
A day at the Reparto Sperimentale Volo

A day at the RSV

The RSV (Reparto Sperimentale Volo) is the Italian Flight Test Wing comprising Gruppo volo (311 Gruppo), a Gruppo Technico (GT = Technical Squadron) and a Gruppo Gestione Software (GGS = Software management Squadron). RSV is part of Centro Sperimentale Volo (CSV = Flight Test Centre) located at Pratica di Mare near Rome.

RSV as a connecting element

The RSV is doing the in flight-testing for new aircraft introduced in the military. In Italia the military means air force (AMI = Aeronautica Militare Italia), Esercito (Army), Marina militare (Navy), Polizia, Carabinieri, Guardia Stradale, Guardia Finanzia etc, in general all authority related flying services. Airplanes are going to be tested initially in a development phase and later on in an operational phase marking not only the Operational Testing & Evaluation (OT&E) principle but far more than that. When an aircraft is in service improvements or solutions for shortcomings are invented by the aircraft manufacturer but how could you find out the customers wishes or needs and adopting his philosophy or strategy without consulting him? Next to this how can you update aircraft being not in production anymore? A test squadron is far more a good oiled system to get new systems introduced but also refined using the aircraft as a testbed. Strong cooperation and understanding the goals are required for success. Although aircraft are in military outfit in many cases RSV uses an early produced airplane from a factory or an early production sample. In addition to the testing work the test center has the delicate task of advising the air staff and the directorate of aeronautical materials and weapons on technical matters.

Being a test pilot is a boy's dream

All the pilots, engineers and technicians are of top quality and practice their skills on whatever type of airplane. To become a member of the RSV wing you have to serve a minimum of four years in an operational squadron. Then, after this off course a test pilot course would be suitable to let you discover what this profession means. A test pilot could follow this course only in three other countries. This could be in the USA with the US Air Force Test Pilot School at Edwards Air Force base or the US Navy Test Pilot School at NAS Patuxent River. The other possibilities are in Europe with the Empire Test Pilot School (ETPS) of the RAF at Boscombe Down or the 'Ecole du Personnel Navigant d'Essais et de Reception of the Armee de l'Air at Istres. The test pilot course lasts 6 months to one year depending your talent or progress. Equally, the other testing personnel at RSV are educated at this pilot test schools as well. As a result of receiving the best education available the graduated Italian testing personnel is qualified complying with the standards of the best test centers in the world. There is a close connection between the test centers in the world and regularly conventions are organised to share each others knowledge in approach. The RSV at Pratica di Mare is participating as well in this conventions. Our accompanying officer, Roberto d'Angelis who is a flight test engineer at RSV himself explains that this job

brings you quite a mix of aircraft types to fly. He started his career as a testpilot in France flying different French helicopters and the A-320, and then in Italia the CH-47 of Italian Army and all helicopters in service of the AMI, the Boeing 707, the Fiat G222, F-104S-ASA(M), Tornado, MB326, Fiat G-91, Bell 47G and C-130J. The test aircraft are in most cases staying there operational live with the RSV squadron because they are fitted with all kind of equipment, sometimes complicated to handle and not practical to operate in front line squadrons.

Several projects

Testing has to be done with many different aircraft and a variety of examples remained at RSV to form a kind of exotic collection. Although the testing of aircraft at the entry of service plays an important role it will never stop there. Continuous testing of new equipment or new software will be necessary. In this way RSV is involved in the development of mid life updates (MLU) and its work is considered very useful. Some work results in a better successor. The Fiat G222 was 3-4 years tested at RSV resulting in an Advanced Avionics Aircraft (AAA) where several countermeasures were installed (ironically against triple A weapons). The knowledge gained with this project has been used now in the C-27J Spartan. The same type was also flying with RSV in a different variant the Fiat G222TCM.

This aircraft has tactical capabilities; special sensors for continuous sensing and analyzing the atmosphere and can detect NBC. The type was build after the Tsjernobyl disaster to measure the radiation, fall out and pollution. Other purposes to mention for testing were for example ILS calibration or other instrument calibrations with special calibration aircraft like the PD-808. The testing includes several items from life support systems to armament such as missiles. Some systems goes beyond the aircraft itself like integration of navigation systems based upon the GPS-Navstar network. The last years some important projects in the AMI consumed time and energy from the RSV. There was the introduction of the C-130J Hercules fleet in the AMI. The type is fitted with digital cockpits and the latest self-defence systems which have to be tested in flight and there was also the certification process of new Night Vision Goggles and testing of special tasks like para-dropping. Equally new self defence systems were certified on the HH-3F helicopter and the Tornado, AM-X and MB-339CD were qualified for Air-to-Air refuelling on the B707.

The Gruppo Gestione Software is involved in the development of MLU avionics for the Tornados. Weaponry must be tested for several aircraft types such as the latest generation rockets like AMRAAM or new variants of the AGM-88 HARM or the latest Paveway bombs. Precision guided munitions like JDAM, the Storm Shadow and there ability of guidance by GPS is another field in which much testing is required. System integration was achieved with the convertible laser designator pod (CLDP) and the laser guide bomb GBU-16. Finally many test activities are concerning the Eurofighter Typhoon. A handful pilots are working with the type representing some 25 % of the work. The latest projects involves the flight testing of the M-346 Advanced Training Aircraft and the steadily growing international cooperation activities in partnership with other nations sees the unit actively participating in international development and testing projects such as the EH-101 and NH-90 helicopters.

Airshows

Next to the testing activities, the RSV has the honour to participate in air shows and therefore the RS –code on the fuselage is well known. Many times the Tornado or Fiat G222 was present in several European countries for different events. Next to the Tornado IDS and the G222 the RSV owns a MB.339B, a MB-339CD, an AMX, an AMX-T, a P-180 and a NH-500E. Other types like the Tornado ADV or ECR, the C-130J or Boeing 707 or different types of helicopters can be assigned temporarily. Some of this aircraft are based at Pratica di mare also with operational squadrons.

During our visit some species of types already out of service for a considerable time are kept operational for what seems the fun of the pilots themselves. We not only saw at the ramp the inventory as mentioned but also a Harvard, a MB-326K and two F-104S-ASA-M and two TF-104G's. The latter was officially taken out of service in 2005. Somehow the pilots showed the impression that besides the work they have to concentrate on their jobs provide them also some fun. While lunching together with all the employees one notice the good atmosphere of this unit and everyone shows a kind of feeling like 'what you want to be done is a piece of cake'.

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