



## Maximum Continuous

|                         |                           |
|-------------------------|---------------------------|
| Torque                  | 113% (302 lb.ft)(346 shp) |
| Output shaft speed (N2) | 95-100% (5716-6016)       |
| Gas producer speed (N1) | 101% (51490 rpm)          |
| Gas temperature         | 737°C (1358°F)            |

**I. Model A109 (cont'd)****Single-engine operation (emergency)**

## Takeoff (5 minutes)

|                         |                           |
|-------------------------|---------------------------|
| Torque                  | 131% (350 lb.ft)(400 shp) |
| Output shaft speed (N2) | 95-100% (5715-6016 rpm)   |
| Gas producer speed (N1) | 102% (52000 rpm)          |
| Gas temperature         | 793°C (1460°F)            |

## Maximum Continuous

|                         |                           |
|-------------------------|---------------------------|
| Torque                  | 126% (336 lb.ft)(385 shp) |
| Output shaft speed (N2) | 95-100% (5715-6016 rpm)   |
| Gas producer speed (N1) | 101% (51490 rpm)          |
| Gas temperature         | 77°C (1430°F)             |

(See RAI-approved Helicopter Flight Manual for rpm and temperature transient limits).

Rotor Limits.

## Power Off

|         |                 |
|---------|-----------------|
| Maximum | 110 % (424 rpm) |
| Minimum | 90 % (346 rpm)  |

## Power On

|         |                 |
|---------|-----------------|
| Maximum | 100 % (385 rpm) |
| Minimum | 95 % (365 rpm)  |

Rotor Speed Warning.

|            |                 |
|------------|-----------------|
| Low Speed  | 95 % (365 rpm)  |
| High Speed | 105 % (404 rpm) |

Airspeed Limits.

|                                 |         |     |
|---------------------------------|---------|-----|
| Never Exceed Speed ( $V_{NE}$ ) | 168 kts | IAS |
|---------------------------------|---------|-----|

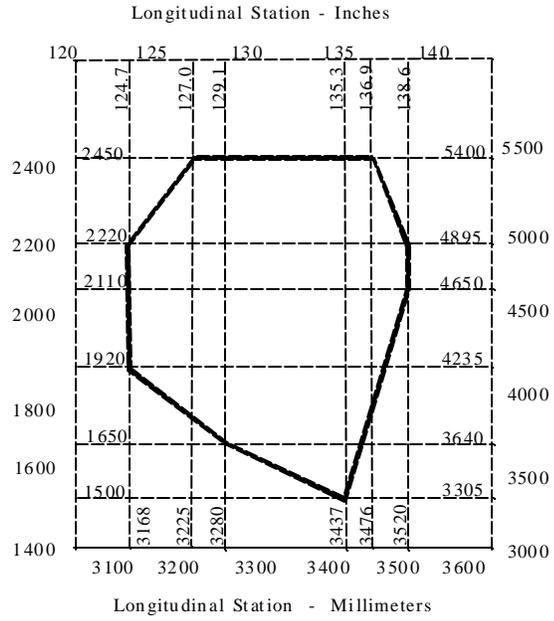
For reduction of  $V_{NE}$  with altitude and OAT, see RAI-approved Helicopter Flight Manual.

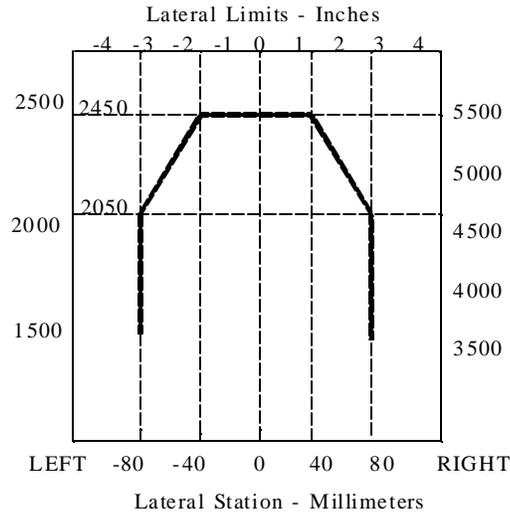
|   |         |     |
|---|---------|-----|
| Maximum Gear Operating Speed ( $V_{LO}$ ) | 120 kts | IAS |
| Maximum Gear Extended Speed ( $V_{LE}$ )  | 120 kts | IAS |
| Maximum Forward Touchdown Speed           | 40 kts  | IAS |

C.G. Range (Gear Down).

## Longitudinal Limits

(Gear retraction moment is a 4 kgm (347 lb. in) moving CG forward).



**I Model A109 (cont'd)**CG Range (Gear Down).Empty Weight & CG Range.

(None)

Maximum Weight.

2450 Kg. (5400 lb)

Minimum Crew.

One pilot

Maximum Passenger.

7: For aircraft conforming with Agusta Report 109-06-01.  
 1 at sta 1650 mm (65 in)  
 3 at sta 2485 mm (98 in)  
 3 at sta 3265 mm (129 in)

0: For aircraft in "green" delivery configuration conforming with Agusta Report 109-06-03.

Maximum Baggage.

150 Kg. (330 lb) at sta 4920 mm (194 in)

Maximum floor loading for baggage compartment:

500 Kg/m<sup>2</sup> (102 lb/ft<sup>2</sup>)

Maximum load per tie-down fitting:

91 Kg. (200 lb.)

Fuel Capacity.

Total : 148.4 U.S. Gal. (559 lit.) in two tanks of 74.2 U.S. Gal. (279.5 lit.) each,  
 at sta. 3650 mm (144.0 in.)

Usable : 146 U.S. Gal. (550 lit.)

*See NOTE 1 for unusable fuel.*Oil Capacity Engines.

2 U.S. Gal. (7.7 lit.) each engine, at sta. 3053 mm (136 in)

*See NOTE 1 for undrainable oil.*Maximum Operating Altitude.

4,560 m (15,000 ft)

Rotor Blade and Control

For rigging information refer to the Model A109 Maintenance Manual.

Movements.

## II. Model A109A (Normal Category Helicopter), approved April 2, 1976.

### Engines.

Two (2) Detroit Diesel Allison Division of General Motors Corporation Model 250-C20B turboshaft engines.

Bendix gas producer fuel control DP-N2.

Bendix power turbine governor AL-AA1.

### Fuel.

For all temperatures:

MIL-T-5624 grade JP-4  
ASTM D-1655 Jet B

For temperatures above -18°C (0°F):

MIL-T-5624 grade JP-5  
ASTM D-1655 Jet A  
ASTM D-1655 Jet A1  
See NOTE 4

### Engine Limits.

All engine operation

Takeoff (5 minutes)

|                         |                            |
|-------------------------|----------------------------|
| Torque                  | 113% (302 lb.ft) (346 shp) |
| Output shaft speed (N2) | 95-100% (5715-6016 rpm)    |
| Gas producer speed (N1) | 105% (53518 rpm)           |
| Gas temperature         | 810°C (1490°F)             |

Maximum continuous

|                         |                            |
|-------------------------|----------------------------|
| Torque                  | 113% (302 lb.ft) (346 shp) |
| Output shaft speed (N2) | 95-100% (5715-6016 rpm)    |
| Gas producer speed (N1) | 105% (53518 rpm)           |
| Gas temperature         | 738°C (1360°F)             |

Single-engine operation (emergency)

Takeoff (5 minutes)

|                         |                             |
|-------------------------|-----------------------------|
| Torque                  | 131% (350 lb. ft) (400 shp) |
| Output shaft speed (N2) | 95-100% (5715-6016 rpm)     |
| Gas producer speed (N1) | 105% (53518 rpm)            |
| Gas temperature         | 810°C (1490°F)              |

Maximum continuous

|                         |                            |
|-------------------------|----------------------------|
| Torque                  | 126% (336 lb.ft) (385 shp) |
| Output shaft speed (N2) | 95-100% (5715-6016 rpm)    |
| Gas producer speed (N1) | 105% (53518 rpm)           |
| Gas temperature         | 810°C (1490°F)             |

(See RAI-approved Helicopter Flight Manual for rpm and temperature transient limits).

### Rotor Limits.

Power off:

|         |      |           |
|---------|------|-----------|
| Maximum | 110% | (424 rpm) |
| Minimum | 90%  | (346 rpm) |

Power on:

|         |      |           |
|---------|------|-----------|
| Maximum | 100% | (385 rpm) |
| Minimum | 95%  | (365 rpm) |

Rotor Speed Warning.

|            |      |           |
|------------|------|-----------|
| Low speed  | 95%  | (365 rpm) |
| High speed | 105% | (404 rpm) |

**II. Model A109A (Normal Category Helicopter) (cont'd).**

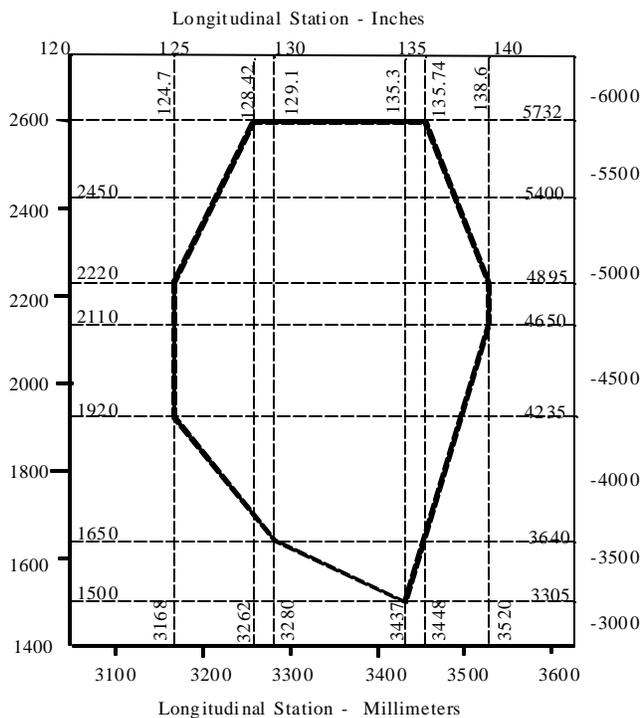
Airspeed Limits.

Never exceed speed ( $V_{NE}$ ) 158 knots IAS (See NOTE 7)  
 For reduction of  $V_{NE}$  with altitude and OAT, see RAI-approved  
 Helicopter Flight Manual.

Maximum Gear Operating Speed ( $V_{LO}$ ) 120 kts IAS  
 Maximum Gear Extended Speed ( $V_{LE}$ ) 120 kts IAS  
 Maximum Forward Touchdown Speed 40 kts IAS

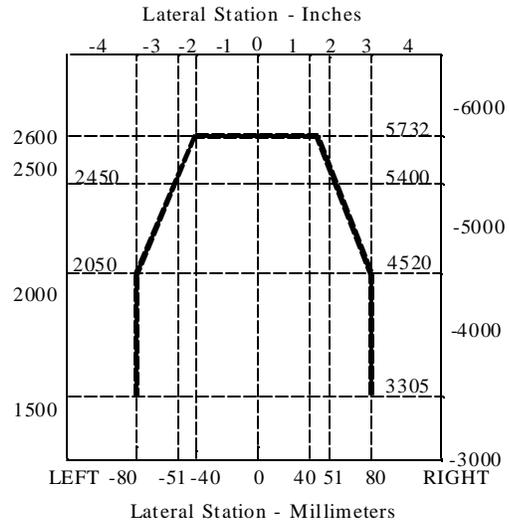
CG Range (Gear Down).

Longitudinal Limits  
 (Gear retraction moment is 4 kgm (347 lb.in) moving CG forward)



CG Range (Gear Down).

Lateral Limits



**II. Model A109A (Normal Category Helicopter) (cont'd).**

|   |   |
|---|---|
| <u>Empty Weight &amp; CG Range.</u>       | (None)  |
| <u>Maximum Weight.</u>                    | 2600 kg (5732 lb.) (See NOTE 7)   |
| <u>Minimum Crew.</u>                      | One pilot at Sta. 1630 mm (64 in.) to 1695 mm (67 in.) See NOTE 5.  |
| <u>Maximum Passengers.</u>                | 7: For aircraft conforming with Agusta Report: 109-06-02.<br>1 at Sta. 1630 mm (64 in) to 1695 mm (67 in) (See NOTE 4).<br>3 at Sta. 2485 mm (98 in)<br>3 at Sta. 3265 mm (129 in)<br><br>0: For aircraft in "green" delivery configuration conforming with Agusta Report 109-06-07 |
| <u>Maximum Baggage.</u>                   | 150 kg. (330 lb.) at sta 4920 mm (194 in)<br><br>Maximum floor loading for baggage compartment:<br>500 kg/m <sup>2</sup> (102 lb/ft <sup>2</sup> )<br><br>Maximum load per tie-down fitting:<br>91 kg (200 lb.)   |
| <u>Fuel Capacity.</u>                     | Total: 148 U.S. Gal. (559 lit.) in two tanks of 74.2 U.S. Gal. (279.5 lit.) each,<br>at sta 3652 mm (144.0 in.)<br>Usable: 146 U.S. Gal. (550 lit.)<br><i>See NOTE 1 for unusable fuel.</i>   |
| <u>Oil Capacity Engines.</u>              | 2 U.S. Gal. (7.7 lit.) each engine, at sta 3053 mm (120 in).<br><i>See NOTE 1 for undrainable oil.</i>  |
| <u>Oil Capacity Transmission.</u>         | 3.2 U.S. Gal. (12 lit.) at sta 3460 mm (136 in)<br><i>See NOTE 1 for undrainable oil.</i>   |
| <u>Maximum Operating Altitude.</u>        | 2,432 m. (8,000 ft.) <i>See NOTE 7.</i>   |
| <u>Rotor Blade and Control Movements.</u> | For rigging information refer to the Model A109A/A109AII/A109C Maintenance Manual.  |

**III. Model A109A II (Normal Category Helicopter), approved December 4, 1981.**

|                 |  |
|-----------------|--|
| <u>Engines.</u> | Two (2) Detroit Diesel Allison Division of General Motors Corporation Model 250-C20B or 250-C20R/1 turboshaft engines.<br><br>Bendix gas producer fuel control DP-N2.<br>Bendix power turbine governor AL-AA1. |
| <u>Fuel.</u>    | For all temperatures:<br>MIL-T-5624 grade JP-4<br>ASTM D-1655 Jet B<br><br>For temperatures above -18°C (0°F):<br>MIL-T-5624 grade JP-5  |

ASTM D-1655 Jet A  
ASTM D-1655 Jet A1  
*See NOTE 4*

### III. Model A109A II (Normal Category Helicopter) (cont'd)

#### Engine Limits.

##### All Engine Operation

##### Takeoff (5 minutes)

|                         |                            |
|-------------------------|----------------------------|
| Torque                  | 97% (323 lb.ft) (370 shp)  |
|                         | (-C20R/1 engine)           |
| Torque                  | 121% (323 lb.ft) (370 shp) |
|                         | (-C20B engine)             |
| Output shaft speed (N2) | 95-100% (5715-6016 rpm)    |
| Gas producer speed (N1) | 105% (53518 rpm)           |
| Gas temperature         | 810°C (1490°F)             |

##### Maximum continuous

|                         |                            |
|-------------------------|----------------------------|
| Torque                  | 97% (323 lb.ft) (370 shp)  |
|                         | (-C20R/1 engine)           |
| Torque                  | 121% (323 lb.ft) (370 shp) |
|                         | (-C20B engine)             |
| Output shaft speed (N2) | 95-100% (5715-6016 rpm)    |
| Gas producer speed (N1) | 105% (53518 rpm)           |
| Gas temperature         | 738°C (1360 °F)            |
|                         | (-C20B engine)             |
| Gas temperature         | 752°C (1358°F)             |
|                         | (-C20R/1 engine)           |

##### Single-engine operation (emergency)

|                         |                            |
|-------------------------|----------------------------|
| Torque                  | 118% (400 lb.ft) (450 shp) |
|                         | (-C20R/1 engine)           |
| Torque                  | 137% (350 lb.ft) (420 shp) |
|                         | (-C20B engine)             |
| Output shaft speed (N2) | 95-100% (5715-6016 rpm)    |
| Gas producer speed (N1) | 105% (53518 rpm)           |
| Gas temperature         | 810°C (1490°F)             |

(See the A109AII Helicopter Flight Manual for rpm and temperature transient limits).

#### Rotor Limits.

##### Power off

|         |      |           |
|---------|------|-----------|
| Maximum | 110% | (424 rpm) |
| Minimum | 90%  | (346 rpm) |

##### Power on

|         |      |           |
|---------|------|-----------|
| Maximum | 100% | (385 rpm) |
| Minimum | 95%  | (365 rpm) |

#### Rotor Speed Warning.

|            |      |           |
|------------|------|-----------|
| Low speed  | 95%  | (365 rpm) |
| High speed | 105% | (404 rpm) |

#### Airspeed Limits.

Never exceed speed ( $V_{NE}$ ) 168 knots IAS

For reduction of  $V_{NE}$  with altitude and OAT, see the A109AII Helicopter Flight Manual.

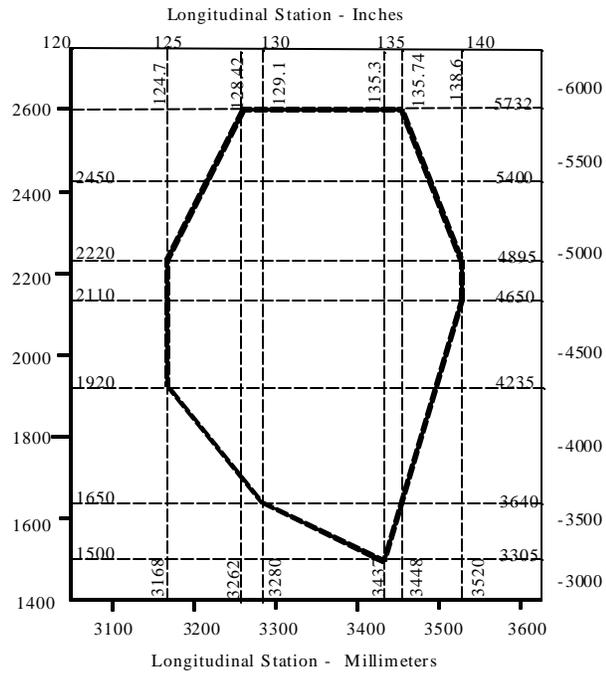
|   |         |     |
|---|---------|-----|
| Maximum Gear Operating Speed ( $V_{LO}$ ) | 120 kts | IAS |
| Maximum Gear Extended Speed ( $V_{LE}$ )  | 120 kts | IAS |
| Maximum Forward Touchdown Speed           | 40 kts  | IAS |

**III. Model A109A II (Normal Category Helicopter) (cont'd)**

CG Range (Gear Down).

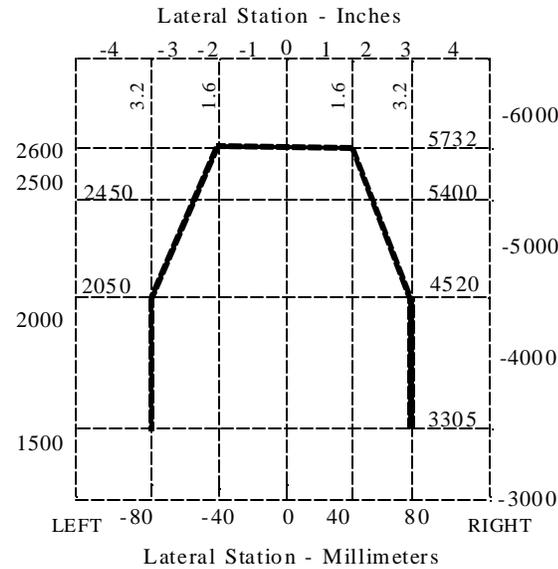
Longitudinal Limits

Gear retraction moment is 4 kgm (347 lb.in.) moving CG forward)



CG Range (Gear Down).

Lateral Limits



Empty Weight & CG Range

(None)

Maximum Weight.

2600 kg (5732 lb.)

Minimum Crew.

One pilot at Sta. 1565 mm (62 in.) to 1630 mm (64 in.)

**III. Model A109A II (Normal Category Helicopter) (cont'd)**

|                                       |   |
|---------------------------------------|---|
| <u>Maximum Passengers.</u>            | 7: For aircraft conforming with Agusta Report 109-06-29.<br>1 at sta. 1565 mm (62 in) to 1630 mm (64 in)<br>3 at sta. 2420 mm (95 in) Facing FWD or 3 at sta 2455 (97 in) Facing AFT<br>3 at sta. 3200 mm (126 in)  |
|                                       | 0: For aircraft in "green" delivery configuration conforming with Agusta Report 109-06-07. See Appendix 15 of required flight manual.   |
| <u>Maximum Baggage.</u>               | 150 kg. (330 lb.) at sta 4920 mm (194 in)<br>Maximum floor loading for baggage compartment:<br>500 kg/m <sup>2</sup> (102 lb/ft <sup>2</sup> )<br>Maximum load per tie-down fitting:<br>91 kg (200 lb.)   |
| <u>Fuel Capacity.</u>                 | Total: 148.4 U.S. Gal. (559 lit.) in two tanks of 74.2 U.S. Gal. (279.5 lit.) each, at sta 3652 mm (144.0 in.)<br><br>Usable: 146 U.S. Gal. (550 lit.)<br><i>See NOTE 1 for unusable fuel</i><br><i>See NOTE 9 for fuel capacity with auxiliary fuel tank installation.</i> |
| <u>Oil Capacity Engines.</u>          | 2 U.S. Gal. (7.7 lit.) each engine, at sta 3053 mm (120 in)<br><i>See NOTE 1 for undrainable oil.</i>   |
| <u>Oil Capacity Altitude.</u>         | 3.2 U.S. Gal. (12 lit.) at sta 3460 mm (136 in)<br><i>See NOTE 1 for undrainable oil.</i>   |
| <u>Maximum Operating Altitude.</u>    | 4,560 m. (15,000 ft.)   |
| <u>Rotor Blade Control Movements.</u> | For rigging information refer to the Model A109A/A109AII/A109C Maintenance Manual.  |

**IV. Model A109C (Normal Category Helicopter), approved August 10, 1989.**

|                 |  |
|-----------------|--|
| <u>Engines.</u> | Two (2) Detroit Diesel Allison Division of General Motors Corporation Model 250-C20R/1 turboshaft engines.<br><br>Bendix gas producer fuel control DP-N2.<br><br>Bendix power turbine governor AL-AA1. |
| <u>Fuel.</u>    | For all temperatures:<br>MIL-T-5624 grade JP-4<br>ASTM D-1655 Jet B<br><br>For temperature above -18°C (0°F):<br>MIL-T-5624 grade JP-5<br>ASTM D-1655 Jet A<br>ASTM D-1655 Jet A1<br>See NOTE 4        |

**IV. Model A109C (Normal Category Helicopter) (cont'd)**Engine Limits.

## All Engine Operation

## Takeoff (5 minutes)

|                         |                            |
|-------------------------|----------------------------|
| Torque                  | 104% (345 lb.ft) (395 shp) |
| Output shaft speed (N2) | 95-100% (5715-6016 rpm)    |
| Gas producer speed (N1) | 105% (53518 rpm)           |
| Gas temperature         | 810°C (1490°F)             |

## Maximum Continuous

|                         |                            |
|-------------------------|----------------------------|
| Torque                  | 100% (332 lb.ft) (380 shp) |
| Output shaft speed (N2) | 95-100% (5715-6016 rpm)    |
| Gas producer speed (N1) | 105% (53518 rpm)           |
| Gas temperature         | 752°C (1385°F)             |

## Single-engine operation (emergency)

|                         |                            |
|-------------------------|----------------------------|
| Torque                  | 118% (400 lb.ft) (450 shp) |
| Output shaft speed (N2) | 95-100% (5715-6015 rpm)    |
| Gas producer speed (N1) | 105% (53518 rpm)           |
| Gas temperature         | 810°C (1490°F)             |

(See the A109C Helicopter Flight Manual for rpm and temperature transient limits).

Rotor Limits.

## Power off

|         |      |           |
|---------|------|-----------|
| Maximum | 110% | (424 rpm) |
| Minimum | 90%  | (346 rpm) |

## Power on

|         |      |           |
|---------|------|-----------|
| Maximum | 100% | (385 rpm) |
| Minimum | 95%  | (365 rpm) |

Rotor Speed Limits.

|            |      |           |
|------------|------|-----------|
| Low speed  | 95%  | (365 rpm) |
| High speed | 105% | (404 rpm) |

Airspeed Limits.

Never exceed speed ( $V_{NE}$ ) 168 knots IAS

For reduction of  $V_{NE}$  with altitude and OAT, see the A109C Helicopter Flight Manual.

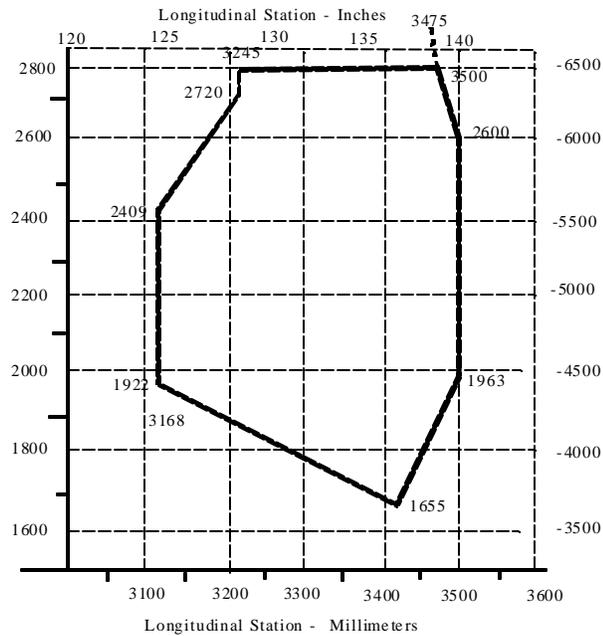
|   |         |     |
|---|---------|-----|
| Maximum Gear Operating Speed ( $V_{LO}$ ) | 120 kts | IAS |
| Maximum Gear Extended Speed ( $V_{LE}$ )  | 120 kts | IAS |
| Maximum Forward Touchdown Speed           | 40 kts  | IAS |

**IV. Model A109C (Normal Category Helicopter) (cont'd)**

CG Range (Gear Down).

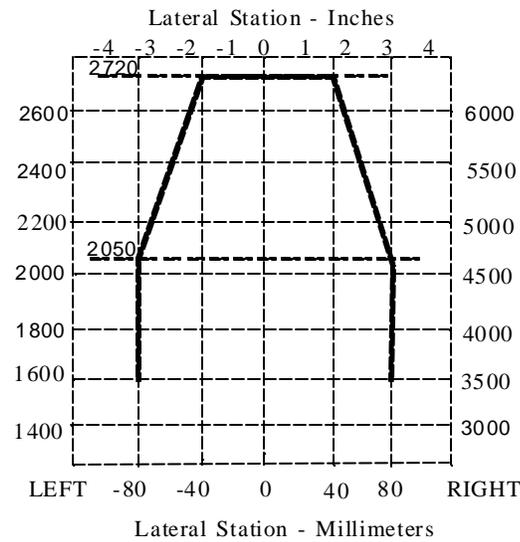
Longitudinal Limits

Gear retraction moment is 4 kgm (347 lb. in.) moving CG forward



CG Range (Gear Down).

Lateral Limits



Empty Weight & CG Range.

(None)

Maximum Weight.

2720 Kg (5997 lb)

Minimum Crew.

One pilot at Sta. 1565 mm (62 in.) to 1630 mm (64 in.)

**IV. Model A109C (Normal Category Helicopter) (cont'd)**

|                                |  |
|--------------------------------|--|
| Maximum Passengers.            | 7: For aircraft conforming with Agusta Report 109-06-67<br>1 at Sta. 1565 mm (62 in) to 1630 mm (64 in)<br><i>See NOTE 5.</i><br>3 at Sta. 2420 mm (95 in) Facing FWD or 3 at Sta. 2455 (97 in) Facing AFT<br>3 at Sta. 3200 mm (126 in) |
|                                | 0: For aircraft in "green" delivery configuration conforming with Agusta Report 109-06-07. See Appendix 15 of required flight manual.  |
| Maximum Baggage.               | 150 kg. (330 lb.) at Sta. 4920 mm (194 in)   |
|                                | Maximum floor loading for baggage compartment:<br>500 kg/m <sup>2</sup> (102 lb/ft <sup>2</sup> )  |
|                                | Maximum load per tie-down fitting:<br>91 kg (200 lb.)  |
| Fuel Capacity.                 | Total: 148.4 U.S. Gal. (559 lit.) in two tanks of 74.2 U.S. Gal. (279.5 lit.) each, at sta. 3652 mm (144.0 in.)  |
|                                | Usable: 146 U.S. Gal (550 lit.)<br><i>See NOTE 1 for unusable fuel.</i><br><i>See NOTE 9 for fuel capacity with auxiliary fuel tank installation.</i>  |
| Oil Capacity Engines.          | 2 U.S. Gal. (7.7 lit.) each engine, at sta. 3053 mm (120 in)<br><i>See NOTE 1 for undrainable oil.</i>   |
| Oil Capacity Transmission.     | 3.2 U.S. Gal. (12 lit.) at sta. 3460 mm (136 in)<br><i>See NOTE 1 for undrainable oil.</i>   |
| Maximum Operating Altitude.    | 4,560 m. (15,000 ft.)  |
| Rotor Blade Control Movements. | For rigging information refer to the Model A 109A/A 109AII/A 109C Maintenance Manual.  |

**V. Model A109K2 (Normal Category Helicopter), approved January 15, 1993.**

|                     |   |
|---------------------|---|
| Egines.             | Two (2) Turbomeca Model Arriel 1 K 1 turboshaft engines.<br><br>Turbomeca Fuel Control Unit 0164348390.   |
| Fuel                | For all temperatures:<br>MIL-T-5624 grade P-4, JP-5,<br>ASTM D-1655 Jet A, A 1, Jet B,<br>MIL-T-83133 grade JP-8,<br>AIR 3404-F43 (AVCAT)<br><br>For detailed information see Section 1 of the A109K2 Flight Manual FAA approved. |
| Engine/Xmsn Limits. | All Engine Operation<br>Takeoff<br>Torque 100% (900 SHP at N2 100%)<br>Output shaft speed (N2) 100% (6,000 rpm)   |

|                                  |                   |
|----------------------------------|-------------------|
| Gas producer speed (N1) (5 min.) | 102% (52,836 rpm) |
| Gas temperature (5 min.) TOT     | 845°C (1,553°F)   |



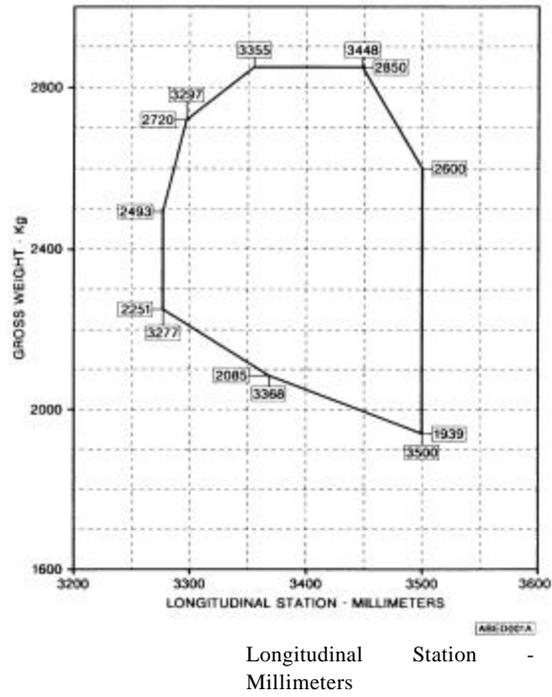
**V. Model A109K2 (Normal Category Helicopter) (cont'd)**

|                        |  |               |                      |
|------------------------|--|---------------|----------------------|
| Engine Limits (cont'd) | Maximum Continuous   |               |                      |
|                        | Torque   | 100%          | (900 SHP at N2 100%) |
|                        | Output shaft speed (N2)  | 100%          | (6,000 rpm)          |
|                        | Gas producer speed (N1)  | 98.2%         | (50,868 rpm)         |
|                        | Gas temperature  | 775°C         | (1,427°F)            |
|                        | Single-engine operation (emergency)  |               |                      |
|                        | (2½ min.)  |               |                      |
|                        | Torque:  | 71.1%         | (640 SHP at N2 100%) |
|                        | Output Shaft Speed (N2)  | 100%          | (6000 rpm)           |
|                        | Gas Producer Speed (N1)  | 103.1%        | (53406 rpm)          |
|                        | Gas temperature (TOT)  | 885°C         | (1625°F)             |
|                        | (30 min.)  |               |                      |
|                        | Gas Temperature (TOT)  | 845°C         | (1553°F)             |
|                        | Gas producer speed (N1)  | 102%          | (52,836 rpm)         |
|                        | Maximum Continuous   |               |                      |
|                        | Torque   | 62.2          | (560 SHP at N2 100%) |
|                        | Output Shaft Speed (N2)  | 100%          | (6000 rpm)           |
|                        | Gas temperature  | 775°C         | (1,427°F)            |
|                        | <i>(See the A109K2 Helicopter Flight Manual for rpm and temperature transient limits).</i> |               |                      |
| Rotor Limits.          | Power off  |               |                      |
|                        | Maximum  | 110%          | (422 rpm)            |
|                        | Minimum  | 90%           | (346 rpm)            |
|                        | Power on   |               |                      |
|                        | Maximum  | 100%          | (384 rpm)            |
|                        | Minimum  | 97%           | (372 rpm)            |
| Rotor Speed Warning    | Low speed  | 95%           | (365 rpm)            |
|                        | High speed   | 105%          | (403 rpm)            |
| Airspeed Limits.       | Never exceed speed (Vne)   | 152 knots IAS |                      |
|                        | For reduction of Vne with altitude and OAT, see the A 109K2 Helicopter Flight Manual.      |               |                      |
|                        | Maximum Forward Touchdown Speed  | 40 Kts IAS    | till to 2720         |
|                        | Kg   | 30 Kts IAS    | over 2720            |
|                        | Kg   |               |                      |

V. Model A109K2 (Normal Category Helicopter) (cont'd)

CG Range.

Longitudinal Limits

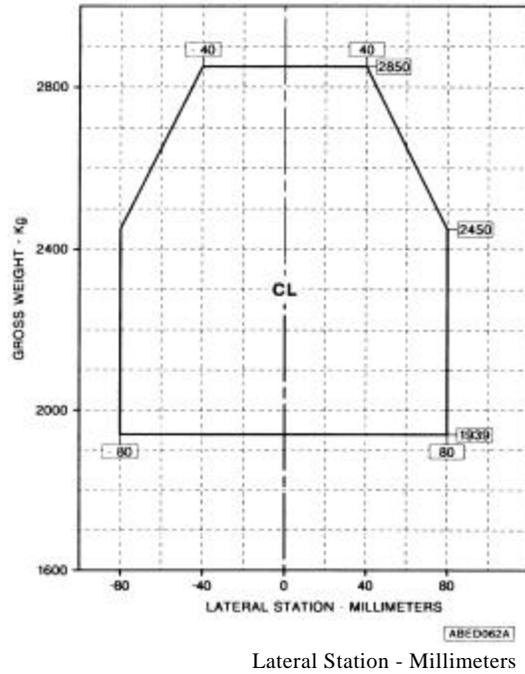


Longitudinal Station -  
Millimeters

CG Range.

Lateral Limits

Lateral Station



Lateral Station - Millimeters

Empty Weight & CG Range.

(None)

Maximum Weigh

2,850 Kg (6,283 lb)

Minimum Crew.

One pilot at Sta. 1,565 mm (62 in) to 1,630 mm (64 in)

**V. Model A109K2 (Normal Category Helicopter) (cont'd)**

|                               |   |
|-------------------------------|---|
| Maximum Passengers.           | 7   |
| Maximum Baggage.              | 150 Kg (330 lb) at Sta 4,920 mm (194 in)  |
|                               | Maximum floor loading for baggage compartment:<br>500 Kg/m <sup>2</sup> (102 lb/ft <sup>2</sup> )   |
|                               | Maximum load per tie-down fitting:<br>91 Kg (200 lb)  |
| Fuel Capacity.                | Total Usable: 123.6 US Gal (468 lt) at Sta 3,824 mm (150.56 in)<br><i>See NOTE 1 for unusable fuel.</i><br><i>See NOTE 8 for fuel capacity with auxiliary fuel tank installation.</i> |
| Oil Capacity Engines          | 2 US Gal (7.7 lt) each engine, at Sta 3,311 mm (130 in)<br><i>See NOTE 1 for undrainable oil</i>  |
| Oil Capacity Transmission     | 3.2 US Gal (12 lt) at Sat 3,441 mm. (135 in)<br><i>See NOTE 1 for undrainable oil.</i>  |
| Maximum Operating Altitude.   | 4,560 m (15,000 ft)   |
| Rotor Blade Control Movements | For rigging information refer to the Model A 109K2 Maintenance Manual.  |

**VI. Model A109E (Normal Category Helicopter), approved August 26,1996.**

|                     |   |
|---------------------|---|
| Engines.            | Two (2) Pratt & Whitney Canada Inc. PW206C turboshaft engines.<br>FADEC control engines   |
| Fuel                | For all temperatures:<br>ASTM D-1655 Jet A, A 1, A2 Jet B,<br>Military specification (only for reference)<br>MIL-T-5624 grade JP-4, JP-5,<br>MIL-T-83133 grade JP-8,<br>For detailed information see Section I of the A109E Flight Manual FAA approved. |
| Engine/Xmsn Limits. | All Engine Operation  |
|                     | Takeoff   |
|                     | Torque 100% (900 SHP at N2 100%)  |
|                     | Output shaft speed (N2) 102% (6120 rpm)   |
|                     | Gas producer speed (N1) 98.7% (57250 rpm)   |
|                     | Gas temperature 5 min. (TOT) 863°C (1585.4°F)   |
|                     | Maximum Continuous  |
|                     | Torque 100% (900 SHP at N2 100%)  |
|                     | Output shaft speed (N2) 100% (6060 rpm)   |
|                     | Gas producer speed (N1) 97.4% (56500 rpm)   |
|                     | Gas temperature (TOT) 820°C (1508°F)  |
|                     | Single-engine operation (emergency)   |
|                     | 2½ min.   |
|                     | Torque 114% (640 SHP at N2 100%)  |
|                     | Maximum Output Shaft Speed (N2) 102% (6120 rpm)   |

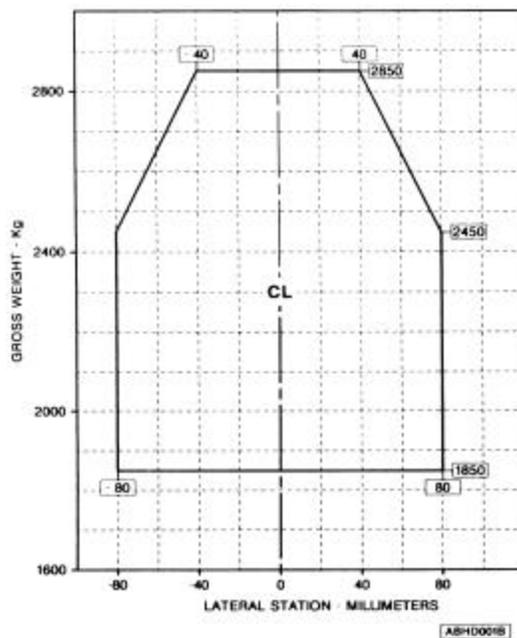
|                         |                     |
|-------------------------|---------------------|
| Gas Producer Speed (N1) | 102.4 % (59400 rpm) |
| Gas Temperature (TOT)   | 930°C (1706°F)      |



**V1. Model A109E (Normal Category Helicopter) (cont'd)**

C.G. Range

Longitudinal limits (cont'd)



Empty Weight &amp; CG Range.

(None)

Maximum Weight.

2,850 Kg (6,283 lb)

Minimum Crew.

One pilot at Sta 1,565 min (62 in) to 1,630 min (64 in)

Maximum Passengers.

7

Maximum Baggage.

150 Kg (330 lb) at Sta 5,300 mm (209 in)

Maximum floor loading for baggage compartment:

500 Kg/m<sup>2</sup> (102 lb/ft<sup>2</sup>)

Maximum load per tie-down fitting:

91 Kg (200lb)

Fuel Capacity.

Total Usable: 157 US Gal (595 lt)

*See NOTE 1 for unusable fuel,*

Oil Capacity Engines

1.35 US Gal (5.12 lt) each engine

*See NOTE 1 for undrainable oil.*

Oil Capacity Transmission.

2.9 US Gal (11 lt)

*See NOTE 1 for undrainable oil.*

Maximum Operating Altitude.

4,560 m (15,000 ft)

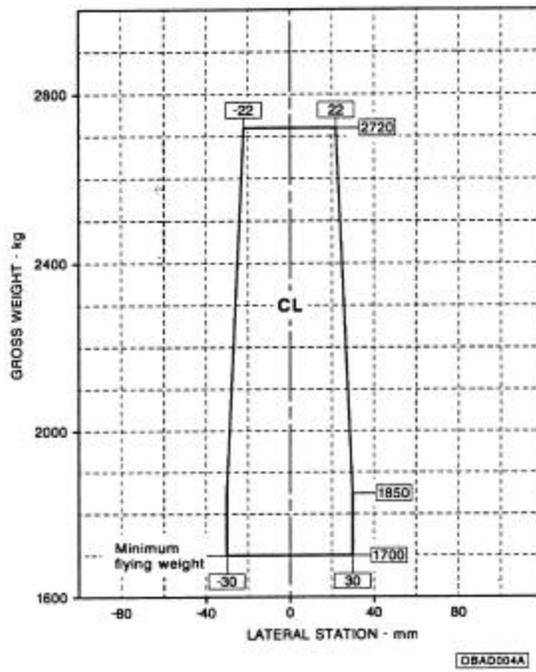
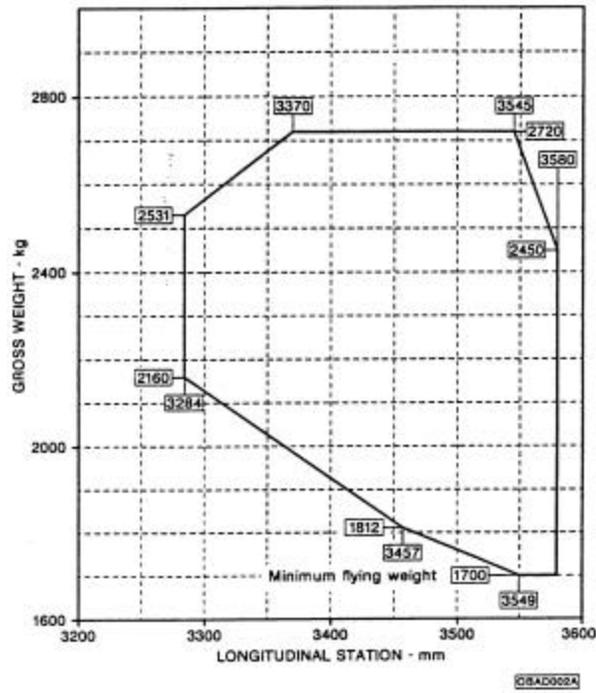
Rotor Blade Control Movements

For rigging information refer to the Model A109E Maintenance Manual.

**VII. Model A119 (Normal Category Helicopter), approved .....**

|                     |   |   |
|---------------------|---|---|
| Engine.             | One (1) Pratt & Whitney Canada Inc. PT6B-37A turboshaft engine.<br>Electronic Engine Control (EEC)  |   |
| Fuel                | For all temperatures:<br>ASTM D-1655 Jet A, A 1, A2<br>Military specification (only for reference)<br>MIL-T-5624 grade JP-5,<br>MIL-T-83133 grade JP-8<br>For detailed information see Section II of the A119 Flight Manual FAA approved. |   |
| Engine/Xmsn Limits. | Takeoff   |   |
|                     | Torque  | 108.5% (900 SHP at N2 100%)                           |
|                     | Output shaft speed (N2)   | 101% (4416 rpm)                                       |
|                     | Gas producer speed (N1)   | 103.2% (39300 rpm)                                    |
|                     | Gas temperature 5 min. (ITT)  | 810°C (1490.4°F)                                      |
|                     | Maximum Continuous  |   |
|                     | Torque  | 100% (830 SHP at N2 100%)                             |
|                     | Output shaft speed (N2)   | 101% (4416 rpm)                                       |
|                     | Gas producer speed (N1)   | 100.1% (38100 rpm)                                    |
|                     | Gas temperature (ITT)   | 755°C (1391°F)  |
| Rotor Limits.       | Power off   |   |
|                     | Maximum   | 110% (422 rpm)  |
|                     | Minimum   | 90% (346 rpm)   |
|                     | Power on  |   |
|                     | Maximum   | 101% (388 rpm)<br>103% (396 rpm)<br>with torque < 50% |
|                     | Minimum   | 95% (365 rpm)   |
| Rotor Speed Warning | Low speed   | 96% (369 rpm)   |
|                     | High speed  | 108% (415 rpm)  |
| Airspeed Limits     | Never exceed speed (Vne)  | 152 knots IAS power on                                |
|                     | For reduction of Vne with altitude and OAT, see the A119 Rotorcraft Flight Manual.  |   |

**VII. Model A119 (Normal Category Helicopter) (cont'd)**  
 C.G. Range Longitudinal limits



Empty Weight & CG Range. (None)

Maximum Weight. 2,720 Kg (5,997 lb)

Minimum Crew. One pilot at Sta 1,565 mm (62 in) to 1,630 mm (64 in)



**VII. Model A119 (Normal Category Helicopter) (cont'd)**

|                               |  |
|-------------------------------|--|
| Maximum Baggage.              | 150 Kg (330 lb) at Sta 4,880 to 6,430mm (192 to 253 in)<br>Maximum floor loading for baggage compartment:<br>500 Kg/m <sup>2</sup> (102 lb/ft <sup>2</sup> ).<br>For loading instruction see the A119 Rotorcraft Flight Manual |
| Fuel Capacity.                | Total Usable: 157 US Gal (595 lt)<br><i>See NOTE 1 for unusable fuel,</i>  |
| Oil Capacity Engine           | 2.76 US Gal (10.45 lt)<br><i>See NOTE 1 for undrainable oil.</i>   |
| Oil Capacity Transmission.    | 2.72 US Gal (10.3 lt)<br><i>See NOTE 1 for undrainable oil.</i>  |
| Maximum Operating Altitude.   | 4,572 m (15,000 ft)  |
| Rotor Blade Control Movements | For rigging information refer to the Model A119 Maintenance Manual.  |

## DATA PERTINENT TO ALL MODELS

|                          |  |
|--------------------------|--|
| Datum.                   | Longitudinal station 0 (datum) is 1835 mm (72 in) forward of the front jack point.<br>For the A119, longitudinal station 0 (datum) is 1785 mm (70 in) forward of the front jack point.<br><br>Lateral station 0 (datum) is ± 450 mm (± 18 in) inboard of each main jack point and coincides with the rotorcraft longitudinal plane of symmetry.  |
| Leveling Means.<br>level | A109, A109A, A109AII, A109C, A109K2, A119 plumb line from ceiling reference point to index plate on floor of passenger cabin. For A109E, the leveling is performed by a water<br><br>put on the datum plate located on the cabin roof, RH side.  |
| Serial Numbers Eligible. | A Registro Aeronautico Italiano Certificate of Airworthiness for Export endorsed as noted under import requirements must be submitted for each individual rotorcraft for which application for certification is made.<br>For A119 S/N 14001 and greater  |
| Certification Basis.     | FAR 21.29 and FAR Part 27 dated February 1, 1965, including Amendments 27-1 through 27-8.<br><br>FAR Part 29 dated February 1, 1965, para. 29.903(b), for Category "A" engine isolation.<br><br>Special Conditions for Agusta Model A109 helicopter No. 27-54-EU-17, issued on June 26, 1973.<br>Equivalent safety in lieu of compliance shown for:<br><br>-FAR 27.1189, re shutoff means<br>-FAR 27.1305(d), re fuel quantity indicator for A109A up to S/N 7165.<br>-FAR 27.927(c) at amendment 27-12 elected by the applicant |

## Certification Basis

For the Model A 109K2. in addition to the above:

|          |                                   |
|----------|-----------------------------------|
| -27.25   | Amendment 11                      |
| -27.79   | Amendment 21                      |
| -27.143  | Amendment 21                      |
| -27.865  | Amendment 11                      |
| -27.923  | Amendment 12 (for reference only) |
| -27.939  | Amendment 11                      |
| -27.951  | Amendment 9                       |
| -27.1093 | Amendment 20                      |

For the Model A109E in addition to the above:

|          |              |
|----------|--------------|
| -27.2    | Amendment 28 |
| -27.21   | Amendment 21 |
| -27.45   | Amendment 21 |
| -27.71   | Amendment 21 |
| -27.141  | Amendment 21 |
| -27.175  | Amendment 21 |
| -27.177  | Amendment 21 |
| -27.401  | Amendment 27 |
| -27.610  | Amendment 21 |
| -27.901  | Amendment 23 |
| -27.903  | Amendment 23 |
| -27.927  | Amendment 23 |
| -27.954  | Amendment 23 |
| -27.1091 | Amendment 23 |
| -27.1189 | Amendment 23 |
| -27.1305 | Amendment 23 |
| -27.1321 | Amendment 13 |
| -27.1322 | Amendment 11 |
| -27.1323 | Amendment 13 |
| -27.1325 | Amendment 13 |
| -27.1401 | Amendment 10 |
| -27.1505 | Amendment 21 |
| -27.1519 | Amendment 21 |
| -27.1521 | Amendment 23 |
| -27.1527 | Amendment 14 |
| -27.1529 | Amendment 18 |
| -27.1549 | Amendment 23 |
| -27.1555 | Amendment 21 |
| -27.1557 | Amendment 11 |
| -27.1581 | Amendment 14 |
| -27.1583 | Amendment 16 |
| -27.1585 | Amendment 21 |
| -27.1587 | Amendment 21 |

Special conditions for Agusta Models A 109D and A 109E helicopters, High Intensity Radiated Fields No. 27-ASW-3 issued on June 13, 1996.

Equivalent safety in lieu of compliance shown for: FAR 27.175(c), re static longitudinal stability.

For the Model A119 in addition to the above:

-FAR 27.29, Amdt. 14  
-FAR 27.33, Amdt. 14  
-FAR 27.65, Amdt. 33  
-FAR 27.71, Amdt. 21  
-FAR 27.151, Amdt. 21  
-FAR 27.161, Amdt. 21  
-FAR 27.173, Amdt. 21  
-FAR 27.307, Amdt. 26  
-FAR 27.321, Amdt. 11  
-FAR 27.337, Amdt. 26  
-FAR 27.339, Amdt. 11  
-FAR 27.351, Amdt. 26  
-FAR 27.361, Amdt. 23  
-FAR 27.391, Amdt. 26  
-FAR 27.395, Amdt. 26  
-FAR 27.397, Amdt. 11  
-FAR 27.427, Amdt. 27  
-FAR 27.501, Amdt. 26  
-FAR 27.571, Amdt. 26  
-FAR 27.602, Amdt. 38  
-FAR 27.603, Amdt. 16  
-FAR 27.613, Amdt. 26  
-FAR 27.663, Amdt. 26  
-FAR 27.672, Amdt. 21  
-FAR 27.727, Amdt. 26  
-FAR 27.779, Amdt. 21  
-FAR 27.783, Amdt. 26  
-FAR 27.807, Amdt. 26  
-FAR 27.863, Amdt. 16  
-FAR 27.917, Amdt. 11  
-FAR 27.923, Amdt. 29  
-FAR 27.955, Amdt. 23  
-FAR 27.967, Amdt. 30  
-FAR 27.975, Amdt. 30  
-FAR 27.977, Amdt. 11  
-FAR 27.997, Amdt. 23  
-FAR 27.1027, Amdt. 23  
-FAR 27.1041, Amdt. 23  
-FAR 27.1043, Amdt. 14  
-FAR 27.1045, Amdt. 23  
-FAR 27.1141, Amdt. 33  
-FAR 27.1143, Amdt. 29  
-FAR 27.1145, Amdt. 12  
-FAR 27.1193, Amdt. 23  
-FAR 27.1327, Amdt. 13  
-FAR 27.1337, Amdt. 23  
-FAR 27.1411, Amdt. 11  
-FAR 27.1501, Amdt. 14  
-FAR 27.1525, Amdt. 21  
-FAR 27.1545, Amdt. 16  
-FAR 27.1547, Amdt. 13

- FAR 27.1559, Amdt. 21
- 27 Appendix A, Amdt. 24

The A109 models with a maximum weight exceeding 6000 lb have been approved following the grant of the exemption No. 6518 dated October 9, 1996.

The Grant of Exemption n° 6648, Regulatory Docket No. 28353 was issued on June 25, 1997, for the A119 in response to Agusta letter of September 27, 1995, requesting exemption from 21.19(b)(1) of Title 14, Code of Federal Regulations (14 CFR) to allow for an amendment to the TC No. H7EU rather than applying for a new Type Certificate due to design change from 2 engine to one engine.

Date of Application for Type Certificate:

February 18, 1971

Type Certificate No. H7EU issued June 1, 1975; amended April 2, 1976 to include Model A 109A; amended December 4, 1981 to include Model A109AII; amended August 19, 1989 to include Model A109C; amended January 15, 1993 to include Model A109K2; amended August 26, 1996 to include Model A109E; amended April 28, 2000 to include A119.

For IFR operations see NOTE 6.

**Import Requirements.**

To be considered eligible for operation in the United States, each aircraft manufactured under this type certificate must be accompanied by a certificate of airworthiness for export or certifying statement endorsed by the exporting foreign civil airworthiness authority which states (in the English language): This aircraft conforms to its U.S. type design (type certificate number H7EU) and is in a condition for safe operation.

The U.S. airworthiness certification basis for aircraft type certificated under FAR Section 21.29 and exported by the country of manufacture is FAR Sections 21.183(c) or 21.185(c).

The U.S. airworthiness certification basis for aircraft type certificated under FAR Section 21.29 exported from countries other than the country of manufacture (e.g. third party country) is FAR Sections 21.183(d) or 21.183(b).

**Equipment.**

The basic required equipment as prescribed in the applicable airworthiness regulations (see certification basis) must be installed in the rotorcraft for certification.

In addition the following items of equipment are required:

(a) Approved Helicopter Flight Manual:

- 1 Model A109: A109 Helicopter Flight Manual dated May 2 1, 1975 or later revision.
- 2 Model A 109A: A109A Helicopter Flight Manual dated May 16, 1979 or later revision.

**Equipment.**

NOTE: for operations at 2450 Kg (5400 lbs) pages I-2A, 1-213 and I- I 2A are applicable.

- 3 Model A109A II: A I 09A II Helicopter Flight Manual dated June 2, 1981 or later revision.
- 4 Model A109C: A 109C Helicopter Flight Manual dated October 2, 1989 or later revision.
- 5 Model A109K2: A 109K2 Helicopter Flight Manual dated January 23, 1992 or later revision.
- 6 Model A109E: A109E Rotorcraft Flight Manual dated May 31, 1996
- 7 Model A119: A119 Rotorcraft Flight Manual dated April 19, 2000

(b) Low-rotor-rpm and engine-failure warning systems in accordance with Agusta drawing Nos 109-0729-21 or 109-0729-31 and 109-0729-22 for A109A, A109AII and A119 Models; 109-0741-06 for Model A109C; 109-0741-27 and 109-0752-40 for Model A109K2; 109-0753-28 for Model A109E.

(c) OAT indicator MS28028-1

On A 109E the OAT dated are shown on the IDS system and the sensor is P/N E22307-2-4.

Required and optional approved equipment are listed in the A109 Equipment List Report No. 109-07-01; A109A Equipment List Report No. 109-07-03; A109AII Equipment List Report No. 109-07-06; A109C Equipment List Report No. 109-07-09; A109K2 Equipment List Report No. 109-07-14; A109E Equipment List Report No. 109-07-16; A119 Equipment List Report No. 109-07-19. For IFR operations see NOTE 6.



- Placards. Placards listed in the RAI approved Rotorcraft Flight Manual must be displayed in the appropriate location.
- Service Information. Information essential for proper maintenance of the rotorcraft is presented in the following documentation which must be supplied with each rotorcraft at time of delivery:  
 A109A/A109AII/A109C A109K2 A109E Airworthiness Limitations Section (chapter 4) of the Maintenance Manual A109A/A109AII/A109C A109K2 A109E inspection requirements and component overhaul schedule (chapter 5) of the Maintenance Manual  
 A109A/A109AII/A109C A109K2 A109E Maintenance Manual A119 Airworthiness Limitations Section (chapter 4) of the Maintenance Manual  
 NOTE: mission profiles using more cycles than those quoted in the A119 MM section 04-00 " Airworthiness Limitations Section" shall be communicated to the aircraft manufacturer for retirement lives recalculation and approval.  
 A119 inspection requirements and component overhaul schedule (chapter 5) of the Maintenance Manual.  
 "Service bulletins, structural repair manuals, and overhaul and maintenance manuals, which contain a statement that the document is RegistroAeronautico Italiano (RAI) approved, are accepted by the FAA and are considered FAA approved. These approvals pertain to the type design only."  
 Mandatory Bulletins will be identified as such.
- NOTE 1. Current weight and balance report including list of equipment included in the certificated empty weight and loading instructions must be provided for each rotorcraft at the time of the original certification.
- The certificated empty weight and corresponding CG location must include undrainable oil and undrainable fuel.
- Undrainable oil is zero Kg. for all models except for the A109E where the undrainable oil is 2.09 Kg./4.61 lbs (0.567 U.S.gal/2.15 lt) at the sta. 4280 mm (168.5 in) and for the A119 where the undrainable oil is 1.6 Kg./3.52lbs (0.433 U.S. gal /1.64 lt) at the sta. 4673 mm (183.9 in).
- Unusable fuel is 7 Kg /15 lbs (2.4 U.S. gal./9 lt.) at sta. 3750 mm (148°) for Model A109A/AII/C, 9 Kg./20 lbs (3.2 U.S. gal./12 lit.) at sta. 3750 mm (148°) for Model A109K2, 8 Kg/17.6 lbs (2.66 U.S. gal./10lt) at sta 3320 mm (131in) for Model A109E, and , 8.15 Kg /18 lbs (2.72 U.S. gal./10.18lt) at sta 3325 mm (131in) for Model A119.
- NOTE 2. Model A 109 helicopters may be converted to Model A109A helicopters in accordance with RAI-approved Service Instructions No. A 109-I.
- NOTE 3. Life-limited components and approved retirement times of the Model A109A/A109AII/A109C/A109K2/ A109E/A119 are listed in the chapter 04 "Airworthiness Limitations" of the applicable "Maintenance Manual" and must be replaced as prescribed therein.
- NOTE 4. For operation below 4°(40°F) of the Model A109A/AII/C the use of anti-ice additive is authorized, but is not mandatory due to aircraft anti-ice fuel filter installation. Below 4°C (40°F) the AVGAS JET FUEL MIXTURE may be used as an alternative fuel. Refer to Allison Operation and Maintenance Manual for AVGAS mix, cold weather fuel and blending instructions.
- For A109E operation below 4°C (40°F) the use of anti-ice additive is authorized but not mandatory due to aircraft anti-ice fuel filter installation. For additive requirements and blending procedures refer to Pratt & Whitney manuals.
- For A119 operation below 4°C (40°F) the use of anti-ice aditive is not mandatory the engine is equipped with a fuel heater.

NOTE 5. For helicopters up to and including S/N 7114 not equipped with adjustable seat kit PIN 109-0700-49-1, moment arm of pilot and forward passenger seat is 1650 mm, (65 in) from sta. 0.

- NOTE 6.
- a. Model A109A helicopters, S/N 7107, 7130 and subsequent, are eligible for day and night IFR operations, with one pilot or with two pilots, when "IFR" installation Agusta Kit No. 109-0810-22, Rev. E or later FAA-approved revision is incorporated and the helicopter is operated in accordance with Model A109A Flight Manual IFR Supplement No. 1 approved by RAI under date of July 16, 1978 and subsequent approved revisions. (NOTE: the above-noted kit and flight manual supplement comprise the Agusta version of FAA-approved STC No. CH2699SW).
  - b. Model A109A II and A109C helicopters S/N 7256, and subsequent, are eligible for day and night IFR operations with one, or with two pilots when "IFR" installation Kit No. 109-0810-22, Rev. E or, later FAA approved revision, is incorporated and the helicopter is operated in accordance with Model A109 II and A109C Rotorcraft Flight Manuals.
  - c. Model A109K2 helicopters S/N 10001 and subsequent, are eligible for day and night, single pilot IFR operation when IFR installation Agusta Kit No. 109-0810-22-135 and subsequent approved dash numbers are incorporated.  
 Certification Basis:
    - Appendix B to Part 27 - Airworthiness criteria for helicopter instrument flight - Amdt. 27.19.
    - FAR Part 27 Paragraph 27.672 Amdt. 21; 27.1309 Amdt 21; 27.1329 Amdt 21; 27.1335 Amdt. 13.
 The helicopter shall be operated in accordance with the Model A109K2 Flight Manual IFR Supplement No. 2.
  - d. Model A109E Helicopters S/N 11001 and subsequent, are eligible for day and night, single pilot IFR operation when IFR installation Agusta Kit P/N 109-0810-22-143 and subsequent approved dash number are incorporated.  
 Certification Basis:
    - Appendix B to Part 27 - Airworthiness criteria for helicopter instrument flight - Amdt. 27.19.
    - FAR Part 27 Paragraph 27.672 Amdt. 21; 27.1309 Amdt 21; 27.1329 Amdt 21; 27.1335 Amdt. 13.
 The helicopter shall be operated in accordance with the Model A109E Flight Manual.
- NOTE 7.
- Model A109A helicopters are eligible for operations at maximum weight of 2600 kg (5732 lb.) when Agusta Technical Bulletin No. 109-20 and subsequent approved revisions are incorporated. For Model A109A helicopters not incorporating the Agusta Technical Bulletin No. 109-20, the following limitations are to be applied.
- Airspeed limits  
 Never exceed speed (VNE)            168 kts            IAS  
 For reduction of VNE with altitude and OAT, see page 1-2A of the RAI-approved Helicopter Flight Manual.
  - CG Range (Gear Down)  
 Longitudinal Limits --  
     Refer to diagram on page 5 (Model A109A) for weight up to 2450 kg. (5400 lb.)  
 Lateral Limits --  
     Refer to diagram on page 6 (Model A109A) for weight up to 2450 kg. (5400 lb.)
  - Maximum Weight                    2450 kg (5400 lb.)  
     See Page 1-2B of the RAI-approved Helicopter Flight Manual.
  - Maximum Operating Altitude    4560m (15000 ft)  
     See Page 1-2B of the RAI-approved Helicopter Flight Manual.
- NOTE 8.
- For Models A109AII, A109C, and A109K2, the auxiliary fuel tank installation P/N 109-0810-56 adds a total fuel capacity of 40.8 U.S. Ga. (153 lit.) at sta. 4708 min (185.3 in.) of which 40 U.S. Gal. (150 lit.) is usable.

NOTE 9. The Models A109/A109A/A109AII/A109C/A109K2/A109E/A119 are identified by the general assembly drawing as follows:

|                            |             |
|----------------------------|-------------|
| 109-9000-01-5              | for A109    |
| 109-9000-01-11/15/19/23/27 | for A109A   |
| 109-9000-01-31             | for A109AII |
| 109-9000-01-135            | for A109C   |
| 109-9000-01-139            | for A109K2  |
| 109-9000-01-149            | for A109E   |
| 109-00-155 rev. B          | for A119    |

NOTE 10. The model A109K2 is eligible for operations on clear airfield and helipad with the critical engine failure concept when the installation P/N 109-0822-47 (all the approved dashes) is incorporated and the helicopter is operated in accordance with the Model A 109K2 Flight Manual Supplement No. 3 "Take-off and landing procedures and performance data on clear airfield and helipad with critical engine failure".

Certification Basis:

That applicable to the A109K2 plus JAR 29.45(a), (b)(2) Amdt. Base; JAR 29.49(a)Amdt. Base; JAR 29.51 Amdt. Base; JAR 29.53 Amdt. Base; JAR 29.55 Amdt. Base; JAR 29.59 Amdt. Base; JAR 29.60 Amdt. Base; JAR 29.61 Amdt. Base; JAR 29.62 Amdt. Base; JAR 29.64 Amdt. Base; JAR 29.65 (a) Amdt. Base; JAR 29.67 (a) Amdt. Base; JAR 29.75 Amdt. Base; JAR 29.77 Amdt. Base; JAR 29.79 Amdt. Base; JAR 29.81 Amdt. Base; JAR 29.85 Amdt. Base; JAR 29.87 (a) Amdt. Base; FAR 29.86 1 (a) Amdt. 26; FAR 29.90 1 (c) Amdt. 25 for engines installations only; FAR 29.901 (c) Amdt. 25. For engines installation only; FAR 29.903(b), (c), (e) Amdt. 3 1; FAR 29.908(a) Amdt. 25; FAR 29.923 Amdt. 23; FAR 27.927 (a), (b) Amdt. 12; FAR 29.927 (c)(1) Amdt. 26; FAR 29.953 (a) Amdt. Base; JAR 29.1027(a) Amdt. Base; JAR 29.1045 (a)(1), (b), (c), (d), (f) Amdt. Base; JAR 29.1047 (a) Amdt. Base; JAR 29.1181 (a) Amdt. Base; JAR 29.1187 (e) Amdt. Base; JAR 29.1189 (c) Amdt. Base; JAR 29.1191 (a)(1) Amdt. Base; JAR 29.1193 (e) Amdt. Base; JAR 29.1305 (a)(6), (b) Amdt. Base; JAR 29.1309 (b)(2)(i), (d) Amdt. Base; JAR 29.1323 (e)(1) Amdt. Base; JAR 29.1331 (b) Amdt. Base; JAR 29.1587 (a) Amdt. Base.

The JAR requirements listed above meets the FAR Part 27 and FAR Part 29 CAT A. requirements.

NOTE 11. The model A109E is eligible for operations on clear airfield and helipad with the "Equivalent Category A" when the installation P/N 109-0811-39 (all the approved dashes) is incorporated and the helicopter is operated in accordance with the Model A109E Flight Manual Supplement No. 12 Equivalent Category "A" operations.

In addition to the paragraphs of the Certification Basis the A109E must comply also with the following paragraphs:

JAR 29.45 (a), (b), (2) Amendment base; JAR 29.49 (a) Amendment base; JAR 29.51 Amendment base; JAR 29.53 Amendment base; JAR 29.55 Amendment base; JAR 29.59 Amendment base; JAR 29.60 Amendment base; JAR 29.61 Amendment base; JAR 29.62 Amendment base; JAR 29.64 Amendment base; JAR 29.65 (a) Amendment base; JAR 29.67 (a) Amendment base; JAR 29.75 Amendment base; JAR 29.77 Amendment base; JAR 29.79 Amendment base; JAR 29.81 Amendment base; JAR 29.85 Amendment base; JAR 29.87 (a) Amendment base; (JAR 29.571 Amendment base Fatigue evaluation of structure.) AC Material only: AC 29-2A Item 230 Paragraph 10; JAR 29.861 (a) Amendment base; JAR 29.901 (c) Amendment base; JAR 29.903 (b), (c), (e) Amendment base; JAR 29.908 (a) Amendment base; JAR 29.927 (c)(1), JAR 29.953 (a) Amendment base; JAR 29.1027 (a) Amendment base; JAR 29.1045 (a)(1), (b), (c), (d), (f) Amendment base; JAR 29.1047 (a) Amendment base; JAR 29.1181 (a) Amendment base; JAR 29.1187 (e) Amendment base; JAR 29.1189 (c) Amendment base; JAR 29.1191 (a)(1) Amendment base; JAR 29.1193 (e) Amendment base; JAR 29.1195 (a), (d) Amendment base; JAR 29.1197 Amendment base; JAR 29.1199 Amendment base; JAR 29.1201 Amendment base; JAR 29.1305 (a)(6), (b) Amendment base; JAR 29.1309 (b)(2)(i), d) Amendment base; JAR 29.1323 (c) (1) Amendment base; JAR 29.1331 (b) Amendment base; JAR 29.1351 (d) (2) Amendment base; JAR 29.1587 (a) Amendment base.

The JAR requirements listed above meets the FAR Part 27 and FAR Part 29 CAT A. requirements.

NOTE 12. For the models A109K2 and A109E that has been certified with ditching provisions in accordance with RFM supplements n° 22 & 21 respectively the certification basis has been updated adding with the following paragraphs: FAR 27.563 Amendment 26, FAR 27.801 Amendment 11, FAR 27.807 Amendment 26, FAR 27.1411 Amendment 11, FAR 27.1415 Amendment 11.

.....END.....