

SR Axis Autoflow Mk4 Upgrades

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Problem

There are a group of issues that regularly occur with the SR axis on the Autoflow. The proposed upgrades solve all of them with a package of measures

The issues are:

SR Axis Issues

| No | Issue | Solution |
|----|--|--|
| 1 | The SR axis datum sensor in its designed position on a Mk4 is prone to breakage with offcuts. On Mk4 machine, the orientation on an arc makes setup unreliable and difficult | Move the SR datum sensor to a point higher on the assembly, away from the swarf and change its orientation so it works from a flat plate rather than an arc. |
| 2 | Moving the SR sensor creates another issue with reliability as offcuts at the top can be thrown into this area, breaking the sensor holder and the sensor | Design a deflector plate to improve offcut management in this area |
| 3 | The SR axis slewing ring seal can be pulled out with a sharp offcut as area acts like a "bucket" for swarf and offcuts | Design a cover system to enclose the base area |
| 4 | The later SR axis slewing rings have a greasing point on the inside of the ring that can be wiped out by the same offcuts | Cover system needs to protect the greasing points, and they need to be piped and routed so that the greasing points are more accessible |
| 5 | The end stop on the SR axis is poorly designed and unreliable on the Mk4 design | Design a system that can be retrofitted, given the change in design of the steel framework |

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