

The Asia Pacific crisis was expected to deliver devastating effects for the world economy. Despite much expectation a downturn in North America and Europe has not materialised. Engine and parts traders are continuing business unabated.

Engine and parts traders boycott 'phantom' recession

Engine and parts traders, like any other business, are subject to market forces and must keep a weather eye on the economy. As the crisis in the Asia Pacific threatens to bring doom and gloom worldwide, engine and parts traders could be facing oversupply and hard times ahead. So where is this recession and engine glut?

Trading and leasing business

The engine trading and leasing market thrives on four levels: trading, short-term leasing, long-term leasing and parting-out.

The CF6 will be one of two large turbofans to become the JT9D of the trading market.

In turn, this market depends for its livelihood on used aircraft transactions, aircraft-on-ground (AOG) situations, extended or unexpected shop visits and the continued popularity of certain aircraft and engine types.

Whenever, a downturn in traffic occurs, airlines typically resolve this by parking older aircraft. Since the engine trading and leasing business relies on just such older types of aircraft, especially the JT8D and JT9D, a glut of older aircraft can badly hit engine values and engine traders.

The JT8D market is notorious for rollercoasting. In the early 1990s there was a huge surplus. But are there enough factors to cause another JT8D downturn?

You could be forgiven for thinking that a combination of the Asia Pacific

crisis, a large number of Stage 2 aircraft nearing retirement (again), the imminence of Stage 3 compliance, a possible law preventing an increase in hushkitted aircraft and an outflow of Stage 2 aircraft from the EC from April 1999, would all indicate a resounding 'yes' to that question.

Parts business

Parts traders and suppliers are not influenced by the same market forces. In fact, the parts business has a higher degree of stability and revenue.

Parts suppliers generate business from the repair of rotables and repairables and from airlines replenishing their stocks.

Because repairable parts ultimately will always be scrapped, there is a



constant need for them and this feeds the suppliers' business. This fact means the parts business has a built-in degree of resistance to business cyclicality. "The parts business is actually virtually recession-proof until aircraft get parked," says Mike Mayer, senior vice president of The Avatar Alliance. "The last time there was a serious impact was in 1979."

The engine market

Engine traders and lessors are dependent on powerplant types that are not controlled by original equipment manufacturers (OEMs) for business. Pratt & Whitney (P&W), for example, has pretty much left the overhaul and aftermarket business for the JT3D, JT8D and JT9D to other players. This has allowed companies, such as The Ages Group and Willis Lease Finance Corporation (WLFC), to generate large volumes of business from these engines.

General Electric (GE) and Rolls-Royce (RR), however, have kept far more control on the repair and trading business of their engines. There never were that many independent engine shops and traders for RR engines, there being more GE and CFMI engines on the aftermarket than RR powerplants, but GE's purchase of engine shops has recently stemmed aftermarket activity in CF6 and CFM56 variants.

Repeat rollercoaster?

Although JT8D values dropped notoriously in the 1990s, the market has always been aware of its popularity. But how long can the market continue to rely on this?

Half the risk carried by the JT8D market is its huge size. There are about 8,000 younger generation (-7/-9/-11/-15/-17) JT8Ds in service with a spare pool of another 1,000. This global fleet generates almost 3,000 removals a year.

The underlying issue is the economic performance of the aircraft it powers. The fact that such aircraft are fully or

nearly depreciated and have low market values is positive, but the market for them outside their current first-tier airline operation is less clear.

The DC-9 market has been tight in recent years. Although Northwest publicly states its intention to keep its DC-9 fleet, it is tipped to order the A318. Lack of a sizeable DC-9 market will start a glut of earlier JT8Ds. Several major US carriers now seem ready to retire their 727s, and this could add to a stockpile.

On the other hand, South America and the freight market could still continue to absorb large numbers of these aircraft. Although it originally appeared the EC would cap numbers of hushkitted aircraft flying in EC airspace after April 1999, it may now quietly drop its proposed law after mounting pressure from a group of US companies (*see EC hushkit ruling faces fierce opposition, Developments, page 4*). This would keep East Europe open, a market ripe for the DC-9 and 737-200.

"The JT8D may have stopped in Europe, but South America continues to be strong" concedes Charlie Little, vice president engine sales and leasing at The Ages Group. "There are 727 retirements from US majors to come and this could lead to a major downturn in the JT8D market."

Despite a possible JT8D oversupply in the future, the market acknowledges the situation is nowhere near desperate yet. "The market for JT8D-7s should hold up well," claims Charlie Willis, president of Willis Lease Finance Corporation (WLFC). "Many have been cannibalised. The -9s should dip over the next year, but these will also recover due to cannibalisation. The -15 and -17 market should remain strong."

WLFC is a short- and long-term engine lessor that has vertically integrated since starting its own engine shop, Pacific Gas Turbine Center and parts company Willis Aeronautical Resources. This integration provides it with greater control over parts and repair costs. "Being in just one part of

the business is not enough, you have to be vertically integrated so that you have control of your costs from start to finish. If one type of engine goes out of favour we can break it apart in the shop and sell the parts. We are not as dependent on leasing as we used to be.

"The Asia Pacific crisis and predicted recession has righted itself sooner than expected," continues Willis. "It's hard to say how many 727s will be absorbed as freighters. The cargo door AD could in fact lead to a fresh spate of freight conversions. Also, the major airlines always defer new deliveries and retirements. So far we have felt no negative affect at all."

Aeroturbine is a Miami-based aircraft engine sales and leasing company predominantly involved in the marketing of Pratt & Whitney JT8D and CFM56 series engines. "The operating economics of the 727-200F will keep the JT8D's in favour for at least the next five years," says Bob Nicholls, chief operating officer at Aeroturbine. "The closest competitor is the A300 which is too large for many markets and relatively expensive to purchase. One negative factor is that Europe may soon limit the number of hushkitted aircraft like the 727. Even so, freight growth within the Americas, both north and south, will keep demand for heavy gross weight 727s high."

"The -7B and -9A market will likely sag, while -15 and -17 powered aircraft will remain popular. One focus of our business is buying unserviceable engines, managing their refurbishment through shops and then having them in stock with warranties for our airline and leasing company customer base. Many aircraft lessors and their operators are looking for higher powered JT8Ds to replace aircraft originally powered by -7B and -9A series engines. There is a lot of turnover in light powered JT8Ds at present, but we anticipate a rapid softening in the -7B and -9A market.

"We may still see a global recession in the 2001 to 2002 period. This would

lead to a typical over reaction by the industry with resultant massive fleet retirements, driving market prices well below actual values. When this happens, as it has in every cyclical downturn our industry has experienced, good engines will likely be available at bargain prices. It all depends on the depth of a downturn. A deep recession would probably result in the majors deferring delivery of new equipment, while a mild one could actually accelerate dumping of Stage 2 equipment.

“The industry, however, has learned much from the last slump of the early 1990s. Aircraft retirements have been more carefully planned. Engine shop visits are being tailored to meet requirements and redelivery conditions to aircraft lessors.”

“There will not be much meat left on the engine carcasses when the next round of aircraft retirements hot the dessert. Finding valuable candidates for return to service will be the real challenge. The rest will be recycled to provide an economical materials source to further ensure long-term survival of the remaining flyers.”

Despite the prospects of a flooded JT8D market, traders are not pessimistic. “There is still high demand for used aircraft,” says Dave Abbott, director of business development at American Air carriers. “American and Delta have large numbers of aircraft that will

continue in service elsewhere and these high-quality machines will not be part-out candidates. We are not worried about these 727s being parked since they are too good.”

Like WLFC, American Air carriers has vertically integrated to gain more control on the supply side of its business. “We bought engine shop American Jet Engine Service in Miami, engine management company Global Turbine Services and Global Spares, which supplies us with JT8D parts,” explains Abbott. “As well as the landing gear shop, Condor Flight Service, we can now offer a complete service, including the supply of heavy rotables, such as landing gears. We have a growing reputation as a complete support provider.”

“The market seems strong,” says Karl Brown, president at American Air carriers. “There is a possibility of an engine glut and this is why we acquired an engine repair shop. We can actually take advantage of any glut, because the overhaul market still remains fairly strong. We can generate business from this activity rather than trading and leasing. It also provides a good opportunity to acquire parts cheaply before an upturn. Having both trading and leasing as well as overhaul capability means we can play the markets in peaks and troughs.”

Brown echoes many of Nicholl’s

reasonings. “The effects of recession are not as straightforward as some may think. As aircraft get retired or put down operators switch engines and have to repair poorer ones with outstanding ADs or that need LLP replacement. There will be a tremendous amount of work to be done. Also, when aircraft get returned to lessors they are required to return engines in a specified condition and this generates shop work and engine buying. This is likely to cause a shortage of good, serviceable JT8Ds in the future.

With more unserviceable engines, more will be split for parts, which will give us greater accessibility to them. I think we are more likely to see a short-term spike rather than a trough. The splitting of large fleets also increases demand for spare units.

“People have been talking doom and gloom for two years but the market keeps getting stronger. We now have more demand for JT8Ds than ever.” In any case, Brown notes: “Most additional engines coming on to the market will be less desirable ones anyway.”

JT9D

If there was another downturn, such as that experienced by the JT8D in the early 1990s, it would involve several other engines, especially the JT9D.

The 747-100 and -200 fleets have

Despite a large number of JT9Ds on the market, some traders are having no problem in placing engines. Many JT9Ds are being cannibalised for parts to supply engine shops.

imploded. Many aircraft have been parted out and there is a surplus of used 747s, including five ex-Singapore Airlines -300s, on the market. So who would want early JT9Ds?

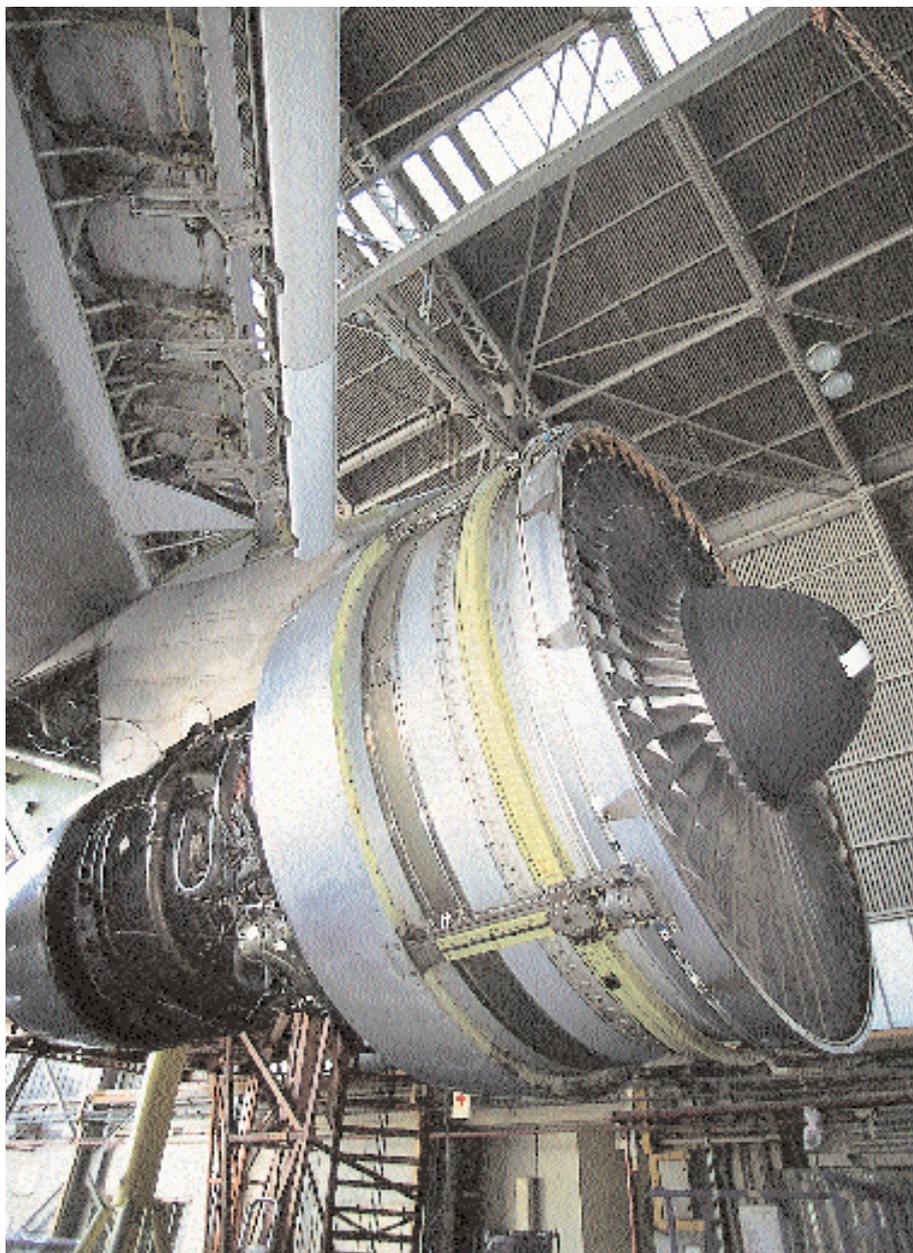
There are several major players in the JT9D market. Given current conditions two such players, WLFC and AAR, have taken the brave step of buying a total of 27 747-100s, largely for their engines.

But not all players view the market so bullish. "The JT9D market is in a downhill slide into oblivion, with no bottom in sight," exclaims Charlie Little, vice president engine sales and leasing at The Ages Group. "There's a large quantity of parts and engines and at least 120 -7As on the market. And although they will not come onto the market at the same time, there are few places for them to go.

"Core engine values must now be about \$200,000. Some operators are bound to upgrade their used 747 fleets and so the oversupply of older JT9Ds will have a knock-on effect on shops. The problem of oversupply is compounded by some airlines forming aftermarket companies to sell surplus engines. This puts a lot of price pressure on traders and lessors."

The JT9D is one of the most popular engines in the aftermarket. All major engine traders are involved in the JT9D in some way or another. The number of annual JT9D shop visits is testament to the continued demand for JT9D parts, despite a general shunning of the 747-100 and early -200s by the industry. Out of an annual shop visit activity of more than 1,100 for all JT9Ds, about 500 are for the -3A/-7/-7A/-7F and -7J variants. The earlier variants are the most numerous, accounting for about half of all JT9Ds. A large number of retired 747s would naturally lead to a glut. Most, however, are likely to have a poor maintenance status. Like the JT8D, engines will be stripped for parts rather than repaired. Many parts of earlier JT9Ds can be upgraded for later variants. Parts will be cheap, but this provides the added benefit of making shop visits cheaper.

AAR is involved in the JT9D business in several ways. A large area is the supply of parts to General Electric Engine Services (GEES). "We supply parts to GEES on a fixed price contract," explains Lee Hall, vice president strategic planning and acquisitions at AAR. The company is in the parting-out business and recently concluded a much publicised purchase of 15 747-100s from British Airways. "AAR is very large and we buy parts from the smaller players



and so always have a good idea of the market's strength. We have the same deal with GEES for JT8D parts.

"We are also in the trading and short-term leasing business. Short-term leases typically start at 30 days, but often end up being several months. We also get involved with leasing CF6 and CFM56 engines, but the JT9D is our largest engine.

"AAR occupies the middle ground and so we can take advantage of surpluses. Parts become cheap and we are less affected by a downturn than a pure lessor or engine shop would be" Hall claims.

AAR purchased BA's 15 747-100s at the same time that WLFC acquired 12 747-100s from United, causing much consternation in the market. To most the deals almost seemed suicidal. But Hall notes: "We needed all the engines on the 15 aircraft to satisfy demand for the parts. The parts can either go directly or be modified to go into later JT9D variants." In fact, AAR has already sold several of the first of the ex-BA aircraft directly on to other

parts suppliers.

"High value parts are also needed by overhaul shops. Not so many of the other parts are needed, but shops can use these rather than overhaul others. All this maintains demand for parts and JT9Ds themselves," explains Hall. "The 747F should also regain popularity now the AD on the freight conversion has been sorted out. This will stimulate demand."

But Hall admits to a note of warning. "If GEES' JT9D activity suffered then we would be affected."

WLFC agreed to buy 12 ex-United 747-100s. Half of the engines will be torn down for parts, while the other half will be available for lease. "There may be a large number of JT9Ds on the market," claims Willis "but many will or have already been cannibalised. It is always possible to market an engine. If you have one available there are always three people who want to buy or lease it. The attrition of engines keeps feeding the business. WLFC also has partnerships with engine shops in the same way AAR and GEES have. In fact we often supply AAR.



“We have already taken seven of the 12 ex-United 747s. Most have been dismantled and one is leased”, continues Willis. “Remember that -200s can use a lot of -100 parts. Despite what some people are saying about the 747 and JT9D market, there are still substantial numbers being operated by carriers such as Tower Air, Evergreen, Corsair and Polair Air Cargo.”

“Engine traders can always move on to other engine types anyway,” continues Willis. “We have bought nine PW4000-94s, for example. There is now a large need for CF6-50s. Because it has short on-wing times on the A300B2/4 there will be some good opportunities. The CFM56 will be the next JT8D and the PW4000 and CF6 the next JT9D of the market.”

Parts supply

Besides engines, the increased popularity of the A300 freighter has stimulated demand for airframe parts.

“We are most active in A300 material at the moment,” says Mike Mayer. “The US economy is strong. There is a lot of other business coming from start-up airlines in all parts of the world. One example is Channel Express, which we helped to start its A300 operation. Our business has not been damaged by the Asia Pacific crisis.

“Our advantage is that our products are cheaper than the OEMs’, since we buy surplus overhauled stock at competitive rates. There have been plenty of good opportunities to buy material. Examples include our deal with the Delta material, on which the company was founded, and airlines that have gone out of business. The market is large enough to avoid problems and there are plenty of opportunities. One issue is that airline credit can become a problem in a recession, but we do not see any signs of one materialising.”

The parts supply industry is less divided than are engine traders about the possibility of a recession. Here, the Asia

A proportion of an excess of engines will be in a poor maintenance status. These will be dismantled for parts, keeping the excess to a minimum.

Pacific crisis seems to have caused almost no concerns at all. “With respect to talk of a recession, I am optimistic about west Europe’s and north America’s economy,” says Lawrence Rayman, president of Aviation Systems International.

“Also, we do not do much business in the Asia Pacific region and so are not affected by problems there. Besides, whenever there is a change opportunities are created because of fleet changes. There is a lag time for disposing of surplus parts because inventory is the last thing anyone thinks about, Rayman points out.

“Leasing companies provide good opportunities because they do not get involved in parts and so we would make good partnerships. One example is our A300 inventory and the freighters leased by C-S Aviation,” continues Rayman. “Although no-one is recession-proof, downturns provide good opportunities to buy stock. Customers always buy just in time, which means part values will have increased after a traffic revival. Most areas of the world seem stable anyway.”

ASI is largely an airframe parts trader, but also gets involved in some engine transactions. It has stripped down five A300s to supply freight operators with material and sold engines to engine lessors.

“The A300 is a good market to be in and we are buying two more engines. This provides us with a good opportunity to get into the CF6 market,” says Rayman. “In the meantime the parts business is becoming more sophisticated and less fragmented. It is consolidating as a result of mergers.”

AAR is still primarily in the parts business, despite its activity with engines. The majority of the parts it deals with, however, are for engines. It is active in supplying parts for most types of aircraft, except for newer ones which do not yet have a surplus of material floating around the industry.

“We have customers all over the world,” explains Lee Hall. “One problem is that rotatable inventories do not get continually replaced like engine inventories. This makes demand for parts less predictable.

“Although there are not many selling opportunities in the Asia Pacific region there are good buying opportunities. All basically appears normal in Europe and north America,” says Hall. “I think we may experience a stagnation, but not a recession.”