

Up swings the needle as acceleration increases. It's a revolution that gives our fighters faster and more maneuverable opponents. The man who can get on top first is the man who will come out on top.

ENGINES FOR OUR PLANES.

The triumph of the Rolls Royce Merlin Ten engine of the Spitfires, Hurricanes and Defiants over the Daimler-Benz of the Messersmidt's and Heinkels, was first established in the skies over Flanders and during the Battle of Britain. Today the Merlin Twenty (the latest Rolls Royce aero Engine to go into mass production) is fitted to our latest fighter planes. In spacious factories like this the mechanical masterpieces are born. Every phase of their production is a triumph of engineering. The automatic but delicate operation of turning cylinder liners, is but one of the processes which go into the construction of a power-unit which ultimately will be made-up of over eleven thousand parts. It would be nice to think that not a few of these magnificent engines will be ear-marked for use in Australia. Just as we answer the appeal for help to Russia, so does the call from our own kith and kin find a ready response. This is how a multiple driller deals with a crank-case.

A crank-case is here being ~~gr~~ faced off. The metal cuttings are collected on a moving belt, and so find their way back into the crucibles. On a series of giant lathes, crankshafts are being made. In spite of its size, a crankshaft is as dependent on minute measurements and balance as the smallest component part. These teeth are going through much the same as when we sit in a dentists chair.

In the "Standards Room" we come across a series of laboratory instruments which amply illustrates the scientific perfection of the Merlin engine. Measurements down to infinitesimal fractions of an inch are gauged. These instruments allow for no mistakes - they put the O.K. on only the best. The shadowgraph checks-up on the teeth foundation of a gear wheel.

Look at a magnification of a perfectly milled gear.

This machine is testing the tensile or breaking point of a test piece of cold metal. The reading on the dial gives the answer.

Now we join up with a party of R.A.F. Officers, and get a screen snapshot of a conversation between the workers who make the engines, and the men who sit behind them.

From the Initial Erection Shop the engines are sent to be subjected to an exacting bench test for acceptance purposes. In an ante-room looking into the testing shed through a glass partition, we meet the experts who are checking performance through a battery of gauges and dials. All speech is ~~now~~ drowned in a deafening roar as they give her the gun.

Up swings the needle as acceleration increases. It's revs that matter. Revolutions that drive our fighters faster and higher than their opponents. The man who can get on top first is the man who will come out "on top" - and the Merlin Twenty is putting him there.

The triumph of the Rolls Royce Merlin engine of the Spitfires, Hurricanes and Defiants over the Messerschmitt's and Heinkels, was first established in the skies over England and during the Battle of Britain. Today the Merlin Twenty (the latest Rolls Royce aero engine) goes into mass production (it is fitted to our latest fighter planes). In special factories like this the mechanical masterpieces are born. Every phase of their production is a triumph of engineering. The automatic but delicate operation of turning cylinder liners, is but one of the processes which go into the construction of a power-unit which ultimately will be made-up of over eleven thousand parts. It would be nice to think that not a few of these magnificent engines will be set-marked for use in Australia. Just as we answer the appeal for help to Russia, so does the call from our own kit and find a ready response. This is how a multiple drilller deals with a crank-case.

A crank-case is here being faced off. The metal cuttings are collected on a moving belt, and so find their way back into the crucibles. On a series of giant lathes, crankshafts are being made. In spite of its size, a crankshaft is as dependent on minute measurements and balance as the smallest component part. These teeth are going through much the same as when we sit in a dentist's chair.

In the "Standard Room" we come across a series of laboratory instruments which amply illustrate the scientific perfection of the Merlin engine. Measurements down to infinitesimal fractions of an inch are gauged. These instruments allow for no mistakes - they put the O.K. on it the best. The spherograph checks-up on the teeth foundation of a gear wheel.

Look at a magnification of a perfectly milled gear.

This machine is testing the tensile or breaking point of a test piece of cold metal. The reading on the dial gives the answer.

Now we join up with a party of R.A.F. Officers, and get a screen snapshot of a conversation between the workers who make the engines, and the men who sit behind them.

From the Initial Erection Shop the engines are sent to be subjected to an exacting bench test for acceptance purposes. In an ante-room looking into the testing shed through a glass partition, we meet the experts who are checking performance through a battery of gauges and dials. All speech is hushed down in a deafening roar as they give her the gun.