

THE WORLD'S FIGHTING PLANES



William Green



The World's Fighting Planes

Fourth and completely revised edition

WILLIAM GREEN

ILLUSTRATED BY
P. ENDSLEIGH CASTLE
& DENNIS I. PUNNETT

MACDONALD: LONDON

First published in 1954
Fourth edition November 1964
Second impression February 1965

© William Green, 1964

Published by
Macdonald & Co. (Publishers) Ltd.,
Gulf House, 2 Portman Street, London, W.1
Made and printed in Great Britain by
Purnell and Sons, Ltd., Paulton (Somerset) and London

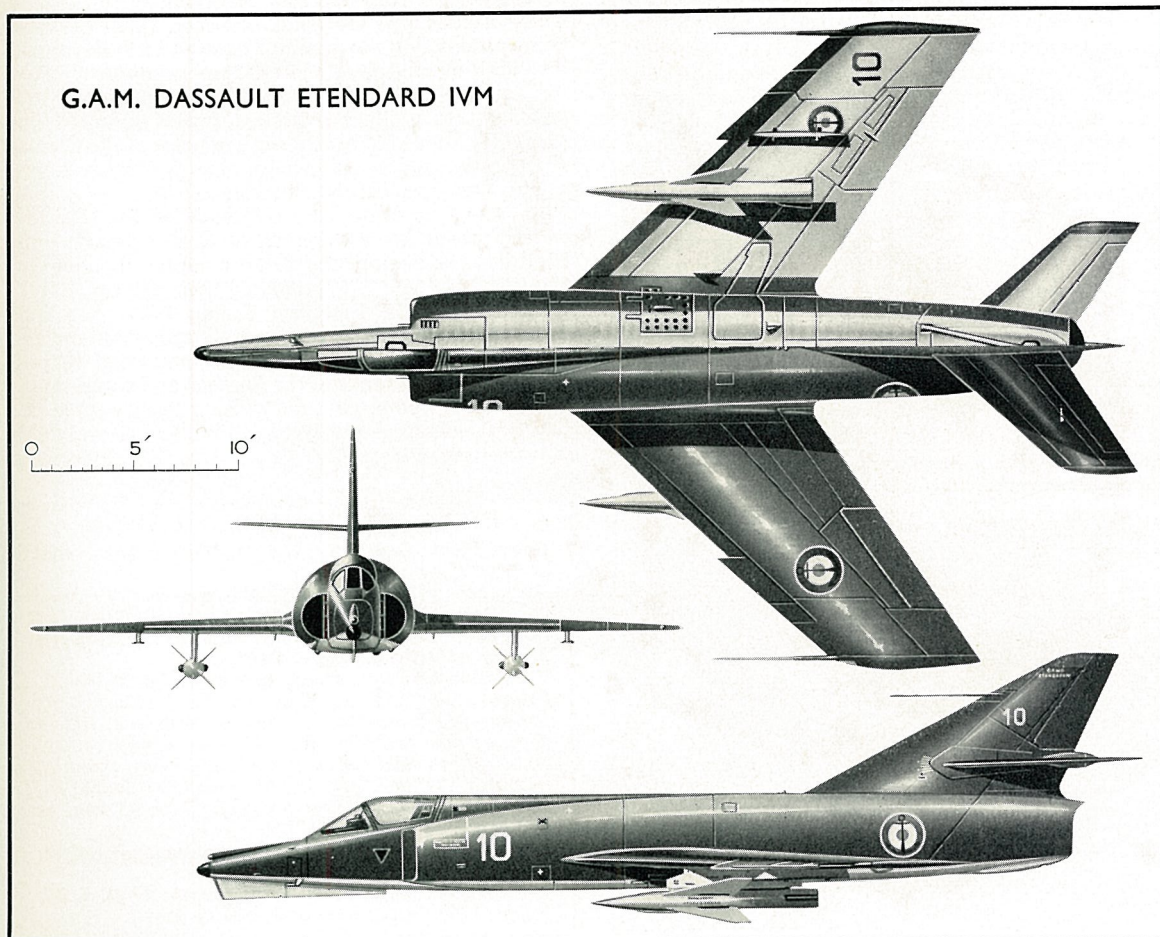
G.A.M.DASSAULT ETENDARD IVM

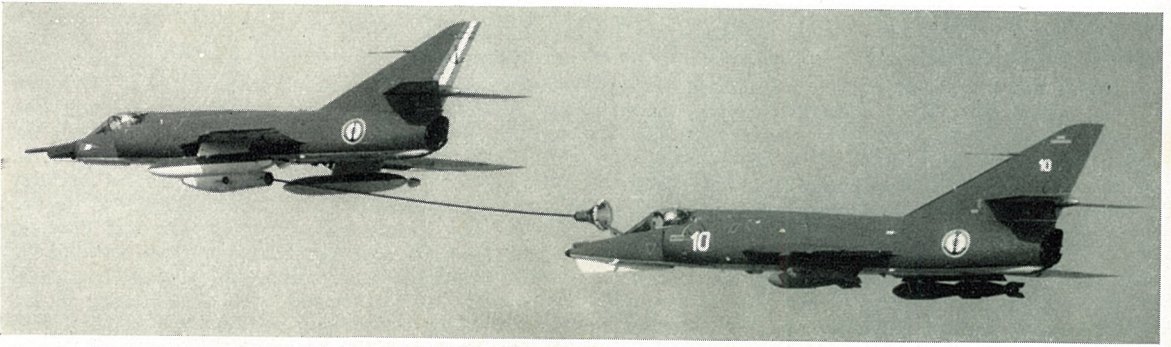
Evolved from a private venture contestant in the NATO competition for a lightweight strike fighter eventually won by the Fiat G.91, the Etendard IVM shipboard aircraft undertakes strike and interception missions at low and medium altitudes, and is currently embarked aboard the carriers *Clémenceau* and *Foch*, equipping four Aéronavale flottilles, 11F, 14F, 15F and 17F. The Etendard IVM officially entered service with the Aéronavale on January 18, 1962, ninety machines having been ordered, of which twenty-one have been completed as Etendard IVP reconnaissance aircraft.

Three different fighter prototypes, all dubbed Etendard, were built and flown by G.A.M. Dassault during 1955-57, and prior to the début of the definitive Etendard IVM (the 'M' suffix indicating 'Marine'), all possessing a generally similar aerodynamic configuration. The Etendard II was designed to meet an Armée de l'Air requirement for a small strike fighter powered by a pair of Turboméca Gabizo turbojets each rated at 2,420 lb.s.t. and 3,330 lb.s.t. with after-burning. This type, which flew for the first time on July 23, 1956, suffered from the inadequate development of its Gabizo engines, and was abandoned after a

relatively brief test period. The Etendard IV, powered by a SNECMA Atar 101E-3, was produced as a private venture, its development being engendered by the NATO tactical strike fighter specification which, in fact, called for the installation of the Bristol Siddeley Orpheus, and the third machine, the Etendard VI, did employ this engine and, flying for the first time on March 16, 1957, was specifically intended to fulfil the NATO requirement. The Etendard VI was abandoned as a result of the success of the Fiat entry in the contest, and the company subsequently concentrated on development of the Atar-powered Etendard IV as a company-funded project.

The Etendard IV-01 was flown for the first time on July 24, 1956, and displayed outstanding qualities. Design emphasis had been placed on production simplicity and ease of maintenance, and the Aéronavale foresaw the possibility of adapting the aircraft for use from the new carriers then under construction, ordering a semi-navalised prototype and six fully-navalised pre-production machines under the designation Etendard IVM. The prototype, the Etendard IVM-01, flew for the first time on May 21, 1958, the pre-production aircraft following during 1959-60.

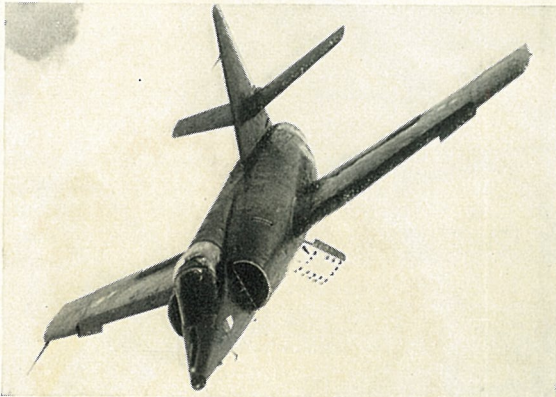




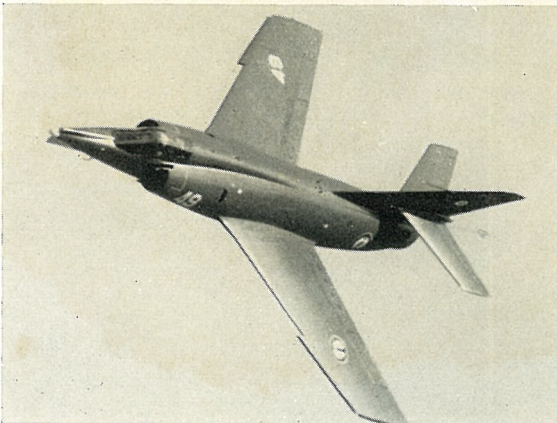
An Etendard IVP equipped with "buddy" pack refuelling an Etendard IVM. Unlike the IVM, the IVP has a fixed refuelling probe, and carries five OMERAs, three of these being installed in the nose.

Modifications incorporated in the aircraft to give it "sea legs" included the provision of folding wingtips, launching attachments and arrestor hook, a strengthened undercarriage with long-travel shock absorbers and high-pressure tyres, an extendible nosewheel leg to increase take-off incidence, and increases in wing and rudder areas.

The first pre-production aircraft, the Etendard IVM-02, completed initial carrier qualifications aboard the *Clémenceau* between September 19 and 24, 1960, and this aircraft, like four later pre-production machines, was powered by the SNECMA Atar 08 which was to



(Above) The fifth pre-production Etendard (IVM-06) with air brakes extended, and (below) a standard Etendard IVM.



be adopted as standard for the production model, but the Etendard IVM-03, also known as the Etendard IVB, which flew for the first time on December 2, 1959, was fitted with an 11,200 lb.s.t. Avon 51 (200 series) and adapted for flap blowing, permitting it to use the 103-ft. catapult of smaller carriers. This was also the first Etendard to feature a fin-type antenna beneath the nose for the Nord AS.20 ASM. The final pre-production aircraft was designated Etendard IVP-07, and first flown on November 19, 1960, served as a prototype for the tactical reconnaissance version which carries five OMERAs, three of these being mounted in the modified nose and a twin vertical installation being situated in the bay normally housing the twin 30-mm. DEFA cannon. The Etendard IVP also features a flight refuelling probe mounted immediately above the nose fairing in place of the normal Aïda 7 radar, and is equipped for "buddy" tanker duties.

The first production Etendard IVM flew in July 1961, and first deliveries were made to Flottille 15F which served as the operational conversion unit, Flottille 11F being the second unit to re-equip, Flottilles 14F and 17F replacing their veteran F4U-7 Corsairs with the Etendard during 1964. A SAAB Type BT9F toss bomb computer is provided, and the Aïda 7 radar provides detection, telemetry and weapon homing. Integral tanks in the fuselage and wings house a total of 715 Imp. gal., comprising twenty-three per cent of the disposable volume of the aircraft, and these may be supplemented by two 132 Imp. gal. underwing tanks.

ETENDARD IVM SPECIFICATION

Power Plant: One SNECMA Atar 08B turbojet rated at 9,700 lb.s.t.

Armament: Two 30-mm. DEFA cannon and two Nord AS.30 command guidance ASMs or two 1,000-lb. and two 500-lb. bombs or (intercept mission) two infra-red homing AIM-9 Sidewinder AAMs.

Performance: Max. speed, 673 m.p.h. at 36,090 ft. (Mach 1.02), 683 m.p.h. at sea level (Mach 0.9); limiting Mach number, 1.4; initial climb rate, 19,685 ft./min.; time to 39,370 ft., 4.45 min.; service ceiling, 50,850 ft.; tactical radius at sea level (clean), 186 mls., with two 132 Imp. gal. auxiliary tanks at 36,000 ft., 500 mls.; endurance (for ferrying), 3 hr. 45 min. at 510 m.p.h.

Weights: Empty, 12,786 lb.; max. catapult weight, 19,840 lb.; max. overload, 22,486 lb.

Dimensions: Span, 31 ft. 6 in.; length, 47 ft. 1 in.; height, 12 ft. 7½ in.; wing area, 306 sq. ft.