

Sikorsky HR2S.



Piasecki YH-16A Turbo Transporter.



"assault transport," it is powered by two Pratt and Whitney R-2800-99W engines of some 2,500 h.p. each and has a gross weight of over 50,000 lb. Range is 850 miles with a payload of 16,000 lb. With a crew of two it is capable of air-lifting and landing 61 combat troops and their equipment; or it can carry 50 stretcher patients, six "ambulatory or walking patients," five nurses, and more than 1,300 lb of equipment on casualty evacuation flights. Other typical loads are: a 2½-ton 6 x 6 truck, two men, and 3,750 lb of equipment; a 1½-ton truck, two men, and 5,000 lb; two ¾-ton trucks, four men, and 3,400 lb; or four ¼-ton jeeps, four men, and 4,550 lb.

When artillery is required by assault forces, the C-123B can fly in and unload such ordnance as a 155 mm howitzer, 19 rounds of ammunition, and 1,300 lb of miscellaneous equipment; a 105 mm howitzer, a ¼-ton weapons carrier, six men, and 90 rounds; or a 90 mm howitzer, 90 rounds, and 6,000 lb.

Four external tanks carry the entire fuel load and reduce fire danger in that they can be jettisoned for an assault landing or in a like emergency.

Studies have been made for turboprop powerplants and flight tests have been conducted with two Fairchild J44 turbojet units, each of 1,000 lb thrust. With this augmented power, and with one engine feathered on take-off, the rate of climb has been increased from 150ft/min to 500ft/min. Interest has also been shown in the use of a Continental-built Turboméca Aspin II ducted fan for use as an air pump to feed a boundary layer control system.

Span, 110ft; length, 76ft.

Stroukoff YC-123F Pantobase This development of the basic C-123 design has a sealed hull for flotation and two sturdy skis, for land or water use, extensible from the hull bottom. The normal retractable land undercarriage is fitted, and there are outboard stabilizing floats. For water operation the skis are lowered and, by virtue of lateral aerofoils, surface at about 20 m.p.h. Notwithstanding the numerous modifications and additions, cruising speed is given as 179 m.p.h. The YC-123F has taken off from an ice-and-snow runway at a weight of 55,165 lb. The previous "record" for unassisted ski take-off was held by a Lockheed Neptune, at 52,800 lb.

Lockheed C-130A Hercules Since our previous review new facts have been disclosed concerning this remarkable machine. Classed by the

U.S.A.F. as a "medium combat transport," it is powered by four Allison T56-A-1 turboprops, has a design gross weight (load factor 3) of 108,000 lb, or an "alternate gross weight" (load factor 2.5) of 124,200 lb. Take-off thrust can be augmented by eight Aerojet 15KS-1000 rockets, giving a total of 8,000 lb thrust for 15 seconds' duration. The main cargo compartment is 41.45ft long, 10.25ft wide, and 9.1ft high, and corresponding dimensions for the main loading door are 10ft, 9.2ft, and 3.4ft.

The normal crew numbers four and alternative to 92 troops, 64 paratroops, or 70 stretcher cases plus attendants can be accommodated. Features include integral ramp and cargo door; crew- and cargo-compartment pressurization; ground and in-flight air-conditioning; thermal de-icing system for wing and empennage leading-edges; armour protection against small-arms fire for pilot, co-pilot and engine nacelles; single-point refuelling; E-4 autopilot; provision for rearward-facing passenger seats; provision for "push-button spot drops of up to 25,000 lb supplies"; and an airstream deflector for paratrooping.

It is known that a "pantobased" version—suitable for operation from water, land, mud, ice or snow—is under development.

Full performance figures have not been made known, but the Hercules is said to take off with a 20-ton load in 12 seconds, or, at an all-up weight of 110,000 lb, "in twelve times its own length."

Span, 132.6ft; length, 95.2ft.

Piasecki YH-16A Turbo Transporter This great helicopter, with two Allison YT38-A-3 turboprops, is the prototype of the YH-16B, which is intended as the production version, though its future is at present in doubt. The YH-16A weighs over 16 tons and has been paced by a fixed-wing aircraft at a speed of 166 m.p.h.

Sikorsky HR2S-1 The production version of this assault helicopter, designed primarily for the Marine Corps but also to be used by the U.S. Army under the designation H-37A, differs from the prototype in having twin main wheels, improved cooling, a slab tailplane and faired rotor head. It was designed to carry two Marine squads (26 men) or two jeeps plus crews. Gross weight is between 28,000 and 30,000 lb, and top speed, with two Pratt and Whitney R-2800 piston engines derated to 1,900 h.p. each, is between 150 and 160 m.p.h. Developed models will have Allison turboprops.

Boeing B-52 refuelling by the flying-boom method from the Type 707 (precursor of the KC-135).

