For corrections, suggestions, or to be added to the revision distribution list please email: sefoltz@outlook.com

Thank you,

[Signature]
# Table of Contents

<table>
<thead>
<tr>
<th>Acronymns</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GENERAL</strong></td>
<td>4</td>
</tr>
<tr>
<td><strong>DOORS</strong></td>
<td>4</td>
</tr>
<tr>
<td><strong>LIGHTING.</strong></td>
<td>4</td>
</tr>
<tr>
<td><strong>FIRE PROTECTION.</strong></td>
<td>4</td>
</tr>
<tr>
<td><strong>COMMUNICATIONS.</strong></td>
<td>5</td>
</tr>
<tr>
<td><strong>ELECTRICAL.</strong></td>
<td>5</td>
</tr>
<tr>
<td><strong>APU</strong></td>
<td>6</td>
</tr>
<tr>
<td><strong>POWERPLANT.</strong></td>
<td>7</td>
</tr>
<tr>
<td><strong>FUEL.</strong></td>
<td>8</td>
</tr>
<tr>
<td><strong>HYDRAULIC.</strong></td>
<td>8</td>
</tr>
<tr>
<td><strong>LANDING GEAR.</strong></td>
<td>9</td>
</tr>
<tr>
<td><strong>FLIGHT CONTROLS.</strong></td>
<td>9</td>
</tr>
<tr>
<td><strong>PNEUMATICS.</strong></td>
<td>10</td>
</tr>
<tr>
<td><strong>AIR CONDITIONING.</strong></td>
<td>10</td>
</tr>
<tr>
<td><strong>PRESSURIZATION</strong></td>
<td>11</td>
</tr>
<tr>
<td><strong>ICE AND RAIN</strong></td>
<td>11</td>
</tr>
<tr>
<td><strong>OXYGEN.</strong></td>
<td>12</td>
</tr>
<tr>
<td><strong>FLOWS</strong></td>
<td>12</td>
</tr>
<tr>
<td><strong>PLANEVIEW AVIONICS.</strong></td>
<td>13</td>
</tr>
<tr>
<td><strong>SOP</strong></td>
<td>14</td>
</tr>
</tbody>
</table>
A C R O N Y M S

ACC            AIR CONDITIONING CONTROLLER
ACM            AIR CYCLE MACHINE
ACP            AUDIO CONTROL PANEL
ACS            AIR CONDITIONING SYSTEM
ADC            AIR DATA COMPUTER
ADM            AIR DATA MODULE
ADS            AIR DATA SYSTEM
AEER           AUX ELECTRONIC EQUIPMENT RACK
AFCS           AUTOMATIC FLIGHT CONTROL SYSTEM
AGM            ADVANCED GRAPHICS MODULE
ASC            AIRCRAFT SERVICE CHANGE
ASCB           AVIATION STANDARD COMMUNICATIONS BUS
ATN            AERONAUTICAL TELECOMMUNICATIONS NETWORK
BAC            BLEED AIR CONTROLLER
BAS            BLEED AIR SYSTEM
BIT            BUILT-IN TEST
BITE           BUILT-IN TEST EQUIPMENT
BPCU           BUS POWER CONTROL UNIT
BTMS           BRAKE TEMP MONITORING SYSTEM
CAS            CREW ALERT SYSTEM
CCD            CURSOR CONTROL DEVICE
CDU            CONTROL DISPLAY UNIT
CMC            CENTRAL MAINTENANCE COMPUTER
CMF            COMMUNICATIONS MANAGEMENT FUNCTION
CPC            CABIN PRESSURE CONTROLLER
CPCP           CABIN PRESSURE CONTROL PANEL
CPOP           CO-PILOT OVERHEAD PANEL
CPSP           CABIN PRESSURE SELECTOR PANEL
CPIP           CABIN PRESSURE INDICATOR PANEL
CSD            CONSTANT SPEED DRIVE
DAU            DATA ACQUISITION UNIT
DC             DISPLAY CONTROLLER
DMU            DATA MANAGEMENT UNIT
DU             DISPLAY UNIT
EBDI           ELECTRONIC BEARING AND DISTANCE INDICATOR
ECS            ENVIRONMENTAL CONTROL SYSTEM
ECU            ELECTRONIC CONTROL UNIT
EDS            ELECTRONIC DISPLAY SYSTEM
EDM            EMERGENCY DESCENT MODE
EEC            ELECTRONIC ENGINE CONTROL
EVM            ENGINE VIBRATION MONITOR
EV S           ENHANCED VISION SYSTEM
FGCP           FLIGHT GUIDANCE CONTROL PANEL
FGC            FLIGHT GUIDANCE COMPUTER
FOC            FUEL COOLED OIL COOLER
FPV            FLIGHT PATH VECTOR
FMU            FUEL METERING UNIT
FSECU          FLAP/STAB ELECTRONIC CONTROL UNIT
FQSC           FUEL QUANTITY SIGNAL CONDITIONER
FWC            FAULT WARNING COMPUTER
GCU            GENERATOR CONTROL UNIT
GP             GUIDANCE PANEL
GSCP           GROUND SERVICE CONTROL PANEL
HOPS           HARDOVER PROTECTION SYSTEM
HMG            HYDRAULIC MOTOR GENERATOR
HUD            HEAD UP SYSTEM
IDG            INTEGRATED DRIVE GENERATOR
I-NAV          INTEGRATED NAVIGATION
IRU            INERTIAL REFERENCE UNIT
LAN            LOCAL AREA NETWORK
LEER           LEFT ELECTRONIC EQUIPMENT RACK
LPV            LOCALIZER PERFORMANCE WITH VERTICAL GUIDANCE
LRU            LINE REPLACEABLE UNIT
MAU            MODULAR AVIONICS UNIT
MCDU           MULTIFUNCTION CONTROL DISPLAY UNIT
MWS            MONITOR AND WARNING SYSTEM
NBPT           NO BREAK POWER TRANSFER
ND             NAVIGATION DISPLAY
NIC            NETWORK INTERFACE CARD
PDP            POWER DISTRIBUTION PANEL
POP            PILOT OVERHEAD PANEL
PTU            POWER TRANSFER UNIT
REER           RIGHT ELECTRONIC EQUIPMENT RACK
RVDT           ROTARY VARIABLE DIFFERENTIAL TRANSDUCER
SAV            STARTER AIR VALVE
SEP            STANDBY ELECTRICAL POWER
SFD            STANDBY FLIGHT DISPLAY
SVO            START VALVE OPEN
SVS            SYNTHETIC VISION SYSTEM
SV-PFD         SYNTHETIC VISION PRIMARY FLIGHT DISPLAY
TCS            TOUCH CONTROL STEERING
TLA            THRU S LEVER ANGLE
TROV           THRUST RECOVERY OUTFLOW VALVE
VGP            VNAV GLIDE PATH
VSD            VERTICAL SITUATION DISPLAY

N O T E S

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
GULFSTREAM G450 Condensed Notes

1 GENERAL

DIMENSIONS:
- LENGTH: 89' 3"
- WINGSSPAN: 77' 4"
- TAIL HEIGHT: 25' 2"
- WHEELBASE: 39' 1" X 13' 8"
- MIN TAXI STRIP FOR 180° TURN: 55' 3"

WEIGHTS:
- MAX RAMP: 75,000 LBS (ASC 016)
- MAX TAKEOFF: 74,600 LBS (ASC 016)
- MAX LDG: 66,000 LBS / 58,500 LBS (ASC 007C)
- MAX ZERO FUEL: 49,000 LBS / 48,000 LBS (ASC 008)

SPEEDS:
- VMO / MMO: 340 KTS / M.88 Mr
- VTURB >10,000 FT: 270 KTS / 0.75 Mr
- VTURB <10,000 FT: 240 KTS
- FLAPS 10°/20°/30°: 250 / 220 / 180 KTS (0.60 Mr)
- MINIMUM MANEUVERING SPEEDS FLAPS 0°/10°/20°/30°: 200 / 180 / 160 / VREF +5 KTS
- VLE / VLO / EMERG: 250 / 225 / 175 KTS (0.70 Mr)
- VA: 206 KTS
- TIRE LIMIT: 195 KTS
- VMCG / VMCA / VMCL: 109 / 106 / 99 KTS
- INOP TRIM (MACH/ELEC): 0.75 Mr
- INOP STAB / JAMMED ELEV: 270 KTS / 0.75 Mr
- INOP YD ABOVE 20,000 FT: 210 KTS MINIMUM
- MAX DEMONSTRATED X-WIND: 24 KTS

ALTITUDES:
- MAX OPERATING: 45,000 FT
- INOP YD AND MACH TRIM: 41,000 FT
- FLAPS 10° / 20°: 25,000 FT
- LDG GEAR / FLAPS 30°: 20,000 FT
- MAX FIELD ELEV: 14,500 FT / 15,000 FT (ASC 068)

2 DOORS

- EMERGENCY EXITS
  - PRIMARY
    - (LAND EVAC)
    - CABIN WINDOWS (4)
  - SECONDARY
    - BAGGAGE DOOR

3 LIGHTING

- SUBSYSTEMS
  - FLIGHT DECK LIGHTING
  - CABIN LIGHTING
  - SERVICE COMPARTMENT LIGHTING
  - EXTERIOR LIGHTING
  - EMERGENCY LIGHTING

- EXTERIOR LIGHTING
  - BEACON, STROBE, NAV, ICE INSPI, LOGO, RAMP, LANDING, PULSE, TAXI, WING TIP TAXI, AND WHEEL WELLS LIGHTS
  - Strobe Light – 2 IN EACH LOCATION
  - Strobe Light FAULT INDICATOR
  - NAV LIGHTS - 2 IN EACH LOCATION
  - TAXI LIGHTS (3) – AUTO OFF ON GEAR RETRACTION
  - LANDING LIGHTS – AUTO OFF AT 18000’
  - LANDING LIGHT OPERATION LIMITED TO 5 MINUTES WHEN ON THE GND

- EMERGENCY LIGHTING
  - OVERWING EGRESS, UNDERWING EGRESS, EMERG LIGHT BATTERIES, EMERG CONTROL SWITCHES, AND MAIN ENTRANCE DOOR EMERG LIGHTS
  - WHEN ON E-BATTS ONLY THE MASTER LIGHTING CONTROL KNOB FUNCTIONS

4 FIRE PROTECTION

- COMPONENTS
  - SMOKE DETECTION
  - SMOKE EVAC HANDLE
  - ENG FIRE DETECTION
  - BAG COMP
  - APU FIRE DETECTOR
  - PAX COMP AND TAIL COMP O’HEAT
  - LEER, REER, BEER
  - FWD, LAF, CENTER AFT, R AFT FLOOR
  - AFT EQUIPMENT

- APUs
  - FIRE DETECTION
  - HIGH GAS PRESSURE SENSOR
  - LOW GAS PRESSURE SENSOR
  - HEAT PRODUCES HIGH PRESSURE
  - SENSES FIRES AND FAULTS
  - THERMAL SWITCHES

- FIRE BELL
  - 6 LIGHTS, 2 CAS MSGs

- APU FIRE TEST
  - 6 LIGHTS, 2 CAS MSGs

- APU FIRE DETECTOR FAIL
  - A TEST WILL NOT SHUTDOWN THE APU
  - FIRE BELL WILL ONLY SOUND ON THE GND

- FIRE HANDLE SHUTS OFF:
  - AT THE 7TH AND 12TH STAGES
  - AT THE IDG
  - AT THE BLEED AIR DUCT
  - FRONT ENG MOUNT
  - ENG ANTI-ICE DUCT (L ENG)
  - ENG LOOP A, R ENG LOOP B – L ENG LOOP B, R ENG LOOP A – R ENG LOOP B
  - FUEL – AT THE TANK, FUEL SHUTOFF VALVE
  - HYD – AT THE TANK, FUEL SHUTOFF VALVE
  - HYD – AT THE TANK, FUEL SHUTOFF VALVE
  - ELEC – AT THE IDG

PLEASE EMAIL CORRECTIONS TO: sefoltz@outlook.com
REV 3.0, 201810
### Communications

- **Voice**
  - VHF (3) – Transceivers and Antennas, MCDU or CDD (8.33 or 25 kHz increments)
  - HF (2) – Transceivers and Coupler, MCDU
  - HF Antenna Attachment Makes ACFT AN ANTENNA
  - VHF #3 Normally Used for Data

- **ACP**
  - EMER BUTTON
  - BYPASSES ACP
  - DIRECT LINK BETWEEN HEADSET AND COMM #1

- **SELCAL**
  - VHF (3) and HF (2)
  - 4 Letter Decoder Card in Each Audio Interface Unit (AIU)

### Electrical

- **1 HMG (SEP)**
  - G450, 5 kva, 115 V, 400 Hz, 3 Phase AC

- **DFDR**
  - 25 HRS OF DATA – TAIL COMP
  - DFR/CMC EVENT SWITCH ON OVERHEAD (RECORDS -30 SEC + 1 MIN)

- **ELT**
  - AER
  - 121.5 MHz, 243.0 MHz, and SAT FREQ 406.025 MHz
  - 72 HR TRANSMIT TIME
  - LAT LONG INTERFACE FROM IRS
GULFSTREAM G450 Condensed Notes

AC POWER SOURCES
- CSD IDGs (2)
- APU GEN
- HMG

AC POWER FLOW:
- "GENERALLY, AC POWERS HEATERS, MOTORS, AND CHARGERS"
  - 1) IDG/APU GEN/EXT AC
  - 2) L & R MAIN AC BUSES
  - 3) L & R STBY AC BUSES

L MAIN AC BUS
- L ESS AC BUS
- L ESS TRU
- L MAIN TRU
- AUX TRU (PRIMARY)
- L BATT CHARGER

R MAIN AC BUS
- R ESS AC BUS
- R ESS TRU
- R MAIN TRU
- AUX TRU (SECONDARY)
- R BATT CHARGER

TRUs (5) – 250 A EA
- 115 V AC TO 28 V DC
- WHEN OPERATING THE HMG THE AUX TRU CAN POWER BOTH THE L AND R ESS DC BUSES.

DC POWER SOURCES:
- MAIN BATTERIES (2)
  - "2 APU START ATTEMPTS + 30 MIN"
- E-BATTS (4)
  - 24 V, 45 AMP HR
  - LEAD-ACID
    - L & R E-BATTS
    - L & R EMERG DC BUSES
    - ESS FLT INST BUS
    - IRUs (3)
- FWD & AFT
- E-BATTS

AVIONICS E-BATTS (2) POWER
- CAPT AUDIO PANEL
- CLOCKS (2)
- GEAR HANDLE AND LIGHTS
- EBDS
- SDF
- MCDU 1 – STBY ENG INST AND FUEL
- MCDU 3 – BACKUP RADIO (COM,NAV,XPDR 1)

GND SERVICE BUS
- GND
  - R MAIN BATT
  - EXT DC
- AIR
  - R MAIN DC BUS
- SWITCHES (3)
  - FWD EXT ACCESS
  - TAIL COMPARTMENT
  - REMOTE REFUELING
- AUTO OFF
  - MAIN DOOR CLOSED, AND
  - FWD ACCESS DOOR CLOSED, AND
  - TAIL COMPARTMENT DOOR CLOSED

BPCUs (2):
- "LOCATED IN THE LEER AND REER"
- L & R NETWORKS
- POWER DISTRIBUTION
- POWER PROTECTION

E-INV (1kVA)
- 28 V DC TO 1 kVA, 115 V AC
- ESS AC BUS, PHASE A
- 60 Hz CONVERTER (1 OR 2)
- 115 V, 60 Hz
- GALLEY POWER AUTO SHED

IDG LOAD LIMIT
- WHEN AMBIENT >110°F/43.5°C, LIMIT IDG LOAD TO 45% (18kVA) TO KEEP FUEL TEMP <95°C

7 APU – HONEYWELL 36–150

SINGLE SHAFT, CONSTANT SPEED GAS TURBINE ENGINE
- ACCESSORY GEARBOX DRIVES:
  - APU GEN
  - LUBRICATION PUMP (OIL PUMP)
  - INTEGRAL OIL RESERVOIR (2 QTS)
  - SPEED SENSOR – ECU
- EXHAUST SECTION
  - EJECTOR PUMP DRIVES AMBIENT AIR WHICH LOWERS EGT AND NOISE
- ELEC – L OR R BATT BUS
  - APU MASTER SWITCH – ECU
- ECU MODES
  - NON-ESS (GROUND)
  - ESS (AIR)
- FUEL COMPONENTS
  - " BURNS 200 PPH (30 GAL PER HR)"
  - L TANK/L PUMP
  - X FLOW & R PUMP
  - APUS
  - APU FUEL CONTROL
  - FIRE
- APU GEN
  - 40kVA, 115 V, 3 PHASE AC
  - GND 95% + 4 SEC

STARTER LIMITS – BATTERY
28 V DC MOTOR MOUNTED TO THE DRIVESHAFT OF THE ACCESSORY GEARBOX

STARTER LIMITS – DC CART
3 ATTEMPTS
1 HR COOL DOWN

CONSECUTIVE STARTS LIMIT
6 AT 10 MIN INTERVALS
- MAX ALTITUDE / LOAD >0.85 M
  - FL370 / 100% RPM + 90 SEC
- MAX ALTITUDE / LOAD <0.85 M
  - FL300 / 85%
- GUARANTEED START ALTITUDE
  - FL370
- MASTER ON:
  - 1) ECU PERFORMS BIT ("READY" FLASHES – BULB CHECK)
    - 2) OIL TEMP SENSED
    - 3) APU DOOR OPENS (65° OR 27°)
    - 4) FUEL SHUTOFF VLV OPENS
    - 5) "READY" LIGHT (15 SEC)
- START BUTTON:
  - 1) APU STARTER (LEFT BATT)
    - 2) 5% - APU FUEL CONTROL SHUTOFF VLV OPENS & IGN
    - 3) 7% - "READY" LIGHT GOES OUT
    - 4) 46-60% - STARTER CUT-OUT
    - 5) 95% - IGN CUT-OUT
    - 6) 95% + 4 SEC – GEN ON

MAX RPM: 107%
- 700% + 30 MIN – AIR AVAIL

STOP BUTTON
- 1) OVERSPEED SIGNAL TO ECU (107%)
- 2) FUEL CONTROL UNIT SHUTS OFF FUEL TO APU
- 3) BIT TEST
- 4) SURGE CONTROL VALVE CYCLES
- 5) <35% RPM, ECU CLOSES INLET DOOR
- 6) ECU MONITORS EGT AND RPM FOR 5 MIN
- 7) AFTER 5 MIN “APU MASTER” CAS DISPLAYED

SURGE CONTROL VALVE
- PREVENTS COMPRESSOR STALLS
  - > 16,500 FT OPENS AT 60% RPM
OF THE FADEC

THE RIGHT ENGINE IS THE CRITICAL ENGINE

HP AND LP COMPRESSOR SECTIONS ARE DRIVEN BY THEIR OWN COAXIAL SHAFTS/SPOOLS (SHAFT WITHIN A SHAFT) – BEARINGS

CLOCKWISE ROTATION

OIL COOLING VIA FUEL-OIL HEAT EXCHANGER

75% OF LP COMPRESSOR “FAN AIR” Bypasses

25% HP SECTION COMBUSTION CHAMBER

BYPASS AIR AND COMBUSTION AIR ARE MIXED BY A CRENELATED FLANGE

3 LP / INNER SPOOL

12 STAGE LP COMPRESSOR SECTION DRIVEN BY 2 TURBINE STAGES

FIXED STATORs ARE BETWEEN EACH COMPRESSOR STAGE

10 COMBUSTION LINER ASSEMBLIES

2 TWO IGN PLUGS – LINERS 4 & 8 O’CLOCK POSITIONS

HIGH SPEED GEARBOX ON THE LP COMPRESSOR

LOW SPEED GEARBOX ON THE LP COMPRESSOR

TANK BOOST PUMPS [ELEC] FUEL SHUTOFF VALVES LE PUMP FUEL-OIL HEAT EXCHANGER FUEL FILTER LOW PRESSURE SWITCH 15 PSI HP PUMP FUEL FILTER FUEL METERING UNIT HP FUEL SHUTOFF VALVE FUEL FLOW TRANSMITTER FUEL SPRAY NOZZLES 10 THE LP PUMP CAN SUCTION FEED THE ENG <FL200

IGN

TWO IGN PLUGS EACH ENG (CONT IGN)

ONLY ONE IS USED FOR START

THE EEC ALTERNATES WHICH IGN IS USED FOR START (IF NO IGN CYCLE FUEL CONTROL SWITCH TWICE)

THE EEC IS AT THE HEART OF THE FADEC

EACH EEC HAS DUAL CHANNELS

EACH EEC RECEIVES INPUT FROM THE 3 MAUs AND THE 3 ADMs

EACH EEC OUTPUTS TO THE FWCs AND CMC

AT >35% HP RPM A DEDICATED GEN (3 PHASE AC, PERM MAGNET ALTERNATOR [PMA], RECTIFIED BY THE PSU INTO 28 V DC) POWERS THE FADEC AND EEC

PRIMARY CONTROL MODE

USES HP FOR IDLE (LOW OR HIGH)

USES EPR ABOVE IDLE

ALTERNATE CONTROL MODE – LP RPM – TAKEOFF IN ALT IS PROHIBITED

REVERSE THRUST CONTROL MODE – LP RPM

“SOFT REVERSION” – EEC REVERTS TO LP

“HARD REVERSION” – CREW SELECTS LP

FLAPS > 22

Landing Gear Down

WOW in the AIR

REMAINS IN HIGH IDLE FOR 5 SEC AFTER LANDING

ELEC CONTROLLED

HYDRAULICALLY OPERATED

2 LOCKING LATCH MECHANISMS

MECHANICAL SPRINGS HOLD T/Rs SHUT, HYDRAULIC PRESSURE UNLOCKS THE HOOKS

MAX REVERSE – 65% LP DECREASES TO 55%

BETWEEN 60 AND 50 KTS (30 SEC MAX)

IDLE REVERSE BY 60 KTS ON LANDING

INOP T/R - ADD 600 FT TO THE ACC-STOP DIST.

IF A T/R DEPLOYS IN FLT THE ENG GOES TO IDLE, BUT THE THRROTE DOES NOT MOVE.

ENG OIL

R ENG OIL TANK – 15.5 PINTS (10.8 USABLE)

L ENG OIL TANK – 14.5 PINTS (10.8 USABLE)

LUBRICATES THE ROLLER/ THRUST BEARINGS AND GEARS

PRESSURE REGULATED (200 PSI)

TEMPERATURE CONTROLLED VIA FCOC

OIL PUMP DRIVEN BY THE ACCESSORY GEARBOX

FUEL-OIL HEAT EXCHANGER (FCOC), IDG FCOC

CHECK OIL BETWEEN 5-30MIN AFTER SHUTDOWN

LAST FLIGHT OF THE DAY

14 CUMULATIVE HRS

ENG OIL REPLACEMENT SYSTEM – 14 PINTS

OIL TANK FUEL QUANTITY TRANSIMITER OIL PUMP FCOC OIL TEMP TRANSUNDER OIL FILTER [DPI Bypasses AT 30 PSI] ENG BEARINGS, RADIAL DRIVE, AND ACC GEARBOX SCAVENGE PUMPS MAGNETIC CHIP DETECTORS OIL TANK...
**GULFSTREAM G450 Condensed Notes**

### TABLE OF CONTENTS

**HYDRAULIC**
- LEFT SYSTEM
  - 18.4 GAL
- RESERVOIR - STORAGE
  - 6.4 GAL (4.4 FOR LEFT, 2.0 FOR AUX)
- FULL SHOWN AT 2.8 GAL
  - MIN 2.75 GAL
- CLOSED BY FIRE HANDLE
  - (PUMP ISOL FROM RES)

- RIGHT SYSTEM
  - 7.5 GAL
- RESERVOIR
  - 1.5 GAL
- FULL SHOW AT 0.8 GAL
  - MIN 0.7 GAL
- CLOSED BY FIRE HANDLE
  - (PUMP ISOL FROM RES)

- ENG DRIVEN HYD PUMPS
  - 3000 PSI
  - 20.5 GAL/MIN – TAKEOFF
  - 14.5 GAL/MIN – FLT IDLE
  - 10.5 GAL/MIN – GND IDLE

- ELEC DRIVEN AUX HYD PUMP
  - 3000 PSI
  - 1 OR 2 GAL/MIN (ASC)

- L & R HEAT EXCHANGERS
  - IN THE L & R FUEL HOPPERS

- AUX PUMP
  - ARMED TO ACTIVATE WHEN L SYS/PTU PRESS <1500 PSI AND BRAKE >10^0, WOW – GND

- PTU
  - ARMED TO ACTIVATE WHEN L SYS PRESS <1500 PSI
  - 3000 PSI
  - 10 GAL/MIN

- PREVENTS AUTO PTU OPERATION
  - L HYD LOW (<1 GAL)
  - R HYD HOT (>104^0)

- HMG
  - Powered by L SYS or PTU
  - 5kVA, 115 V, 400 Hz AC

---

**FUEL**
- WING FUEL TANKS
  - 29500 LBS OF FUEL
  - 4370 GAL

- THE WING 3° DIHEDRAL FORMS A NATURAL GRAVITY FLOW TOWARDS THE WING ROOT

- OIL PRESS – MIN:
  - TAKEOFF / MCT / IDLE 30 PSI / 25 PSI / 17 PSI

- FQSC
  - “FUEL QUANTITY SIGNAL CONDITIONER”
  - PROCESSES SIGNALS FROM PROBES
  - REPORTS QUANTITY TO MAUs

- VENTILATION
  - FORWARD AND AFT VENT DUCT
  - VENT PLENUM
  - FLOAT-OPERATED VENT / RELIEF VALVES
  - NONRELIEVING FLOAT VENT VALVES
  - OVERBOARD LINE VENT INLET AND FLUSH VENT INLET/OUTLET (RAM AIR INLET)

- BOOST PUMPS
  - 16 PSI MIN
  - L/R MAINS
  - 1/10 MAIN DC

- FUEL SHUTOFF VALVES
  - CONTROLLED BY THE FIRE HANDLE (ESS DC)
  - FAIL FROZEN

- APU SHUTOFF VALVE
  - CONTROLLED BY THE APU MASTER (ESS DC)
  - FAIL FROZEN

- FILTERATION
  - GRAVITY FUELING SCREENS
  - BOOST PUMP INLETS
  - FUEL FILTER – PRIOR TO FUEL METERING UNITS (FMUs)
    - 5 PSI DIFFERENTIAL
    - 55 PSI DIFFERENTIAL

- FUEL BALANCING
  - CROSSFLOW (ESS DC)
  - INTERTANK (ESS DC)
  - 400 LB IMBALANCE
  - 2000 LB IMBALANCE

---

**ENG FUEL TEMP:**
- MINIMUM -40°C
- MAXIMUM / TRANSIENT +95°C / 130°C (15 MIN)
- DAT >110°F / 43.5°C

**OIL TEMP:**
- MIN FOR START -40°C
- MIN FOR THROTTLE ADVANCE -30°C
- MIN FOR TAKEOFF THRUST +20°C (QRH)
- MAX TEMP / TRANSIENT +105°C / +120°C (15 MIN)

---

**PLEASE EMAIL CORRECTIONS TO:** sefoltz@outlook.com

**REV 3.0, 201810**
**GULFSTREAM G450**

**Condensed Notes**

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>LEFT SYSTEM</th>
<th>RIGHT SYSTEM</th>
<th>AUX SYSTEM</th>
<th>1200 PSI</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCUM PRECHARGE - SHOCK ABSORPTION</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ELEVATOR</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STALL BARRIER</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AILERONS</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPOILERS (FLT &amp; GND)</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GND SPOILER SERVO</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RUDDER</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>YAW DAMP</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>L THRU REV</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R THRU REV</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PTU MOTOR</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FLAPS</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>LANDING GEAR &amp; DOORS</td>
<td>X</td>
<td>X</td>
<td>GND X</td>
<td></td>
</tr>
<tr>
<td>NOSEWHEEL STEERING</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BRAKES</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>HMG MOTOR</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PARK BRAKE PRESSURE</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAIN ENTRANCE DOOR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Landing Gear**

**Extension and Retraction (Norm)**
- LANDING GEAR HANDLE
- REQUIRES ELEC (ESS DC) TO OPERATE
- REQUIRES HYD (L SYS OR PTU) TO ACTUATE COMPONENTS
- SEQUENCING VALVES
- OPENS GEAR DOORS AND UPLOCKS
- PRESSURIZES THE HYD LINES WITH NITROGEN
- DRIVES THE GEAR DOWN AND LOCKED

**Nitrogen (Emer)**
- TOUCHDOWN PROTECTION – LOCKED WHEEL
- TOUCHDOWN/HYDROPLANE PROTECTION – HYD PRESS REMOVED FROM BRAKES TIL 30KTS SENSED OR 5 SECONDS OF GND CONTACT
- BRAKE SNUB – ON RETRACTION (FOR 3 SEC)
- NO PROTECTION BELOW 10 KTS
- WHEEL-SPRED TRANSDUCERS (70% DIFFERENTIAL) ELECTRONIC LOGIC
- SWITCH ON – BRAKES SYNOPTIC 3000 PSI SCALE
- SWITCH OFF – BRAKES SYNOPTIC 800 PSI SCALE

**Anti-Skid Brakes**
- ELECTRO MECHANICAL ACTUATION (L HYD / PTU SYS)
- TILLER – 80° TO 82° (<18 KTS)
- PEDAL STEERING – 7° (16° – TAILER MALFUNCTION)
- SHIMMY DAMPING

**Dispatch with Anti-Skid Inop Requires:**
- OPERATIVE GROUND SPOILERS
- FLAPS 20°
- COWL/WING ANTI-ICE OFF
- DRY RUNWAY

**Nosewheel Steering**
- ELECTRO CONTROLLED “STEER BY WIRE” – ELEC SIGNAL TO A TRANSDUCER
- HYDROMECHANICAL ACTUATION (L HYD / PTU SYS)
- TILLER – 80° TO 82° (<18 KTS)
- THROTTLE – 5° (15° – TAILER MALFUNCTION)
- PEDAL DAMPING

**Wow**
- WOW ON EACH MAIN
- FWC PRESUMPTIONS: FWC WARNS OF DISAGREEMENT
- AIR: RA >150 FEET
- GND: <50 KTS AIRSPEED
- COMBINED WOW

**Flight Controls**

**FLAPS** (0° TO 39°)
- FLAP TYPE FLAPS
- ELECTRICALLY CONTROLLED
- ELECTRICALLY POWERED/OPERATED
- ELEC MOTOR/GEARBOX & TORQUE TUBE
- PRIMARY CHANNEL – MAIN DC BUS
- SECONDARY CHANNEL (EMER STAB) – R STBY AC BUS (HMG)
- COMMAND SIGNALS:
  - PRIMARY – FLAP HANDLE
  - SECONDARY – YOKE ELEV TRIM (EMER STAB)

**FSCU**
- SIGNALS THE FLAP POWER DRIVE UNIT TO HYDRAULICALLY MOVE THE FLAPS
- SIGNALS 2 AC MOTORS TO DRIVE THE STAB
- Monitors: FLAP ASYMMETRY, FLAP/STAB MISCOMPARE, ETC...

**EMER STAB**
- STAB POSITION IS CONTROLLED WITH YOKE ELEC PITCH TRIM, “PULL IT DOWN”

**Spoilers**
- ROLL AUGMENTATION (2 OUTBOARD PANELS – 55° LIMIT)
- R ELEC POWERED/OPERATED
- FLT SPOILERS (6 PANELS – 26° LIMIT)
- GND SPOILERS (6 PANELS – 20°)
- ELECTRICALLY CONTROLLED
- HYDRAULICALLY OPERATED (L AND R HYD)
- DISABLED WITH “LATERAL CONTROL” OFF

**Table of Contents**

**Wheel Speed Sensors (749 KTS)**
- GROUND SPOILERS
- THRUST REVERSERS
- GEAR UP
- UNSAFE < 345 FT
- WARNING TLA ≤ 5° FLAPS < 22°
- GEAR HORN
- SILENCE AVAIL IF

**Dump Valve, If Pressed**
- ELEC MOVES THE DUMP SHUTTLE VALVE TO THE HYD FLUID POSITION FROM THE NITROGEN GAS EXTENSION POSITION
- REMOVES HYD PRESS FROM DE-SPIN SYSTEM. IF GEAR PINS ARE LEFT IN AND THE HANDLE IS RAISED THE DE-SPIN SYSTEM APPLIES BRAKE PRESSURE. TO RELEASE THE BRAKE PRESSURE BEFORE LANDING THE DUMP VALVE MUST BE PRESSURED.

**Park Brake**
- 1700 PSI MIN TO SET (3000 PSI RECOMMENDED)

**Please Email Corrections To:** sefoltz@outlook.com

**Rev 3.0, 201810**

**Page 9**
HOPS

“FORCELINKS”. HOPS CAN BE RESET WITH CBs ONLY

- BOTH L AND R HYD FLUID IS SHUTOFF TO BOTH AILERON AND BOTH SPOILER ACTUATORS (GND/FLT)

AILERON

- BOTH L AND R HYD FLUID IS SHUTOFF

ELEV

- BOTH L AND R HYD FLUID IS SHUTOFF

Rudder

- L AND/OR R HYD FLUID SHUTOFF DEPENDENT UPON WHICH SYSTEM EXPERIENCED THE HARDOVER

13 PNEUMATICS

- SOURCES OF PNEUMATIC AIR:
  - ENGINES (NORMALY 500°F, 40 PSI)
  - APU
  - EXTERNAL AIR

- TWO SEPARATE AND INDEPENDENT PNEUMATIC SYSTEMS
- CAPABLE OF OPERATING CONNECTED VIA ISOLATION VALVE

- BLEED AIR VALVES AKA “MANIFOLD PRESSURE REGULATING VALVES”

- BLEED AIR CONTROLLERS (BAC) (ESS DC BUS)

- PRESSURE TARGET

- TEMPERATURE TARGET (AT PRE-COOLER OUTPUT)

- ISOLATION VALVE

- PNEUMATIC USERS:

- VALVES

- SUBCOMPONENTS:

14 AIR CONDITIONING

- FUNCTIONS:

- CABIN AIRFLOW
- TEMP CONTROL
- EQUIPMENT COOLING

- CABIN AIRFLOW AND TEMP CONTROL

- MODULATED VIA AIR CONDITIONING CONTROLLERS (AAC) VIA PACKS VIA TRIM AIR VALVES AND DELIVERED VIA 3 ZONE DELIVERY DUCTS.
- MANUAL TEMP CONTROL: 35°F - 230°F
- AUTO TEMP CONTROL: 60°F - 90°F

- EQUIPMENT COOLING

- FANS FOR LEER AND REER (L/R PSUs)
  - HIGH SPEED <FL350, LOW SPEED >FL350
  - (PSU) FANS FOR TRUs;
  - LOW SPEED <FL350, HIGH SPEED >FL350

ECS PACKS

- PACK VALVE CLOSES WHEN:

- “ENERGIZED CLOSED, FAIL OPEN”

- RAM AIR

- COOLS THE PACK HEAT EXCHANGER
  - A FAN RUNS WHEN ON THE GND TO DRAW AIR IN
  - AIR EXHAUSTED THROUGH LOUVERS

- PNEUMATICALLY DRIVEN TURBINES
- DIFFUSERS
- HEAT EXCHANGERS

- PRIMARY AND SECONDARY “RADIATORS”
  - MAX TEMP 450°F

- WATER EXTRACTORS “NO SOCK”

- AIR IS CENTRIFUGALLY SPUN FORCING MOISTURE OUT
  - MOISTURE IS ALSO VAPORIZED VIA HEAT

- MANIFOLDS:

- COLD AIR MANIFOLD→
  - GASHERS
  - THREE DUCTS
  - OZONE SCRUBBERS
  - 400°F

- TRIM AIR VALVES

- MIX HOT AIR WITH COLD AIR
### Gulfstream G450 Condensed Notes

**Section 15: Pressurization**
- **Components:**
  - Cabin pressure controller (CPC) - REER
  - Cabin pressure control panel (CPCP)
  - Cabin pressure indicator panel
  - Thrust recovery outflow valve (TROV)
  - Cabin pressure relief valve

- **Pressurization Motors (3):**
  - AC motor #1
  - CPC channel 1 (mode: AUTO1) controlled in both auto and semi
  - ESS AC powered

- **Modes:**
  - Auto 7500'/300 FPM
  - ADS, FMS, MAU flight at 9 KTS OR PLA >150° LDG at -1000 descent
  - Semi
  - CREW PROG CPC and CREW SEL FLT/LDG
  - Manual

- **Cabin Pressure Relief Valve:**
  - Partially opens at 9.74 PSI
  - Fully opens at 9.94 PSI to 10.15 PSI
  - Neg diff pressure relief at -0.25 PSI

- **Limitations:**
  - Max diff - air: 9.94 PSI
  - Max diff - ground: 0.3 PSI

- **Cabin Pressure Low Trip Points:**
  - 8000'
  - LFE <7500'
  - 10000'
  - LFE 7500'-9500'
  - 14500'
  - LFE 9500'-14000'
  - 15500'
  - LFE >14000' (ASC 068)
  - 10000'
  - Manual mode

- **O2 Mask Drop:**
  - 14750' ± 250'
  - 15750' ± 250' (high alt switch, ASC 068)

- **EDM Armed:**
  - 2FL400 & autopilot engaged

- **EDM Mode Activated:**
  - "Cabin Low Press"
  - A/T engage - go to idle
  - GP speed - MAN 340 KTS
  - GP HDG - 90° left turn
  - GP ALT - 15000'
  - GP FLCH
  - Aircraft turn left 90°, descends at VMO/MMO, captures 15000'
  - GP speed - MAN 250 KTS

### Section 16: Ice and Rain
- **Protected Components:**
  - Wing leading edges
  - Eng cowl inlet leading edges
  - Windshields
  - Cabin windows
  - EVS windshields
  - Probe sensors
  - AOA probes
  - Pitot probes
  - TAT probes

- **Cowl Anti-Ice:**
  - SAT < 10°C, visible moisture
  - SAT < 1°C, visible moisture, GND OPS

- **Wing Anti-Ice:**
  - The bleed air controller controls the wing anti-ice control valves.
  - 12th stage air augment 7th stage air to provide 400°F (500°F S.E.) to the bleed air manifold.
  - The wing anti-ice control valves fail closed.
  - Cross-over Duct provides redundancy.
  - Leading edge target temp: 130°F.
  - Over temp protection at 180°F.

- **Cold Weather Operations:**
  - Reference aom ch 7 - all weather operations and procedures
  - Reference cold weather operations manual (CWOM)
  - ≤ 0°C consult CWOM - water draining
  - Altimetry: Qrh-ng alternate normals

- **Eng Start:**
  - Qrh-ng, alternate normals "cold weather start and operations"
  - -40°C: minimum oil temp for start
  - ≤ -10°C: oil temp - perform crank cycle (Qrh-ng). turn gen switches off for start.
  - Allow MAX LP and HP RPM for 45 sec prior to selecting fuel cont on

- **Cowl Anti-Ice (GND and FLT):**
  - Select on if sat ≤10°C (50°F) with visible moisture / contaminated surface conditions

- **Eng Icing Notes:**
  - Can occur below 8°C
  - As air is drawn into the engine the temperature drops and the moisture condenses into droplets. these droplets can strike metal parts and freeze
  - Ice shedding procedure: reduce power lever (one at a time) to idle for 5 sec, advance to 85% LP for 2 sec, then return to normal setting.
TAXI:
- -30°C: MINIMUM OIL TEMP FOR TAXI
- TAXI WITH FLAPS UP
- HEAT BRAKES TO 100°C. THIS DISSIPATES MOISTURE FROM THE BRAKES; PREVENTS FROZEN BRAKES ON LANDING
- WHILE STOPPED EXERCISE BRAKES TO 3000 PSI – DON’T SET PARKING BRAKE FOR EXTENDED PERIODS
- AVOID USING REV THRUST IF POSSIBLE
- MIN OIL TEMP FOR TAKEOFF IS +20°C
- PERFORM CONTAMINATION CHECK IF OAT <1°C PERFORM ENG RUN UP (<60 MIN INTERVALS):
  - LP RPM: ...85%, PAUSE 1 MIN, RETURN TO IDLE

TAKEOFF PLANNING:
- DO NOT USE REDUCED (FLEX) THRUST
- CONSIDER USING MIN V1
- PRIOR TO TAKEOFF PERFORM ENG ICE CLEARING PROCEDURE:
  - LP RPM: ..................85%, PAUSE 2 SEC
  - ENG OPERATION: ..................CHECK NORMAL
  - TAKEOFF POWER: ..................SET

AFTER TAKEOFF:
- DELAY GEAR RETRACTION, IF PRACTICAL
- CONSIDER CYCLING THE GEAR
- WARM WHEEL WELLS USING WING ANTI-ICE

NOTE: PERIODICALLY DISENGAGE AUTOPILOT TO CHECK TRIM AND HANDLING

MINIMUM MANEUVERING SPEEDS:
- FLAPS 0°: 200 KCAS
- FLAPS 10°: 180 KCAS
- FLAPS 20°: 160 KCAS
- FLAPS 39°: VREF + 5 KTS

PITOT SYSTEM ICING:
- CRUISE AOA: 0.2-0.3 (3-5° PITCH)
- APPROACH AOA: 0.4 (3-5° PITCH)
- VREF AOA: 0.5 (3-5° PITCH)

PITOT SYSTEM AND AOA VAN ICING:
- USE GPS GROUND SPEED

BEFORE LANDING:
- EXTEND LANDING GEAR EARLIER THAN NORMAL
- SELECT ANTI-SKID OFF, PERFORM SEVERAL BRAKE APPLICATIONS TO 3000 PSI, THEN SELECT ANTI-SKID ON

LANDING:
- PERFORM FIRM TOUCHDOWN
- CONSIDER PULLING SPEED BRAKE HANDLE AS A BACKUP TO THE AUTO GND SPLR SYSTEM
- LOWER NOSE IMMEDIATELY
- APPLY MODERATE-TO-FIRM BRAKE PRESSURE SMOOTHLY AND SYMMETRICALLY
- MAINTAIN CONSTANT BRAKE PRESSURE ALLOWING THE ANTI-SKID TO WORK
- BE PREPARED FOR DOWNWIND DRIFT
- NO TURNS UNTIL VERY SLOW TAXI SPEED IS ATTAINED

OXYGEN:
- OXYGEN BOTTLES (2)
- 1800 PSI NORMAL, 1500 PSI MINIMUM
- 230 CUBIC FEET TOTAL
- LOCATED UNDER THE FLOORBOARDS
- PRESSURE REGULATORS REDUCE PRESSURE TO 55-60 PSI
- OVERBOARD DISCHARGE LINE (GREEN DISK)
  - OVERPRESSURE
  - OVERTEMPERATURE
- CREW/PAX O2 VALVE LEVER - ON/OFF
- PAX O2 SYSTEM CONTROL KNOB - AUTO/OFF/MAN
- THE MASKS DEPLOY AT 14750' ± 250' (15750' ± 250’ – ASC 068) AND FLOWS UNTIL THE CABIN REACHES 13750 ± 250’
- QUICK-DONNING EROS O2 MASKS
  - N: DILUTED
  - 100%
- EMERGENCY OXYGEN ROTARY KNOB – POSITIVE PRESSURE FLOW
- AUTO POSITIVE PRESSURE FLOW AT FL350. CERTIFIED TO FL400.
**Gulfstream G450 Condensed Notes**

<table>
<thead>
<tr>
<th>TABLE OF CONTENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PLANEVIEW AVIONICS</strong></td>
</tr>
<tr>
<td>• HONEYWELL PRIMUS EPIC PLANEVIEW AVIONICS</td>
</tr>
<tr>
<td>▪ LCDs (4) – DUs</td>
</tr>
<tr>
<td>▪ SFD</td>
</tr>
<tr>
<td>▪ EBDI</td>
</tr>
<tr>
<td>▪ DCs (2)</td>
</tr>
<tr>
<td>▪ CCDs (2)</td>
</tr>
<tr>
<td>• MAUs (3)</td>
</tr>
<tr>
<td>▪ COMPUTERS</td>
</tr>
<tr>
<td>▪ RECEIVE AND TRANSMIT DATA VIA ASCBs</td>
</tr>
<tr>
<td>▪ MAU 1 &amp; 3 – LEER, MAU 2 – REER</td>
</tr>
<tr>
<td>▪ PLUG IN CARDS (16 IN EACH MAU) – LINE REPLACEABLE UNITS/MODULES</td>
</tr>
<tr>
<td>▪ EACH MAU HAS DUAL PWR SUPPLIES (A&amp;B)</td>
</tr>
<tr>
<td>▪ MAU 1A: L ESS DC &amp; R MAIN DC</td>
</tr>
<tr>
<td>▪ MAU 1B: R ESS DC &amp; L MAIN DC</td>
</tr>
<tr>
<td>▪ MAU 2A: R MAIN DC &amp; L MAIN DC</td>
</tr>
<tr>
<td>▪ MAU 2B: R ESS DC &amp; L MAIN DC</td>
</tr>
<tr>
<td>▪ MAU 3A: L MAIN DC &amp; R MAIN DC</td>
</tr>
<tr>
<td>▪ MAU 3B: L ESS DC &amp; R MAIN DC</td>
</tr>
<tr>
<td>• MAU MODULES</td>
</tr>
<tr>
<td>▪ AIRCRAFT PERSONALITY</td>
</tr>
<tr>
<td>▪ CONTROL MODULES</td>
</tr>
<tr>
<td>▪ GP</td>
</tr>
<tr>
<td>▪ WEATHER CONTROLLER</td>
</tr>
<tr>
<td>▪ TCAS (TA &lt; 500’)</td>
</tr>
<tr>
<td>▪ MCDU</td>
</tr>
<tr>
<td>▪ TONE, MWS</td>
</tr>
<tr>
<td>• ACTUATOR MODULES</td>
</tr>
<tr>
<td>▪ AP/FD, YD, AT</td>
</tr>
<tr>
<td>▪ TRIM</td>
</tr>
<tr>
<td>▪ (PITCH, AUTO, MACH)</td>
</tr>
<tr>
<td>▪ STALL PROTECTION</td>
</tr>
<tr>
<td>• AGM MODULES</td>
</tr>
<tr>
<td>▪ PFD</td>
</tr>
<tr>
<td>▪ ND</td>
</tr>
<tr>
<td>▪ CAS</td>
</tr>
<tr>
<td>▪ SYSTEMS</td>
</tr>
<tr>
<td>▪ WEATHER</td>
</tr>
<tr>
<td>▪ CAMERA</td>
</tr>
<tr>
<td>▪ ANNUNCIATION</td>
</tr>
<tr>
<td>• GPS MODULES (2)</td>
</tr>
<tr>
<td>• CMC MODULES</td>
</tr>
<tr>
<td>• DATABASE MODULES</td>
</tr>
<tr>
<td>▪ NAV (IN EACH AGM)</td>
</tr>
<tr>
<td>▪ TERRAIN</td>
</tr>
<tr>
<td>• AGMs (4)</td>
</tr>
<tr>
<td>▪ CREATE AND DISPLAY GRAPHICS ON DUs</td>
</tr>
<tr>
<td>▪ AGMs ARE IN EACH MAU</td>
</tr>
<tr>
<td>▪ MAU 1 &amp; 2 HAVE 1 AGM EACH</td>
</tr>
<tr>
<td>▪ MAU 3 HAS 2 AGMs</td>
</tr>
<tr>
<td>▪ CONTROLLED BY “DISPLAY SYSTEM CONTROL” SWITCHES (4) (OPERATE ON THE GND ONLY)</td>
</tr>
<tr>
<td>▪ OPERATES AUTOMATICALLY WHEN AIRBORNE</td>
</tr>
<tr>
<td>▪ SYS LOGIC BORROWS FROM DUs/AGMs WHEN FAILURES OCCUR</td>
</tr>
<tr>
<td>• DU POWER SOURCES</td>
</tr>
<tr>
<td>▪ DU 1</td>
</tr>
<tr>
<td>▪ L ESS DC</td>
</tr>
<tr>
<td>▪ DU 2</td>
</tr>
<tr>
<td>▪ L MAIN DC</td>
</tr>
<tr>
<td>▪ DU 3</td>
</tr>
<tr>
<td>▪ R MAIN DC</td>
</tr>
<tr>
<td>▪ DU 4</td>
</tr>
<tr>
<td>▪ R ESS DC</td>
</tr>
<tr>
<td>• IRU (3) LASER RING GYROS</td>
</tr>
<tr>
<td>▪ ATTITUDE INFO FROM GRAVITY</td>
</tr>
<tr>
<td>▪ TRUE NORTH FROM EARTH’S TRUE EAST ROTATION</td>
</tr>
<tr>
<td>▪ UPDATED BY GPS (2)</td>
</tr>
<tr>
<td>▪ PRIMARY PWR IF INPUT &gt; 18 V DC &lt; 36 V DC</td>
</tr>
<tr>
<td>▪ SECONDARY PWR (E-BATTS) IF PRIMARY PWR &lt; 18 V DC</td>
</tr>
<tr>
<td>▪ STATIONARY ALIGNMENT (5-17 MIN)</td>
</tr>
<tr>
<td>▪ ALIGN IN MOTION (15-30 MIN) – REQUIRES GPS INPUT, TURNS HELP</td>
</tr>
<tr>
<td>▪ AUTO REALIGN – UPDATES WHEN NOT IN MOTION</td>
</tr>
<tr>
<td>▪ HYBRID IRs – GPS, H IRs, DME/DME, VOR/DME, IRS</td>
</tr>
<tr>
<td>• AIR DATA SYSTEM (ADS)</td>
</tr>
<tr>
<td>• AUTOMATIC SENSOR REVERSION</td>
</tr>
<tr>
<td>▪ IN FLIGHT ONLY (&gt;60 KTS)</td>
</tr>
<tr>
<td>• MONITOR AND WARNING SYSTEM (MWS)</td>
</tr>
<tr>
<td>▪ FWCs (2)</td>
</tr>
<tr>
<td>▪ WITHIN 2 MAUs</td>
</tr>
<tr>
<td>• PFDs</td>
</tr>
<tr>
<td>▪ PLI</td>
</tr>
<tr>
<td>▪ THROTTLE DIRECTOR</td>
</tr>
<tr>
<td>▪ AIRSPEED TREND VECTOR</td>
</tr>
<tr>
<td>▪ ALTITUDE TREND VECTOR</td>
</tr>
<tr>
<td>• CCDs</td>
</tr>
<tr>
<td>▪ FUNCTIONS THAT THE CCD DOES THAT THE DC CAN’T DO:</td>
</tr>
<tr>
<td>• WARNING SYSTEM</td>
</tr>
<tr>
<td>▪ WARNINGS (RED, TRIPLE CHIME)</td>
</tr>
<tr>
<td>▪ CAUTION (AMBER, DOUBLE CHIME)</td>
</tr>
<tr>
<td>▪ ADVISORY (BLUE, SINGLE CHIME)</td>
</tr>
<tr>
<td>• AOA GUIDE</td>
</tr>
<tr>
<td>▪ CRUISE</td>
</tr>
<tr>
<td>▪ APPROACH</td>
</tr>
<tr>
<td>▪ VREF</td>
</tr>
<tr>
<td>▪ 0.2 TO 0.3 AOA (3° TO 5° PITCH)</td>
</tr>
<tr>
<td>• VSD</td>
</tr>
<tr>
<td>▪ ACTUAL FLIGHT PATH ANGLE</td>
</tr>
<tr>
<td>▪ SPEED PREDICTION CIRCLE</td>
</tr>
<tr>
<td>• AUTO SPEEDS</td>
</tr>
<tr>
<td>▪ V2 ON TAKEOFF</td>
</tr>
<tr>
<td>▪ AT 400’ WITH FLAPS UP AND FLCH – 200 KTS</td>
</tr>
<tr>
<td>▪ AT 1500’ V1, VR, V2 DISAPPEAR</td>
</tr>
<tr>
<td>▪ AT 2500’/ + 4NM – 250 KTS</td>
</tr>
<tr>
<td>▪ AT 10000’ – 300/ 75</td>
</tr>
<tr>
<td>• DC VREF</td>
</tr>
<tr>
<td>▪ FLAP HANDLE POSITION</td>
</tr>
<tr>
<td>▪ CURRENT AIRCRAFT WEIGHT</td>
</tr>
<tr>
<td>• FLAP</td>
</tr>
<tr>
<td>• WARNING INHIBIT</td>
</tr>
<tr>
<td>• WARNING SYSTEM</td>
</tr>
<tr>
<td>• WARNING INHIBIT</td>
</tr>
<tr>
<td>▪ GEAR MUST BE DOWN</td>
</tr>
<tr>
<td>▪ ON TAKEOFF – COMES OFF AT 400’</td>
</tr>
<tr>
<td>▪ AFTER LANDING – MUST BE Deselected BY CREW</td>
</tr>
<tr>
<td>▪ INHIBITS AMBER AND BLUE CAS CHIMES – NOT CAS MSG</td>
</tr>
<tr>
<td>• TERRAIN INHIBIT</td>
</tr>
<tr>
<td>▪ SELECT WITHIN 15 NM OF AN AIRPORT THAT:</td>
</tr>
<tr>
<td>▪ HAS NO PUBLISHED IAP</td>
</tr>
<tr>
<td>▪ &lt; 3500’ RUNWAY</td>
</tr>
<tr>
<td>▪ NOT IN TERRAIN DATABASE</td>
</tr>
<tr>
<td>▪ IF OME ALTIMETER IS BEING USED IN NON WGS-84 COUNTRIES</td>
</tr>
<tr>
<td>• WINDSHERE WARNING</td>
</tr>
<tr>
<td>▪ TAKEOFF</td>
</tr>
<tr>
<td>▪ APPROACH</td>
</tr>
<tr>
<td>▪ MISSED APPROACH</td>
</tr>
<tr>
<td>• TERRAIN INHIBIT</td>
</tr>
<tr>
<td>▪ SELECT WITHIN 20 NM</td>
</tr>
<tr>
<td>▪ 5 NM INNER RING</td>
</tr>
<tr>
<td>▪ 10 NM OUTER RING</td>
</tr>
<tr>
<td>• WINDSHERE WARNING</td>
</tr>
<tr>
<td>▪ GND TO 1500’ AGL</td>
</tr>
<tr>
<td>▪ 1500’ TO 100’ AGL</td>
</tr>
<tr>
<td>▪ TO 1500’ AGL</td>
</tr>
</tbody>
</table>

**Please email corrections to:** sefoltz@outlook.com

**Rev 3.0, 201810**
**GULFSTREAM G450 Condensed Notes**

**AUTOPILOT**
- MIN ENGAGE HEIGHT
- MIN DISENGAGE HEIGHT
- 200 FT
- PRECISION APPROACH - 60 FT
- NON-PRECISION - 50 FT < MDA
- LNAV/VNAV – AT DA

**COLD WEATHER**
- 65°F (18°C)
- MIN TEMP FOR:
  - DUs, IRUs, EERs
  - SFD (CB – POP E-9)
  - EBDI (CB – COP POP D-9)
- 50°F (10°C)
- 32°F (0°C)
- 14°F (-10°C)
- 5°F (-15°C)
- PURGE WATER IF AIRCRAFT IS LEFT UNHEATED > 90 MIN
- -4°F (-20°C)
- -20°F (-28°C)
- -40°F (-40°C)
- REMOVE BATTs
- REMOVE LIFE RAFTS
- MIN FOR ENG START

**TO/GA PRESSED:**
- HEAD UP GUIDANCE
- COMMANDS:
  - WINGS LEVEL
  - INITIALLY 8° PITCH
  - THEN V2 TO V2 + 10
  - UNTIL FLAP CHANGE
- ONE ENG INOP
  - INITIALLY 8° PITCH
  - THEN V2 TO V2 + 10 UNTIL 1500’ AGL
  - AT 1500’ AGL – VSE

**TO (TAKEOFF) VERTICAL MODE**
- INITIALLY 8° PITCH
- THEN V2 TO V2 + 10 UNTIL 1500’ AGL
- AT 1500’ AGL – VSE

**TO (TAKEOFF) PERFORMANCE MODE**
- ARMED WHEN
  - EPR TARGET (RATED/FLEX)
  - V2 IN GP
  - ISOL VALVE IS CLOSED
- ENGAGE WHEN
  - EPR > 1.05
  - AIRSPEED < 60 KTS
  - A/T ENGAGE PRESSED

**FLIGHT MODE ANNUNCIATIONS:**
- LATERAL PERFORMANCE
- VERTICAL
- FMA, HDG, LOC, VOR, ETC.
- IAS, FLCH, GA, HOLD, ETC.
- ALT, ASEL, FPA, GA, ETC.

**FLCH PERFORMANCE MODE**
- IAS OR MACH MODE (SPEED HOLD MODE)
- FOR ALT CHANGE > 6000’
  - CLIMB THRUST
  - IDLE THRUST
- ENGAGES AT 60 KTS
- DISENGAGES AT 400’
- THE AUTOTHROTTLE DRIVE MOTORS DE-ENERGIZE AND THE CREW CAN EASILY MOVE THROTTLES

**HOLD PERFORMANCE MODE**
- ENGAGES AT 60 KTS
- DISENGAGES AT 400’
- THE AUTOTHROTTLE DRIVE MOTORS DE-ENERGIZE AND THE CREW CAN EASILY MOVE THROTTLES

**RADAR - HONEYWELL PRIMUS 880**
- WHILE REFUELING
- DIST FROM FUELING
- DIST FROM PERSONNEL
- TO TURN ON (GND)
- NEVER
- 300’
- 49’
- STAB 4 TIMES IN 3 SEC

**AUTOMATIC FLIGHT CONTROL SYSTEM (AFCS)**
- TWO CHANNELS (1 & 2)
  - EACH CHANNEL HAS ITS OWN FLIGHT GUIDANCE CONTROL SYSTEM (FGCS)
  - EACH FGCS HAS ITS OWN:
    - AUTOPILOT
    - FLIGHT DIRECTOR
    - AUTOTHROTTLE
    - YAW DAMPER
    - STALL PROTECTION
  - AFCS INPUTS:
    - FMS, IRS, & GP

**FLIGHT MODE ANNUNCIATIONS:**
- LATERAL PERFORMANCE
- VERTICAL
- FMA, HDG, LOC, VOR, ETC.
- IAS, FLCH, GA, HOLD, ETC.
- ALT, ASEL, FPA, GA, ETC.

**FLGHT MODE**
- LATERAL PERFORMANCE
- VERTICAL
- FMA, HDG, LOC, VOR, ETC.
- IAS, FLCH, GA, HOLD, ETC.
- ALT, ASEL, FPA, GA, ETC.

**FLCH PERFORMANCE MODE**
- IAS OR MACH MODE (SPEED HOLD MODE)
- FOR ALT CHANGE > 6000’
  - CLIMB THRUST
  - IDLE THRUST
- ENGAGES AT 60 KTS
- DISENGAGES AT 400’
- THE AUTOTHROTTLE DRIVE MOTORS DE-ENERGIZE AND THE CREW CAN EASILY MOVE THROTTLES

**HOLD PERFORMANCE MODE**
- ENGAGES AT 60 KTS
- DISENGAGES AT 400’
- THE AUTOTHROTTLE DRIVE MOTORS DE-ENERGIZE AND THE CREW CAN EASILY MOVE THROTTLES

**TO (TAKEOFF) PERFORMANCE MODE**
- ARMED WHEN
  - EPR TARGET (RATED/FLEX)
  - V2 IN GP
  - ISOL VALVE IS CLOSED
- ENGAGE WHEN
  - EPR > 1.05
  - AIRSPEED < 60 KTS
  - A/T ENGAGE PRESSED

**TO (TAKEOFF) VERTICAL MODE**
- INITIALLY 8° PITCH
- THEN V2 TO V2 + 10
- UNTIL FLAP CHANGE
- ONE ENG INOP
  - INITIALLY 8° PITCH
  - THEN V2 TO V2 + 10 UNTIL 1500’ AGL
  - AT 1500’ AGL – VSE

**GA VERTICAL MODE**
- AVAIL:
  - < 16500’ MSL
  - < 200 KTS
  - < 2000’ AGL

**TO/GA PRESSED:**
- COMMANDS:
  - WINGS LEVEL
  - INITIALLY 8° PITCH
  - THEN FLAP SPEED SCHEDULE UP TO 17° PITCH LIMIT

**GP - BANK**
- HIGH BANK
- LOW BANK
- 28° (AUTO < 28500’)
- 17° (AUTO > 29500’)

**PFD-CMD**
- L & R LIT
- ILS APP < 1200’ AGL

**HUD**
- BOX FOR EVS OPERATIONS
- FLIR
- EVS
- AUTO, H OR L

**AIRPORT LINES / EXTENDED CENTERLINE**
- APPEAR AT 20000’ RA
- DISAPPEAR AT 325 AGL
- DEPicts 800/8000’ RWY

**RUNWAY LINES / EXTENDED CENTERLINE**
- APPEAR AT 350° RA
- DISAPPEAR AT 60’ RA
- DEPicts 150/8000’ RWY
- 1000’ AIM POINT LINE
- < 100’ RA

**Please email corrections to: sefoltz@outlook.com**

**Notes:**
- AOM ➔ CHAPTER 6 GROUND/FLIGHT CHARACTERISTICS AND PROCEDURES

**GULFSTREAM HAS ADVISED THAT THE INITIAL, CRITICAL PILOT RESPONSES FOR THE FOLLOWING EMERGENCY PROCEDURES SHOULD BE PERFORMED PROMPTLY WITHOUT REFERENCE TO A CHECKLIST:  

**IMMEDIATE ACTION:**
- REJECTED TAKEOFF
- ENGINE FAILURE/FIRE AFTER V1
- EMERGENCY DESCENT
- RAPID DECOMPRESSION
- AUTOPILOT OR AUTOTHROTTLE UNCOMMANDED DISCONNECT
- ENGINE EXCEEDANCE
- OVERSPEED
- STALL PROTECTION/STALL WARNING ACTIVATION
- FLIGHT CONTROL JAMS
- TOTAL LOSS OF BRAKING
- EGPWS ALERT
- WINDSHEAR ALERT
- TCAS ALERT
- IN ADDITION, PILOTS ARE EXPECTED TO DON OXYGEN MASKS PROMPTLY WHEN APPROPRIATE (e.g. WHEN SMOKE IS DETECTED)
**NORMAL START, RIGHT ENG:**  
- BLED AIR PRESS  
- START MASTER-PUSH  
- R ENG START-PUSH  
- VERIFY LP (2%) AND HP (20%)  
- R FUEL CNTL – RUN  
- AT 44% HP  
- MIN ENG IDLE  
- MIN OIL PRESS  
- HYD PRESSURES  
- "SINGLE RUDDER"  
- 0.3,000  

**NOTE:** RESIDUAL TGT IS < 200ºC, IF NOT, PERFORM A CRANK CYCLE.  
**NOTE:** WITH CYCLE.

- SELECTING RUN.  
- CRANKING RPM AND ACHIEVE MAX TAILWINDS > 10 KTS,  
- NOTE: WITH CYCLE.

- THE 45

- NOTE: WHEN ROLLING THROUGH CONFIGURATION

- APPROACH TO STALL - CLEAN  
  - SET MAN SPEED 160 KTS  
  - BRIEF "STOP TRIM AT VREF" & "CALL 140"  
  - IDLE THRUST  
  - STOP TRIMMING AT VREF

**STALL WARNING ACTIVATION**  
**IMMEDIATE ACTION:**
  - ANNOUNCE "STALL"  
  - REDUCE AOA, SELECT TO/GA POWER  
  - ROLL, UNLOAD THE WING  
  - ATTITUDE – TO RECOVER TO LEVEL FLIGHT  
  - DURING RECOVERY CALL "SYNC HEADING"

- APPROACH TO STALL – TAKEOFF CONFIGURATION  
  - FLAPS 20º  
  - SET HEADING CHANGE  
  - IDLE THRUST  
  - STOP TRIMMING AT VREF

**STALL WARNING ACTIVATION**  
**IMMEDIATE ACTION:**
  - ANNOUNCE "STALL"  
  - REDUCE AOA, SELECT TO/GA POWER  
  - ROLL, UNLOAD THE WING  
  - ATTITUDE – TO RECOVER TO LEVEL FLIGHT  
  - DURING RECOVERY CALL "SYNC HEADING"

- APPROACH TO STALL – LANDING CONFIGURATION  
  - GEAR DOWN, FULL FLAPS  
  - VERTICAL SPEED -700 FPM  
  - IDLE THRUST  
  - STOP TRIMMING AT VREF

**STALL WARNING ACTIVATION**  
**IMMEDIATE ACTION:**
  - ANNOUNCE "STALL"  
  - REDUCE AOA, SELECT TO/GA, CALL "FLAPS 20"  
  - ROLL, UNLOAD THE WING  
  - AT POSITIVE RATE, CALL "GEAR UP, HDG, FLCH"  
  - AT 160 KTS, CALL "FLAPS UP"

**NORMAL TAKEOFF**  
- ROTATE TO 14º  
- PM, “POSITIVE RATE”  
- PM, “400 FT”  
- PF, “GEAR UP”  
- PF, “FLAPS UP, FLCH”

- STEEP TURNS  
  - 1500’, 250 KTS  
  - DISENGAGE 1. HDG  
  - 2. A/T  
  - 3. A/P

**NOTE:** WHEN ROLLING THROUGH ±32º BANK, AN INVERTED TRIANGLE APPEARS AT THE 45º Position. IT DISAPPEARS FROM VIEW AT ±30º.

**IMMEDIATE ACTION:**
  - REDUCE PITCH WITH BANK / INCREASE PITCH WITH A/P DISC  
  - CALL "JAMMED STABILIZER CHECKLIST"

**RUNAWAY PITCH TRIM**  
**IMMEDIATE ACTION:**
  - A/P DISC – PUSH AND HOLD  
  - PITCH TRIM – DISSINGAGE  
  - A/P DISC – RELEASE  
  - CALL "RUNAWAY PITCH TRIM CHECKLIST"

**EMERGENCY DESCENT**  
**IMMEDIATE ACTION:**
  - EDM ARMED:  
    - 2fl400 &  
    - AUTOPilot ENGAGED
  - EDM PROCEDURE:  
    - CABIN PRESSURE LOW
  - NOTE: THE GUIDANCE PANEL WILL BE LOCKED UNTIL THE ADM HAS BEEN TERMINATED BY DISCONNECTING THE AUTOPilot.
  - NOTE: CPC CHANNELS CAN BE SWITCHED BY SELECTING MANUAL AND RETURNING TO AUTO.
  - NOTE: DO NOT REMOVE OXYGEN MASK UNTIL BELOW 10,000FT – THE AIRCRAFT WILL LEVEL AT 15,000FT.

**PERFORM EMERGENCY DESCENT:**
  - EDM DUTIES: "MASKS MASKS!"  
    - OXYGEN MASK: DONNING OXYGEN MASKS:  
      - REMOVE GLASSES  
      - REMOVE HEADSET, PUT THEM AROUND YOUR NECK  
      - DON OXYGEN MASK, SELECT MIC TO MASK  
      - REPLACE HEADSET OR SELECT SPEAKER ON  
  - EDM ARMED:  
    - GEAR UP  
    - FLCH  
    - AIRCRAFT TURNS LEFT 90º, DESCENDS AT VMO/MMO, LEVELS 15000’
    - GP SPEED – MAN 250 KTS
  - NOTE: DON'T REMOVE OXYGEN MASK UNTIL BELOW 10,000 FT – THE AIRCRAFT WILL LEVEL AT 15,000 FT.
  - PM DUTIES: "MASKS MASKS!"  
    - OXYGEN MASK: DONNING OXYGEN MASKS:  
      - REMOVE GLASSES  
      - REMOVE HEADSET, PUT THEM AROUND YOUR NECK  
      - DON OXYGEN MASK, SELECT MIC TO MASK  
      - REPLACE HEADSET OR SELECT SPEAKER ON  
  - EDM ARMED:  
    - GEAR UP  
    - FLCH  
    - AIRCRAFT TURNS LEFT 90º, DESCENDS AT VMO/MMO, LEVELS 15000’
    - GP SPEED – MAN 250 KTS
  - NOTE: DON'T REMOVE OXYGEN MASK UNTIL BELOW 10,000 FT – THE AIRCRAFT WILL LEVEL AT 15,000 FT.

**IMMEDIATE ACTION:**
  - PF DUTIES: "MASKS MASKS!"  
    - OXYGEN MASK: DONNING OXYGEN MASKS:  
      - REMOVE GLASSES  
      - REMOVE HEADSET, PUT THEM AROUND YOUR NECK  
      - DON OXYGEN MASK, SELECT MIC TO MASK  
      - REPLACE HEADSET OR SELECT SPEAKER ON  
  - EDM ARMED:  
    - GEAR UP  
    - FLCH  
    - AIRCRAFT TURNS LEFT 90º, DESCENDS AT VMO/MMO, LEVELS 15000’
    - GP SPEED – MAN 250 KTS
  - NOTE: DON'T REMOVE OXYGEN MASK UNTIL BELOW 10,000 FT – THE AIRCRAFT WILL LEVEL AT 15,000 FT.

- APPROACH TO STALL - CLEAN  
  - SET MAN SPEED 160 KTS  
  - BRIEF "STOP TRIM AT VREF" & "CALL 140"  
  - IDLE THRUST  
  - STOP TRIMMING AT VREF

**STALL WARNING ACTIVATION**  
**IMMEDIATE ACTION:**
  - ANNOUNCE "STALL"  
  - REDUCE AOA, SELECT TO/GA POWER  
  - ROLL, UNLOAD THE WING  
  - ATTITUDE – TO RECOVER TO LEVEL FLIGHT  
  - DURING RECOVERY CALL "SYNC HEADING"

- APPROACH TO STALL – TAKEOFF CONFIGURATION  
  - FLAPS 20º  
  - SET HEADING CHANGE  
  - IDLE THRUST  
  - STOP TRIMMING AT VREF

**STALL WARNING ACTIVATION**  
**IMMEDIATE ACTION:**
  - ANNOUNCE "STALL"  
  - REDUCE AOA, SELECT TO/GA POWER  
  - ROLL, UNLOAD THE WING  
  - ATTITUDE – TO RECOVER TO LEVEL FLIGHT  
  - DURING RECOVERY CALL "SYNC HEADING"

- APPROACH TO STALL – LANDING CONFIGURATION  
  - GEAR DOWN, FULL FLAPS  
  - VERTICAL SPEED -700 FPM  
  - IDLE THRUST  
  - STOP TRIMMING AT VREF

**STALL WARNING ACTIVATION**  
**IMMEDIATE ACTION:**
  - ANNOUNCE "STALL"  
  - REDUCE AOA, SELECT TO/GA, CALL "FLAPS 20"  
  - ROLL, UNLOAD THE WING  
  - AT POSITIVE RATE, CALL "GEAR UP, HDG, FLCH"  
  - AT 160 KTS, CALL "FLAPS UP"
**WINDSHEAR / CFIT ESCAPE**

QRH: SUPPLEMENTAL DATA, 5-7 WINDSHEAR / MICROBURST
QRH: RED TAB, MA-9 AND AMBER TAB, MB-54 - OTHER WARNING ANNOUNCEMENTS

---

**IMMEDIATE ACTION:**
- DISCONNECT AUTOPILOT AND AUTOTHRUSTS
- MAX POWER (ENSURE SPEED BRAKES ARE RETRACTED)
- 3° TO 4° PER SECOND ROTATION
- PITCH UP TO 25° OR PLI
- SPD, VREF - 20 KTS OR PLI
- NO CONFIG CHANGES TILL CLEAR

**NOTE:** A PITCH ATTITUDE OF 25 DEG HAS BEEN DEMONSTRATED AT MAX LDNG WT WITH FULL FLAPS.

**POST WINDSHEAR:**
- CALL "MAN SPEED 250, FLCH"
- ENGAGE AUTOTHRUSTS

---

**TCAS ALERT**

**IMMEDIATE ACTION:**
- TCS – PRESS AND HOLD
- PITCH – FLY-TO-BOX
- ATC – NOTIFY "TCAS RA"
- WHEN CLEAR, "RETURNING TO ASSIGNED ALTITUDE"

---

**GO AROUND – TWO ENGINE**

*WITH ENHANCED NAV*

- CALL, "GO AROUND, FLAPS 20"
- SELECT TO/GA, PITCH INTO FD
- AT POSITIVE RATE, CALL "GEAR UP, SET UP THE MISSED APPROACH"

PM SELECTIONS:
1. GEAR UP
2. GROUND SPOILERS OFF
3. SET/CONFIRMS MISSED APPROACH ALT
4. CONFIRMS PF GP IN FMS
5. SELECTS MAN SPEED 200 KTS
6. SELECTS FLCH

*NOTE:* WHEN GA MODE IS SELECTED WITH THE ACTIVE LATERAL MODE BEING LNAV, THE LATERAL MODE DOES NOT TRANSITION TO WINGS LEVEL/HEADING HOLD; IT REMAINS IN LNAV.

**NOTE:** A FULLY COUPLED AUTO MISSED APPROACH IS POSSIBLE WITH ONLY – "TOGA, FLAPS 20, POSITIVE RATE, GEAR UP, 400', FLAPS UP" – EVERYTHING ELSE WORKS AUTOMATICALLY, AS LONG AS THE MISSED APPROACH ALTITUDE IS SET IN THE ALTITUDE PRESELECT.

---

**GO AROUND – SINGLE ENGINE**

*WITH ENHANCED NAV*

- CALL, "GO AROUND, FLAPS 20"
- SELECT TO/GA, PITCH INTO FD
- AT POSITIVE RATE, CALL "GEAR UP, SET UP THE MISSED APPROACH"

PM SELECTIONS:
1. GEAR UP
2. GROUND SPOILERS OFF
3. SET/CONFIRMS MISSED APPROACH ALT
4. CONFIRMS PF GP IN FMS
5. SELECTS MAN SPEED (NOT 200 KTS)
6. SELECTS FLCH

**NOTE:** USE OF THE AUTOThROTTLE DURING SINGLE ENGINE APPROACH IS PROHIBITED.

**NOTE:** SINGLE ENGINE AUTOPILOT COUPLED GO-AROUND IS NOT APPROVED.

---

**CONTAMINATED RUNWAY RESTRICTIONS**

**TAKEOFF**
- FLAPS 20 ONLY
- OPERATIVE ANTI-SKID
- OPERATIVE AUTO GROUND SPOILERS
- OPERATIVE THRUST REVERSERS
- MAX STANDING WATER – 0.391N
- RATEd THRUST ONLY, ETC...

**LANDING**
- FLAPS 39° ONLY
- OPERATIVE ANTI-SKID
- OPERATIVE THRUST REVERSERS
- MAX STANDING WATER – 0.591N
- THRESHOLD SPEED VREF TO VREF+10

**LANDING DIST ADJUSTMENTS “RULE OF THUMB”**

**EXCESS AIRSPEED**
- DRY RUNWAY, AN ADDITIONAL 300 FT PER 10 KTS
- WET RUNWAY, AN ADDITIONAL 500 FT PER 10 KTS
- EXTENDED FLARE, AN ADDITIONAL 2500 FT PER 10 KTS

**FLEX TAKEOFF RESTRICTIONS (AFM APPENDIX A)**

**NO TAILWIND**
- NO DOWNHILL SLOPE*
- NO CONTAMINATION ON RUNWAY (BUT WET IS OK)
- NO WING ANTI-ICE
- ANTI-SKID MUST BE OPERATIVE
- AUTO GROUND SPOILERS MUST BE OPERATIVE IF FLAPS 10°, ETC...

**TOTAL LOSS OF BRAKING**

**DIFFERENTIAL BRAKES AND RUDDER - USE**
- NOSEWHEEL STEERING SWITCH – OFF

**REJECTED TAKEOFF**

---

**UNCOMMANDED NOSEWHEEL STEERING**

**IMMEDIATE ACTION:**
- DIFFERENTIAL BRAKES AND RUDDER - USE
- NOSEWHEEL STEERING SWITCH – OFF

---

**QRH OPTIONS:**
- **REJECTED TAKEOFF** (QRH MISCELLANEOUS INDEX, EI-12)
- **ENGINE FAILURE BELOW V:**
- **THRUST REVERSERS UNLOCK OR DEPLOY DURING TAKEOFF**
GULFSTREAM G450 Condensed Notes

NOTES

---

EMERGENCY EVACUATION

PARK / EMERG BRAKE: SET
L / R FUEL CONTROL SWITCHES: OFF
L / R FIRE HANDLES: PULL (IF REQ, DISCH 1 / 2)
CABIN PRESSURE CONTROL: MANUAL
OUTFLOW VALVE: FULL OPEN
APU MASTER: OFF
L / R MAIN BATTERIES: OFF
PASSENGERS / CREW: EVACUATE

EVACUATION COMMANDS:
"OPEN SEAT BELTS, LEAVE EVERYTHING, COME THIS WAY, GET OUT, RUN AWAY FROM THE AIRCRAFT"

---

PLEASE EMAIL CORRECTIONS TO: sefoltz@outlook.com
REV 3.0, 201810
PAGE 18