

There have been a number of developments at Rolls-Royce concerning its engine maintenance services and support functions. These include the new TotalCare Flex and Select Care services, new customer service centres and changes to its Trent Service Network.

Rolls-Royce engine services developments

Rolls-Royce has launched a number of new engine support services including SelectCare™ in early 2016 and TotalCare® Flex® in September 2015.

TotalCare Flex

In September 2015 Rolls-Royce announced it had signed the first widebody agreement for its new TotalCare Flex service with Cathay Pacific. The agreement covers support of the airline's Trent 800 engines for 17 777 aircraft.

The TotalCare® product was originally designed with the intention of maximising an engine's time on wing and to provide cost predictability for operators. The original TotalCare Term offering provides comprehensive support at an agreed cost per FH for a fixed period of time. Rolls-Royce later introduced TotalCare Life where the cost

per FH is based on the whole life cycle of the engine rather than a fixed term.

Rolls-Royce subsequently recognised the need to provide an additional support service more suited to mature engines approaching the end of their life cycles.

TotalCare Flex is designed for operators looking to economically manage mature engines and potentially retire a certain aircraft type. Rather than deliberately building engines to spend the maximum possible time on wing there is more focus on building assets to a lower workscope for shorter time frames. This might include the use of more serviceable used materials.

Several other operators have signed up to TotalCare Flex contracts following the Cathay Pacific announcement. South African Airways will receive TotalCare Flex support for the Trent 500 engines in its A340 fleet while BMI Regional will receive support for the AE3007 engines powering its ERJ145 aircraft.

SelectCare

In January 2016 Rolls-Royce announced the launch of its new SelectCare™ engine maintenance service.

SelectCare is designed to fit between the manufacturer's existing TotalCare and MRO services. TotalCare provides cost predictability with fully comprehensive maintenance support supplied on a cost-per-flight-hour (FH) basis. An MRO services agreement sees customers pay for shop visit support on an individual time and material basis.

SelectCare will allow operators to choose the maintenance support services they require. It will provide cost certainty by covering a certain number of engine shop visits at an agreed price. Unlike a TotalCare Term agreement which fixes the period of cover, SelectCare provides cover for an agreed number of shop visit inductions and is not time bound.

American Airlines has been announced as the launch customer for the new SelectCare service. It will use SelectCare to cover all of the RB211-535 engines that equip its 757 fleet. Rolls-Royce previously supported these aircraft via separate TotalCare and MRO services agreements.

American Airlines took delivery of 126 757-200s from Boeing between 1989 and 2002. All of these aircraft were powered by RB211-535 series engines. The airline currently has 61 757-200s in service and a further 38 in storage.



American Airlines is launch customer for Rolls-Royce's SelectCare engine maintenance service. American will use SelectCare to support its RB211-535-equipped 757 fleet.

ROLLS-ROYCE TRENT ENGINES IN-SERVICE FLEET

Engine/Aircraft	Number of aircraft	
	In service	Stored
Trent 500		
A340-500	4	21
A340-600	71	19
Total	75	40
Trent 700		
A330-200	267	19
A330-200F	31	-
A330-300	390	12
Total	688	31
Trent 800		
777-200	13	-
777-200ER	126	33
777-300	36	6
Total	175	39
Trent 900		
A380	77	2
Trent 1000		
787-8	92	1
787-9	58	-
Total	150	1
Trent XWB		
A350-900	24	-
Total	1,189	113

LessorCare

Rolls-Royce believes that the next few years will see an unprecedented number of 10-to-15 year-old widebodies being returned from initial lease terms and transitioned to their next operators.

Many Trent engines are supported by TotalCare agreements. These support packages tend to prioritise maintaining a high time on-wing and achieve this through the use of factory new components rather than serviceable and used material. Critics argue that aircraft with engines tied into this type of support package may be less attractive prospects on the secondary market since the next operator may not require engines with such a high build standard or the costs associated with maintaining this.

Despite these arguments, Rolls-Royce claims that Trent-powered aircraft including A330s and 777s are still experiencing an active secondary market.

Rolls-Royce offers its Operating Lessor Engine Restoration Agreement (OPERA) solution for lessors with aircraft powered by engines that have been under a TotalCare Life agreement. This makes the equivalent value of maintenance reserves payable from the previous operator's period of use available to the lessor.

Trent MRO network

In recent years engine manufacturers have been accused of having too much

control over the MRO market for their latest products. It has been argued that there are too few independent MRO shops and that the reduction in choice can drive up shop visit costs.

Rolls-Royce has been making changes to its Trent Service Network. This has been driven by factors such as a projected three-fold increase in shop visit requirements by 2030, which would exceed current shop capacity, and the maturing nature of earlier Trent series engines including the Trent 700, Trent 800 and Trent 500. The in-service and stored fleet of Trent powered aircraft has been summarised (see table, page xx).

Rolls-Royce has highlighted its intention to create a more competitive and capable MRO market for its Trent engines.

The current Trent Service Network is made up of Approved Maintenance Centres (AMCs) and customer owned shops. The AMCs are endorsed by Rolls-Royce to carry out Trent engine overhauls and can use Rolls-Royce branding to market their capabilities more broadly. Engine Overhaul Services, Derby (formerly Aero Repair & Overhaul) is Rolls-Royce's only wholly-owned facility with capability across multiple engine types including RB211-535, Trent 700, Trent 800, Trent 1000, Trent 7000 and Trent XWB. Alternatively customers can choose to overhaul their engines in three other AMCs in which Rolls-Royce has a 50% equity stake. These include the

HAESL, SAESL and N3EOS joint ventures with Cathay Pacific, Singapore Airlines and Lufthansa Technik respectively. Some customers with Trent 700s and Trent 800s have preferred to overhaul these engines in their own facilities. These airlines include All Nippon Airways (ANA), Egyptair, Emirates, Thai Airways and Etihad.

DeltaTechOps has become a new AMC, and the first in which Rolls-Royce has no equity. It is expected that additional non-equity Trent AMCs will be announced in the future.

Other changes made during the past 12 months include dissolving a fourth joint venture between Rolls-Royce and American Airlines called Texas Aero Engine Services (TAESL), a change in the ownership structure of HAESL and SAESL and the removal of a territorial approach to MRO work.

HAESL is a joint venture between Rolls-Royce, Hong Kong Aircraft Engineering Company (HAECO) and SIA Engineering Company (SIAEC). SAESL is a joint venture between Rolls-Royce, HAESL and SIAEC. Under new proposals to increase competition the cross shareholding between HAESL and SAESL will be removed with Rolls-Royce increasing its equity stake to 50% in both organisations. This means SIAEC will no longer have an interest in HAESL, which in turn, will no longer have an interest in SAESL. N3 will continue as a joint venture between Rolls-Royce and Lufthansa Technik.

Under the previous business model Rolls-Royce directed Trent MRO work to each of its equity joint ventures according to pre-defined geographic territories. Those joint ventures are now founder AMCs and members of the Trent Service Network. New agreements announced in late 2015 mean that these AMCs will now compete globally both for TotalCare overhauls and time and material business. Rolls-Royce acknowledged that as earlier Trent series engines begin to reach the end of their life-cycles the MRO support network will need to evolve to cater for an increasingly global and diverse fleet.

Customer service centres

In 2015 Rolls-Royce opened a Customer Service Centre in Singapore and in early 2016 it introduced new ones in Washington DC and China to improve responsiveness, local awareness and customer proximity.

Derby will still support Europe the Middle East and Africa; Singapore and China will support the Asia Pacific and China; and Washington the Americas. [AC](#)

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