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with P-38 300 gallon drop tank modification and he agreed. I gave him status of the project and he said that half of the enroute stations had responded to their message and all had confirmed 91 octane fuel availability. He advised that Maj. Nelson was coming out the next day and would have Theodore Nikolai with him.

Lt. Cook and I then went over the radio and navigational equipment analysis with the shop specialists. We had adequate communication capability, but no automatic radio compass system. I had made up some of my logs for the flight and our primary navigation aids were radio beacons and a few radio range systems. The radio compass requirement was so important that I felt we must have redundant capability and I asked the shop personnel if they could install an AAF ARN-7 radio compass system. They said they needed to develop an installation plan, but felt confident they could do it. I asked them to use equipment that had been "burned in" and from the most reliable manufacturers. They reminded us that they had not been able to operate the equipment because batteries were still disconnected. I asked them to let us know as soon as possible the feasibility of the proposed ARN-7 installation.

Lt. Cook reported that most of the work was going well, except the spark plug check. They still had not been able to remove all the plugs located on the inside banks of the V-12 engine. They could feel the plugs, but could not see them or get existing tools on them. Lt. Cook had the engine shop and the two tech reps working to design tools to do the job. We knew the Germans had to replace plugs and there had to be a way to do it. We then went over the electrical, hydraulic, and flight control systems. We had what we needed and they had been serviced, so Cook started to button up for the closeout phase.

I began to hear the JU 88 being referred to as "Baksheesh." We had a number of inquiries about how we had gained possession of it. We jokingly indicated that a Rumanian pilot had delivered it to the RAF as a gift from Der Fuehrer and the British in turn gave it to the U.S. "Baksheesh" is a term used by Egyptian hawkers and beggars trying to get something for nothing. The GI's used the term jokingly, but it soon became a term that stuck.

Sgt. Connor reported they had made an adapter to remove the difficult plugs that was working. Cook told them to install the new plugs they found in the salvage yard, as the engine shop had checked them and found them to be excellent. We then went over the instrument systems. Sgt. Eldered H. Johnson had run a calibration check on the altimeter and airspeed system and made up a calibration card for the airspeed indicator. We decided not to replace any instruments as we now understood them and their units of measurement. We were not sure the JU 88 static-pressure system would work accurately on USAAF instruments. Sgt. Johnson's card would permit me to convert kilometers to miles per hour. The heading reference instrument combined the direct gyro, primary compass, and radio bearing functions in a single integrated instrument. There was a switch labeled "Kurtz Sten" they had not been able to identify. They had called for anyone that spoke German and a man from the mess hall bake shop responded, but turned out to be extremely nontechnical. The best he could come up with was "short steerer". We pondered this for a while, but could not determine its function. I asked the instrument people to see if they could remove the instrument to gain enough clearance to pick up some of the wire codes so we could trace wire bundles. We found the bundle routed into the aft fuselage. The bundle went to a servo-like assembly with control cables connecting to the rudder cables. All of a sudden we realized it was part of the autopilot system. Further checks revealed

that the directional integrated instrument also included a heading-hold system. We could not find any autopilot functions for pitch or lateral control; it controlled only heading.

The electric shop personnel returned to affirm that they could install the ARN-7. They went over the planned layout, with the directional readout instrument on the main instrument panel, the control unit located on the right side of the cockpit easily accessible to the pilot, the receiver in the aft fuselage, and loop and sensing antenna units on top of the fuselage just aft of the wing. They were going to use the shop mock-up system, as it had some time on it, was in excellent condition, and was made by the original design contractor. They had also been able to get control cables and wire bundles with plugs from aircraft in the salvage yard. We told them it looked good and to go ahead with the installation.

I discussed with Lt. Cook the need for reserve or emergency electrical power in the event we lost our normal electrical system. We decided to install another battery that could be manually switched onto the main electrical bus to charge the battery or supply power directly. We planned to make up a sub panel that could be switched from the main power bus to the emergency battery to supply power to the ARN-7, fuel transfer pump, and command transceiver.

Lt. Cook reported the plugs had now all been replaced and he was going to take that special plug tool with us. The emergency equipment people checked in with the bad news that the German life raft would not hold pressure for more than a few hours. They were trying to find a U.S. raft that could be satisfactorily adapted to the JU 88 compartment.

Lt. Cook asked the crew to button up and configure the aircraft so we could connect the batteries. We needed to power up to complete a number of other checks. It was again after hours when we secured and shut down for the night. After dinner, I returned to base operations and finished plotting the maps and flight charts. I completed my navigational logs for all legs of the flight.

The next morning, October 4, 1943 (Day four with the JU 88), I checked in at the hangar and Lt. Cook said he would have power on the JU 88 in about an hour. The right side P-38 tank was mounted and stabilized with adjustable braces made by the depot machine shop. We would need the capability to salvo the drop tanks in the event of a power loss with a full fuel load, so we located the bomb salvo switches on the instrument panel and scheduled a test of the system for 0830.

I went to the office to check on the enroute messages. All stations had reported back and all confirmed that 91 octane fuel and the other service products were available. Each station also confirmed that their defense organizations had been notified. I returned to the hangar where the paint shop had finished with the markings. Cook advised that the JU was now powered up and we could do some of the checks. We set up with Cook and the crew under the right P-38 tank to catch it when it released. I went to the cockpit and on signal, snapped the right red covered switch labeled *Bombenbefreiung* (Bomb Release). There was a loud bang and smoke. I shut off power and cleared the cockpit to discover the P-38 tank still hung on the right bomb rack and Lt. Cook, Sgt. Atilio I. Gromebeth, and a couple of other personnel with minor shrapnel wounds. We discovered the left bomb rack lying on the floor beneath the wing. It had been blown off as explosive bolts and linkage detonated when I toggled the emergency bomb salvo switch. By a stroke of luck, the switches were wired backwards or we would