SUCCESSFUL test begins as the Jetliner, flying 300 miles per hour, zooms 50 feet over the heads of anxiously-watching A. V. Roe officials.

JETLINER'S efficiency depends largely on E. H. Atkin, 45, chief designer, airframe devision, A. V. Roe Canada, where the new plane was built.

XC 102

Canada's First Jet Transport Proves Airworthiness

by David Willock
Standard Toronto Bureau

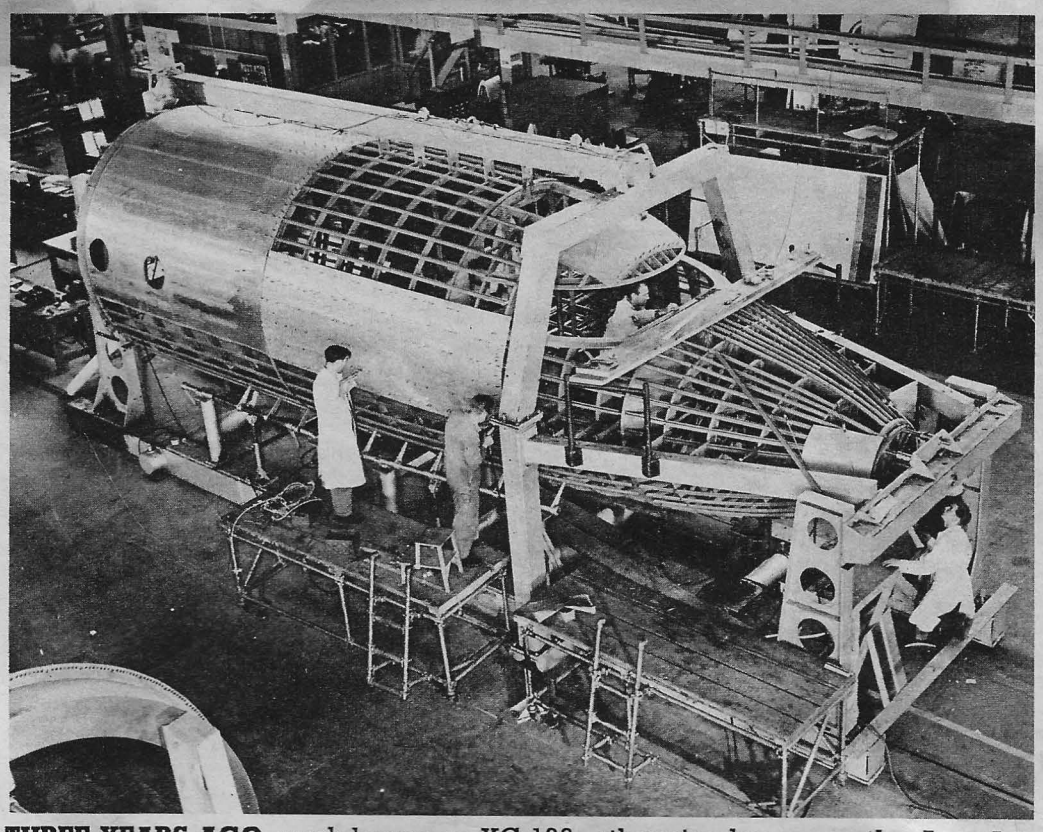
ON August 10 this year, Canada's first Jetliner, the brainchild and pet of 3,000 workers, took to the air on its first test flight.

The fact that a few days before, in Britain, the de Havilland-built Comet had beaten them in the race to produce a transport designed from scratch to carry jet engines was forgotten as test pilot Jimmy Orrell at the controls of the Avro Jetliner took off, buzzed the factory, and climbed with ease to 12,000 feet.

Orrell emerged beaming. As far as he could tell, the bugs were few and minor—remarkable in a brand new aircraft.

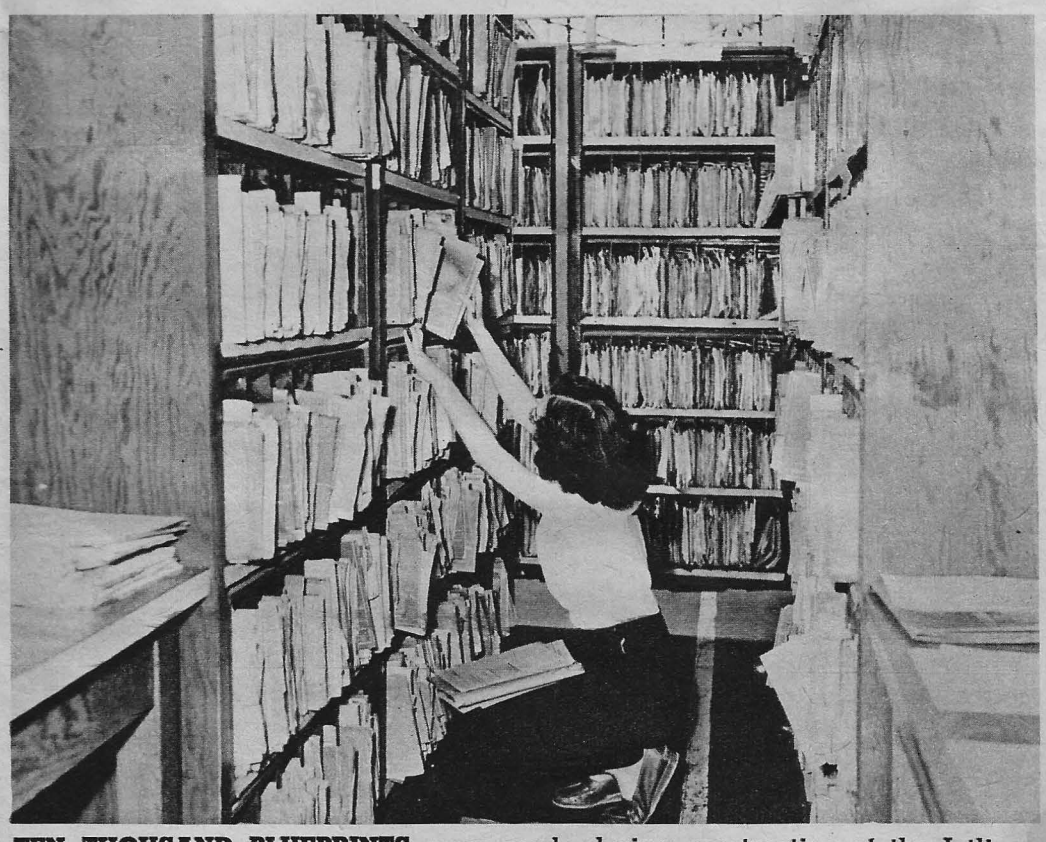
A week later the Jetliner again took to the air. After he had been flying an hour Pilot Orrell discovered the undercarriage was stuck in the up position. The word quickly spread and all work at the A. V. Roe plant ceased as 3,000 workers anxiously crowded the airfield. Hydraulic, manual and emergency systems had all failed and Orrell was faced with bringing in a new ship whose behavior he could not reckon and with flaps up which caused her to "float".

To a control tower operator's suggestion that he ditch the Jetliner in Lake Ontario, Englishman Orrell gave the equivalent reply of "not bloody likely." On the fourth run he again approached, nonchalantly hedge-hopped a pile of stones and concrete on a runway under repair and set the sleek aircraft down on the grass just north of the east-west runway, skidded 1,500 feet and stopped 50 feet short of the high way fence. Orrell, co-pilot Don Rogers and flight engineer Bill (continued on page 5)



THREE YEARS AGO, work began on XC-102, otherwise known as the Avro Jetliner. This was one of the earliest stages, with the nose section on assembly jig.

AS WORK PROGRESSES, the aircraft's complicated hydraulic system is tested. Cost of this first experimental plane has been estimated as high as $4,000,000.



TEN THOUSAND BLUEPRINTS were made during construction of the Jetliner. The aircraft was planned to meet needs of North American inter-city transport.

Baker again emerged beaming. They had been the least anxious of all and they had proved—though involuntarily—the high safety factor of the prop-less aircraft. Only a few underplates and the tail end of the jet tubes had been bent.

The undercarriage hydraulic system was modified, plates were replaced and within a month the Jetliner was again in the air. Since then it has made frequent test flights and Orrell, Rogers and Baker continue to beam. Until the XC 102—official title for the Avro Jetliner—has had 50 hours in the air and obtained its certificate of airworthiness from the Department of Transport, Vice-President Deisher and the men who designed her will have to stand itchy-panting on the ground.

The story really began three years ago, when Walter Deisher, benevolent boss of A. V. Roe Canada, sat in his company's board room at the Malton airport plant near Toronto with his lieutenants and officials of Trans Canada Air Lines and talked about the need and possible markets for a jet-powered transport plane.

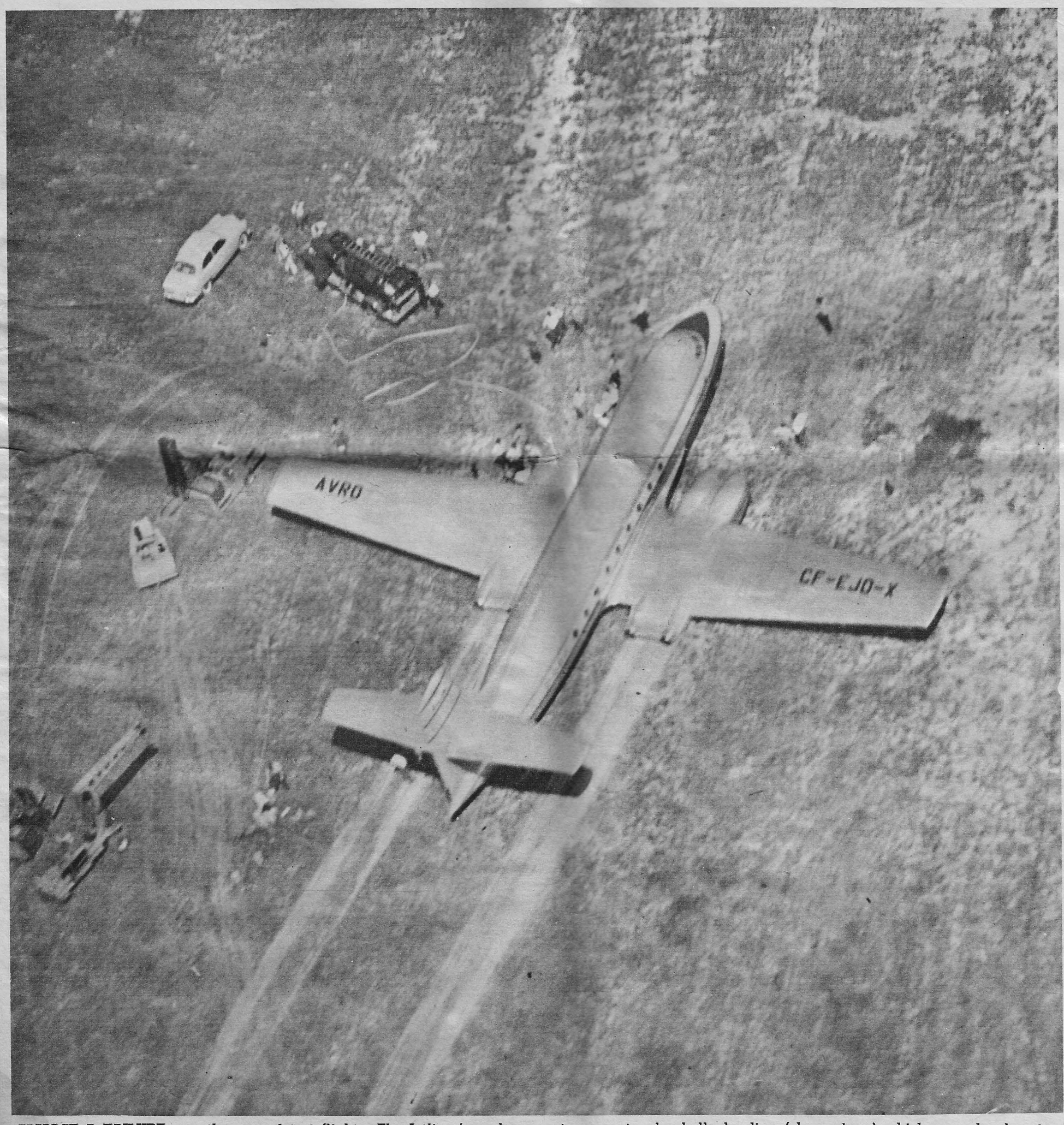
E. H. Atkin, chief designer airframe division A. V. Roe, Manchester, England and project engineer, perky Jim Floyd, were brought over to Canada. Designs were drawn up to meet the specifications of airline operators and the work of building a prototype began.

The Jetliner opens a new vista for commercial air travel. Jetflight is noiseless and vibration-free and, with a cruising speed of 427 m.p.h. at 30,000 feet, Montreal, Toronto and New York come within an hour's flying time of each other.

The Jetliner has a passenger capacity of 40 to 60 passengers, a cabin diameter of 10 feet and a speed 100 mph faster than existing transports. Her construction and design is a triumph of Anglo-Canadian co-operation and foresight. With nothing comparable in sight, American airlines may be forced to buy the Canadian product.

An example of the spirit existing at A. V. Roe was when the Jetliner was ready for her first test flight after the spectacular belly landing. The general workshop foreman asked pilot Orrell if he would like to supervise final tests of the hydraulic system. "Hell, no," replied Orrell. "If it's OK with you chaps, it's OK with me."

Henry Garside, manager of the experimental division of A. V. Roe and now assistant production manager said to this reporter: "We think we have a pretty wonderful plane here." Project designer Jim Floyd interjected: "We don't think. We know." Tests so far carried out indicate how right he is.

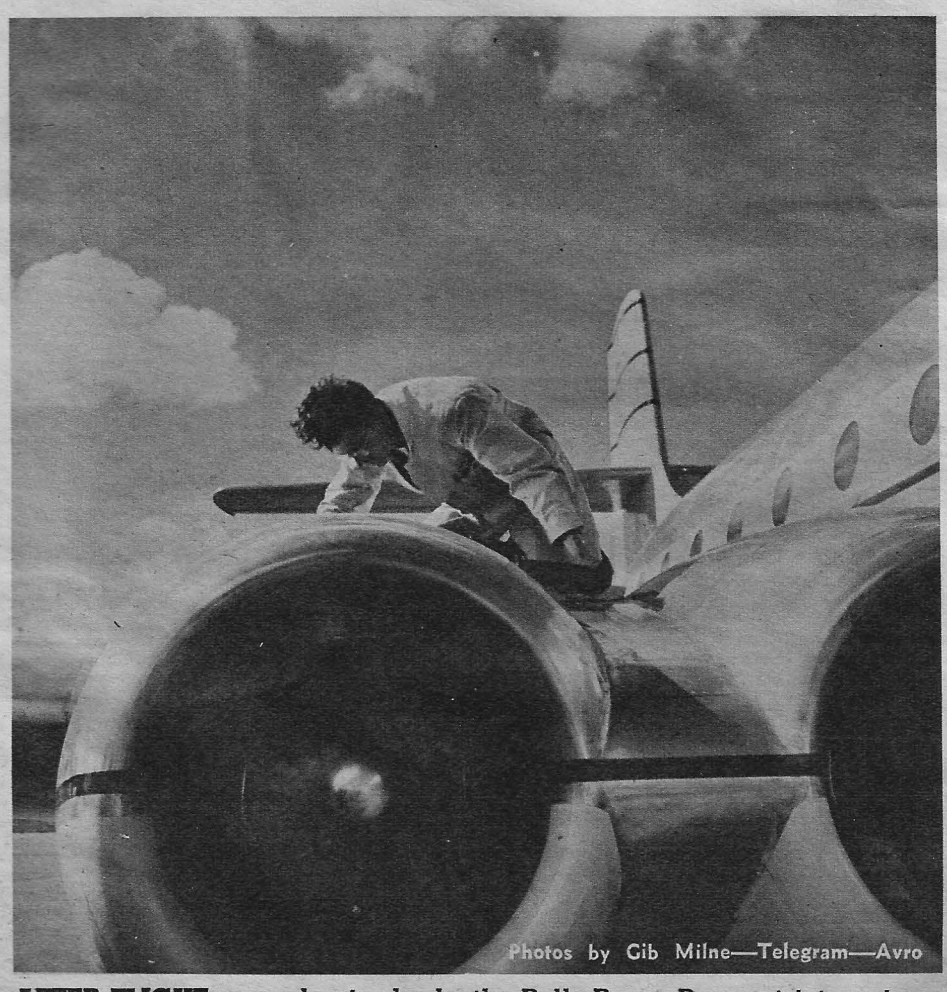


ALMOST A FAILURE was the second test flight. The Jetliner's undercariage jammed but the test pilot Jimmy Orrell brought the plane down to a spectacular belly landing (shown here) which caused only minor damage. Damage in ordinary aircraft this size would have been serious.

(more pictures on next page)

GIANT AVRO JETLINER shines in the sun on its first test flight. The Canadian-designed plane may well revolutionize commercial air travel.

AT LANDING is vice-president Deisher, (right) of A. V. Roe. Second from left is test pilot Jimmy Orrell. Others are designer Jim Floyd, flight engineer Bill Baker, pilot Don Rogers, and production official H. Garside.



Photos by Gib Milne—Telegram—Avro

AFTER FLIGHT, a mechanic checks the Rolls Royce Derwent jet engines. During test, Jetliner moved so swiftly it was difficult to keep track of her in sunlight. Speed is 100 mph faster than existing transports.