Manual Supplement

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This supplement contains information necessary to ensure the accuracy of the above manual.

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FLUKE®
Calibration

Change #1, 557

On page 2, under the **Caution**, replace the first bullet with:

- **Read *Care and Handling Guidelines*, before you remove the mercury triple point cell from the case. Incorrect handling can damage the cell.**

On page 3, replace the ***Specifications*** section with:

Specifications

ITS-90 Assigned Temperature	234.3156 K (–38.8344 °C)
Expanded Uncertainty (k=2)	0.2 mK
Purity of Mercury	99.999999+% (8N+)
Quantity of Mercury	2,600 g
Outer Diameter of the Cell	38 mm (1.5 in)
The Length of the Cell	400 mm (15.75 in)
Inner Diameter of the Reentrant Well	8 mm (0.31 in)
Total Immersion Depth in Mercury	210 mm (8.27 in)
Total Length of the Reentrant Well	381 mm (15 in)
Case Material	304L Stainless Steel

Under ***Description***, in the first paragraph, remove the first sentence.

Under ***Care of Your Mercury Triple Point Cell***, in the first paragraph, replace the first 2 sentences with:

> The mercury triple point cell is completely sealed and requires very little maintenance. Fluke Calibration recommends that the cell be kept in the vertical position for safety, although putting a cell in the horizontal position for a short time will not cause damage. Extended placement in a horizontal position may cause the mercury to come in contact with the welded closures and is not recommended.

Under ***Realization of the Triple Point of Mercury***, replace the first paragraph with:

> The Fluke 5900E freezing and melting techniques yield triple-point values within ±0.1 mK over most of the liquid-solid range.

On page 4, in the first paragraph, replace the first 2 sentences with:

> Since the triple point of mercury is about 60 °C below room temperature, the melting technique is easier to realize and has a longer plateau. Fluke Calibration recommends that most users realize the triple point of mercury using the melting technique.

In the second paragraph, replace the first sentence with:

> The realization of the melting curve of the mercury triple point is accomplished in a bath with a minimum depth of 457 mm (18 inch), such as Fluke Calibration models 7341 and 7381 liquid baths.

On page 5, Table 3, replace the 5th row with:

Indium (F)	429.7485	4.9	3.3	0.003801

Replace the last paragraph on the page with:

> h: the immersion depth of the midpoint of the sensor of a SPRT into the material used for the fixed point. The immersion depth of the midpoint of a SPRT sensor in a mercury triple point cell is approximately 183 mm. The distance from the inner bottom of the central well to the surface of liquid metal is about 208 mm. If the distance of the midpoint of the sensor from the tip of the sheath is 25 mm, the mean immersion depth of the SPRT sensor = 208 mm –25 mm = 183 mm. The temperature correction, Δt, can be calculated using Equation 1.