ASM 925 DCOF Meter Operator Instructions

925 Kit Contents

925 DCOF meter
Test foot with SBR material attached (2 included)
Test foot cleaning brush
Sand Paper
Two 9 volt batteries installed
32 g micro SD card in SD adapter
SlS vials w/ 13ml Sodium Laurel Sulfate each, w/ MSDS sheet
Cloth specimen bag for accessories
Reference surface to verify meter
Carrying case w/ wheels

925 Testing Method

The 925 is a motorized drag sled. There is an internal weight with a test foot that is attached and is pulled internally with a load cell measuring the forces. As the downward vertical motion is started, the test foot starts forward as contact is being made. The sled is pulled forward in a sliding dynamic motion. The processor gathers the force data, calculates into a DCOF value, does this with 100 points over the run and calculates the average to be displayed.

Getting Started

Remove the meter from the case. The two 9 volt batteries are installed at the factory. Prior to installing the test foot, for a first time user it is recommended to push the meter down a couple of times just to get a feel for how to press down smoothly. One does not have to press down overly fast or with excessive force. Just a nice smooth motion to the meter stops going down. There are 2 stops on the bottom so the meter is depressed to the same position each time.

Prior to installing the test foot, run a pass to verify the unit is working properly and there is not a drive problem.

1) Turn the meter on with the power switch on the top. Press 1 to continue or 2 to edit the time and date. If changing the time and date, follow the on screen prompts after 2 to edit.

2) Select 1 for a single pass.
3) Press 1 to start.
4) Press 1 to continue.
5) Press 1 again to continue.
6) Push the meter down and hold until the test is complete and the display reads “Done Lift Meter” Should read DCOF = 0.000
7) Press C to repeat. Run another cycle if you would like to practice or feel the meter run again.

Prepping the Test Foot

1) Remove a test foot from the storage container. If it is dirty or shiny from testing, lightly sand the SBR material.
2) Using 2000 grit wet/dry silicone paper, drag the foot across the paper 2 times, rotate 90 degrees, repeat 3 more times so the foot is sanded in 4 directions.
3) Brush the foot with the enclosed brush to clean off sanding residue. If you have a spray bottle it is recommended to spray the foot and then brush to further clean of any sanding residue.

4) Make sure the meter is turned off and install the test foot by screwing it into the bottom of the meter in the weighted block in the slot opening on the bottom of the meter.

Do not press hard or attempt to move the assembly by sliding the mechanism or side to side. This will damage the load cell.

Test the Reference Surface

1) Apply SLS to the reference surface in approximately a 1 ½" x 3" strip. Lining the meter up over the SLS, using the black lines on the side of the meter (shows the travel area).
2) Turn the meter on and select 1 to continue.
3) Press 0 to run a zero calibration run.
4) Press 1 to start or 2 to cancel if not ready. Once the 1 is pressed the meter will run the travel distance with the test foot in the air. If this is done with the SLS it will spread the SLS back and forth over the test area also. After the end of the calibration run, the meter will return the test foot to the start position.
5) Press 1 to continue
6) Verify the SLS is on the test foot travel area.
7) Select 1 pass.
8) Press 1 to start.
9) Press 1 to continue.
10) Press 1 to continue.
11) Press the meter down after the display instructs this. Let up when the test is complete.
12) Discard the reading. Press C to repeat.
13) If the foot was sanded, repeat this procedure 1 or 2 more times to condition the test foot.

Testing

1) Select the type of test you would like to make, 1 for single pass, 4 for 4 passes (1 of each direction 0 deg., 90 deg., 180 deg. and 270 deg. averaged into one final DCOF, or 6 for 6 passes, 3 in one direction and 3 in a direction 90 deg from the original, and then averaged into 1 final DCOF.
2) After selecting the display will indicate P1 for first pass and 0 deg if using a 4 or 6 pass run. Press 1 to start and you can use the edit function to assign a location number.

3) Press 1 to continue and you can edit the run number by selecting 2 or it will sequentially increase each time a run is saved.
4)Press the meter down and hold, lift up after the run is complete, record the DCOF when satisfied, either press C to repeat the run or D to save the pass. The display will ask to verify the SD card is in place for saving. The data will be lost if the card is not in place when starting the save. With the micro SD card in place, press 1 to verify and 1 again once the data is saved. The first of the passes takes a few seconds longer to save as the file must be set up for the number of passes.
5) Follow the display prompts for the remainder of the passes.

SD Card Information

You cannot use a micro SD card that is larger than 32g capacity. If you wish to carry additional cards a 32g is recommended but a card of less capacity can be used. Please try any card used prior to field use to assure the meter is recognizing the card.
When saving data to the card, make sure the card is in place. If it is not and you mistakenly press 1 to tell the device it is, the display will read that data is saving but without a card it is not. The meter does not have a hard storage without the micro SD card. The display will stay on data saving until the power is turned off. The power must be turned off and back on to move past this and the data from the pass will be lost.
Once the run is saved to the card, the card can be used in any supporting device that can accept the card format and an Excel spreadsheet. Download the excel spreadsheet and export the data file to the spreadsheet for the report. If you view the DAT files, the data is encrypted so the numbers do not match the display when viewing and recording the DCOF number after each pass.

Error Codes

Meter Up Early is displayed if even down force is not applied throughout the run. The meter will return the sensor to the docked start position and the test will be cancelled.
Check Motor Gear is displayed if the meter senses something that increases or decrease friction excessively. A grout line or unexpected contaminate may cause this. If everything looks ok on the test surface and the error continues there may be an internal mechanical drive issue.
Low Battery is displayed to when the voltage drops too low to run the motor at a consistent speed. Replace with two 9 volt batteries. Follow all local, state and federal regulations for battery disposal and or recycling. Alkaline batteries are supplied. Most rechargeable batteries will not last as long with the constant startup of the motor. It is not recommended to use a lithium Ion battery. The short runs with startup loads could cause the lithium Ion batteries to heat up.