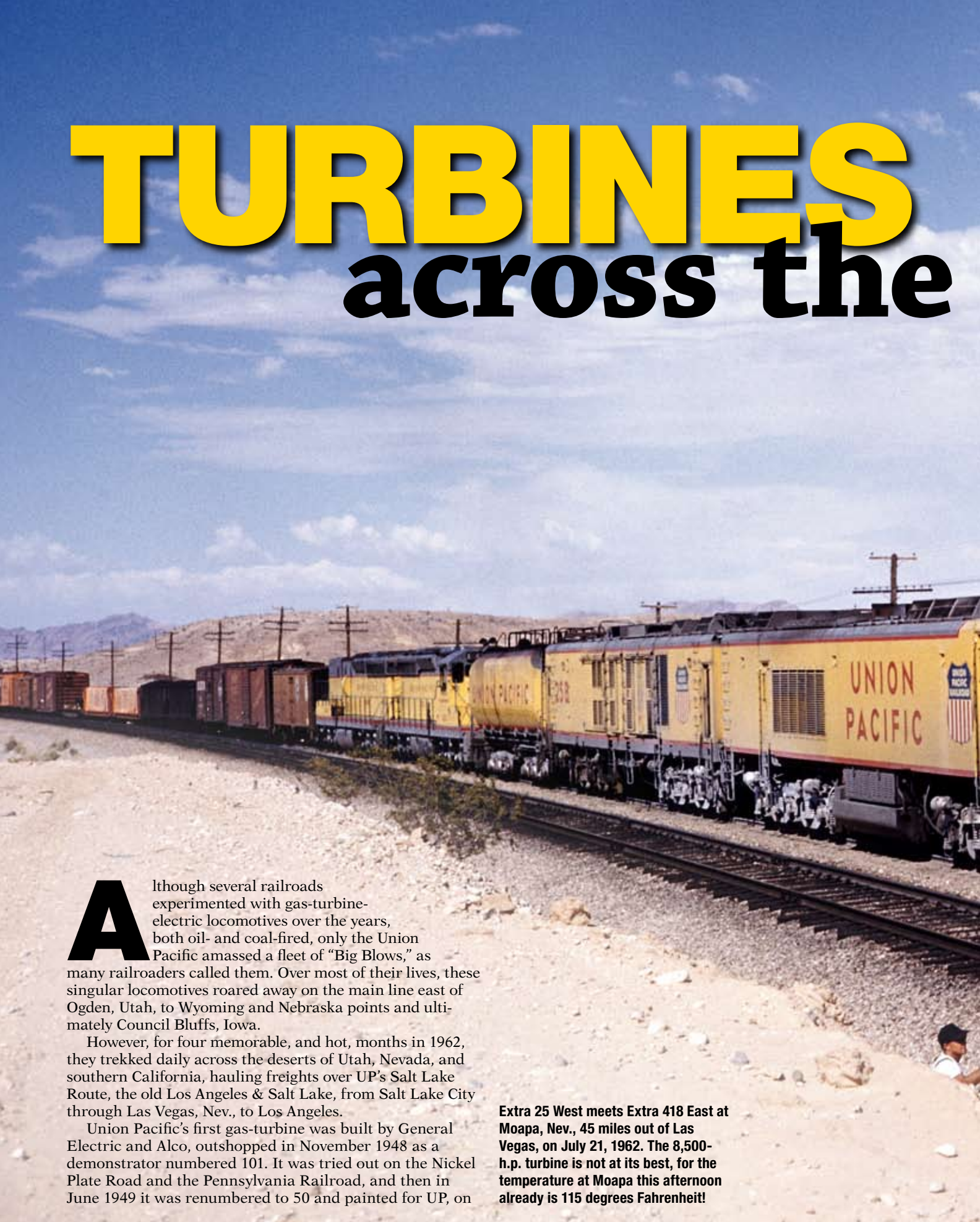
TURBINES across the



Although several railroads experimented with gas-turbine-electric locomotives over the years, both oil- and coal-fired, only the Union Pacific amassed a fleet of "Big Blows," as many railroaders called them. Over most of their lives, these singular locomotives roared away on the main line east of Ogden, Utah, to Wyoming and Nebraska points and ultimately Council Bluffs, Iowa.

However, for four memorable, and hot, months in 1962, they trekked daily across the deserts of Utah, Nevada, and southern California, hauling freights over UP's Salt Lake Route, the old Los Angeles & Salt Lake, from Salt Lake City through Las Vegas, Nev., to Los Angeles.

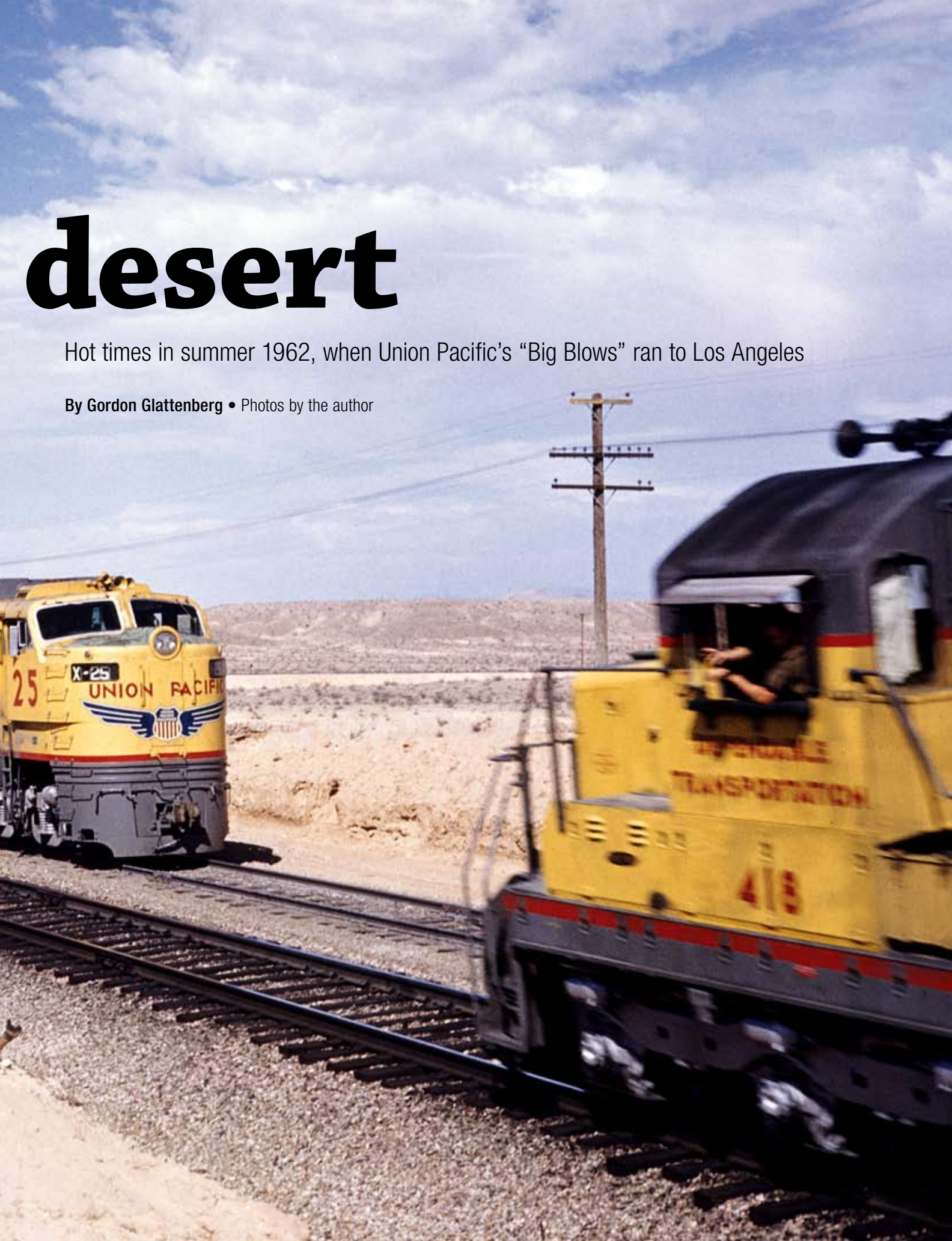
Union Pacific's first gas-turbine was built by General Electric and Alco, outshopped in November 1948 as a demonstrator numbered 101. It was tried out on the Nickel Plate Road and the Pennsylvania Railroad, and then in June 1949 it was renumbered to 50 and painted for UP, on

Extra 25 West meets Extra 418 East at Moapa, Nev., 45 miles out of Las Vegas, on July 21, 1962. The 8,500-h.p. turbine is not at its best, for the temperature at Moapa this afternoon already is 115 degrees Fahrenheit!

desert

Hot times in summer 1962, when Union Pacific's "Big Blows" ran to Los Angeles

By Gordon Glattenberg • Photos by the author



The sun is setting and the heat of the day of June 27, 1962, is gone as Extra 60 East passes through vineyards at Pedley, Calif., on its way to Riverside and Santa Fe rails over Cajon Pass to Daggett, Calif. This 4,500-h.p. turbine is the last of UP's original 10, which had flat-sided "full" carbodies and whose delivery began in 1952.

whose expansive railroad it operated for 21 months.

The locomotive had a carbody design with a control cab on each end, unusual for an American unit. It was rated at 4,500 horsepower at 80 degrees Fahrenheit and 1,500-foot elevation, but at cooler temperatures it put out as much as 5,500 h.p. While it could outperform contemporary diesels, its main virtue was its ability to burn cheap residual oil, known as "Bunker C" (the same fuel used in oil-burning steam locomotives).

The success of No. 50 led to two orders from UP to GE for 25 similar units. Rated at 4,500 h.p., the units were numbered 51–75 and were delivered beginning in 1952. All had single cabs. The first 10 had full-width carbodies, while the final 15 were similar to road-switchers in having an exterior walkway on each side. Many called these turbines the "veranda" type. Turbines 51–75 were built with on-board fuel tanks but were later given fuel tenders.

UP's final order for turbines was for 30 huge, two-unit locomotives rated at 8,500 h.p. Numbered 1–30, they were delivered during 1958–1961. All were equipped with fuel tenders from the start, as well as m.u. connections so one or more trailing diesels could be controlled from the turbine's cab. Some were upgraded to a whopping 10,000 h.p.

When the Big Blows started running to Los Angeles, they provided a welcome variety in the motive power we train-watchers in the area would see, for at that time nearly every freight diesel on UP's Salt Lake Route was a

Climbing the 1.5 percent grade on Santa Fe track on the east side of Cajon Pass on July 4, 1962, Extra 29 West has crossed above the eastbound track at Frost and, near dusk, meets UP train 104, the *City of Los Angeles*, at speed at Hesperia. Next on 29's agenda: picking up orders on the fly from the Santa Fe operator at Summit.

With a westbound freight safely cleared into the siding, Extra 29 East accelerates out of Apex, 20 miles east of Las Vegas and the crest of the first grade out of town, on June 30, 1962. Behind 8,500-h.p. turbine 29, and ahead of an A-B SD24 duo, are an EMD dynamometer car and the GP30 demonstrator. UP would buy the latter, built as a 2,200 h.p. "GP22" in 1961, and number it 875.

"Veranda"- or "gallery"-style turbine 70, a 4,500-h.p. model, shows off the "road-switcher" type carbody at Colton Tower, Calif., on July 28, 1962, as it prepares to head for San Bernardino and Cajon Pass.

400-series SD24. All three types of turbines were used on the route, but the newer and larger 8,500 h.p. ones were most common, often teamed up with SD24's. Adding to the variety, on more than one occasion I saw turbine 29 with an EMD test car, the GP30 demonstrator, and some SD24's.

Chasing the turbines across the desert was challenging, because 1962 was before the era of air-conditioned autos. I watched Extra 25 West in a meet at Moapa, Nev. [opening pages], with the outdoor temperature already 115 degrees! On another occasion, I chased 29 east out of Las Vegas just after dawn, but as the line finally pulled away from the highway and headed for the Meadow Valley Wash, it was 8:30 a.m. and so hot already that I gave up for the day.

After four months of operation in such high temperatures that did not allow the turbines to perform at their best, UP pulled them back to their original route east of Ogden. Some people also said that UP received complaints from urban L.A.-area residents about the turbines' noise. Regardless, by the late '60s, changes to petroleum refining reduced the supply of residual fuel, and as the fuel price increased, the turbines lost their main advantage over diesels. By the early 1970s, they were all out of service. For us southern California train photographers, though, it was a memorable if brief experience on the Salt Lake Route.

More online

You'll find more about gas turbines on our Web site. See a cutaway drawing of an 8,500-h.p. "Big Blow," plus video clips of Union Pacific turbines in action, at www.ClassicTrainsMag.com

The order board is clear, and the "air conditioning is on"—*i.e.,* the nose door is open—as Extra 65 West passes the Summit station on July 28, 1962, ready to descend Cajon Pass into San Bernardino.

Extra 70 East rounds Sullivan's Curve, less than a mile above Cajon siding en route to the summit. This is the second track, built by the Santa Fe Railway in 1911 to reduce the 3 percent grade from Cajon to Summit. Five years after these photos, Southern Pacific would build its own line over Cajon, the Colton-Palmdale Cutoff, which would parallel the Santa Fe on the outside of the curve here.