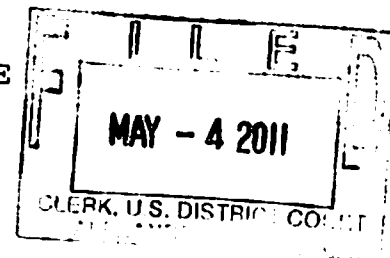


IN THE UNITED STATES DISTRICT COURT FOR THE  
EASTERN DISTRICT OF VIRGINIA  
Alexandria Division



ROLLS-ROYCE PLC,	)	
	)	
Plaintiff,	)	
	)	
v.	)	1:10cv457 (LMB/JFA)
	)	
UNITED TECHNOLOGIES	)	
CORPORATION (d/b/a PRATT &	)	
WHITNEY),	)	
	)	
Defendant.	)	

MEMORANDUM OPINION

Before the Court are defendant United Technologies Corporation's ("UTC") Motion in Limine to Preclude Rolls-Royce from Presenting Evidence or Argument at Trial of Lost Profits and Price Erosion Damages [Dkt. No. 507] and Motion in Limine No. 2 to Preclude Rolls-Royce from Presenting Evidence or Argument at Trial of Unsupported Lump Sum Reasonable Royalty Damages [Dkt. No. 558]. In each motion UTC seeks to prevent plaintiff Rolls-Royce plc ("Rolls-Royce") from presenting evidence and argument that it is entitled to damages which UTC maintains are either contrary to patent law in that they are time barred or are unsupported by sound economic analysis and the evidence in the record. For the reasons discussed below, UTC's motions will be granted and the plaintiff's damage claims will be limited to the parameters set by this Opinion.

I. Background

Rolls-Royce and UTC are direct competitors in the jet engine market relevant to this litigation. Each party has multiple

patents covering elements of the jet engines they manufacture. Rolls-Royce manufactures and sells the Trent 900 engine, which incorporates the forward, rearward, forward swept fan blade design covered by Rolls-Royce's '077 patent at issue in this civil action. UTC and General Electric formed a joint venture known as Engine Alliance, which manufactures and sells the GP7200 engine.<sup>1</sup> Among defendant UTC's contributions to the GP7200 engine is the fan blade component, which Rolls-Royce alleges infringes its '077 patent, and is the subject of this patent infringement litigation.

In 2000, Airbus began taking orders for jet engines for its new A380 jumbo jet, which seats 550 passengers and is billed as the "Superjumbo of the 21st Century." Supplemental Expert Report of Mary A. Woodford, Ex. C to Mot. in Limine ("Woodford Report") at ¶ 20. The first A380 entered commercial service in late 2007. As of March 2010, Airbus has forecast that it will produce a total of 630 A380s. Id. at ¶ 43.

When an airline purchases an A380 from Airbus, it has a choice of only two available engines to be installed on the airframe: either Rolls-Royce's Trent 900, or Engine Alliance's GP7200 engine. The ordering process begins with the airline placing a "firm order" with either Rolls-Royce or Engine

---

<sup>1</sup>UTC provides the fan blade component of the engine and General Electric provides the compressor and other portions. They share the costs of producing each engine equally and divide revenues equally.

Alliance, indicating that "the airline or customer has a commitment to purchase those engines." Id. at ¶ 47. Jet engine manufacturers typically sell their engines at deep discounts, especially to early purchasers of a new line of engines, and make much of their profits on "aftermarket" services such as repair, maintenance, and spare parts. Id. at ¶ 29. Since 2000, five airlines and the International Lease Finance Corporation have placed firm orders with Engine Alliance to provide engines for a total of 128 A380s.<sup>2</sup> Id. To date, however, Engine Alliance has actually delivered engines for only 19 aircraft. In the same time period, Rolls-Royce has received orders to equip 106 A380s with the Trent 900, beginning with 10 firm orders from Singapore Airlines in late 2000. Id. at ¶ 45, Mot. in Limine at 7. At oral argument on March 17, 2011, both parties agreed that it takes several years from receipt of a firm order to actual delivery and installation of an engine. The parties disagreed, however, about the likelihood of a firm order materializing into a final sale. UTC argues that firm orders are not a guaranteed purchase, citing to one customer's recent cancellation of an order for 20 engines for four aircraft, Tr. at 21. Counsel for Rolls-Royce, however, described cancellations of firm orders for A380 engines as "fairly rare." Tr. at 8.

---

<sup>2</sup>An A380s airframe has four engines, but Engine Alliance and Rolls-Royce often sell spare engines. For consistency, this opinion will refer to the number of aircraft for which engines are sold rather than the actual number of engines that are ordered.

Mary A. Woodford, Rolls-Royce's damages expert, has prepared an extensive damages report, upon which Rolls-Royce seeks patent infringement damages of \$3.7 billion, consisting of \$1.4 billion for losses due to price erosion and \$2.3 billion for lost profits. Woodford Report at ¶¶ 114, 128. The price erosion damages are based on Rolls-Royce's sale of engines for 106 aircraft at prices lower than what it would have been able to charge had Engine Alliance not presented a competing engine. The lost profit damages calculations are based on sales for 128 aircraft that Rolls-Royce lost to Engine Alliance. As an alternative basis for a damage award, Woodford calculated a lump sum, fully paid royalty of \$1.3 billion. That figure is based on a \$493 million royalty brought up to 2010 dollars.

## II. Discussion

Fed. R. Evid. 103(c) allows a court "to the extent practicable . . . to prevent inadmissible evidence from being suggested to the jury by any means[.]" Courts exercise this power by reviewing motions in limine before or during trial. See Luce v. United States, 469 U.S. 38, 41, n.4 (1984) ("Although the Federal Rules of Evidence do not explicitly authorize in limine rulings, the practice has developed pursuant to the district court's inherent authority to manage the course of trials."). In patent infringement actions, the Court has discretion "both in selecting the methodology for and in calculating a damage award."

Mahurkar v. C.R. Bard, Inc., 79 F.3d 1572, 1579 (Fed. Cir. 1996).

A. Price erosion damages

Rolls-Royce bases its claim for price erosion damages on the assumption that, absent competition from Engine Alliance, it would have been able to charge a higher price for its engine. Woodford Report at ¶ 128. Woodford estimates that had the GP7200 engine not been available, Rolls-Royce would have received \$759.36 million more for the engines that it has sold, and it would have received \$592.31 million more in aftermarket repair services and spare parts for those engines, for a total price erosion loss of \$1.351 billion. Ex. D. to Woodford Report. UTC argues that much of the price erosion damage claim is barred by 35 U.S.C. § 286 and that the calculations of price erosion are not supported by evidence or sound economic analysis.

1. Section 286 limitation on price erosion damages

UTC first argues that 35 U.S.C. § 286 bars Rolls-Royce from seeking damages for any infringement that occurred more than six years before Rolls-Royce filed this civil action on May 5, 2010. Section 286 provides that:

Except as otherwise provided by law, no recovery shall be had for any infringement committed more than six years prior to the filing of the complaint or counterclaim for infringement in the action.

UTC argues that Rolls-Royce negotiated the engine price for 69 of the 106 aircraft at issue before May 5, 2004, and that any price erosion damages for the engines sold for those 69 aircraft are

therefore time-barred.<sup>3</sup>

In response, Rolls-Royce argues that Section 286 is a statute of limitations that does not restrict the plaintiff from seeking damages accruing before May 2004 because UTC failed to plead a statute of limitations defense, thereby waiving the defense. Rolls-Royce also argues that it should be afforded equitable tolling because of the interference action brought by UTC which caused a delay in Rolls-Royce's bringing an infringement action against UTC. Opp. at 5.<sup>4</sup>

Rolls-Royce's argument ignores more than two decades of Federal Circuit precedent. The Federal Circuit has examined Section 286 and determined that it is a bar on damages, not a statute of limitations:

---

<sup>3</sup>Three of the eight airlines - Singapore Airlines, Qantas Airways, and Lufthansa - placed firm orders with Rolls-Royce between 2000 and 2002, before the May 5, 2004 six-year period began.

<sup>4</sup>Both Rolls-Royce and UTC have patented technology covering the profiles of the fan blades in the A380 engines. The PTO issued U.S. Patent No. 6,0071,077 (" '077 Patent") to Rolls-Royce on June 6, 2000. On June 5, 2001, UTC filed a second reissue application, no. 09/874,931 (" '931 Reissue Application") based on its earlier patent no. 5,642,985, which had issued on July 1, 1997. In 2003, UTC convinced the Patent and Trademark Office's Board of Patent Appeals and Interferences to declare an interference between Rolls-Royce's '077 Patent and UTC's '931 Reissue Application. Rolls-Royce appealed the interference decision to this Court in 2005, and the Court reversed the PTO's decision. Rolls-Royce PLC v. United Techs. Corp., 730 F. Supp. 2d 489 (E.D. Va. 2009). The Federal Circuit affirmed this Court on May 5, 2010. Rolls-Royce PLC v. United Techs. Corp., 603 F.3d 1325 (Fed. Cir. 2010).

[Section 286] is not a statute of limitations barring suit in the usual meaning of the term. It does not say that 'no suit shall be maintained.' Take, for example, the situation of [defendant] R & H in this case as it was before the district court. R & H was allegedly continuing the use of the '007 patent process. Waiting for more than six years after that use commenced did not create a bar under § 286 to the *bringing of a suit* for infringement or *maintaining* the suit. Assuming a finding of liability, the only effect § 286 has is to prevent any 'recovery . . . for any infringement committed more than six years prior to the filing of the complaint. . . .' Therefore, suit could be maintained and recovery of damages could be had for infringement taking place *within* the six years prior to the filing of the complaint.

Standard Oil Co. v. Nippon Shokubai Kagaku Kogyo Co., 754 F.2d 345, 347-48 (Fed. Cir. 1985). See also Bradford Co. v. Jefferson Smurfit Corp., 2001 U.S. App. LEXIS 25205 (Fed. Cir. Oct. 30, 2001) ("section 286 is not a statute of limitations.").

Rolls-Royce acknowledges that the Federal Circuit has held that Section 286 is not a statute of limitations, yet it urges this Court to ignore that controlling precedent in favor of its own interpretation of the statute by focusing on its legislative history; however, a district court cannot ignore binding Federal Circuit precedent. Because Section 286 is a clear bar on damages and not a statute of limitations, equitable tolling does not apply and UTC did not waive the defense by failing to raise it. Accordingly, to the extent Rolls-Royce bases any of its damages on acts occurring before May 5, 2004, these damages must be stricken.

2. Methodology for calculating price erosion damages

In calculating price erosion damages, Woodford examined orders that Rolls-Royce has received to date from eight airlines which have ordered Trent 900 engines for 106 aircraft. She then compared the difference between the price Rolls-Royce agreed to accept with the price that she predicted Rolls-Royce would have received absent competition from Engine Alliance. Woodford Report at ¶¶ 119-123. Rolls-Royce had discounted its Trent 900 engines, which have a list price of \$20 million, by an average of 87.3 percent, resulting in a final price of \$2.54 million. Woodford's report estimates that had the GP7200 engine not been available, Rolls-Royce would have only had to discount the Trent 900 by 77 percent, which would have nearly doubled the price of the engine to \$4.6 million. Mot. in Limine at 25. In other words, Rolls-Royce estimates that it would have been able to charge nearly twice as much for its engines had it not faced competition from Engine Alliance

Price erosion damages are allowed if they "account for the nature, or definition, of the market, similarities between any benchmark market and the market in which price erosion is alleged, and the effect of the hypothetically increased price on the likely number of sales at that price in that market." Crystal Semiconductor Corp. v. Tritech Microelectronics Int'l, 246 F.3d 1336, 1357 (Fed. Cir. 2001). UTC argues that Rolls-Royce's



calculation of price erosion damages should be stricken because it is based on incorrect economic assumptions. Specifically, UTC argues that Woodford based her opinion about how Rolls-Royce would have discounted its engines solely on Rolls-Royce's internal business plan, and not on any customer surveys or other economic analysis of the airline market.

Rather than providing evidence to support her methodology, Woodford simply states that "[a]s a general matter, markets with products that are necessities, or have few acceptable substitutes, tend to experience smaller effects on quantity demanded when there is an increase in price." Woodford Report at ¶ 124. The only market Woodford cites for this conclusion is the processed fluid milk market, a market hardly similar to the very unique jet engine market. Even if one were to assume that a market for necessities is always inelastic, Woodford does not cite any evidence for the proposition that a jet engine is a necessity in the same way as is milk.

Woodford further disregards the significance of price elasticity by stating that the increased engine price would only result in a passenger paying an average of \$4.19 more per round trip ticket. Woodford Report at ¶ 127. This calculation relies on the wrong analysis because the increased engine price is not being paid directly by passengers. The proper analysis must consider how the purchaser, in this case the airlines, would

react to increased engine prices. Whether they chose to pass the increase on to customers is a separate matter. Woodford cannot just simply assume that airlines would happily pay millions of dollars more per engine. It is not even clear whether Airbus would have undertaken the project of producing the Airbus 380 in the first place if it had only one engine supplier to rely upon.

Therefore, the unsupported assumption of price inelasticity significantly undermines the validity of Rolls-Royce's price erosion damages claim. See Crystal Semiconductor Corp., 246 F.3d at 1360-61 ("Yet, Crystal also seeks price erosion damages without showing that a higher CODEC price would have allowed Crystal to sell its CODECs in that same market segment. Without economic evidence of the resulting market for higher priced CODECs, Crystal cannot have both lost profits and price erosion damages on each of those lost sales.").

#### B. Lost profits

Woodford estimates that Rolls-Royce suffered \$2.3 billion in lost profits for Engine Alliance's sale of engines for 128 aircraft. Woodford Report at ¶ 114. This calculation includes profits lost for both the sales of the engines and sales of 25 years of "aftermarket" service contracts. Id. at ¶ 83. Woodford's estimated lost revenues per aircraft range from \$50.82 million to \$82.40 million in 2010 dollars, and estimated profits per aircraft range from \$16.51 million to \$22.06 million in 2010

dollars. Ex. L to Woodford Report.

To obtain lost profits in a patent infringement case, the plaintiff has the burden of proving: "(1) demand for the patented product, (2) absence of acceptable noninfringing substitutes, (3) his manufacturing and marketing capability to exploit the demand, and (4) the amount of the profit he would have made." Panduit Corp. v. Stahlin Bros. Fibre Works, Inc., 575 F.2d 1152, 1156 (6th Cir. 1978).

UTC argues that many of the lost profits claims are time-barred and incorrectly based on the price of the entire engine rather than just the fan blade component. UTC also argues that the damage calculations are based on unsupported assumptions about sales of aftermarket services, and that Rolls-Royce improperly seeks lost profits on engines that UTC has yet to deliver.

1. Section 286 limitation on lost profits

Woodford bases her lost profits conclusions on the number of firm orders placed for GP7200 engines. Woodford Report at ¶ 83 ("Engine Alliance's firm orders over the damage period provide the base for Rolls-Royce's quantity of lost sales."). UTC first objects that many of these firm orders occurred before May 5, 2004.<sup>5</sup> Mot. in Limine at 8. The evidence supports UTC's

---

<sup>5</sup>The Woodford Report does not mention the dates of each firm order that were included in the lost profits calculation.

objection. For example, International Lease Finance Corporation placed firm orders for GP7200 engines for four aircraft in August 2003, Air France placed firm orders for 10 aircraft in mid-2001, and Emirates placed orders for 43 aircraft in 2002 and 2003. Id. at 9-10.

In response, Rolls-Royce argues that all of the lost profits "are tied to infringing acts that occurred between May 2004 and trial." Opp. at 21:

In some cases, the agreement and contract may be before May 2004, but in those cases the certification and manufacture occur in the accounting period. In other cases, the sale and agreement may fall within the accounting period with manufacture and delivery happening later. In all cases, the certification process required by contract occurred in 2005 and 2006."

Id.

Patent infringement occurs when a defendant "makes, uses, offers to sell or sells" a patented item without consent of the patent owner. 35 U.S.C. § 271(a). Rolls-Royce correctly argues that it may recover lost profits for concrete acts of infringement that occurred after May 5, 2004. The record shows that to date Engine Alliance has delivered GP7200 engines to Airbus for only 19 of the 128 aircraft for which it has firm orders. Although the orders of those engines may have occurred before May 5, 2004, delivery after May 5, 2004 places them within the eligible time period. Engines for these 19 aircraft, therefore, may be included in Rolls-Royce's lost profits claim if

Rolls-Royce prevails on its infringement case.

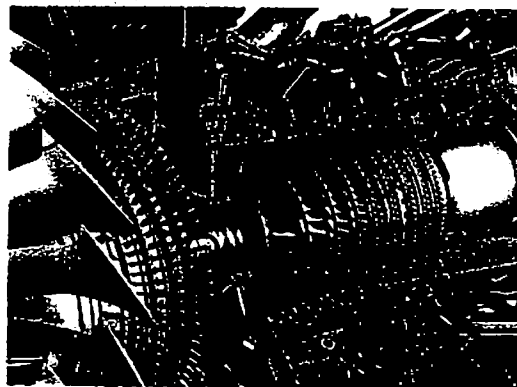
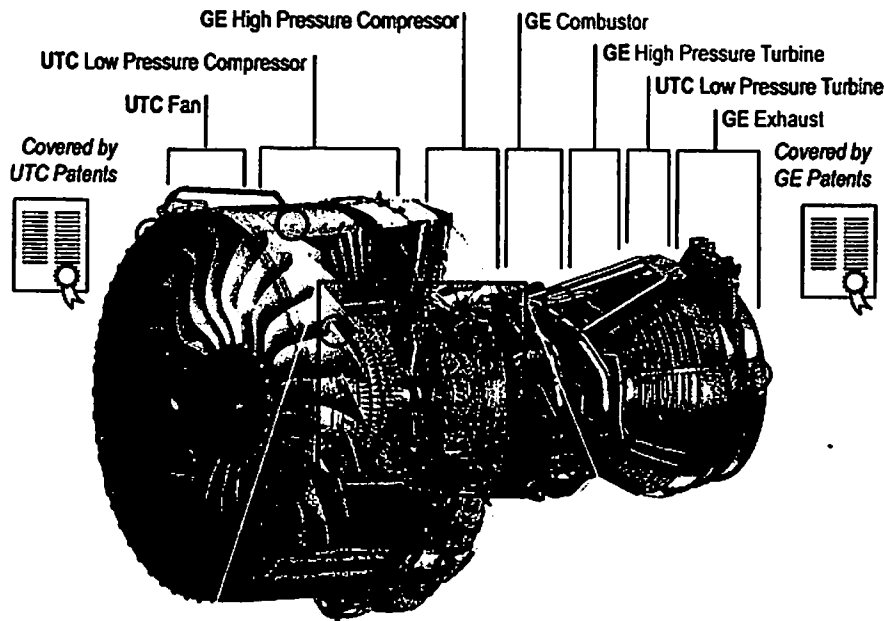
Rolls-Royce also attempts to recover damages for engines that have been either certified by the Federal Aviation Administration or manufactured after May 5, 2004, even though they have not yet been delivered to customers. Opp. at 5-8. UTC counters that the "vast majority" of engines ordered before May 2004 do not exist and "thus have never been manufactured, used, tested, or delivered." Reply at 6. Rolls-Royce responds that many of these engines do exist; however, its only support for this claim are vague lists and deposition testimony. This apparent factual dispute may be moot because UTC has stated and presented some evidence that it plans to install non-infringing blades in all future GP7200 engines, and that this design-around cuts off Rolls-Royce's claim to lost profits for any engine not yet made. Given the uncertainty of the evidence concerning the design around, Rolls-Royce may not claim lost profits for firm orders of GP7200 engines that occurred before May 5, 2004 if the engines have not yet been installed.

## 2. Entire market value

In addition to problems with the number of engines for which damages can be sought, Rolls-Royce bases its lost profits claim on the price of the entire engine, even though the patent only covers one design aspect of the fan blade, which in turn is one

of more than 10,000 components in the engine.<sup>6</sup> UTC argues that

<sup>6</sup>The main portions of a jet engine are the compressor, burner, turbine, and fan stage. Incoming air passes through the fan stage at the front of the engine, continues through the core compressor and burner, where it is mixed with fuel and combusted. This combustion generates propulsive thrust in a manner analogous to propeller blades on a piston-driven airplane engine. Woodford Report at ¶ 19. This diagram of the GP7200, presented by UTC during oral argument, depicts the fan blades in relation to the rest of the engine, and indicates some of the other features for which either UTC or GE has patents.



Rolls-Royce should not be permitted to claim lost profits based on the price for the entire engine.

To recover lost profit damages based on the full price of a product that contains both patented and unpatented features, a plaintiff must satisfy the requirements of the "entire market value rule," by demonstrating that the patented feature is the "basis for customer demand" for the entire product. Imonex Servs. Inc. v. W.H. Munzprufer Dietmar Trenner GH, 408 F.3d 1374, 13890 (Fed. Cir. 2005), see also Rite-Hite Corp. v. Kelley Co., 56 F.3d 1538, 1549 (Fed. Cir. 1995) (stating that "damages for component parts used with a patented apparatus were recoverable under the entire market value rule if the patented apparatus "was of such paramount importance that it substantially created the value of the component parts.") (internal quotation marks and citation omitted).<sup>7</sup> Therefore, Rolls-Royce must prove that the profile of UTC's swept fan blade is the basis for demand for the entire GP7200 engine.

UTC correctly argues that Rolls-Royce's expert has not cited any economic evidence that the design of UTC's fan blade is the basis for customer demand for the entire engine. In a

---

<sup>7</sup>In its Opposition brief, Rolls-Royce argues that the entire market value rule applies if the patented and unpatented components work together as a "functional unit." At oral argument, however, counsel for Rolls-Royce conceded that it misstated the legal rule. Tr. at 58-59.

deposition, Woodford admits that she did not ask representatives of either Airbus or any of the airline customers about the factors that they considered in deciding whether to purchase the GP7200 over Rolls-Royce's Trent 900. Ex. E to Mot. in Limine. Failing to provide any evidence of demand undermines "any argument for applicability of the entire market value rule." Cornell Univ. v. Hewlett-Packard Co., 609 F. Supp. 2d 279, 289 (N.D.N.Y. 2009) (Rader, C.J., sitting by designation).

In fact, Woodford's report actually acknowledges that fan performance is only one of eight features that helped Engine Alliance achieve the weight and fuel consumption requirements for these engines. Woodford Report at ¶ 57. A deposition of Sara Sheard, Rolls-Royce's commercial director of civil aerospace, and several Rolls-Royce internal documents revealed that when airlines consider purchasing engines for the A380, they consider numerous factors including price, safety, reliability, and maintenance costs. See Ex. 2 to Opp., Report of Robert N. Yerman ("Yerman Report") at ¶¶ 73-75.

At oral argument and in its brief, Rolls-Royce relied heavily on internal UTC documents that state that the sweep of the fan blade is an important feature. Tr. at 59-60. But this is merely commentary by UTC employees and it does not provide any evidence whatsoever of consumer demand. See Cornell Univ., 609 F. Supp. 2d at 288-89 (rejecting entire market value argument



based solely on defendant's internal documents).

Rolls-Royce also argues that the entire market value applies because this Court, in the interference proceeding, found that "the improved efficiency and noise characteristics of the fan blade have been a major driving force behind sales of Rolls-Royce engines that incorporate them." Rolls-Royce PLC v. United Techs. Corp., 730 F. Supp. 2d 489, 508 (E.D. Va. 2009). That finding was in the context of the secondary consideration of commercial success for nonobviousness, and did not address whether the fan blade profile was the sole or even primary basis of consumer demand for the entire engine. A finding of commercial success does not necessarily lead to application of the entire market value rule. See Biacore v. Thermo Bioanalysis Corp., 79 F. Supp. 2d 422, 471 (D. Del. 1999) (refusing to apply the entire market value rule despite a finding of commercial success). Because there is insufficient evidence to support Woodford's use of the entire market value of the engines in calculating lost profits, that aspect of her report will be stricken.

Instead of basing its lost profits claim on the entire market value of the GP7200, Rolls-Royce will be limited to a maximum of 50 percent of the market value. This more reasonable figure is derived from the fact that UTC and General Electric contribute equally to the GP7200. UTC's economics expert, Robert N. Yerman, argues that the fan stage represents 14.65 percent of

an engine's value. Yerman Report at ¶ 186. UTC argues, therefore, that Rolls-Royce can recover no more than 14.65 percent of lost profits. As with Rolls-Royce's expert, Yerman also does not provide sufficient details or reasoning for his calculation. Given the lack of empirical data underlying the parties' views as to the basis for calculating lost profits, the Court will limit the range to no more than 50 percent of the engine's value.

Accordingly, Rolls-Royce will not be permitted to seek damages for lost profits based on the value of the entire engine. Instead, the parties may present evidence to the jury to determine where within the zero to 50 percent range the proper value should be based.

### 3. Aftermarket services

A significant portion of Rolls-Royce's lost profits claim is based on the value of the aftermarket services that it would have provided if it had sold the engines that Engine Alliance had sold. In reaching that damage estimate, Woodford assumed that 90 percent of the engine purchasers would have also contracted for 25-year agreements under Rolls-Royce's "Total Care" program. Under that program, airlines pay Rolls-Royce a fixed amount per flight hour in exchange for aftermarket services. UTC argues that this calculation is flawed because Woodford's conclusion is not based on firm evidence that airlines will actually sign up

for 25-year agreements.

Rolls-Royce argues that this lost profits claim is reasonable because all of its Trent 900 customers have signed up for Total Care; however, Rolls-Royce also acknowledges that only one of its customers - British Airways - has committed to a 25-year contract. The remaining customers have only signed up for between 10 and 15 years of aftermarket services. Opp. at 25, n.17. On this evidence, assuming that 90 percent of its customers would purchase a 25-year aftermarket contract is an egregious overreaching which undercuts the reliability of the expert's conclusion. Accordingly, this damage claim cannot go forward.

#### 4. Sale of future engines

UTC also argues that Woodford's expert report improperly includes lost profit damages for engines that have not been delivered or installed. As of March 15, 2011, Engine Alliance has only delivered engines for 19 aircraft. Reply at 15. In addition to seeking damages for those engines, Rolls-Royce seeks damages for all engines for which UTC has firm orders. In calculating that damage amount, Rolls-Royce assumes that all firm orders will materialize into a final sale. Rolls-Royce has the burden of demonstrating that these future sales will occur. See Brooktree Corp. v. Advanced Micro Devices, Inc., 977 F.2d 1555, 1581 (Fed. Cir. 1992) ("The burden of proving future injury is

commensurately greater than that for damages already incurred, for the future always harbors unknowns." ).

At oral argument, both parties acknowledged that not all firm orders are final, and that airlines have canceled firm orders, though the parties disagree on the frequency of such cancellation. UTC cited cancellations of Engine Alliance firm orders from ILFC, Federal Express, and United Parcel Service. Reply at 15-16. Rolls-Royce did not dispute that those cancellations occurred but unsuccessfully tried to downplay their significance by arguing that these cancellations did not come from passenger airlines; that distinction is irrelevant. The cancellations demonstrate that firm orders do not always result in sales, and confirm the conclusion that the expert's report is based on overly inflated assumptions about actual sales.

Therefore, this portion of Woodford's damages calculation will be stricken.

### C. Royalty calculation

As an alternative damages theory, Rolls-Royce puts forward a \$1.3 billion royalty calculation. UTC opposes that amount, arguing that at best the figure that should be argued before the jury should not exceed \$493 million, with any calculation of interest or conversion to present dollars being left to the Court. UTC also argues that Rolls-Royce's expert, Mary Woodford, bases her royalty calculation on the assumption that in 2000,

before UTC had made or sold any engines, it would have paid an up front lump sum royalty of \$493 million for a license to use the '077 patent's fan blade design, despite clear evidence that UTC was unwilling to invest the approximately \$1 billion expected to be required to develop "the new engine." UTC points to its decision to enter into the joint venture with General Electric, in which each party contributed 50/50 to the development of the engine, as clear evidence of UTC's unwillingness to invest \$1 billion in the project. Obviously, \$493 million represents nearly half a billion dollars, which amounts to almost all of UTC's investment in the new engine project. On this evidence, UTC makes a very strong argument that even the \$493 million figure is highly speculative; however, it does not ask the Court to strike that figure. Rather, UTC argues that Rolls-Royce should be limited to arguing for no more than a \$493 million royalty with any increase for prejudgment interest or conversion to current dollars left to the Court.

Rolls-Royce's response and the basis upon which Woodford increased the \$493 figure to \$1.3 billion are wholly inadequate in that they fail to address UTC's arguments. For these reasons, UTC's Motion in Limine No. 2 will be granted and Rolls-Royce's presentation of an alternative damage theory based on a fully paid, up front lump sum royalty is limited to a claim for \$493 million. At trial, UTC may oppose that amount and Rolls-Royce may defend the \$493 million figure. Increasing any royalty

figure by prejudgment interest or for present value will be left to the Court.


### III. Conclusion

Although Rolls-Royce has had more than 10 months to develop a concrete and economically sound damages theory, as discussed above, its claim for \$3.2 billion in price erosion and lost profits damages is based on misstatements of the law, a lack of sound evidence, and unsupported economic assumptions, and its paid up royalty theory is similarly flawed. Woodford's expert report reads more like a lawyer's brief advocating for the highest conceivable damage award rather than an expert trying to assist the trier of fact reach a reasonable damages figure. Because of this extensive overreaching, the entire report is undermined. For these reasons, UTC's Motion in Limine to Preclude Rolls-Royce from Presenting Evidence or Argument at Trial of Lost Profits and Price Erosion Damages [Dkt. No. 507] and Motion in Limine No. 2 to Preclude Rolls-Royce from Presenting Evidence or Argument at Trial of Unsupported Lump Sum Reasonable Royalty Damages [Dkt. No. 558] will be granted and Rolls-Royce's evidence and argument concerning damages will be limited to the parameters discussed in this Opinion.

An Order reflecting these decisions will be issued along with this Memorandum Opinion.

Entered this 4<sup>th</sup> day of May, 2011.

Alexandria, Virginia

  
/s/ Leonie M. Brinkema  
United States District Judge