

Technical Bulletin

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Equipment	1-Gallon Bail-O-Matic				
Topic	Can Escapement Assembly Setup				

- Issues:**
- 1. A can orienting to the ear rail after Escapement # 1, catches up to the prior can, and fails to continue to orient to the ear rail.**
 - 2. A can releasing from Escapement #2, bumps into the can in the bailing station, causing it not to orient into position properly.**
 - 3. Cans bunch up between Escapement #1 and Escapement #2.**

Remedy: Setup the Escapements to the following criteria:

- 1. The Escapement Cylinder Needle Valve** controls the speed that the cylinder actuates and retracts. It should be set so the cylinder retract speed matches the return travel of the escapement arm, as a can passes through it.

(This criteria is the same for both escapements #1 and #2.)

Too slow will hesitate the can passing through the escapement.

Too fast will cause the cylinder rod nose to retract faster than the motion of the arm, as a can passes. This causes slamming of the escapement assembly when actuated open, along with increased wear. It also often results in the escapement bouncing back to the closed position, when there is no second can present.

The arm and cylinder should retract together as a second can passes through, with no hesitation or stutter in the second can's travel speed.

The Escapement #1 Limit Switch (Models C & D), or Photo Eye (Model DS), is responsible for opening the escapement. It also must provide enough space between cans, to not allow a 2nd can to catch up to and bump the prior can, before its ear reaches the ear rail.

Models C & D: Set the limit switch actuation so that a can against the guide rail on the switch side of the conveyor, fully actuates the lever of the Air Trigger Assembly, without burying the back of the lever against the switch.

All Models: (Limit switch, or photo eye equipped.)
Place two cans upstream of a closed escapement #1. Place the downstream can, with its ear already oriented to the ear rail. Place the upstream can, with its ear furthest away from the ear rail.

Actuate the switch with the conveyor running, to release the cans.

If the cans bump, before the 2nd can has a chance to orient to the ear rail, move the switch downstream for more can spacing.

If there is too much space between the cans, when the 2nd can's ear reaches the ear rail, move the switch upstream to reduce the space.

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- 2. The Escapement #2 Limit Switch (Models C & D), or Photo Eye (Model DS), is responsible for keeping a second can releasing from escapement #2, from bumping into the can in the bailing station as it orients into position against the can positioning arms or cover arms.**

If they bump, the incoming can will not orient properly.
Move the switch downstream to provide more space.

If there is too much space, this will slow the machine down.
Move the switch upstream for less space.

- 3. Escapement #1 must not release cans faster than Escapement #2.**

If Escapement # 2 is slowed by either turning the needle valve closed more, to limit release, or by moving the release switch, or photo eye downstream, then the same change must be made to Escapement # 1.

Cans building up between the escapements, until they back up into the 1st escapement, indicates cans are being released faster from Escapement #1 than they are from Escapement #2.

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Escapement Model D

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	00419	AIR CYLINDER	1
2	00814	STRIKER PAD	1
3	00819A	AIR TRIGGER ASSEMBLY	1
4	00830	BUMPER	1
5	01911-02	ESCAPMENT ARM	1
6	01919	ESCAPMENT BRACKET	1
7	00121	ROLLER	2
8	00922-01	BEARING - NEEDLE	1
9	00922-02	BEARING - NEEDLE	1
10	01106	GUIDE	1
11	01107	WOSE	1
12	01154	SHAFT	1
13	20697	THRUST WASHER	2
14	251145	COLLAR - 1 PC CLAMP	1
15	01010+	SPRING - EXTENSION	1
16	02040	VALVE NEEDLE	1

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 SCALE: 12 IN 10411

Escapement Model DS

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	00419	AIR CYLINDER	1
2	00814	STRIKER PAD	1
3	00830	BUMPER	1
4	01911-02	ESCAPMENT ARM	1
5	01919	ESCAPMENT BRACKET	1
6	00121	ROLLER	2
7	00922-01	BEARING - NEEDLE	1
8	00922-02	BEARING - NEEDLE	1
9	01106	GUIDE	1
10	01107	WOSE	1
11	01154	SHAFT	1
12	20697	THRUST WASHER	2
13	251145	COLLAR - 1 PC CLAMP	1
14	01010+	SPRING - EXTENSION	1
15	02040	VALVE NEEDLE	1

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