

C-27J and G.222

photographic reference manual



contents

brief history	4
C-27J walkaround	16
G.222 walkaround	32



Copyright 2010 Italeri S.p.A.

This publication is an integral part of the Italeri C-27J and G.222 kits (various item numbers), and cannot be sold separately. Information presented in these pages must be intended as an historical and technical overview of the C-27J and G.222 transport aircrafts, and doesn't necessarily relate to the versions offered in the Italeri kits.

Text and research: Alessandro Nati Fornetti

Pictures: AIR KIT news, Alenia Aeronautica S.p.A., Stefano Angelini

Special Thanks to the 5° Reparto S.M.A. for their kind assistance.

All rights reserved. No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, recording, or by any information storage and retrieval system, without prior written permission from Italeri S.p.A. All photos and artwork are the property of the respective owners, and used with permission. The information in this work is true and complete to the best of our knowledge. However, all information is presented without any guarantee on the part of Italeri S.p.A., who also disclaim any liability incurred in connection with the use of the information.

introduction

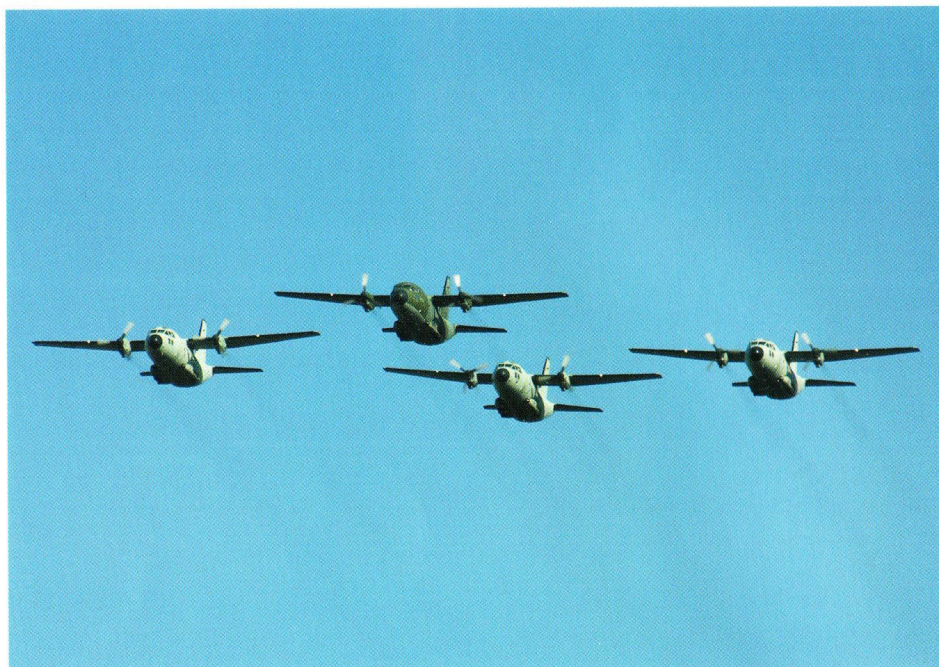


Following a long tradition of popular Italeri transport aircraft kits which already includes several versions of the C-47/DC-3, Ju.52, Ju.86, C-119 and C-130, here comes a brand new mould for an aircraft with an unusual history: the C-27J Spartan.

Even if the C-27J is just entering service with the air forces of its many customer countries, its roots can be traced to the Aeritalia G.222, an aircraft which first flew more than thirty years ago.

The C-27J is much more than a G.222 with different engines and a glass cockpit; however, this manual concentrates on those variations which can be easily seen, and thus have a direct interest to the modeller.

Enjoy your kit!



In 1962 NATO issued its Basic Military Requirement 4 for a medium transport aircraft capable of supporting V/STOL fighters operating from advanced, dispersed areas. V/STOL was the name of the game in those times, and even the NATO transport had to work that way..! Giuseppe Gabrielli - the FIAT engineer of G.50 Freccia, G.55 Centauro and G.91 fame - answered the call with the G.222 Cervino. Even if it didn't reach the hardware stage, the Cervino can easily be imagined like a G.222 as it later emerged, but powered by two Rolls-Royce Dart turboprops and six or eight wingtip-mounted Rolls-Royce RB162 lift engines, much like the Dornier Do.31E experimental transport.

Such proposal could hardly be called realistic; nevertheless, the airframe showed some promise, so in 1968 the Italian Air Force ordered two prototypes and a static cell of a simplified version with GE T64 turboprops but no lift jets. The first G.222 took the air on its maiden flight on July 18th, 1970.

Following prolonged but successful testing the IAF ordered 44 aircrafts, with deliveries starting in 1978. By then FIAT Aviazione had become part of Aeritalia.



Above: an Aeronautica Militare Italiana G.222 wearing the classic NATO camouflage.

Below: one of five Nigerian Air Force G.222s delivered in 1984-85.





Above: most Italian G.222s were on charge to the 46a Aerobrigata in Pisa AFB.

In Italian Air Force service the main G.222 user was the 46a Aerobrigata, which also has the Italian C-130 fleet on charge. Based at Pisa in centre Italy, the 46a has deployed its G.222s around the world on many missions. The baptism of fire for the G.222 came in the Falkland War with the Argentine Air Force, while on September 3rd, 1992, an Italian aircraft was shot down by a missile while approaching Sarajevo airfield on a UN relief mission.

The G.222 attracted orders from several foreign air forces: Argentina, United Arab Emirates, Nigeria, Somalia, Thailand, Tunisia, and Venezuela. Afghanistan is receiving upgraded ex-IAF aircrafts, but mention must be made of two special customers: Libya and the United States.

Libya showed an early interest in the G.222, trying to obtain 20 aircrafts in 1977. Sales of the GE T64 engines and other equipment were embargoed by the US Government, so the G.222T was developed with Rolls-Royce Tyne turboprops and other modifications. The T became the hot rod of the G.222 family...



Above: a 46a Aerobrigata G.222 in all-white UN livery for overseas deployment.

Below: even in the later gray camouflage, G.222s always kept black radomes.





Above: a spirited take-off from Pisa AFB. Both the G.222/C27A and the C-27J are capable of startling performance, including full tonneau.

Many years later, in 1990, the United States Air Force ordered an upgraded G.222, called C-27A, to fulfil its RRITA (Rapid-Response Intra-Theater Airlifter) requirement. Alenia teamed with Chrysler and delivered ten aircrafts which were based at Howard AFB, Panama, where they had an uneventful and short career. Their greatest merit was breaking the ground for the Italian transport in the USAF. In 1995 Alenia and Lockheed Martin teamed to develop an highly modified G.222 with upgraded T64 engines, four-blade propellers and the same glass cockpit used in the C-130J. Soon the project was modified with Rolls-Royce AE2100 engine and Dowty six-blade propellers, again from the C-130J. The Lockheed Martin Alenia Tactical Transport Systems joint venture lasted from 1997 to 2006, when LM decided to offer its C-130J in the U.S. Army/USAF Joint Cargo Aircraft (JCA) competition; Alenia then formed Global Military Aircraft Systems with L-3 Communications, was joined by Boeing, and on June 13th,



Above, and below: the Italian Air Force Reparto Sperimentale di Volo based in Pratica di Mare nearby Rome has always had a few G.222s on charge.





Above: low-level pass by one of the four G.222RM (Radiomisure) radar and radio calibration aircrafts assigned to the 14° Stormo.

2007, the C-27J Spartan was finally declared winner of the JCA competition. Exactly three years later the C-27J JCA Team announced that the US C-27J fleet (by then standing at four aircrafts delivered) had surpassed 1,000 flight hours and in July, 2010 Alenia announced that the Italian Air Force C-27J fleet (12 aircrafts delivered in 2007-2009) had reached the 10,000 flight hours milestone. It was easy to foresee an export success for the JCA winner, and at the time of writing the C-27J has been ordered by Bulgaria, Greece, Lithuania, Morocco, and Romania, with negotiations going on with Slovakia, and further interest shown by Australia, Canada, India, Taiwan and Ghana.

Finally, mention must be made of the AC-27J Stinger II gunship project for the Air Force Special Operations Command, which was put on hold in 2009 due to funds shortage, but might still make a comeback with the most spectacular G.222/C-27 version ever!



Above: end of the line. Stored Italian AF G.222s await scrapping.

Below: similar fate for this USAF C-27A previously based in Panama.





Above: the unpainted C-27J prototype during its first flight in September, 1999.
Below: the demonstrator in Grosseto AFB on a gloomy December 2003 day...



...but the sun shines on the future of the C-27J! Above, and below: the demonstrator in JCA Winner colours, with the flags of the customer countries.





Above, and below: the first operational Italian Air Force C-27J (MM62215) was finally delivered to the 46a Aerobrigata in Pisa AFB on January 11th, 2007.



Above: the C-27J can fly with its rear cargo door open, just like the G.222.
Below: the Greek Air Force has ordered 12 C-27Js.

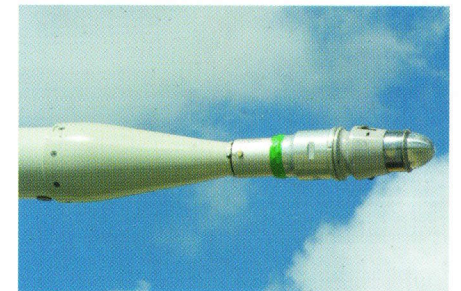


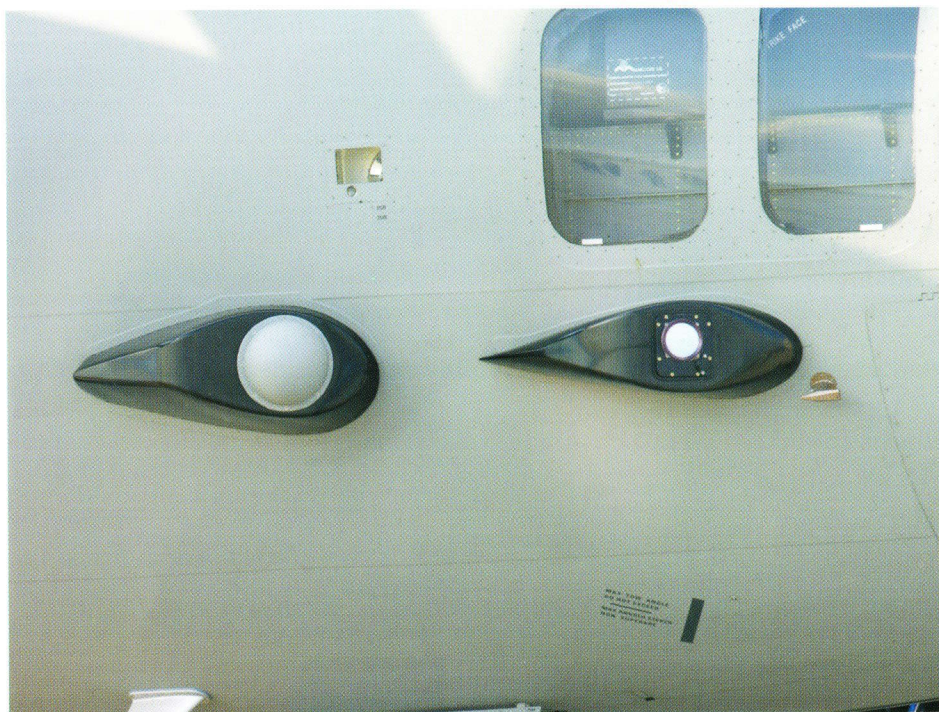


The C-27J is a fully operational aircraft, and a powerful asset to several Air Forces; therefore, its maintenance manual and spare parts catalogue must remain classified. This is the reason why, like previously done with the C-130J, we'll rely on pictures only.



Above: windshield and wipers.
Rest of page: the fixed in-flight refuelling probe, located on the left side of the cockpit roof.



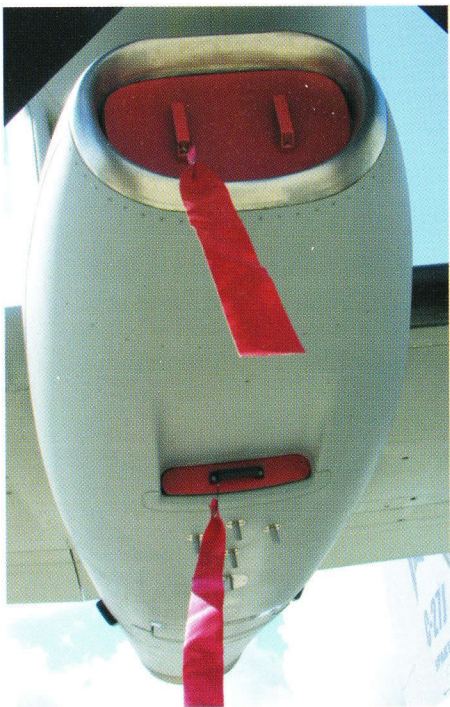


Above, and below: sensors under the cockpit.
Right: antennas under the radome.

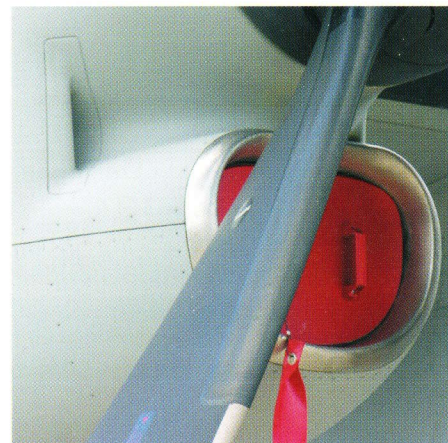
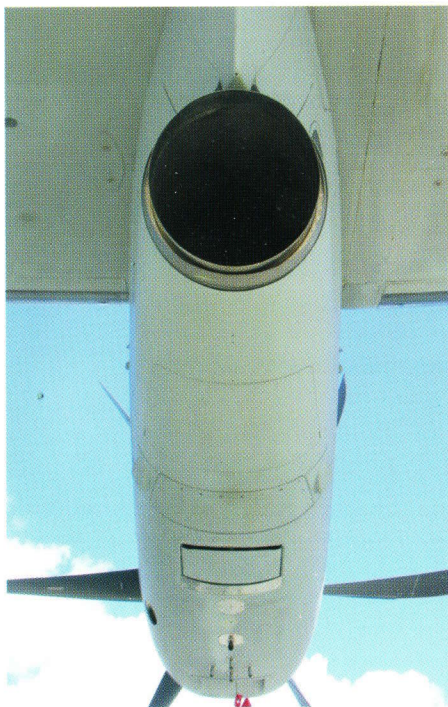


Above, and below: the Rolls-Royce Allison AE2100-D2A 4,637shp engine with Dowty R-391 six-blade prop.





Above: underneath the engine nacelle.
 Below left: nacelle rear end and exhaust.
 Below right: looking straight into the turbine exhaust.



Above: more aspects of the engine.
 Below: right wingtip with chaff dispenser.





Above, and below: the prototype in JCA Winner colours. Note the G.222 type tailcone, with no sensors.

Right: the vertical fin (port side) on a production aircraft.



Above, and below right: the tailcone "bumps" are very similar to those found under the cockpit, and cover the rear sector of the aircraft.

Below left: the port stabilizer.





Above, and right: the nose landing gear.
Below: the main landing gear consists of twin independent units on each side.

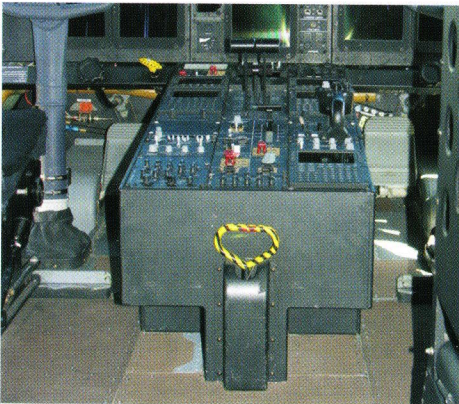


Above: the air intake on the right gear sponson.
Below: digital technology is everywhere in the C-27J cockpit..!





Above: the instrument panel and HUDs.
 Below left: the centre console.
 Right: access door/ladder.



Above: pilot and copilot seats.
 Below: left and right side consoles.





Above: the rear cockpit wall behind the seats. Below: cockpit roof, right side.



Above: roof panel and cockpit aisle. Below: cockpit roof, left side.





Below, and page 31: the C-27J cargo bay.





From the modeller's point of view the differences between the C-27J and the G.222 are relatively few. Let's have a look.

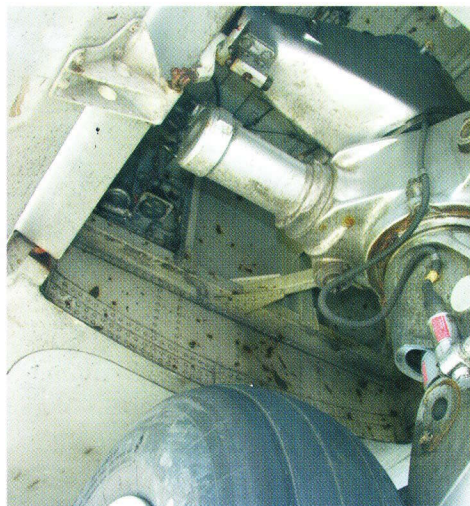


This page: nose undersides, emergency exit (right side) and nose gear.

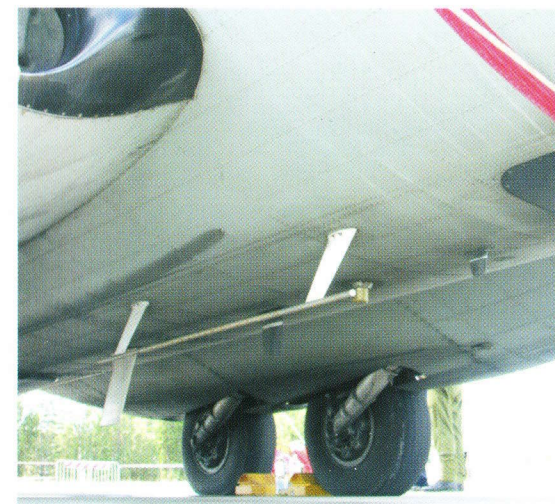




This page: more aspects of the nose gear, its doors and well.

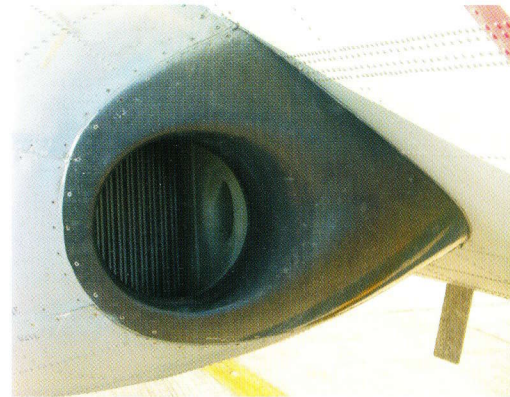


This page: the main gear is located in sponsons with great ease of maintenance.

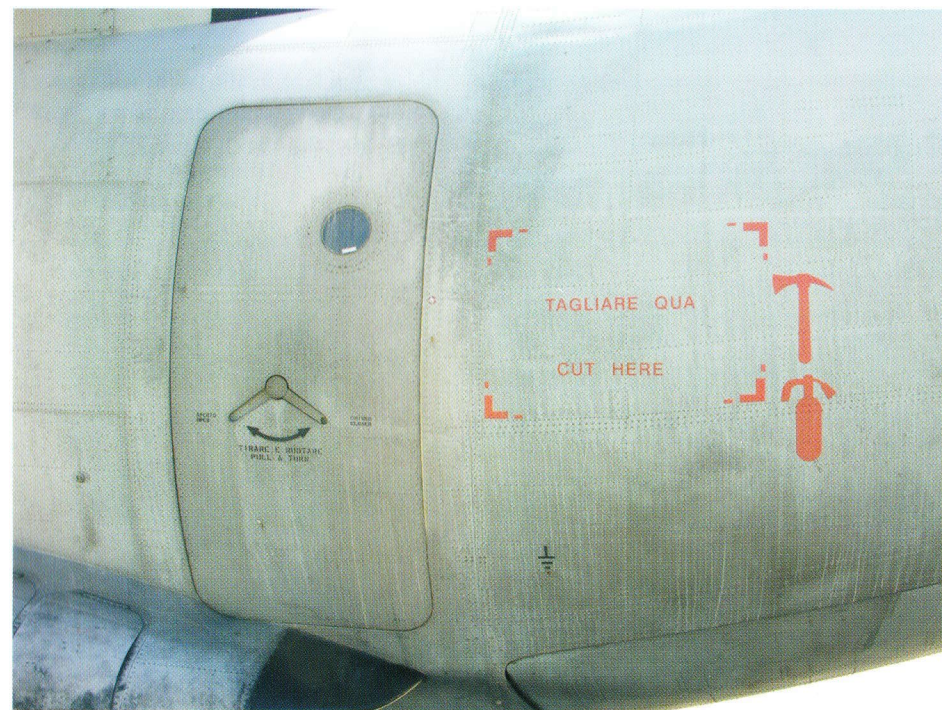


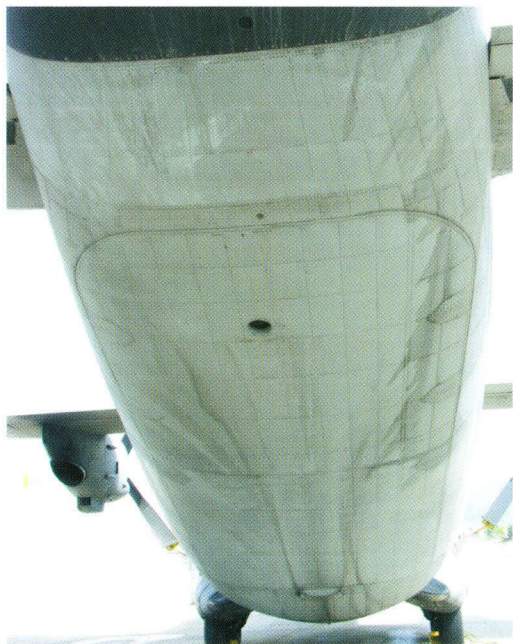


This page: more aspects of the port sponson and main gear.

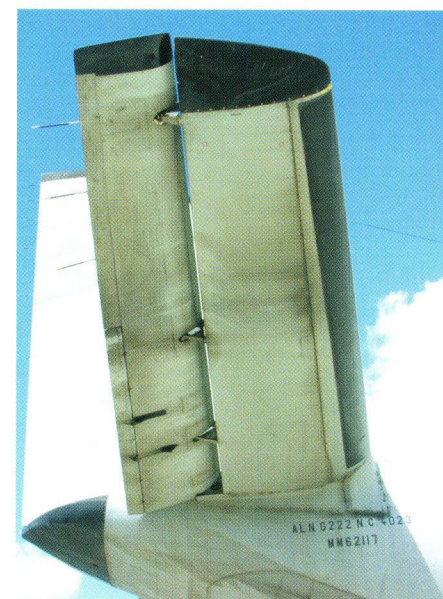


Above: sponson front intake.
Right: APU exhaust.
Below: port rear door.



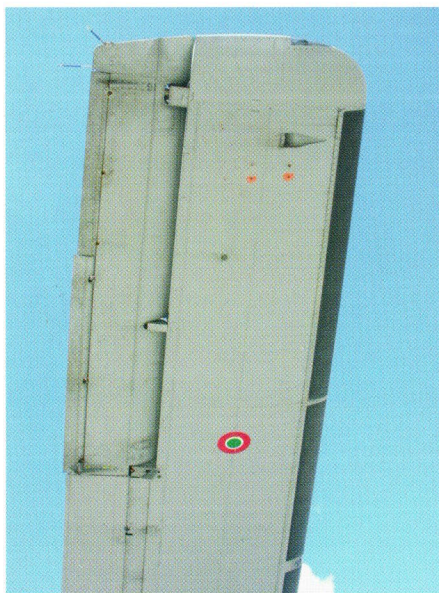


Above: kink in the rear fuselage.
Left: the two-part rear cargo door.
Below: the tail bumper.



Above: the vertical tail and starboard stabilizer.
Below: the G.222 tailcone lacks the sensors seen on the C-27J.





Above: the 3,447shp General Electric T64-GE-P4D turboprop.

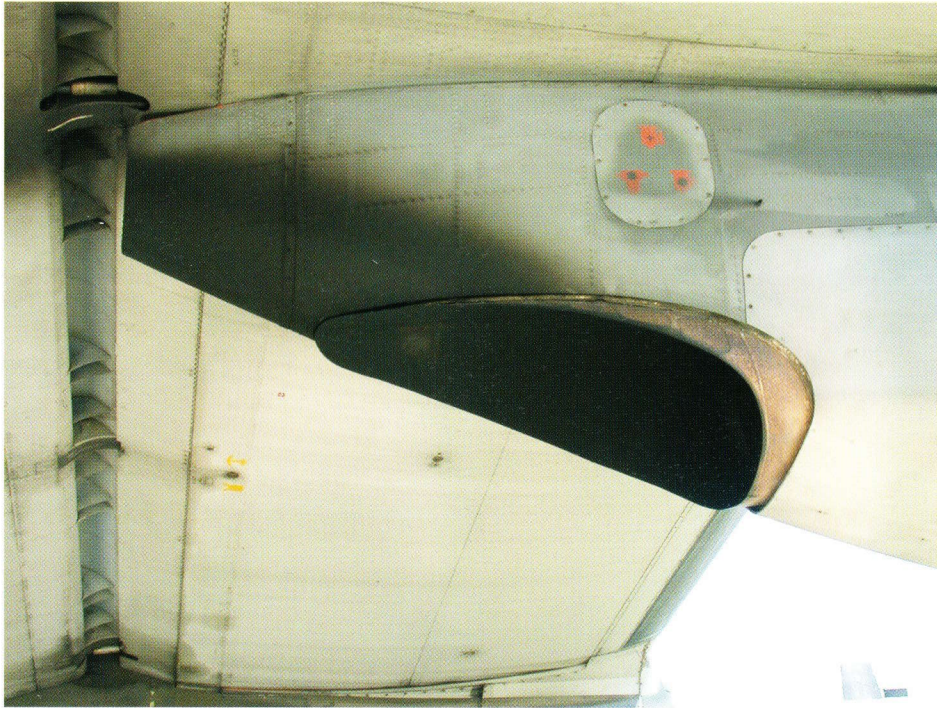
Left: right aileron and wing tip.

Below: prop blade.

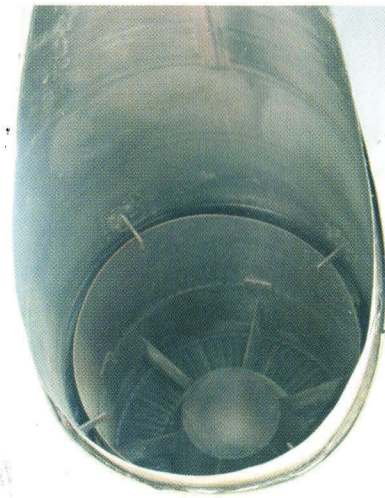


This page: more aspects of the T64 engine.

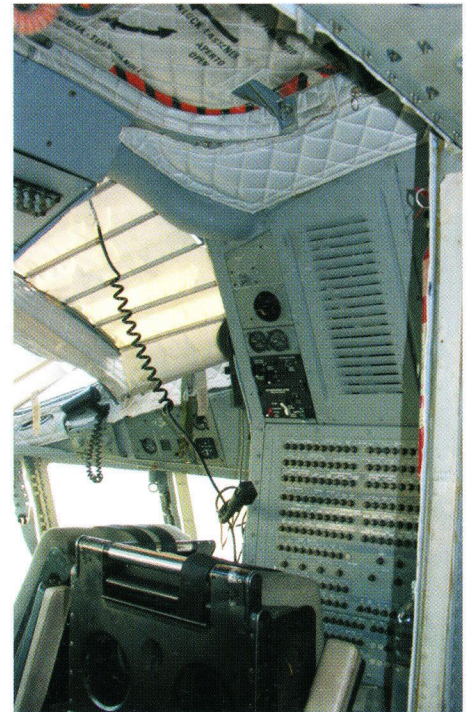
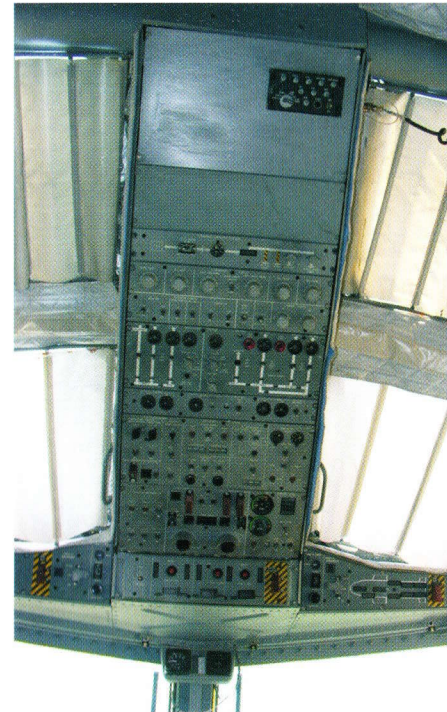




This page: exhaust and oil radiator.

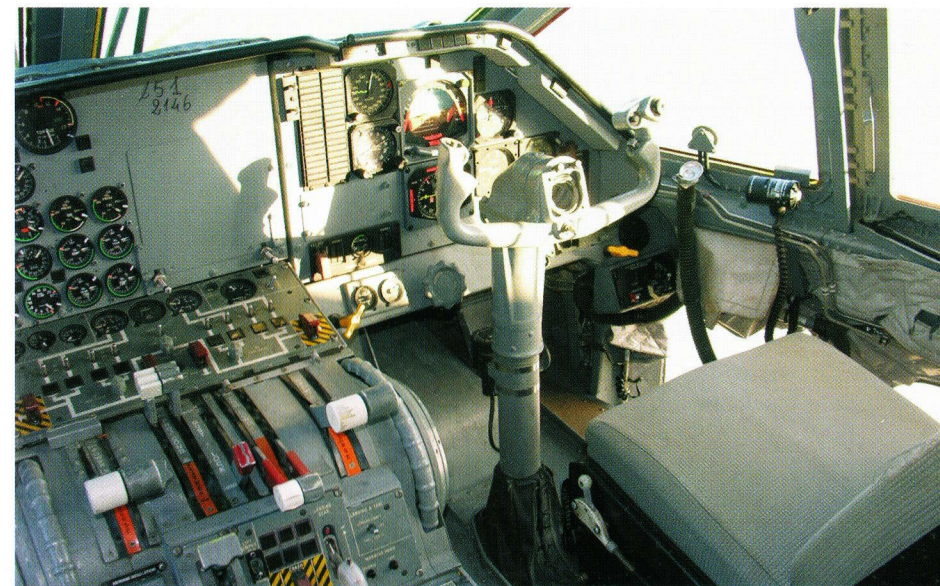
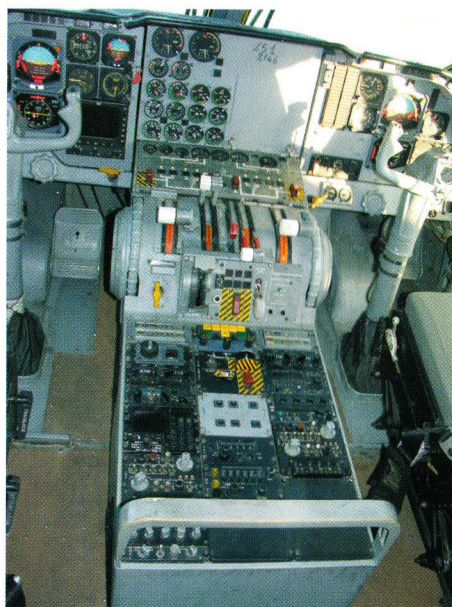


This page: the G.222 cockpit is very different from what can be seen in the C-27J. There's a flight engineer position on the right side, too.

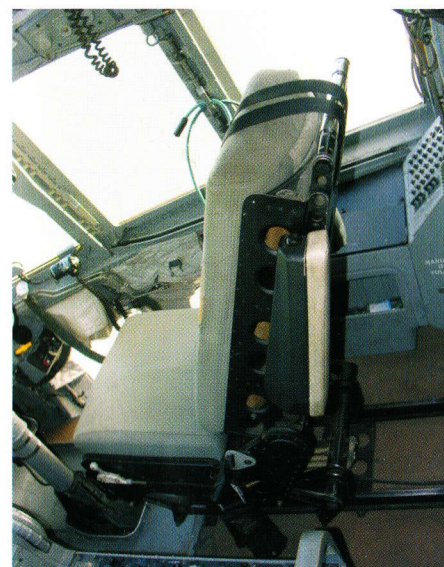


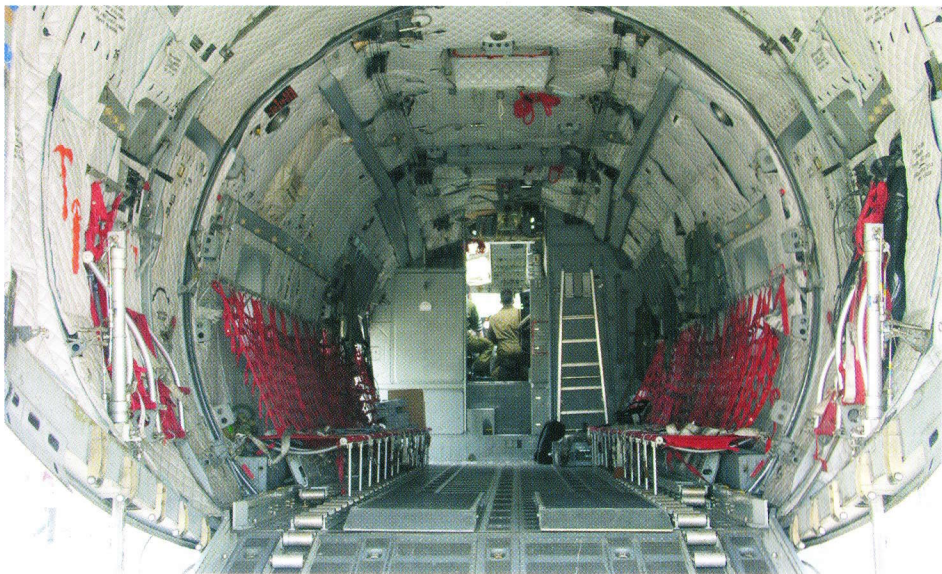


This page: pilot seat and centre console.

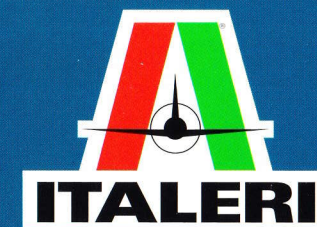


Above, and below left: copilot seat and centre console.
Below right: flight engineer's seat.



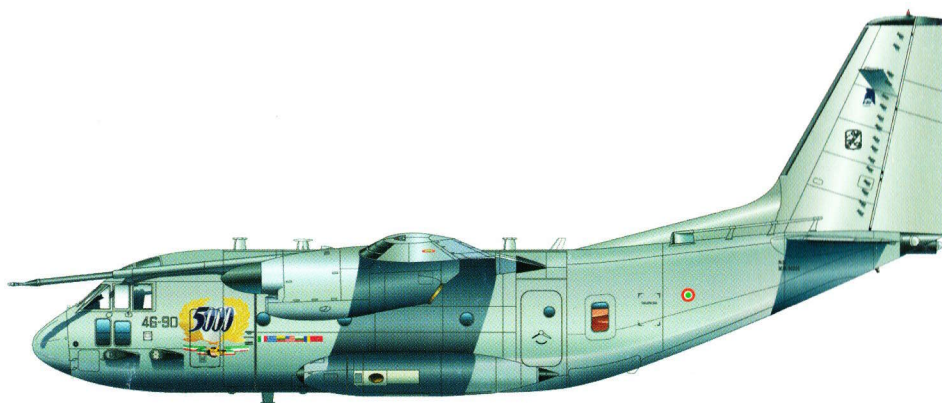


This page: the G.222 cargo bay looking forward and aft.



Copyright 2010 Italeri S.p.A.

Printed in Italy



Italeri S.p.A.
Via Pradazzo, 6/b
I-40012 Calderara di Reno
Bologna
Italy

Ph.: +39 051. 317 5211
Fax: +39 051. 726 459
e-mail: italeri@italeri.com
<http://www.italeri.com>