# CHECK FLIGHT CERTIFICATE

| | | |
|---|---|---|
| **B767-300 (RB211-524H, GE CF6 80C2/B6F-B7F, PW 4056-3)** | **CFS 248 Issue 3** | Registration: |

| | | |
|---|---|---|
| Date: | Crew: | Observer: |

| **Performance** | Climb #1 | Climb #2 | |
|---|---|---|---|
| Average Weight | | | |
| Average Altitude | | | ft |
| Average Temp. | | | °C |
| Speed | | | KIAS |
| Achieved Rate | | | fpm |
| Scheduled Rate | | | fpm |
| Margin | | | fpm |
| Permitted Margin | -80 | -120 | fpm |

| | |
|---|---|
| Airfield: | |
| Start Weight | Kg/Lbs*: |
| Takeoff cg: | |

Performance:

SATIS/UNSATIS/NOT APPLICABLE*

*(delete as applicable)**

**Defects**

| No. | Defect | -/R/FT | Action? |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

(use a continuation sheet as necessary)

**Conclusions/Comments**

I CERTIFY that I have tested the above aircraft and have detailed the deficiencies and unsatisfactory features above. Those items annotated R or FT must be dealt with as shown in the notes on the reverse side.

| | | | |
|---|---|---|---|
| Name: | Signed: | Date: | Licence No.: |
| For CAA Use only | Report Logged by: | Date: | Report No.: |

NOTES

**General**
Only CAA personnel or pilots specifically briefed to carry out CAA Check Flights may conduct the test.
General notes on test conduct can be found in the CAA Check Flight Handbook.

*Registration:* If the aircraft is not on the UK register, add the manufacturers serial number and expected UK registration (if known).
*Crew:* Captain, co-pilot, Flight engineer (where applicable).
*Airfield:* Departure airfield.
*Start Weight:* Actual all up weight at first engine start. Also delete Kg or Lbs as appropriate. *Takeoff cg:* Actual cg at lift-off, preferably as a % of the Mean Aerodynamic Chord.

**Performance**
A full description of climb analysis is given in the CAA Check Flight Handbook.
*Climb#1/Climb#2:* Enter in these columns data from the first and second climbs.
*Average Weight:* The aircraft all up weight at the midpoint of the measured climb.
*Average Altitude:* The altitude at which the line drawn to average the measured points passes through at the mid time.
*Average Temp:* The temperature at which the line drawn to average the measured points passes through at the mid time.
*Speed:* The target climb speed (Indicated Airspeed.)
*Achieved Rate:* The climb rate as given by the slope of the line drawn to average the measured altitude points in feet per minute.
*Scheduled Rate:* The expected gross rate of climb read from the appropriate graph in the Flight Manual with any adjustments for configuration differences. For large aircraft, the basic gross data are normally to be found in a separate supplement labelled 'Additional Flight Test Data'.
*Margin:* The difference between the Scheduled and Achieved rates of climb (negative if achieved is lower than scheduled).

**Defects**
Enter all defects from the flight. All defects must also be entered in the Technical Log. Procedural items entered in the Technical Log (such as re-stowing oxygen masks) need not be entered here. Items affecting flight safety which were known before the flight, whether or not they were deferred should be entered. In the latter case, the defect should be annotated accordingly after the details.
*No.:* The first column is to allow the items to be numbered.
*Defect:* Enter details of the defect.
*-/R/FT:* Classify each defect according to its impact on safety, regardless of whether it can be deferred according to the MEL. Any deferrals should be dealt with in the normal way in the Technical Log. Items requiring rectification (or deferral under the MEL) before further flight for hire or reward or before the issue of the CofA should be marked 'R'. Additionally, items that require re-checking in-flight following rectification (such as inadequate climb performance) should be marked 'FT'. Items requiring both should be marked 'R/FT'.
*Action?:* This column should be left blank unless further information is required from the engineers or the item is considered to be of sufficient import that CAA action is considered necessary, then the person/department/agency from whom further action is required should be noted in this column. Annotate accordingly if an MOR or similar report is to be raised.

**Conclusions/Comments**
Any conclusions, notes or comments useful for tracking defects may be entered.
*Name:* Only the pilot who carried out the test may sign this sheet.

## CAA Check Flight Schedules

All CAA Check Flight Schedules (CFSs) are prepared based on a design standard which, before September 2003, was the UK Type Certificate. Following the creation of EASA there may be different design standards in service within the European Union (EU) - this may include modifications approved in any EU country.

It is the responsibility of the flight crew to ensure that the exercises and limitations in the CFS are correct for the aircraft under test.

The prime source of information will be the aircraft flight manual and in the event of conflict the flight manual should be taken as overriding.

CAA policy is that pilots who conduct airtests on the behalf of the Authority must be acceptable to the Authority, must have been briefed on techniques and safety considerations before carrying out the tests in these schedules and must have carried out an airtest within the last 4 years.

The CAA does not accept responsibility for the use of a CAA CFS on a test flight not directly under their control.

# CHECK FLIGHT SCHEDULE

CFS No.248, Issue 3

B767-300 (RB211-524H, GE CF6 80C2/B6F-B7F)

| | |
|---|---|
| Registration | |
| Flight Date | |

**INTRODUCTION**

This schedule is applicable only to Boeing 767-300 aircraft. It is based on the assumption that the everyday operation of the aircraft serves as a continuous check on the functioning of all normal services. On these test flights, however, the crew are expected generally to monitor the behaviour of all equipment and report any unserviceable items. In addition to completing all the required tests in this schedule, any characteristics which are considered unsafe or undesirable must be recorded.

The minimum flight crew for this test shall be increased by one observer to record the results of the tests. Passengers should not be carried. Oxygen shall be available for all persons on board. Passenger drop-out oxygen panels should be taped before flight. The test should, if possible, be carried out in the sequence as written; altitude conditions must be observed.

The data contained in this schedule is correct at the time of writing, but might not be in agreement with subsequent Flight Manual amendments. In cases of conflict the current Flight Manual is overriding and CAA (Airworthiness Division) should be informed.

The crew of the aircraft must be familiar with the contents of this schedule before flight. In addition the pilot conducting the tests must be specifically approved by the CAA (AD) for Check Flights on Boeing 767.

LOADING AND CALCULATION OF WEIGHT

The aircraft is to be loaded to between 120,000 kg and 130,000 kg with CG within flight manual limits.

The actual values shall be recorded; where specific tests require the aircraft weight to be recorded, it shall be calculated from the "fuel quantity".

POST-FLIGHT ACTION

Complete a statement of defects, sign the Flight Test Certificate and state clearly whether or not the aircraft needs to be re-flown.

B767-300 with RB211-524H engines
IN FLIGHT T.O. EPR 8 SEC. THRUST

| | TAT°C | | | | | | |
|---|---|---|---|---|---|---|---|
| **ALTITUDE FEET** | **30** | **27** | **24** | **21** | **18** | **15** | **12** |
| 2000 | 1.678 | 1.69 | 1.69 | 1.69 | 1.69 | 1.69 | 1.69 |
| 3000 | 1.678 | 1.69 | 1.70 | 1.70 | 1.70 | 1.70 | 1.70 |
| 4000 | 1.678 | 1.69 | 1.70 | 1.71 | 1.71 | 1.71 | 1.71 |
| 5000 | 1.678 | 1.69 | 1.70 | 1.71 | 1.717 | 1.717 | 1.717 |
| 6000 | 1.676 | 1.688 | 1.698 | 1.708 | 1.716 | 1.723 | 1.723 |
| 7000 | 1.668 | 1.68 | 1.691 | 1.701 | 1.71 | 1.723 | 1.723 |
| 8000 | 1.66 | 1.672 | 1.684 | 1.695 | 1.704 | 1.714 | 1.723 |

B767-300 with RB211-524H engines
GO-AROUND POWER SETTING (EPR)

| | TAT°C | | | | | | |
|---|---|---|---|---|---|---|---|
| **ALTITUDE FEET** | **30** | **27** | **24** | **21** | **18** | **15** | **12** |
| 2000 | 1.756 | 1.760 | 1.760 | 1.760 | 1.760 | 1.760 | 1.760 |
| 3000 | 1.756 | 1.760 | 1.765 | 1.770 | 1.770 | 1.770 | 1.770 |
| 4000 | 1.756 | 1.760 | 1.765 | 1.770 | 1.775 | 1.775 | 1.775 |
| 5000 | 1.756 | 1.760 | 1.765 | 1.770 | 1.775 | 1.779 | 1.779 |
| 6000 | 1.756 | 1.760 | 1.765 | 1.770 | 1.775 | 1.781 | 1.782 |
| 7000 | 1.756 | 1.760 | 1.765 | 1.770 | 1.775 | 1.781 | 1.782 |
| 8000 | 1.756 | 1.760 | 1.765 | 1.770 | 1.775 | 1.781 | 1.782 |

TABLE 1 POWER SETTING for RB211-524H engines

| | | | CLEAN | | | FLAP 20° | | | FLAP 30° | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| WT. KG. x1000 | FLAP 20° T/O CLIMB | EN-ROUTE CLIMB | TRIM | SHAKE | STALL | TRIM | SHAKE | STALL | TRIM | SHAKE | STALL |
| 100 | 118 | 198 | 169 | 152 | 130 | 125 | 108 | 96 | 117 | 102 | 90 |
| 102 | 119 | 200 | 172 | 154 | 132 | 126 | 109 | 97 | 118 | 103 | 91 |
| 104 | 120 | 202 | 174 | 156 | 134 | 127 | 110 | 98 | 120 | 104 | 92 |
| 106 | 122 | 204 | 176 | 158 | 135 | 129 | 111 | 99 | 121 | 105 | 93 |
| 108 | 123 | 206 | 178 | 159 | 137 | 131 | 113 | 101 | 122 | 106 | 94 |
| 110 | 124 | 208 | 179 | 161 | 138 | 133 | 114 | 102 | 124 | 107 | 95 |
| 112 | 125 | 210 | 182 | 163 | 140 | 134 | 115 | 103 | 125 | 108 | 96 |
| 114 | 126 | 212 | 183 | 165 | 141 | 135 | 116 | 104 | 125 | 109 | 96 |
| 116 | 128 | 214 | 186 | 166 | 143 | 136 | 117 | 105 | 126 | 110 | 97 |
| 118 | 129 | 216 | 187 | 168 | 144 | 138 | 118 | 106 | 127 | 111 | 98 |
| 120 | 130 | 218 | 190 | 170 | 146 | 139 | 119 | 107 | 129 | 112 | 99 |
| 122 | 131 | 220 | 191 | 172 | 147 | 140 | 120 | 108 | 130 | 113 | 100 |
| 124 | 132 | 222 | 194 | 173 | 149 | 142 | 121 | 109 | 131 | 114 | 101 |
| 126 | 134 | 224 | 195 | 175 | 150 | 143 | 122 | 110 | 132 | 115 | 101 |
| 128 | 135 | 226 | 198 | 176 | 152 | 144 | 123 | 111 | 133 | 116 | 102 |
| 130 | 136 | 228 | 199 | 178 | 153 | 146 | 125 | 112 | 134 | 117 | 103 |
| 132 | 137 | 230 | 201 | 180 | 155 | 147 | 126 | 113 | 135 | 118 | 104 |
| 134 | 138 | 231 | 203 | 182 | 156 | 148 | 127 | 114 | 137 | 119 | 105 |
| 136 | 139 | 233 | 205 | 184 | 158 | 150 | 128 | 115 | 138 | 119 | 106 |
| 138 | 140 | 235 | 207 | 185 | 159 | 151 | 129 | 116 | 139 | 120 | 107 |
| 140 | 141 | 236 | 209 | 187 | 161 | 152 | 130 | 117 | 140 | 121 | 107 |
| TOLERANCE | | | ± 5 kt | | | ± 4 kt | | | ± 4 kt | | |

NOTE: STALL AND SHAKE SPEEDS ARE FOR 15000 FT
FOR OTHER ALTITUDES APPLY CORRECTIONS BELOW TO THE SCHEDULED SPEEDS

| AIRCRAFT WEIGHT | ALTITUDE FLAPS | 10000 FEET | | | 20000 FEET | | |
|---|---|---|---|---|---|---|---|
| | | UP | 20 | 30 | UP | 20 | 30 |
| 100,000 kg | | -2 | -1½ | ½ | +3 | +1½ | +½ |
| 140,000 kg | | -4 | -2 | -1 | +6 | +2 | +1 |

**B767-300 WITH RB211-524 ENGINES**

**TABLE 2 SCHEDULED SPEEDS**

B767-300 with GE CF6 80C2/B6F engines
GO-AROUND POWER SETTING %N1

**B6F**

| | TAT°C | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **ALTITUDE FEET** | **30** | **25** | **20** | **15** | **10** | **5** | **0** | **-5** | **-10** |
| 2000 | 110.1 | 109.9 | 108.9 | 108.0 | 107.0 | 106.1 | 105.1 | 104.3 | 103.3 |
| 3000 | 110.2 | 110.5 | 109.5 | 108.7 | 107.7 | 106.7 | 105.8 | 104.6 | 104.0 |
| 4000 | 110.0 | 110.9 | 110.2 | 109.3 | 108.3 | 107.4 | 106.4 | 105.4 | 104.5 |
| 5000 | 109.9 | 110.6 | 110.8 | 109.9 | 108.9 | 108.0 | 107.1 | 106.1 | 105.1 |
| 6000 | 109.9 | 110.8 | 111.5 | 110.6 | 109.6 | 108.7 | 107.7 | 106.8 | 105.8 |
| 7000 | 109.9 | 110.7 | 111.7 | 111.3 | 110.3 | 109.3 | 108.3 | 107.4 | 106.4 |
| 8000 | 110.0 | 110.8 | 111.6 | 111.9 | 110.9 | 110.0 | 108.9 | 108.0 | 107.0 |

B767-300 with GE CF6 80C2/B7F engines
GO-AROUND POWER SETTING %N1

**B7F**

| | TAT°C | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **ALTITUDE FEET** | **30** | **25** | **20** | **15** | **10** | **5** | **0** | **-5** | **-10** |
| 2000 | 111.9 | 111.6 | 110.7 | 109.8 | 109.0 | 108.1 | 107.2 | 106.3 | 105.3 |
| 3000 | 111.7 | 111.8 | 111.2 | 110.3 | 109.4 | 108.5 | 107.6 | 106.7 | 105.7 |
| 4000 | 111.5 | 112.0 | 111.6 | 110.7 | 109.8 | 108.9 | 108.0 | 107.1 | 106.1 |
| 5000 | 111.6 | 112.3 | 112.1 | 111.4 | 110.0 | 109.6 | 108.7 | 107.8 | 106.8 |
| 6000 | 111.7 | 112.5 | 112.6 | 112.0 | 110.1 | 110.2 | 109.3 | 108.4 | 107.4 |
| 7000 | 111.8 | 112.1 | 112.1 | 112.1 | 110.8 | 110.4 | 109.5 | 108.6 | 107.6 |
| 8000 | 110.8 | 111.7 | 111.7 | 112.2 | 111.4 | 110.5 | 109.6 | 108.7 | 107.7 |

TABLE 3 POWER SETTING

| | | | CLEAN | | | FLAP 20° | | | FLAP 30° | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| WT. KG. x1000 | FLAP 20° T/O CLIMB | EN-ROUTE CLIMB | TRIM | SHAKE | STALL | TRIM | SHAKE | STALL | TRIM | SHAKE | STALL |
| 100 | 112 | 199 | 169 | 151 | 130 | 113 | 105 | 87 | 112 | 102 | 86 |
| 102 | 114 | 201 | 172 | 153 | 132 | 114 | 106 | 88 | 113 | 103 | 87 |
| 104 | 115 | 203 | 173 | 154 | 133 | 117 | 107 | 90 | 114 | 104 | 88 |
| 106 | 117 | 204 | 176 | 156 | 135 | 118 | 109 | 91 | 116 | 105 | 89 |
| 108 | 118 | 206 | 177 | 157 | 136 | 121 | 110 | 93 | 117 | 106 | 90 |
| 110 | 120 | 208 | 179 | 159 | 138 | 122 | 111 | 94 | 118 | 107 | 91 |
| 112 | 121 | 210 | 181 | 161 | 139 | 124 | 112 | 95 | 120 | 108 | 92 |
| 114 | 123 | 212 | 183 | 163 | 141 | 125 | 114 | 96 | 121 | 109 | 93 |
| 116 | 124 | 215 | 185 | 164 | 142 | 127 | 115 | 98 | 121 | 110 | 93 |
| 118 | 126 | 217 | 187 | 166 | 144 | 129 | 116 | 99 | 122 | 111 | 94 |
| 120 | 127 | 219 | 189 | 168 | 145 | 130 | 117 | 100 | 124 | 112 | 95 |
| 122 | 128 | 221 | 190 | 170 | 146 | 131 | 118 | 101 | 125 | 113 | 96 |
| 124 | 129 | 222 | 192 | 171 | 148 | 133 | 119 | 102 | 126 | 114 | 97 |
| 126 | 131 | 224 | 194 | 173 | 149 | 135 | 120 | 104 | 127 | 115 | 98 |
| 128 | 132 | 225 | 196 | 174 | 151 | 137 | 121 | 105 | 129 | 116 | 99 |
| 130 | 133 | 227 | 199 | 176 | 152 | 138 | 122 | 106 | 130 | 117 | 100 |
| 132 | 134 | 229 | 200 | 178 | 154 | 139 | 123 | 107 | 131 | 118 | 101 |
| 134 | 135 | 230 | 202 | 180 | 155 | 140 | 124 | 108 | 133 | 119 | 102 |
| 136 | 136 | 232 | 204 | 181 | 157 | 143 | 126 | 110 | 133 | 121 | 102 |
| 138 | 137 | 233 | 205 | 183 | 158 | 144 | 127 | 111 | 134 | 122 | 103 |
| 140 | 138 | 235 | 208 | 185 | 160 | 146 | 128 | 112 | 135 | 123 | 104 |
| TOLERANCE | | | ± 6 kt | | | ± 5 kt | | | ± 5 kt | | |

NOTE: STALL AND SHAKE SPEEDS ARE FOR 15000 FT
FOR OTHER ALTITUDES APPLY CORRECTIONS BELOW TO THE SCHEDULED SPEEDS

| SHAKE SPEEDS WEIGHT | ALTITUDE FLAPS | 10000 FEET | | | 20000 FEET | | |
|---|---|---|---|---|---|---|---|
| | | UP | 20 | 30 | UP | 20 | 30 |
| 100,000 kg | | -2 | -1 | 0 | +4 | +2 | +1 |
| 140,000 kg | | -4 | -2 | +1 | +4 | +2 | -1 |

| STALL SPEEDS WEIGHT | ALTITUDE FLAPS | 10000 FEET | | | 20000 FEET | | |
|---|---|---|---|---|---|---|---|
| | | UP | 20 | 30 | UP | 20 | 30 |
| 100,000 kg | | -2 | -4 | -3 | +3 | +5 | +1 |
| 140,000 kg | | -4 | -5 | -1 | +7 | +4 | +1 |

**B767-300 WITH GE CF6 80C2-B6F/B7F ENGINES**

**TABLE 4 SCHEDULED SPEEDS (KNOTS IAS)**

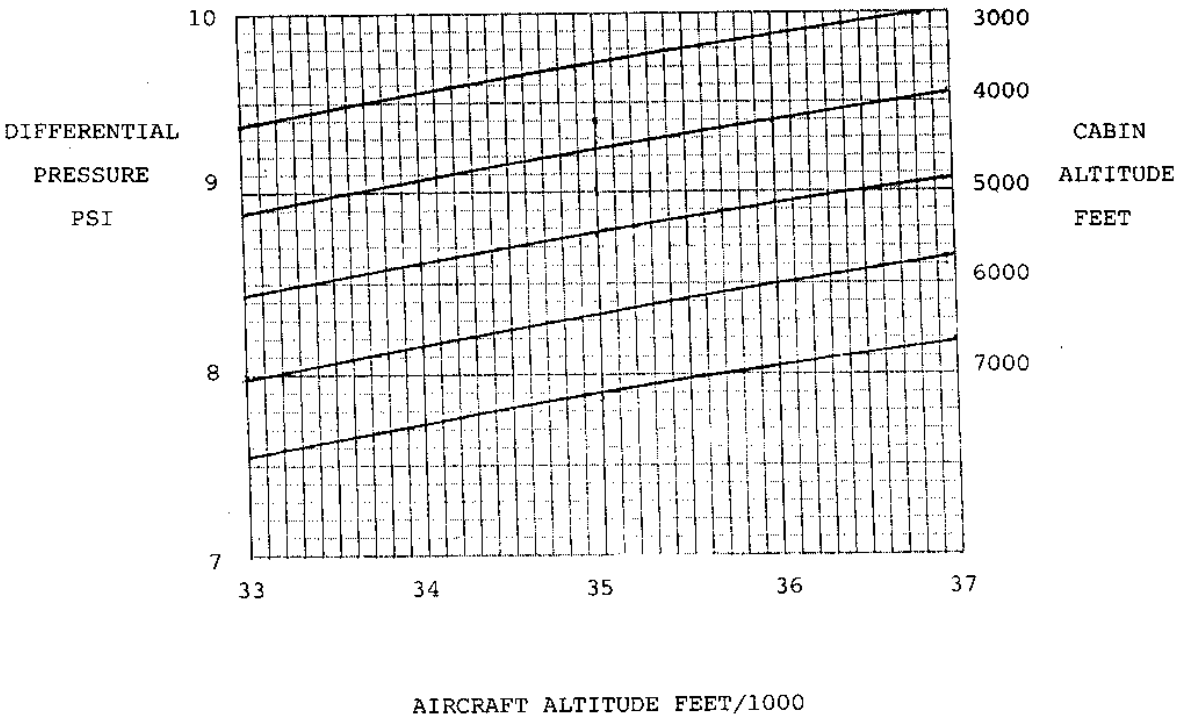


**TABLE 5 CABIN DIFFERENTIAL PRESSURE**

| | TAT°C | | | | | | |
|---|---|---|---|---|---|---|---|
| **ALTITUDE FEET** | **30** | **27** | **24** | **21** | **18** | **15** | **12** and below |
| 2000 | 1.597 | 1.597 | 1.597 | 1.597 | 1.597 | 1.597 | 1.597 |
| 3000 | 1.644 | 1.644 | 1.644 | 1.644 | 1.644 | 1.644 | 1.644 |
| 4000 | | | 1.626 | 1.626 | 1.626 | 1.626 | 1.626 |
| 5000 | | | 1.625 | 1.625 | 1.625 | 1.625 | 1.625 |
| 6000 | | | 1.632 | 1.632 | 1.632 | 1.632 | 1.632 |
| 7000 | | | | | 1.655 | 1.655 | 1.655 |
| 8000 | | | | | 1.680 | 1.680 | 1.680 |

**TABLE 6 B767-300 with PW 4056-3 engines**
**GO-AROUND POWER SETTING (EPR)**

| | | | CLEAN | | | FLAP 20° | | | FLAP 30° | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| WT. KG. x1000 | FLAP 20° T/O CLIMB | EN-ROUTE CLIMB | TRIM | SHAKE | STALL | TRIM | SHAKE | STALL | TRIM | SHAKE | STALL |
| 100 | 122 | 199 | 178 | 158 | 137 | 129 | 114 | 99 | 126 | 111 | 97 |
| 102 | 124 | 201 | 181 | 160 | 139 | 131 | 116 | 101 | 127 | 113 | 98 |
| 104 | 125 | 203 | 183 | 162 | 141 | 133 | 117 | 102 | 129 | 114 | 99 |
| 106 | 127 | 205 | 185 | 163 | 142 | 134 | 118 | 103 | 130 | 115 | 100 |
| 108 | 128 | 207 | 187 | 165 | 144 | 135 | 120 | 104 | 131 | 116 | 101 |
| 110 | 129 | 209 | 190 | 168 | 146 | 136 | 121 | 105 | 133 | 117 | 102 |
| 112 | 130 | 211 | 191 | 169 | 147 | 138 | 122 | 106 | 134 | 118 | 103 |
| 114 | 133 | 213 | 193 | 171 | 149 | 140 | 124 | 108 | 135 | 120 | 104 |
| 116 | 134 | 214 | 195 | 173 | 150 | 142 | 125 | 109 | 136 | 121 | 105 |
| 118 | 135 | 216 | 198 | 175 | 152 | 143 | 126 | 110 | 138 | 122 | 106 |
| 120 | 136 | 218 | 199 | 176 | 153 | 144 | 128 | 111 | 139 | 123 | 107 |
| 122 | 137 | 220 | 201 | 178 | 155 | 146 | 129 | 112 | 140 | 124 | 108 |
| 124 | 139 | 222 | 203 | 179 | 156 | 147 | 130 | 113 | 142 | 125 | 109 |
| 126 | 140 | 224 | 205 | 181 | 158 | 148 | 131 | 114 | 143 | 126 | 110 |
| 128 | 142 | 226 | 207 | 183 | 159 | 151 | 133 | 116 | 144 | 128 | 111 |
| 130 | 144 | 228 | 209 | 185 | 161 | 152 | 134 | 117 | 146 | 129 | 112 |
| 132 | 145 | 229 | 211 | 186 | 162 | 153 | 136 | 118 | 147 | 130 | 113 |
| 134 | 146 | 231 | 213 | 188 | 164 | 155 | 137 | 119 | 147 | 130 | 113 |
| 136 | 148 | 233 | 215 | 190 | 165 | 156 | 138 | 120 | 148 | 131 | 114 |
| 138 | 149 | 234 | 217 | 192 | 167 | 157 | 139 | 121 | 149 | 132 | 115 |
| 140 | 150 | 236 | 218 | 193 | 168 | 159 | 140 | 122 | 151 | 133 | 116 |
| TOLERANCE | | | ± 5 kt | | | ± 4 kt | | | ± 4 kt | | |

NOTE: STALL AND SHAKE SPEEDS ARE FOR 15000 FT
FOR OTHER ALTITUDES APPLY CORRECTIONS BELOW TO THE SCHEDULED SPEEDS

| SHAKE SPEEDS WEIGHT | ALTITUDE FLAPS | 10000 FEET UP | 20 | 30 | 20000 FEET UP | 20 | 30 |
|---|---|---|---|---|---|---|---|
| 100,000 kg | | -2 | -1 | 0 | +4 | +2 | +1 |
| 140,000 kg | | -4 | -2 | +1 | +4 | +2 | -1 |

| STALL SPEEDS WEIGHT | ALTITUDE FLAPS | 10000 FEET UP | 20 | 30 | 20000 FEET UP | 20 | 30 |
|---|---|---|---|---|---|---|---|
| 100,000 kg | | -2 | -4 | -3 | +3 | +5 | +1 |
| 140,000 kg | | -4 | -5 | -1 | +7 | +4 | +1 |

**B767-300 WITH PW 4056-3 ENGINES**

**TABLE 7 SCHEDULED SPEEDS (KNOTS IAS)**

| | | | |
|---|---|---|---|
| Fuel Contents | Left | ..... | kg |
| | Centre | ..... | kg |
| | Right | ..... | kg |
| | Total | ..... | kg |

1. BEFORE STARTING ENGINES

WARNING SYSTEMS

Check all warning lights.

Record any lights which have faulty filaments

.....

Check fire warning test SAT/UNSAT

Check Ground Proximity Warning System Test SAT/UNSAT

Check Air Data Computer test (left and right): SAT/UNSAT

Overspeed warning for 2 seconds
Invalid flags for 5 seconds
Air data instruments indicate

10000 feet
137 knots
VMO needle 357 knots
Mach indicates 0.75 then black shutter appears

Check Stall Warning test SAT/UNSAT

With flaps UP operate both stall warning switches and check column moves forward
repeat flap down - check column does not move

FLIGHT DECK PLACARDS

Check airframe limitations SAT/UNSAT

Check instrument colour coding on EICAS

Check flight deck engraving, instrument panels and circuit breakers

VMO pointer reading (355 - 359 knots) P1 [ ]

P2 [ ]

EFIS SWITCHING

| | | |
|---|---|---|
| Select alternate EFIS. Check for proper displays, instrument switching annunciations and return to normal. | P1 | SAT/UNSAT |
| | P2 | SAT/UNSAT |
| Select alternate IRS. Check for proper displays, instrument switching annunciations and return to normal. | P1 | SAT/UNSAT |
| | P2 | SAT/UNSAT |

AUTO SPEED-BRAKE

| | |
|---|---|
| With throttles closed deploy speedbrake lever to ARM. Check speedbrakes deploy. | SAT/UNSAT |
| Advance No.1 throttle 1 inch forward. Check speedbrakes retract. | SAT/UNSAT |
| Close No.1 throttle and redeploy speedbrakes. Advance No.2 throttle 1 inch forward and check speedbrakes retract. | SAT/UNSAT |
| Close throttles and put speedbrake lever down. Select reverse and check speedbrakes deploy. | SAT/UNSAT |
| Return throttles and speedbrakes to usual positions. | |

STABILISER TRIM

| | |
|---|---|
| Check operation of stabiliser on control column switches (stops at 1¼ divisions if flaps are up). | SAT/UNSAT |
| Check operation of stabiliser on manual trim levers. | SAT/UNSAT |
| Check operation of stabiliser trim cut out switches (each in turn noting operating at half rate). | SAT/UNSAT |
| Check stabiliser trim brake by opposing trim with control column. | |
| Then check that the manual trim levers will override the trim brake. | SAT/UNSAT |

TAKE-OFF CONFIGURATION WARNING

While the CONFIG test switch is held in the TAKE-OFF position, check the Take-Off Configuration Warning sounds, the Master Warning flashes, the red CONFIG light appears and the appropriate EICAS message appears for each of the following conditions.

| | |
|---|---|
| Speedbrake lever out of the DOWN detent | SAT/UNSAT |
| Stabiliser trim between 7 and 7½ units | SAT/UNSAT |
| Flaps out of take-off configuration | SAT/UNSAT |
| Parking brake set | SAT/UNSAT |

2. AFTER STARTING ENGINES

Brakes

| | |
|---|---|
| During low speed taxi verify braking action from right hydraulic system by monitoring right hydraulic pressure on EICAS: | SAT/UNSAT |
| Depressurise right hydraulic system and verify braking action from centre hydraulic system by monitoring centre and right hydraulic pressures on EICAS: | SAT/UNSAT |
| Depressurise centre hydraulic system and check that C hydraulic system pressure is zero. Braking action shall be maintained with accumulator pressure. BRAKE SOURCE light shall illuminate and EICAS message appear: | SAT/UNSAT |
| Depressurise brake accumulator by operating brakes. NOTE: Nose gear steering inoperative. | SAT/UNSAT |
| Push the RESERVE BRAKES and STRG switch on the pilot's panel, the left electric pump LOW PRESS light shall extinguish and BRAKE SOURCE light shall extinguish. Braking shall be normal; Nosegear steering available: | SAT/UNSAT |
| Pressurise right and centre hydraulic system and push the RESERVE BRAKES and steering switch 'OFF'. Accumulator pressure reads normal | SAT/UNSAT |
| Check nosewheel steering from rudder pedals and deflection of L and R tillers. | SAT/UNSAT |

Take-off Configuration Warning

| | |
|---|---|
| With engines operating check any one of the Take-off Configuration Warnings when either engine is increased to about 75% N1: | SAT/UNSAT |

Set 8,000 feet cabin altitude.

3. TAKE-OFF

Carry out a normal take-off. Record any unusual characteristics.

.....

4. ENGINE ACCELERATIONS

Conditions

| | |
|---|---|
| Altitude | 4000-7000 ft |
| Flaps | 25° |
| Gear | DOWN |
| Anti icing | OFF |
| Pressurisation | ON |
| Airspeed | 140 kt |

Record

| | | |
|---|---|---|
| Altitude | | ft |
| TAT | | °C |
| TRC Go-Around EPR | | |
| AFM Go-Around EPR | | (See table 1,3 or 6) |
| Flight Manual 8 sec target EPR (RR) or 1% N1 below go-around N1 (GE) | | (See table 1 or 3) |

For each engine record stabilised flight idle N1 and slam acceleration time to target power.

| Engine Position | **LEFT** | **RIGHT** | |
|---|---|---|---|
| Flight Idling N1% | | | |
| Acceleration Time sec to Target power | | | (8 Sec. Max) |

5. ENGINE-OUT TAKE-OFF CLIMB

Clear of cloud and turbulence carry out a measured climb for 5 mins from a starting altitude between 4000 and 7000 ft.

Test Weight .....kg

Take-off Safety Speed .....kt (see table 2)

Start Altitude .....ft

TAT .....°C

TRC G/A EPR .....

AFM G/A ..... APR

(if any discrepancy use the AFM power for the climb) (table 1)

| | | | |
|---|---|---|---|
| Pressurisation | Two A/c PACKS ON | | |
| Flaps | 20° | | |
| Engine & Airframe Anti-icing | OFF | | |
| Altimeter | 1013 mb | | |
| Gear | UP | | |
| Engines | **LEFT** | - | Idle |
| | **RIGHT** | - | G/A Power |

| TANK | **LEFT** | **CENTRE** | **RIGHT** | **TOTAL** |
|---|---|---|---|---|
| FUEL CONTENTS AT **START** OF CLIMB KG | | | | |

| Time Mins | Pressure Altitude ft | IAS kt | TAT °C | Left | Right |
|---|---|---|---|---|---|
| 0 | | | | | |
| ½ | | | | | |
| 1 | | | | | |
| 1½ | | | | | |
| 2 | | | | | |
| 2½ | | | | | |
| 3 | | | | | |
| 3½ | | | | | |
| 4 | | | | | |
| 4½ | | | | | |
| 5 | | | | | |

ASI Comparison

| CAPT | F/O |
|---|---|
| | |

(Max Diff 5 kt)

* Note engine parameters at this time.

Record the flying control trimmer settings towards the end of the climb:

Stabilizer: ..... Rudder: ..... Aileron: .....

| TANK | **LEFT** | **CENTRE** | **RIGHT** | **TOTAL** |
|---|---|---|---|---|
| FUEL CONTENTS AT **END** OF CLIMB KG | | | | |

Record the following 2 minutes from start of climb:

| Engine | LEFT | RIGHT |
|---|---|---|
| EPR | | |
| N1 % | | |
| EGT °C | | |
| N2 % | | |
| N3 % | | |
| Fuel Flow kg/hr | | |

<u>NOTE</u>: Crossfeed fuel as necessary during the climb to maintain symmetry.

Record satisfactory functioning of the fuel crossfeed system: SAT/UNSAT

Weather and turbulence conditions: .....

Comments: .....

6. ENGINE OUT EN-ROUTE CLIMB

NOTE: Leave Right engine at flight idle for 5 mins before shutting off the fuel.

Start APU with generator select switch OFF.

Trip right generator, check satisfactory instrument transfer: SAT/UNSAT

Select APU generator switch ON.
Shut down right engine.

Clear of cloud and turbulence carry out a measured climb for 5 minutes from a starting altitude between FL100 and FL160 but not less than 5000 ft above terrain.

| | | | |
|---|---|---|---|
| Test Wt | .....kg | Eng.Out ER Climb Speed | .....kt |
| Gear | UP | Pressurisation | 1 A/c PACK ON |
| Flaps | UP | Eng. & A/F A/I | OFF |
| Altimeter | 1013mb | APU: | On line |
| **LEFT** Eng: | Max Cont. Power | **RIGHT** Eng: | Inoperative |

| TANK | **LEFT** | **CENTRE** | **RIGHT** | **TOTAL** |
|---|---|---|---|---|
| FUEL CONTENTS AT START OF CLIMB KG | | | | |

| Time Mins | Pressure Altitude ft | IAS kt | TAT °C | Left | Right |
|---|---|---|---|---|---|
| 0 | | | | | |
| ½ | | | | | |
| 1 | | | | | |
| 1½ | | | | | |
| 2 | | | | | |
| 2½ | | | | | |
| 3 | | | | | |
| 3½ | | | | | |
| 4 | | | | | |
| 4½ | | | | | |
| 5 | | | | | |

ASI Comparison

| CAPT | F/O |
|---|---|
| | |

(Max Diff 5 kt)

* Note engine parameters at this time.

Record the flying control trimmer settings towards the end of the climb:

Stabilizer: ..... Rudder: ..... Aileron: .....

| TANK | **LEFT** | **CENTRE** | **RIGHT** | **TOTAL** |
|---|---|---|---|---|
| FUEL CONTENTS AT END OF CLIMB KG | | | | |

Record the following 3 minutes from start of climb:

| Engine | LEFT | RIGHT |
|---|---|---|
| EPR | | |
| N1 % | | |
| EGT °C | | |
| N2 % | | |
| N3 % | | |
| Fuel Flow kg/hr | | |

NOTE: Crossfeed fuel as necessary during the climb to maintain symmetry.

Record satisfactory functioning of the fuel crossfeed system: SAT/UNSAT

Weather and turbulence conditions: .....

6(a) ENGINE RELIGHTING

At the end of the en-route climb carry out a starter assist relight the right engine at:-

16,000 ft, 160 kts, gear up, flap 15° (RB211-524H)
or 14,000 ft, 160 kts, gear up, flap 15° (GE CF6-80C2-B6F/B7F)
or 15,000 ft, 180 kts, gear up, flap 15° (PW 4056-3)

| Idle N1 | EGT °C | Altitude ft | TAT °C | Windmill N3 | Time to EGT rise | Max EGT °C | Time to Idle N1 |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | | | | | | | |
| | | | Max | Values | 30 sec | | 2 min |

Leave engine at idle for 5 minutes before checking throttle response. SAT/UNSAT

Select right generator control switch ON.

Shut down the APU.

7. LOW CABIN PRESSURE

During a climb to FL180 select MAN MODE and raise cabin altitude controlling cabin rate by turning the packs on and off and/or OVRD valve as required. Pull C/B P23 to isolate the No.2 system autocontroller.

Record: Cabin altitude warning ..... (9000-11000 ft)

Cabin altitude oxy mask dropout ..... (13250-14750 ft)

Check: Crew oxygen masks: SAT/UNSAT

Oxygen mask microphones: SAT/UNSAT

Lower cabin altitude and control cabin rate by turning packs on and off. Record any masks panels which fail to drop.

.....

Reset normal pressurisation when cabin altitude is below 8,500 ft and with a low rate of descent.

Reset passenger oxygen by cycling passenger oxygen control circuit breaker A24.

Reset C/B P23.

8 FUEL DUMP (if applicable)

Flaps UP
Altitude above 6000 feet
Inform ATC that fuel dump check is being made
DO NOT TRANSMIT ON HF
Fuel jettison selector switch ON
Fuel jettison nozzle switches ON
Check visually for flow from each wing SAT/UNSAT
Fuel jettison nozzle switches OFF
Fuel jettison selector switch OFF
Check jettison flow ceases SAT/UNSAT

Climb to FL 350

9. <u>HIGH CABIN PRESSURE</u>

<u>Maximum Differential</u>

At FL350 select MAN, toggle the outflow valve to achieve 8.2 psi. Set rate control to index or greater and select AUTO 2.

After 3 mins record cabin diff pres: .....
(8.35 - 8.85)

Select AUTO 1 and check cabin remains within 8.35 to 8.85 psi.

Record: Cabin differential pressure .....

Safety Valve

Drive the outflow valve toward CLOSED in MAN mode. The cabin pressure shall limit to the primary value of the safety valve.

DO NO EXCEED 9.4 PSI DIFFERENCE PRESSURE

| | | |
|---|---|---|
| Indicated differential pressure | | (8.85 - 9.25) |
| Cabin altitude | | ft |
| Flight altitude | | ft |
| Calculated differential pressure | | (8.85 - 9.25)<br>(see table 5) |

Drive the outflow valve to OPEN to reduce differential pressure, then select AUTO mode.

10. CONTROLS AND TRIMS

Trim the aircraft at Flight Level 350 in a level cruise at 0.82 IMN.

| Altitude | TAT °C | IAS kt | MACH | Stab Trim | Rudder Trim | Aileron Trim |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | Limits | ± 3 Div | ± 1 Div |

Record ASI limit speed hand .....(280-286 kt)

Check controls for:

Breakout, centering, weight and response: SAT/UNSAT

Check operation of trimmers:

Stabiliser on control column switches: SAT/UNSAT

Rudder: SAT/UNSAT

Aileron: SAT/UNSAT

Check operation of yaw dampers by initiating a Dutch Roll with a rudder input with all dampers off. Check that each yaw damper in turn stops the Dutch Roll oscillation.

Left SAT/UNSAT
Right SAT/UNSAT

Reselect all yaw dampers on.

11. HIGH MACH

Apply MC Thrust and accelerate to 0.86 IMN. Do not trim above 0.84 IMN.

Record IMN at which appropriate half of the overspeed warning light illuminates and confirm each related aural warning.

| Captain | Co-Pilot |
|---|---|
| | |

Limits: 0.842-0.85 IMN (Mmo 0.84)
or 0.862-0.87 IMN (Mmo 0.86)

Note handling qualities at 0.86 IMN: (slight push force) SAT/UNSAT

Extend airbrakes at Mmo warning: (no roll and gently pitch up) SAT/UNSAT

12. WINDMILL RELIGHT

Start APU at FL350 and 0.76 IMN: SAT/UNSAT

Idle LEFT engine for 5 mins during descent to FL300. Record idle N1. With APU generator selector switch OFF shut the fuel OFF on the LEFT engine.

Check satisfactory instrument transfer: SAT/UNSAT

Select APU generator switch ON.

After 5 mins, windmill relight the left engine at FL300:-
RR 280 kts
GE 220 kts
PW 260 kts

| Idle N1 | EGT °C | Altitude ft | TAT °C | Windmill N3 | Time to EGT rise | Max EGT °C | Time to Idle N1 |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | | | | | | | |
| | | | Max | Values | 30 sec | | 2 min |

Leave engine at idle for 5 minutes

Check response of throttle: SAT/UNSAT

Comments: .....

Idle right engine for 5 mins during descent to FL160. (Max Alt for flap extension FL200). Record idle N1.

Shut fuel off right engine.

Shut down APU. Time to start of shutdown: ..... secs (60 max)

13. HIGH IAS

At any convenient altitude between FL150 and FL200 and clear of cloud and turbulence trim the aircraft in level flight at 350 kt.

Record: ASI speed limit hand ..... kt (355-359)

Trims: Stabiliser .....

Rudder ..... (+ 5 Div)

Aileron ..... (+ 1 Div)

Apply power to accelerate slowly to 370 kt IAS.

Record IAS at which appropriate half of the overspeed warning light illuminates and confirm each related aural warning.

Captain: ..... kt Co-pilot..... kt (359-371)

Check operation of controls over small angles: SAT/UNSAT

Extend speed brakes at 370 kt (gentle NU pitch, no roll): SAT/UNSAT

14. STALLS, GEAR AND FLAP TIMES (See table 2, 4 or 6 for scheduled speeds)

Flight level 200-100. Carry out a stall to stall warning with engines idle, flaps UP.

Time: ..... (GMT) Trim Speed:..... kt

| | | Stick | Shake |
|---|---|---|---|
| Weight kg | Trim Setting | Sched | Actual (± 6 kt) |
| | | | |

Comments: ..... Altitude:..... ft

Time flaps from UP to 20° at 190 kt IAS ..... sec (38 max).

Pull the right stall warning circuit breaker (J22) and carry out a slow straight stall to stall warning. Reset C/B J22 and then trip left stall warning C/B (C11) and repeat stall to stall warning.

Weight ..... kg Trim Speed ..... kt

| | | Stick | Shake |
|---|---|---|---|
| CB Pulled | Trim Setting | Sched | Actual (± 5 kt) |
| | | | |
| | | | |

Comments: ..... Altitude: ..... ft

CHECK CIRCUIT BREAKERS REINSTATED:

Time gear down at 160 kt ..... secs (35 sec max)

Time flaps 20° to 30° ..... secs (10 sec max)

Carry out a slow straight power off stall to the stall warning.

| | | Stick Shake | |
|---|---|---|---|
| Weight kg | Trim Speed 1.3 VS | Sched | Actual (± 5 kt) |
| | | | |

Comments: .....

15(a) FLAP AND GEAR RETRACTION

Time: flaps 30° - 20° at 140 kt ..... ( 8 sec max)

landing gear up at 180 kt ..... (19 sec max)

flaps up at 190 kt ..... (38 sec max)

15(b) ALTERNATE FLAPS

With speed below 210 kt, while observing flap limit speeds arm both LE and TE ALTN flap systems. Put the GPWS gear override switch on.

Rotate flap selector to 30° and time flaps to 30°.

Time: ..... (4 min 30 sec max)

Visually check the slats are gapped.

Rotate flap selector to 20°. Check TE flaps retract to 20: SAT/UNSAT

Place the normal flap lever to 20º. Push both LE and TE ALTN flap switches to OFF and rotate the flap selector to NORM. Retract the flaps using the normal flap selector lever.

Put the GPWS gear override switch off.

16. ALTERNATE LANDING GEAR (OBSERVE PLACARD SPEEDS)

(a) Assure gear handle is in the OFF position (For aircraft incorporating Boeing Service Bulletin SB-767-32-0177, or aircraft post line number 802, the gear handle should be in the UP position). Hold the ALTN GEAR EXTENSION switch in for 2 seconds. Check the door amber lights illuminate.

Main gear green lights ON in ..... secs (25 secs max)

Nose gear green light ON in ..... secs (40 secs max)

Confirm EICAS messages 'GEAR DOORS' , 'GEAR DISAGREE' & 'TAIL SKID'

(b) Place the ALT GEAR EXTENSION switch in the OFF position and wait 60 secs. Place gear lever down and check gear doors close: SAT/UNSAT

Retract gear normally. SAT/UNSAT

17(a) RAM AIR TURBINE (RAT)

Depressurise "C" hydraulic system. Check spoilers 3, 5, 8 and 10 do not work.

Deploy RAT prior to approach and confirm green 'PRESS' light illuminates in RAT switchlight, and spoilers 3, 5, 8 and 10 work. SAT/UNSAT

Return "C" hydraulic system to normal.

17(b) SPEEDBRAKE WARNING

On approach after selection of flap 25° briefly select Speedbrakes OUT and check that a Speedbrake warning occurs. Select Speedbrake IN: SAT/UNSAT

18. LANDING

Carry out a normal landing with full reverse thrust and record any unusual characteristics.

QFE: .....

Reverse N1: Left ..... Right .....

Minimum for ambient conditions .....

19. AFTER LANDING

Standby Power

With external power and APU generator off, disconnect both generators and check that standby power light does not illuminate: SAT/UNSAT

Check the following items for correct operation:

| | |
|---|---|
| LEFT VHF COMM: | SAT/UNSAT |
| LEFT VHF NAV: | SAT/UNSAT |
| LEFT RMI: | SAT/UNSAT |
| LEFT OR RIGHT ADF: | SAT/UNSAT |
| CENTRE ILS: | SAT/UNSAT |
| STANDBY ATTITUDE INDICATOR | SAT/UNSAT |
| STANDBY ALTIMETER AND VIBRATOR | SAT/UNSAT |
| INSTRUMENT LIGHTING | SAT/UNSAT |
| FLIGHT INTERPHONE | SAT/UNSAT |
| FUEL QUANTITY | SAT/UNSAT |
| STANDBY ENGINE INSTRUMENTS (NOTE EPR INOP.) | SAT/UNSAT |
| RUDDER TRIM (TRIM INDICATOR INOPERATIVE) | SAT/UNSAT |
| HIGH IDLE ON ENGINES | SAT/UNSAT |
| MANUAL STABILISER TRIM | SAT/UNSAT |
| 1/2 GEAR GREEN LIGHTS | SAT/UNSAT |

Reinstate both generators and check normal operation of electrics.

20. ENGINE SHUTDOWN

Shut engines down using the fire handles.

| | | |
|---|---|---|
| Check: | Spar valve shuts (light cycles): | SAT/UNSAT |
| | Generator field switches OPEN: | SAT/UNSAT |
| | Fuel control switches: | CUT OFF |
| | Fire handles: | RE-INSTATE |

Record fuel contents: Left ..... kg

Centre ..... kg

Right ..... kg

Total ..... kg

**Amendment Record.**

Issue 2

Sections 5 and 7

Take-off and en-route climbs reinstated.

Section 9 High Cabin Pressure

Clarification of the valve operating procedures.

Section 15(b) Alternate Flaps

The test has been amended so that it finishes after the flaps have been retracted on the alternate system to 20º.

Issue 3

Section 1. Take-off Configuration Warning

Test amended to include check of all system inputs

Section 6 & 7

Sequences of tests 6 and 7 have been reversed such that the en-route climb immediately follows the take-off climb.

Section 11 High Mach

Test amended to include data for aircraft with 0.86 Mmo

Section 15(b) Alternate Flaps

Requirement to check slats sealed deleted

Amendment Record for Issue 2 amended to correct flap position for Alternate Flap Check.