



SUBJECT:

This process applies to the method of milling, buffing and polishing glass defects on all glass bulbs (Marion Only).

* SCHEDULE NO. 1

MAY 1955

1. EQUIPMENT:
 - a. Grinding & Buffing
 1. 2 Black and Decker portable grinders model #96K.
 2. 2 #33998 Black and Decker felt pads.
 3. 2 #33493 Black and Decker feather edger.
 4. Behr Manning 8" diameter discs 220-C-Durite.
 - b. Polishing
 1. Lange model MD-150 combination polisher equipped with 36" diameter scratch wheel with 3" x 3" felt attached.
 2. 90% cerium oxide.
 3. Eberhard Fiber Glass-o-graph #197 pencil.

2. PROCEDURE:
 - a. Milling & Buffing
 1. Bulb with bruise check is selected from rack.
 2. Bruise check is circled with Glass-o-graph pencil. This area is ground smoothly using a light rocking motion until all evidence of bruise check is removed. Portable Grinder equipped with 220-C-Durite discs used for this operation. (Natural contour of glass should at all times be followed during this and subsequent operations.)
 3. The bulb is then cleaned before next operation is applied.
 - b. Dressing Procedure for Model MD-150 Lange Combination and Polisher.
 1. Wheels to be trimmed by maintenance only.
 2. The felt wheel is to be trimmed using a round nose flat wood turning tool or an old file ground to this shape. The tool should be rested on the support provided and the rear of the machine, and worked back and forth against the wheel. The finished wheel should have a flat working surface and filleted corners.
 - c. Mixing of Cerium Oxide.
 1. One quart of cerium oxide mixed with four quarts of water. Wheel should be turned slowly until components are mixed. If excess splattering occurs mixture is too thin.
 - d. Polishing.
 1. Bulb that is milled is selected from rack.
 2. The bulb should be held firmly against the felt wheel but in such a manner that the applied pressure can be varied. A "rocker" motion is employed, the bulb being moved constantly back and forth in all directions. This should be done until all scratches are removed and the repaired area is blended into the untouched part of the bulb with a minimum of flat-spot (facet) or lens-like optical effects resulting.

SCALE—

DIMENSIONS IN

UNLESS OTHERWISE SHOWN.

DIMENSIONS SHOWN WITHOUT TOLERANCES ARE DESIGN CENTERS

2-5410-21-80

PCM262-802EG

• CHANGE
•• ADDITION
••• DELETION

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TREATMENT OF GLASS BULB DEFECTS
Process Specification

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2. PROCEDURE (Cont'd)

d. Polishing (Cont'd)

3. Foot feed should be often enough to keep wheel supplied with thin layer of cerium oxide.
4. When all greyness of glass is gone and no difference of polished and unpolished area is detected, the operation is then complete.
5. Clean bulb upon finishing operation.

e. Pressure Check.

1. Each milled bulb only is to be pressure tested before buffing and polishing to a pressure of 40 psig for one minute.
2. Mark ND29 on each pressure tested bulb.
3. Record results in pressure test log.

f. General Recommendations.

1. Only trained personnel be used for this job.
2. Sufficient lighting be present for all operations.
3. Experience is that best results are obtainable only with recommended materials and speed.
4. It is imperative that bulb is thoroughly cleaned between every operation.

End of Schedule #1

SCALE—

DIMENSIONS IN

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SUBJECT: TREATMENT OF GLASS BULB DEFECTS
Process Specification

SUPERSEDES Sept. 21, 1954

This schedule applies to the buffing of silicate below the panel seal.

SCHEDULE NO. 2

1. EQUIPMENT
 - a. Black and Decker model 96K grinder equipped with feather edger and felt backing pad.
 - b. 240° Durite 7" diameter disks.

2. PROCEDURE
 - a. Using grinder, make light passes over silicate area using very little pressure until silicate is removed.
 - b. Inspect area for removal of glass. If glass is visibly removed, it is imperative that bulb be pressure tested.
 - c. On areas below the panel seal, it is not necessary to polish.

End of Schedule #2

SCALE—

DIMENSIONS IN

UNLESS OTHERWISE SHOWN.

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* CHANGE
** ADDITION
*** DELETION

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