

Technical Advisory Bulletin (TAB)

Bulletin #: TBMELCO016A

October 31, 2016

Product: Melco EMT16, BRAVO

Implementation: ☐ Urgent ☐ Mandatory ☒ As Required ☐ Info Only

Reference:

Subject: Needle 16 dropping

SITUATION:

Due to a factory assembly process issue, there may be machines in the field that experience a Needle Bar drop on Needle #16. This can occur when the machine is powered up and the Needle Case travels to its Color Change Home position. At Color Change Home, the Needle Case is located at its farthest left position and Needle #1 is approximately 4mm to the left of the Needle Plate hole.

When the Needle Case reaches this far left position, the Needle Bar Stud on Needle #16 is positioned very close to the left end of the guide channel in the Left Front Upper Arm Cover, or even protrude out of this channel. See picture below.

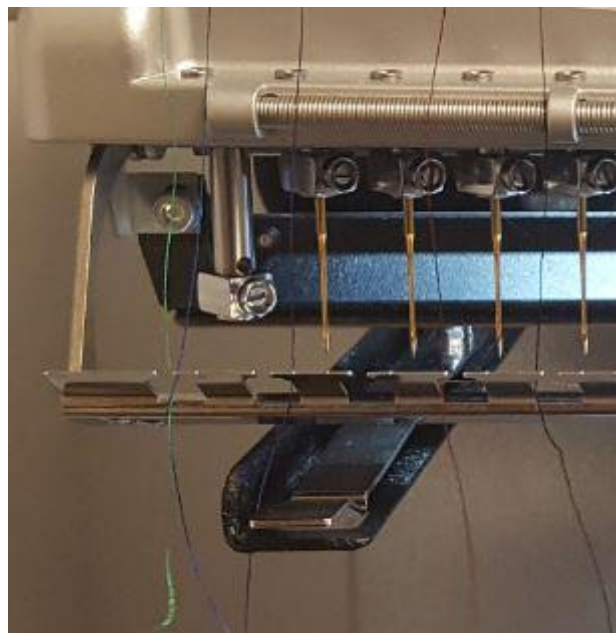
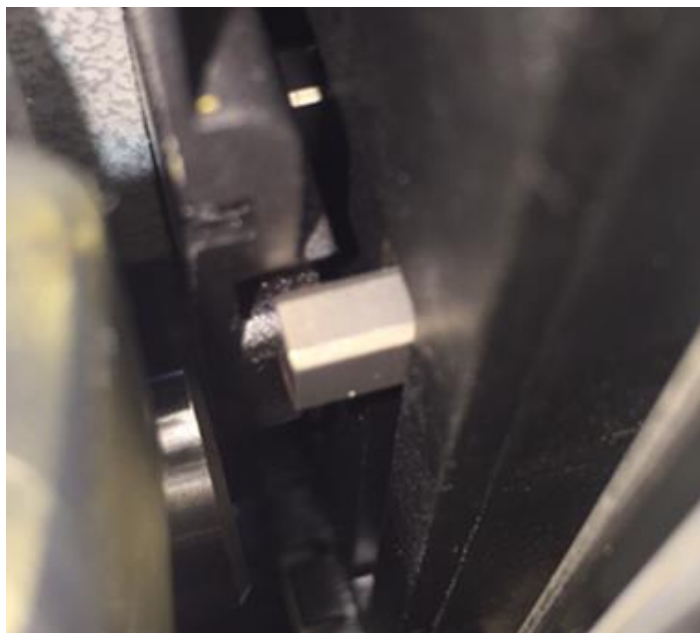


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In extreme cases, if the Needle Bar Stud travels beyond the end of the Front Arm Cover, Needle16 will drop as shown below.



This drop condition does not always occur immediately because there is a small amount of friction in the system preventing the Needle Bar from falling on new machines. However, as the machine breaks in from regular use, it could drop at any time when the Needle Case goes to its Color Change Home position during power up.

The earliest reported machine serial number exhibiting this condition in the field was 403442 for EMT16 and 340361256 for Bravo.

Machine inspections and adjustments for this issue, when necessary, started at Melco US at SN 403536 for EMT16 and 340361270 for BRAVO.

SOLUTION:

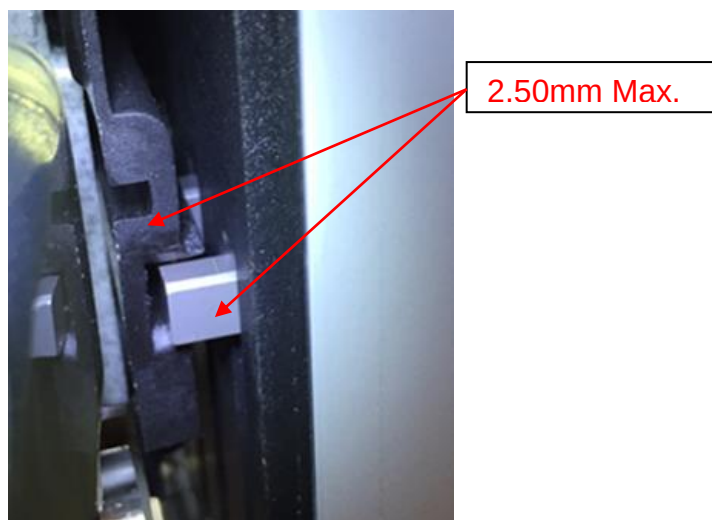
Currently, all factory machines are correctly assembled to prevent this issue from occurring. In addition, all machines in inventory at Melco have been checked for this condition and corrected as required since detection of this defect.

Based on inspections and reports received from Customer Support **it is estimated that only a very small percentage of the machine population potentially has this defect.**

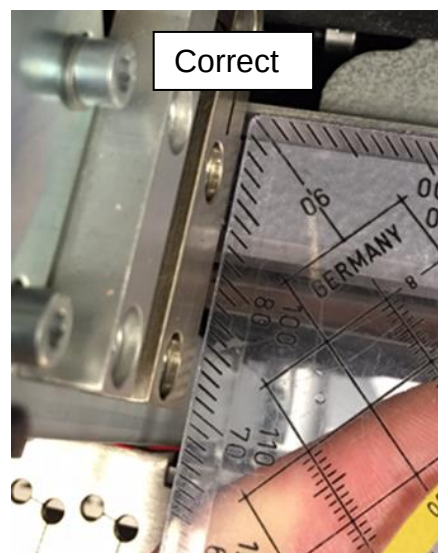
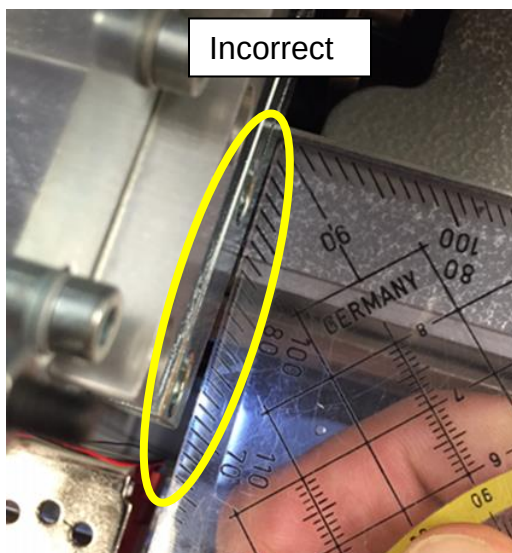
RECOMMENDED ACTION:

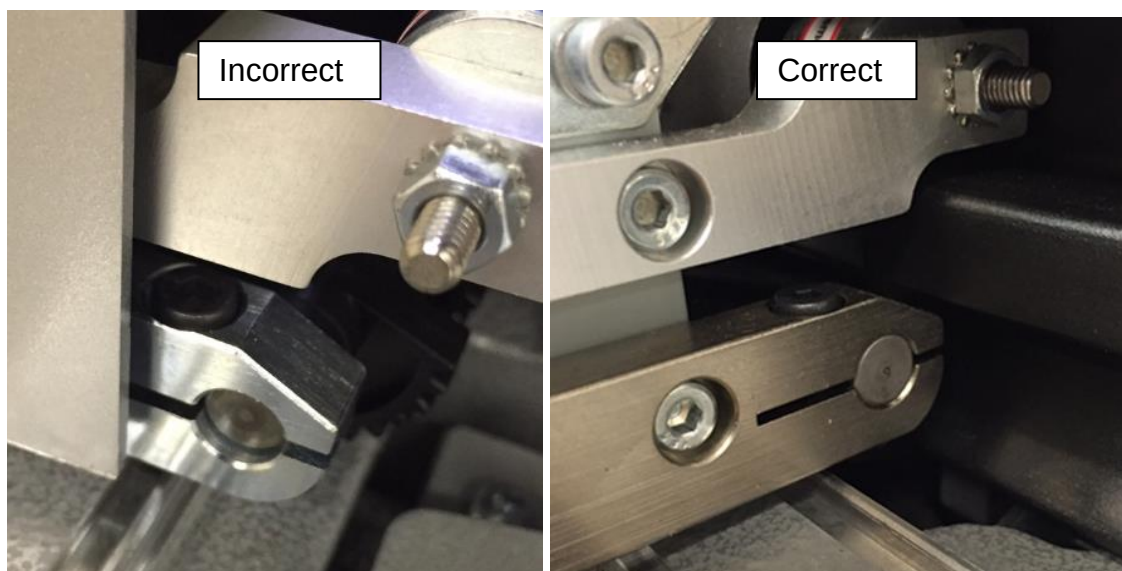
If the machine is not already at a customer, or a technician is at a customer for an unrelated service call, it is recommended to check whether or not Needle #16 has the risk of dropping using the following steps:

1. Power up the machine.
2. When the Needle Case reaches Color Change Home (extreme left position), immediately press the E-Stop button. Repeat as necessary to ensure the machine has stopped precisely at Color Change Home.
3. For machines at distributors, dealers and customers check if Needle #16 can drop by trying to pull down the Needle Bar with thumb and forefinger on the Needle Clamp. If the Needle Bar can be pulled down, move it back up even with the other Needle Clamps. Hold the Clamp in position and release the E-Stop until the Needle Case stops. Only Melco trained technicians are allowed to make adjustments to the Needle Case Assembly or replace it with a new one.
4. For machines at Melco Switzerland/Germany, measure the distance the number 16 Needle Bar Stud protrudes beyond the left side of the Left Upper Arm Front Cover. If the measurement is more than 2.5mm, it is recommended that the Needle Case Assembly be re-adjusted to reduce this distance. Only Melco trained technicians are recommended to perform this readjustment.

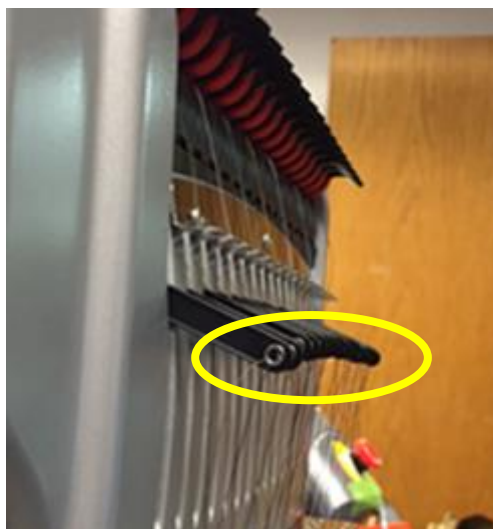


5. **Technicians Only:** The cause for this issue is mostly the result of the Take-Up Lever Mounting Bracket on the right side of the Needle Case Assembly not being square or perpendicular to the Upper Head Casting. The right side of the Needle Case Frame is bent outwards and the Take-Up Lever Shaft is recessed as shown in the pictures below.





This issue can also cause the Take-Up Levers to be on an arc rather than straight line. Actually, if a machine shows the Take-Up Lever Arms to be on a pronounced upward facing arc then this is a good indicator that the Needle Case had been misadjusted.



During the process of correcting this issue the Take-Up Levers, Color Change and Thread Feed assemblies will all require readjustment to machine specifications.