NBA A FIRS T NEW S

New Orleans debut for Citation X
BY IAN GOOLD
IN NEW ORLEANS

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essna has unveiled Citation
X, described by chairman
Russ Meyer as the "world's fast-
est business jet", at the 43rd US
National Business Aircraft Asso-
ciation convention in New Or-
leans.
Based on a stretch of the
top-of-the-range Citation III it
will be powered by two 27kN
(6,0001b) thrust GM/Allison
GMA3007A engines and sup-
ported by a new 35-37' swept
wing. The aircraft will fly at
Mach 0.9 at up to 51,000ft.
The launch comes just a year
after Cessna announced the Ci-
tation IV, another development
of the III, which was dropped
earlier this year. Cessna expects
the new aircraft, designated
Model 750, to fly in March
1993 and to enter service two
years later.
Meyer says that the X is
aimed at the gap between the $8
million-$10 million mid-sized
business aircraft and the heavy

corporate jets. The aircraft of-
fers a Citation III cabin section,
but is some 1.5m longer inside.
The challenge is to "...provide
truly pre-emptive performance",
says Meyer. Other aircraft are
too small, too slow or do not
reach sufficient altitudes, he
claims.

The price for the X is $11.85
million excluding completion,
which could cost up to $1
million. Cessna expects to de-
liver 32 aircraft in the first year

of production. Orders have been
taken for ten.
Citation X performance tar-
gets are Mach 0.86 cruise at
41,000ft, equivalent to Los An-
geles-New York in little more
than 4h. Non-stop flights New
York-London would take an es-
timated 6.5h.

Meyer suggests that climb to
47,000ft at maximum operating
weight would require 30min,
while to 41,000ft at typical op-
erating weight could be
achieved in just 13min.
Highest priority is to design
a new wing and attachment
structure, says Meyer. Cessna
had hoped to use the Citation
Ill's 25° swept outer wing pan-
els, but has now abandoned this
in favour of a more rakish
sweep. Winglets will not be
employed. The flaps and spoil-
ers may be of composite con-
struction, but Meyer expects the
new wing to be basically metal.
Cessna hopes to begin wind-
tunnel testing in July 1991. •

Russ Meyer (above):" Citation X (below) is the world's fastest business jet"

Allison develops GMA 3007
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llison is to develop an 36
kN (80001b) thrust version
of its 31.5 kN (70001b) class
GMA 3007 turbofan. The new
powerplant is targeted at the
larger business jet market and
60 to 70 seat regional jets.
The growth is being achieved

through a higher turbine tem-
perature. However this will still
be below the qualification tem-
perature of the T406 core. The
3007 has been selected for the
Embraer EMB-145 twin turbofan
regional transport and Cessna
Citation X. •

NEW S I N BRIE F

ALLIED WARRANTY

Allied Signal's Garrett engine
and general aviation services
divisions are offering opera-
tors of TFE731-powered air-
craft a new warranty pro-
gramme, financial guarantees
and improved engine compo-
nents.

P&W will power

Ishida tilt-wing
BY KIERAN DALY

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he planned Ishida TW-68
tilt-wing aircraft is to be
powered by four Pratt & Whit-
ney Canada PT-6 turboprops
mounted in two twin-engine
riacelles and driving two propel-
lers.

The configuration, which
Ishida believes is unprecedented
among non-helicopter aircraft,
is intended to address safety
concerns about tilt-wings in the
event of engine failure.
Ishida Aerospace Research
president David Kocurek says
the four engines will be cheaper
and lighter than two engines
because substantially smaller
powerplants can be used.
The Fort Worth-based comp-
any signed a memorandum of
understanding with PWC last
week but the exact specification
of the PT-6 to be used will not
be available until the beginning
of 1991.

Kocurek says: "The most im-
portant feature of these new
powered lift aircraft is the as-
surance of absolute safety from
the propulsion system. We have
evolved a system where if one
engine is off-line then you will
have three engines operating
and there will basically be no
degradation in performance.
This gets away from the critical
decision point familiar in heli-
copter operations."
Each nacelle's engines will be
mounted either side-by-side or
one above the other with one
transmission gearbox per na-
celle. The powerplants will be
cross-coupled as in the Bell
Boeing V-22 tilt-rotor. Kocurek
says the requirement is for ap-
proximately 2000hp to be de-
livered to each propeller.
He attributes the idea for the
engine configuration to a 1967
study by students at Cranfield,
England. The aircraft's horizon-
tally mounted "tail rotor" is a
Fenestron-type design driven by
a 50hp hydraulic motor and
used only for trim in the hover
and during transition.
The configuration is due to
be frozen by the end of 1991
ready for a first flight in early
1994. •

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