

DISPERSANT AIRCRAFT CAPABILITY FORM

PLATFORM

**DOUGLAS
DC-4**

Operator: Airborne Support Inc.
OSRO: Clean Gulf Association



Photo compliments of Airborne Support, Inc. (ASI)

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	150	3	75-150	Airborne Support Inc. estimated value
	a. Application (gallons per acre)	gpa	5.0	3	1.0-10.0	Airborne Support Inc. estimated value
	b. Altitude	feet	50	2	50-100	Airborne Support Inc.
	c. Application Speed	knots	150	2	120-160	Airborne Support Inc.
	d. Pump Rate (gallons per minute)	gpm	-----	3	40-600	Estimate for typical spray systems
	e. Boom Pressure (pounds/square inch)	psi	-----	3	15-45	Estimate for typical spray systems
2	Transit Speed at Altitude From Base to Staging Airport	knots feet	150 <10,000	2	150 <10,000	Airborne Support Inc.
3	Transit Speed at Altitude Staging Airport to/from spill	knots feet	150 <10,000	2	150 <10,000	Airborne Support Inc.

4	Dispersant Spraying Reposition Speed	knots	150	2	150	Airborne Support Inc.
5*	Time to Fully Load Dispersant Tank	min	20	2	20-90	Airborne Support Inc.
6*	Time to Fully Load Fuel Tanks	min	16	2	16-90	Airborne Support Inc.
7	Load Dispersant & Fuel simultaneously (Yes/No)	-----	Yes	1	Yes	Airborne Support Inc. See Other Comments 5* & 6*
8	Time to Make U-turn (Turn 180 degrees)	min	1.0	2	1.0	Airborne Support Inc.
9	Dispersant Payload Maximum	gal	2,000	1	2,000	Airborne Support Inc.
10	Fuel with maximum dispersant payload	lbs	10,000	1	10,000	Airborne Support Inc.
11	Approach Distance for spraying	nm	1.0	2	0.5-1.5	Airborne Support Inc.
12	Departure Distance for spraying	nm	1.0	2	0.5-1.5	Airborne Support Inc.
13	Taxi Time Take-Off	min	15	2	10-30	Exercise observation
14	Taxi Time Landing	min	15	2	10-30	Exercise observation
15	On-site Check-In/Safety Time	min	10	2	5-15	Exercise observation
	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	8.2	2	8.2	Airborne Support Inc.
	b. Maximum Flight Range	nm	1,230	2	1230	Airborne Support Inc.
	c. Optimal Altitude	feet	-----	-----	-----	-----
	d. True Air Speed	knots	150	2	150	Airborne Support Inc.
	e. Fuel Consumption	lbs/ hour	-----	-----	-----	-----
17	Take-Off with Maximum Fuel and No Payload (assume no wind and VFR fuel reserve)					
	a. Maximum Flight Time	hours	11.5	2	11.5	Airborne Support Inc.
	b. Maximum Flight Range	nm	1,725	2	1,725	Airborne Support Inc.
	c. Optimal Altitude	feet	-----	-----	-----	-----
	d. True Air Speed	knots	150	2	150	Airborne Support Inc.
	e. Fuel Consumption	lbs/ hour	-----	-----	-----	-----
18	Staging area briefing	min	45	2	30-60	Exercise observation
	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	5,000	2	5,000	Airborne Support Inc.
20	Runway weight restrictions for maximum aircraft weight	lbs	50,000	2	50,000	Airborne Support Inc.

	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.