



PPMS Service Note 1084-601

Cleaning the ACMS Sample Transport Assembly

A buildup of residue inside the assembly may result in the transport sticking. The system is designed to fail when the transport resistance exceeds a value that the servo controller assembly can easily drive. The error message “Sample Travel is Blocked” indicates this condition. Therefore, the ACMS Sample Transport Assembly (part number 4084-500) may require occasional cleaning.

In addition to the cleaning procedure, make sure that the small breaker switch located on the rear of the ACMS Servo Controller/Magnet Tray is also set. If this breaker is not tripped, it will be very hard to switch. If it has been tripped, it will be easy to reset.

Procedure for Cleaning the Sample Transport Assembly

Note: Do not use solvents or lubricants.

1. Remove the sample transport assembly from the PPMS probe head.
2. Remove the slider tube and gear rack assembly from the block positioner (**Figure 1**).
 - a. Slide a pen-sized instrument into the center of the cylinder in the block positioner. Push the slider tube and gear rack assembly to the base of the block positioner by pushing along the cylinder wall.

Note: The instrument used to do this must not scratch any surface of the sample transport assembly. A plastic ballpoint pen works well.

- b. Remove the circlip sleeve (“c” shaped wire) from the bottom of the cylinder in the block positioner with a tweezers. It is helpful to move the circlip sleeve until a portion of it is exposed at the notch (**Figure 2**) of the block positioner cylinder.

Note: The beveled end of the slider tube and gear rack assembly is the end that is inserted first into the cylinder of the block positioner. It is inserted from the top.

3. Swab the inner and outer surface of the slider tube and gear rack assembly with a dry cotton swab. Clean the gears.
4. Clean the inner cylinder of the block positioner with a clean, lint-free cloth.
5. Reinstall the slider tube and gear rack assembly into the block positioner (**Figure 1**). It is inserted from the top of the block positioner.
6. Reinstall the circlip sleeve with a tweezers.

7. If the circlip sleeve is exposed within the notch of the block positioner cylinder, move it so it is not exposed (**Figure 2**).
8. Reinstall the sample transport assembly onto the PPMS probe head.

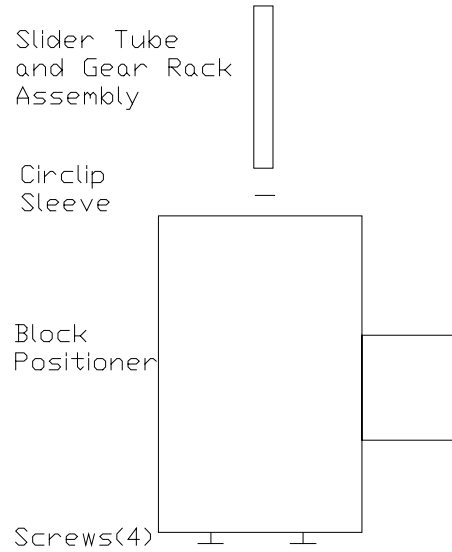


Figure 1. The ACMS Sample Transport Assembly.

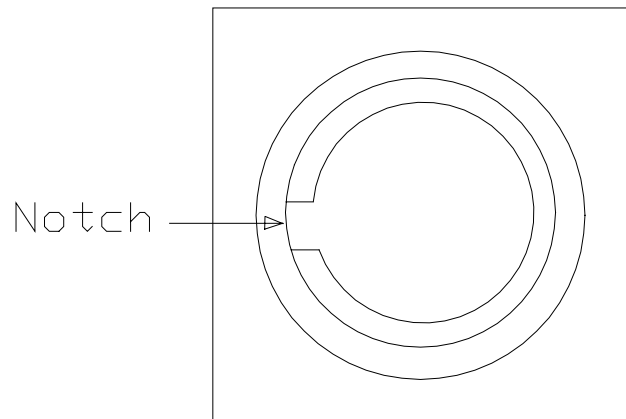


Figure 2. The Bottom View of the Block Positioner.