FAA APPROVED

ROTORCRAFT FLIGHT MANUAL SUPPLEMENT

TO THE AGUSTA S.p.A. MODEL


Agusta Approved Rotorcraft Flight Manual
when equipped with

Integrated Flight Systems, Inc. Air Conditioning System

Registration # Serial #

This supplement must be attached to the Agusta Approved Rotorcraft Flight Manual when the rotorcraft is modified by the installation of Integrated Flight Systems, Inc. Air Conditioning System in accordance with

STC No. SR00060DE

The information contained herein supplements or supersedes the basic manual only in those areas listed herein. For limitations, procedures, and performance information not contained in this supplement, consult the basic Rotorcraft Flight Manual.

FAA Approved

Manager, Flight Test Branch, ANM-160L
Federal Aviation Administration
Los Angeles Aircraft Certification Office
Transport Aircraft Directorate

FAA Approved Date

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# RECORD OF REVISIONS

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<th>FAA Approval</th>
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SECTION I – OPERATING LIMITATIONS

- The air conditioner system must be turned “OFF” during engine start.
- Operation of the air conditioner system is prohibited on one generator if the total electrical load will exceed 115 amps (except model K2 and E, 130 amps continuous).

SECTION II – NORMAL PROCEDURES

Ground Operation – One Engine (#1 required) – One Generator

- To turn air conditioner “ON”, move switch to “A/C”. Prior to “ON”, ensure ammeter indicates 65 amps or less (K2 and E model – 80 amps or less).
- To turn air conditioner “OFF”, move switch to “OFF”.
- For air circulation without cooling, move switch to “FAN”.
- Select desired blower speed for cockpit.
- Select desired blower speed for cabin.
- Do not start #2 engine with air conditioner “ON”.

Ground and Flight Operations

- Ventilation Control – As desired. (Close for cockpit/cabin cooling).
- Air Conditioning Control Switch – As desired.
- Air Conditioning Fan Speed Control Switches – As desired (Cockpit and cabin).
- Turn air conditioner “OFF” to obtain correct Magnetic Compass heading.
SECTION III – EMERGENCY PROCEDURES

- In the event of engine failure, turn air conditioner “OFF”.

3.1 D.C. Generator Failure

- Air Conditioning “OFF”.
  Note: Auto Load Shedding of the Air Conditioning System is not provided.
- Ammeter 65 Amps or less (K2 and E Model – 80 amps or less)
- Reduce electrical load
- Air Conditioning “ON”, as desired
- Ammeter – monitor – 115 amps maximum continuous (Except K2 and E Model, 130 amps continuous)

3.2 Excessive Temperature, Fire, Smoke

- In the event of the following, turn Air Conditioner “OFF”:
  - Cabin or other fire
  - Presence of smoke
SECTION IV – PERFORMANCE

- With the Air Conditioner “ON”, decrease Rotorcraft Flight Manual data by:
  - Reduce Hover Gross Weight by 100 pounds
  - Reduce Rate of Climb by 50 feet per minute

NOTE:
1. Engine Anti-Ice “OFF”
2. Indicates performance degradation when operating on an engine power limit (i.e., TOT/N1).

SECTION V – WEIGHT AND BALANCE

- Weight and Balance must be computer with air conditioning system installed. Ensure that empty weight and CG of aircraft is within manufacturer’s limits per the FAA Approved Flight Manual.
SECTION VI – MANUFACTURER’S INFORMATION

6.1 Systems & Description

The Air Conditioning System consists of a belt-driven vapor cycle (R134a) air conditioning system.

The system, as supplied, may be used without any heater installed. The Agusta Bleed Air Heater, Casey Shroud Heater, or other FAA Approved heaters may be utilized.

The Air Conditioning System provides for cabin comfort during all operations, both on the ground and in flight. During ground operations when only the #1 engine is running, cooling may be provided. Controls for the Air Conditioning System are over the pilot’s head. Two switches are provided. The Master Control Selector consists of a toggle type switch, labeled “A/C”, “OFF”, and “FAN”. Selecting the “A/C” position turns on the system’s evaporator fans, condenser blowers, and belt driven compressor clutch. The second toggle switch provides for “HIGH”, “LOW, and “MED” evaporator fan speed selection for the cockpit. A rocker switch in the aft cabin provides blower speed control for passengers.

A high pressure safety switch disengages the compressor and stops operation of the refrigeration cycle in the event of excessive refrigerant pressure. This can occur due to a failure of the condenser blowers or restricted condenser intake. A low pressure switch of similar design protects the system due to loss of refrigerant. Both switches will automatically reset and the system will cycle on again when the pressures are again at a preset point.

The evaporator fan system may be used any time air circulation is desired. This is accomplished by placing the selector switch in the “FAN” position.

System electrical protection is provided by two circuit breakers (15A and 20A), labeled “EVAP/EVAP”, and two circuit breakers (20A and 20A) labeled “COND/COND”. These circuit breakers are located in the Air Conditioning Master Electrical Panel. This panel is located on the transmission deck. A circuit breaker (1A) also protects the Condenser Fans and Compressor Clutch. If a high pressure occurs in the system, the High Pressure Switch will open the 1A circuit breaker. The condenser fans and compressor clutch will then shut off, but the cabin fans will continue to operate.
6.1 Systems & Description (cont)

A Master Air Conditioning System Circuit Breaker is provided in the aircraft’s auxiliary electrical panel located behind and above the pilot’s head. If this circuit breaker is pulled for any reason, all electrical power to the Air Conditioning System is disconnected.

A “Soft Start Mode” is provided electrically for this system. When the Master Control Selector, labeled “A/C”, is turned “ON”, both evaporator fans, having a total electrical requirement of 20 amps is immediately energized. A few seconds later, the dual condenser blowers and compressor clutch are energized, which requires another 28 amps of electrical system capacity. Due to this “Delay Feature”, electrical “soft start” is provided.

6.2 Electrical Loading

The maximum electrical requirements of the basic air conditioning system are as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Amps</th>
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<tbody>
<tr>
<td>Condenser Blower</td>
<td>2 each @ 13 amps = 26 amps</td>
</tr>
<tr>
<td>Compressor</td>
<td>1 each @ 2 amps = 2 amps</td>
</tr>
<tr>
<td>Evaporator Fan (Fwd)</td>
<td>1 each @ 13 amps = 13 amps</td>
</tr>
<tr>
<td>Evaporator Fan (Aft)</td>
<td>1 each @ 7 amps = 7 amps</td>
</tr>
<tr>
<td>Total System</td>
<td>= 48 amps</td>
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