

GENERAL

The APU provides electrical power to the battery bus and bleed air to the ECS ducting when necessary.

The APU is mounted in the aircraft tail cone. Access is provided through a door in the left aft fuselage. The turbine air inlet is located at the upper fuselage, and is covered by a door when not in use. The exhaust is located at the rear tail cone. Cooling air inlet is located at the right side of the fuselage.

The APU starter is connected to the right battery and the generator feeds the battery bus.

The APU is computer controlled. Turbine speed is maintained at 100% RPM and EGT is limited to 665°C. Automatic shutdown is provided for the following conditions: overspeed, high EGT, low oil pressure, high oil temperature, APU compartment fire, APU control circuitry failure, APU door not open, DC power loss, speed sensor loss, no acceleration and APU engine malfunction. The APU fuel shutoff valve closes automatically when APU MASTER switch is OFF.

OPERATION

Prior to start, APU door must be opened (**APU DOOR OPEN** message is on). The starter cuts out at 6900 rpm. APU generator may be switched on after **APU READY** message is on.

APU controller may be reset following automatic shutdown (**APU FAIL** message on), by cycling APU MASTER switch OFF and ON.

Gulfstream G200 - APU

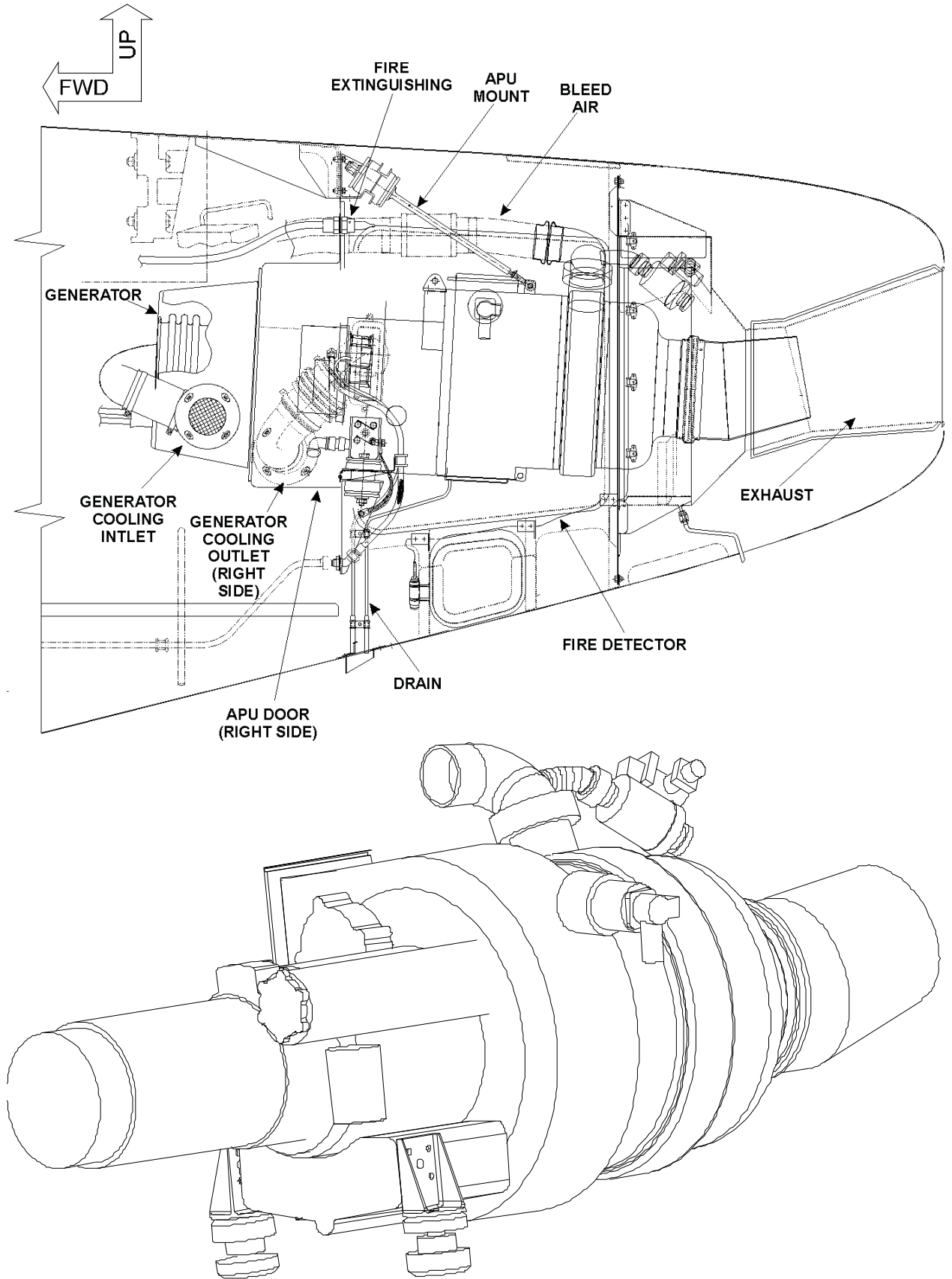


Figure 5-43. Auxiliary Power Unit (APU)

APU CONTROLS AND INDICATORS

STARTER switch - has three positions:

START - momentary position to engage starter

OFF - starter is off

STOP - stops starter operation

MASTER switch - has three positions as follows:

ON - engages the APU electrical power and opens APU door and
APU FIRE SHUTOFF valve

DOOR CLOSE - shuts down APU and closes APU intake door

OFF - stops APU operation, including APU door movement, even if
door is in transit

GEN switch - has three positions:

ON - connects APU generator.

OFF - disconnects APU generator

RESET - resets APU generator

APU FIRE pushbutton - when pressed, the pushbutton arms the APU
fire extinguisher for operation, shuts down the APU and
closes the APU fuel shutoff valve.

ARM EMPTY pushbutton - pressed to discharge the APU fire
extinguisher.

PRESS TO TEST pushbutton - pressed to test APU fire protection
system

ECS selector - the normal aircraft selector (on the pedestal) has APU
position which is used to select APU bleed air for air
conditioning and pressurization.

APU EMERGENCY KILL switch (ground service panel) - used for
emergency APU shutdown.

Warning Messages

APU BLEED AIR LEAK - Leak or rupture in APU bleed air ducts

APU FIRE - APU fire; APU enters automatic shutdown sequence

Caution Messages

APU FAIL - APU malfunction. APU automatically shuts down

APU OIL PRESS LOW - APU oil pressure too low. APU automatically shuts down

APU OIL TEMP HI - APU oil temperature too high. APU automatically shuts down

APU BLEED OPEN - APU bleed shutoff valve is open when ECS selector is not in APU position

APU GEN OVER LOAD - APU generator load above limits

R ENG/APU FIRE BTLE - Aircraft on ground and the right fire extinguisher bottle pressure is below 400 psi

Advisory Messages

APU READY - APU is on and running ready to take loads

Status Messages

APU DOOR CLOSED - APU MASTER switch is in ON or DOOR CLOSE position and APU door is closed

APU DOOR IN TRANSIT - APU MASTER switch is in ON or DOOR CLOSE position and APU door is in transit

APU DOOR OPEN - APU MASTER switch is in ON or DOOR CLOSE position and APU door is open

APU GEN OFF - APU is operating and APU generator is disconnected

APU OIL LEVEL LOW - APU oil quantity is low

R ENG/APU FIRE BTLE - Aircraft in flight and the right engine/APU fire extinguisher bottle pressure is below 400 psi

Gulfstream G200 - APU

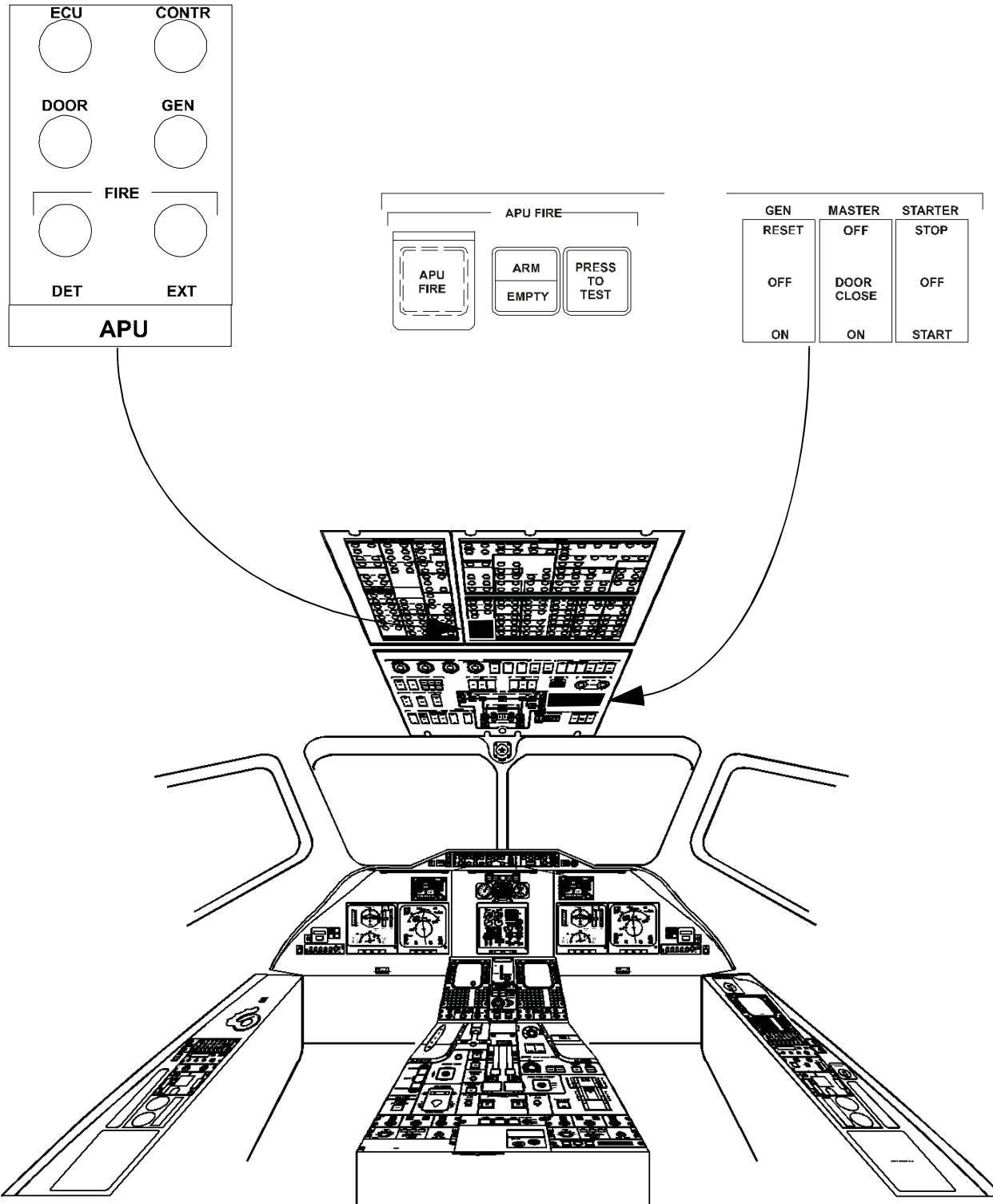


Figure 5-44. APU Controls