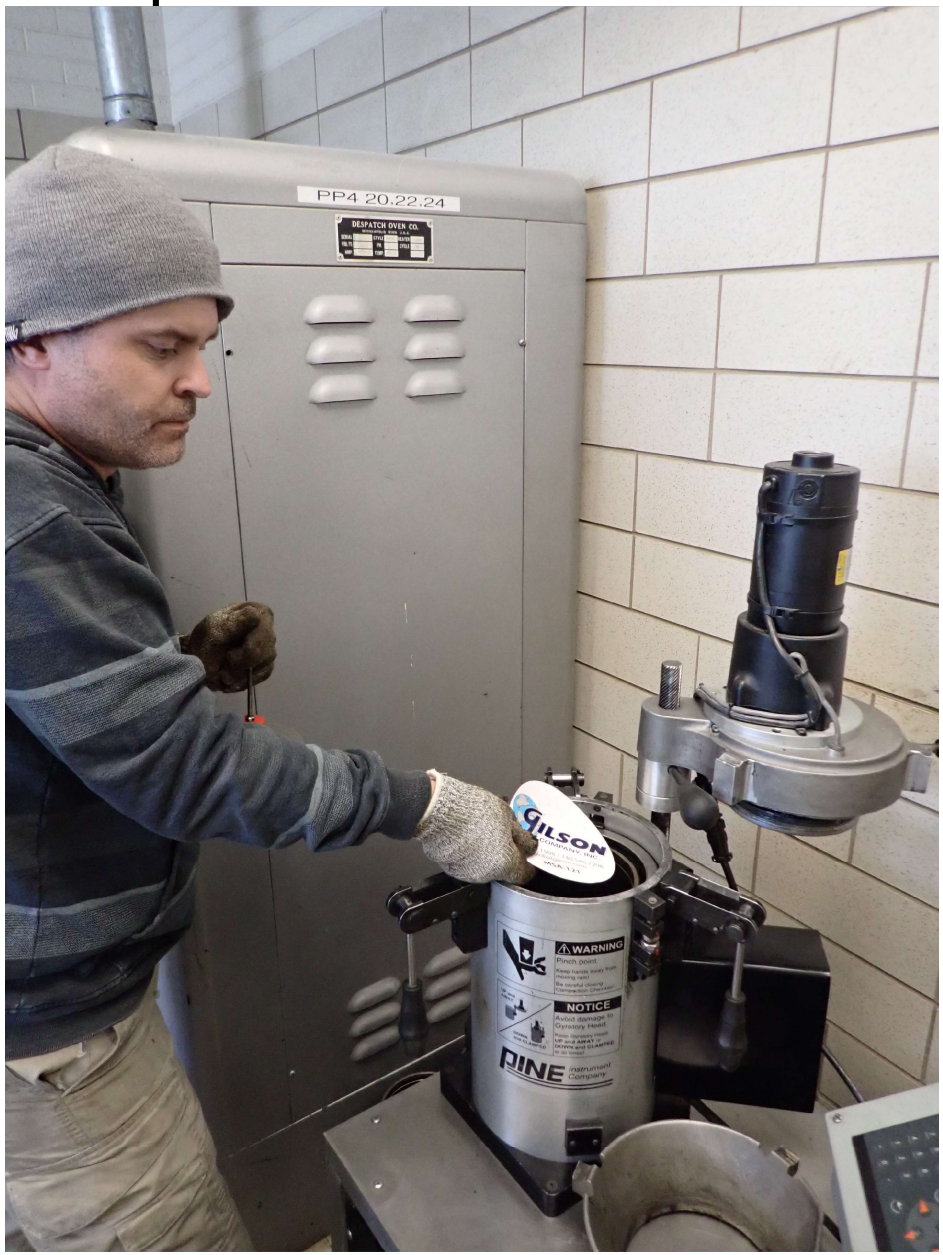
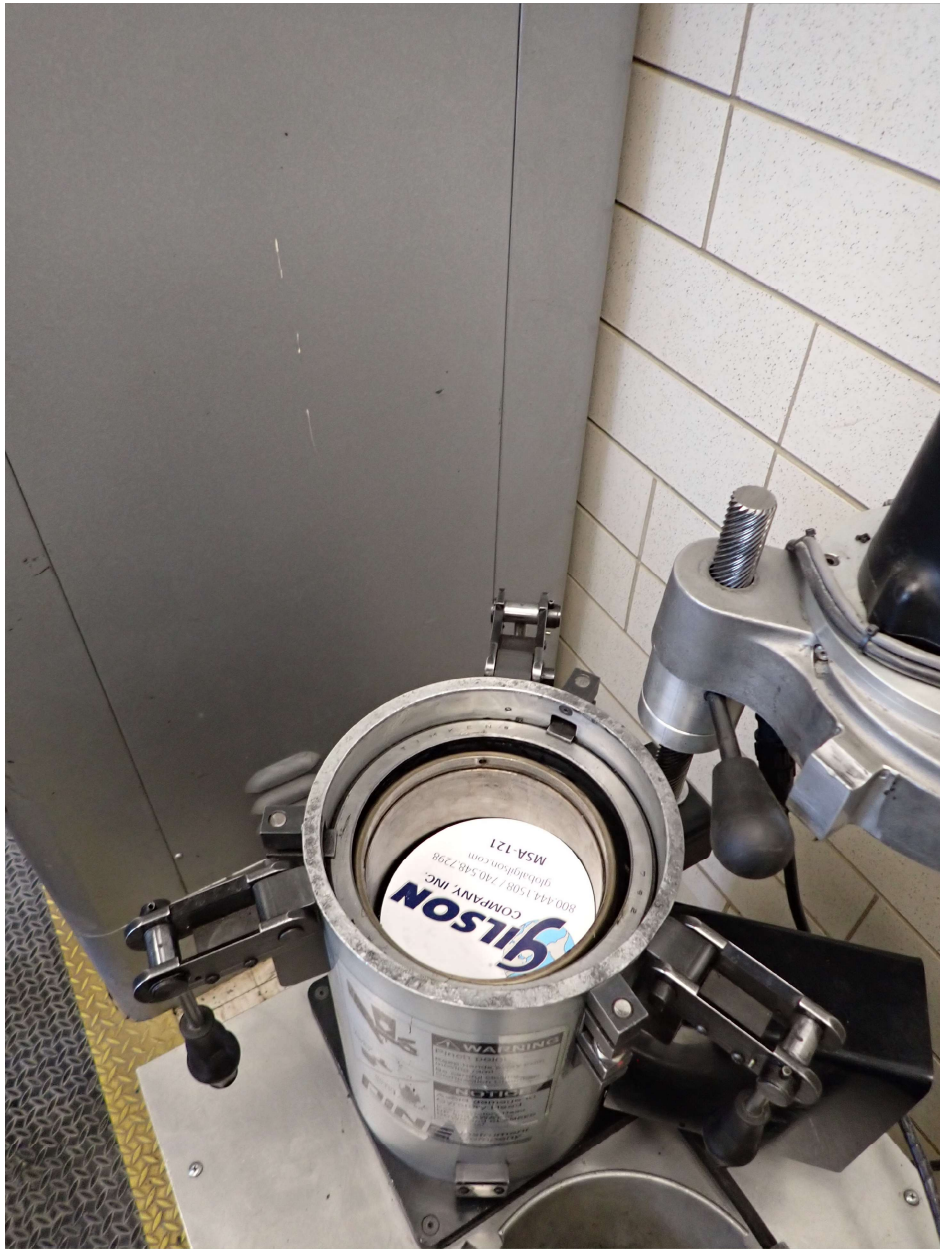
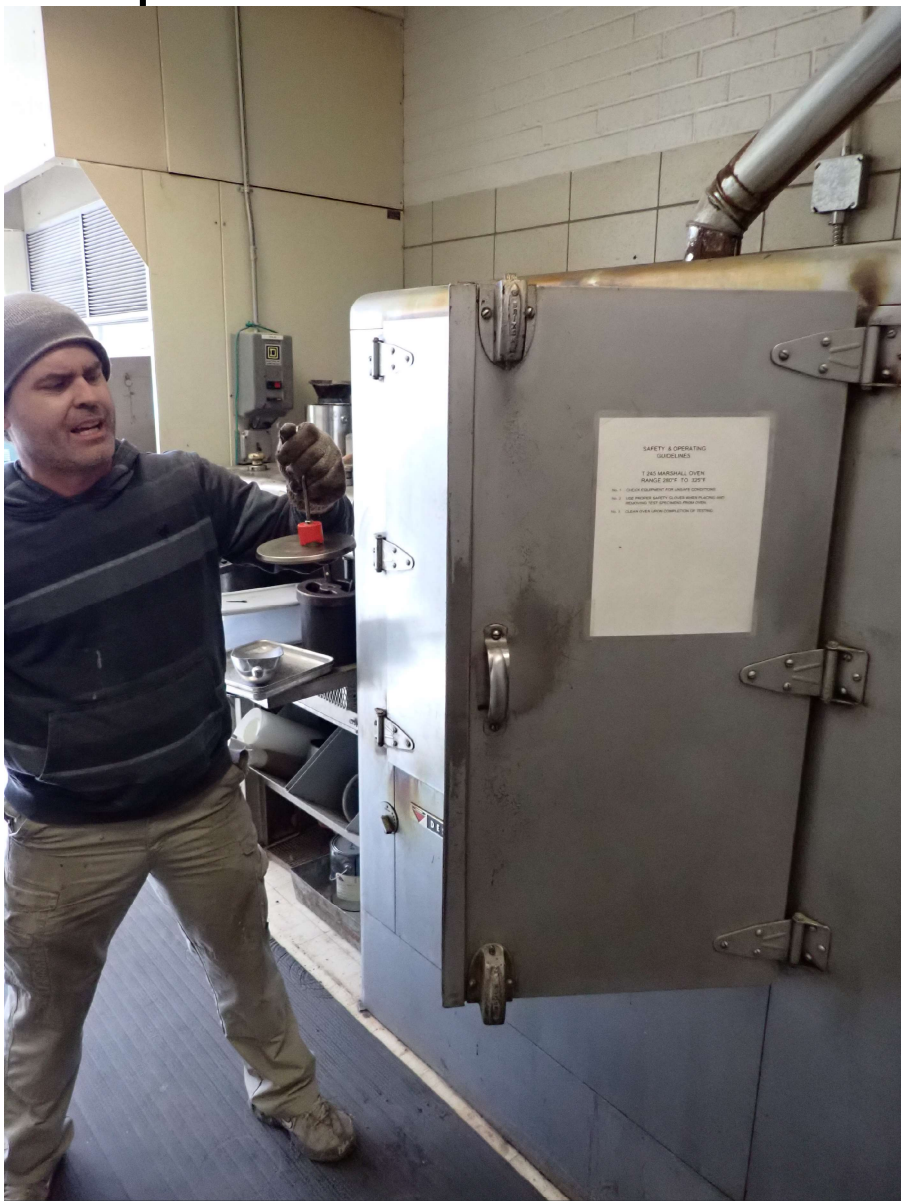
Get the mix in the compactor

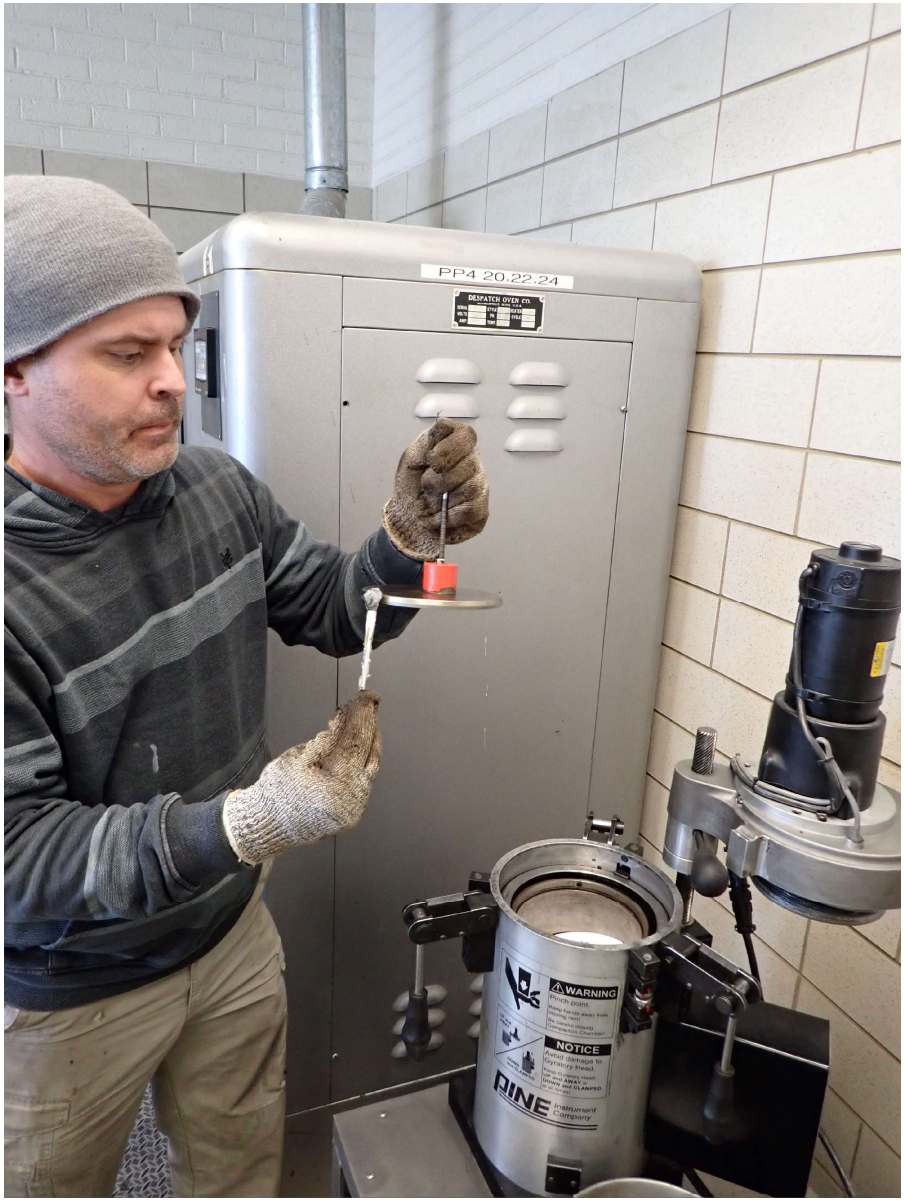
Add paper disk



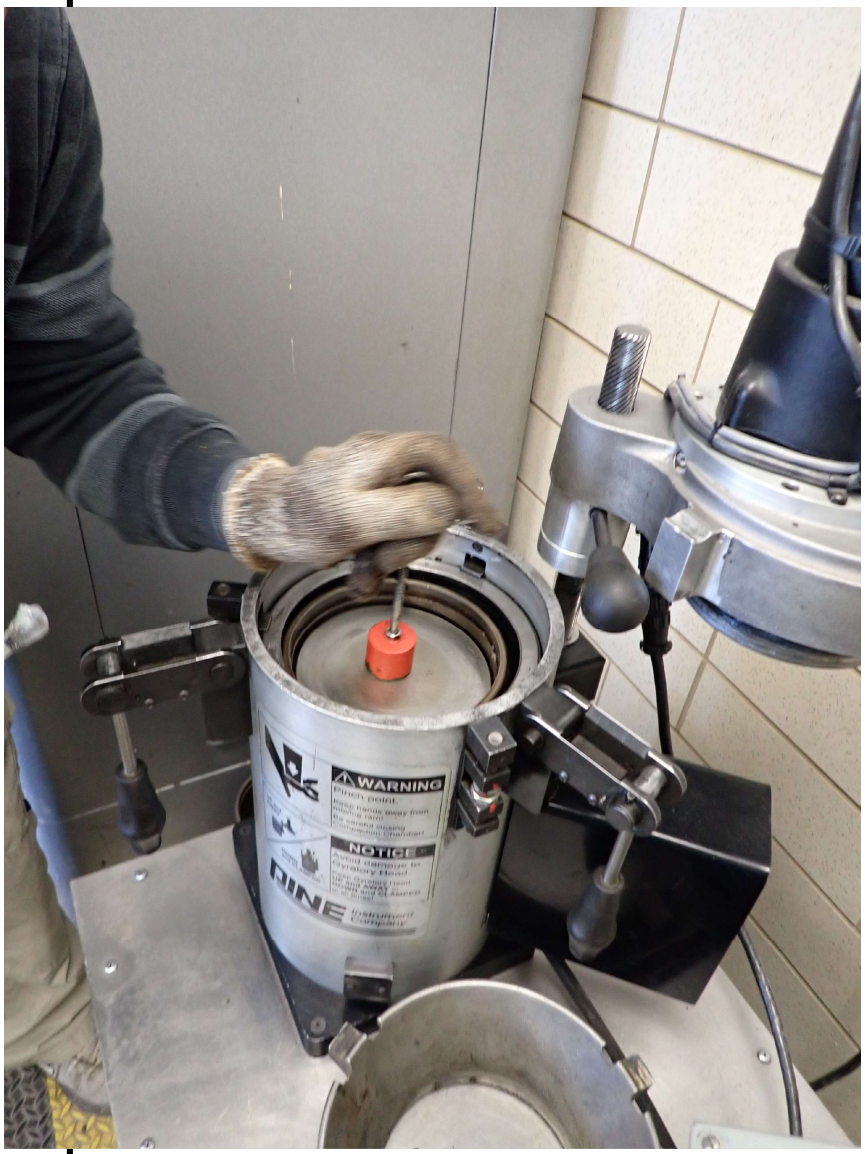


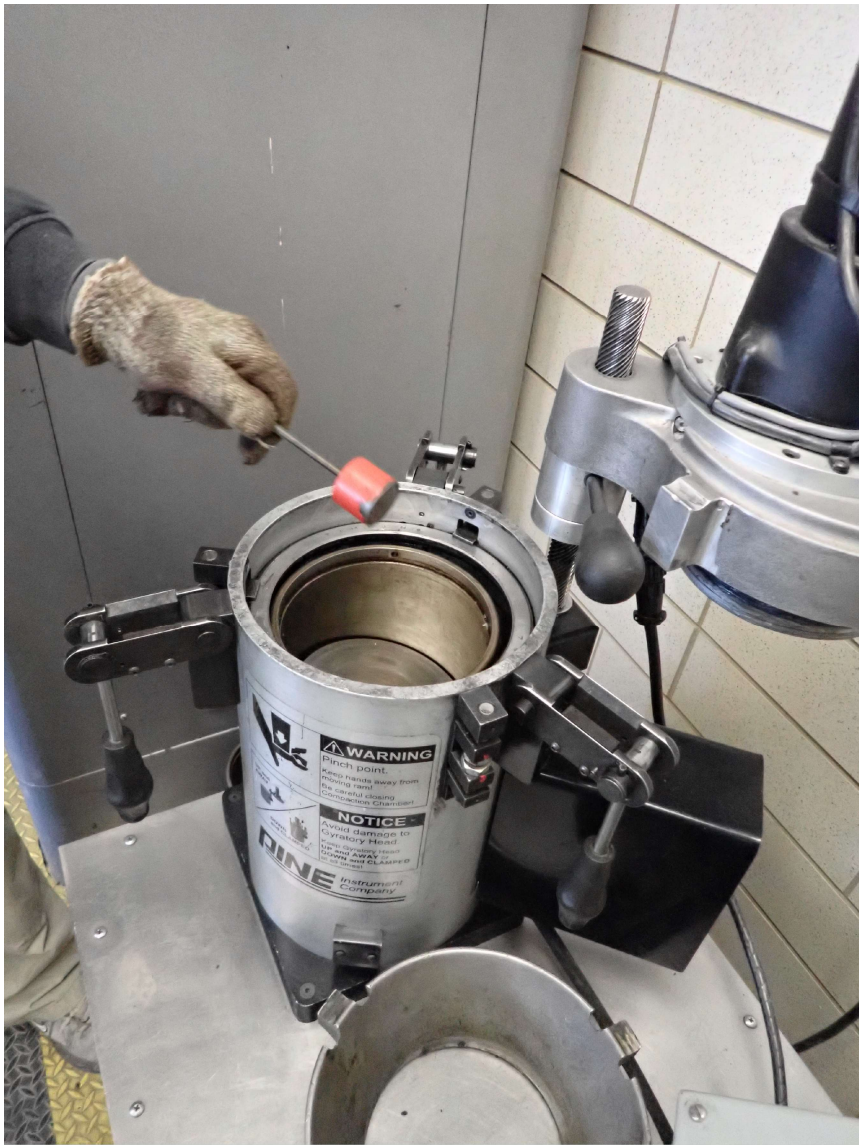
Get top plate out of the oven and lubricate it

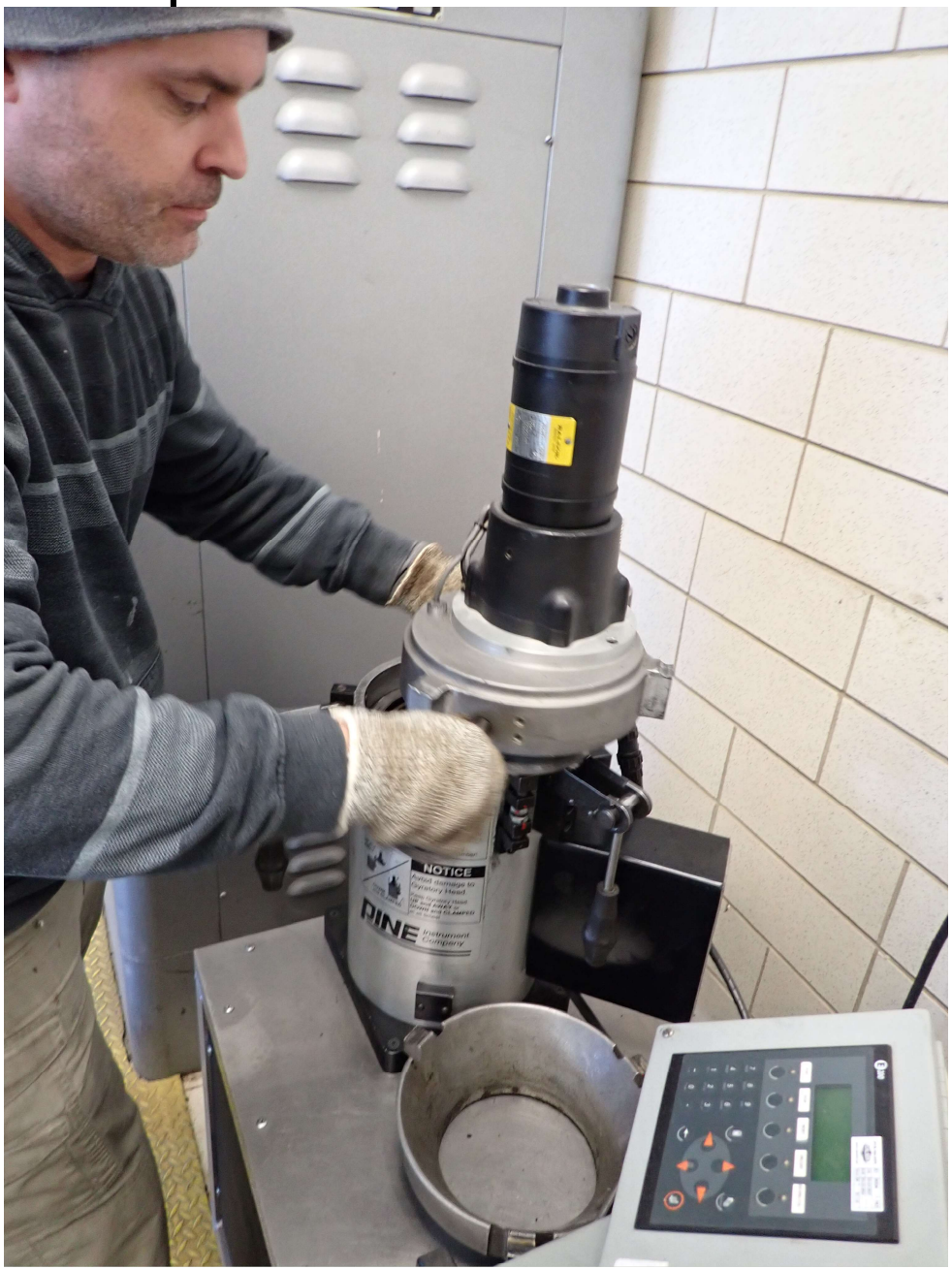


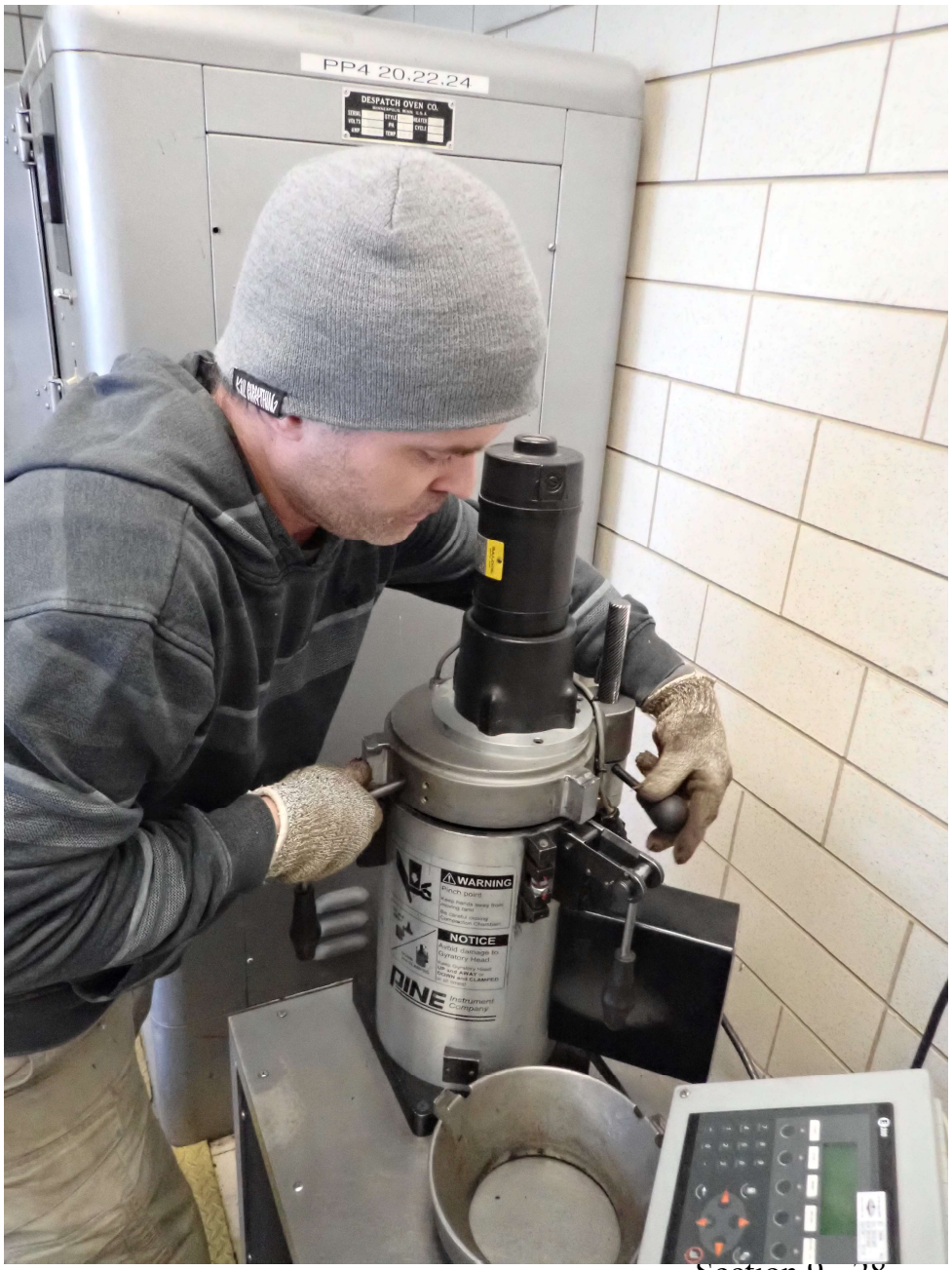


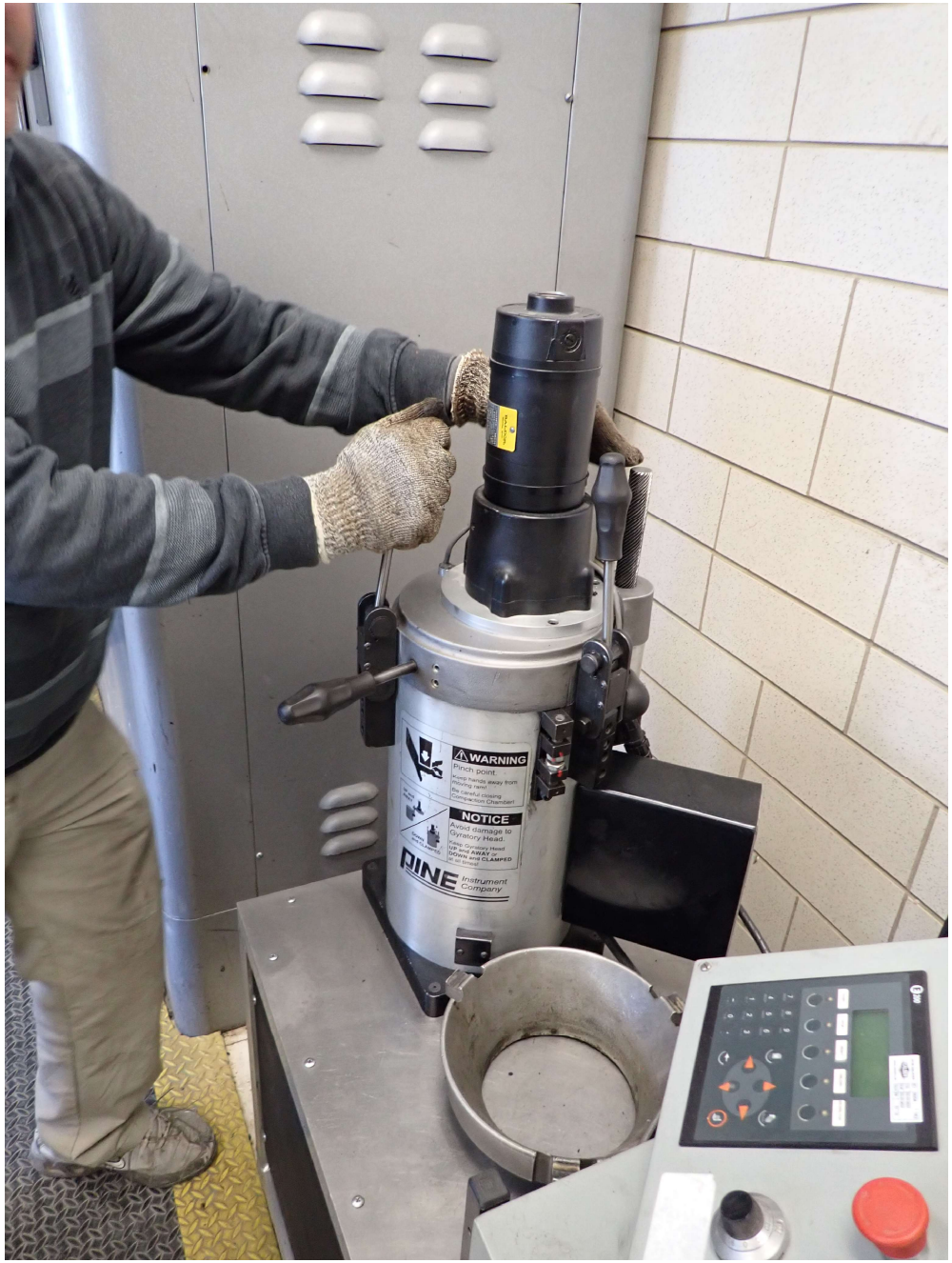
Place the hot top plate





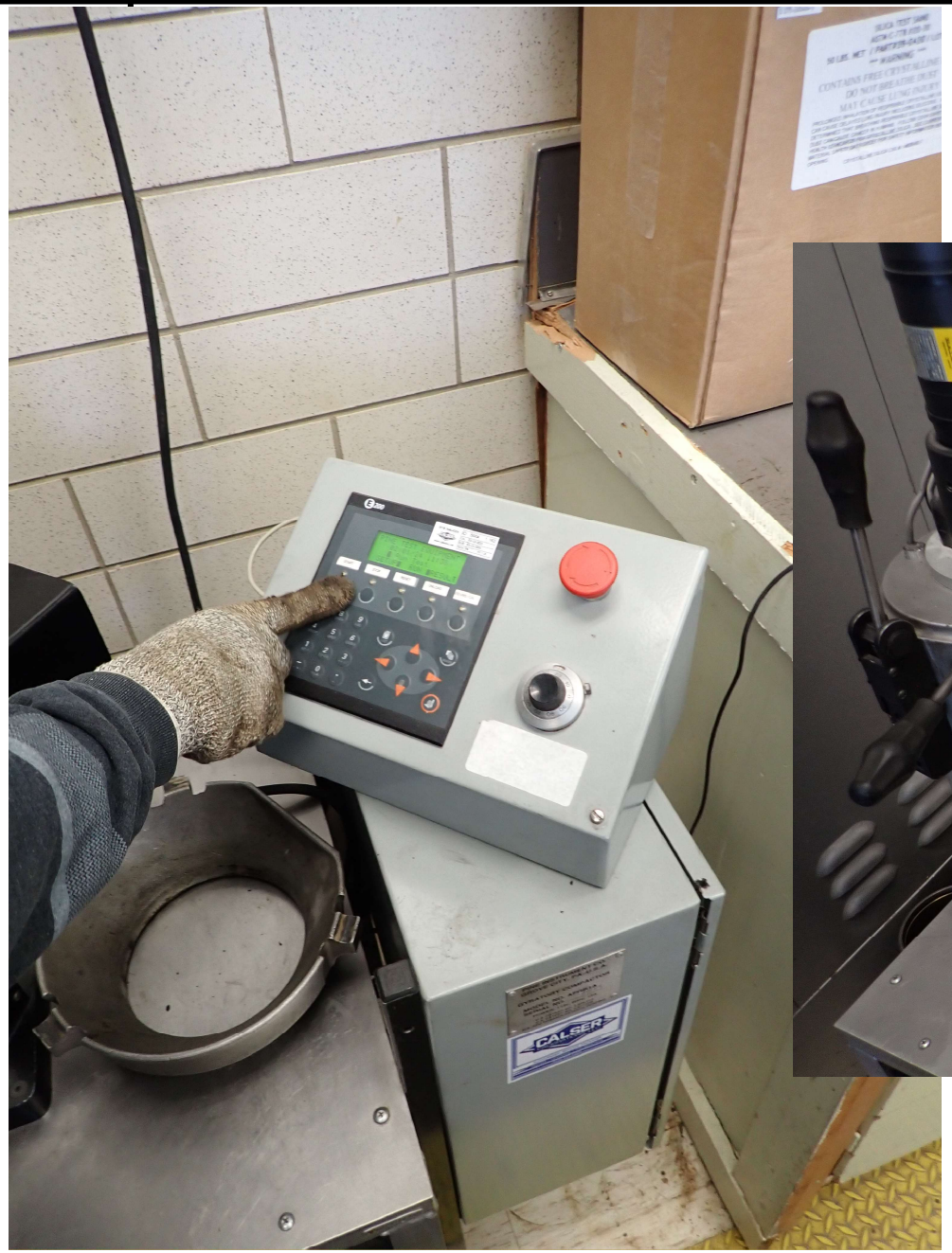

NOTICE
PINE Instrument Company

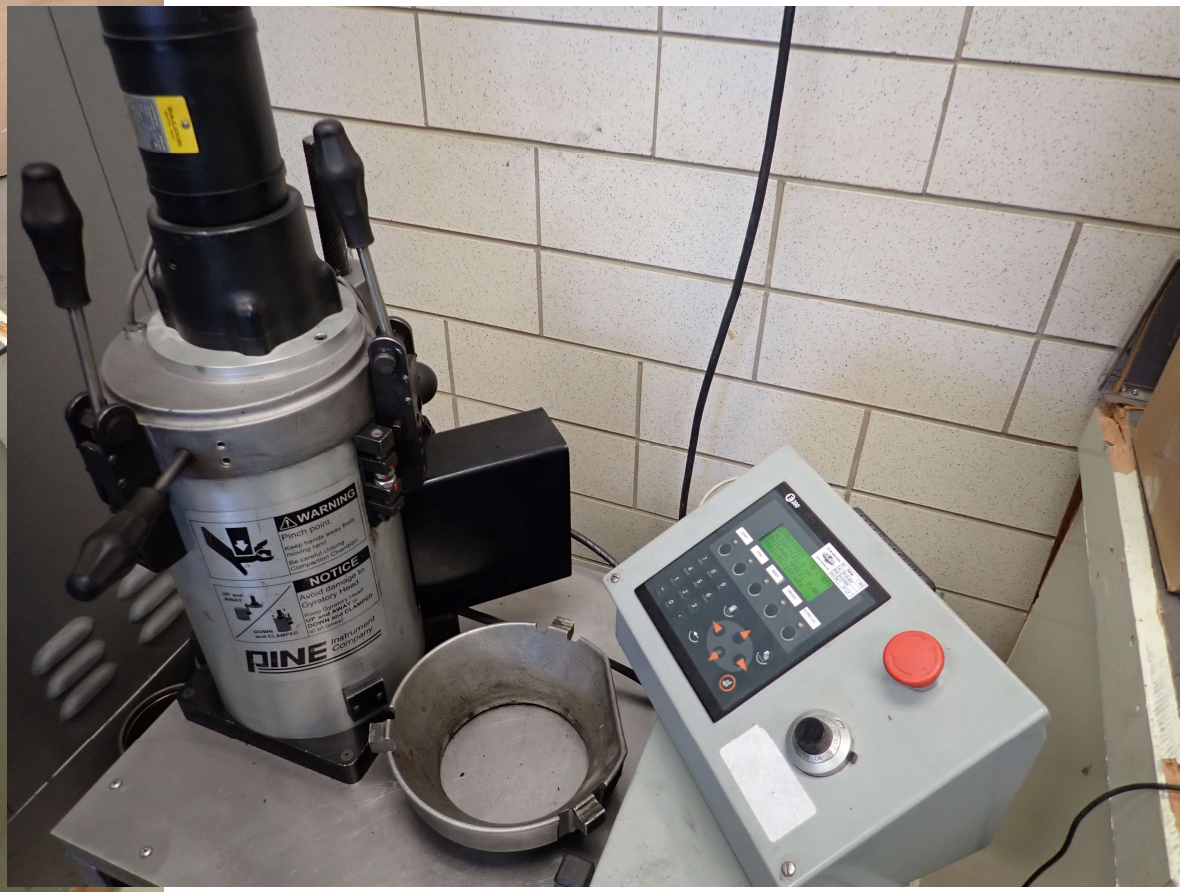

PP4 20.22.24
DESPATCH OVEN CO.
WARNING
NOTICE
PINE Instrument Company

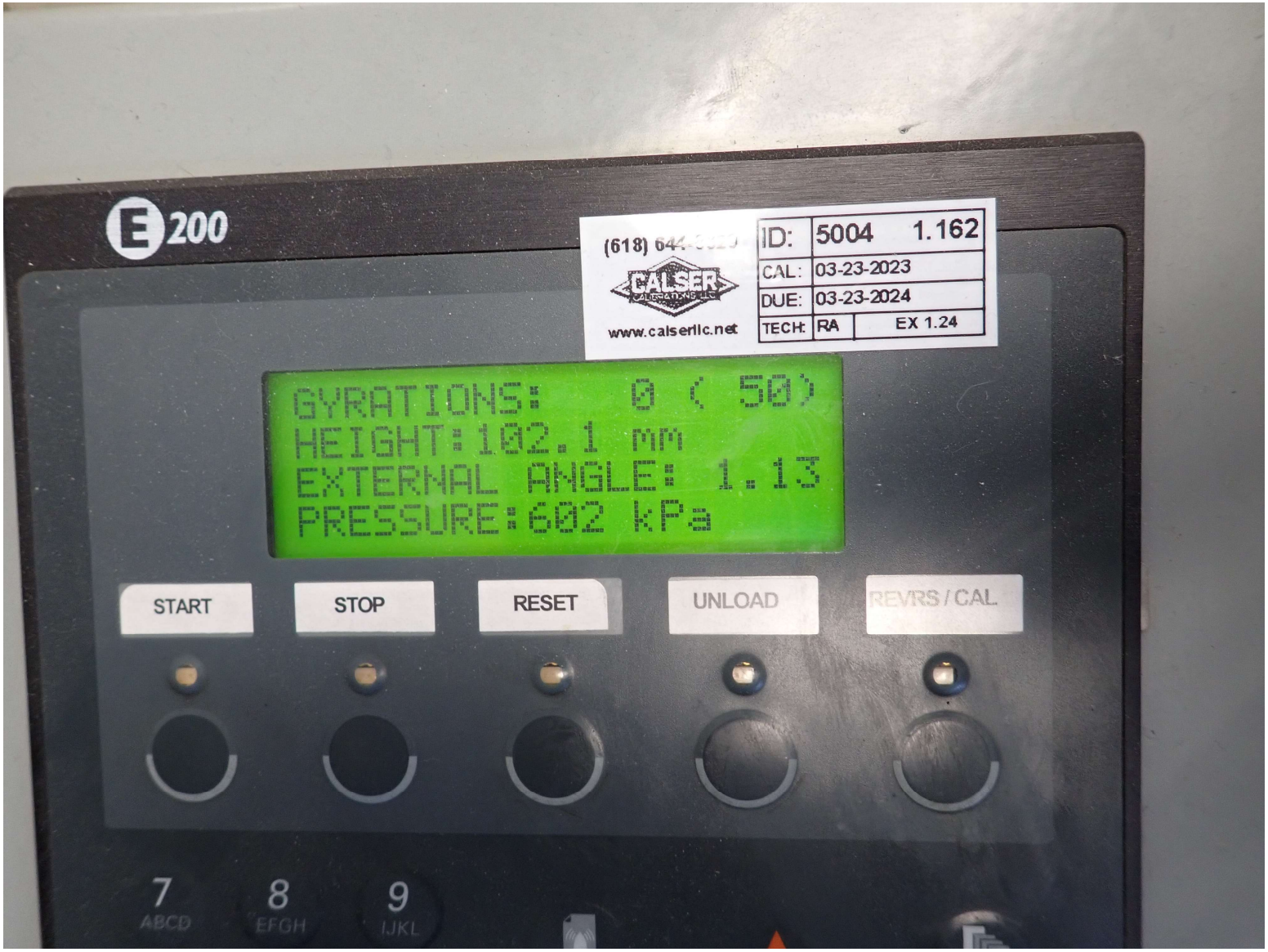

WARNING
Pinch point.
NOTICE
Avoid damage to Gyratory Head.
PINE
Instrument Company

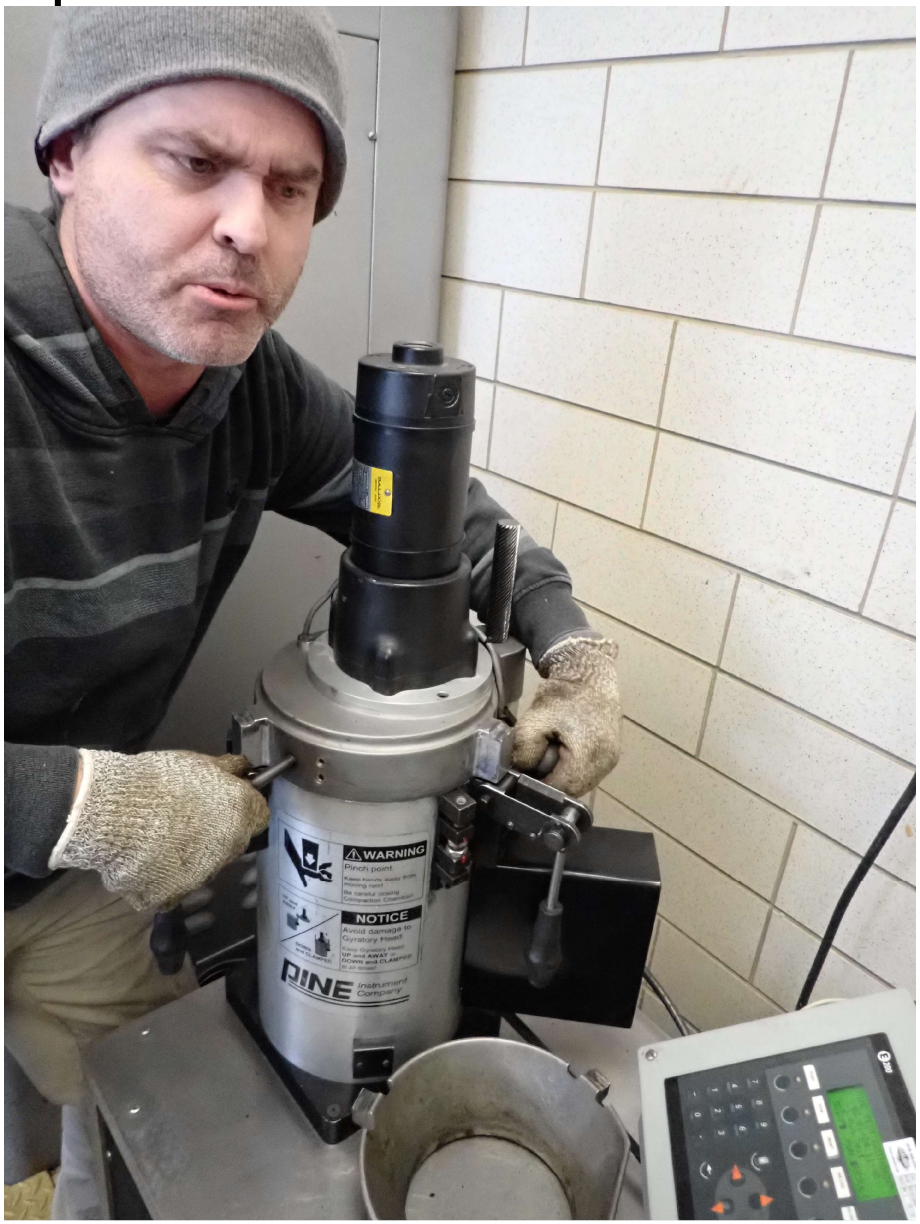
COMPACTION PROCEDURE (CONTINUED)

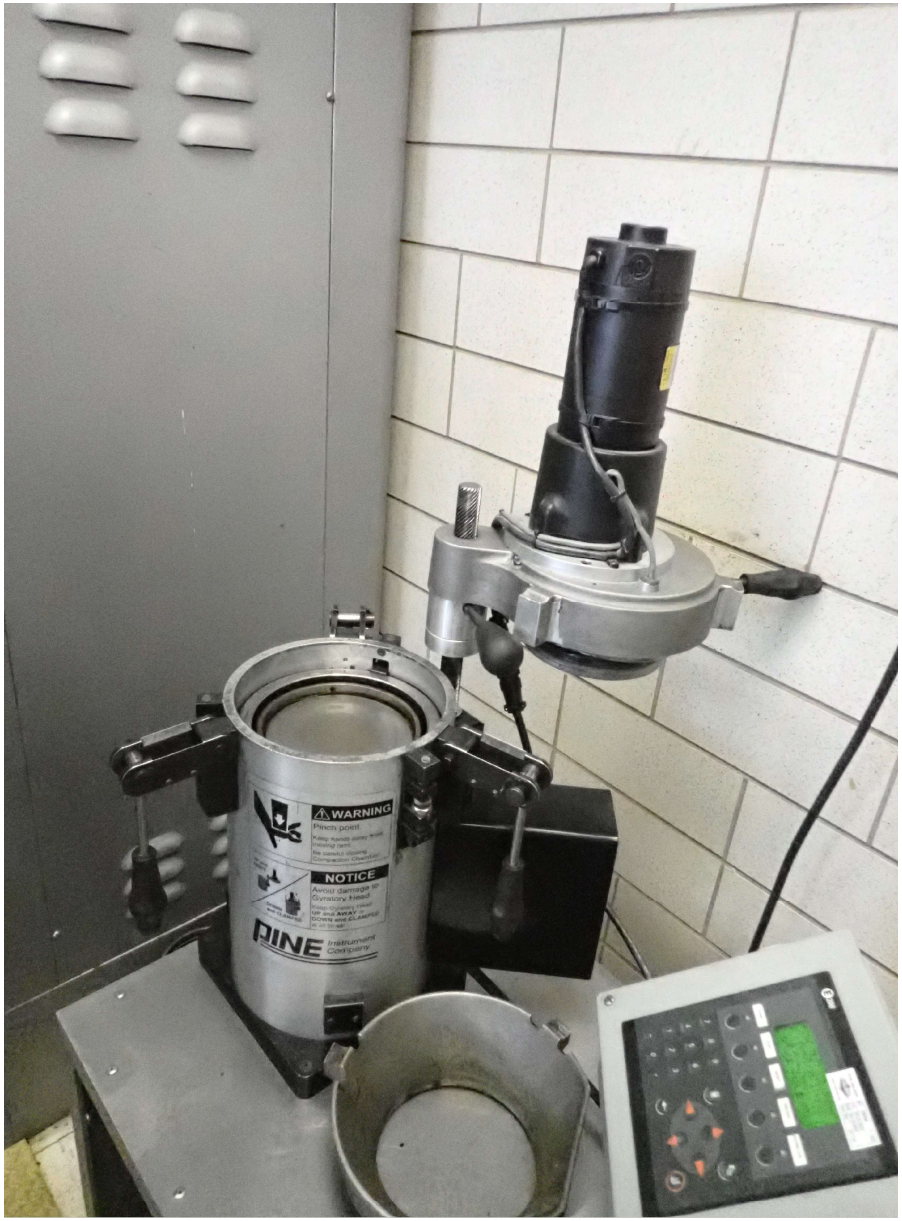
- Apply a 1.16 ± 0.02 degrees average internal angle to the mold assembly and begin the gyratory compaction.
- Allow the compaction to proceed until the desired number of gyrations specified in R 35 is reached and the gyratory mechanism shuts off.

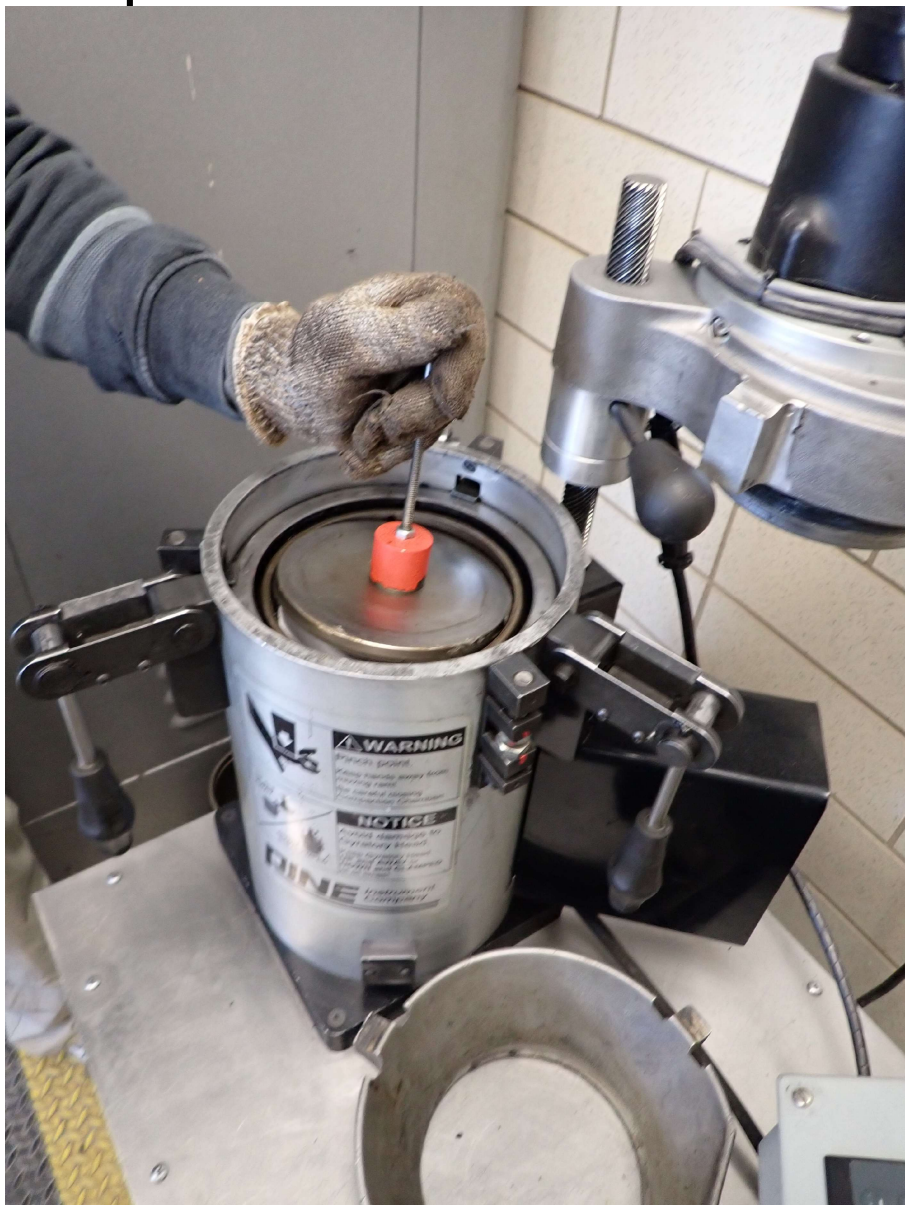

CAL-GER

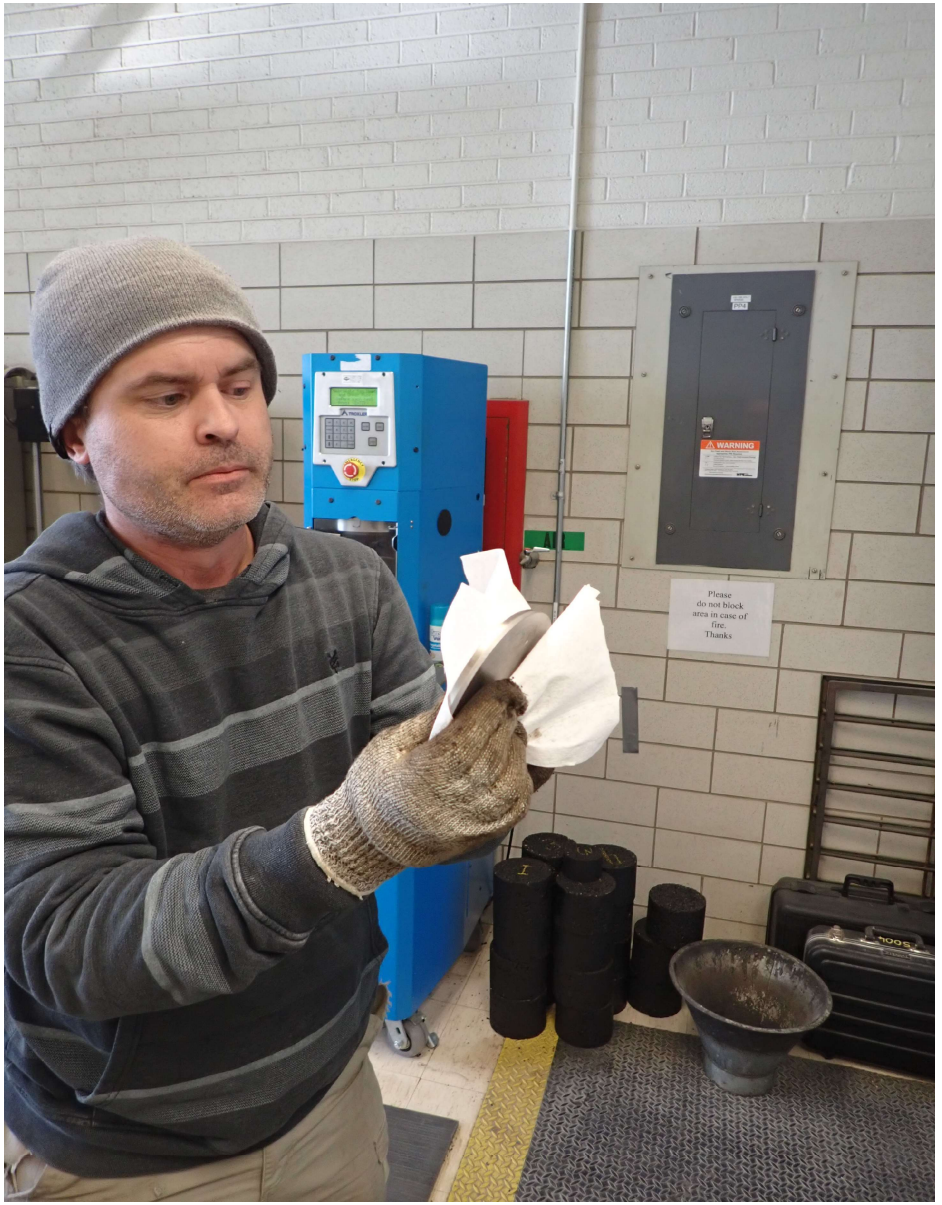

WARNING
Pinch point.
NOTICE
Avoid damage to Gyratory Head.
PINE Instrument Company

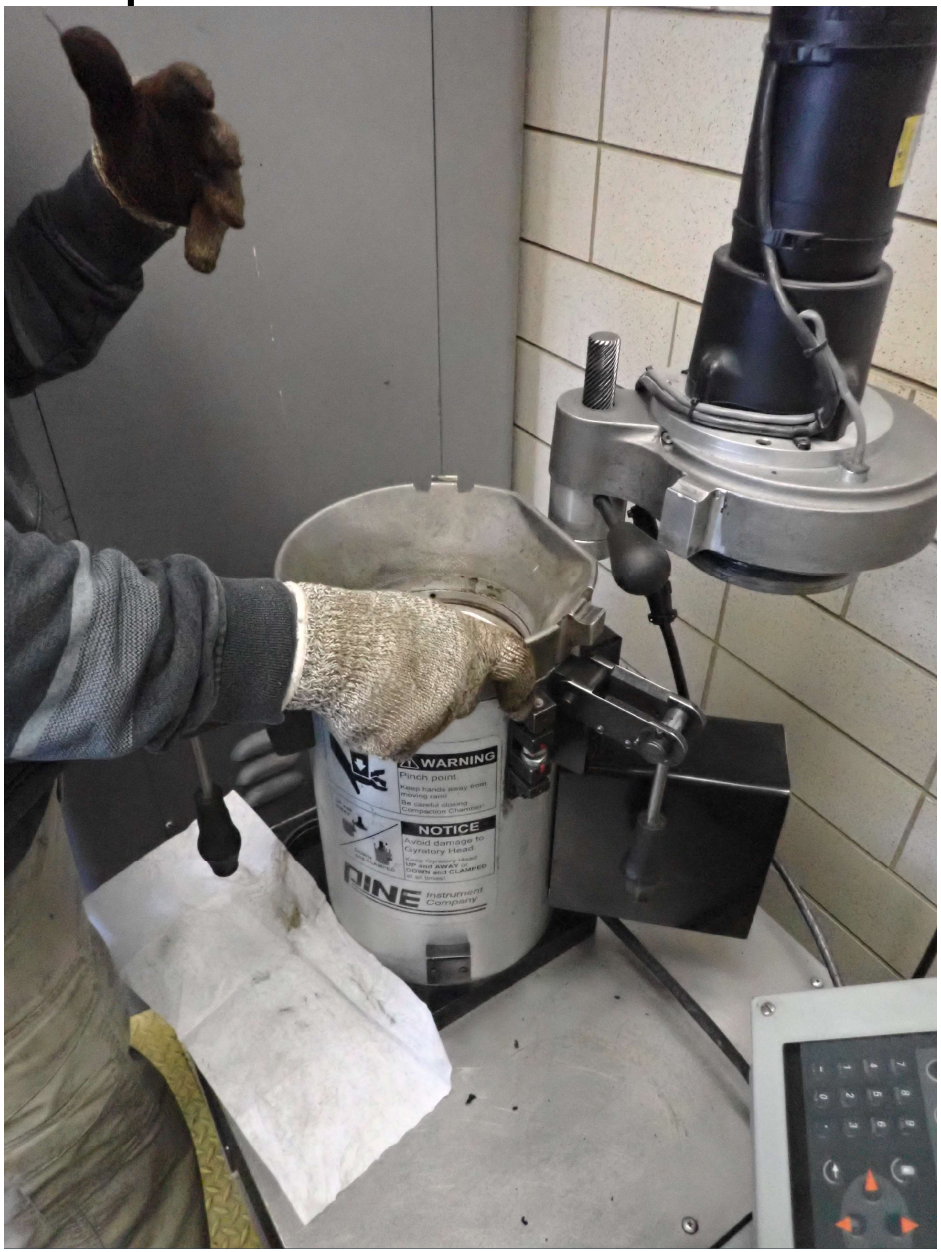

E200
(618) 644-3529
CALSER
www.calserllc.net
ID: 5004 1.162
CAL: 03-23-2023
DUE: 03-23-2024
TECH: RA EX 1.24
GYRATIONS: 0 (50)
HEIGHT: 102.1 mm
EXTERNAL ANGLE: 1.13
PRESSURE: 602 kPa
START
STOP
RESET
UNLOAD
REVRS / CAL
7 ABCD
8 EFGH
9 IJKL

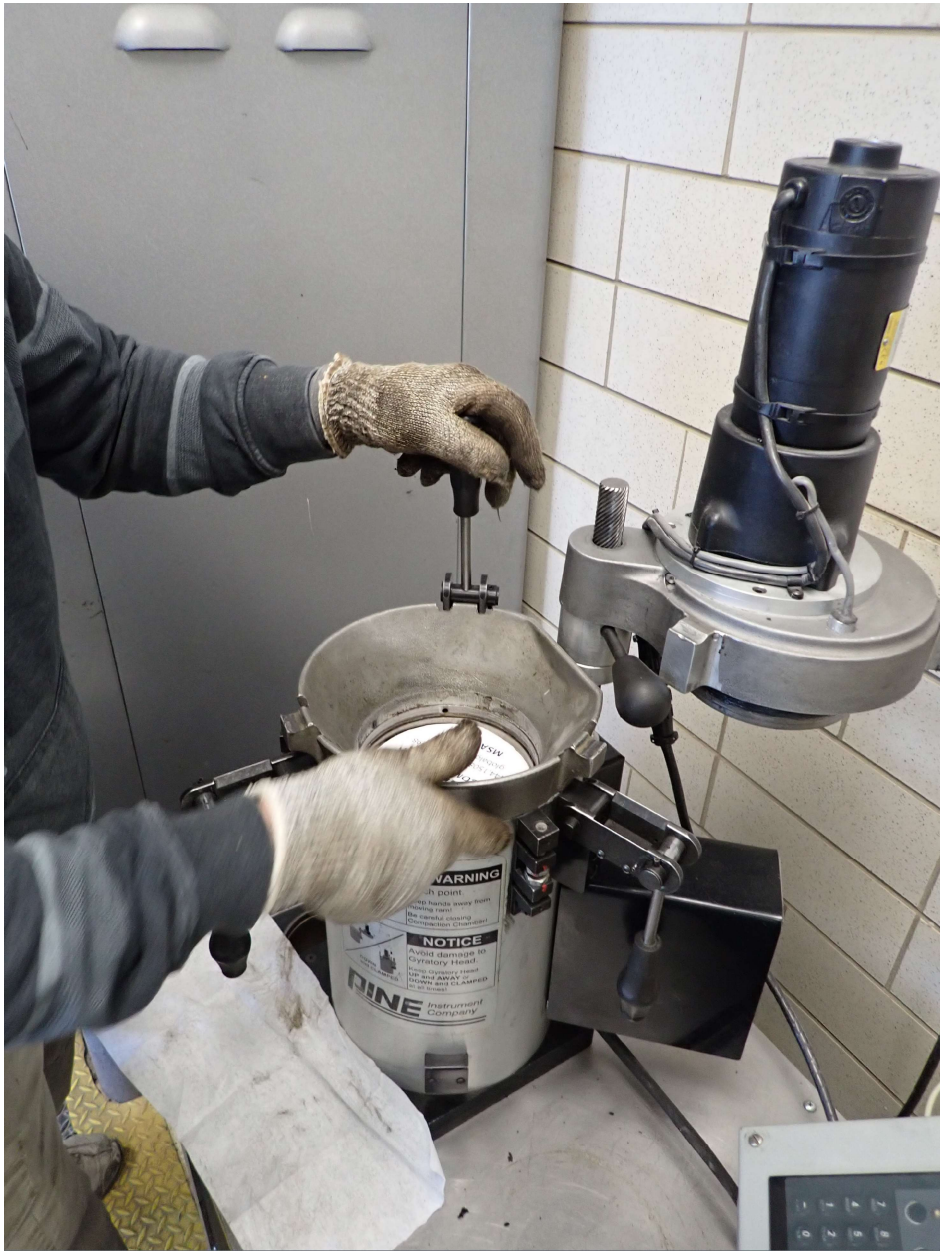

WARNING
Pinch point
NOTICE
Avoid damage to Gyratory Head!
PINE Instrument Company


WARNING
Pinch point
NOTICE
PINE Instrument Company


WARNING
NOTICE
DINE


Please
do not block
area in case of
fire.
Thanks
WARNING


WARNING
Pinch point.
Keep hands away from moving ram!
Be careful closing Compaction Chamber!
NOTICE
Avoid damage to Gyratory Head.
Up and AWAY or DOWN and CLAMPED
PINE Instrument Company


NOTICE
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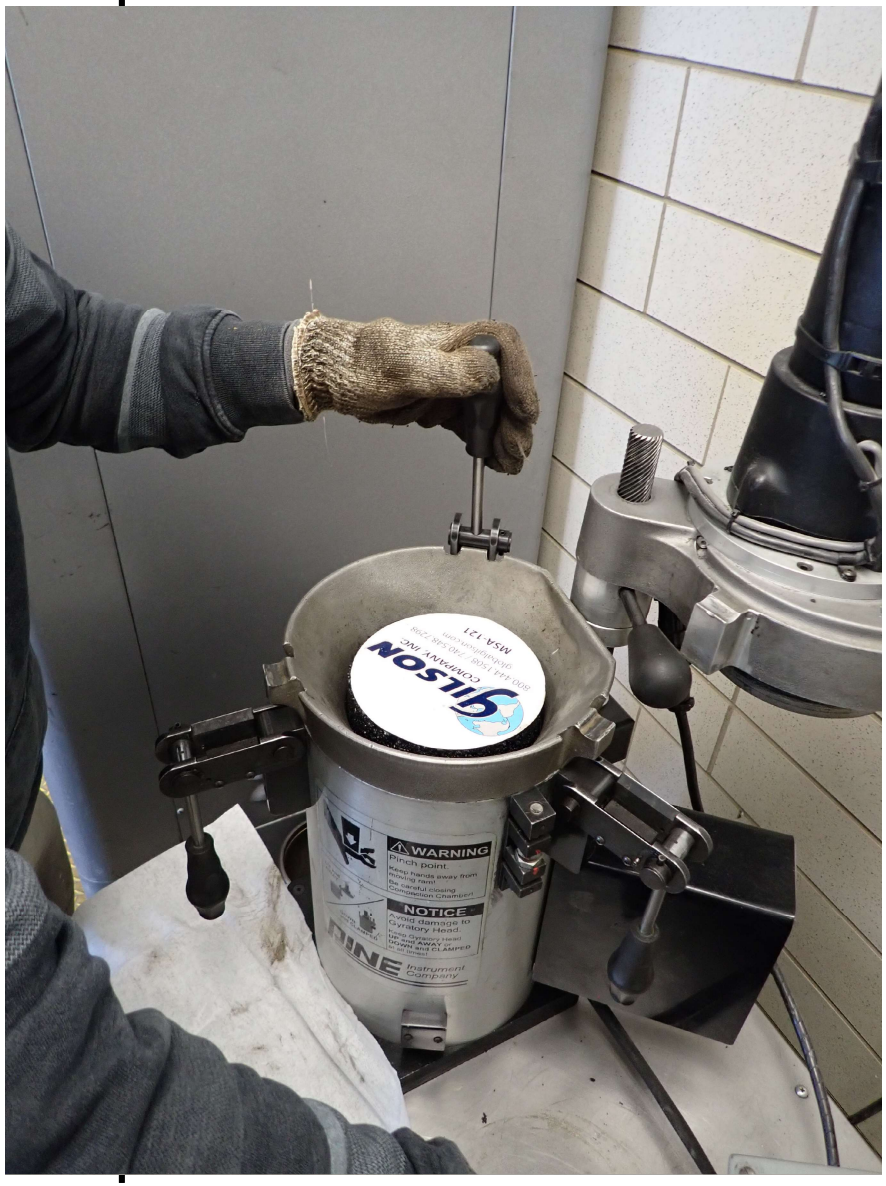
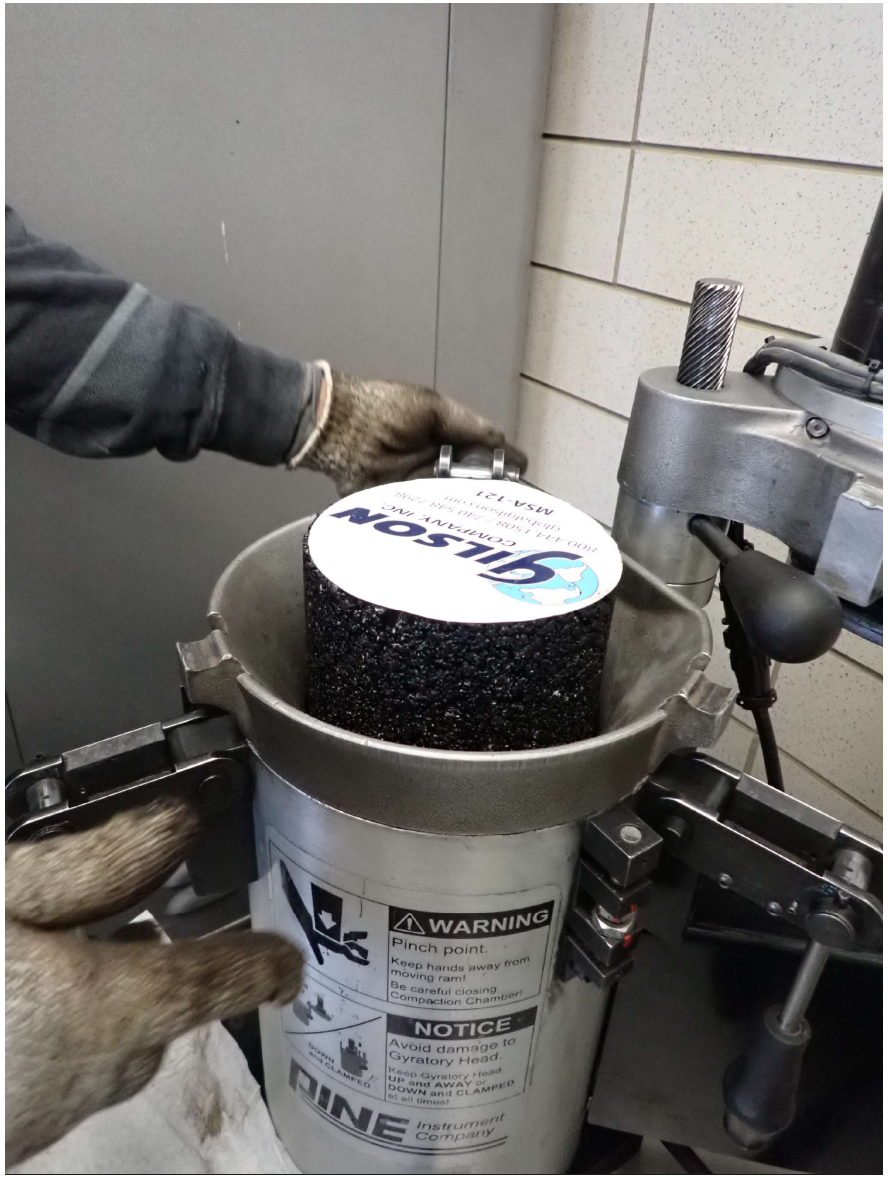
PINE Instrument Company


WARNING
Pinch point.
Keep hands away from moving ram!
Be careful closing Compaction Chamber!
NOTICE
Avoid damage to Gyratory Head.
Keep Gyratory Head UP and AWAY or DOWN and CLAMPED at all times!
PINE
Instrument Company
GILSON
GILSON COMPANY INC.
MSA 121


WARNING
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Keep hands away from moving ram!
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Avoid damage to Gyratory Head.
Keep Gyratory Head UP and AWAY or DOWN and CLAMPED at all times!
PINE
Instrument Company
GILSON
GILSON COMPANY INC.
MSA 121


WARNING
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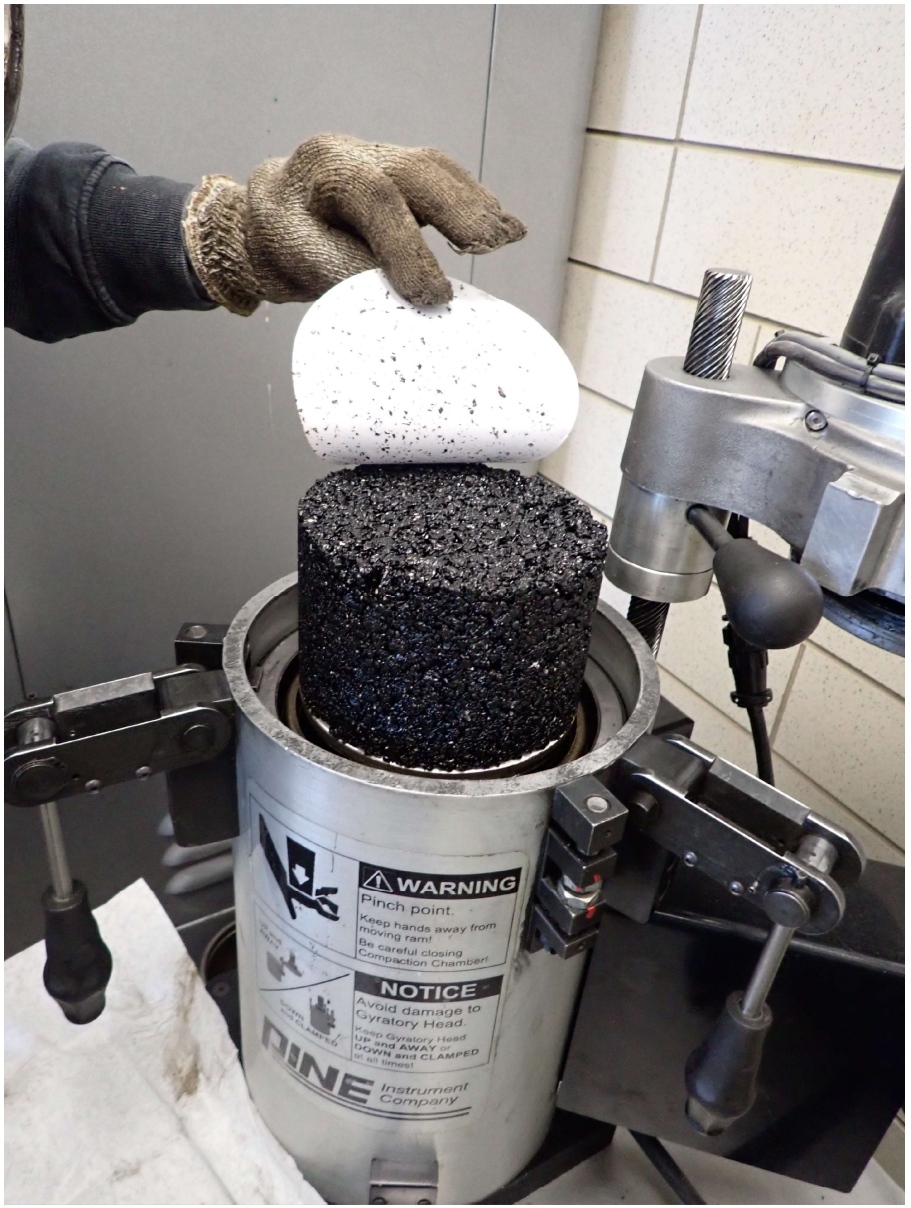
WARNING
Pinch point.
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Be careful closing Compaction Chamber!
NOTICE
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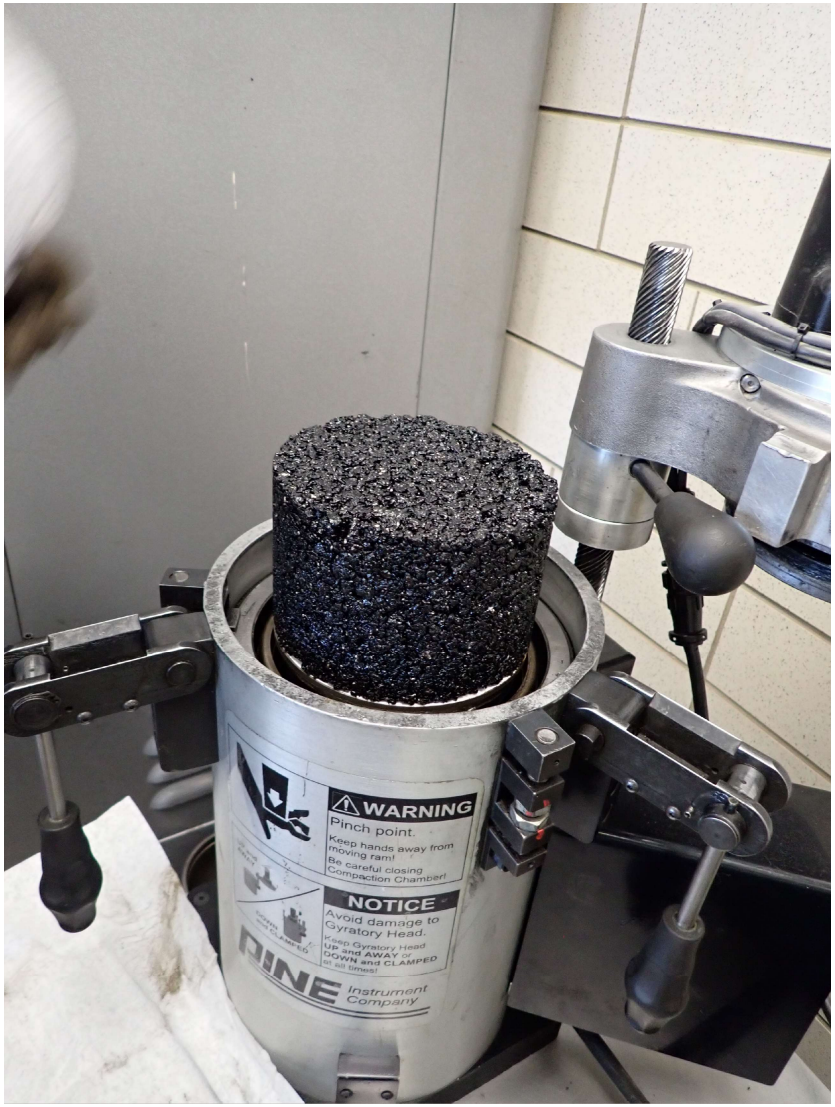
Keep Gyratory Head UP and AWAY or DOWN and CLAMPED at all times!
PINE Instrument Company


WARNING
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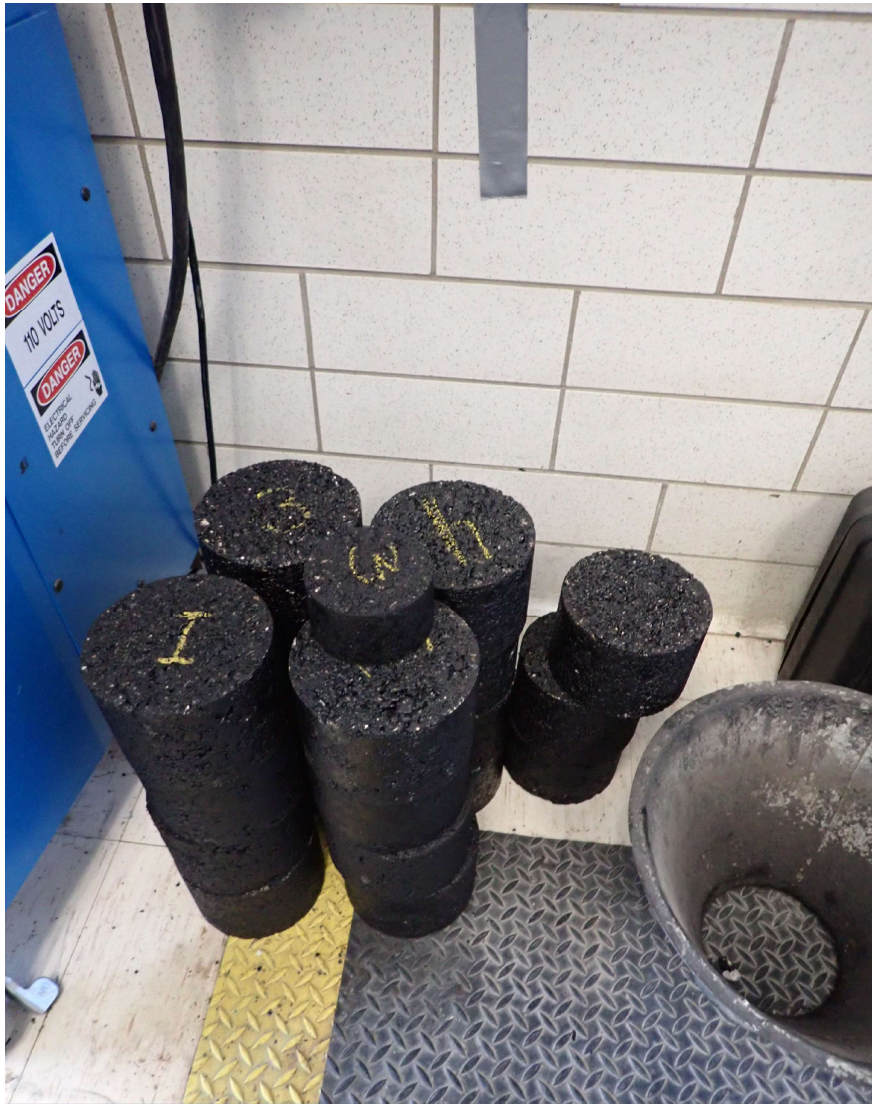
Keep hands away from moving ram!
Be careful closing Compaction Chamber!
NOTICE
Avoid damage to Gyratory Head.
Keep Gyratory Head UP and AWAY or DOWN and CLAMPED at all times!
PINE
Instrument Company


DANGER
110 VOLTS
DANGER

COMPACTION PROCEDURE (CONTINUED)

- Remove the angle from the mold assembly, remove the ram pressure, and retract the loading ram in the order specified by the SGC manufacturer (the preceding steps may be done automatically by the compactor on some models of SGCs). Remove the mold from the compactor (if required) and extrude the specimen from the mold. The specimens can be extruded from the mold immediately after compaction for most asphalt mixtures. However, a cooling period of 5 to 10 min in front of a fan may be necessary before extruding some specimens to ensure the specimens are not damaged.
- Remove the paper disks from the top and bottom of the specimens.

DENSITY PROCEDURE

- Determine the maximum specific gravity (Gmm) of the loose mix in accordance with T 209 using a companion sample. The companion sample shall be conditioned to the same extent as the compaction sample.
- Determine the bulk specific gravity (Gmb) of the specimen in accordance with T 166.
- When the specimen height is to be monitored, record the specimen height to the nearest 0.1 mm after each revolution.

DENSITY CALCULATIONS

Calculate the uncorrected relative density (%Gmmux) at any point in the compaction process using the following equation:

$$\%G_{mmux} = \frac{W_m}{V_{mx} G_{mm} G_m} \times 100 \qquad (1)$$

where:

$\%G_{mmux}$	=	uncorrected relative density at any point during compaction expressed as a percent of the maximum theoretical specific gravity;
W_m	=	mass of the specimen, g;
G_{mm}	=	theoretical maximum specific gravity of the mix;
G_m	=	unit weight of water, 1 g/cm^3;
x	=	number of gyrations; and
V_{mx}	=	volume of the specimen, in cm^3, at any point based on the diameter (d) and height (h_x) of the specimen at that point (use "mm" for height and diameter measurements).

It can be expressed as:

$$V_{mx} = \frac{\pi d^2 h_x}{4 \times 1000} \qquad (2)$$

DENSITY CALCULATIONS (CONTINUED)

At the completion of the bulk specific gravity test (Gmb), determine the relative density (%Gmmx) at any point in the compaction process as follows:

$$\%G_{mmx} = \frac{G_{mb} h_m}{G_{mm} h_x} \times 100 \qquad (3)$$

where:

$\%G_{mmx}$	=	corrected relative density expressed as a percent of the maximum theoretical specific gravity;
G_{mb}	=	bulk specific gravity of the extruded specimen;
h_m	=	height in millimeters of the extruded specimen; and
h_x	=	height in millimeters of the specimen after x gyrations.

PROCEDURE FOR VISUALLY INSPECTING THE CONDITION OF THE MOLD

Perform a visual inspection of the mold:

- **Confirm that the molds are thoroughly cleaned and identified with a unique serial number or other unique identifier. Allow the molds to achieve a temperature of 64 to 82°F. This temperature range can be confirmed with an infrared thermometer.**
- **The mold bore shall be free of residue and deep gouges. Mold bores without gouges typically have an acceptable surface finish. Identify any wear area that may be visible in the mold. Do not attempt to clean an SGC mold in an ignition oven. Extreme heat may cause the mold to soften or become "out of round" and unrepairable.**