

Sodium Vapor Flares - Navigation Aids

By John W. Howland

Smog and fog were a serious problem that all fliers had to contend with in wartime England. Coal and coke were the principal fuels for industry and locomotives. Pollution control was still far in the future. The smog was so bad, it was difficult to do pilotage navigation. Flying at low altitude, say 1000 or 1500 feet, we couldn't see far enough ahead to identify a landmark. However, by looking straight down we could pick up a town, or a RR track or even an odd shaped grove of trees. On such occasions, I traded seats with my bombardier. If I was able to locate a starting point, I placed a large scale map of the area on my knees and traced our course with a pencil. However, lining up for a landing was a serious problem for the pilot.

On one occasion, while flying in a six ship formation on a practice mission out of Ridgewell in February 1944, we were caught above a layer of smog while trying to return to base. As we circled the field at an altitude of 1000 to 1500 ft.. the ground team went into action and placed two sodium vapor flares along the main runway which, as I recall, was runway 27 (270 degrees). A light wind was blowing from about 285 degrees so the flares were placed on the left (south) side of our landing strip so the dense clouds of gray-white smoke they emitted would not blow across the runway.

As I looked out the window at that gray blob of smog below, two pinpoints of light suddenly appeared. We were first to land. Jim Tyson circled to the left. The two pinpoints of light burned through the haze during the downwind, base leg and final approach. Tyson lined up the two flares. (One spotted near the touchdown end of the runway, and the other about halfway down the runway.) He adjusted his descent to touchdown near the first flare and we landed without problems.

It so happened we had to taxi back to the other end of the field to reach our hard stand. We pulled up and stopped on the perimeter track prior to crossing the approach to runway 27 waiting for clearance from the tower to make the crossing. About then I heard the roar of four Wright Cyclones and a B-17 roared overhead, too close for comfort. He was not in line with the runway. I then checked the flares and noticed that only one flare was lit. I opened the front hatch, dropped to the ground, and ran over to find out what the problem was.

I was told, "We are running short of flares and using them one at a time for conservation." I really don't remember my exact words, but I'm sure they were not gentle as I told them to light two flares at once so the pilots could line-up and land. The second flare was lit, and the remaining planes landed safely in just a few minutes. That was the only time our crew had to resort to landing with the aid of sodium vapor flares. But I can assure you, those two bright pinpoints of light shining through the dark haze were beautiful. And they worked.

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