Gripper Sequence of Events

Located on the Infeed Rail of the BLADE™ wood processing system.

TRIGGER	WITH STRAIGHT LUMBER	WITH CROOKED LUMBER
Gripper in the retracted position & board sensor on load arms is tripped.	1. As the lumber is flipped, its position is a few inches from the gripper opening.	1. As the lumber is flipped, its position is a few inches from the gripper opening.
Load Arms in the up position then a small time delay	2. The gripper moves forward, and the lumber goes into the gripper opening and actuates the Board Slip Sensor (required before the cycle is done). When the leading edge of the board nears the saw, the board activates the Leading Edge Beam Sensor.	2. The gripper moves forward, and when the leading edge of the board nears the saw, the board activates the Leading Beam Edge Sensor. If the lumber is bowed, it may not enter the gripper clamp opening, and will be pushed by the front of the gripper assembly.
Leading Edge Sensor & Distance	3. After a programmed gripper move distance, the side and top clamps close. The gripper also closes based on distance traveled from the leading edge beam sensor but the distance is greater than that of the side and top clamps.	3. After a programmed gripper move distance , the side and top clamps close. The gripper also closes based on distance traveled from the leading edge beam sensor but the distance is greater than that of the side and top clamps. If the board is not inside the gripper clamp opening prior to the side and top clamps closing, the pressure of the gripper moving forward while the board is clamped in the side and top clamps should cause the board end to slip into the gripper assembly. If the board is not in the gripper at all, the gripper closes all the way (which is not measured) and the Board Slip Sensor is **not** activated. If the board is partially in the gripper, the clamp closes normally but the Board Slip Sensor is **not** activated.
	4. The gripper moves the board forward and backward, into the saw chamber, for the programmed cuts. The LASM knows when to clamp because it knows the length of the board and how much the gripper moves.	4. Without the Board Slip Sensor's activation, Error 004 appears and the saw will not run. See below for solution.
	5. When there is no length left for the gripper to grab the LASM takes control of the board and the gripper retracts to the correct position to load the next board.	