2-6 ORIGINATING CHECK

This is a flow-patterned Challenge and Response checklist that includes tests that must be completed under the following conditions:

- aircraft's first flight of the day, or
- The captain's first flight on the aircraft, or
- after aircraft has been left unattended by flight crew or cabin crew for any extended period of time, or
- maintenance has been done to the aircraft
- first flight of the day only items are marked with an asterisk (*)

Note: If the originating check is required to be accomplished again, every item on the Originating Checklist must be completed again.

ORIGINATING CHECK		
Aircraft Logbook & Documents	Checked	BOTH
Emergency Equipment	Checked	CA
Safety & External Walkaround Checks	Complete	BOTH
Gear & Safety Pins	Removed/On Board	BOTH
Pedals, Seat & Harness	Adjusted	BOTH
Audio Warning Panel	Checked	F/O
Electrics	Checked	CA
*Fire Test	Complete	CA
Lights	Checked	CA
Fuel	Checked	CA
Bleeds	Checked	CA
APU	As Required	CA
Start Panel	Checked	CA
Hydraulics	Checked	CA
ELT	ARM/RESET	CA
Pressurization	Checked	F/O
Air-Conditioning	Checked	F/O
*Ice Detector Test	Complete	F/O
Windshield Heat	LOW	F/O
Emergency Lights	ARMED	F/O
Standby Compass	Checked	F/O
*Stall Test	Complete	F/O
Nosewheel Steering	OFF	CA
Clocks	Set	BOTH
EFIS Control Panels	Checked	BOTH
Instrument Panels	Checked	BOTH
EICAS & Standby Instrument	Checked	CA
*Anti-Skid Test	Complete	CA
*MLG Bay Overheat Test	Complete	CA
Upper Pedestal	Checked	CA
Thrust Lever Quadrant	Checked	CA
Avionics	Checked	CA
Starlink Power	On and Dark	CA
Trims	Checked	CA
Yaw Dampers	ENGAGED	CA
Source Select Panel	NORMAL	CA
Lower Pedestal	Checked	CA
FMS	SET	CA/F/O
RVSM Qualified	CHECKED	CA

Originating Check (continued)

The CA performs the flow but some portions require the F/O's participation. The F/O monitors the CA unless directed to do other tasks.

The F/O will then read the Originating Checklist and both pilots ensure that all challenge and response items are complete.

Aircraft Logbook & Documents	Checked	BOTH

Check the maintenance log and make sure to review all previous pages to verify no open discrepancies exist. Ensure that all other required documents are on board. Refer to GOM 1-2.11.1 for complete list.

Emergency Equipment	Checked	CA

Check the following:

- escape rope – open rope storage access panel and check rope is secured to the structure
- escape hatch – physically check that escape hatch is closed and locked (two (2) green witness marks are correctly aligned)
- flashlights (2)
- crash axe
- halon (1211 portable fire extinguisher – check indicator is in green band
- smoke hood (PBE) – check condition of seal
- life vests (3) under seats – check availability
- oxygen masks/smoke goggles (3)

Safety & External Walkaround Checks	Complete	BOTH

Gear & Safety Pins	Removed	FO
	On Board	CA

Pilot completing the walk-around inspection shall ensure landing gear pins (3) and ADG safety pins (1) have been removed (normally F/O).

Pedals, Seat & Harness	Adjusted	BOTH

Adjust seat and rudder panels so that maximum braking can be applied with full rudder deflection.

Originating Check (continued)

Audio Warning Panel	Checked	F/O

DCU switches ..... Guarded, no lights

Electrics	Checked	CA

DC Service switch ..... OFF
BATTERY MASTER switch ..... ON
IDG DISC switchlights ..... Guarded, no lights
AC ESS XFER switchlight ..... Flush, no lights
APU GEN switch ..... AUTO
GEN 1 & 2 switches ..... AUTO
AUTO XFER switchlights ..... Flush, no lights

*Fire Test	Complete	CA

***Fire Detection/Firex Monitor Test**

Note 1: If this test was completed in the Safety Check it can be omitted at this point.

Note 2: To prevent an AFT CARGO DET nuisance caution message, wait at least 30 seconds after selecting the BATTERY MASTER switch ON before starting this test.

FIRE DETECTION/FIREX MONITOR Panel

Test pushbutton ..... Press for 2 seconds and release

Both MASTER WARNING lights flash for the duration of the test.

On the glareshields, the following indications occur:

- LH & RH ENG FIRE PUSH switchlights illuminate
- APU FIRE PUSH switchlight illuminates
- BOTTLE 1 & 2 ARMED PUSH TO DISCH switchlights illuminate
- APU BOTTLE ARMED PUSH TO DISCH switchlight illuminates

On the CARGO FIREX panel, the following indications occur:

- FWD & AFT CARGO SMOKE PUSH switchlights illuminate
- BOTTLE ARMED PUSH TO DISCH switchlight illuminates
- On the status page, verify FIRE SYS OK

After approximately 30 seconds, the test will be complete and any malfunctions will be shown in the form of caution or status messages.

When the test is complete, verify that all fire detection indications are removed.

Originating Check (continued)

HYDRAULIC SOV Panel

L & R HYD SOV switchlights ..... Guarded, no lights

Lights	Checked	CA

NAV lights..... ON
BEACON ..... OFF
STROBE..... OFF
LOGO ..... As required
WING INSP..... As required
LANDING LTS (LEFT, NOSE & RIGHT)..... OFF
RECOG/TAXI LTS ..... OFF

Fuel	Checked	CA

L & R BOOST PUMPS switchlights ..... Selected out

- INOP lights (amber) are illuminated

GRAVITY XFLOW switchlight ..... Selected out

L & R XFLOW and AUTO OVERRIDE switchlight ..... Selected out

Bleeds	Checked	CA

WING A/I CROSS BLEED..... NORMAL
BLEED VALVES..... AUTO
ISOL ..... CLSD
BLEED SOURCE..... BOTH ENG

APU	As Required	CA

Start Panel	Checked	CA

L & R ENG START switchlights..... Selected out
IGNITION CONT switchlight ..... Selected out

Hydraulics	Checked	CA

Originating Check (continued)

Hydraulic Systems Test

HYDRAULIC switches .....All OFF

EICAS control panel (ECP) ..... Select HYD synoptic page

STAB TRIM switches .....Disengage

Ensure STAB TRIM caution message is on

Fluid quantities/temperatures..... Check✸

AC motor pump (ACMP) switches .....1B ON, 3A OFF, 3B ON, 2B ON

Hydraulic Systems 1, 2, 3 ..... Check

When checking individual hydraulic systems, ensure that:

Fluid quantities.....Normal (45% to 85%)✸

Reservoir output lines ..... Green

System pressures .....3,000 psi

Associated HYD services..... White

✸ Quantities are dependent on temperature, if outside of normal values, contact Maintenance Control through Dispatch by calling the phone number and desk number listed on the release.

EICAS control panel (ECP) ..... Select STAT page

*__Note 1__**:** The SSCU test occurs automatically every 50 cycles when both STAB TRIM channels are engaged. The SPLR/STAB IN TEST advisory message illuminates during this test and may stay illuminated for approximately 60 sec.

STAB TRIM switches .....CH 1 & CH 2 engage

*__Note 2__**:** If SPLR/STAB IN TEST advisory message is posted, do not move rudder, nosewheel steering tiller, hydraulic pump switches and do not disengage STAB TRIM until test is complete.

*__Note 3__**:** If accidental SPOST 2 interruption occurs, simultaneous SSCU 1 FAULT and SSCU 2 FAULT status messages will be posted SOP Section 5 must be consulted.

AC motor pump (ACMP) switches .....1B AUTO, 3B AUTO, 2B AUTO

Ensure hydraulic pressure depletion

AC motor pump (ACMP) switch..... 3A ON

Hydraulic System 3 .....Check

AC motor pump (ACMP) switch..... 3A As required

ELT	ARM/RESET	CA

Also verify PASS OXY switchlight is guarded and no light.

Pressurization	Checked	F/O

MAN ALT switch..... HOLD

EMER DEPRESS switchlight .....Guarded, light out

PRESS CONT switchlight .....Light out

MAN RATE knob .....Full DECR

Originating Check (continued)

Air-Conditioning	Checked	F/O

L & R PACK switchlights ..... As required

RECIRC FAN ..... ON

RAM AIR switchlight ..... Guarded, light out

Temp Control MAN switchlights ..... Lights out

CARGO switch ..... COND AIR

ANTI-ICE Control Panel

ANTI-ICE, WING switch ..... OFF

ANTI-ICE, COWL LH & RH switches ..... OFF

*Ice Detector Test	Complete	F/O

ANTI-ICE, DET TEST switchlight ..... Select in

Verify the following:

- ICE caution message displayed
- Amber ICE light illuminates on ANTI-ICE panel
- ADS HEAT TEST OK advisory message displayed

ANTI-ICE, DET TEST switchlight ..... Release

- ICE caution message removed
- Amber ICE light extinguishes
- ADS HEAT TEST OK advisory message removed

Windshield Heat	LOW	F/O

LH & RH WSHLD switches ..... LOW

LH & RH PROBES switches ..... OFF

Miscellaneous Lights Panel

DOME LIGHT ..... As required

STBY COMP ..... As required

OVHD ..... As required

Passenger Signs Panel

NO SMKG ..... ON

SEAT BLTS ..... ON

Originating Check (continued)

Emergency Lights	ARMED	F/O

EMER LTS switch..... ARM

Standby Compass	Checked	F/O

Compare headings with CA's and F/O's HSIs on the PFD and MFD.

Ensure compass card is in place.

Note: AHRS heading information may be inaccurate due to ground equipment magnetic disturbance at the gate.

ROLL SEL, PLT and CPLT switchlights..... No lights

*Stall Test	Complete	F/O

***Stall Protection System Test**

WARNING: Both stall protection system switches must remain on for all phases of flight.

CA and F/O side panels:

STALL PTCT PUSHER switches..... ON

HYD PUMP 3A..... ON

Either STALL switchlight..... Select

Continuous ignition activates.

Stick shaker activates.

Stick pusher activates.

Note: STALL FAIL caution message appears if either AP/SP DISC switch is depressed for more than three (3) seconds.

CA and F/O STALL switchlights..... Lights extinguish

Stick shaker..... Deactivates

CONT IGNITION status message..... Removed

HYD PUMP 3A..... OFF/As Required

Flight Control Panel (FCP)

AP DISC switch-bar..... Engaged

Originating Check (continued)

Nosewheel Steering	OFF	CA

WIPERS..... Both OFF/PARK
Side LIGHTING panels ..... As required

Clocks	Set	BOTH

Ensure the UTC time/day is accurate.

For an inaccurate UTC time/day:

Standard Clocks – On the lower left hand corner, set the "Time Setting/Display Selector" to SET. The ET button next to it selects the parameter to be set. The flashing parameter can be incremented by pressing the CHR button (upper right corner).

GPS Clocks – These clocks are synchronized to the GPS. If there is a valid GPS signal, the clocks do not need to be set, as this will be done automatically at power up. In the case of invalid GPS data or signal loss, the clocks will operate in internal (INT) mode. To set the clock, push the MODE button for two seconds, then push the MODE button again to toggle between UTC hours and minutes (when the INT is lit), year, month, and day, (when the DT is lit), and local time hours and minutes (when the LT is lit). In any of these modes, the ET SEL button is used to decrease the data and the ET RST button is used to increase the data. Data changes are in increments of one digit for each press of the ET SEL or ET RST button. At any time during the time setting process, pressing the MODE button for a minimum of two seconds will exit the time setting mode and restart the clock operation.

EFIS Control Panels	Checked	BOTH

DH ..... Remove from PFD

MDA..... Remove from PFD

RA Test ..... Select (verify 50 ft radar altitude on PFD)

Note: EFIS COMP MON caution message and RA flag may appear in dual radar altimeter configuration.

BARO ..... Set to field elevation

Display reversionary panels ..... NORM

Instrument Panels	Checked	BOTH

PFD and MFD ..... Normal

Originating Check (continued*)*

CVR Test

Plug in headset

TEST switch: Press and hold for five (5) seconds.

Verify that the green light illuminates, and that an audible tone is heard.

EICAS & Standby Instruments	Checked	CA

EICAS Display (ED 1 and ED 2)

Verify that no abnormal indications are present.

Integrated Standby Instrument

Standby altitude indicator ..... No flags

Standby altimeter ..... Set to field elevation

Originating Check (continued)

*Anti-Skid Test	Complete	CA

***Anti-Skid Test**

ANTI-SKID switch.....ARMED

Ensure no A/SKID INBD or A/SKID OUTBD caution messages are displayed.

ANTI-SKID switch.....Select OFF

Ensure A/SKID INBD and A/SKID OUTBD caution messages display.

ANTI-SKID switch.....Select ARMED

The messages disappear after approximately six (6) seconds.

MUTE HORN Switchlight.....Guarded, lights out

Originating Check (continued)

*MLG Bay Overheat Test	Complete	CA

***MLG Bay Overheat Test**

MLG BAY switch..... Hold at OVHT

The following indications occur:

- Triple chime, "GEAR BAY OVERHEAT"
- Master Warning
- Red MLG BAY OVHT EICAS message

MLG BAY switch.....Release

MLG BAY OVHT warning message removed.

OVHT TEST switch.....Hold at WARN FAIL

The following indications occur:

- Single chime
- MLOG OVHT FAIL EICAS message

OVHT TEST switch.....Release

MLOG OVHT FAIL caution message removed.

Upper Pedestal	Checked	CA

ENGINES SYNCH switch.....N1

HIGH PWR SCHEDULE switchlight.....Selected out and guarded

IND LTS..... As required

GRND PROX TERRAIN switch .....Selected out and guarded

GRND PROX FLAP OVRD switch.....Selected out and guarded

Thrust Lever Quadrant	Checked	CA

PITCH DISC handle.....In (vertical)

ROLL DISC handle ..... In (horizontal)

GND LIFT DUMPING switch..... AUTO

LH & RH THRUST REVERSER switches ..... ARMED

FLIGHT SPOILER lever 0

Thrust levers .....SHUT OFF

Avionics	Checked	CA
Starlink Power	On and Dark	CA

Starlink Power Switch.....PRESS, verify annunciator is Dark

Radio tuning units (both)..... Normal

Originating Check (continued)

***TCAS Test**

Display control panel ..... Press TFC

This will display the TCAS map on the MFD.

Radio Tuning Unit (RTU)

TCAS line key..... Select

This will allow access to the TCAS main level page on the RTU.

TEST line key..... Select

Successful completion of the TCAS test is indicated by the aural:

- "TCAS SYSTEM TEST OK"

ATC Line select key ..... Select

To turn ON altitude reporting mode.

- ATC page indicates ALT ON
- Displayed altitude corresponds with current pressure altitude.

Display control panel ..... Select TFC

This will return the MFD format to the original display before the test.

Audio Control Panel

All receive and transmit switches ..... As required

VOI CE/BOTH switch ..... BOTH

MASK/BOOM switch.....BOOM

EMER/NORM switch.....NORM

Public Address System Test

Audio control panel (ACP) ..... Select PA

Interphone control unit.....Select PA switchlight

PA switchlight remains in (green).

Transmit a test message.

Note: Ensure that the public address test message is heard by the cabin crew.

Weather Radar

Weather radar (both if applicable) .....OFF

Originating Check (continued)

Backup Tuning Panel

1 & 2 RTU INHIBIT PUSH switchlights.....Selected out

FMS TUNE INHIBIT switch.....Up

ATC SEL knob.....STBY

Mode selector knob.....STBY

Verify that the frequencies displayed are the same as COM 1 and NAV 1 on the RTU.

STAB and MACH Trim

STAB TRIM CH 1 & CH 2.....Press

MACH TRIM.....Press

On the status page, utilizing the stab trim, verify free movement of the stabilizer in both directions then re-set to 7.0 (should be displayed in green). Verify that all trim related messages are removed from ED 1 and ED 2.

Display/Avionic Fans

DSPLY & AVIONICS FANS.....NORM

Inertial Reference Systems (if installed)

IRS 1 & 2.....NAV

Verify the IRS alignment is complete.

Trims	Checked	CA

AIL TRIM & RUD TRIM.....Checked and Zero

On the status page, verify free movement of the aileron and rudder trims in both directions, then re-set both trims to zero-degree deflection (ensure both icons are displayed in green).

Lighting

LIGHTING.....As required

Yaw Dampers	ENGAGE	CA

YD 1 & YD 2.....ENGAGE

On both PFDs, verify amber YD indication is removed.

On the primary page, verify YAW DAMPER caution message is removed.

On the status page, verify YD 1 INOP and YD 2 INOP status messages are not displayed.

Note: YD 1 and 2 will only engage when on-side AHRS/IRS is aligned

Originating Check (continued)

Source Select Panel	NORMAL	CA

ATT HDG knob ..... NORM
AIR DATA knob ..... NORM
EICAS knob ..... NORM
DSPL CONT knob ..... NORM

Lower Pedestal	Checked	CA

Observer's ACP ..... As required
LANDING GEAR manual release handle ..... Stowed
ADG manual deploy handle ..... Stowed
EMER FLAP switch ..... NORMAL

FMS	Set	CA

Ensure FMS procedures are complete. (Reference SOP 1-11)

Originating Check (continued)

RADIO

- AUTOTUNE

RVSM QUALIFIED	Checked	CA

Prior to operations in RVSM airspace, the Captain must ensure that:

A. The pitot static probes must be unobstructed, with no abnormal discoloration and the fuselage skin in the vicinity of the static sources must be free of damage.

B. The following RVSM required equipment must be installed and operational:

1. Autopilot.....Must be operational
2. Altitude Alerting System.....Must be operational
3. Altitude Reporting Transponder (2 installed).....One must be operational
4. Air Data Computers (2 installed).....Two must be operational

C. The ADC source coupled to the active Flight Control Computer (FCC) must be the same as that coupled to the ATC transponder during flight in RVSM airspace.

2-7 RESERVED