

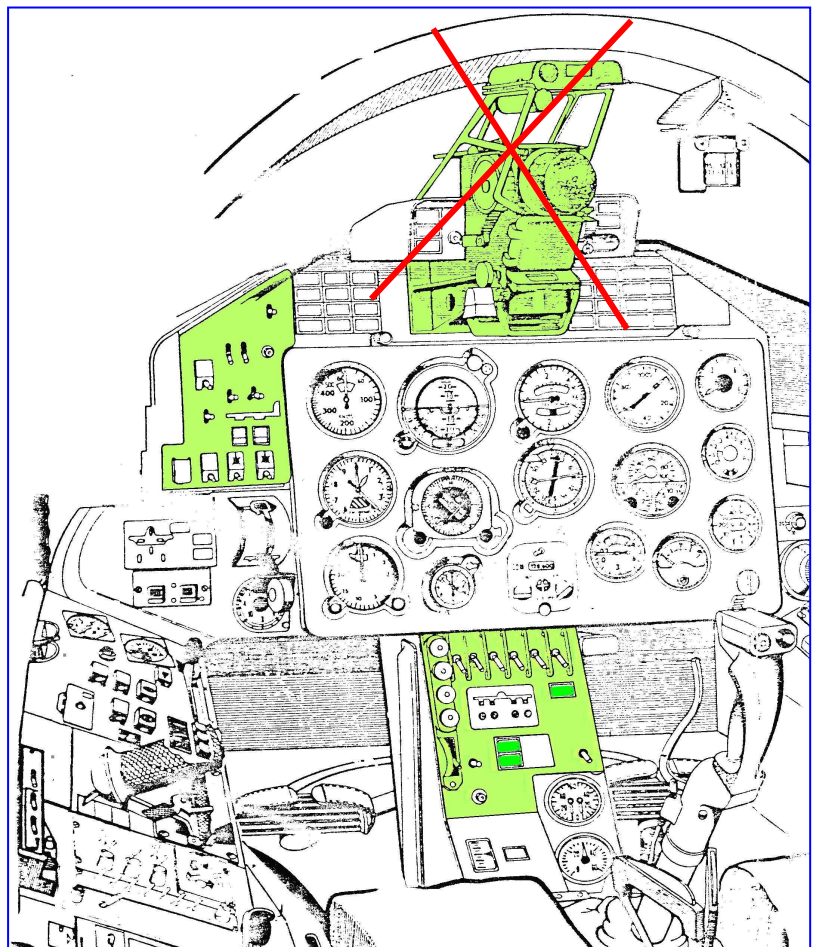


Verification of Demilitarization L-39 (unguided rockets)

1) Gun sight, original position
in all L-39 aircraft



Gun sight, removed





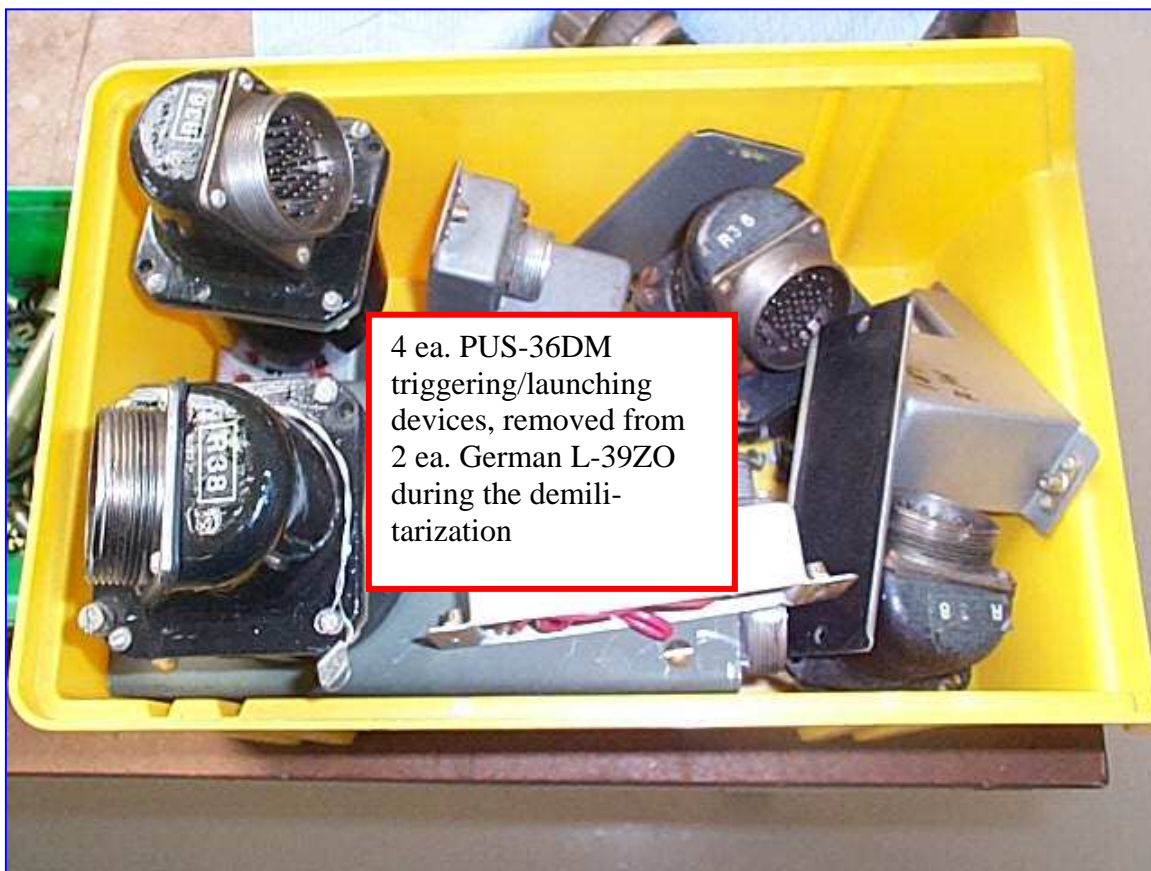
A) The Gun-Sight ASP-3NMU 39, an optical-gyroscope gun sight developed in the 50ies

The missing Gun sight is a major item necessary for an effective firing with unguided rockets. Firing rockets from the airplane requires a correction angle to be set on the gun sight in accordance with the rocket type. Since there are many types of the S-5 rockets, each rocket type has a different war head and therefore a different ballistic curve. The correction factor must be set at gun sight to compensate the differences. With no gun sight installed, a pilot in the cockpit would be unable to aim and hit the target

If there are still some installed (in Europe for museum purposes), than one need to look at the date of the import of the airplane and their last flight/maintenance in the Air Force of the country the airplanes came from.

If this is longer as 2 years ago, the gun sight must be considered as inop, because at each 200 hrs or at least after 2 years the gun sight must be removed from the airplane, bench tested, re-installed and re-calibrated (leveled) with the other armament systems, on the airplane installed and airplane on jacks. Such a test bench is not existing in the US and on airplanes parked in the countries of the formerly operation, such maintenance has been not performed since the airplanes were on the "For Sale" list. Only the maintenance on parked airplanes was done (preservation work, if that ever was done...)

B) The PUS-36DM, which is the triggering/launching device to provide the electrical impulses for ignition of each rocket engine.



4 ea. PUS-36DM triggering/launching devices, removed from 2 ea. German L-39ZO during the demilitarization



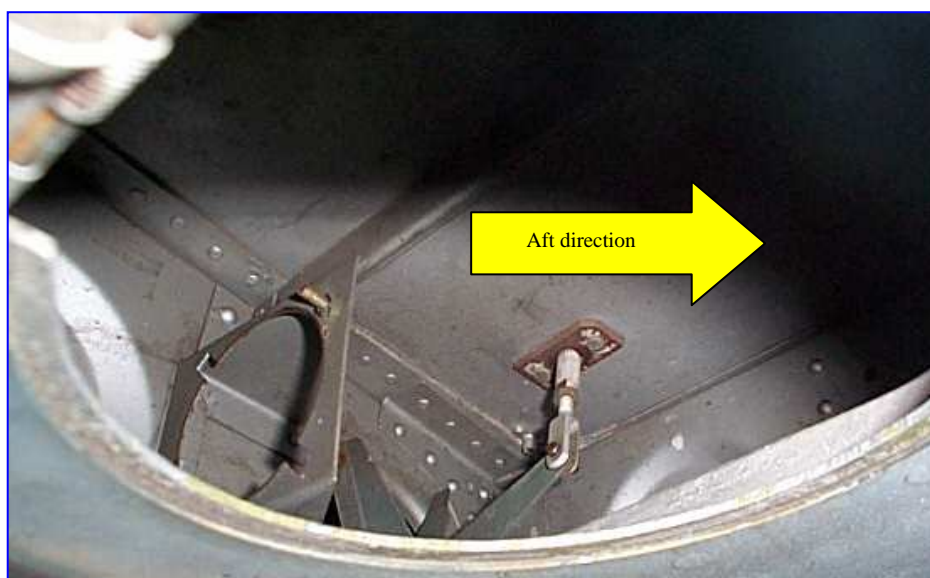
The PUS-36DM is the master unit in the circuit of the unguided rocket firing. If it is gone, one can do nothing with the pods, even they are still internally wired and loaded. The PUS-36 provides the launching impulse for the rockets in a special order between the left and right pod in sequences less of 0,025 sec and of impulse duration of 0,007...0,015 sec.

- For the L-39 C you have one PUS-36DM mounted in the left wing (labeled R-16) and serving both sides, it is mounted inside the wing with access trough a round lid in the rear area of the pylon in direction to the outer flap track / inboard Aileron gap
- For the L-39ZA/ZO you have 2 PUS-36DM (labeled R-36 / R-38) mounted in the right wing with access through a round lid in the rear area of the outer pylon in direction to the outer flap / inner Aileron gap. If you don't find them in the R/H wing, check in the left wing at the same position. The mfr may have changed their location within the L-39ZA series. One PUS-36DM serves the inboard pylons the other the outboard pylons, always shifting during the firing sequence between left and right.

Access to the PUS-36, shown here on a L-39C:



An empty bracket should be visible like that (on the L-39ZA/ZO R/H wing two empty brackets)





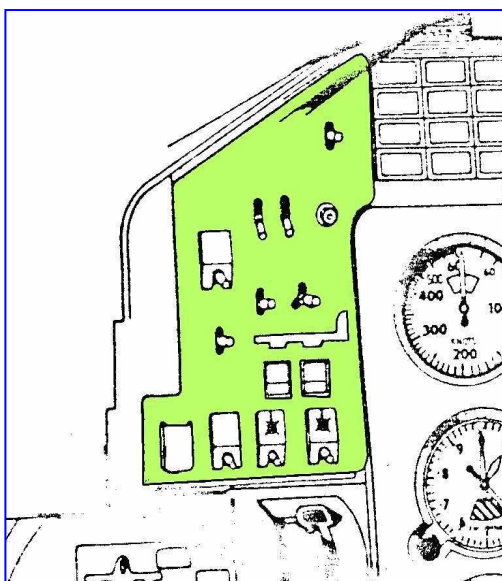
One (L-39C) or two (L-39ZA/ZO) wire bundles with connectors in fwd. direction:



If Pus-36 is still installed it would sit here

Note: The PUS-36DM picture was taken from a L-39ZO and is also labeled like on the ZA with R-38

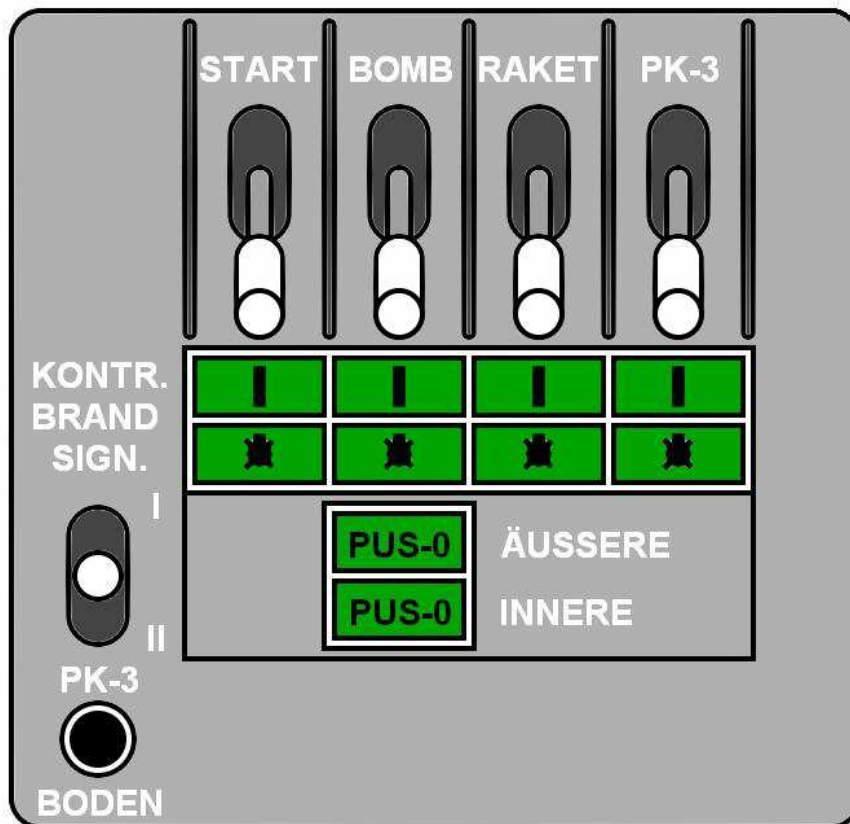
The arms panel in the cockpit left side is not essential, it consists mainly of simple switches (easy to replace) and the pylon selector push button. For original appearance of the airplane it is mostly kept in the airplane and not part of the demilitarization technology carried out for example in the Ukraine or Romania. However many airplanes have them removed to create more space for additional Radio / Nav. equipment.



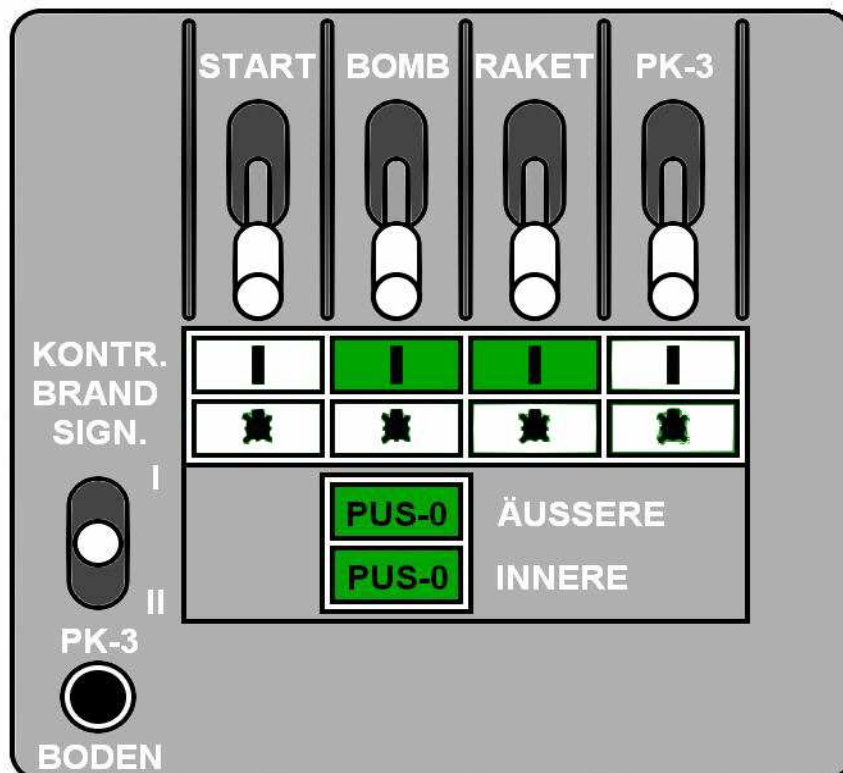
The panel shown on R/H is a sample from a L-39ZO and almost equal to the ZA



The pedestal panel delivers information to the pilot, here shown of a L-39Z0 fully armed and arms "life" even switches above are not "ON". PUS-O says the triggers are at "zero". On a demilitarized airplane the PUS lights remain off.



This panel should remain installed, for the purpose of carrying fuel drop tanks. The indication for that would be:





The green lights “ON” at the lower picture are the symbol that a load/cargo/traveling pod/drop tank is attached to the pylon. It says nothing that this is a weapon or that a weapon has been switched to “life”!

Summery: If the gun sight and the PUS-36DM has been removed the airplane should be considered as demilitarized.
Existing wires in the wing are not an indication of a Non-demilitarized airplane. It is important to understand that several other systems running over the same cable harnesses and from there over the same diode boxes, like for annunciator lights in the cockpit. For trouble shooting on the airplane the system should remain intact as much as is possible. Wild cut wires led in the past to malfunctions of aircraft systems and flight safety issues.