



TSB # 15-2017

March 2, 2017

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TO: All Bourgault Dealers  
ATTN: Service Manager, Parts Manager, Sales Manager  
SUBJECT: "Rapid Opener Drop" – change to Counter-Balance Cartridge

## INFORMATION BULLETIN:

### BACKGROUND:

All PHD (3310 and 3320) and all ICD (3710 and 3720) drills can experience "opener drop".

There are two basic categories of "opener drop"

- Slow "opener drop"
  - When a drill is left with the openers in the raised position, with no active hydraulics being applied, the openers all slowly lower to the ground over a period of time. This may take 1 hour, 1 day or 1 week etc...
    - Slow opener drop is the direct result of bypass within the opener cylinder(s), it is simply oil moving from one side of the piston seal to the other. Since all the cylinders are plumbed together they eventually will all lower to the ground, how fast they lower to the ground will depend on the total amount of bypass within the system.
  - Generally speaking slow opener drop does not cause any functional issues in field position. Active hydraulics are applied therefore any internal bypass is quickly recovered and the openers operate properly and as long as the machine stays in the raised position long enough to satisfy the customer's expectations, no concerns are raised.
- Rapid "opener drop"
  - When a drill is left with the openers in the raised position, with no active hydraulics being applied, then the openers all rapidly lower to the ground, basically in the same way they would if lowered with the control box. This may take place after just a few minutes or as much as 30-40 minutes.
    - NOTE: The openers may lower completely to the ground or just lower part way.
  - Rapid opener drop is typically preceded immediately by an audible click or snap from within the hydraulic block.
    - The root cause of the rapid opener drop is the direct result of bypass within the opener cylinders combined with a significant amount of air retained in the system. The air combined with the bypass oil creates an imbalance within the system resulting in the PO check-valve being forced open and allows the openers to rapidly lower to the ground.
    - Rapid opener drop can be further affected by leaving "residual" pressure in the system, it is critical to ensure all the gauges are reading zero pressure when placing the drill into storage or prior to transporting.
  - Rapid opener drop as well does not cause any functional issues in field position but will become a concern when transporting the drill without active hydraulics being applied.
    - The customer is unable to transport the drill from field to field without having to apply active hydraulics to prevent the openers from dropping to the road.
    - The drill cannot be normally transported, as part of a sales transaction, by a dealership or customer as hydraulics may not be present on the tow vehicle.

The solution to any opener drop situation is to repair or replace any opener cylinders with internal bypass and take steps to remove trapped air from the system. Refer to the opener drop test procedure in the operator manual or watch the video procedure on YouTube.

[https://www.youtube.com/watch?v=oBTF7rIGJ9k&list=PLL\\_3g3fNp79qJrBfJP\\_tNWCco6vUWsFLP&index=12](https://www.youtube.com/watch?v=oBTF7rIGJ9k&list=PLL_3g3fNp79qJrBfJP_tNWCco6vUWsFLP&index=12)



All model year 2017, 3320 and 3720 drills have been built with a counter-balance cartridge instead of the previously used PO check-valve cartridge. This change will allow the system to withstand a higher system imbalance (caused by the combination of opener cylinder bypass and air trapped in the system) before the drill experiences the rapid opener drop situation. Of course this new cartridge will have a limit to how much of a system imbalance it can withstand before opening and at that point any opener cylinders with internal bypass will need to be repaired or replaced and steps taken to remove the excess air trapped in the system.

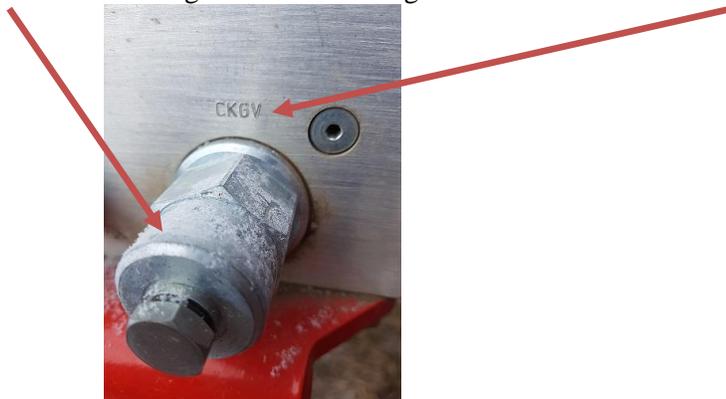
Any 3310, 3320, 3710 or 3720 drills, experiencing the rapid opener drop situation may benefit from replacing the PO check-valve cartridge with this new counter-balance cartridge to extend transport range prior to having to repair or replace bypassing opener cylinders. The new counter-balance cartridge will not resolve slow opener drop concerns.

**CORRECTIVE ACTION:**

- Notify your staff involved with the Bourgault product line and your customers of this product improvement.
- Order the counter-balance cartridge (3441-21-08) from the Bourgault Parts Department.

Part Number	Description	Ref Price	List Price
3441-21-08	2:1 Vented Counter-Balance Valve (CAGL – LGN)		

- Remove the existing PO Check-Valve cartridge from the existing block. The block will be stamped CKGV.



- Install the new cartridge (3441-21-08) into the CKGV port stamped on the hydraulic block.
- This fix can be applied to units with a high float block or a standard block.



**WARRANTY DETAIL:**

- Warranty does not apply. **CONTACT BOURGAULT DEALER FOR PRICING**