

static_fire_ date_utc	static_fire_ date_unix	tbd	net	window	rocket	success	details	crew
0	2006-03-17T00:00:00.000Z	1.14E+09	FALSE	FALSE		5e9d0d95e da69955f70 0 9d1eb	FALSE	Engine failure at 33 seconds and loss of vehicle
1	None	NaN	FALSE	FALSE		5e9d0d95e da69955f70 0 9d1eb	FALSE	Successful first stage burn and transition to second stage, maximum altitude 289 km, Premature engine shutdown at T+7 min 30 s, Failed to reach orbit, Failed to recover first stage

2	None	NaN	FALSE	FALSE	5e9d0d95e da69955f70 0 9d1eb	FALSE	Residual stage 1 thrust led to collision between stage 1 and stage 2
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3	2008-09-20T00:00:00.000Z	1.22E+09	FALSE	FALSE	5e9d0d95e da69955f70 0 9d1eb	TRUE	Ratsat was carried to orbit on the first successful orbital launch of any privately funded and developed, liquid-propelled carrier rocket, the SpaceX Falcon 1
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					5e9d0d95e da69955f70 0 9d1eb		
4	None	NaN	FALSE	FALSE	TRUE	None	

ships	capsules	payloads	launchpad	auto_upda te	failures	flight_num ber	name	date_utc
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			[5eb0e4b5b6c3bb0006eeb1e1]	5e9e4502f5090995de566f86	TRUE	[[{'time': 33, 'altitude': None, 'reason': 'merlin engine failure'}]]	1 FalconSat	
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			[5eb0e4b6b6c3bb0006eeb1e2]	5e9e4502f5090995de566f86	TRUE	[[{'time': 301, 'altitude': 289, 'reason': 'harmonic oscillation leading to premature engine shutdown'}]]	2 DemoSat	
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			[5eb0e4b6b 6c3bb0006 eeb1e3, 5eb0e4b6b 6c3bb0006 eeb1e4]	5e9e4502f5 090995de5 66f86	TRUE	[{'time': 140, 'altitude': 35, 'reason': 'residual stage-1 thrust led to collision between stage 1 and stage 2'}]	3 Trailblazer
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			[5eb0e4b7b 6c3bb0006 eeb1e5]	5e9e4502f5 090995de5 66f86	TRUE		4 RatSat
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			[5eb0e4b7b 5e9e4502f5			
			6c3bb0006 090995de5			
			eeb1e6]	66f86	TRUE	
						5 RazakSat

					fairings.re			
date_unix	date_local	date_precision	upcoming	cores	id	fairings.re used	covery_att empt	fairings.re covered
2006-03-24T22:30:00.000Z	1.143E+09	2006-03-25T10:30:00+12:00	hour	FALSE	[[{'core': '5e9e289df35918033d3b2623', 'flight': 1, 'gridfins': False, 'legs': False, 'reused': False, 'landing_attempt': False, 'landing_success': None, 'landing_type': None, 'landpad': None}]]	5eb87cd9ffd86e000604b32a	FALSE	FALSE
2007-03-21T01:10:00.000Z	1.174E+09	2007-03-21T13:10:00+12:00	hour	FALSE	[[{'core': '5e9e289ef35918416a3b2624', 'flight': 1, 'gridfins': False, 'legs': False, 'reused': False, 'landing_attempt': False, 'landing_success': None, 'landing_type': None, 'landpad': None}]]	5eb87cdaffd86e000604b32b	FALSE	FALSE

2008-08-03T03:34:00.000Z	1.218E+09	2008-08-03T15:34:00+12:00	hour	FALSE	<pre> [{'core': '5e9e289ef 359181487 3b2625', 'flight': 1, 'gridfins': False, 'legs': False, 'reused': False, 'landing_att empt': False, 'landing_su ccess': None, 'landing_typ e': None, 'landpad': None}] </pre>	5eb87cdbff d86e00060 4b32c	FALSE	FALSE
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2008-09-28T23:15:00.000Z	1.223E+09	2008-09-28T11:15:00+12:00	hour	FALSE	<pre> [{'core': '5e9e289ef 3591855dc 3b2626', 'flight': 1, 'gridfins': False, 'legs': False, 'reused': False, 'landing_att empt': False, 'landing_su ccess': None, 'landing_typ e': None, 'landpad': None}] </pre>	5eb87cdbff d86e00060 4b32d	FALSE	FALSE
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				[{'core': '5e9e289ef 359184f103 b2627', 'flight': 1, 'gridfins': False, 'legs': False, 'reused': False, 'landing_att empt': False, 'landing_su ccess': None, 'landing_typ e': None, 5eb87cdcff 'landpad': d86e00060 None}]			
2009-07- 13T03:35:0 0.000Z	2009-07- 13T15:35:0 1.247E+09 0+12:00	hour	FALSE	FALSE	FALSE	FALSE	

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FALSE	[]	https://imgbox.com/4f/e3/l0lkuJ2e_o.png	https://imgbox.com/be/e7/iNqsqVYM_o.png	None	None	None	None	[]
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[]	None	https://www.youtube.com/watch?v=0a_00nJ_Y88	0a_00nJ_Y88	https://www.space.com/2196-spacex-inaugural-falcon-1-rocket-lost-launch.html	https://en.wikipedia.org/wiki/DemoSat

[]	None	https://www.youtube.com/watch?v=Lk4zQ2wP-Nc	Lk4zQ2wP-Nc	https://www.space.com/3590-spacex-falcon-1-rocket-fails-reach-orbit.html	https://en.wikipedia.org/wiki/DemoSat
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FlightNumber	Date	BoosterVer	PayloadMa	Orbit	LaunchSite	Outcome	Flights	GridFins
0	1 3/24/2006	Falcon 1	20	LEO	Kwajalein	None	None	1 FALSE
1	2 3/21/2007	Falcon 1	NaN	LEO	Kwajalein	None	None	1 FALSE
2	4 9/28/2008	Falcon 1	165	LEO	Kwajalein	None	None	1 FALSE
3	5 7/13/2009	Falcon 1	200	LEO	Kwajalein	None	None	1 FALSE
4	6 6/4/2010	Falcon 9	NaN	LEO	CCSFS SLC	None	None	1 FALSE

Reused	Legs	LandingPac	Block	ReusedCou	Serial	Longitude	Latitude
FALSE	FALSE	None	NaN		0 Merlin1A	167.7431	9.047721
FALSE	FALSE	None	NaN		0 Merlin2A	167.7431	9.047721
FALSE	FALSE	None	NaN		0 Merlin2C	167.7431	9.047721
FALSE	FALSE	None	NaN		0 Merlin3C	167.7431	9.047721
FALSE	FALSE	None		1	0 B0003	-80.5774	28.56186

	FlightNum	k	Date	Booster	Ver	Payload	Ma	Orbit	LaunchSite	Outcome	Flights
4	1	6/4/2010	Falcon 9	NaN		LEO			CCSFS SLC 4	None None	1
5	2	5/22/2012	Falcon 9			525 LEO			CCSFS SLC 4	None None	1
6	3	3/1/2013	Falcon 9			677 ISS			CCSFS SLC 4	None None	1
7	4	9/29/2013	Falcon 9			500 PO			VAFB SLC 4	False Ocean	1
8	5	12/3/2013	Falcon 9			3170 GTO			CCSFS SLC 4	None None	1
...
89	86	9/3/2020	Falcon 9			15600 VLEO			KSC LC 39A	True ASDS	2
90	87	10/6/2020	Falcon 9			15600 VLEO			KSC LC 39A	True ASDS	3
91	88	10/18/2020	Falcon 9			15600 VLEO			KSC LC 39A	True ASDS	6
92	89	10/24/2020	Falcon 9			15600 VLEO			CCSFS SLC 4	True ASDS	3
93	90	11/5/2020	Falcon 9			3681 MEO			CCSFS SLC 4	True ASDS	1

90 rows × 17 columns

GridFins	Reused	Legs	LandingPac	Block	ReusedCou	Serial	Longitude	Latitude
FALSE	FALSE	FALSE	None		1	0 B0003	-80.5774	28.56186
FALSE	FALSE	FALSE	None		1	0 B0005	-80.5774	28.56186
FALSE	FALSE	FALSE	None		1	0 B0007	-80.5774	28.56186
FALSE	FALSE	FALSE	None		1	0 B1003	-120.611	34.63209
FALSE	FALSE	FALSE	None		1	0 B1004	-80.5774	28.56186
...
TRUE	TRUE	TRUE	5e9e30323		5	7 B1060	-80.604	28.60806
TRUE	TRUE	TRUE	5e9e30323		5	7 B1058	-80.604	28.60806
TRUE	TRUE	TRUE	5e9e30323		5	9 B1051	-80.604	28.60806
TRUE	TRUE	TRUE	5e9e30333		5	7 B1060	-80.5774	28.56186
TRUE	FALSE	TRUE	5e9e30323		5	2 B1062	-80.5774	28.56186