

Loss of M-21 and D-21 On 30 July 1966

Photo Archive and Data



Pilot: Bill Parks

LCO: Ray Torrick

60-6941 (M-21) and (D21A) #504

60-6941 (M-21) This was the second A-12 to be converted to an M-21 for launching the D-21 reconnaissance drone. During a flight test on 30 July 1966 for launching the drone, the drone pitched down and struck the M-21, breaking it in half. Pilot Bill Park and Launch Control Officer (LCO) Ray Torrick stayed with the plane a short time before ejecting over the Pacific Ocean. Both made safe ejections, but Ray Torrick opened his helmet visor by mistake and his suit filled up with water which caused him to drown. This terrible personal and professional loss resulted in "Kelly" Johnson's decision to cancel the M-21/D-21 program. LAC #135 (941) flew 95 flights for 152.7 hours total flight time prior to the crash.

The following data is derived from www.habu.org (with Permission):

She was lost on Saturday, July 30, 1966. Prior to this flight, there had been 3 successful D-21 launches from 941, but all 3 had been executed with the mother ship in a .9g "dive," flying slightly downward to assist in blackbird/drone separation. If the still-experimental M/D-21 were to be used in combat (real-world) missions, the crew might be under fire from missiles and fighter/interceptors, and so might not have the luxury of launching from a .9g dive. In this fourth launch, the D-21 would separate in a level-flight, 1g configuration.

For the first 2 to 3 seconds of the drone launch, everything went normally. Unfortunately, the drone was not able to penetrate the shock wave coming off the mother ship. The D-21 (#504) had almost cleared the M-21's rudders when it encountered the shock wave, bounced off, rolled 45 degrees to the port (left) side, and impacted the mother ship almost directly at Station 715, where the forward fuselage attaches to the wing root. Between the impact and resulting explosion, #941 was for all intents and purposes cut cleanly in two.

Lockheed test pilot Bill Park and Launch Control Officer Ray Torrick remained in the tumbling wreckage until a lower altitude where they ejected safely, but they landed in the open ocean, and Torrick drowned when his pressure suit took on water. Some reports attribute this to Torrick prematurely opening the faceplate of his visor, but other informed sources have stated that the buoyancy of the David Clark suits would make this almost impossible. Others have speculated that his suit was torn by shrapnel from the wreckage as he ejected. In either case, no further M/D-21 flights occurred; furthermore, a Baylor bar was then added to the flight suit

helmets to ensure that the faceplate could not accidentally be opened in similar situations.

All M/D-21 operations ended with the death of Ray Torrick. All subsequent flights of the D-21 were as D-21B's, which were reconfigured to launch the drone from an under wing pylon of a B-52 (much like the X-15 had been), boosted to Mach 3 by a rocket motor that was jettisoned after the D-21B's Marquardt ramjet was started.

Photo Archive of the Crash

The following images was extracted from a movie handheld by Keith Beswick while flying along side of the M-21 in another Blackbird at Mach 3.0. Ray Torrick, the Launch Control Officer (LCO) safely ejected from the M-21 however he drowned at sea 150 miles off the coast of California. Bill Parks, Pilot survived.

Credit for the following images goes to Keith Beswick (Lockheed), Jim Fitzgerald (Lockheed) and especially to Chuck Wygant (Lockheed) for obtaining a copy of this rare film footage.

Images are click to enlarge



[M21 001.JPG](#)

D-21 mounted on M-21
Mother ship 60-6941 at
Area 51



[M21 002.JPG](#)

M-21 Taxis out at Area 51



[M21 003.JPG](#)

M-21 60-6941 in flight 30
July 1966



[M21 004.JPG](#)

D-21 shown from a
previous flight with
frangible nosecone



[M21 005.JPG](#)

D-21 on Mother ship 60-
6941 (M-21) prior to
crash



[M21 006.JPG](#)

D-21 on Mother ship 60-
6941 (M-21) prior to
crash



[M21 007.JPG](#)

D-21 on Mother ship 60-
6941 (M-21) prior to
crash



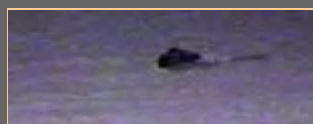
[M21 008.JPG](#)

D-21 Ignition



[M21 009.JPG](#)

D-21 Separates from
Mother ship



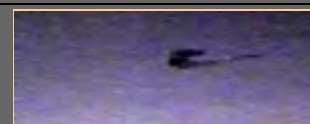
[M21 010.JPG](#)

D-21 un-starts and falls
off on left wing of D-21
Silhouette of bottom of D-
21 shown here



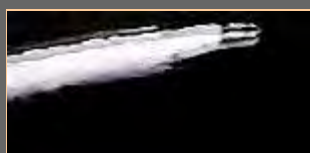
[M21 011.JPG](#)

D-21 begins roll to left

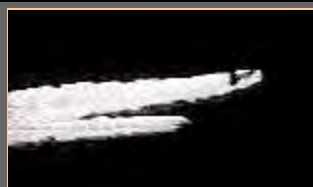


[M21 012.JPG](#)

D-21 impacts the M-21
Mother ship causing nose
to pitch-up breaking the
aircraft in two at the 715
station where the wings
attach



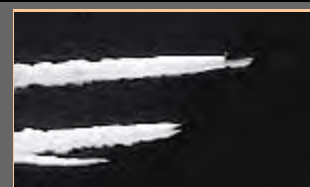
[M21 013.JPG](#)



[M21 014.JPG](#)



[M21 015.JPG](#)



[M21 016.JPG](#)

M-21 initial breakup- Frame#1	M-21 Breakup continues- Frame#2	Breakup continues- Frame#3	Breakup continues- Frame#4
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The MPEG movie of the crash sequence filmed by Keith Beswick flying along side of the M21 at Mach 3 is available here. You can download this movie to your computer. The file size is 16.7 MB (16,648KB) and depending on the speed of your modem connection, may be a lengthy download. Here is the URL for the M21/D21 Accident:

http://www.wvi.com/~sr71webmaster/MD21_accident.mpg

Or

You can order the "Master SR-71 DVD" with 7 Movies that contain this rare crash sequence footage at this URL:

http://www.wvi.com/%7Esr71webmaster/PayPal_Order.htm

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