

Mark Jefferies and the Extra 330SC

Commentary notes.

Introduction

Due to variables in weather conditions the sequence of manoeuvres may vary, these notes are therefore intended as a guide that will give the commentator flexibility during the show to pick and choose from comments about the pilot, the aircraft, and the figures flown, in addition to some relevant references to the sponsor.

Sealey tools and must be mentioned in the commentary

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There are notes that the commentator may use at the bottom of this document referring to the sponsor.

Notes:

Pilot

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Mark Jefferies is one of the world's most accomplished air show performers. Mark is 57 years old and has been flying aerobatics for the last 35 years. In addition to his air show performances Mark runs a busy airfield in the UK where he lives with his wife and 2 children.

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His air show career spans over 25 years where he has performed in a wide range of aircraft from jets through to vintage bi-plane aircraft.

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Marks skill as an aerobatic pilot is proven by his successful career as an unlimited aerobatics pilot. He has represented Great Britain in competitions over many years during the course of which he has won medals at several international competitions. In the UK Mark has frequently won national championships, first winning at unlimited level in 1994 in an aeroplane that he built himself.

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Winner of the National aerobatics title 2005, 6 & 7. Recently winning the World Air Masters in 2015.

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The skill and experience of this pilot ensure that regardless of weather conditions, wind speed and direction that the show is well balanced for the crowd.

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Mark is flying the Extra330SC, due to his yearning for greater performance than ever.

Aeroplane

to be referred to as the 330SC

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The Extra330SC. This is a German designed and built aircraft. This single seat variant is one of only 59 manufactured to date, and has even better performance than the more common two seat variant – not least due to the consequent saving in weight. This aircraft is sold when it returns to the UK to be replaced by a newer version.

- this aircraft has staggering power-to-weight performance.

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The aeroplane

is built specifically for unlimited aerobatics, with a wing designed to ultimately withstand a bone-crunching +/-25G, i.e. 25 times the force of gravity.

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The airframe is constructed from steel tubing, carbon fibre, wood and a carbon/Kevlar wing skin. The combination of these high-tech materials combined with its weight saving single seat configuration give this aeroplane stunning performance. Roll rates exceed 420 degrees per second, and speeds varying from 260MPH to, well backwards!

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Mark uses an environmentally friendly smoke oil, “baby oil” through the sequence to emphasise the flight path of the Extra through the display. I am often asked how does the smoke not get in way of the pilots view – I can assure you that it does, particularly when flying backwards, the cockpit will fill with smoke and take seconds to clear!

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The engine is the new 580 cubic inch, 6 cylinder Lycoming powerplant generating 320HP.

Manoeuvres

- Mark begins diving in then upwards rolling transitioning into a knife edge spins. – maximised as Mark keeps full throttle through the figure – and full control deflections.

- Mark then pulls up into a unique figure, after rolling, flying away the aircraft will tumble end over end. This looks very violent and I assure you its wild in the cockpit. Its a figure created by Mark that is a skilful combination of gyroscopic twists–this requires fantastic precision, and a strong head.

- Through this sequence Mark will be experiencing very high g-loadings of 8 positive g (4 g can induce black out in normal people as the blood is forced from the head) and an eye-watering minus 6g where all the blood is forced into the head. Under these conditions organs can move inches inside the body with dramatic changes in blood pressure and heart rate. Hence a regular training programme is essential to unlimited aerobatic performances.

- Other figures flown will include: Tail slide, where the aircraft flies backwards. As the aeroplane flies backwards Mark is literally balancing it on its tail, and to recover he will use reverse pitch controls due to the airflow travelling backwards over the aircrafts control surfaces.

Mark is a master of the new “gyrobatics” where the engine is used in conjunction with the aerodynamics to make the aircraft tumble out of control and with the powerful controls return to precision flight.

International Airshows.

Marks team the GLOBAL STARS travel the World entertaining. Last year his team displays in Australia, Holland, India and China. This year here in the Kingdom of Bahrain, then India in March with China in September.

Other interests.

Mark is a keen skier and has a chalet in the Alps where he will be in February. He has also taken up paragliding in the mountains and paramotoring in the flat lands of the UK.

His other work is very varied including, running an airfield, an aviation maintenance company along with aircraft sales, assisting running an arable farm, holiday lets business and renting of houses.

Sponsors note

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