

AMPLIMITE* Plated Die Cast Cable Clamp Housings

1. SCOPE

This specification covers the acceptable requirements and the not acceptable conditions for the AMPLIMITE Plated Die Cast Cable Clamp Housings.

2. DEFINITIONS

- A. Cold Shuts: surface lappings of solidified metal on die casting.
- B. Inclusions: foreign material cast into the casting.
- C. Foliation Crazing or Cold Lap: a magnified cold shut condition.
- D. Metal Nodule: a small mass or lump of excess material cast in the casting.
- E. Break Out: incomplete casting or missing features.
- F. Gate Lump: excess material left in gating area.

3. APPLICABLE DOCUMENTS AND FORMS

The following documents and forms constitute a part of this specification to the extent specified herein. Unless otherwise specified, the latest edition of the document applies.

3.1. Specification

- A. 102-19 Nonconforming Material
- B. 115-54 Die Cast, Requirements of

4. INSPECTION CRITERIA

- 4.1. All figures in the specification are shown at various sizes. Cable clamp housings shall be viewed at actual size without the use of magnification. Housings shall be rotated and viewed under four 40 watt fluorescent lights, located 1.5 meters [5 feet] above work area viewed at 460 to 610 mm [18 to 24 inches] for a maximum of 5 seconds. If no defect is found under specified lighting, distance and time, the part shall be accepted.
- 4.2. Conditions shown in this specification include brightness, blisters, burnt plating, exposed copper, black marks, brown spots, water stain, non-fill, bent housings, dents, white haze and sink.
- 4.3. For visual aids of above conditions, refer to pages 3 through 13 of this specification.

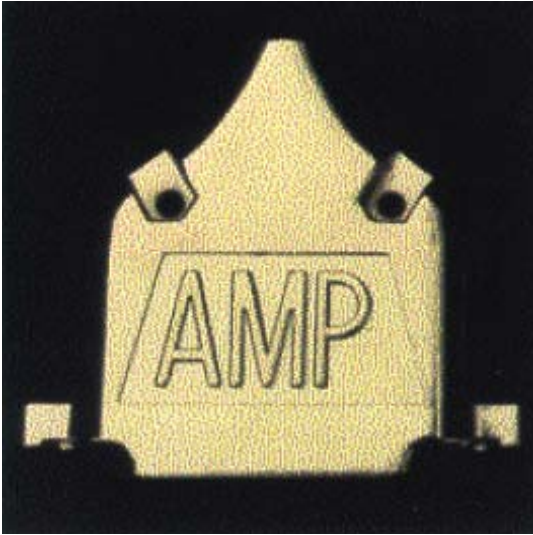
5. PLATED CABLE CLAMP HOUSING

- A. Excess material such as metal nodules, breakout, gate lump, and knockout (ejection) flash are not acceptable.
- B. Cold shuts, inclusions, pores, pits, nicks, foliation crazing, and gouges greater than .89 mm [.035 in.] maximum are not acceptable on exterior surfaces. Scratches, pits, and gouges (nicks) on the plated surface that expose the base metal are not acceptable. These conditions are acceptable in remaining areas provided they satisfy the following conditions.
 - 1. Parts pass applicable gaging.
 - 2. Parts meet dimensional requirements.
- C. Slivers of metal, plated over metal particles, finishing media, or other material are not acceptable in any location
- D. Contamination, such as tumbling media or zinc particles wedged into the part, is not acceptable.
- E. Non-fill (see Figure 24) and mis-trim (see Figure 23) in any location are not acceptable.
- F. Flaking plating causing exposed copper on any surface is not acceptable. (See Figure 9.) Exposed copper due to other factors on external or internal surfaces is acceptable if less than 5.08 mm x 2.42 mm [.200 x .100 in.] in length. (See Figure 10.)

- G. External brown spots are acceptable at six (6) sample rejections out of a standard lot inspection (C=6), if smaller than 6.35 mm [.250 in.]. External white discoloration is not acceptable (Figure 17). Internal stains, bleedout, discoloration, and matte finish are acceptable.
- H. Waterspots larger than .89 mm [.035 in.], but smaller than those in Figures 15 and 16, are acceptable at three (3) sample rejections out of a standard lot (C=3) inspection.
- I. Blisters and raised surface irregularities are acceptable if:
 - 1. They do not flake, peel, or fracture when depressed with a probe or lifted with tape.
 - 2. There are less than four blisters and none are larger than .89 mm [.035 in.] in any dimension. (See Figures 4 and 5.)
- J. Unacceptable flash or casting build-up may be hand or die trimmed. However, supplier shall assume responsibility for meeting all requirements. Casting shall not be repaired by plugging, welding or other methods without Tyco Electronics Corporation approval.
- K. Flatness (115-54, Rev O) shall be .20 mm [.008 in.] maximum for surfaces up to 76.2 mm [3.00 in.] long with an additional .08 mm [.003 in.] maximum added for each 25.4 mm [1.00 in. over 76.2 mm [3.00 in.].
- L. Threads are acceptable, as defined in the National Bureau of Standards Handbook – H28 (1969), part 1 (Screw Thread Standards for Federal Services), when the go and no-go gages are applied to the product internal thread if:
 - 1. No-go gage does not enter.
 - 2. No-go gage enters no more than (3) turns before definite drag is felt.
 - 3. Go gage enters freely for the full length of the thread.
 - 4. Go gage does not meet step 3 above, but the .035 N•m [5 inch-ounce] or less torque enters to the full depth; special requirements such as exceptionally thin or ductile material, or small number of threads, may necessitate modification to this practice.

6. CORRECTIVE ACTION PROCEDURE

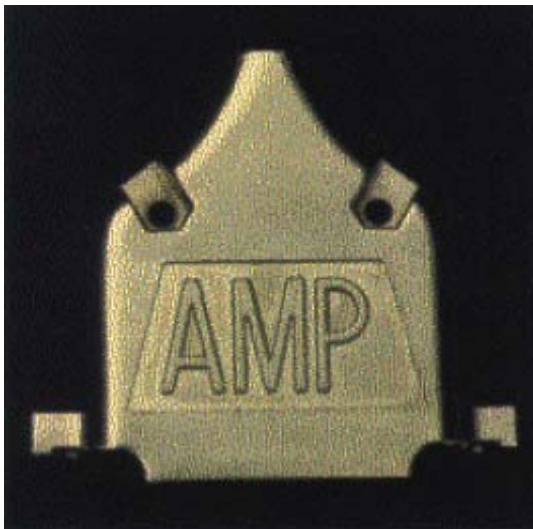
Any nonconforming product shall be dispositioned in accordance with Quality Specification 102-19, Nonconforming Material.



ACCEPTABLE

Very Bright
(High Reflectivity)

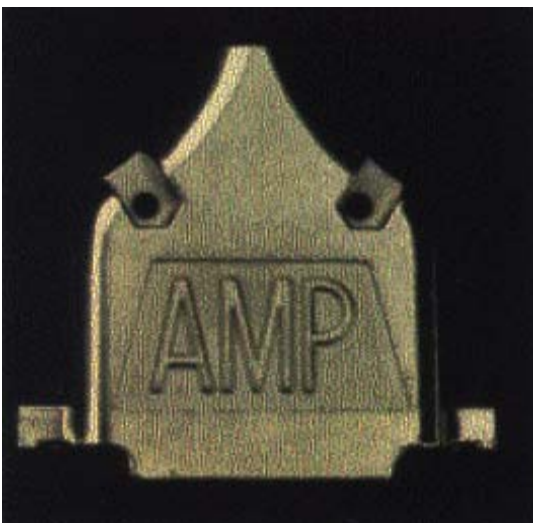
Figure 1



ACCEPTABLE

Bright
(Medium Reflectivity)

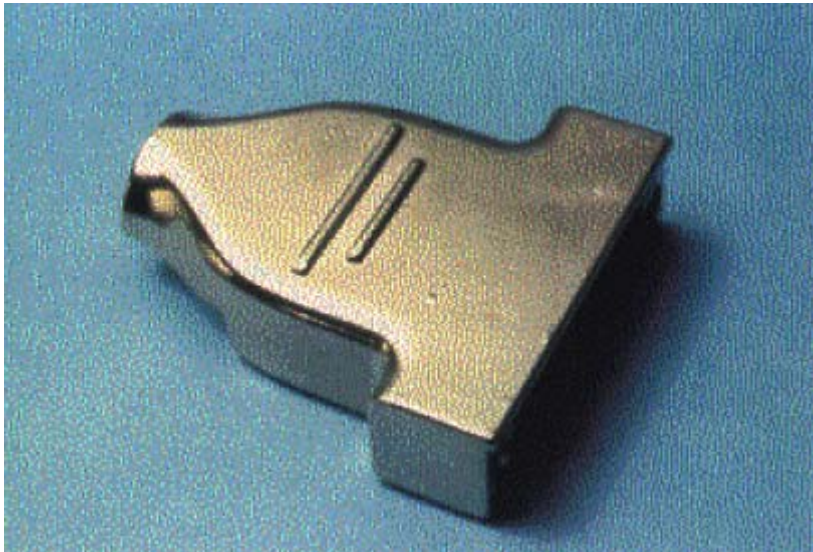
Figure 2



ACCEPTABLE
(Minimum)

Dull
(Low Reflectivity)

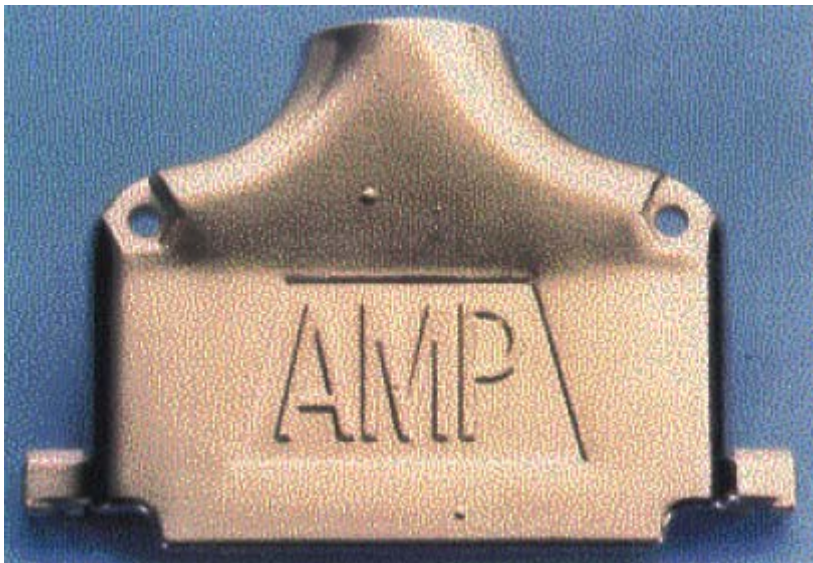
Figure 3



ACCEPTABLE

Blister

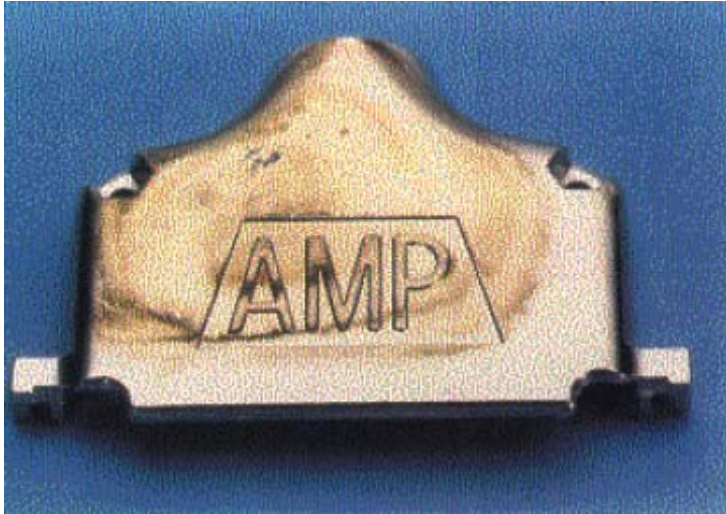
Figure 4



NOT ACCEPTABLE

Blister

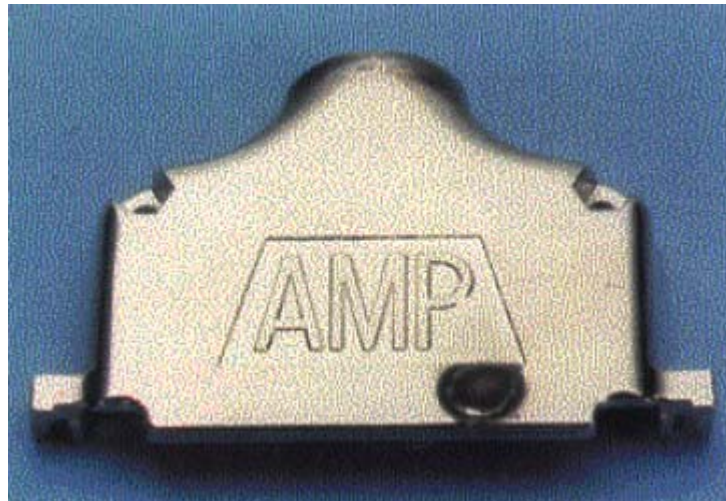
Figure 5



NOT ACCEPTABLE

Burnt Plating

Figure 6



NOT ACCEPTABLE

Burnt Plating

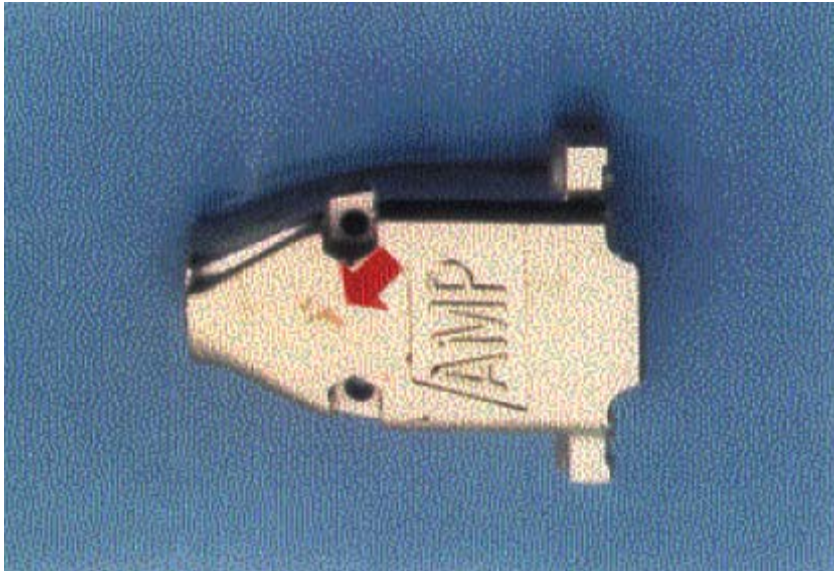
Figure 7



NOT ACCEPTABLE

Burnt Plating

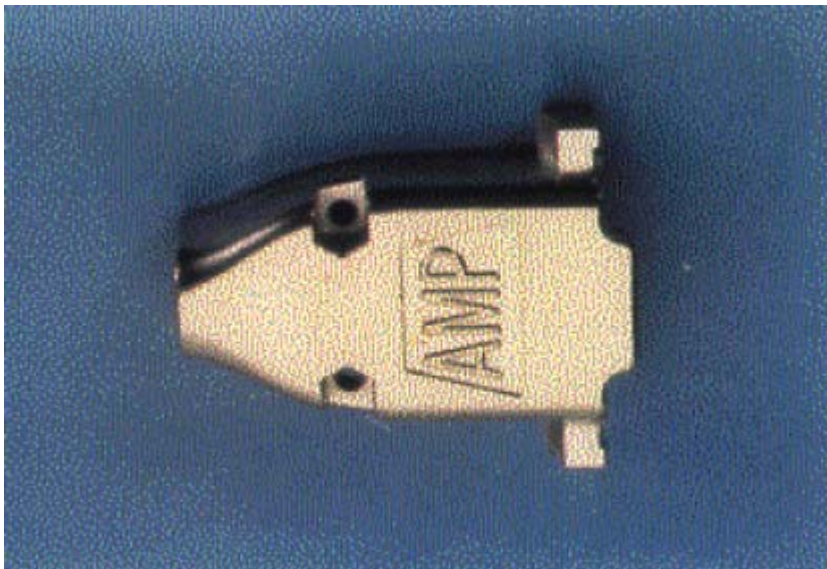
Figure 8



NOT ACCEPTABLE

Exposed Copper

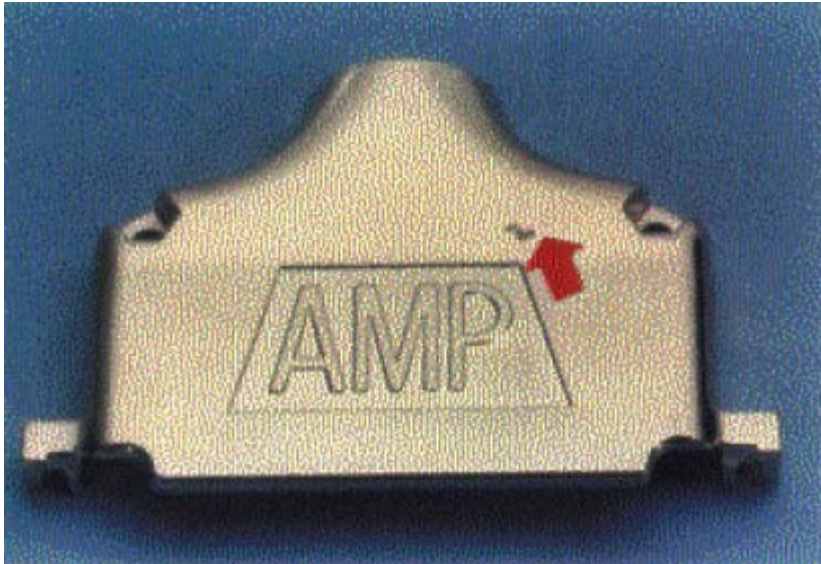
Figure 9



ACCEPTABLE

Exposed Copper

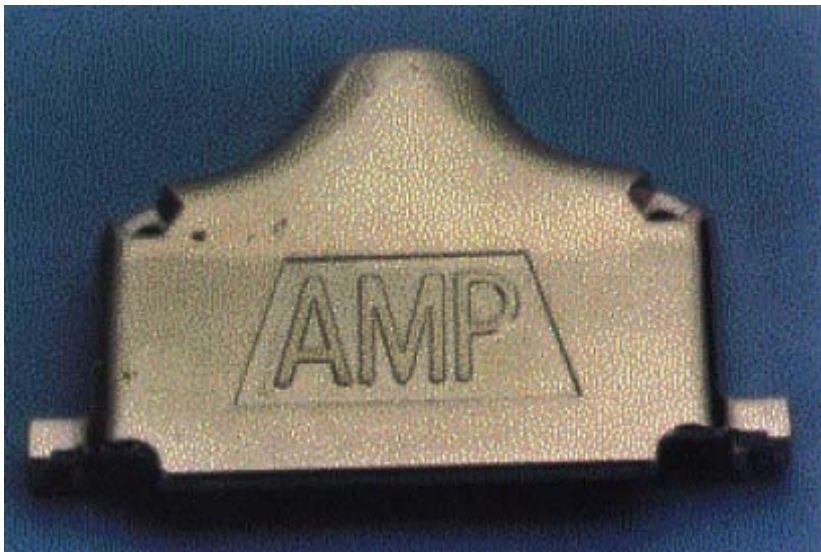
Figure 10



ACCEPTABLE

Black Marks

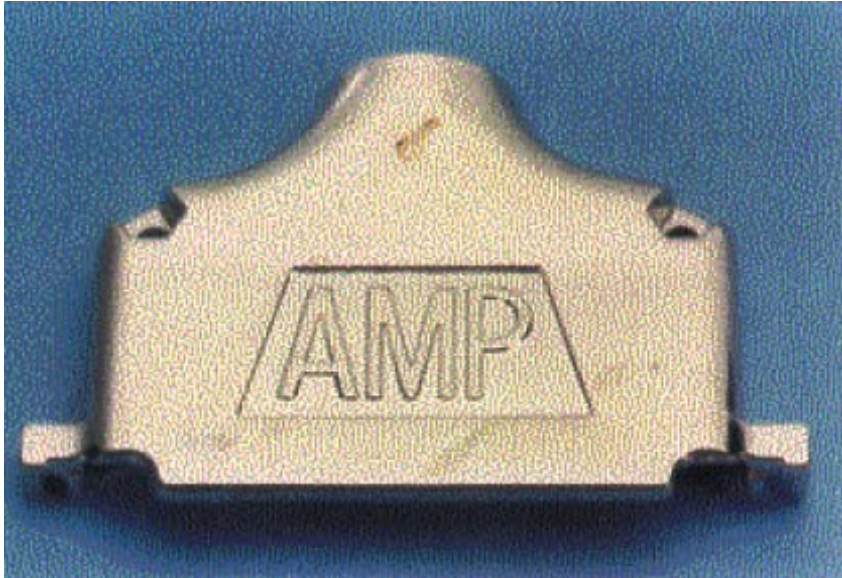
Figure 11



ACCEPTABLE

Black Marks

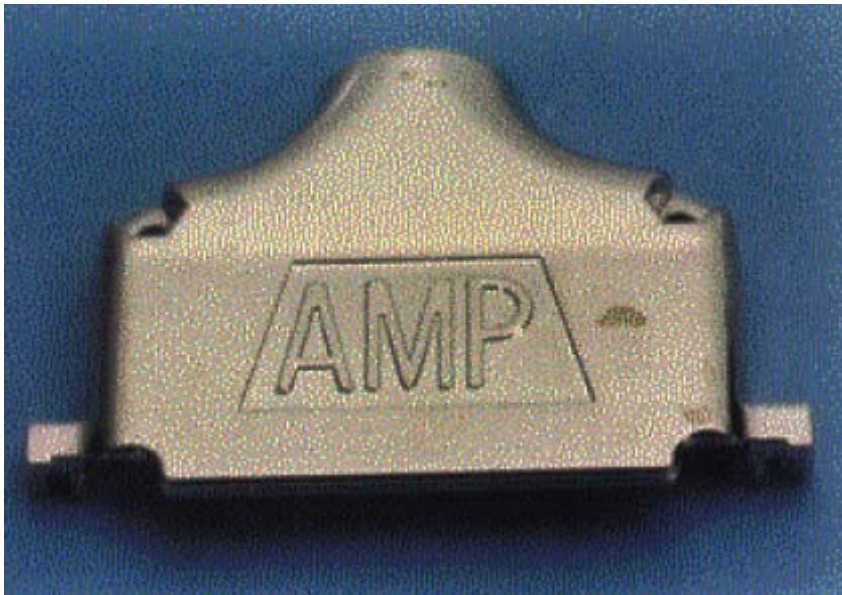
Figure 12



ACCEPTABLE

Brown Spots

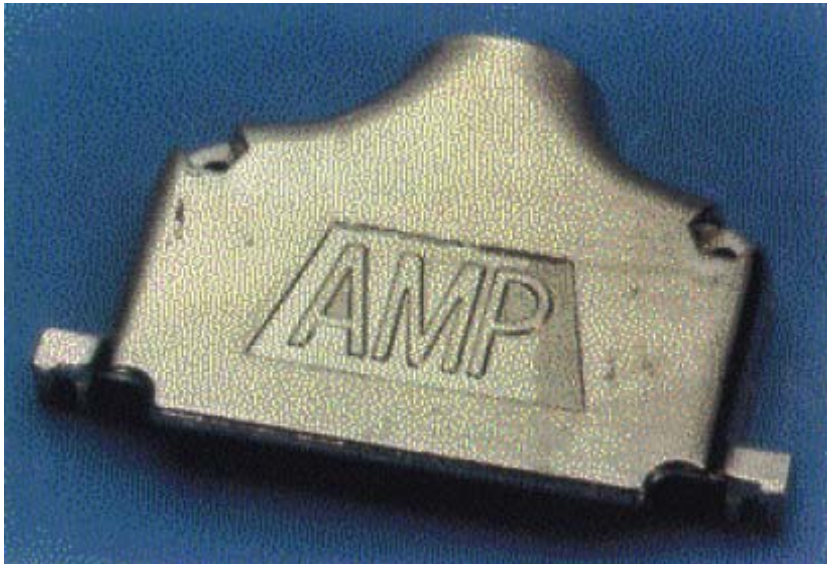
Figure 13



NOT ACCEPTABLE

Brown Spots

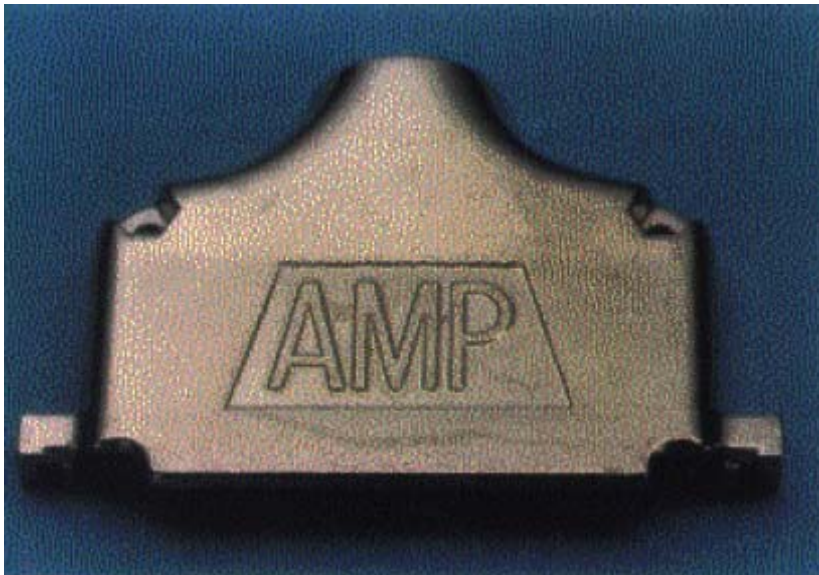
Figure 14



NOT ACCEPTABLE

Water Stains

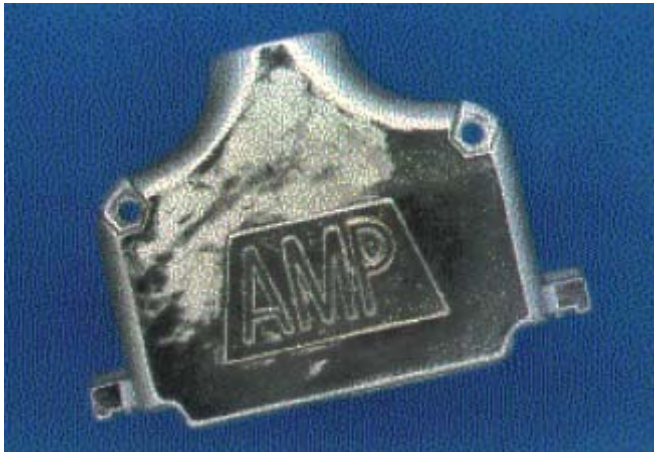
Figure 15



NOT ACCEPTABLE

Water Stains

Figure 16



NOT ACCEPTABLE

White Haze

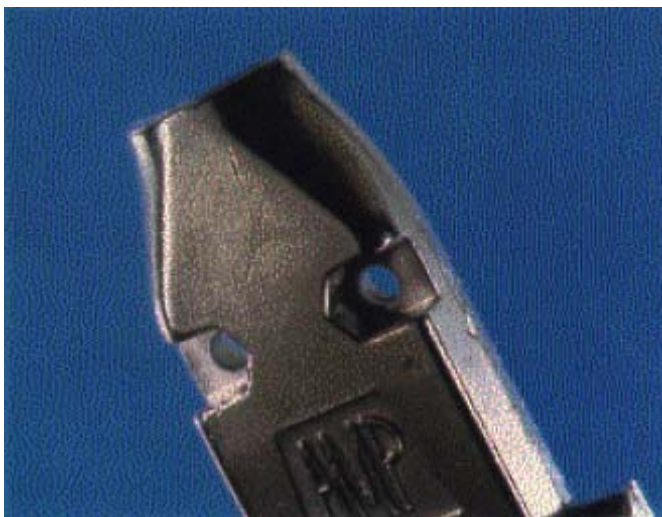
Figure 17



NOT ACCEPTABLE

Nick or Gouge

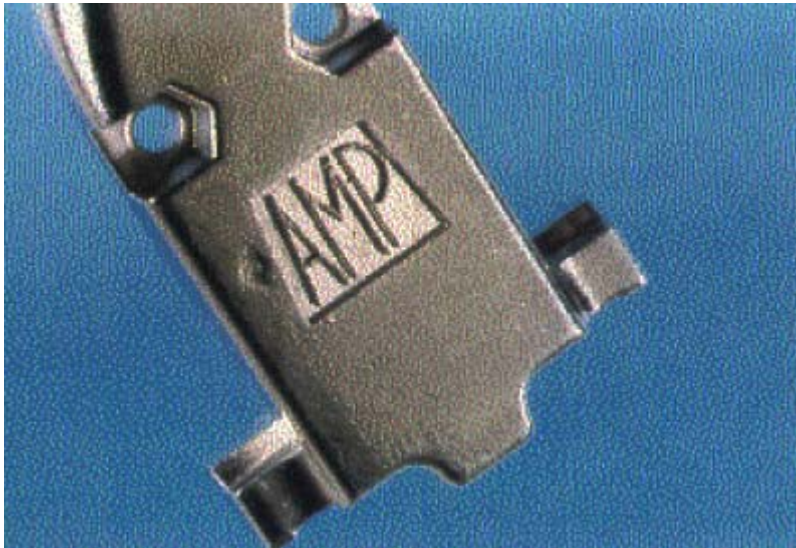
Figure 18



ACCEPTABLE

Nick or Gouge

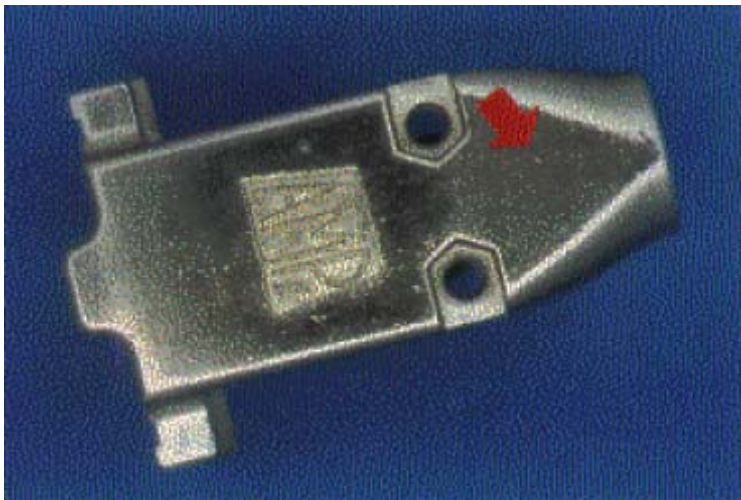
Figure 19



NOT ACCEPTABLE

Dent

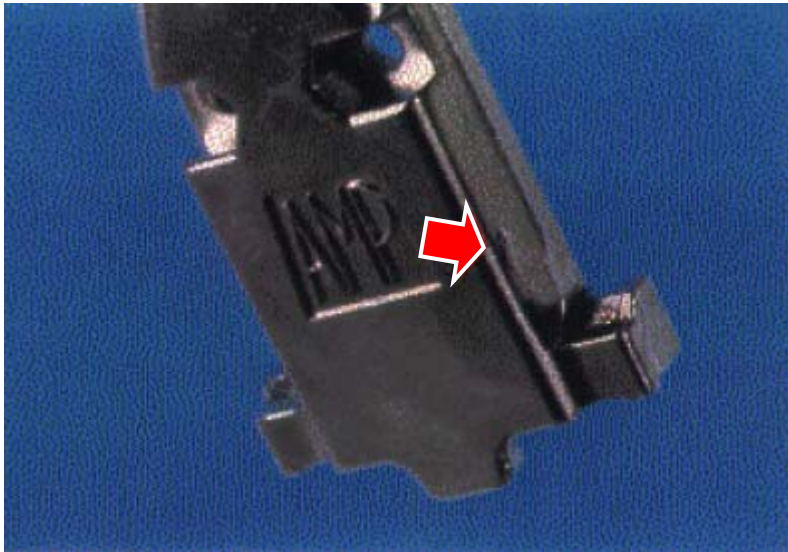
Figure 20



ACCEPTABLE

Dent

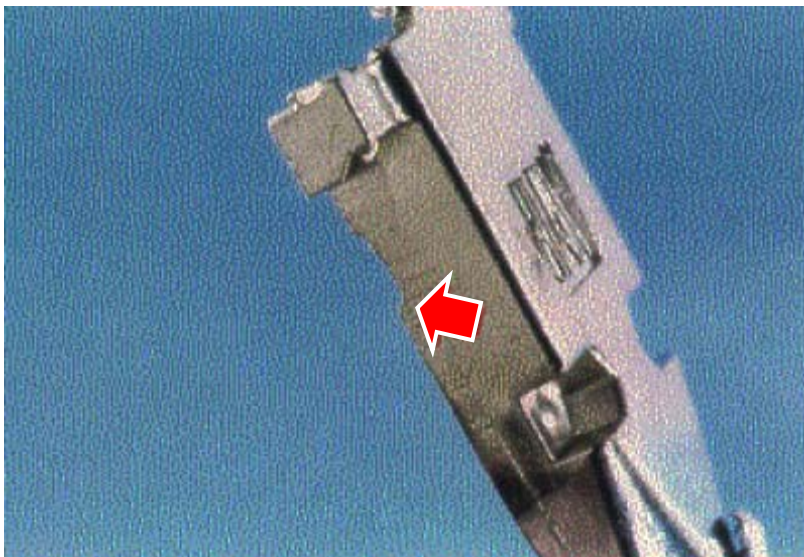
Figure 21



ACCEPTABLE

Blister

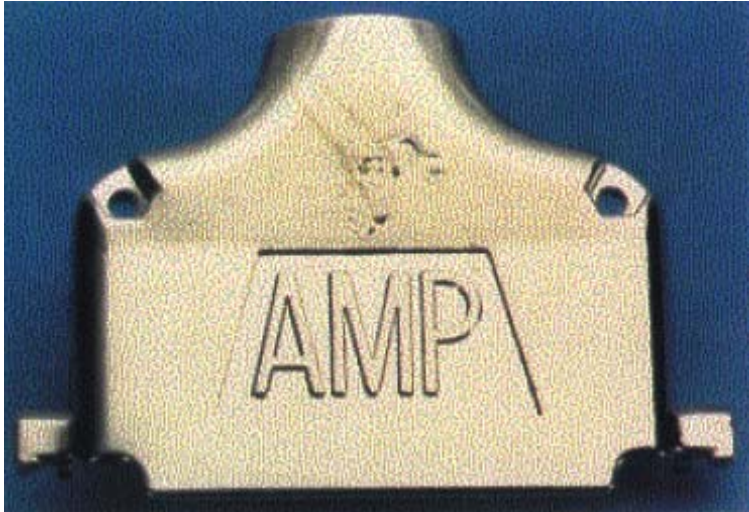
Figure 22



NOT ACCEPTABLE

Mis-Trim

Figure 23



NOT ACCEPTABLE

Nonfill

Figure 24

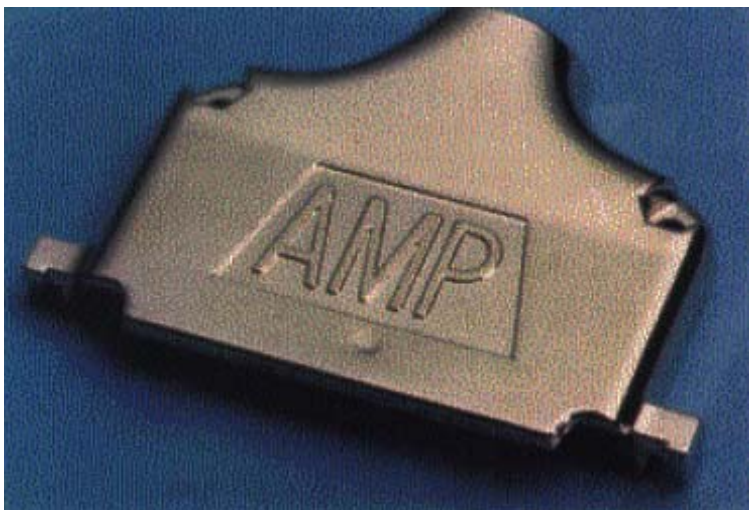


ACCEPTABLE

Bent

Figure 25

Per Engineering Specification 115-54



NOT ACCEPTABLE

Sink

Figure 26