

DISPERSANT AIRCRAFT CAPABILITY FORM

PLATFORM

Bell 407
with Simplex Model 6810
Spray Bucket
(240 gallons)

Operator: Paradise Helicopters
OSRO: Clean Island Council



Photo from web site: www.lionsair.ch

DATA SOURCE LEGEND

- 1. (Black):** Indicates the data are based on documented field trials or is a fixed design value
- 2. (Blue):** Indicates the data are based on limited field observations or operator's stated practice or stated value (little or no documentation)
- 3. (Red):** Indicates the data are based on reasonable calculations or performance of comparable systems

		Unit	U.S. Regulatory Calculation Values	Data Source 1-2-3	Range	Reference(s)
AIRCRAFT PARAMETERS						
1	Swath Width	feet	65	1	60-70	Clean Island Council exercises
	a. Application (gallons per acre)	gpa	5	2	1-10	Confirmed by Operator to Clean Island Council
	b. Altitude	feet	50	1	50	Clean Island Council exercises
	c. Application Speed	knots	50	1	30-90	Clean Island Council exercises
	d. Pump Rate (gallons per minute)	gpm	40	1	30-50	Clean Island Council exercises
	e. Boom Pressure (pounds/square inch)	psi	40	1	38-42	Clean Island Council exercises
2	Transit Speed at Altitude From Base to Staging Airport	knots feet	110	3	100-140	Operator confirmed
3	Transit Speed at Altitude Staging Airport to/from spill	knots feet	90	1	90	Clean Island Council exercises
4	Dispersant Spraying Reposition Speed	knots	50	1	30-90	Clean Island Council exercises
5	Time to Fully Load Dispersant Tank	min	10	3	10	Confirmed by Operator to Clean Island Council

6	Time to Fully Load Fuel Tanks	min	5	3	5	Confirmed by Operator to Clean Island Council
7	Load Dispersant & Fuel simultaneously (Yes/No)	-----	Yes	3	Yes	See Other Comments below 5* & 6*
8	Time to Make U-turn (Turn 180 degrees)	min	0.75	3	0.75	Confirmed by Operator to Clean Island Council
9	Dispersant Payload Maximum	gal	240	1	240	Simplex Model 6810 spray bucket capacity
10	Fuel with maximum dispersant payload	lbs	1170	3	1170	Confirmed by Operator to Clean Island Council
11	Approach Distance for spraying	nm	0.5	3	0.5	Confirmed by Operator to Clean Island Council
12	Departure Distance for spraying	nm	0.5	3	0.5	Confirmed by Operator to Clean Island Council
13	Taxi Time Take-Off	min	1	2	1	Confirmed by Operator to Clean Island Council
14	Taxi Time Landing	min	1	2	1	Confirmed by Operator to Clean Island Council
15	On-site Check-In/Safety Time	min	10	2	10	Estimated from exercises
	CASCADE PARAMETERS*					
16	Take-off with Maximum Payload and Maximum Take-off Weight (assume no wind and VFR fuel reserve)					
	a. Maximum Flight Time	hours	1.7	2	1.7	Confirmed by Operator to Clean Island Council
	b. Maximum Flight Range	nm	153	2	153-187	Confirmed by Operator to Clean Island Council
	c. Optimal Altitude	feet				
	d. True Air Speed	knots	90	2	90-110	Confirmed by Operator to Clean Island Council
	e. Fuel Consumption	lbs/hour	250	2	250	Confirmed by Operator to Clean Island Council
17	Take-Off with Maximum Fuel and No Payload (no under slung bucket) (assume no wind and VFR fuel reserve)					
	a. Maximum Flight Time	hours	1.7	2	1.7-3.0	Confirmed by Operator to Clean Island Council
	b. Maximum Flight Range	nm	238	2	238-420	Confirmed by Operator to Clean Island Council
	c. Optimal Altitude	feet				
	d. True Air Speed	knots	140	2	140	Confirmed by Operator to Clean Island Council
	e. Fuel Consumption	lbs/hour	228	2	228	Confirmed by Operator to Clean Island Council
18	Staging area briefing	min	45	2	45	Estimated from exercises
	AIRPORT PARAMETERS					
19	Runway length - Minimum (For take-off at maximum gross weight assuming sea level, 90° F, no wind using a balanced field concept, i.e., go, no go speed)	feet	Helo pad 37 ft x 37 ft	2	Helo pad 37 ft x 37 ft	

20	Runway weight restrictions for maximum aircraft weight	lbs	Helo pad	2	Helo pad	
	OTHER COMMENTS					
5* - 6*	The time to load dispersants and fuel are stand alone times independent of each other. If item 7 indicates that fuel and dispersants can be loaded simultaneously, then the longer of fuel or dispersant load time is used in the capability calculations. If item 7 indicates fuel and dispersants can NOT be loaded simultaneously, then the times are added together to calculate the aircrafts capability. To load simultaneously depends upon the airport, aircraft, and support crew. The loading times depend upon the loading system i.e., 5000 tank truck, 55 gallon drums or other means and the pumping system used. The time shown in items 5 and 6 is for loading from a tank truck which is standing by ready to commence loading when the aircraft comes to a stop in the loading area, i.e. the fastest loading time possible.					
*	Cascade Parameters: The aircraft's calculated capability when cascading uses the same fuel loading and taxi times for dispersant operations as listed in items 6, 13 and 14.					