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INTERNATIONAL
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AEROSPACE MATERIAL SPECIFICATION

Submitted for recognition as an American National Standard

SAE AMS 4145F

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Cancelled 1996-09
Superseding AMS 4145E

ALUMINUM ALLOY FORGINGS
12.2Si - 1.1Mg - 0.9Cu - 0.9Ni (32S-T6)

This specification has been "CANCELLED" by the Aerospace Materials Division, SAE, as of September 1996. By this action, the document revision letter and title will be deleted from the active specification index of Aerospace Material Specifications. Cancelled specifications are available from SAE upon request.

PREPARED UNDER THE JURISDICTION OF AMS COMMITTEE "D"

AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
29 West 39th Street
New York City

AMS 4145E

Issued 12-5-39
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ALUMINUM ALLOY FORGINGS
12.2Si - 1.1Mg - 0.9Cu - 0.9Ni (32S-T6)

1. ACKNOWLEDGMENT: A vendor shall mention this specification number and its revision letter in all quotations and when acknowledging purchase orders.

2. FORM: Die forgings and forging stock.

3. COMPOSITION:

Silicon	11.0 - 13.5
Magnesium	0.8 - 1.3
Copper	0.5 - 1.3
Nickel	0.5 - 1.3
Iron	1.0 max
Zinc	0.25 max
Titanium	0.05 max
Chromium	0.10 max
Other Impurities, each	0.05 max
Other Impurities, total	0.15 max
Aluminum	remainder

4. CONDITION:

4.1 Die Forgings: Solution and precipitation heat treated. Quenching from the solution temperature shall be at a rate fast enough for the material to meet the following requirements, but shall be as slow as practicable in order to keep internal stresses at a minimum.

4.2 Forging Stock: As fabricated.

5. TECHNICAL REQUIREMENTS:

5.1 Die Forgings:

5.1.1 Tensile Properties:

5.1.1.1 Test Specimens: Test specimens, machined from separately forged coupons or from forging stock representing the forgings and in either case heat treated with the forgings, or machined from prolongations on heat treated forgings, shall conform to the following requirements:

Tensile Strength, psi	52,000 min
Yield Strength at 0.2% Offset or at 0.0114 in. in 2 in. Extension Under Load (E=11,400,000), psi	42,000 min
Elongation, % in 4D	5 min

5.1.1.2 Forgings, With Grain Flow: When test specimens are machined from forgings with the axis approximately parallel to the forging flow lines, the tensile properties shall conform to those specified in 5.1.1.1, except that elongation may be as low as 3.5%, unless otherwise agreed upon by purchaser and vendor.

REAFFIRMED

10/91