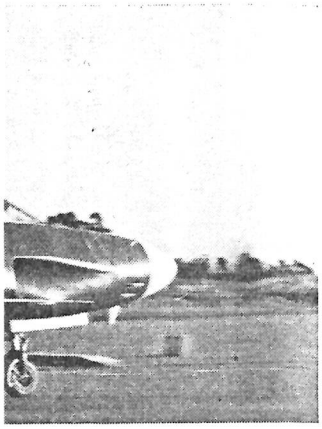

all-weather-intercep-
st flight on January
ignation J 32B. It is
fighter with a modi-
and a larger after-
turbojet.
the main mission, the
vide range of under-
on to the standard
n armament. Sixteen
uided rockets and
luded in the list of
.
quadron service with
early in 1956, pro-
powerful supporting
ions. The SAAB-32's
give it the necessary
needed in the list of
r weapon can carry
firepower will pro-
this nation with new
all-around defense.
of tactical ground-
he land armies be-
important with the
new weapon, the
service indeed to its
re military collision
liately ahead. Tech-
A 32.
— Maximum speed:
App. 2000 miles.
ft. Weight: App.
ine: 7500-lb. thrust
terburning) Svenska
et. Armament: Four
ion plus underwing
3 in. Length: 48 ft. ■



CANADA

# AVRO CANADA C.102 JETLINER

The C.102 Jetliner possesses the unique distinction of being the first jet-powered transport aircraft to be built in North America, and the first civil jet to fly on that continent. Design work commenced soon after the second World War, in the summer of 1946, and two Rolls-Royce Avon turbojets were initially proposed for installation in this sophisticated design. However, as the Avon engines were not available at that time, four Derwents had to be installed, which necessitated some modification of the initial configuration. The Rolls-Royce Derwent turbines, which at the time of their installation in the C.102 possessed the longest overhaul life of any turbojet extant, were also in the ranks of the world's most powerful turbojet engines, and provided the C.102 with a normal cruising speed of 403 mph at 30,000 ft. This performance, outstanding at its time, was made by J. C. Floyd, Avro designer.

The C.102 was first flown on August 10, 1949, and carried a crew of two with seats for a maximum of 50 passengers. Basically a conventional airliner with straight wings and tail surfaces, the C.102 was nevertheless extremely advanced for its time, particularly as far as its powerplants were concerned. The four Derwent 5 turbojets were slung under the wings, in pairs, close to the center line of the aerodynamically clean fuselage with a stepped cabin windshield. The close proximity of the thrust lines and the fuselage center line would eliminate powerful asymmetric forces in case of a failure of one of the turbojets. The total fuel capacity of 2352 Imp. gals. (this was to be increased to 4000 Imp. gals. on production models) provided the Jetliner with capability to operate over stage-lengths of the order of 1100 miles. All fuel was carried in four integral tanks in the outer wing sections. The maximum climb rate at sea level was 2220 feet per minute.

Being the world's second jet commercial airliner (the British Comet had flown for the first time only 14 days before the Jetliner took off for its maiden flight), the C.102 was expected to be produced in limited quantities if political and military commitments, resulting from the Korean War, had not precluded further development. Although Avro Aircraft Ltd. has studied the possibilities of reviving the development of this early jet airliner and building an advanced version with increased fuel capacity, more powerful engines and improved performance, this machine's commercial potential has been definitely lost as a result of the time lag which rendered it obsolete.

However, be that as it may, the Jetliner has provided considerable service in the form of adding to the store of civil jet operational know-how, a knowledge as invaluable to the progress of aviation as is aerodynamics itself. In particular, the C.102's service as a high-altitude observation platform was of consequence in the development of several versions of the CF-100 all-weather fighter. Having completed a series of trials for research purposes, the Jetliner prototype was scrapped, so that there is no aircraft of this type flying today.

TECHNICAL DATA — Maximum speed: Cruising 458 mph. Range: Normal 1250 miles. Ceiling: App. 40,000 ft. Weight: Loaded 65,000 lbs. Engines: Four 3600-lb. thrust Rolls-Royce Derwent turbojets. Armament: None. Wingspan: 98 ft. 1 in. Length: 82 ft. 9 in. ■

**Fifty-passenger airliner**