

**Two-Circuit Heavy Duty Burner Housings**

**1. SCOPE**

This specification covers the acceptable requirements and the not acceptable conditions for Ceramic and Phenolic Two-Circuit Heavy Duty Burner Housings not covered in Engineering Specification 115-40.

**2. REFERENCE DOCUMENTS**

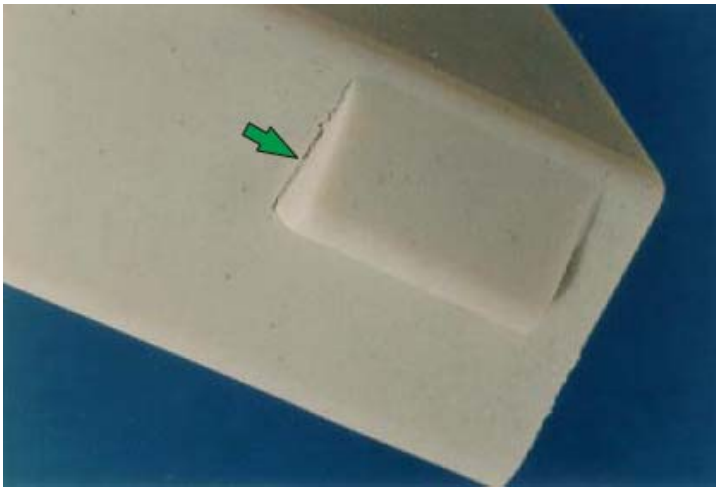
Additional documents that may be used for reference.

- 115-40 Requirements for Molded Plastic Products

**3. INSPECTION CRITERIA**

Parts are to be inspected with magnification 2X to 3X.

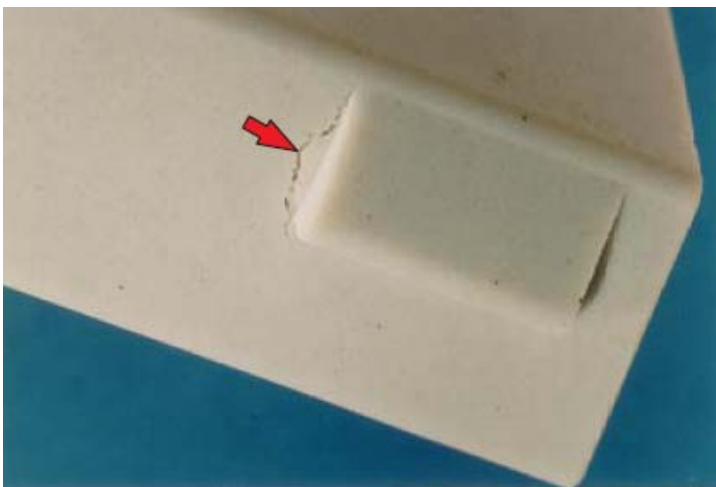
**3.1. Ceramic Housings**



**● ACCEPTABLE**

Narrow Crack

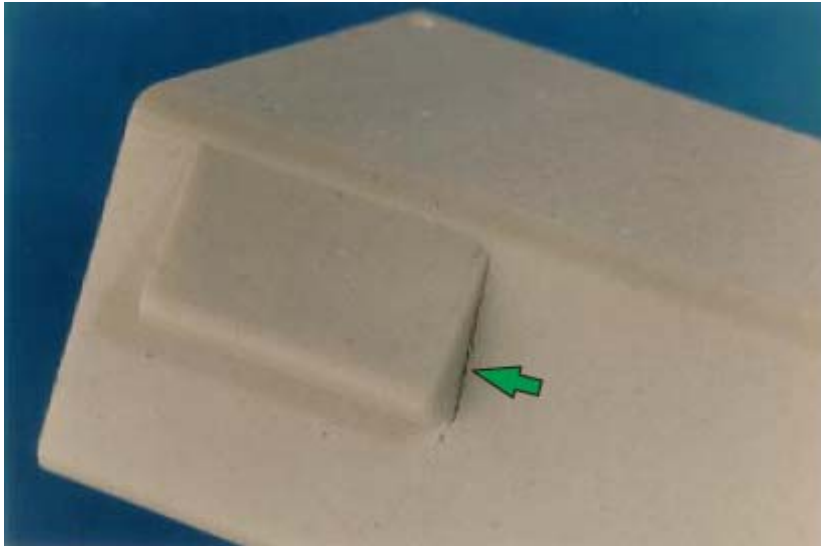
Figure 1



**● NOT ACCEPTABLE**

Extensive Crack  
Protrudes Beyond Ear

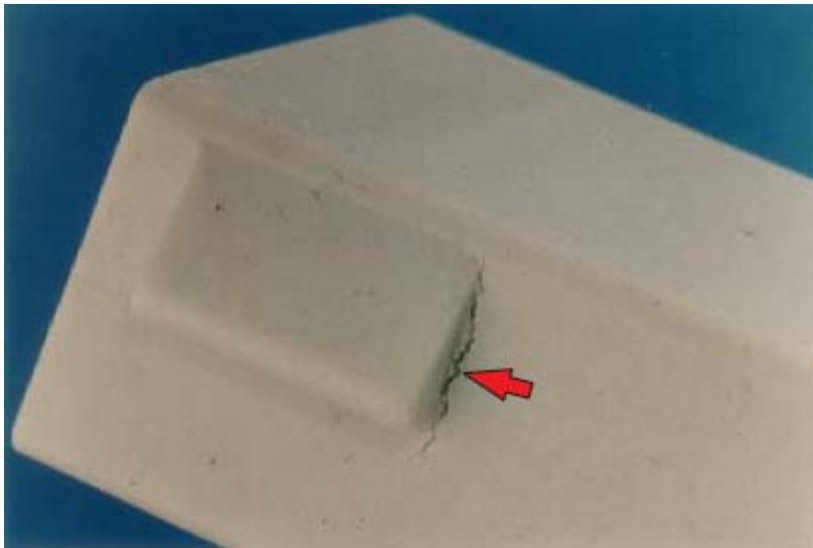
Figure 2



**● ACCEPTABLE**

Narrow Crack

Figure 3



**● NOT ACCEPTABLE**

Extensive Crack

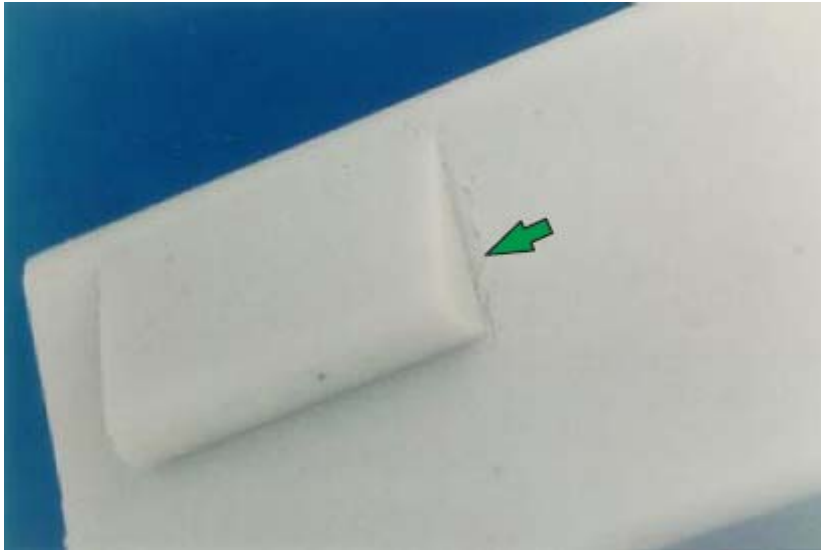
Figure 4



**● ACCEPTABLE**

Narrow Crack

Figure 5



**● ACCEPTABLE**

Narrow Crack

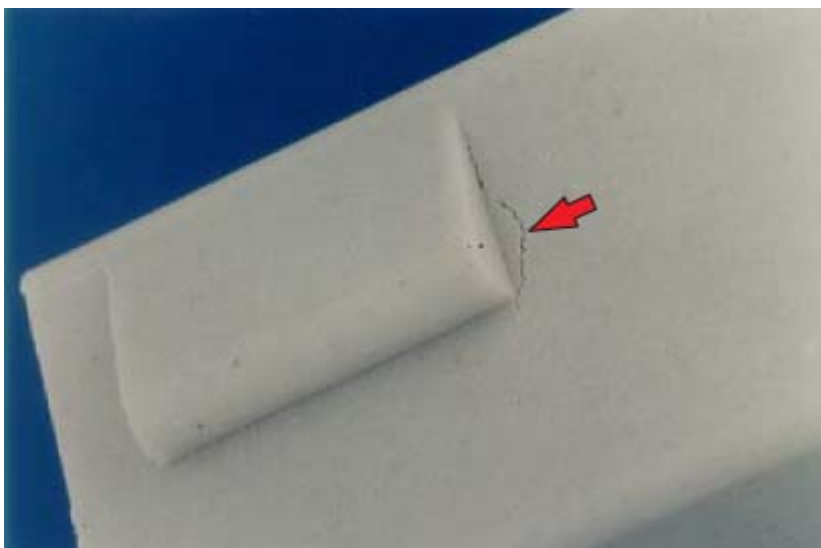
Figure 6



**● NOT ACCEPTABLE**

Crack Extends Through Ear

Figure 7



**● NOT ACCEPTABLE**

Extensive Crack  
Protrudes Beyond Ear

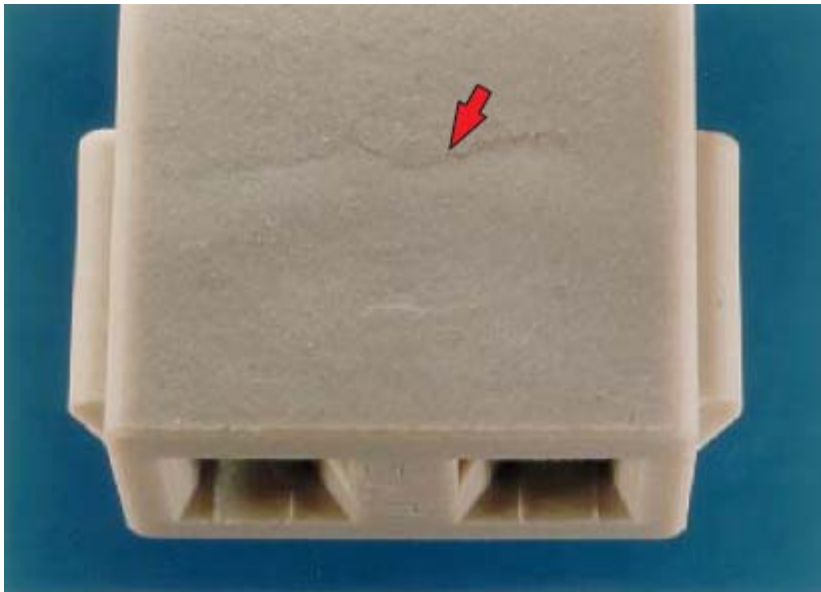
Figure 8



● NOT ACCEPTABLE

Crack

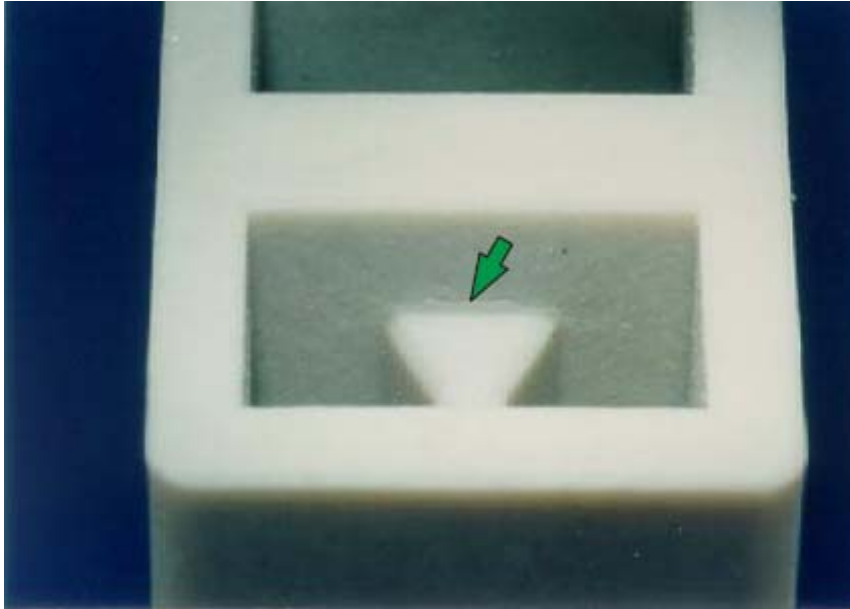
Figure 9



● NOT ACCEPTABLE

Crack

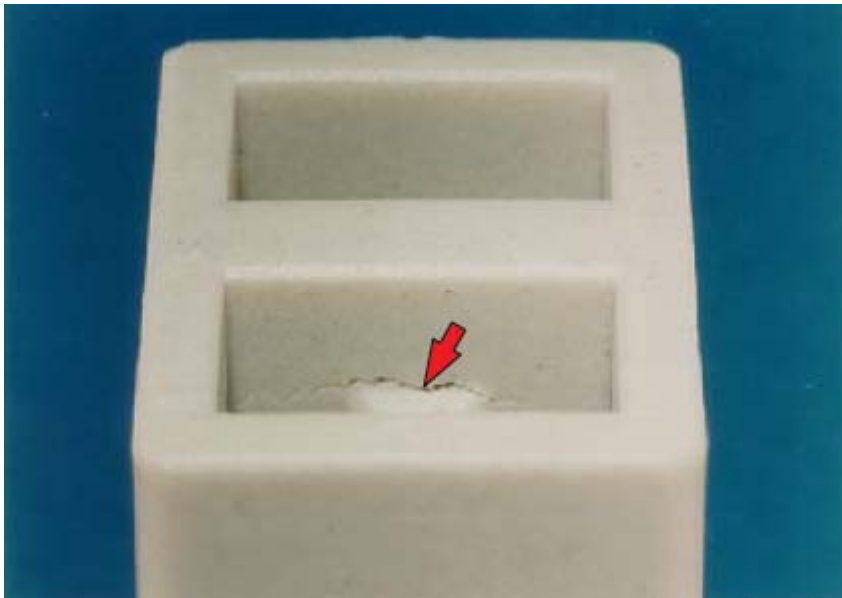
Figure 10



 **ACCEPTABLE**

Narrow Crack

Figure 11

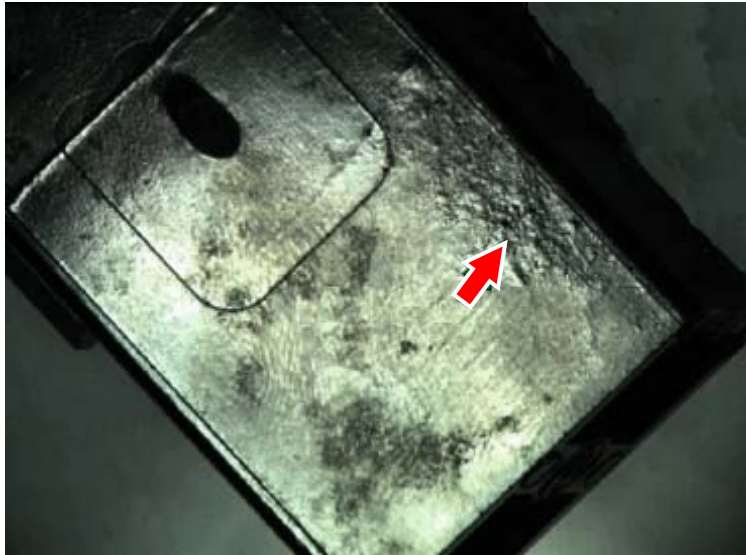


 **NOT ACCEPTABLE**

Extensive Crack

Figure 12

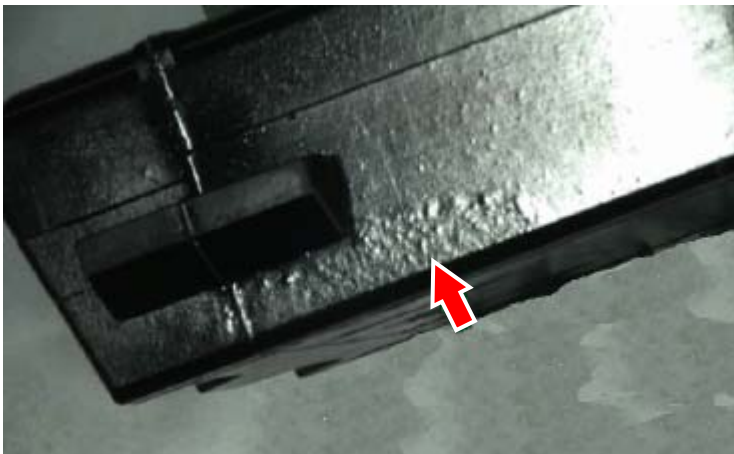
3.2. Phenolic Housings



**● NOT ACCEPTABLE**

Blemish  
Surface Not Broken

Figure 13



**● NOT ACCEPTABLE**

Blemish  
Surface Not Broken

Figure 14



**● NOT ACCEPTABLE**

Blemish  
Openings in Outer Surface

Figure 15



**● NOT ACCEPTABLE**

Blemish  
ID Marks Must Be Legible

Figure 16



**● NOT ACCEPTABLE**

Foreign Material Adhered to  
Surface with Measurable Height

Figure 17



**● ACCEPTABLE**

Small Chip on Edge  
(Can not exceed more than  
1/2 thickness of the wall)

Figure 18

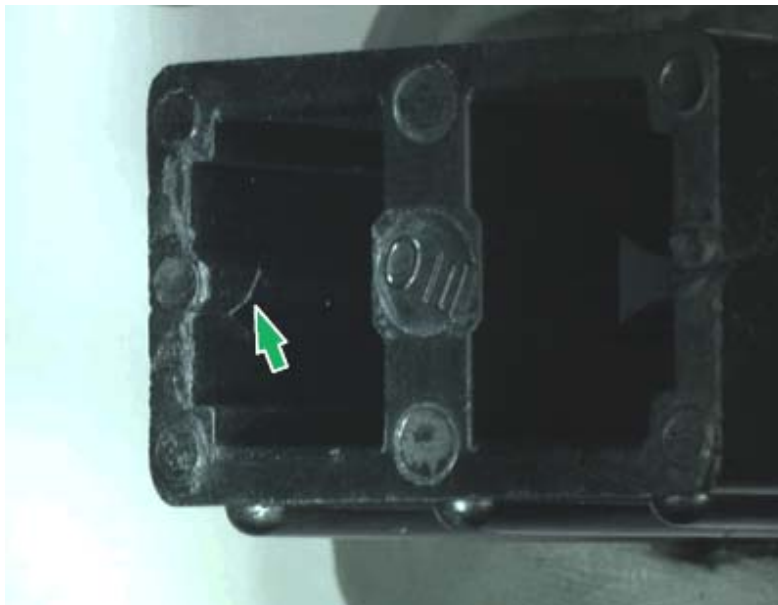
- 3.3. **Knit Line** - Two flow fronts in a molded material that are completely filled and are completely bonded but leaves a witness line. Sharp corners appear on the part when a complete fill is present in knit line area.



 **ACCEPTABLE**

External Knit Line  
(Bonded / Shallow /  
Sharp Corners)

Figure 19



 **ACCEPTABLE**

Internal Knit Line  
(Bonded / Shallow /  
Sharp Corners)

Figure 20



● ACCEPTABLE

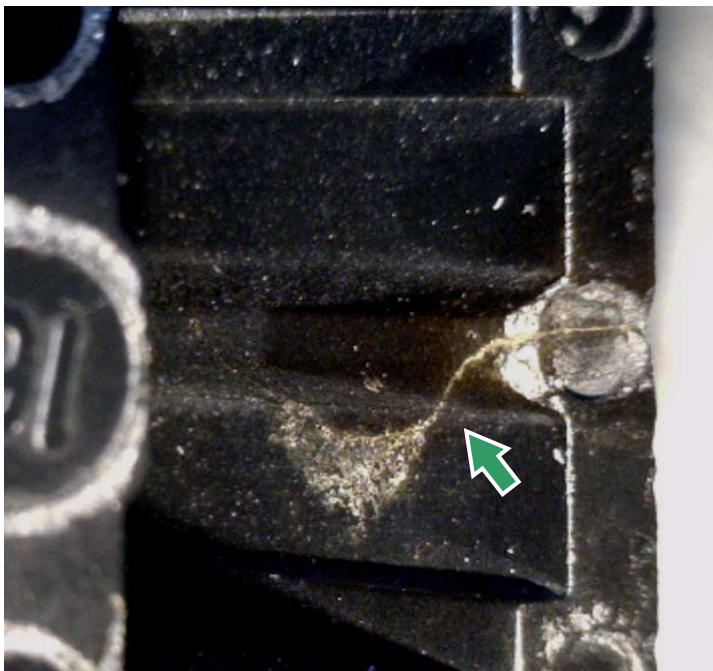
External Knit Line  
(Bonded / Shallow /  
Sharp Corners)

*Same part as Figure 22*

**NOTE**

Knit Line Wraps from  
External to Internal  
Surfaces but is Fully  
Bonded

Figure 21



● ACCEPTABLE

Internal Knit Line  
(Bonded / Shallow /  
Sharp Corners)

*Same part as Figure 21*

**NOTE**

Knit Line Wraps from  
External to Internal  
Surfaces but is Fully  
Bonded

Figure 22

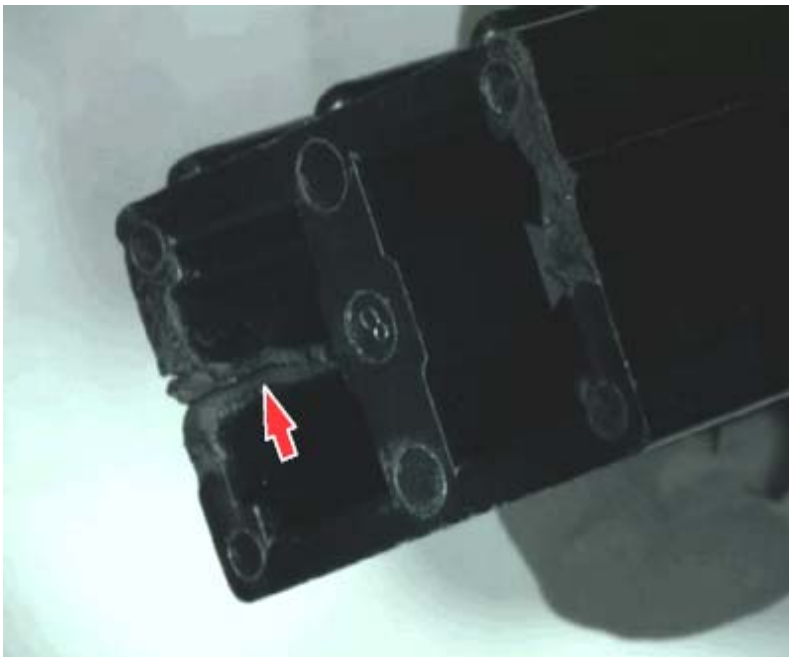
- 3.4. **Incomplete Fill** - Two flow fronts in a molded material that are NOT completely filling and are NOT completely bonded but leaves a V-grooves or gaps on the corners.



● NOT ACCEPTABLE

External Incomplete Fill  
(Not Bonded / Deep /  
Corner Gaps)

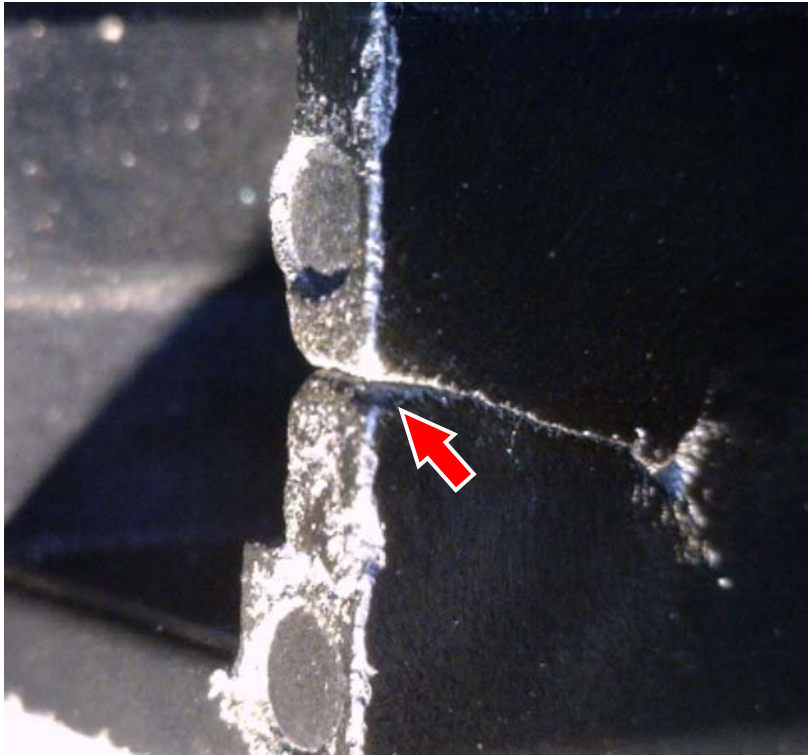
Figure 23



● NOT ACCEPTABLE

Internal Incomplete Fill  
(Not Bonded / Deep /  
Corner Gaps)

Figure 24



● NOT ACCEPTABLE

External Incomplete Fill  
(Not Bonded / Deep /  
Corner Gaps)

*Same part as Figure 26*

**NOTE**

*Knit Line Wraps from  
External to Internal  
Surfaces and is NOT  
Bonded*

Figure 25



● NOT ACCEPTABLE

Internal Incomplete Fill  
(Not Bonded / Deep /  
Corner Gaps)

*Same part as Figure 25*

**NOTE**

*Knit Line Wraps from  
External to Internal  
Surfaces and is NOT  
Bonded*

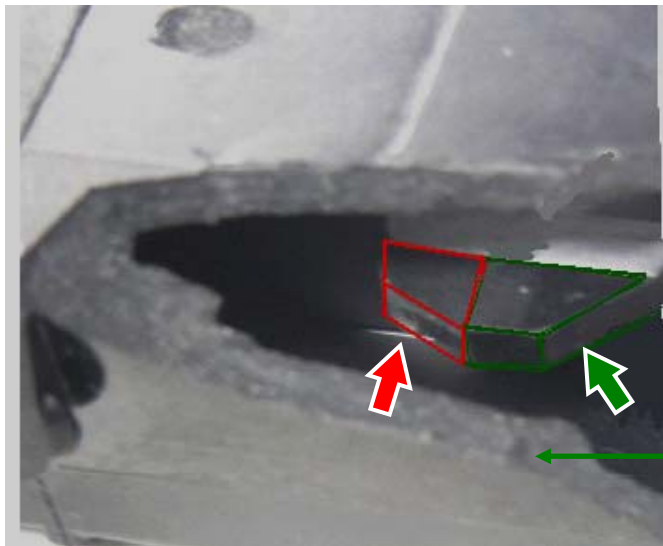
Figure 26



● NOT ACCEPTABLE

External Knit Line  
(Open / Deep)

Figure 27



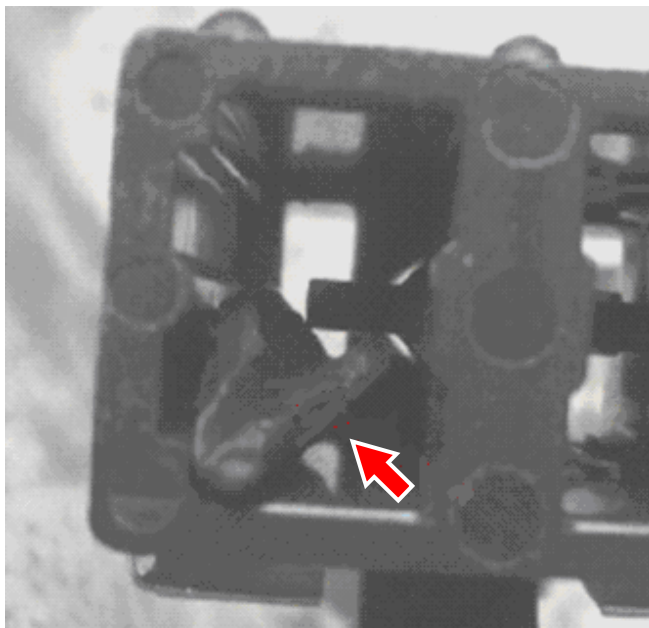
● NOT ACCEPTABLE

No extra plastic or deformation  
due to broken mold tooling.

**NOTE**

*External wall removed for  
illustration.*

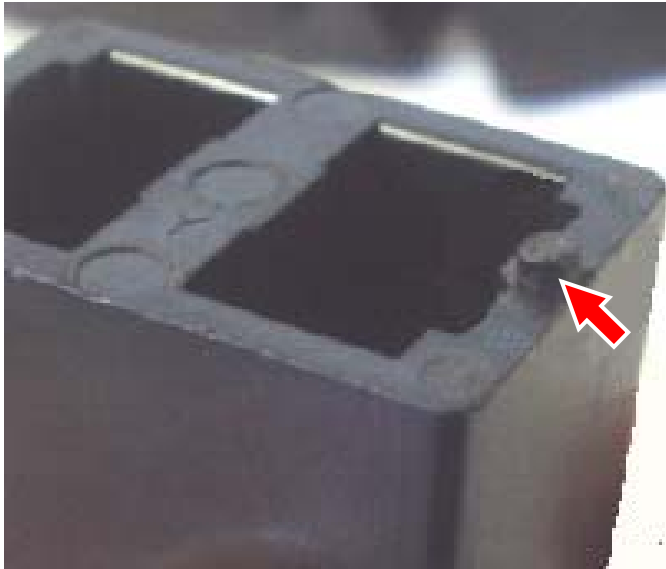
Figure 28



● NOT ACCEPTABLE

No obstructions.

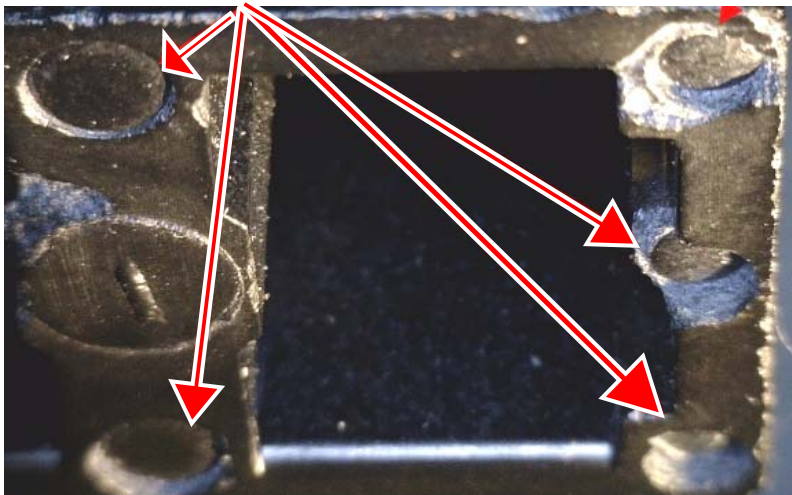
Figure 29



● NOT ACCEPTABLE

No extra plastic due to broken mold tooling may raised more than 0.13 mm [.005 inch] above the adjacent surface.

Figure 30



● NOT ACCEPTABLE

Embedded Ejector Pins shall not be recessed more than 0.38 mm [.015 inch] below the adjacent surface.

Figure 31



● NOT ACCEPTABLE

Sink and Nonfill shall not be recessed more than .18 mm [.007 inch] below the surface.

Figure 32