

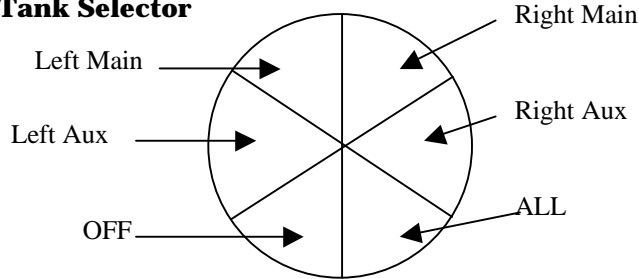
**DOUGLAS DC-3/R4D CHECKLISTS (Condensed, \* = R4D Only)**

<p><b>BEFORE STARTING ENGINES</b>          Battery Switch - ON          Generator Switch - ON          Fuel Gauges - Amount of Fuel          Automatic Pilot - OFF          Nav &amp; Strobe Lights - ON          Seat Belt/No Smoking Lights - ON          Trim Tabs - Neutral          Parking Brake - ON          Carburetor Heat - As Needed          * Cowl Flaps - OPEN          Fuel Selector - As required          Propellers - Full Forward, High RPM          Throttles - Cracked (or 5 keystrokes)          Mixtures - Idle Cut-Off (or 5 keystrokes)          Pitot Heat - OFF</p>	<p><b>CRUISE</b> (CHT = Cylinder Head Temp)           Desired Cruise - 2000-2150 RPM, 26"                                      Abv 3,500' Auto-Lean CHT 232C           Economy Cruise -1750 RPM, 25", Auto Lean           Max Cruise - 2250 RPM, 34",                                      Below 3,500' - Auto Lean CHT 232C           Min Cruise - 1700 RPM, 32" MAP, Auto Lean                                      CHT 232C           Fuel Selector - To Desired Cruise Tanks          Seat Belt Light - OFF          * Cowl Flaps - AS REQUIRED or OFF</p>
<p><b>START ENGINES</b>          (see detailed checklist)  <b>BEFORE TAXI</b>          Crew and Passengers Aboard          Door Secured, Light - OFF (/ (slash) key)          Radios - ON, and SET          Clock - SET          Parking Brake - OFF   <b>ENGINE RUN-UP</b>          Parking Brake - ON          Fuel Boost Pumps - OFF          Mixtures - Auto Rich          Fuel Selector - All Tanks          Carb Heat - ON, Check, OFF          Ignition &amp; Propeller Checks, each engine              See detailed checklists</p>	<p><b>BEFORE LANDING</b>          Altimeter - SET          Fuel Selector - ALL          Mixtures - Auto Rich          Carburetor Heat - As Needed          Pitot Heat - As Needed          Landing Lights - ON          Fuel Boost Pumps - ON          Seat Belt/No Smoking Lights - ON          Propellers - 1800-2000 RPM          Gear - Down and Latched, Green Light,                      Check Wheels Visually          Parking Brake - Off, brake pressure on pedals          Flaps - As Desired          Propellers full forward in case of go around.          Airspeeds: Downwind - 125k, Base - 105k                      Final 85k</p>
<p><b>BEFORE TAKEOFF</b>          Altimeter - SET          Mixtures - Auto Rich          Landing Lights - ON          Fuel Boost Pumps - ON          Pitot Heat - As Required          Flaps - SET          * Cowl Flaps - TRAIL, then OFF          Take Off - 2700 RPM, 48"              <b>Log takeoff time</b></p>	<p><b>AFTER LANDING</b>          Flaps - Up          Fuel Boost Pumps - Off          Elevator Trim - Neutral          Propellers - Full Forward, High RPM          * Cowl Flaps - OPEN          Pitot Heat - OFF               <b>Log landing time</b></p>
<p><b>AFTER TAKEOFF AND CLIMB</b>          Gear - UP (After Positive Vertical Velocity and                      Altimeter Indication)          Flaps - UP          Wheels- Stop Rotation With Brakes          90 KIAS - 2550 RPM, 40"          110 KIAS - 2350 RPM, 36"           Fuel Boost Pumps - OFF          Landing Lights - OFF</p>	<p><b>PARKING</b>          Parking Brake - ON (chocks in - OFF)          Ignition - OFF          Mixtures - Idle Cut-Off          Fuel Selectors - OFF          Battery Switch - OFF          Generators - OFF          Flap Handle - UP          Navigation, Strobe, Landing lights - OFF          Pitot Heat - OFF          Seat Belt Sign - OFF          Door - OPEN</p>

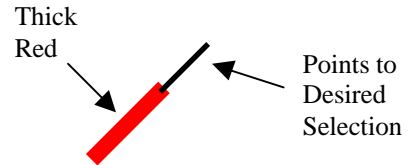
<p><b>START ENGINES</b>  Right Magneto Lever - Both  Right Fuel Boost Pump - On  Prime Switch - On Right  Start Switch - ON RIGHT, 10 to 15 seconds  Mesh Switch - On Right  Mesh Switch - Off  Start Switch - OFF  Right Mixture - Auto-Rich  Right Fuel Boost Pump - OFF</p> <p>Repeat for Left Engine</p>	<p><b>AIRSPEEDS</b></p> <table> <tr><td>Vmc (min control)</td><td>71k</td></tr> <tr><td>V1 (decision)</td><td>81k</td></tr> <tr><td>V2 (single engine climb)</td><td>84k</td></tr> <tr><td>Vref (refusal)</td><td>80k</td></tr> <tr><td>Vr (rotate)</td><td>84k</td></tr> </table> <p>Max Extension, Gear Down - Vle 140</p> <p>Flaps, Max Speeds:  10 ( 1 / 4 ) - 130 KIAS  20 ( 1 / 2 ) - 105 KIAS  30 ( 3 / 4 ) - 99 KIAS  40 ( Full ) - 97 KIAS</p>	Vmc (min control)	71k	V1 (decision)	81k	V2 (single engine climb)	84k	Vref (refusal)	80k	Vr (rotate)	84k
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<p><b>Engine Runup - Ignition Check</b></p> <p>Set brakes  Magneto switches in Both position.  Propellers in the High position--full forward</p> <p>Right Engine  throttle to 2350 RPM.  Mag switch to Left, note RPM drop  Mag switch to Both  Mag switch to Right, note RPM drop  Mag switch to Both</p> <p>- Max allowable drop (Left or Right magneto) is 65 RPM, 25 RPM is the normal drop.  - Allowable difference (left and right magneto) in RPM drop is 40 RPM</p> <p>Repeat for Left Engine</p> <p>* Propeller Feather Check  Left Engine - FEATHER, UNFEATHER  Repeat for Right Engine</p>	<p><b>Engine Runup - Propeller Check</b></p> <p>Magneto switches in the Both position  Propellers in the High position--full forward  Set 1000 RPM on both engines</p> <p>Set the left engine to 1700 RPM.  Left-engine prop control to Low RPM  Note that the RPM decreases to 1200 RPM or below.  Return prop control to High RPM, back to 1700 RPM  Left throttle to 1000 RPM</p> <p>Repeat the prop check for the right engine.</p> <p><b>Misc Info</b>  Carb Heat - Forward is OFF</p>										

**Here are some tips on reading the Fuel Selector Gauge and the Fuel Quantity Gauge**

**Fuel Tank Selector**



**Selector Handle**



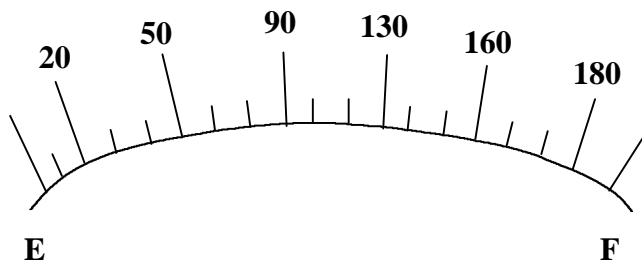
**Fuel Quantity and Fuel Quantity Gauge**

**Fuel Quantity**

The Dutch Dakota (PH-DDZ), Company DC-3 (DCA N1776) and the R4D (50819) all have the same fuel load. The 804 Gallons are distributed as follows:

Left Aux – 200, Left Main – 202, Right Main – 202, and Right Aux – 200

**Fuel Gauge**



E for Empty,

F for Full

All this information is available on the Fuel Dialog box ( Aircraft | Fuel ) but this may make it a bit easier to read directly from the cockpit.

# DC-3 Airways - Pilot's Log

Flight Log for: \_\_\_\_\_ Pilot #: \_\_\_\_\_ Page #: \_\_\_\_\_

<b>Date</b>	<b>Type Acft</b>	<b>Flight Number</b>	<b>Takeoff Time</b>	<b>Landing Time</b>	<b>Flight Time - in Minutes (10ths)</b>	<b>Total Time Hrs . Min (in 10ths)</b>	<b>PIREP Submitted</b>

Minutes to Tenths conversion: 1 to 6 = 1, 7 to 12 = 2, 13 to 18 = 3, 19 to 24 = 4, 25 to 30 = 5, 31 to 36 = 6, 37 to 42 = 7, 43 to 48 = 8, 49 to 54 = 9, 55 to 60 = full hour

## DOUGLAS DC - 3 CHECKLISTS

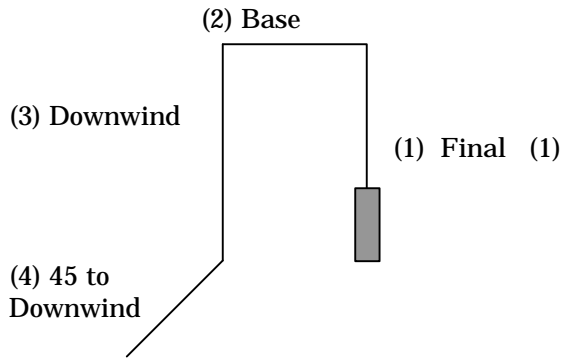
### PAX (passenger) Stops - Through Flights

<p style="text-align: center;"><b>BEFORE LANDING</b></p> <p>Pitot Heat - As Needed  Landing Lights - ON  Fuel Boost Pumps - ON  Mixture - AUTO RICH  Seat Belt/No Smoking Lights - ON  Propellers - 1800-2000 RPM  Gear - DOWN &amp; LATCHED (Green Light)  Flaps - As Desired  Propellers – FULL FORWARD  Airspeeds: Downwind - 125k, Base - 105k  Final 85k</p>	<p style="text-align: center;"><b>BEFORE TAKEOFF</b></p> <p>Altimeter - SET  Mixtures - AUTO RICH  Landing Lights - ON  Fuel Boost Pumps - ON  Pitot Heat - As Required</p> <p>Take Off - 2700 RPM, 48”</p> <p style="text-align: center;"><b>Log takeoff time</b></p>
<p style="text-align: center;"><b>AFTER LANDING</b></p> <p>Flaps - UP  Fuel Boost Pumps - OFF  Elevator Trim - Neutral  Propellers - FULL FORWARD, High RPM  Trim - SET  Pitot Heat - OFF</p> <p style="text-align: center;"><b>Log landing time</b></p> <p>Engine #1 – SHUT DOWN  Seat Belt Sign – OFF  Door – OPEN (/ (slash) key)</p>	<p style="text-align: center;"><b>AFTER TAKEOFF AND CLIMB</b></p> <p>Gear - UP  Flaps - UP  Wheels- Stop Rotation With Brakes  90 KIAS - 2550 RPM, 40”  110 KIAS - 2350 RPM, 36”</p> <p>Fuel Boost Pumps - OFF  Landing Lights – OFF</p>
<p style="text-align: center;"><b>BEFORE TAXI</b></p> <p>Door Secured, Light - OFF (/ (slash) key)  Radios - ON, and SET  Clock – SET</p> <p>Engine #1 - RESTART  Trim – SET  Flaps - SET  Parking Brake – OFF</p>	<p style="text-align: center;"><b>CRUISE</b></p> <p>Desired Cruise - 2000-2150 RPM, 26”  Economy Cruise -1750 RPM, 25”  Auto Lean  Max Cruise - 2250 RPM, 34”,  Min Cruise - 1700 RPM, 32” MAP  Auto Lean</p> <p>Fuel Selector - To Desired Cruise Tanks  Seat Belt Light - OFF</p>

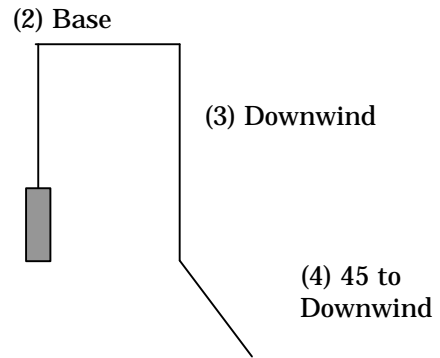
Use these check lists with combined flights. Get the <ne-sked-2.zip> file for New England Schedule, Regrouped into flights of 2 to 4 legs. It's on the Download page of the DC-3 Airways web site.

**Compute Headings for VFR Traffic Patterns**

**Right Hand Pattern**



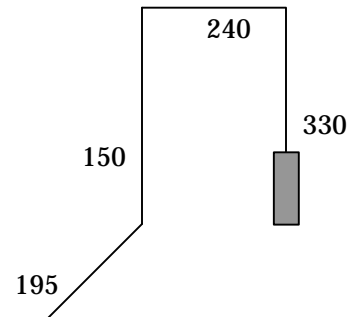
**Left Hand Pattern**



Enter Pattern Headings Below	Right Traffic		Left Traffic	Enter Pattern Headings Below
	Runway Hdg	Final Approach Runway Hdg (1)	Runway Hdg	
	(1) MINUS 90 degrees	Base Leg (2)	(1) PLUS 90 degrees	
	Runway Reciprocal	Downwind (3)	Runway Reciprocal	
	(2) MINUS 45 degrees	45 to Downwind (4)	(2) PLUS 45 degrees	

Example: Right Traffic Pattern to Land Runway 33

Enter Pattern Headings Below	Right Traffic	
330	Runway Hdg	Final Approach Runway Hdg (1)
240	(1) MINUS 90 degrees	Base Leg (2)
150	Runway Reciprocal	Downwind (3)
195	(2) MINUS 45 degrees	45 to Downwind (4)



Source: manuals, aircraft checklists & placards

Airspeed (AS) in knots	DC – 3 DDA – PH DDZ	R 4 D 50819	DC - 3 DCA 1776
<b>Take Off</b>			
Flaps	0	0	
Trim	0	0	
Power	48" 2700	52" 2800	48" 2800
Vr Rotate	84	85	
METO Power	40" 2550	43" 2600	43" 2600
Flaps Up	105k	105k 41"	
500 Feet	36" 2350	36" 2400	36" 2400
<b>Climb</b>			
Power		35" 2400	
Vy Best Rate	105	105	
Vx Best Angle		84	
<b>Cruise</b>			
Power	Normal 26" 2150 Min 32" 1700 Max 34" 2250	32" 2000 31" 1850	32" 2000 31" 1850
AS		145 – 185	145 - 185
Va Maneuver		122	
Vne Never Exc	180	180	172 (154 full wgt)
Max AS Vno Vmo			
Vmo Max Opr			
<b>Landing</b>			
<b>Vfe Flaps</b>			
10° ( 1 / 4 )	130	135	135
20° ( 1 / 2 )	105	99	99
30° ( 3 / 4 )	99	97	87
40° ( Full )	97		
Gear Max Vle Vlo Oper Dn - Up	140	140	140 140
Vmc Min Cont	71	77	77
Pattern Downwind	23" 2000 125k	20" 2000 125k	20" 2000
Final AS Vref Clean	80	80	80
Flaps	85	85	85
<b>Stall (24,000 GrWgt)</b>			
- Clean Vs	67	67	
- Gear/Flaps Vso	61	61	61
Go Around		33" 2300	33" 2300
Best Glide		115	115
Close Exterior Door	/ (slash)	Nav Lights – ON	
Remove Signs / Chocks	N/A	Parking Brakes - OFF	