

TB207 (Rev1) - Arm Type ATC Position Drum Problem

This documentation describes the possible causes and the solutions for Arm Type ATC failures in the field. The most common error messages are:

9018 ARM HOME/CLAMP NO STOP

9022 ARM HOME/CLAMP NO STOP

9027 ARM HOME/CLAMP NO STOP

There are two possible causes:

- 1) Electrical noise generated by carousel or arm brake motors is causing arm sensors to have false trips that are long enough for the PLC to react and output failure messages. This subject is described in TB206.
- 2) These errors can also be caused by swing arm position drum misalignment.

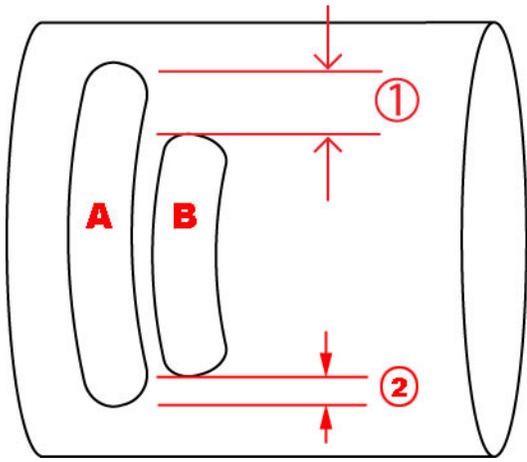
Position drum misalignment

The position drum slots and sensors must be properly aligned to prevent errors. Figure 6 shows the location of the sensors and position drum; it is located at the front side of the machine on the swing arm unit. If the sensor base is misaligned horizontally with respect to the slots on the position drum, the sensors may read inconsistently. A technician can easily fix a misalignment by loosening two screws on the sensor base and adjusting sensor alignment.



Figure 6, Position Drum and Sensors on the Swing Arm Unit

Slots on the position drum can be misaligned with respect to each other as well. The ideal position of B slot is at the center of A slot. Distance 2 can be shorter than what it is supposed to be and cause the middle sensor to trip at an earlier stage of tool change, which results in failure messages. Figure 7 shows the slot position on the drum. A technician can resolve this by reversing the phases on the arm motor. This will change the direction of the position drum rotation, which gives more time for the arm to get into the correct position before the middle sensor trips.



Document History

Rev1 Created on *2007-05-10*