The John H. Glenn, Jr.
Oral History Project

Oral History Interview 16

with
John H. Glenn, Jr.

in the Hart Senate Office Building
in Washington, D.C.

March 27, 1998

Brien R. Williams
Interviewer

[Begin Interview 16, Tape 1, Side A]

WILLIAMS: This is the sixteenth interview with Senator Glenn. It's taking place in his office in the Hart Senate Office Building. This is March 27, 1998. I'm Brien Williams.

We're starting out here, we're going to leave the Korean action to a later date, but I wanted to ask you about the Korean Memorial, how that came about, how reflective of the war you think it is and how good a memorial.

SEN. GLENN: The Korean War itself was sort of the forgotten war. It's been termed that, and I think that's a very apt name for it. It came too close after World War II where everybody had been so concentrated on a huge war all over the world, and this was looked at as sort of a small regional conflict that came up within about five years of the end of World War II. So it didn't receive the same attention from the American people. They were tired of war, and rightly so after World War II.

But for the people that were involved in Korea, it was every bit as bad as World War II or any other war. One thing, when people think of a nation going to war, I think they think of soldiers marching by and the flags flying and the bands playing. Then you go out and you fight the war, and you come back and the band's playing and everybody thinks it's great, you won the war. But for the people that are out there, the people that are in combat, it makes no difference whether the war was the size of Korea or whether the war was the size of World War II. It was very real. We lost a lot of people. In fact, Korea was one of the bloodiest wars we've ever had. You talk about the horrible slaughter that occurred in the Vietnam War, and it was. The Vietnam War stretched over about ten years and we lost 58,000 Americans in Vietnam. The Korean War lasted three years and we lost 53,000 people. So if you want to put it on slaughter per day, Korea was far more lethal. I'm not trying to downplay Vietnam, certainly, but all I'm pointing out is, for the individuals that were involved, Korea was every bit as tough as any war we've ever had for those people that were out there doing the shooting and being shot at and taking losses and being wounded and so on.

But the Korean War did not receive that kind of attention. Some of the people that had been in Korea had the idea that there should be a memorial here in town [Washington, DC]. Now, for me, I don't care whether there's a memorial or not. I remember very vividly the things that happened out there. I remember the people that got shot down. I remember John Jerado [phonetic]. I remember all the things that we went through. I remember the people that got hit or were

wounded or people that never came back from out there. So, for me, those are my memorial from Korea. I remember those things very, very vividly. I don't need that. But I think it's good for people on down in generations yet to come to have something to look at to remind that, yes, there was a lot of sacrifice that went on. That's what a memorial, to me, is all about. It's not just to make a pretty statue; it's to honor the current people who were there who are still alive, but to remind future generations that we have a history and a heritage and a dedication to country that is the reason we've developed the way we have. So I supported the idea of a Korean Memorial.

General—I was trying to think of the general's name who started the whole thing. He was a commanding general in Korea for a while. I'll think of it in a minute. Anyway, he died in the middle of this effort to raise the money to do a Korean Memorial. The person who took over from him and really brought it through to fruition, and through to dedication day, was a Marine General, Ray Davis. Ray Davis is famous in the Marine Corps. In fact, is famous in military circles as a Congressional Medal of Honor winner who was the colonel in the charge of the Marines that were surrounded at the Chosin Reservoir.

The story of their coming out and getting down to Hungnam where they could be picked up, is one of the great stories, great things in the annals of Marine history. Extreme cold. They brought all their wounded and all the dead out with them. They had the wounded on the hoods, strapped them on the hoods of Jeeps, where they could be warm. They were completely surrounded, and it was only

with his leadership and the fact that it was the kind of Marine discipline and combat capability that they had that they were able to get out of there at all. They flew a lot of close air support in there with them.

This happened before I went to Korea, so I was not involved with it. But the stories that the pilots had, the working down in the valleys trying to get those guys out of the Chosin Reservoir was really something. A friend of mine was a close air controller, a forward air controller that was assigned to that regiment. He was the one calling in air strikes. I remember they talked about him afterwards. They were calling in one strike and he couldn't see the target very well. There was all kinds of rifle fire going on and this whole ridge they were on was being swept by fire all the time. He was so intent on getting the airplanes in that he stood up on this ridge so that he could see the target, so he could direct the planes in by radio. They tried to grab him back down again, he got hit and a bullet went through part of his throat and caused blood in his throat, and he was still gurgling into the microphone, trying to direct the planes in. They had to grab him by the feet and literally pull him back down. So there was just one story after another like that out of the Chosin Reservoir and the people trying to get out of there.

Anyway, there are things like that in Korea and you could tell that story a hundred times by different things that happened in Korea. Where the Iwo [Jima] Memorial over here has the slogan on it that, "Uncommon valor was a common virtue." That could be said just as much about Korea and some of the actions there. So, people from Korea thought that this should be remembered by future

generations, so they set out to get a Korean War Memorial, and I supported that and worked with that group. We had a letter campaign and canvassed former Marines. Some of the meetings that were had, well, a number of the meetings that planned all of that preparation for the memorial were here in this office, as a matter of fact. So when Ray Davis took over, he really did a good job of bringing the whole thing through.

There's a little sidebar story to this, too, that I think is sort of funny. It's not funny, but it shows a different attitude, anyway. They had several different designs for the Korean War Memorial, and the one they finally settled on was the one as though there are a lot of troops walking along the road, it's raining, and they have ponchos on. It's a very typical scene. So, when you walk into the Korea War Memorial, you are part of that scene of these soldiers and they're walking along.

The figures are supposed to represent all who fought out there, Army, Marines and foreign troops, also, although this is mainly Americans in the Korean War Memorial. But it's supposed to represent Army and Marines. When Ray Davis took over to run this Korean War Memorial, and they showed him the model, they had these twelve or fifteen figures, however many there are. So it was to be sort of route step hiking along a road, going to combat. They didn't have their chin straps. All the chin straps on their helmets were just hanging loose down. They weren't hooked up. The first thing he did, he said that when he was out there, that for his Marines that would not be the case. His Marines had

enough discipline, they were supposed to keep their straps fastened, and they did. He insisted that three of the statutes over here have the chin straps fastened to represent the Marines. So when you go to the Korean War Memorial, you can look at them and you'll see there are three figures there that have the chin straps fastened, and that's Ray Davis's doing.

So it's an impressive memorial. It's over there by the Lincoln Memorial and it's juxtaposed across the mall on the other side of the reflecting pool from the Vietnam Memorial. So it gets a lot of attention over there. The Vietnam Memorial is very dramatic, of course, in its stark simplicity and the names of people who were lost. The Korean War Memorial, I think, is a good counterpart to it, because it gives you a little feel, as though you're almost walking along with some of these people, as they walk along the road either hiking to or from, marching to or from combat, whatever it is.

So I thought the memorial was very well deserved and I was glad to support it. We were able to raise enough money to put the thing over. At the dedication of it, when we had the groundbreaking for it, several of us that were involved in it made little speeches that day. I said that day that for me and for other people that were in Korea, this was probably a wasted effort for us personally, because we had our own memories, and those were the memorial that I have in my own mind. But I thought it was important that to convey just a little bit of the feeling of what happened out there and that this war should not be a forgotten war, any more than any other war. It had just as much sacrifice and just

as much noble purpose of the individuals involved representing their country and going in harm's way and doing it and doing a good job, as any war that we had ever fought.

So I'm glad to see it there, and I think it's good and it's a counterpart to the Vietnam War, where we lost almost the same number of people in those two wars. Although the Vietnam War, of course, had a lot more attention and became sort of a political lightening rod in this country.

The Korean War was somewhat of a political lightening rod, also, in that there was a real difference of opinion as to whether, among the people of this country, not among the people out there fighting, but among the people of this country, there was a real dichotomy of opinion as to whether we should have been involved with it. [Harry S.] Truman at one time had said that we would not go into that area. Later on then, after the North Koreans attacked, he decided in conjunction with the U.N. [United Nations] that we would go in. So we really changed course.

There are some people who feel that his initial statement that we would not be involved in that area was one of the reasons the North Koreans started what they did. Then after they started and the U.N. decided to take action, and we, through the U.N., were involved, it became the first U.N.—what was called a police action. Well, it was anything but a police action; it was a war. So it was a controversial thing.

When [Dwight D.] Eisenhower was elected in the—I forget which

election, anyway whichever Eisenhower election was the first one, one of his pledges was that he would go to Korea and try and end the war. So it was somewhat of a political lightening rod, as well as Vietnam became later.

WILLIAMS: That was 1952.

SEN. GLENN: '52, was it? I guess.

WILLIAMS: He did go in November to the war.

SEN. GLENN: He went, yes.

WILLIAMS: Was it last year there was some controversy about how well the Korean War Memorial was being kept up?

SEN. GLENN: Yes. Once these memorials are—you get a charter, it's chartered by the federal government. You can raise private funds to put up a memorial like that. It has to be approved and it goes through all the Washington Planning Commission and all that sort of thing to make sure that it's architecturally right and so on. Then at the end of that, once it's there and it's established, then it's turned over, and the Park Service actually takes it over and maintains it from that time forward.

Well, there was a lot of criticism over a year, year and a half ago, because there were lights out, the grass hadn't been mowed, and there were bare spots. It was getting rather shabby treatment. There were a lot of complaints about it, so the Park Service, I think they got the thing back in better shape than it was before. But there were some complaints about it that it was not being given the attention it should have compared to other monuments around here.

Actually, my innermost feelings at the time were, well, that's rather typical

of the Korean War. It didn't get the attention that it was supposed to have either, and the memorial was just fitting in with what happened back in the fifties, early fifties. But I guess that's not the right way to look at it. But they have it now and it has a lot of visitors there, and I hope it serves to remind people in the future that there was a lot of sacrifice in that war. Even though it came so soon after World War II, it got very little attention.

WILLIAMS: It is a remarkable memorial in the sense that it conveys a real sense of the somberness and the dejection, almost, of participating in that war.

SEN. GLENN: Yes. Well, it does. Another factor of it I should have mentioned, too. I think they did a pretty good job on night lighting. If you visit it at night, it's almost spooky over there. Along the one wall, they've done one wall that sort of shows—it's almost like ghostly figures. It shows pilots and mechanics and other people over here along the wall in addition to these big figures out in the middle. At night it's a little, to me, like the Lincoln Memorial. The Lincoln Memorial, to me, has always been more impressive at night than it is in the daytime. It's almost like going to church, to go into the Lincoln Memorial at night. It's just the way the lighting is and the figure of Lincoln in its simplicity, and yet, I guess, much of its grandeur is its simplicity in conveying a feeling. The Korean War Memorial is much the same kind of thing.

WILLIAMS: I saw it for the first time with snow on the ground.

SEN. GLENN: That would be even better. And that's something that most people didn't realize, the winters in Korea and the fighting conditions out there were brutal. The

pullout from the Chosin Reservoir, one of their biggest problems was the cold. They had people, all kinds of people, with frostbite and disabled by the weather and equipment wouldn't work right because of the weather and the bitter, bitter cold. So, the Korean War, part of the problem was the elements and the winter conditions.

In the wintertime out there, the normal weather patterns are that you have winds run from the northwest toward the southeast. They sort of blow right down the peninsula from up out of Manchuria and Mongolia and up in Siberia and up in that area. That's where your normal winter winds are. In fact, out there when we were flying in the winter, flying missions up into North Korea, we normally had a heavy bomb load on when I was flying the F-9Fs, the Panthers. You have a heavy bomb load so you'd cruise up maybe 22 or 23,000-feet altitude was about all you could get, sometimes with a heavy load, because we were always going up with all the bombs and everything you could put on them, and that's about all you could do with that going up.

Then coming back when we were light, light on fuel, and you'd already dropped all your bombs, why, you went for altitude. So we'd come back around 35,000 feet, and quite often you'd pick up a jet stream, which wasn't that well defined at that time. We didn't know that much about jet streams then. You'd go up there and you'd accidentally pick up a jet stream coming back and you'd scoot on home very fast. So there were always winds that helped you out at altitude.

WILLIAMS: In this chronology I developed here, I noticed that sometime in September of 1953

you took fifteen men for R&R in Hong Kong.

SEN. GLENN: Yes, and that's one where they had a drawing. At the end of the war, they had the carriers and some of the other ships would go down to make a routine port call at Hong Kong. So to give some people R&R, why, they would have a drawing, or there would be so many people selected. So out of the air group we would have so many slots. You'd say, "Okay, air group can send ten people on the next carrier going to Hong Kong." You went down, it was about five, something like four or five days to get down there, and you were there about a week and about four to five days back. So it was about two weeks or so away.

We always had a drawing as to who was going to go, and lo and behold, the ones that were assigned to pilots, I won one of those drawings by luck, so I went to Hong Kong. Went down to Puson, as I recall, I think it was. Went down to Puson, went aboard a destroyer, and went across to Japan, got aboard the carrier, I don't remember where it was. I don't remember where the carrier was, but, anyway, went aboard over in Japan and went down to Hong Kong and went through the Taiwan Straits on the way down, and was in Hong Kong then for about a week.

That was old Hong Kong. That was when you sat out on the front porch of the Peninsula Hotel, like you used to see in the old-time ads or movies, before Hong Kong grew as tall as it is now with the buildings. It was the first time I'd been into a situation like that ashore since I'd been in China at the end of World War II. So I enjoyed that trip very much. Then we came back up, rode the carrier

back up again.

While we were in Hong Kong, we stayed on the ship at night and they had little boats that shuttled us to shore, that went back and forth all the time, so you could go in and shop or look around, whatever.

WILLIAMS: Were you carrying the reputation on that trip as the "MiG Mad Marine," or "Old Magnet Ass?" Were you just another pilot?

SEN. GLENN: I was just another pilot on that trip, I think. I'm sure there might have been some discussion about what I had just come out of flying with the Air Force up there, but I don't recall anything along that line. It was mainly just pilots and they had a certain number of enlisted, too. So if you had people out of your air group that were assigned, well, there'd be an officer in charge of that group. That's how I got on this. What did we have, fifteen Marines there. Fifteen people, yes. I was in charge of fifteen men for R&R in Hong Kong. That's how it occurred.

When you got down there, I wasn't in charge of them for their R&R, we got there and they were on their own. All I did was make sure we had all of them back aboard before we started back north again. As I recall, everybody showed up, and that was fine.

WILLIAMS: You went back then to Korea at the end of that R&R, is that right?

SEN. GLENN: Yes, right.

WILLIAMS: Then you were there for several more months?

SEN. GLENN: Yes, there until whenever it was when I came back. In December, I guess, when I came back, got my orders back to the States. Meanwhile, I had put in for test

pilot training. I thought out of my combat experience and my own interest in making better airplanes and better ways of doing things, I thought I'd like to go to test pilot school and test some of the new aircraft. We had a whole new stable of aircraft that we knew about that were being designed and were coming out at that time. They included the first of the Navy and Marine Corps' supersonic airplanes, as well as a whole new series of jet attack and fighter aircraft.

I applied for test pilot training. Now, that was not without considerable thought, because if I was going to make the Marine Corps a career, sometimes going off to several years of duty like that, very specialized, was not exactly the best career planning. If you wanted to really assure your ascendancy in the Marine Corps, the best thing to do is get some experience with the ground troops, as well as flying, and go to all the right schools, apply for those.

But I really wanted to do the test work. So I decided that I'd just take my chances on a long-term career and do test work, if I could. As a result of my combat record, which was good, both with the Air Force and the Marine Corps—the colonel of our group at that time was Colonel Robertson, and I went to see him, and he endorsed my request and it went through, and I was accepted by the test pilot school. It was a small class. It was at Patuxent Naval Air Station. Patuxent River, Maryland, is where it is. At that time, it was called TPT, test pilot training. It's now called test pilot school.

So I was assigned and reported in there in the January class. It was a six-month class in January of '54. It was a very rigorous course. It was like we used

to joke about going to the academic side of test pilot training was like getting a drink out of a fire hydrant. You get a little in you and a lot all over you. That's about what it was.

It was a very, very tough academic course, because a high percentage of the people that came in were either people who had graduate degrees already, or who were graduates of the Naval Academy. Now, those people, of course, had had a full dose of math and advanced calculus and all of that. I had not had advanced calculus, and so I worked very hard at test pilot school on the academic side of it, and I did fine. But I had never had a course in calculus at that time, and yet that was one of the requirements for coming to the school that they waived in my case because of my combat background. They wanted me there for that. So when I got there, that's one of the hardest academic things I ever did, was do calculus self-taught. I stayed awake till two or three in the morning many, many nights, going through and learning calculus with all the little primers and background, and, to some extent, the help of the director of the school, who was a great guy, head of the academic thing, a guy named Walt Hess [phonetic]. Walt helped me some on that, so I got so I was as passable in calculus as the other people were in general terms, or passable enough in calculus I didn't have any problem getting through the academics. The flight part of the course, I did fine in that. There wasn't any problem with that.

At the end of the test pilot training, I was assigned to what was called armament test. Patuxent River had the base organized along different lines. One

was flight test, where new airplanes came and went through just the aerodynamic testing. You had service test, which was where the new planes were assigned and you tried to put them through as fast a service life of the whole airplane. You flew them twenty-four hours a day, and tried to put the whole service life of the airplane on, breaking it down into high-power time and so much use of weapons and so many landings and tried to simulate the whole life of the airplane as fast as possible. Then armament test is where we took the airplane in and really used it like a combat airplane. So that's something I was good at, because I'd been doing that. I just came out of that kind of work.

So each pilot then, as you came into armament test, you were assigned certain projects. You had your airplane or two airplanes that you did the armament trials on. The Navy used to have what they called Board of Inspection and Survey, BIS, trials, and all new equipment like ships or airplanes or anything are put through Board of Inspection and Survey trials. That's where you have all the things written out that the airplane or the ship has to comply with, as far as maneuverability and the speed and the certain power settings in speed and all that, and armament performance.

The armament performance, the overall combat capability is what I was assigned to do. That's what the pilots in arm test did. So you went out and you fired the guns and you shot rockets and you dropped bombs and you did all the things you normally would do in combat and did them under different G loadings and maneuvering loadings and things like that. So you tried to establish combat

conditions as much as possible.

We had air-to-air targets, towed banners that one plane would go up and tow a banner a thousand feet or so behind the airplane, and then that was the target that we went up and shot at. You'd come back and count the holes in the banner then, and they had little soft paint that the tip of each shell was dipped into this little soft paint. So that when it fired and it went through this mesh sort of screen-type target, it left that color then on there. So you could take several planes up and know which pilot was hitting and which was not and which airplane was hitting by which colors. So when you came back, you'd analyze the banner and see how many holes there were in it. That same kind of thing was used…

[Begin Tape 1, Side 2]

SEN. GLENN: I had some very good projects while I was there and got to fly quite a number of different airplanes. One of the first airplanes that I was assigned to that I did some of the armament trials on was what the Navy called the FJ-3. The FJ-3 was basically an F-86, as I had just been flying in Korea, except it had been modified to have a tailhook on it so it could go aboard carriers. With the support structure it made it a little heavier than the F-86, so it didn't have some of the same performance. We had four 20-millimeter cannons on it instead of the six .50-caliber machine guns we had on the F-86 in Korea. That was a little bit different.

I, in flying that airplane, had some things happen that were not good, where we discovered some problems with the airplane. On some of the 20-

millimeter gunfire, at extended gunfire, it damaged some of the panels on the nose by the gun and actually caved some of them in where it popped rivets and went down the duct, on the inside of the duct, air inlet duct, for the jet engine. So that was a bad one, and so we had to stop and re-beef up all of those, the support structure for where the guns fired.

It's fine to have an airplane that's great aerodynamically, but if it won't work with the weapons, why, it doesn't mean much as a combat airplane. This is always something that is a design—is always a problem around the manufacturers whether they stress the aerodynamics or the weapons or whatever. You have to work them out together; you can't just make one or the other.

The FJ, they had a few squadrons of those, but it never was a plane that was bought in any big major quantity, but for a little while it was about as good as we had. We had some Douglas airplanes, one that was called an F-4D that Douglas had designed, a fighter that was almost a delta-shaped fighter. It was a very agile—very high rate of climb, good performance. It had its counterpart in an attack airplane, an A-4D, an attack airplane that looked somewhat the same, but carried far more bombs and rockets and all that. Flew a little bit on what was the Navy's biggest bomber at the time. I was not assigned as the project officer on it, but it was the A-3D, an attack plane. It was a very large carrier, attack bomber plane.

There were two other planes that were made by Chance-Vought that I did a lot of work on, where we had some experiences that show why you have to have a

good test program on airplanes. The F-7U, it almost looked like a praying mantis. It was very high; the nose was on an extended nose gear way up in the air. The reason you had to have that was because a delta wing requires more change in angle of attack to get the same amount of lift, the more delta wing you have. So on that, to get an angle of attack that would come aboard ship, where it could land even on a runway; you had to have a very high nose gear to let you get that kind of angle of attack.

This airplane was one of the first real new jet fighter aircraft at the end of World War II, and one of the first to go to an all-hydraulic control system. It had all kinds of problems. We used to joke about it. It had its own assignment of buckets, when it came in after a flight and was on the line there. You had your own buckets you put under every spot where hydraulic fluid was leaking out of the airplane. That wasn't much of a joke; it was pretty much true—had an awful time with the hydraulic system on it.

Doing the armament trials, it was a very high-performance aircraft as far as taking off and getting up to about eighteen or twenty thousand feet. It had the fastest rate of climb at that time of anything that we had, or that the Air Force had, I think, too, as far as that goes. But then once you got on up at higher altitude, it wasn't all that great. It had some peculiar aerodynamic characteristics, also, in that if you pulled too tight into a turn and pulled it into a complete stall and got it into a spin, it was very difficult to get out.

One of the Chance-Vought pilots, John McGert [phonetic], who was chief

test pilot at the Chance-Vought plant in Dallas, rode one down one day in a spin. He couldn't get it out to about 3,500 feet or so and finally got out and the plane crashed. So it had some spin characteristics that were not good.

I was doing the armament trials on it, and we had some strange experiences there, too. It was a twin-engine airplane with the cockpit pretty well up front and the inlet ducts on each side back along the side of the fuselage. The two 20-millimeter cannons were mounted in the upper forward duct, forward part of the duct, just by the inlet, air inlet, to the engines. Now this, I think, was a rather gross mistake in design, because when you're talking about taking a plane to altitude, you have to keep a smooth airflow into the engine, and yet here were two 20-millimeter cannons up there that were going to be firing and disrupting that airflow. That's exactly what happened. When you get the plane up at altitude, and I did this on several different flights, you take the plane up at altitude and if you're above about, I think if you're above about 25,000 feet, when you would fire the 20-millimeter cannons, you'd put the fire out in the engine. So there you are flying a glider up there at 25,000 feet. In other words, what would happen was, the rate of fire was setting up a standing wave of air going back and forth, just like an organ pipe, it's an organ pipe effect. This would disrupt the flow of air to the engines enough that it would flame out at that altitude.

So we'd go up and fire the guns on one side and see how it worked and that would put it out. You'd come back down and restart them again, restart the engine again, go back up, try it again—the same thing on the other side. It was

the same on both sides. So we had a project then: how are we going to fix this?

There was a Marine Colonel Chinn [phonetic], he was of Chinese extraction, but he was supposed to be one of the world's greatest armament experts. He was over at Dahlgren. So we brought Colonel Chinn over, and he thought we could fix this, probably, by putting a fix on the end of the gun barrel that would be very similar to what you see skeet shooters use on a shotgun—a thing on the front of it that as the expansion of gas comes out the front there are a lot of little louvers and what is called a Cutts compensator. A Cutts compensator takes this blast and turns some of it back, so that it reduces the recoil of the shotgun and it doesn't hurt the shot going out at all.

So Colonel Chinn thought if we could do that off the blast of this and turn some of this blast aside and around, without letting it just reverberate down the duct, that we could correct this situation. So he designed a thing that was made out of stainless steel that was about, oh, probably eight or ten inches long. It would screw on the end of the gun barrel—had an opening so the shell could still come out through the middle of this. But there were a lot of little holes in it that were drilled out or were machined into this thing where it would take some of the blast and turn the blast and deflect it backwards, which would reduce the blast amount that was going to have any effect on the engine. There were multiple holes. There were probably twenty holes like that. They were curved holes that took the blast and turned it back, in a back direction.

He brought these Cutts compensators over, and we fired them in the gun

butts out on the firing range just to see if they worked, number one, and they did. It looked like it was going to be pretty good. So we put them on the airplane and took it up and I went up to altitude then and fired. At the points where we'd been having a problem before, it seemed to work great. It was perfect. I went on up to max altitude, which I think for that airplane was something like, oh, I think we had trouble getting above forty. I don't know we ever got up, I think maybe thirty-eight or thirty-nine thousand is where I was actually doing the test point. It worked fine, guns fired, and I thought we really had a good fix for this thing.

So we left those things on all four guns and continued with our test program. I was going out and firing so many thousand rounds through these things. About the third or fourth flight where I went out and was shooting a full load of ammunition at altitude—and this was up high—and I fired and there was a noise and the whole cockpit lit up. I think every emergency light in the thing went on, and there was all sorts of racket.

To make a long story short, what had happened was this Cutts compensator thing, the forward part of this thing—probably seven or eight pounds of stainless steel—had burned off. The constant fire had taken the stiffness out of the metal and changed the composition of it. It burned off and went down the duct and hit the first stage of the engine. Well, it stripped the engine pretty well and pieces went out all over the place. The way the engine compressor was aligned, these pieces went out through the fuselage and down through the lower part of the wing. I was ahead of it so none of them came through the cockpit, but

they did go through the top of the airplane behind me, behind the cockpit, where there were fuel tanks. It was just luck that we didn't have any rupture of a fuel tank from that. But it blew the engine completely. It stripped the whole first stage of the engine, and blades went out from this thing. So that fix didn't work.

That's just indicative of the type thing you're looking for. We were looking for an arm test. And there are some other examples that I'll get into later. But the F-7U, they had, I think, about three squadrons of those were sent out to the fleet and they had so much trouble with the airplane, that it never was a first line. Well, it was a first-line airplane when it was sent out. But it had so many maintenance problems and gunfire, as well as some other problems, too, with firing rockets, that I also worked on, that it never was a very successful airplane. So that's the kind of thing you run into in testing, and I'll give you some more of that later.

WILLIAMS: Thank you.

[End of interview]