

PLANNING FOR THE BOEING

This is the second part of an article on the Boeing 707 by Chief Engineer D. B. Hudson.

This is an item which is being carefully assessed to establish a long-term policy.

The engines of the Boeing 707 will be started by air turbine starters, activated by a pressure air source. Some form of ground starting unit, supplying air at the required pressure and volume, will be required and various types are being closely investigated.

Ground support equipment must also be available to cover the aircraft a.c. electrical system requirements.

Noise Problem

Ground running of the aircraft will present problems due to noise, including high frequency compressor noise, and jet blast; detuners (mufflers fitted to the jet pipe), intake deflectors and jet blast deflector screens are being assessed and will be employed where necessary.

In addition to the above, re-equipment will be required for refuelling, jacks, wheel chocks, undercarriage change equipment, engine change equipment, engine stands, work platforms, ground air conditioning, etc., etc.

The requirements on all these are being evaluated in relation to Sydney and out station needs, to ensure that complete ground coverage will be available on all the projected Boeing routes when the aircraft is introduced.

AMONG THE FIRST
Qantas will undertake the complete overhaul of the Pratt & Whitney JT3C-6 jet engine and its accessories and will become one of the first airlines in the world to take this step with turbo-jet engines.

As a result, the Engineering section probably most affected by the introduction of the Boeing will be the engine overhaul shop. R.O.S. is faced with a major re-organisation of facilities and overhaul methods, plus an extensive re-equipment programme.

Planning for the overhaul of jet engines is of such magnitude that European airlines, including B.O.A.C., K.L.M., S.A.S. and others, have decided to pool their efforts and have formed a Jet Engine Overhaul Committee for the express purpose of solving the many problems. Qantas is an active member of this Committee, but we are, in fact, independently leading the field with our advanced programme for jet engine overhaul.

One of the major snags to be overcome is the high cost of the specialised equipment required. The engine manufacturer has quoted an astronomical dollar figure for the supply of this equipment, evidently based on his previous experience with the U.S.A.F.

A Qantas Engineering representative travelled overseas to study this problem, and established that by alternative purchase of equipment in sterling, and local manufacture, considerable savings will be possible.

Many of the test benches required for testing of various components after overhaul are being designed by and will be manufactured by Qantas.

The Fuel Control Unit Test Stand, which performs the most critical calibrations in the engine fuel metering system, is probably the most important individual bench, and will be purchased overseas.

Briefly, some of the special facilities required in jet engine overhaul will be: specialised areas and equipment for balancing compressor and turbine assemblies and for overhauling bearings and air seals; extensive re-equipment for machining and welding operations; new cleaning methods; larger capacity lifting equipment for the weighty sub-assemblies; new type stands for the vertical assembly procedure of the engine; increased floor area for the complete overhaul.

Test House

The design and manufacture of the multitude of equipment items required for the engine overhaul shop is a formidable task.

The design and manufacture of the Jet Test House will be undertaken by the Company. Our design study has already progressed to an advanced stage, and following the visit of an Engineering representative to the United States, the basic layout will shortly be consolidated.

However, the detail design of the Test House will divert a large amount of our efforts for a considerable time.

A major problem is silencing, and a massive detuner unit will be necessary to deaden the high frequency noise from the engine. The engine will be mounted on some form of thrust measuring rig, and the installations will probably be designed to handle engines in excess of 30,000 lb. thrust in order to cater for all possible future requirements.

Special viewing provisions may be necessary to protect personnel against turbine disintegration. New instrumentation techniques, starting system, fuel system and many other features will be incorporated.

Our investigations are aimed at including the very latest ideas from overseas sources into our Jet Test House design.

This plane never leaves the ground

Apprentices make "Southern Myth"

Qantas has a Super Constellation, "Southern Myth", which never leaves the ground and which has the radio call sign "Q" in its unofficial aircraft registration.

VH-EAQ is no myth, however.

It is a Super Connie flight station in the Technical School at Mascot being converted from the 749 flight engineer station which had been in operation for eight years.

The conversion work is being done by apprentices at very little cost, using mainly scrap.

"We scrounged around..." say the boys.

In laconic fashion tall, quiet, fourth-year Mascot apprentice Jim Thurstan described how he and four fellow apprentices—Roy Judd (4th year), Eddie Grohe (2nd year), Barry James and John Lewis (3rd year)—collected materials for the job.

Over the last 12 months, whenever they could be spared from their regular duties, the boys have worked on the conversion.

When completed, the 1049 flight station will be able to simulate practically any emergency that could arise.

"We understand it is the only one of its type in an Australian airline," said Len Carolan, Supervisor of the Technical School.

"The Super Connie flight station will be used primarily for initial crews' 1049 flight deck familiarisation in emergency procedures."

"In the next six months we will train more than 200 people in the 1049 flight station," said Ross Le Plastrier, Flight Operations Instructor.

"They will be captains, first officers and flight engineers, either new to the company or doing refresher courses.



"It will be particularly helpful in converting DC4 pilots over to Super Connies."

You might say this job is a joint Tech. School effort.

Mr. Carolan and Mr. Le



Getting a stranglehold—or vice versa—on the Tech. School's Super Constellation flight station is fourth year apprentice Jim Thurstan. "We scrounged around" is how Jim describes the collecting of materials for the job.

Not what it seems! Tech School's Super Constellation flight station "Southern Myth" against a painted background. The gentleman at left, however, is real. He's Eddie Grohe, second year Mascot apprentice.

Plastrier praise the boys for their work.

In turn, the boys, through their spokesman, Jim Thurstan, say:

"We could not have done the job without the help of our practical instructor, G. J. "Jan" Aldous, and the co-operation we received from all the Mascot shops, particularly the carpenters' shop."

Most of the work was done without blueprints.

The boys scavenged plywood from the carpenters' shop, worked out the electrical circuits with the aid of their instructors, and sought help from other Mascot experts when necessary.

"Most difficult part of all to do was the cockpit roof," said Eddie Grohe, who, like the other four lads, has been keenly interested in his "spare time" job.



Flight Operations Instructor Ross Le Plastrier (right) shows the 1049 flight engineer's station to Flight Engineer John Jackson. In their spare time, over the last 12 months, Mascot apprentices have converted the Tech School's 749 flight engineer's station into a 1049 flight station. Work is not yet finished on it, but instruction is being given to flight crew by Mr. Le Plastrier.

Engagements...

Best wishes to Bob Cockett, of Stationery, Bulk Store, and Jenny Kennedy, who announced their engagement at the Qantas annual staff ball. Jenny, a nursing student, is the daughter of Mr. Alex Kennedy, Qantas Staff Accountant.

The engagements are announced of Ian Sappey (ROS Instrument Shop) to Ruth Street, and John Green to Kathleen Donovan (ROS Stores). John and Kathleen will

make their home in Kalgoolie after their marriage next January or February.

Wedding bells "next year" for Miss Valerie Jones, of Stock Records Section, Bulk Store, who has announced her engagement to Cecil Quilkey.

Congratulations are in order to Lee Bason, of Stores Accounting, Kingsford, who has announced his engagement to Rosaleen Fitzgerald.