



July 1, 2026

**BY ELECTRONIC FILING**

Marlene H. Dortch  
Secretary  
Federal Communications Commission  
45 L Street, N.E.  
Washington, DC 20554

Re: *SpaceX Gen 1 and Gen 2 Semi-Annual Reports*

Dear Ms. Dortch:

Pursuant to its voluntary commitments as reflected in paragraph 97u of the modification order issued on April 27, 2021,<sup>1</sup> and pursuant to its voluntary commitments as reflected in paragraphs 135y, bb, ff, and gg of the authorization order issued on December 1, 2022,<sup>2</sup> Space Exploration Holdings, LLC provides the attached semi-annual constellation status reports covering both our Gen 1 and Gen 2 systems for the period from December 1, 2025 through May 31, 2026.

If you have any questions, please do not hesitate to direct them to me.

Sincerely,

*/s/ David Goldman*

David Goldman  
Vice President, Satellite Policy

SPACE EXPLORATION TECHNOLOGIES CORP.  
1155 F Street, NW  
Suite 475  
Washington, DC 20004  
Email: [David.Goldman@spacex.com](mailto:David.Goldman@spacex.com)

Attachment

cc: Carolyn Mahoney

---

<sup>1</sup> See *Space Exploration Holdings, LLC*, 36 FCC Rcd. 7995, ¶ 97u (2021).

<sup>2</sup> See *Space Exploration Holdings, LLC*, 37 FCC Rcd. 14882, ¶¶ 135y, bb, ff, gg (2022).

## SPACEX GEN 1 AND GEN 2 STATUS REPORT

December 1, 2025 – May 31, 2026

SpaceX appreciates this opportunity to update the Commission and the public about the reliability and safety of its satellite constellation. As this report details, SpaceX continues to follow space sustainability best practices by using industry-leading maneuver thresholds, consistently screening high quality ephemerides, and deploying at low altitudes to allow satellites to be screened prior to orbit raise, minimizing the risk of satellites becoming non-maneuverable. SpaceX also takes a conservative approach when it chooses to de-orbit satellites, based on long-term hardware reliability trends. SpaceX satellites exceed industry standards for demisability, with no calculable risk to life on the ground, coupled with the targeted reentry of satellites over unpopulated regions of the globe. SpaceX's tightly integrated approach allows it to quickly identify ways in which it can improve the service, the performance, and the reliability of its satellites. Accordingly, SpaceX has a bias towards de-orbiting and replacing satellites whenever doing so will improve service for consumers on the ground or enhance the sustainability of space. Because of the low altitudes at which these satellites operate, they can be deorbited quickly.

SpaceX's conservative approach requires a significant investment in engineering for sustainability and performance. Not only must SpaceX invest in satellites that are more capable and perform more maneuvers that carry considerable cost to SpaceX, but unlike other operators with less emphasis on sustainability, SpaceX is willing to deorbit satellites based on long-term reliability forecasts, rather than waiting for failure of critical subsystems. Practically speaking, this approach means that SpaceX may deorbit a considerable number of satellites that would never experience a failure to mitigate a small number of non-maneuverable satellites in orbit. No other operator takes a similarly conservative approach. SpaceX takes this more costly approach out of an abundance of caution to best preserve and protect low-Earth orbit, especially given the large number of satellites that it operates.

SpaceX volunteered to report on the health of its system because it believes transparency is critical to sustainable space operations. But SpaceX reiterates that it cannot maintain long-term space sustainability unilaterally and without other satellite operators (both US and non-U.S.) participating; no operator, and indeed no country, can do so. SpaceX therefore requests, as it has before, for other operators—including those that have chosen to license their satellites outside the U.S. and claim not to be bound by U.S. rules yet want to offer services in the country—to provide similar public disclosures about the performance of their satellites. Even a small system can induce high risk when operated irresponsibly or without transparency.

The United States can set a strong example by applying rules and conditions consistently and requiring transparent operations for all satellite operators. To that end, the Commission should swiftly ensure that all operators report on the health of their constellations. Doing otherwise could mislead the public about the relative risk of different systems and is already skewing policy discussions. Only with the Commission working with all operators equally can we truly maintain space sustainability for future operations and human space flight.

## RESPONSES TO COMMISSION REQUESTS

1. *“Number of conjunction events identified for Starlink satellites during the reporting period, and the number of events that resulted in an action (maneuver or coordination with another operator), as well as any difficulties encountered in connection with the collision avoidance process and any measures taken to address those difficulties.”*

### Events/Maneuvers

SpaceX now nominally uses an even more conservative maneuver threshold approximately two orders of magnitude more sensitive than the industry standard. Specifically, SpaceX satellites will maneuver when the probability of collision is greater than  $3e-7$  (3 in 10,000,000 chance of collision), as opposed to the industry standard of  $1e-4$  (1 in 10,000 chance of collision).

Using this very conservative threshold, along with additional miss-distance-based criteria, SpaceX Gen 1 satellites performed 65,137 propulsive maneuvers over the reporting period, averaging approximately 36 maneuvers per satellite, per year and SpaceX Gen 2 satellites performed 142,015 propulsive maneuvers over the reporting period, averaging approximately 46 maneuvers per satellite, per year.

Because few other operators are required to report such maneuvers, SpaceX is unable to compare this rate across the rest of the industry. SpaceX therefore urges the Commission to apply its transparency obligations consistently across all operators.

The table below indicates the top secondaries for which Starlink satellites maneuvered, along with the number of maneuvers for each object.

<b>NORAD ID</b>	<b>Object Name</b>	<b>Operator</b>	<b>Maneuvers</b>
63990	TIANTIE KEJI	GUOX / ZJ Lab	1809
58555	HONGHU 2	Hongqing Technology	1740
56944	NUSAT-41 (C PAYNE-G)	Satellologic	1457
60498	NUSAT-48 (H. LEAVITT)	Satellologic	1422
63989	CHONGZHOU	GUOX / ZJ Lab	1390
59136	VSP RF C1	Aerospacelab	1312
59122	NUSAT-44 MARIA MITCHELL	Satellologic	1243
60493	NUSAT-50 (NANCY ROMAN)	Satellologic	1070
54750	YAOGAN-36 04C	PRC	1057
63985	NEIJIANG GAOXIN	GUOX / ZJ Lab	1041

SpaceX coordinated with other satellite operators hundreds of times over the reporting period. In most cases, SpaceX maneuvered its satellites to reduce collision probability using its conservative threshold. But when other satellites are transiting through SpaceX's operational shells, coordination typically results in a "time-domain deconfliction" strategy with the transiting satellite taking maneuver responsibility on long time horizons and SpaceX retaining maneuver responsibility closer to the Time of Closest Approach (TCA). This approach provides both operators an opportunity to mitigate risk, thereby enabling higher fault tolerance. If the secondary party were unable to mitigate risk for any reason (or mitigated it, but only partially), SpaceX retains the ability to further maneuver prior to the conjunction. Time-domain deconfliction also enables both parties to operate safely without needing to be directly engaged every time one operator acts for the other. For this reason, accurate reporting on the number of times other satellites maneuvered in conjunctions with SpaceX Gen 1 and Gen 2 satellites can be difficult. Outside of such agreements, other satellites maneuvered fewer than 20 times for SpaceX in this reporting period.

### **Difficulties Encountered in the Collision Avoidance Process**

Launch Collision Avoidance Gap – A gap in time currently exists between when required launch collision avoidance screening ends and when satellites are cataloged and screened for conjunctions by the 19<sup>th</sup> Space Defense Squadron. This gap can range from one day to several weeks depending on the number of satellites deployed and the timing of when they are deployed relative to each other. SpaceX satellites mitigate the launch collision avoidance gap in two ways.

First, SpaceX mitigates collision risk during the launch collision avoidance gap by injecting its satellites into very low (around 300 km average altitude), sparsely populated orbits relative to all other operational spacecraft. SpaceX also mitigates collision risk during the launch collision avoidance gap by pre-arranging a set of temporary catalog identification numbers associated with each satellite. SpaceX then uploads satellite owner/operator ephemerides on Space-Track.org as close to the deployment time as is possible, given the fact that screening cycles occur every eight hours and it typically takes several hours to download satellite states and covariance information after deployment.

Unfortunately, many satellite owner/operators do not pre-arrange the use of the temporary catalog identification numbers, nor do they screen ephemerides as quickly as is practical post-deployment, creating unnecessary and avoidable risk for other satellite owner/operators. The practice of early screening of ephemerides is especially important for missions injecting into existing operational shells of other systems. All satellite owner/operators should work to generate and screen ephemerides and covariance as quickly as possible after deployment.

Operator Ephemeris and Covariance Screening and Operator Contact Information on Space-Track.org—Effective collision avoidance in space relies on consistent data sharing and reliable communication among spacecraft operators, but challenges persist. Many spacecraft listed on Space-Track.org do not provide propagated ephemeris or covariance data, which restricts the 19<sup>th</sup> Space Defense Squadron's ability to screen for potential collisions. Additionally, operators often fail to

share consistent contact information, complicating coordination efforts. Sharing accurate ephemerides and realistic covariance data is critical, as it improves collision avoidance, bounds maneuver predictions, and enhances overall space situational awareness. SpaceX strongly encourages all operators to provide contact details and regularly screen their ephemerides on Space-Track.org. In cases of high-risk conjunctions involving satellites without contact information, SpaceX seeks alternative ways to reach the operator. If these efforts fail, SpaceX takes responsibility for maneuvering its satellites to reduce collision risks.

The inconsistent availability of high-quality ephemerides, particularly from operators of maneuvering satellites, increases overall collision risk. SpaceX has observed issues such as prolonged ephemeris outages, where operators of maneuvering satellites fail to upload data to Space-Track.org for extended periods. Some operators only share ephemerides before planned maneuvers or after radar-based screenings identify high-probability conjunctions, while others provide data with insufficient lead time for effective screening. Late-notice maneuvers, which are not screened because operators do not share ephemerides or permit the use of Conjunction Data Messages, further complicate matters. International coordination adds another layer of difficulty, especially with Chinese and Russian operators, who often do not share ephemerides or contact information despite operating a significant portion of maneuverable satellites.

Beyond availability, the reliability of ephemerides is crucial for sustainable operations. Unfortunately, SpaceX has encountered issues with poor-quality ephemerides from other operators. Some ephemerides include physically implausible trajectories, such as suborbital or highly eccentric paths for satellites in stable circular orbits. Other ephemerides diverge significantly from actual satellite paths or exhibit notable biases. Others have unrealistic or overly optimistic covariances that do not properly bound uncertainties in the trajectories. Unreliable thrusters or poorly planned maneuvers often contribute to these inaccuracies, leading to concerning prediction errors. To address these issues, SpaceX urges operators to consistently publish high quality ephemerides and to proactively assess the accuracy of their predictions, make improvements where necessary, and pause maneuvers if safe operations cannot be guaranteed. SpaceX encourages the FCC or other regulatory agencies to evaluate the quality of ephemeris provided by satellite operators.

2. *“Satellites that, for purposes of disposal, were removed from operation or screened from further deployment at any time following initial deployment and identifying whether this occurred less than five years after the satellite began regular operations or were available for use as an on-orbit replacement satellite.”*

<b>Gen 1</b>			
<b>Satellites That Started Deorbit</b>	<b>Date Removed</b>	<b>Is SpaceX Still In Contact or Has the Satellite Reentered?</b>	<b>Removed &lt;5 years after beginning operation?</b>
STARLINK-1329	12/1/2025	TRUE	No
STARLINK-4518	12/2/2025	RE-ENTERED	Yes
STARLINK-5982	12/4/2025	RE-ENTERED	Yes
STARLINK-1267	12/5/2025	TRUE	No
STARLINK-2001	12/5/2025	TRUE	No

STARLINK-2114	12/5/2025	RE-ENTERED	Yes
STARLINK-1626	12/5/2025	TRUE	No
STARLINK-1067	12/5/2025	TRUE	No
STARLINK-1666	12/5/2025	TRUE	No
STARLINK-1595	12/5/2025	TRUE	No
STARLINK-1817	12/5/2025	TRUE	No
STARLINK-1828	12/5/2025	TRUE	No
STARLINK-1623	12/5/2025	TRUE	No
STARLINK-3342	12/5/2025	TRUE	Yes
STARLINK-1646	12/5/2025	TRUE	No
STARLINK-1954	12/5/2025	TRUE	No
STARLINK-1394	12/5/2025	TRUE	No
STARLINK-1270	12/5/2025	TRUE	No
STARLINK-1962	12/5/2025	TRUE	No
STARLINK-3711	12/5/2025	TRUE	Yes
STARLINK-1995	12/5/2025	TRUE	No
STARLINK-1873	12/7/2025	TRUE	No
STARLINK-1480	12/7/2025	TRUE	No
STARLINK-1704	12/8/2025	TRUE	No
STARLINK-1456	12/8/2025	TRUE	No
STARLINK-3603	12/8/2025	RE-ENTERED	Yes
STARLINK-4195	12/9/2025	RE-ENTERED	Yes
STARLINK-1338	12/9/2025	TRUE	No
STARLINK-1184	12/10/2025	TRUE	No
STARLINK-1496	12/10/2025	TRUE	No
STARLINK-1080	12/10/2025	TRUE	No
STARLINK-1351	12/11/2025	TRUE	No
STARLINK-4042	12/11/2025	RE-ENTERED	Yes
STARLINK-4264	12/11/2025	RE-ENTERED	Yes
STARLINK-1856	12/11/2025	TRUE	No
STARLINK-1777	12/11/2025	TRUE	No
STARLINK-2065	12/12/2025	RE-ENTERED	No
STARLINK-1154	12/12/2025	TRUE	No
STARLINK-1327	12/12/2025	TRUE	No
STARLINK-1321	12/12/2025	TRUE	No
STARLINK-2083	12/12/2025	TRUE	No
STARLINK-1695	12/14/2025	TRUE	No
STARLINK-1597	12/14/2025	TRUE	No
STARLINK-1304	12/15/2025	TRUE	No
STARLINK-3262	12/15/2025	RE-ENTERED	Yes
STARLINK-1640	12/17/2025	TRUE	No
STARLINK-1373	12/17/2025	TRUE	No
STARLINK-1371	12/17/2025	TRUE	No
STARLINK-6063	12/18/2025	RE-ENTERED	Yes
STARLINK-1478	12/18/2025	TRUE	No
STARLINK-1912	12/18/2025	TRUE	No
STARLINK-1212	12/19/2025	TRUE	No
STARLINK-1656	12/19/2025	TRUE	No
STARLINK-1876	12/19/2025	TRUE	No
STARLINK-3276	12/19/2025	TRUE	Yes

STARLINK-3137	12/20/2025	TRUE	Yes
STARLINK-1046	12/21/2025	TRUE	No
STARLINK-1036	12/22/2025	TRUE	No
STARLINK-1048	12/22/2025	TRUE	No
STARLINK-5092	12/22/2025	RE-ENTERED	Yes
STARLINK-3149	12/23/2025	RE-ENTERED	Yes
STARLINK-3050	12/23/2025	RE-ENTERED	Yes
STARLINK-1114	12/23/2025	TRUE	No
STARLINK-1994	12/23/2025	TRUE	No
STARLINK-1166	12/29/2025	TRUE	No
STARLINK-1451	12/30/2025	TRUE	No
STARLINK-1308	12/30/2025	TRUE	No
STARLINK-1266	12/30/2025	TRUE	No
STARLINK-1297	12/30/2025	TRUE	No
STARLINK-1193	12/30/2025	TRUE	No
STARLINK-1273	12/30/2025	TRUE	No
STARLINK-1302	12/30/2025	TRUE	No
STARLINK-1284	12/30/2025	TRUE	No
STARLINK-1277	12/30/2025	TRUE	No
STARLINK-1307	12/30/2025	TRUE	No
STARLINK-4636	12/31/2025	TRUE	Yes
STARLINK-1361	1/2/2026	TRUE	No
STARLINK-6201	1/2/2026	RE-ENTERED	Yes
STARLINK-1309	1/2/2026	TRUE	No
STARLINK-1365	1/2/2026	TRUE	No
STARLINK-1364	1/2/2026	TRUE	No
STARLINK-1331	1/2/2026	TRUE	No
STARLINK-1493	1/2/2026	TRUE	No
STARLINK-1356	1/2/2026	TRUE	No
STARLINK-1400	1/2/2026	TRUE	No
STARLINK-1465	1/2/2026	TRUE	No
STARLINK-1464	1/2/2026	TRUE	No
STARLINK-1337	1/2/2026	TRUE	No
STARLINK-1454	1/2/2026	TRUE	No
STARLINK-1423	1/2/2026	TRUE	No
STARLINK-1433	1/2/2026	TRUE	No
STARLINK-1458	1/2/2026	TRUE	No
STARLINK-1448	1/2/2026	TRUE	No
STARLINK-1420	1/2/2026	TRUE	No
STARLINK-2588	1/6/2026	TRUE	No
STARLINK-2113	1/7/2026	TRUE	No
STARLINK-1972	1/7/2026	TRUE	No
STARLINK-1718	1/7/2026	TRUE	No
STARLINK-1888	1/7/2026	TRUE	No
STARLINK-1598	1/7/2026	TRUE	No
STARLINK-1781	1/7/2026	TRUE	No
STARLINK-2128	1/7/2026	TRUE	No
STARLINK-1805	1/7/2026	TRUE	No
STARLINK-1845	1/7/2026	TRUE	No
STARLINK-1502	1/7/2026	TRUE	No

STARLINK-1132	1/9/2026	TRUE	No
STARLINK-4646	1/9/2026	RE-ENTERED	Yes
STARLINK-3767	1/9/2026	RE-ENTERED	Yes
STARLINK-3325	1/12/2026	RE-ENTERED	Yes
STARLINK-3633	1/15/2026	TRUE	Yes
STARLINK-3258	1/20/2026	RE-ENTERED	Yes
STARLINK-4478	1/21/2026	TRUE	Yes
STARLINK-4057	1/23/2026	RE-ENTERED	Yes
STARLINK-5851	1/23/2026	RE-ENTERED	Yes
STARLINK-3855	1/23/2026	RE-ENTERED	Yes
STARLINK-4578	1/23/2026	RE-ENTERED	Yes
STARLINK-1812	1/30/2026	TRUE	No
STARLINK-6070	2/4/2026	RE-ENTERED	Yes
STARLINK-3289	2/5/2026	TRUE	Yes
STARLINK-3952	2/9/2026	RE-ENTERED	Yes
STARLINK-2363	2/11/2026	TRUE	No
STARLINK-3151	2/11/2026	TRUE	Yes
STARLINK-3096	2/11/2026	RE-ENTERED	Yes
STARLINK-5228	2/23/2026	RE-ENTERED	Yes
STARLINK-2159	2/25/2026	TRUE	No
STARLINK-2033	2/25/2026	TRUE	No
STARLINK-2169	2/25/2026	TRUE	No
STARLINK-2163	2/25/2026	TRUE	No
STARLINK-2162	2/25/2026	TRUE	No
STARLINK-2238	2/25/2026	RE-ENTERED	Yes
STARLINK-2147	2/25/2026	TRUE	No
STARLINK-3359	2/25/2026	TRUE	Yes
STARLINK-2141	2/25/2026	TRUE	No
STARLINK-2131	2/25/2026	TRUE	No
STARLINK-1185	2/25/2026	TRUE	No
STARLINK-2041	2/25/2026	TRUE	No
STARLINK-2036	2/25/2026	TRUE	No
STARLINK-36097	2/25/2026	TRUE	Yes
STARLINK-2211	2/26/2026	TRUE	No
STARLINK-2299	2/26/2026	TRUE	No
STARLINK-2185	2/26/2026	TRUE	No
STARLINK-2180	2/26/2026	TRUE	No
STARLINK-1525	2/26/2026	FALSE	No
STARLINK-2270	2/26/2026	TRUE	No
STARLINK-2273	2/26/2026	TRUE	No
STARLINK-2342	2/26/2026	TRUE	No
STARLINK-2336	2/26/2026	TRUE	No
STARLINK-2330	2/26/2026	TRUE	No
STARLINK-2292	2/26/2026	TRUE	No
STARLINK-2298	2/26/2026	TRUE	No
STARLINK-2209	2/26/2026	TRUE	No
STARLINK-1567	2/27/2026	RE-ENTERED	No
STARLINK-2448	2/27/2026	TRUE	No
STARLINK-1226	2/28/2026	TRUE	No
STARLINK-1123	2/28/2026	TRUE	No

STARLINK-1008	2/28/2026	TRUE	No
STARLINK-1191	2/28/2026	TRUE	No
STARLINK-1012	2/28/2026	TRUE	No
STARLINK-5034	3/2/2026	TRUE	Yes
STARLINK-3799	3/3/2026	TRUE	Yes
STARLINK-2469	3/4/2026	TRUE	No
STARLINK-2100	3/4/2026	TRUE	No
STARLINK-1153	3/5/2026	TRUE	No
STARLINK-2314	3/5/2026	TRUE	No
STARLINK-1482	3/5/2026	TRUE	No
STARLINK-1316	3/5/2026	TRUE	No
STARLINK-1376	3/5/2026	TRUE	No
STARLINK-1296	3/5/2026	TRUE	No
STARLINK-1167	3/5/2026	TRUE	No
STARLINK-1404	3/5/2026	TRUE	No
STARLINK-1063	3/5/2026	TRUE	No
STARLINK-1172	3/5/2026	TRUE	No
STARLINK-1227	3/5/2026	TRUE	No
STARLINK-3870	3/6/2026	RE-ENTERED	Yes
STARLINK-5041	3/6/2026	TRUE	Yes
STARLINK-2187	3/6/2026	TRUE	No
STARLINK-3734	3/7/2026	TRUE	Yes
STARLINK-4442	3/8/2026	TRUE	Yes
STARLINK-3936	3/8/2026	TRUE	Yes
STARLINK-4448	3/8/2026	TRUE	Yes
STARLINK-4437	3/8/2026	TRUE	Yes
STARLINK-4450	3/8/2026	TRUE	Yes
STARLINK-4454	3/8/2026	TRUE	Yes
STARLINK-4435	3/8/2026	TRUE	Yes
STARLINK-4458	3/8/2026	TRUE	Yes
STARLINK-4464	3/8/2026	TRUE	Yes
STARLINK-4470	3/8/2026	TRUE	Yes
STARLINK-4498	3/8/2026	TRUE	Yes
STARLINK-4679	3/8/2026	TRUE	Yes
STARLINK-4681	3/8/2026	TRUE	Yes
STARLINK-4693	3/8/2026	TRUE	Yes
STARLINK-4049	3/8/2026	TRUE	Yes
STARLINK-4431	3/8/2026	TRUE	Yes
STARLINK-4424	3/8/2026	TRUE	Yes
STARLINK-4412	3/8/2026	TRUE	Yes
STARLINK-4406	3/8/2026	TRUE	Yes
STARLINK-4798	3/8/2026	TRUE	Yes
STARLINK-5042	3/8/2026	TRUE	Yes
STARLINK-5000	3/8/2026	TRUE	Yes
STARLINK-4402	3/8/2026	TRUE	Yes
STARLINK-4398	3/8/2026	TRUE	Yes
STARLINK-4394	3/8/2026	TRUE	Yes
STARLINK-5036	3/8/2026	TRUE	Yes
STARLINK-4390	3/8/2026	TRUE	Yes
STARLINK-4389	3/8/2026	TRUE	Yes

STARLINK-4388	3/8/2026	TRUE	Yes
STARLINK-5035	3/8/2026	TRUE	Yes
STARLINK-1522	3/8/2026	TRUE	No
STARLINK-4387	3/8/2026	TRUE	Yes
STARLINK-4386	3/8/2026	TRUE	Yes
STARLINK-4357	3/8/2026	TRUE	Yes
STARLINK-4334	3/8/2026	TRUE	Yes
STARLINK-4302	3/8/2026	TRUE	Yes
STARLINK-4293	3/8/2026	TRUE	Yes
STARLINK-4279	3/8/2026	TRUE	Yes
STARLINK-5010	3/8/2026	TRUE	Yes
STARLINK-4110	3/8/2026	TRUE	Yes
STARLINK-5032	3/8/2026	TRUE	Yes
STARLINK-4045	3/8/2026	TRUE	Yes
STARLINK-4043	3/8/2026	TRUE	Yes
STARLINK-5014	3/8/2026	TRUE	Yes
STARLINK-5017	3/8/2026	RE-ENTERED	Yes
STARLINK-4434	3/8/2026	TRUE	Yes
STARLINK-2460	3/9/2026	TRUE	No
STARLINK-2722	3/10/2026	TRUE	No
STARLINK-1020	3/10/2026	TRUE	No
STARLINK-1443	3/11/2026	TRUE	No
STARLINK-2681	3/11/2026	TRUE	No
STARLINK-2569	3/11/2026	TRUE	No
STARLINK-2236	3/12/2026	TRUE	No
STARLINK-1661	3/13/2026	TRUE	No
STARLINK-1762	3/13/2026	TRUE	No
STARLINK-1094	3/13/2026	TRUE	No
STARLINK-1802	3/13/2026	TRUE	No
STARLINK-1609	3/13/2026	TRUE	No
STARLINK-2361	3/13/2026	TRUE	No
STARLINK-1169	3/13/2026	TRUE	No
STARLINK-1260	3/13/2026	TRUE	No
STARLINK-2486	3/15/2026	TRUE	No
STARLINK-1265	3/15/2026	TRUE	No
STARLINK-3272	3/16/2026	TRUE	Yes
STARLINK-2249	3/16/2026	RE-ENTERED	No
STARLINK-1090	3/17/2026	TRUE	No
STARLINK-1362	3/17/2026	TRUE	No
STARLINK-1131	3/19/2026	TRUE	No
STARLINK-4793	3/25/2026	TRUE	Yes
STARLINK-1215	3/28/2026	TRUE	No
STARLINK-1276	3/28/2026	FALSE	No
STARLINK-1202	3/28/2026	TRUE	No
STARLINK-1122	3/28/2026	TRUE	No
STARLINK-1230	3/28/2026	TRUE	No
STARLINK-1246	3/28/2026	TRUE	No
STARLINK-1199	3/28/2026	TRUE	No
STARLINK-1460	3/28/2026	TRUE	No
STARLINK-1262	3/28/2026	TRUE	No

STARLINK-1422	3/28/2026	TRUE	No
STARLINK-1168	3/28/2026	TRUE	No
STARLINK-1413	3/28/2026	TRUE	No
STARLINK-1263	3/28/2026	TRUE	No
STARLINK-4281	3/28/2026	TRUE	Yes
STARLINK-1403	3/28/2026	TRUE	No
STARLINK-1392	3/28/2026	TRUE	No
STARLINK-4795	3/28/2026	TRUE	Yes
STARLINK-1372	3/28/2026	TRUE	No
STARLINK-4689	3/28/2026	TRUE	Yes
STARLINK-1368	3/28/2026	TRUE	No
STARLINK-1133	3/28/2026	TRUE	No
STARLINK-1335	3/28/2026	TRUE	No
STARLINK-1269	3/28/2026	TRUE	No
STARLINK-1156	3/28/2026	TRUE	No
STARLINK-1333	3/28/2026	TRUE	No
STARLINK-4455	3/28/2026	TRUE	Yes
STARLINK-1271	3/28/2026	TRUE	No
STARLINK-1300	3/28/2026	TRUE	No
STARLINK-1281	3/28/2026	TRUE	No
STARLINK-1216	3/28/2026	TRUE	No
STARLINK-1225	3/28/2026	TRUE	No
STARLINK-1183	3/28/2026	TRUE	No
STARLINK-34343	3/29/2026	FALSE	Yes
STARLINK-1549	3/30/2026	TRUE	No
STARLINK-2160	4/1/2026	TRUE	No
STARLINK-5160	4/2/2026	TRUE	Yes
STARLINK-1541	4/2/2026	TRUE	No
STARLINK-2015	4/2/2026	TRUE	No
STARLINK-4508	4/2/2026	RE-ENTERED	Yes
STARLINK-3004	4/2/2026	RE-ENTERED	Yes
STARLINK-36977	4/2/2026	RE-ENTERED	Yes
STARLINK-3729	4/3/2026	RE-ENTERED	Yes
STARLINK-2112	4/3/2026	TRUE	No
STARLINK-3527	4/4/2026	TRUE	Yes
STARLINK-34061	4/9/2026	RE-ENTERED	Yes
STARLINK-3143	4/10/2026	TRUE	Yes
STARLINK-3136	4/13/2026	TRUE	Yes
STARLINK-1871	4/13/2026	TRUE	No
STARLINK-4456	4/13/2026	TRUE	Yes
STARLINK-3573	4/13/2026	TRUE	Yes
STARLINK-1608	4/13/2026	TRUE	No
STARLINK-3620	4/13/2026	TRUE	Yes
STARLINK-2291	4/13/2026	TRUE	No
STARLINK-3858	4/15/2026	TRUE	Yes
STARLINK-4369	4/16/2026	TRUE	Yes
STARLINK-4368	4/16/2026	TRUE	Yes
STARLINK-4451	4/17/2026	TRUE	Yes
STARLINK-4383	4/17/2026	TRUE	Yes
STARLINK-4405	4/17/2026	TRUE	Yes

STARLINK-4422	4/17/2026	TRUE	Yes
STARLINK-4410	4/17/2026	TRUE	Yes
STARLINK-4778	4/17/2026	TRUE	Yes
STARLINK-5001	4/17/2026	TRUE	Yes
STARLINK-5023	4/17/2026	TRUE	Yes
STARLINK-3621	4/18/2026	TRUE	Yes
STARLINK-4310	4/20/2026	TRUE	Yes
STARLINK-5043	4/20/2026	TRUE	Yes
STARLINK-4007	4/20/2026	TRUE	Yes
STARLINK-2076	4/22/2026	TRUE	No
STARLINK-2386	4/22/2026	TRUE	No
STARLINK-3894	4/24/2026	TRUE	Yes
STARLINK-1913	4/25/2026	TRUE	No
STARLINK-3310	4/27/2026	TRUE	Yes
STARLINK-2220	4/28/2026	TRUE	No
STARLINK-2514	4/29/2026	TRUE	No
STARLINK-4189	4/30/2026	TRUE	Yes
STARLINK-3057	5/2/2026	TRUE	Yes
STARLINK-2103	5/5/2026	TRUE	No
STARLINK-2559	5/5/2026	TRUE	No
STARLINK-5533	5/5/2026	TRUE	Yes
STARLINK-2610	5/11/2026	TRUE	No
STARLINK-3306	5/11/2026	TRUE	Yes
STARLINK-2644	5/12/2026	TRUE	No
STARLINK-2119	5/12/2026	TRUE	No
STARLINK-2373	5/12/2026	TRUE	No
STARLINK-3893	5/15/2026	TRUE	Yes
STARLINK-2354	5/15/2026	TRUE	No
STARLINK-5055	5/20/2026	TRUE	Yes
STARLINK-3134	5/22/2026	TRUE	Yes
STARLINK-3579	5/24/2026	TRUE	Yes
STARLINK-3739	5/25/2026	TRUE	Yes

<b>Gen 2</b>			
<b>Satellites That Started Deorbit</b>	<b>Date Removed</b>	<b>Is SpaceX Still In Contact or Has the Satellite Reentered?</b>	<b>Removed &lt;5 years after beginning operation?</b>
STARLINK-11143	12/2/2025	RE-ENTERED	Yes
STARLINK-31761	12/6/2025	RE-ENTERED	Yes
STARLINK-35956	12/11/2025	RE-ENTERED	Yes
STARLINK-32838	12/11/2025	RE-ENTERED	Yes
STARLINK-31027	12/13/2025	TRUE	Yes
STARLINK-31867	12/16/2025	RE-ENTERED	Yes
STARLINK-31013	12/16/2025	TRUE	Yes

STARLINK-31227	12/19/2025	RE-ENTERED	Yes
STARLINK-32335	12/21/2025	RE-ENTERED	Yes
STARLINK-30451	12/23/2025	RE-ENTERED	Yes
STARLINK-32784	12/24/2025	TRUE	Yes
STARLINK-31725	1/6/2026	RE-ENTERED	Yes
STARLINK-32477	1/7/2026	TRUE	Yes
STARLINK-11439	1/16/2026	RE-ENTERED	Yes
STARLINK-31530	1/20/2026	TRUE	Yes
STARLINK-30904	1/25/2026	TRUE	Yes
STARLINK-32955	1/27/2026	TRUE	Yes
STARLINK-31104	2/7/2026	TRUE	Yes
STARLINK-34128	2/9/2026	RE-ENTERED	Yes
STARLINK-31920	2/9/2026	TRUE	Yes
STARLINK-30193	2/11/2026	TRUE	Yes
STARLINK-5384	2/11/2026	RE-ENTERED	Yes
STARLINK-30186	2/11/2026	TRUE	Yes
STARLINK-11687	2/13/2026	RE-ENTERED	Yes
STARLINK-11331	2/13/2026	RE-ENTERED	Yes
STARLINK-32264	2/16/2026	TRUE	Yes
STARLINK-32664	2/16/2026	TRUE	Yes
STARLINK-31704	2/17/2026	TRUE	Yes
STARLINK-31023	2/18/2026	RE-ENTERED	Yes
STARLINK-30792	2/23/2026	TRUE	Yes
STARLINK-30227	2/23/2026	TRUE	Yes
STARLINK-31943	2/24/2026	TRUE	Yes
STARLINK-31444	2/28/2026	TRUE	Yes
STARLINK-31096	3/2/2026	TRUE	Yes
STARLINK-30223	3/2/2026	TRUE	Yes
STARLINK-33582	3/3/2026	TRUE	Yes
STARLINK-30090	3/6/2026	RE-ENTERED	Yes
STARLINK-30144	3/10/2026	TRUE	Yes
STARLINK-30776	3/11/2026	TRUE	Yes
STARLINK-5369	3/12/2026	RE-ENTERED	Yes
STARLINK-30861	3/12/2026	TRUE	Yes
STARLINK-31826	3/13/2026	TRUE	Yes
STARLINK-30546	3/16/2026	RE-ENTERED	Yes
STARLINK-35644	3/20/2026	RE-ENTERED	Yes
STARLINK-30198	3/25/2026	TRUE	Yes
STARLINK-30924	3/27/2026	TRUE	Yes
STARLINK-5677	3/30/2026	TRUE	Yes
STARLINK-11462	3/31/2026	RE-ENTERED	Yes
STARLINK-34792	3/31/2026	RE-ENTERED	Yes
STARLINK-31038	3/31/2026	TRUE	Yes

STARLINK-33851	3/31/2026	RE-ENTERED	Yes
STARLINK-33906	3/31/2026	RE-ENTERED	Yes
STARLINK-34268	3/31/2026	RE-ENTERED	Yes
STARLINK-34671	3/31/2026	RE-ENTERED	Yes
STARLINK-36383	4/1/2026	RE-ENTERED	Yes
STARLINK-36340	4/2/2026	RE-ENTERED	Yes
STARLINK-32704	4/3/2026	TRUE	Yes
STARLINK-32730	4/3/2026	RE-ENTERED	Yes
STARLINK-11664	4/6/2026	RE-ENTERED	Yes
STARLINK-11416	4/12/2026	TRUE	Yes
STARLINK-11111	4/21/2026	TRUE	Yes
STARLINK-32823	4/21/2026	RE-ENTERED	Yes
STARLINK-30994	4/21/2026	TRUE	Yes
STARLINK-30806	4/22/2026	TRUE	Yes
STARLINK-31495	4/24/2026	TRUE	Yes
STARLINK-31692	4/27/2026	TRUE	Yes
STARLINK-5875	4/27/2026	TRUE	Yes
STARLINK-30923	5/2/2026	TRUE	Yes
STARLINK-32678	5/4/2026	TRUE	Yes
STARLINK-30845	5/7/2026	TRUE	Yes
STARLINK-5140	5/11/2026	TRUE	Yes
STARLINK-30091	5/11/2026	TRUE	Yes
STARLINK-5016	5/15/2026	TRUE	Yes
STARLINK-32260	5/18/2026	TRUE	Yes
STARLINK-31402	5/19/2026	TRUE	Yes
STARLINK-11694	5/21/2026	TRUE	Yes
STARLINK-6168	5/23/2026	TRUE	Yes
STARLINK-30808	5/25/2026	TRUE	Yes

3. *“Satellites that re-entered the atmosphere.”*

<b>Gen 1</b>		
<b>Satellite Number</b>	<b>Date of Reentry</b>	<b>Re-entered &lt;5 years after beginning operation?</b>
STARLINK-1643	12/2/2025	FALSE
STARLINK-5326	12/2/2025	TRUE
STARLINK-1011	12/6/2025	FALSE
STARLINK-3322	12/6/2025	TRUE
STARLINK-1692	12/8/2025	FALSE

STARLINK-1107	12/13/2025	FALSE
STARLINK-2340	12/13/2025	TRUE
STARLINK-3722	12/13/2025	TRUE
STARLINK-4511	12/13/2025	TRUE
STARLINK-1475	12/14/2025	FALSE
STARLINK-3663	12/18/2025	TRUE
STARLINK-2660	12/21/2025	TRUE
STARLINK-2368	12/23/2025	TRUE
STARLINK-1734	12/25/2025	FALSE
STARLINK-3557	12/25/2025	TRUE
STARLINK-1142	12/26/2025	FALSE
STARLINK-5957	12/26/2025	TRUE
STARLINK-2069	12/27/2025	TRUE
STARLINK-4063	12/30/2025	TRUE
STARLINK-1360	12/31/2025	FALSE
STARLINK-2595	12/31/2025	TRUE
STARLINK-3317	12/31/2025	TRUE
STARLINK-5056	12/31/2025	TRUE
STARLINK-2626	1/3/2026	TRUE
STARLINK-2393	1/4/2026	TRUE
STARLINK-1510	1/6/2026	FALSE
STARLINK-3296	1/10/2026	TRUE
STARLINK-2511	1/12/2026	TRUE
STARLINK-2540	1/13/2026	TRUE
STARLINK-1306	1/14/2026	FALSE
STARLINK-5219	1/14/2026	TRUE
STARLINK-1328	1/15/2026	FALSE
STARLINK-2086	1/15/2026	TRUE
STARLINK-1705	1/23/2026	FALSE
STARLINK-2619	1/23/2026	TRUE
STARLINK-1700	1/26/2026	FALSE
STARLINK-1325	1/29/2026	FALSE
STARLINK-1740	1/29/2026	FALSE
STARLINK-2117	1/29/2026	FALSE
STARLINK-2133	1/30/2026	FALSE
STARLINK-4264	1/31/2026	TRUE
STARLINK-3763	2/1/2026	TRUE
STARLINK-1979	2/2/2026	TRUE
STARLINK-4015	2/2/2026	TRUE
STARLINK-5103	2/2/2026	TRUE
STARLINK-5073	2/2/2026	TRUE

STARLINK-4587	2/3/2026	TRUE
STARLINK-3284	2/5/2026	TRUE
STARLINK-1614	2/7/2026	FALSE
STARLINK-1767	2/7/2026	FALSE
STARLINK-4118	2/7/2026	TRUE
STARLINK-4463	2/7/2026	TRUE
STARLINK-5619	2/7/2026	TRUE
STARLINK-4518	2/8/2026	TRUE
STARLINK-5225	2/8/2026	TRUE
STARLINK-4646	2/10/2026	TRUE
STARLINK-1605	2/11/2026	FALSE
STARLINK-1497	2/12/2026	FALSE
STARLINK-1978	2/12/2026	FALSE
STARLINK-4639	2/12/2026	TRUE
STARLINK-5982	2/12/2026	TRUE
STARLINK-1986	2/13/2026	FALSE
STARLINK-4195	2/13/2026	TRUE
STARLINK-1060	2/14/2026	FALSE
STARLINK-1144	2/14/2026	FALSE
STARLINK-4315	2/14/2026	TRUE
STARLINK-1769	2/15/2026	FALSE
STARLINK-1629	2/16/2026	FALSE
STARLINK-4042	2/17/2026	TRUE
STARLINK-2052	2/19/2026	FALSE
STARLINK-3920	2/19/2026	TRUE
STARLINK-1642	2/20/2026	FALSE
STARLINK-1474	2/23/2026	FALSE
STARLINK-1789	2/24/2026	FALSE
STARLINK-2024	2/24/2026	FALSE
STARLINK-3262	2/25/2026	TRUE
STARLINK-1318	3/1/2026	FALSE
STARLINK-1294	3/3/2026	FALSE
STARLINK-1710	3/3/2026	FALSE
STARLINK-1750	3/3/2026	FALSE
STARLINK-1651	3/3/2026	FALSE
STARLINK-1210	3/4/2026	FALSE
STARLINK-1601	3/4/2026	FALSE
STARLINK-1848	3/4/2026	FALSE
STARLINK-3269	3/5/2026	TRUE
STARLINK-1723	3/6/2026	FALSE
STARLINK-1687	3/6/2026	FALSE

STARLINK-1112	3/13/2026	FALSE
STARLINK-1738	3/13/2026	FALSE
STARLINK-1712	3/17/2026	FALSE
STARLINK-3767	3/17/2026	TRUE
STARLINK-1955	3/21/2026	FALSE
STARLINK-1484	3/22/2026	FALSE
STARLINK-1587	3/22/2026	FALSE
STARLINK-6201	3/22/2026	TRUE
STARLINK-1726	3/23/2026	FALSE
STARLINK-3258	3/23/2026	TRUE
STARLINK-2022	3/24/2026	FALSE
STARLINK-5092	3/24/2026	TRUE
STARLINK-3050	3/25/2026	TRUE
STARLINK-3855	3/25/2026	TRUE
STARLINK-1814	3/26/2026	FALSE
STARLINK-2488	3/26/2026	TRUE
STARLINK-4057	3/27/2026	TRUE
STARLINK-1398	3/28/2026	FALSE
STARLINK-1298	3/29/2026	FALSE
STARLINK-1752	3/29/2026	FALSE
STARLINK-1648	3/30/2026	FALSE
STARLINK-4038	3/31/2026	TRUE
STARLINK-1053	4/1/2026	FALSE
STARLINK-3149	4/1/2026	TRUE
STARLINK-1971	4/2/2026	FALSE
STARLINK-4407	4/2/2026	TRUE
STARLINK-4361	4/2/2026	TRUE
STARLINK-4404	4/3/2026	TRUE
STARLINK-1765	4/4/2026	FALSE
STARLINK-4461	4/4/2026	TRUE
STARLINK-1820	4/5/2026	FALSE
STARLINK-1843	4/6/2026	FALSE
STARLINK-4469	4/6/2026	TRUE
STARLINK-1031	4/9/2026	FALSE
STARLINK-1585	4/9/2026	FALSE
STARLINK-1625	4/9/2026	FALSE
STARLINK-1575	4/10/2026	FALSE
STARLINK-1657	4/10/2026	FALSE
STARLINK-2116	4/10/2026	FALSE
STARLINK-1645	4/14/2026	FALSE
STARLINK-5024	4/14/2026	TRUE

STARLINK-2058	4/15/2026	FALSE
STARLINK-36977	4/15/2026	TRUE
STARLINK-1742	4/16/2026	FALSE
STARLINK-4578	4/16/2026	TRUE
STARLINK-3952	4/17/2026	TRUE
STARLINK-1894	4/19/2026	FALSE
STARLINK-1965	4/20/2026	FALSE
STARLINK-2095	4/20/2026	FALSE
STARLINK-3603	4/20/2026	TRUE
STARLINK-4465	4/20/2026	TRUE
STARLINK-1612	4/21/2026	FALSE
STARLINK-1683	4/21/2026	FALSE
STARLINK-1934	4/25/2026	FALSE
STARLINK-1669	4/25/2026	FALSE
STARLINK-1800	4/27/2026	FALSE
STARLINK-1681	4/28/2026	FALSE
STARLINK-1621	4/29/2026	FALSE
STARLINK-1775	4/30/2026	FALSE
STARLINK-2238	5/1/2026	TRUE
STARLINK-1832	5/2/2026	FALSE
STARLINK-1799	5/3/2026	FALSE
STARLINK-1975	5/3/2026	FALSE
STARLINK-4349	5/3/2026	TRUE
STARLINK-5228	5/4/2026	TRUE
STARLINK-1593	5/6/2026	FALSE
STARLINK-5851	5/6/2026	TRUE
STARLINK-1159	5/7/2026	FALSE
STARLINK-1680	5/7/2026	FALSE
STARLINK-34061	5/8/2026	TRUE
STARLINK-6070	5/9/2026	TRUE
STARLINK-1567	5/10/2026	FALSE
STARLINK-1019	5/14/2026	FALSE
STARLINK-1790	5/14/2026	FALSE
STARLINK-1733	5/18/2026	FALSE
STARLINK-1746	5/19/2026	FALSE
STARLINK-3096	5/20/2026	TRUE
STARLINK-1457	5/21/2026	FALSE
STARLINK-1816	5/22/2026	FALSE
STARLINK-1627	5/24/2026	FALSE
STARLINK-1911	5/24/2026	FALSE
STARLINK-2249	5/25/2026	FALSE

STARLINK-3325	5/25/2026	TRUE
STARLINK-3870	5/26/2026	TRUE
STARLINK-6063	5/26/2026	TRUE
STARLINK-1624	5/27/2026	FALSE
STARLINK-1686	5/30/2026	FALSE
STARLINK-1727	5/30/2026	FALSE
STARLINK-1801	5/31/2026	FALSE

<b>Gen 2</b>		
<b>Satellite Number</b>	<b>Date of Reentry</b>	<b>Re-entered &lt;5 years after beginning operation?</b>
STARLINK-31618	12/3/2025	TRUE
STARLINK-11612	12/5/2025	TRUE
STARLINK-31060	12/6/2025	TRUE
STARLINK-31841	12/6/2025	TRUE
STARLINK-30190	12/11/2025	TRUE
STARLINK-11336	12/11/2025	TRUE
STARLINK-30163	12/20/2025	TRUE
STARLINK-31771	12/24/2025	TRUE
STARLINK-31864	12/28/2025	TRUE
STARLINK-11459	1/2/2026	TRUE
STARLINK-11248	1/3/2026	TRUE
STARLINK-32838	1/5/2026	TRUE
STARLINK-30159	1/13/2026	TRUE
STARLINK-31925	1/13/2026	TRUE
STARLINK-30459	1/15/2026	TRUE
STARLINK-35956	1/17/2026	TRUE
STARLINK-31254	1/19/2026	TRUE
STARLINK-30192	1/27/2026	TRUE
STARLINK-31227	1/28/2026	TRUE
STARLINK-30228	1/29/2026	TRUE
STARLINK-35238	1/29/2026	TRUE
STARLINK-30183	1/31/2026	TRUE
STARLINK-6246	2/2/2026	TRUE
STARLINK-30110	2/5/2026	TRUE
STARLINK-5390	2/7/2026	TRUE
STARLINK-31655	2/7/2026	TRUE

STARLINK-11143	2/8/2026	TRUE
STARLINK-30185	2/12/2026	TRUE
STARLINK-11439	2/13/2026	TRUE
STARLINK-30451	2/14/2026	TRUE
STARLINK-30241	2/15/2026	TRUE
STARLINK-31139	2/17/2026	TRUE
STARLINK-11401	2/17/2026	TRUE
STARLINK-5890	2/18/2026	TRUE
STARLINK-5391	2/19/2026	TRUE
STARLINK-30177	2/21/2026	TRUE
STARLINK-32266	2/22/2026	TRUE
STARLINK-30200	2/24/2026	TRUE
STARLINK-30175	2/24/2026	TRUE
STARLINK-30238	2/25/2026	TRUE
STARLINK-34128	3/1/2026	TRUE
STARLINK-30209	3/3/2026	TRUE
STARLINK-6284	3/4/2026	TRUE
STARLINK-6151	3/7/2026	TRUE
STARLINK-30232	3/7/2026	TRUE
STARLINK-30210	3/11/2026	TRUE
STARLINK-30995	3/16/2026	TRUE
STARLINK-30504	3/17/2026	TRUE
STARLINK-31145	3/17/2026	TRUE
STARLINK-30513	3/18/2026	TRUE
STARLINK-30559	3/19/2026	TRUE
STARLINK-31299	3/27/2026	TRUE
STARLINK-30960	3/31/2026	TRUE
STARLINK-31023	3/31/2026	TRUE
STARLINK-31867	3/31/2026	TRUE
STARLINK-11687	3/31/2026	TRUE
STARLINK-34411	4/1/2026	TRUE
STARLINK-11331	4/3/2026	TRUE
STARLINK-32272	4/5/2026	TRUE
STARLINK-31304	4/6/2026	TRUE
STARLINK-30090	4/8/2026	TRUE
STARLINK-30187	4/8/2026	TRUE
STARLINK-35644	4/10/2026	TRUE
STARLINK-36340	4/10/2026	TRUE
STARLINK-6256	4/13/2026	TRUE
STARLINK-31268	4/13/2026	TRUE
STARLINK-36383	4/14/2026	TRUE

STARLINK-30546	4/18/2026	TRUE
STARLINK-34792	4/24/2026	TRUE
STARLINK-33633	4/26/2026	TRUE
STARLINK-34268	4/26/2026	TRUE
STARLINK-30189	4/29/2026	TRUE
STARLINK-33851	4/30/2026	TRUE
STARLINK-32730	5/3/2026	TRUE
STARLINK-33906	5/5/2026	TRUE
STARLINK-31761	5/7/2026	TRUE
STARLINK-30237	5/15/2026	TRUE
STARLINK-34671	5/19/2026	TRUE
STARLINK-32823	5/22/2026	TRUE
STARLINK-32335	5/23/2026	TRUE
STARLINK-31725	5/25/2026	TRUE
STARLINK-5369	5/26/2026	TRUE
STARLINK-11664	5/26/2026	TRUE
STARLINK-11462	5/29/2026	TRUE

4. *Gen 1: “Satellites for which there was a disposal failure, including a discussion of any assessed cause of the failure and remedial actions.”*

Under the conditions of its license, SpaceX must provide an additional report if, during any continuous one-year period, that begins after April 2, 2021, there are three or more satellite disposal failures.

<b>Gen 1</b>				
<b>Satellite Number</b>	<b>Cause</b>	<b>Remedial Action</b>	<b>Is SpaceX in contact with the satellite and does it have attitude control for collision avoidance?</b>	<b>Date</b>
STARLINK-34343	Suspected hardware failure	Sensitive components have been identified and removed from future designs and software updates released to mitigate additional occurrences	<b>No</b>	2026-03-29
STARLINK-36253	Suspected hardware failure	Sensitive components have been identified and removed from future designs	<b>No</b>	2026-06-06

5. *Gen 2: “Satellites for which there was a disposal failure, i.e., a satellite that loses the capability to maneuver effectively after being raised from its injection, including a discussion of any assessed cause of the failure and remedial actions. For each such satellite, SpaceX shall report an estimated orbital lifetime for the satellite following the failure, and for the Gen 2 Starlink constellation the cumulative number of failed satellite object years.”*

<b>Gen 2</b>		
<b>Satellite Number</b>	<b>Cause</b>	<b>Remedial Action</b>
STARLINK-32445 (Failed 2026-06-14)	Suspected hardware failure	Sensitive components have been identified and removed from future designs
STARLINK-11678 (Failed 2026-06-03, Reentered 2026-06-25)	Suspected hardware failure	Sensitive components have been identified and removed from future designs

Satellite Number	Perigee (km)	Apogee (km)	Inclination (deg)	DAS Area-to-Mass Ratio	DAS Decay Time From 2026-06-26 (years)
STARLINK-32445	462	463	53.1	0.075	0.81
Total Object Years					0.81

6. *“Identification of any collision avoidance system outages or unavailability, either on a system wide basis or for individual satellites. An “outage” would include any individual satellite anomaly that results in a satellite not achieving targeted risk mitigation via maneuver.”*

### **Gen 1**

SpaceX’s onboard collision avoidance system performed as expected during this reporting period, with no extended system-wide outages. SpaceX recorded six individual “outage” events (as defined earlier) involving Gen 1 satellites in which the targeted collision risk was not reduced through a maneuver. Because few other operators are required to publish this level of detail, it is difficult to compare these results with industry norms.

Five of the six events stemmed from secondary conjunction predictions that were either too inconsistent or arrived too late to trigger a maneuver. Of those five:

- Three were caused by the “launch screening gap,” in which newly launched payloads entered Starlink orbital shells without sufficient screening or trajectory predictions. All three events involved payloads deployed by a CAS Space Kinetic 1 mission launched on December 10, 2025.
- One involved HYDROGNSS-2, a maneuvering satellite whose operator-provided ephemeris was not accurate enough to support mitigation.
- One resulted from inconsistent radar tracking of an analyst object.

The sixth event occurred when a temporary Space-Track.org outage prevented the Conjunction Data Message (CDM) from being delivered in time for the satellite to execute a maneuver.

## **Gen 2**

SpaceX’s recorded 16 individual “outage” events (as defined above) involving Gen 2 satellites in which the targeted collision risk was not reduced through a maneuver. Because few other operators are required to publish this level of detail, it is difficult to compare these results with industry norms.

Fourteen of the 16 events stemmed from inadequate secondary predictions ahead of the conjunction. Of those 14:

- Eleven involved inconsistent radar predictions of generally ballistic objects. Five of these events involved a single object: RBSP A, a poorly tracked eccentric object with large protruding booms.
- Two were caused by the “launch screening gap,” in which newly launched payloads entered Starlink orbital shells without sufficient screening or trajectory predictions. One of these events involved DISKSAT A deployed by an Electron mission launched on December 18, 2025. The second event involved MAGNARO-2, deployed by a different Electron mission, launched on April 23, 2026.
- One involved a maneuvering Russian satellite that did not provide owner/operator ephemeris.

The remaining two events occurred when a temporary Space-Track.org outage prevented the Conjunction Data Message (CDM) from being delivered in time for the satellite to execute a maneuver.

As noted earlier, individual satellites may also be unable to achieve their targeted risk mitigation for reasons outside their control, such as CDM latency or inaccurate secondary predictions. Because few other operators are required to provide comparable data, it remains unclear how SpaceX’s performance compares to industry standards in these areas.

7. *“SpaceX must communicate and collaborate with NASA to ensure that deployment and operation of its satellites does not unduly constrain deployment and operation of NASA assets and missions, supports safety of both SpaceX and NASA assets and missions and preserves long-term sustainable space-based communications services. SpaceX must report on the progress of its*

*communications and collaboration efforts to the Commission in its regular reports specified in condition v.”*

SpaceX and NASA meet to discuss space sustainability issues on a regular cadence. Both NASA and SpaceX mutually work to enable safe launch windows and to preserve long-term sustainable space-based communications services. SpaceX and NASA exchange information to coordinate Starlink launch windows and share information to ensure SpaceX satellites transit safely through International Space Station altitudes. SpaceX also routinely shares launch trajectories and on-orbit satellite ephemerides and covariance data with NASA to ensure SpaceX and NASA assets and missions continue to coexist safely. SpaceX values its strong partnership with NASA and will continue to work closely with NASA to keep space safe and sustainable.