chuck is clean and free of foreign material.
	Ensure wafers are free from damage prior to debonding.
	Ensure tape is fully exposed so there is no interference with the clamping mechanism.
Wafers are Not Debonded	Ensure wafers are not loaded upside down.
	Ensure wafers are centered on the chuck.
	Ensure that the wafer stack is full adhered to the tape
	Check peel motor connector.