

SUPERMARINE

A I R C R A F T

Spitfire



Notes about the Mk 26 Spitfire & Kit

Introduction

After many years of development by Mike O'Sullivan, the approximately 80% scale Supermarine Aircraft Mk 26 Spitfire is in production for the Australian and export market as a Kit built Aircraft. Staying close to the original unmistakable Spitfire lines, the new aircraft is a two-seater version of the proven Mk 25.

The passenger seat is tandem in arrangement.

Wings are removable for Trailing

The Cockpit has a sliding "bubble" canopy and allows the builder to fit an authentic panel layout to suit their preference.

Landing gear is retractable and gas-strut assisted.

The six-inch wheel rims are custom made and disc brakes are used in combination with fully adjustable pedal controls.

The fuel tank is forward of the pilot and behind the engine as original. Volume is 115 litres.

A new V6 240hp GM engine is matched to the airframe and fulfills weight and power requirements. This engine is fuel injected and has the performance to match the high expectations of a Spitfire

Supermarine Aircraft will regulate the number of kits produced so as to maintain a high product standard and good builder support.



General Construction notes.

Airframe

The Spitfire airframe is a stressed skin construction. It is designed for strength and lightness. By virtue of the Spitfires curved "egg" shape, it becomes a very strong structure. Skin thicknesses vary in order to provide strength where required. Stringers are doubled and tripled in zones closer to the firewall and engine. A deep main spar carries primary wing loads. The firewall is stainless steel. Joints are riveted. Round head or countersunk blind rivets are used. If preferred solid rivets can be used where possible. This is the builder's choice.

Airframe has been tested to 9g and is rated 6+ -3g

All fuselage bulkheads are pre-cut, formed and mounted on a central spine during Factory kit construction.

The main spar, wing assembly and empennage sub assemblies are also pre-built using jigs in the factory. The fuselage is supplied to the kit builder as a pre-constructed assembly. This ensures structural integrity is maintained.

Components are mostly computer (Router) cut and standardised. Where possible all holes are pre-drilled (3/32") and parts fitted together using pilot holes. This is a significant improvement, which will increase accuracy and speed of construction. (This will also reduce builder frustration!)

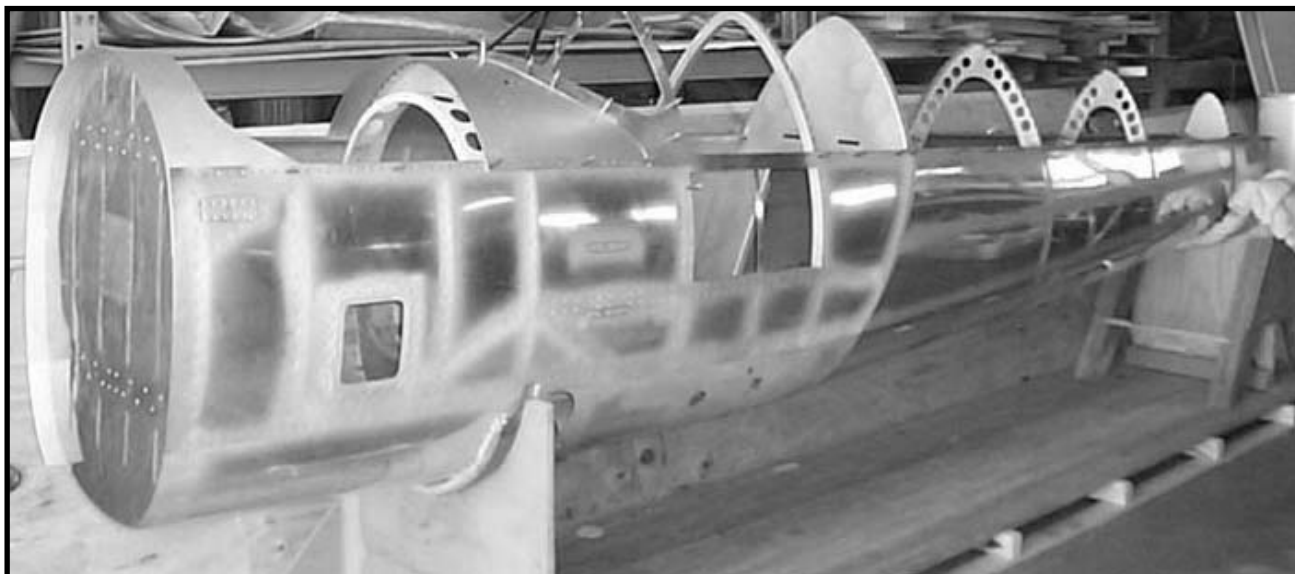
The main spar for example will locate using bolts through matching holes in the correct fuselage bulkheads to ensure accurate fitment. Rudder and elevator frames have pilot holes to match up with the skins.

Materials

The aircraft is aluminium except for some fibreglass fairings. The engine cowl can be either fibreglass or aluminium. Aircraft grade alloy 2024 T3 is used for skin panels.

Treatment

All mating surfaces of pre-assembled parts of the Kit are etch primed.



The Fast build Kit

The Mk 26 Spitfire is crated to the Kit builder with all parts except engine, prop and instruments.

(Instruments being very much a question of personal preference.)

All parts are numbered, boxed with packing lists.

The packing lists must be checked and filed. This will become the builders concise parts list.

Supermarine Aircraft is only selling complete Mk 26 kits (the Mk 25 has been superseded by the Mk26)



The Builders Manual

In two sections:

1. Builder information, requirements (Tools and assembly space), preparation and standard procedures.
2. The step-by-step construction tasks with photos and drawings to clarify the procedure.

The builder's manual section 2 provides an overview of the Aircraft's construction, the principle sub-assemblies, easy to understand drawings and a diagrammatic presentation of the build program. This gives the builder a general sequence and visual presentation of what needs to be done.

Simplicity and logic are the main factors used in this manual. Every part has a number and where possible this number is related to its assembly location (ie: parts of the fuselage are numbered 1 & parts of the wing 2,..etc, etc.

Direct contact can be made with the staff at Supermarine Aircraft for any information about construction. Drawings or photographs can be sent to clarify any processes.



Building Time

Supermarine Aircraft's Spitfire is the world's first aluminium kit Spitfire. The kit is currently only sold in a Fast build option. The Airframe components are jig assembled in the factory with over 700 hours of construction prior to shipping. This reduces the kits build time to between approximately 1000-1200 hours work for the builder. This may vary according to the builders experience



This fuselage is inverted during belly skin fitment

Instruments

Instruments are not supplied in the kit. This is very much to suit the builders individual preference

We recommend that you purchase the instruments of your choice from your local aircraft instrument supplier.

We can direct you to a number of reputable suppliers.

A basic instrument kit can be supplied on request.

We have a standard cockpit layout with some cutouts and a standard six instrument position rubber mounted center panel



GM 3.5 V6 Engine

This Engine will now be the primary choice for the Spitfire. Developing about 240hp the V6 is fuel injected and uses a dual electronic ignition control system. Max Torque is 350Nm at 4500rpm. A belt reduction drive of 1:1.7 is used.

Comprehensive ground testing will be carried out for 60hrs along with substantial flying testing. This powerplant is expected to give good performance, reliability, and fuel efficiency.

Note: Shipping costs for the Engine is not included in the price.

Fast build Kit Costs

The prices quoted are for the list of products detailed below and are current at this date

Kit Price	Crating Built
Complete Kit Total (Aust\$)	\$98,400
In Australia this excludes GST	
Wet Wings(optional)	\$7000
Crating and packing (Aust\$)	\$1500.00

Excludes Shipping Costs & Insurance

Insurance is highly recommended

Payment Details

A deposit of \$5000 (non-refundable) is required if you wish to secure a production line number.

Upon the commencement of the kits' production at the factory, Supermarine Aircraft must receive a payment of 50% of the balance of the total kit price less the \$5000 deposit. Then prior to shipping the kit, Supermarine Aircraft must receive the balance of total payment

Note: The above payment details only relate to the kit (airframe only). The engine and instruments and propeller are not included in this price.

Shipping Costs

Shipping costs are not included in the kit price. The cost of shipping will depend on the method of dispatch and rates applicable on the day the kit is dispatched. Insurance for the Kit will be the responsibility of the builder.

Aircraft Data

Top Speed (VNE)	190 Knots 218 mph 350 kph
Max Cruise	160 Knots 296kph
Cruise (Economical)	150Knots
Stall	44 Knots
Range(with single tank)	3Hrs (approx. at economical cruise speed) with reserve
Rate of climb fpm	2800 +
Takeoff Distance	720ft
Landing distance	1470ft
Service ceiling ft	18000 ft +approx.
Engine used	GMV6 / Jabiru
Power Hp	240hp (GM)
Empty Weight	
Gross Weight	810Kg
Height ft	6' 9" (spinner)
Length	23' 9" 7.24m
Wingspan	27' 8" 8.43m
Wing Area Sq ft	122sq ft
Fuel Capacity	115Lit 25.3UK gal 30.3US gal(without wet wings)
No. of seats	2
Bldg. Material	Aluminium
Build time (beginners)	1200 approx
No being built	21 (10 flying)
Info pack	\$30
Plans	not available
Rating	Limited Aerobatic +6 -3

Note

This data may be changed at the discretion of the manufacturer without notice.

Specifications will vary in accordance with conditions.

This Information compiled Nov 2003



Information and Placement of orders

Supermarine is now selling worldwide.

Kits will be built in the same sequence as the committed orders. Delivery time for the Fast build kit will be 4 to 6 months from start of work in the factory. In this way the earlier orders will get priority.

Please visit our website at SUPERMARINEAIRCRAFT.COM for some pictures of our Spitfire. The Website will be periodically updated with new information and can presently answer many of your questions and provide useful background for potential builders.

A video of the flying Spitfire can be ordered for US\$30. (In Aust Aust\$30)

Supermarine Aircraft thanks you for your interest in our Spitfire. If you wish to place an order or would like more information please don't hesitate to contact us.

Please note that the information and prices supplied in this brochure and on our Website are subject to change at the discretion of Supermarine Aircraft p/l.

Safe flying!

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