CHECK FLIGHT CERTIFICATE

Bombardier DHC 8-400 series	**CFS 324 Issue 1**	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	-70	-70	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.:

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 Airworthiness 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

BOMBARDIER DHC 8-400 SERIES (PW 150A) **CFS 324, Issue 1**

INTRODUCTION

This schedule is applicable only to DHC 8-400 series aircraft. It is based on the assumption that the everyday operation of the aeroplane serves as a continuous check on the functioning of all normal services. On this test flight, however, the crew are expected generally to monitor the behaviour of all equipment and report any unserviceable items. In addition to completing all the tests in this schedule, any characteristics that are considered to be unsafe or undesirable must be recorded.

If anything in this schedule conflicts with the current Flight Manual, comply with the Flight Manual but inform CAA Flight Test section of the discrepancy.

LOADING AND CALCULATION OF AIRCRAFT WEIGHT

The aircraft is to be loaded with full fuel and C.G. forward of 25% MAC

Provision must be made for the calculation of weight throughout the flight.

PRE-FLIGHT ACTION

If passenger oxygen masks are fitted, to prevent them deploying fully during the depressurisation check, the mask doors should be taped with sufficient slack to allow the door to open about 1 cm.

POST-FLIGHT ACTION

Complete a statement of defects, sign the Flight test certificate and state clearly whether or not the aircraft needs to be reflown. Pass the completed Check Flight schedule and Certificate to the CAA Area Office.

Aircraft Registration		First Pilot	
Operator		Second Pilot	
Location		Observer	
Date			

Zero Fuel Weight		C.G. Position	
Start Fuel			
Start Weight			

1. FUNCTIONING - BEFORE STARTING ENGINES

CHECK THE FOLLOWING FOR PRESENCE, LEGIBILITY AND ACCURACY:

Airframe and engine limitations placards.	SAT/UNSAT
Labelling of controls, instrument panels and circuit breakers.	SAT/UNSAT
Test Warning/Caution panel lights	SAT/UNSAT
With the control locks released, operate Aileron Trim through full range checking the trim indicator	SAT/UNSAT

Select Stall Warning Test 1

RA increases to greater than 500' (on-side RA only in dual Rad Alt configuration).
Rising runway or ground tape disappears.

3 second delay.
RA decreases to 50 ft, rising runway or ground tape
reappears.
#1 stick shaker activates
#1 STALL SYST FAIL and PUSHER SYST FAIL — SAT/UNSAT
Caution Lights and Master Caution illuminate

Repeat for Stall Warning Test 2

SAT/UNSAT

2. FUNCTIONING - AFTER ENGINE START

2.1 ELEVATOR CONTROL AND PITCH DISCONNECT

Pull the pitch disconnect handle and rotate through 90 degrees. Check that the handle remains locked out.	SAT/UNSAT
Check that both control columns move freely and independently throughout their range and without interference.	SAT/UNSAT
Check Elevator Asymmetry Caution light illuminates in response to elevator movements.	SAT/UNSAT
Rotate pitch disconnect handle through 90 degrees. Check that the handle springs back in and that columns reconnect when realigned.	SAT/UNSAT
Check that normal pitch control is restored.	SAT/UNSAT

Operate Elevator Trim through full range

Confirm chirper sounds and PUSH OFF lights illuminate when trim held > 3 seconds.	SAT/UNSAT
Confirm full range is achieved on trim indicator.(limit:2 needle widths of full range mark)	SAT/UNSAT

2.2 ROLL DISCONNECT HANDLE

Spoilers	TAXI	
Pull the roll disconnect handle and rotate through 90 degrees. Check that the handle remains locked out.		SAT/UNSAT
Check that both control wheels move freely and independently throughout their range without interference between them and with the pilots wheel controlling the spoilers, the co-pilot's wheel controlling the ailerons.		SAT/UNSAT
Splr 1 and Splr 2 Push Off Switchlights are illuminate at full travel		SAT/UNSAT
Rotate the roll disconnect handle through 90 degrees. Check the handle springs back in and the control wheels reconnect when aligned.		SAT/UNSAT
Check that normal roll control is restored.		SAT/UNSAT
Set Spoilers to TAXI or FLIGHT as required		

2.3 HYD #3 ISOL VALVE CHECK

Perform HYD #3 ISOL VALVE check		SAT/UNSAT

2.4 ALTERNATE FEATHER CHECK

Both Throttles	FLIGHT IDLE	
Both Condition levers	MIN/850	
Autofeather	OFF	
#1 ALT FTHR	ON	
Confirm green light remains off		SAT/UNSAT
No 1 Condition lever	START & FEATHER	
Confirm green light on then propeller feathers in approximately 30 second		SAT/UNSAT
No 1 Condition lever	MIN/850	
After Propeller has unfeathered: # 1 ALT FTHR	Off	
#2 ALT FTHR	ON	
Confirm green light remains off		SAT/UNSAT
No 2 Condition lever	START & FEATHER	
Confirm green light on then propeller feathers in approximately 30 second		SAT/UNSAT
No 2 Condition lever	MIN/850	
After Propeller has unfeathered:# 2 ALT FTHR	Off	

2.5 PROPELLER ANTI-ICE CHECK

PROP levers	MIN 850	
POWER levers	FLIGHT IDLE	
ICE PROTECTION PROP	TEST	
Confirm each propeller heated for approximately 5 seconds as shown by propeller advisory lights and increased L and R AC loads		SAT/UNSAT
ICE PROTECTION PROP	OFF	
PROP and POWER levers	As required	

2.6 RUDDER LIMITER CHECK

Set Flaps 5

Operate Rudder over full range and observe movement on PFCS	SAT/UNSAT

Set Flaps UP, rudder trim neutral

Operate Rudder over full range and observe movement on PFCS is restricted to approximately first division	SAT/UNSAT

2.7 TAKE-OFF CONFIGURATION AUDIO WARNING

Use the T/O WARN TEST switch to confirm the TOCW audio warning sounds when:

Flaps are less than 5° or greater than 15°.	SAT/UNSAT
Elevator trim is outside take-off range.	SAT/UNSAT
No.1 or No.2 condition levers not at max. Np.	SAT/UNSAT

Reset all controls for takeoff

Taxi to a suitable area to increase engine power, or negotiate a hold on the runway to perform the following checks:

2.8 OSG

Perform Overspeed Governor test	SAT/UNSAT

2.9 TAKE-OFF CONFIGURATION WARNING ON THROTTLES

Advance No.1 and No.2 power levers above 50%; the TOCW audio warning should sound when:

Park brake on.	SAT/UNSAT

Set LDG ALT to 8000 ft in preparation for a later test.

3. NORMAL TAKE-OFF

Carry out a normal full power take-off.

4. SPOILER UNLOCK

Reduce speed to 160 knots while carrying out turn reversals using sufficient wheel deflections to activate the roll spoilers. Observe the PFCS and record the speed at which the outboard spoilers activate.

kts

(Lim: 160-170 KNOTS)

Carrying out turn reversals as before but in a slow acceleration to 180 knots. Record airspeed at which outboard spoilers de-activate.

kts

(Lim: 165-175 KNOTS)

5. ENGINE SHUTDOWN AND FLAP EXTENSION ON STBY HYD PRESSURE

CAUTION: DO NOT OPERATE BELOW 3000 FT AGL SINGLE ENGINE

Shut down Engine 1 and feather propeller.

Time flaps from 0 to 15 at 130 KIAS (max 45 secs)

secs

Confirm the landing gear warning sounds SAT/UNSAT

Push the Engine 1 throttle forward to the takeoff detent to prevent the gear warning horn sounding for the subsequent tests.

6. PERFORMANCE TAKE-OFF CLIMB (rec start FL50, limits 4000 ft, AGL to FL90).

Carry out a five minute recorded climb on a steady heading, clear of cloud and turbulence. Control forces are to be trimmed out as far as possible in the test condition before commencing each climb.
Note that the power lever must be set manually to achieve NTOP as the detent will correspond to MTOP when one engine is shut down.

GEAR UP
FLAPS 15 DEGREES
NO. 1 ENGINE SHUT DOWN, PROPELLER FEATHERED
OPERATING ENGINE AT NORMAL TAKE-OFF POWER
(See table at end of Schedule)
PROPELLER MAX RPM
AIRSPEED V_2 KTS
(See table at end of Schedule)
CAPTAINS ALTIMETER SET TO 1013 mb
DE-ICING SYSTEMS OFF
INTAKE BY-PASS DOORS CLOSED
BLEEDS OFF AND NORM

TIME MINS	CAPTAINS ALTITUDE	IAS KNOTS	SAT °C	INDICATED TORQUE
0				
½				
1				
1½				
2				
2½				
3				
3½				
4				
4½				
5				

FUEL QUANTITY 1 2	
TOTAL FUEL	
AIRCRAFT ZFW	
AIRCRAFT WT	

ELEVATOR TRIM	
RUDDER TRIM	
AILERON TRIM	

ENGINE DATA	
TORQUE	
PROP. RPM	
ITT	
Nh	
FUEL FLOW	
OIL TEMP.	
OIL PRESS.	

FUEL QUANTITY 1 2	
TOTAL FUEL	
AIRCRAFT ZFW	
AIRCRAFT WT	

7. STBY HYD PRESS FLAP RETRACTION

Time flaps from 15 to 0 (max 45 secs) | secs

8. ENGINE RELIGHT

Carry out a normal airstart on No. 1 engine at V2+20.

Altitude	FEET
Time From Fuel On To Light Up	SECONDS
Maximum ITT	°C
Relighting And Unfeathering Characteristics	

9. PRESSURISATION (not above FL200)

Select MAN cabin altitude control.

Increase the cabin altitude by switching off air bleeds and using the FWD OUTFLOW control to achieve a comfortable rate of climb

Record cabin altitude when CABIN PRESS light illuminates (limits 9100 to 10900 feet). | FEET

If passenger oxygen masks are fitted, continue to depressurise, otherwise set LDG ALT to sea-level in preparation for a later test.

Check all crew oxygen masks for flow and microphones. SAT/UNSAT

Record cabin altitude when passenger oxygen masks deploy (limits 13000 to 14000 feet). | FEET

Re-pressurise and then select AUTO. Set LDG ALT to sea-level for a later test.

10. ENGINE SHUTDOWN AND ALTERNATE GEAR LOWERING

Shut down engine 2 and feather propeller.

Using the ABNORMALS check list, confirm satisfactory gear extension below 185KIAS using the alternate system. SAT/UNSAT

Confirm gear position with alternate verification system SAT/UNSAT

Reset using the following procedure:

PTU ON

Confirm NOSE L/G RELEASE handle fully stowed then close door

Confirm MAIN L/G RELEASE handle fully stowed then close door

L/G DOWN SELECT INHIBIT SW Normal

When doors have closed, retract gear using normal system SAT/UNSAT

PTU When gear up, reset

11. PERFORMANCE EN-ROUTE CLIMB (recommended start FL100)

Carry out a five minute recorded climb on a steady heading, clear of cloud and turbulence. Control forces are to be trimmed out as far as possible in the test condition before commencing each climb.

GEAR UP
FLAPS UP
ENGINE 2 SHUT DOWN, PROPELLER FEATHERED
OPERATING ENGINE AT MAXIMUM CONTINUOUS POWER*
PROPELLER MAXIMUM RPM
INTAKE BY-PASS DOORS CLOSED
ENGINE 1 BLEED ON AND NORM

AIRSPEED EN-ROUTE CLIMB SPEED | KTS

(See table at end of schedule)
CAPTAINS ALTIMETER SET TO 1013 mb
DE-ICING SYSTEMS OFF

*note: to achieve Max Continuous Power on the operating engine, with the bleeds as specified, both power levers should be moved to the TO detent

TIME MINS	CAPTAINS ALTITUDE	IAS KNOTS	SAT °C	INDICATED TORQUE
0				
½				
1				
1½				
2				
2½				
3				
3½				
4				
4½				
5				

FUEL 1 QUANTITY 2	
TOTAL FUEL	
AIRCRAFT ZFW	
AIRCRAFT WT	

ELEVATOR TRIM	
RUDDER TRIM	
AILERON TRIM	

ENGINE DATA	
TORQUE	
PROP. RPM	
ITT	
Nh	
FUEL FLOW	
OIL TEMP.	
OIL PRESS.	

FUEL 1 QUANTITY 2	
TOTAL FUEL	
AIRCRAFT ZFW	
AIRCRAFT WT	

12. ENGINE RELIGHT

Carry out a normal airstart on engine 2 at 160 knots.

Altitude	FEET
Time From Fuel On To Light Up	SECONDS
Maximum ITT	°C
Relighting And Unfeathering Characteristics	

13. AIRCRAFT FLYING CONTROLS AND TRIMMERS

Primary controls for breakout, backlash, centring, forces and response:	Elevator	SAT/UNSAT
	Rudder	SAT/UNSAT
	Aileron	SAT/UNSAT
Trimmers for normal operation:	Elevator	SAT/UNSAT
	Aileron	SAT/UNSAT
	Rudder	SAT/UNSAT

14. PRESSURISATION (FL150)

CAUTION: DO NOT EXCEED 5.95 PSI

With AUTO selected, check and record the stabilised differential pressure (Limits 4.4- 4.8 at FL150;	PSI
Cabin Altitude	FEET

Using the manual system, increase the cabin differential pressure at about 1000 feet per minute cabin decent rate to open the cabin safety valve.

Record the cabin differential when the safety valve opens (as indicated by a sudden drop of cabin descent rate through zero) (Limits: 5.65 to 5.95 psi).	PSI
	FEET

Reset pressurisation as required.

15. HIGH SPEED (Recommended FL150, Not Above FL200)

	FIRST PILOT	SECOND PILOT
Record Vmo pointer readings (limit 286-292)	KIAS	KIAS

Accelerate, in a gentle descent if necessary, to V_{MO} + 10 knots or until warning sounds.

	FIRST PILOT	SECOND PILOT
IAS from each ASI at which speed warning sounds (limit 286-292)	KIAS	KIAS

Confirm PFD and ISI airspeeds turn red at 285 KIAS SAT/UNSAT

16. STALLING, GEAR AND FLAP FUNCTIONING (Recommended FL100, limits 8000 feet AGL to FL150)

The following tests must be carried out clear of cloud and turbulence. For each stall the aircraft is to be trimmed at the scheduled trim speed (from Table 1) with power at idle. Speed is to be reduced steadily at approximately 1 knot per second until the stall occurs.

STBY HYD	ON
PTU CONTROL	ON
Yaw Damper	Off
Condition Levers	MAX

Carry out a flaps up gear up stall.

Record:

Fuel 1	Fuel 2
Aircraft Wt.	Trim Speed

	Scheduled Speed	Achieved Speed	Limits	
Stick Shaker			±3 knots	SAT/UNSAT
Stall			±3 knots	SAT/UNSAT
Margin Stick shake to stall			not less than 5 knots	SAT/UNSAT
Any unusual characteristics.				SAT/UNSAT
Did Stick Push Operate?				YES/NO

Carry out a flaps 15 gear up stall.

Record:	Fuel 1	Fuel 2
	Aircraft Wt.	Trim Speed

	Scheduled Speed	Achieved Speed	Limits	
Stick Shaker			±3 knots	SAT/UNSAT
Stall			±3 knots	SAT/UNSAT
Margin Stick shake to stall			not less than 5 knots	SAT/UNSAT
Any unusual characteristics.				SAT/UNSAT
Did Stick Push Operate?				YES/NO

Carry out a flaps 35° gear down stall.

Record:	Fuel 1	Fuel 2
	Aircraft Wt.	Trim Speed

	Scheduled Speed	Achieved Speed	Limits	
Stick Shaker			±3 knots	SAT/UNSAT
Stall			±3 knots	SAT/UNSAT
Margin Stick shake to stall			not less than 5 knots	SAT/UNSAT
Any unusual characteristics.				SAT/UNSAT
Did Stick Push Operate?				YES/NO

Set Ref Speed Switch to INCR

Carry out a flaps 35° stall warning check with Icing Stall Warning advance

	Scheduled Speed	Achieved Speed	Limits	
Stick Shaker			±3 knots	SAT/UNSAT
Any unusual characteristics.				SAT/UNSAT

Time flaps 35° to 0 (max 34 secs)	SECS
Confirm Auto Pitch trim runs as flaps travel between 35° and 15°	SAT/UNSAT
Record gear retraction time (limit 7 seconds)	SECS

Ref Speed Switch	**Deselect**
STBY HYD	**OFF**
PTU CONTROL	**OFF**
Yaw Damper	**On**
Condition Levers	**As Required**

17. PITOT STATIC ISOLATION VALVE

Establish the aircraft straight and level at 180 KIAS with the gear and flaps up

Press Isolation valve switch

Confirm ISOL advisory appears	SAT/UNSAT
Confirm Pilot's airspeed and altitude change less than 2 KIAS/ 20 ft	SAT/UNSAT

Reset the Isolation valve switch

18. ICE PROTECTION (below 8000 ft)

Airframe De-ice

Select Bleed Air 1 and 2 Off/Min

Record Deice Pressures (Lims:15-21 psi)

psi	psi

Select AIRFRAME MODE to MANUAL

Switch AIRFRAME MANUAL SELECT to each position and confirm the appropriate boot lights iluminate — SAT/UNSAT

19. LANDING

Carry out a normal 35° flap landing using a high level of reverse power. Record any unusual characteristics.

20. AFTER LANDING

Emergency power check. With engines running, check that the battery master is ON.

Select OFF: STBY and AUX and MAIN BATT, DC GEN 1 and GEN 2, MAIN BUS TIE, EXT PWR, AC GEN 1 and GEN 2.

Verify operation of the following:

ARCDU 1 & 2 VHF 1 VOR/ILS 1 Audio 1 & 2 STBY ATT Clock 1 AHRS 1 & 2 ADU 1	SAT/UNSAT
ED PEC 1 & 2 All Engine Ind except Fuel Temp 2	SAT/UNSAT
Aileron Trim Rudder Trim Elev Trim at reduced rate Flap Control Ldg Gear Ind Hyd Sys 3 All Hyd Ind except Qty 2	SAT/UNSAT

Restore all electrical systems.

PERFORMANCE CLIMB SPEEDS AND STALL SPEEDS (KNOTS IAS)

WEIGHT KGS	FLAPS 0			FLAPS 15			FLAPS 35,Gear Down		
	TRIM	WARN	STALL	TRIM	WARN	STALL	TRIM	WARN	STALL
24	143	121	101	117	102	84	112	94	81
23	140	119	99	114	100	82	109	92	80
22	137	116	96	112	98	80	107	90	78
21	134	114	94	109	96	78	104	88	76
20	131	111	92	106	93	76	102	86	74
19	127	108	89	103	91	74	99	83	72

WEIGHT KGS	FLAPS 35,Gear Down De-ice on	
	TRIM	WARN
24	124	106
23	121	104
22	119	102
21	116	100
20	114	98
19	111	95

WEIGHT KGS
24
23
22
21
20
19

15 FLAP V2 SPEED	FLAPS UP ERC SPEED
109	143
107	140
104	137
103	134
103	131
103	130

400 SERIES SPEEDS

DHC-8 SERIES 400

NORMAL TAKE-OFF POWER TORQUE SETTING (IN-FLIGHT)
PROPELLER RPM 1020; BLEED OFF

	ALTITUDE FEET					
SAT °C	2000	4000	6000	8000	10000	12000
-20	90.3	90.3	90.3	90.3	90.3	87.3
-18	90.3	90.3	90.3	90.3	90.3	86.4
-16	90.3	90.3	90.3	90.3	90.3	85.8
-14	90.3	90.3	90.3	90.3	90.3	84.8
-12	90.3	90.3	90.3	90.3	90.3	84.0
-10	90.3	90.3	90.3	90.3	90.12	83.0
-8	90.3	90.3	90.3	90.3	90.1	82.2
-6	90.3	90.3	90.3	90.3	89.1	81.3
-4	90.3	90.3	90.3	90.3	88.0	80.3
-2	90.3	90.3	90.3	90.3	86.9	79.3
0	90.3	90.3	90.3	90.3	85.9	78.4
2	90.3	90.3	90.3	90.3	84.8	77.4
4	90.3	90.3	90.3	90.3	83.7	76.4
6	90.3	90.3	90.3	89.1	82.7	75.5
8	90.3	90.3	90.3	88.0	81.6	74.5
10	90.3	90.3	90.3	86.9	80.5	73.5
12	90.3	90.3	90.3	85.6	79.3	72.3
14	90.3	90.3	90.3	84.4	78.1	71.2
16	90.3	90.3	89.8	82.8	76.5	69.6
18	90.3	90.3	88.3	81.5	75.2	68.3
20	90.3	90.3	86.8	80.1	73.8	66.9
22	90.3	90.3				
24	90.3	90.3				
26	90.3					
28	90.3					
30	90.3					