

Aircraft Minor Modification Checklist

PROJECT	AACM SERIAL NUMBER
FLIGHT WORK ORDER (FWO)	AIRCRAFT

PURPOSE AND SCOPE

The intent of this checklist is to ascertain the need for Airworthiness Review Process (ARP) approval as defined by NASA Procedural Requirement (NPR) 7900.3C, Aircraft Operations Management Manual. If the answer is "yes" to any one of the questions listed, appropriate paperwork needs to be filed for a safety permit through the Glenn Safety Office. If all answers are "no," the change in aircraft configuration is considered a minor alteration without the need for ARP approval, and may be handled through the existing configuration control process. This does not absolve the responsibility of the Aircraft Operations Office to maintain appropriate documentation substantiating said modification.

Applicable References

1. NPR 7900.3C, Aircraft Operations Management Manual
2. GLP-FA-7900.3, Aircraft Flight Research Airworthiness Procedures
3. GLM-QSA-1700.1, Glenn Safety Manual

Minor Modification Checklist

Index	Question	Yes	No
1.	Are there any structural and material changes that alter the basic aircraft design configuration?		
2.	Are there any modifications of the exterior contour or mold line of the aircraft to an experimental configuration (e.g., addition/removal of wing fence, ventral fin, vortex generator, air induction system, auxiliary inlets, and nonstandard antenna configurations or locations)?		
3.	Are there any modifications to the flight control system, including software revisions, to nonstandard configurations?		
4.	Is there a new or modified propulsion system or its control system, including software revisions, that is nonstandard for the aircraft?		
5.	Any modification of the displays or annunciation affecting critical information presented to the aircrew (e.g., situational awareness, aircraft control, or air vehicle launch) that is nonstandard for the aircraft?		
6.	Any modification of subsystems interfacing with and affecting flight or propulsion systems (e.g., mission computer, navigation, and warning and caution systems) that is nonstandard?		
7.	Any modification of the aircrew lift support systems to nonstandard configurations?		
8.	Is there going to be an evaluation of crosswind landing or wet runway landing limits, emergency procedures, structural or flight control limits, wind envelopes, or helicopter external lift, cargo hook system, or tow limits that are outside the normal limits for the aircraft?		
9.	Is there flight test instrumentation that interfaces with normal aircraft systems or that may affect the operation of those systems?		
10.	Is there any intentional operation in a degraded mode for test purposes (e.g., simulation of partial loss or malfunction of flight control system, engine, and avionics)?		
11.	Will there be dropping of any uncertified stores or objects?		
12.	Are there any other modifications, payloads, or operations that are nonstandard according to established flight manuals, procedures, or Federal Aviation Administration (FAA) certification requirements (if operated under a FAA airworthiness certificate)?		
13.	Is there any upgrade to the avionics with equipment not certified by the FAA?		
14.	Is there any modification that may adversely affect the airworthiness of an aircraft?		
15.	Are there any changes to the aircraft systems (i.e., hydraulic, electrical, fuel, etc.)?		
16.	Is there any operation that exceeds the normal operating envelope of the aircraft?		

Aircraft Minor Modification Checklist

Test Apparatus

Index	Does the test apparatus include any of the following?	Yes	No
1.	Use of fuels or oxidizers.		
2.	Use of chemicals or other hazardous materials.		
3.	Use of compressed gases.		
4.	High-temperature operations (over 140° F)		
5.	Use of high-voltage electrical power.		
6.	High-speed rotating equipment.		
7.	Use of ionizing radiation sources.		
8.	Use of lasers.		
9.	Use of pressurized vessels or systems.		
10.	Use of vacuum systems.		
11.	Use of cryogenics.		

NOTES