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DC-9-30F/CF orders: Alitalia 3, Aviaco 4, Balair 2, BWIA 1, Iberia 4, Inex-Adria 1, KXM 7, Kuwait Air Force 2, Martinair 3, ONA 7, SAS 2, Swissair 1, USAF 24, US Navy 14. Total 75

DC-9-40 orders: SAS 49, TDA 22. Total 71

DC-9-50 orders: Allegheny 8, BWIA 4, Austrian 5, Eastern 9, Finnair 6, Ghana 1, Hawaiian 10, Inex-Adria 2, LAV 5, North Central 18, Swissair 12, unannounced 3. Total 83

DC-9 Super 80 orders (conditional/firm and options): Austrian 8(4), GATX Leasing/McDonnell Douglas Finance Corporation 2(2), Hawaiian 2(2), Inex-Adria 3, PSA 7(3), Swissair 15(5), TDA 5, unidentified 5(8) Total 42 (16).

Total DC-9 orders: 974.

DC-10 On the surface, the DC-10 programme appears healthy enough despite delivery delays exacerbated by a three-month strike earlier this year; sales passed the 300 mark in August, and the company expects to deliver 41 aircraft in 1979. The 300th aircraft will be delivered in early 1980, and most of the 1980 deliveries are already taken up.
However, in the past year the DC-10 has been under in-creasing pressure from the TriStar 500 and the 747, and McDonnell Douglas has responded by accelerating plans for the stretched DC-10. They hope to launch the aircraft at the end of this year or early in 1979, with Swissair and Air New Zealand as prime targets. If this launch date is met, the stretched aircraft could be in service by early 1982.
The problem facing McDonnell Douglas is that its established

New McDonnell Douglas deliveries over the past year have included the
first DC-9-S0 for Ghana Airways and World Airways' first DC-IO-30CF.
World holds options on the stretched version of the DC-10

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DC-10-only customers are tending to step up to the 747 as traffic grows, and that once Boeing has established itself in the airline there is a tendency to meet traffic growth by adding the larger, lower-seat-mile units while the DC-10 fleet remains static. On the opposite flank, the flow of new customers into the DC-10 market seems to be slowing down as airlines such as Delta and Pan Am decide that the TriStar 500 is an easier step up from the narrow-bodies. So far this year McDonnell Douglas has kept B.CAL in the fold against a strong Boeing pitch, while PAL and Thai have stepped up to the 747.

McDonnell Douglas is concentrating on the intercontinental stretched aircraft for ANZ and Swissair, but is also studying stretches for the US domestic market. The intercontinental stretch design has been refined considerably over the past year, under the influence of operator demands for an aircraft with range and runway performance comparable with that of the standard aircraft. This has ruled out the use of the exist-ing wing; after studies of DC-10 derivatives with "plugged" wings a la DC-9 Super 80 and all-new wings, the company appears to have settled on a design which uses most of the existing wing structure with load-alleviating active ailerons, 5ft extensions to each wingtip and completely new trailing-edge flaps. The fuselage would be stretched by a total of 320in; range of the initial stretch aircraft would be com-parable with that of the early-series DC-10-30 and runway per-formance would be similar.

The new aircraft (DC-10 Super 50 is a likely designation
if the programme goes ahead) is expected to seat up to 350 passengers in a mixed intercontinental layout, compared with 275 for the standard aircraft. McDonnell Douglas expects fuel burn per seat to be no less than 24 per cent down on the DC-10-30, and is claiming seat-mile costs below 747 levels. The intercontinental aircraft would weigh just over 600,0001b for take-off, at which point it is close to the limit in braking capacity for the three-leg landing gear. Replacing the twin-wheel centre main gear with a four-wheel bogie would remove this limitation, but would add substantially to the $700 million development bill.
The modified wing could conceivably be grafted on to a standard DC-10 fuselage^ producing an "SP" version of the type. Other drag-reducing improvements, including a longer tailcone and a larger wing-fuselage fillet, are likely to be applied to both the stretched and standard aircraft. The DC-10-30 is now available with a 580,0001b gross weight and 54,0001b-thrust GE CF6-50CB2s, and this option has been selected by Laker Airways; the increased weight translates directly into payload on longer routes, and guarantees Laker a year-round London-Los Angeles non-stop capability with a full load of 377 passengers. Possible stretched aircraft for the domestic market might combine the standard wing with the 26 • 7ft stretch of the intercontinental aircraft, or they could use the modified wing with a further lengthened fuse-lage. The future of the DC-10 programme seems to He with the stretch aircraft, and it is probable that if the new variants are developed they will dominate production of the series, as the DC-8 Super 60 family took over from the earlier versions of the type.

DC-10-10 orders: American 31, Continental 8, Laker 6, National 11, THY 3, United 42, Western 11. Total 112

DC-10-10CF orders: Continental 8

DC-10-30 orders: Aeromexico 2, Air Afrique 2, Air New Zealand 8, Air Zaire 2, Alitalia 8, Balair 1, British Caledonian 5, Condor 2, CP Air 4, Finnair 2, Garuda 4, Iberia 7, JAT 2, KLM 7, Korean Air Lines 4, Laker 5, Lufthansa 11, MAS 2, National 4, Nigeria 2, Pakistan International 4, Philippine Air-lines 3, SAS 5, Singapore Airlines 7, Swissair 11, Thai 2, UTA 6, Varig 4, Viasa 5, Wardair 2, unannounced 4. Total 137

DC-10-30CF orders: Martinair 4, ONA 5, Sabena 3, TIA 3, World
6. Total 21

DC-10-40 orders: JAL 9, Northwest 22. Total 31

DC-10 total: 309

ATMR McDonnell Douglas has now dropped its DCrX-200 proposal for a 200-seat twinjet, based on the DC-10 fuselage section, following the launching of the Airbus A310 and Boeing 767, on the grounds that the market will not support three types. The company is showing more interest in the smaller Advanced-Technology Medium-Bange (ATMS) pro-ject, which has been the subject of collaborative proposals made by McDonnell Douglas to the UK.
The ATMB is a narrow-body in the same class as the Boeing 757, using two RB.211-535s, GE CF6-32s or JTlODs. It would,