

An hourglass-shaped graphic with a globe of the Earth inside. The top bulb is dark blue, and the bottom bulb is light blue. The globe is centered in the narrow neck of the hourglass. The top bulb has a dark blue cap, and the bottom bulb has a light blue cap.

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*AIRCRAFT HUSHKITS: NOISE AND INTERNATIONAL  
TRADE*

John W. Fischer, Resources, Science, and Industry Division

Updated May 8, 2000

**Abstract.** The European Union (EU) has adopted regulations that severely limit the introduction of "hushkit" equipped aircraft into the European aviation market. These regulations primarily affect U.S. aircraft and airlines, and are perceived to have caused U.S. interests significant economic harm. The United States has filed for relief from these regulations with the International Civil Aviation Organization (ICAO) which serves as the world's aviation regulatory and standardization authority. This report discusses the EU regulation, the U.S. policy response, the congressional response, and identifies other issues that may play out as a result of the EU initiative.

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## Aircraft Hushkits: Noise and International Trade

May 8, 2000

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<http://wikileaks.org/wiki/CRS-RL30547>

## **ABSTRACT**

The European Union (EU) has adopted regulations that severely limit the introduction of “hushkit” equipped aircraft into the European aviation market. These regulations primarily affect U.S. aircraft and airlines, and are perceived to have caused U.S. interests significant economic harm. The United States has filed for relief from these regulations with the International Civil Aviation Organization (ICAO) which serves as the world’s aviation regulatory and standardization authority. This report discusses the EU regulation, the U.S. policy response, the congressional response, and identifies other issues that may play out as a result of the EU initiative.

# Aircraft Hushkits: Noise and International Trade

## Summary

A common, but inaccurate, definition of a hushkit characterizes it as a jet engine muffler. Instead, hushkitting, as the process is called, involves a combination of strategies designed to reduce aircraft noise. These strategies can include new technologies, redesigned engine enclosures, replacement engine components, entirely new engines, or a combination of any of the above.

On May 4, 2000, the European Union (EU) adopted a new aircraft noise regulation (number 99/925) that limits the future operation and/or ownership of hushkitted commercial jet aircraft within the EU. The regulation restricts the addition of hushkitted aircraft to EU airline fleet registry on the above date. And it precludes the operation of non-EU hushkitted aircraft not already serving the EU on the above date after 2002. As adopted, the vast majority of the aircraft affected by this regulation are of U.S. manufacture. The United States opposes the EU regulation on several grounds, but has nonetheless attempted to negotiate with the EU on the issue for over a year. On March 14, 2000, the United States filed a complaint with the International Civil Aviation Organization (ICAO) asking that this international aviation safety and regulatory body take action against the EU as a result of its regulation. Although discussions between the EU and the United States continue, it now appears that the issue is at an impasse.

Implementation of the hushkit non-addition rule could result in congressional action. In an earlier response to this issue the House considered legislation calling for an end to British Air and Air France Concorde service to the United States. More importantly, however, congressional action on hushkits might result in a much stronger future role for the Legislative Branch on aircraft noise issues, which to this point have been the primarily in the domain of the Executive Branch.

For the last 56 years the world aviation system has been remarkably stable in the sense that international rules were known well in advance and airlines and other players in the market place could plan for them. The hushkit standoff changes that. If the EU can unilaterally decide what the standards are for aircraft noise, then other aviation regulations could be opened up for unilateral review and revision. While the hushkit situation might blow away over time, there are other equally important aviation issues confronting the EU and the U.S., such as aircraft trade. With the hushkit spat as a backdrop, each of these potential areas of dispute becomes more potentially volatile. This report will be updated as warranted by events.

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# Aircraft Hushkits: Noise and International Trade

Aircraft noise became a major issue for much of the world with the introduction of the first generation of commercial jet aircraft in the 1950s and 1960s. Early commercial jets such as the Boeing 707 and Douglas DC-8, revolutionized airline travel, but they did so at a decibel level that often made those living near airports wish they hadn't been invented. Responding to growing complaints, while taking advantage of improving jet engine technology, the Department of Transportation, Federal Aviation Administration (FAA) implemented its first noise regulations in 1969 (Federal Aviation Regulations, Part 36). The international body concerned with aviation safety and regulation, the International Civil Aviation Organization (ICAO), followed suit by adopting similar standards in 1971 (ICAO Annex 16).

## Aircraft Noise Regulation

The international aircraft noise regulatory structure in place today is the result of decisions reached through the ICAO process. These regulations adopted a set of aircraft noise standards based on performance. The standards, referred to by the relevant chapters<sup>1</sup> in the ICAO Annex, are based on various takeoff, landing, and other operating performance parameters using noise measurements expressed in decibels. Chapter 1 aircraft included the earliest commercial jet aircraft mentioned in the preceding paragraph. Chapter 2 standards were adopted by ICAO as part of its 1971 actions and include the second generation of commercial jet aircraft, most notably the Boeing 727, Boeing 737, and Douglas DC-9. Taking advantage of further improvements in aircraft and aircraft engine technology, Chapter 3 standards were adopted by ICAO in 1977. In 1990, ICAO adopted regulations calling for a phase out of all Chapter 2 aircraft by 2002. At almost the same time, the Airport Noise and Capacity Act of 1990 (ANCA)(P.L. 101-508) called for a similar phase out in the United States, but required that this occur by December 31, 1999. Aircraft serving the United States are now all Chapter 3 compliant. The world fleet will become Chapter 3 compliant in 2002.

### Chapter 4

At the time Chapter 3 regulations were adopted, they were viewed as the best technically possible. Since then, however, technology has advanced to the point where many specialists believe it would be possible to move to a Chapter 4 standard.

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<sup>1</sup> In FAA regulations comparable definitions are referred to as "Stages." Because this report discusses an EU regulation it adopts the ICAO reference framework.

By way of example, several of the newest aircraft types in production are very quiet relative to early Chapter 3 aircraft such as the McDonnell Douglas MD-80 series aircraft. As a result, a significant number of individuals, airports, and governments have expressed an interest in moving toward a new Chapter 4 standard of some sort using the ICAO process.

Committees within the ICAO structure have been meeting for some time to discuss the aircraft noise issue, but have not, as of yet, been able to reach consensus as to what noise levels might be acceptable in a Chapter 4 requirement. Further, there is even less agreement as to how a Chapter 4 regulation might be phased in. Airlines heavily invested in recent vintage Chapter 3 aircraft are loath to move toward any new noise regime that would jeopardize that investment. As will be discussed later in this report, the hushkit dispute is directly related to the Chapter 4 process. And the United States and the European Union (EU) are principal players in an ongoing ICAO process that could address Chapter 4 requirements prior to the the scheduled international phaseout of Chapter 2 aircraft in 2002. Congress has taken a position on this international process. The Wendell H. Ford Aviation Investment and Reform Act for the 21<sup>st</sup> Century (FAIR21)(P.L. 106-513) provides specific guidance for U.S. participation in the Chapter 4 implementation debate, by directing U.S. negotiators to consider the competitive needs of United States airlines and aircraft manufacturers and protect them from being disadvantaged by potential Chapter 4 regulations.<sup>2</sup>

## **Hushkits: Why and Where**

A common, but incomplete, definition of a hushkit is to characterize it as a jet engine muffler. Instead, hushkitting, as the process is called, involves a combination of strategies designed to reduce aircraft noise. These strategies can include new technologies, redesigned engine enclosures, replacement engine components, entirely new engines, or a combination of any of the above.

The decision to buy hushkits is typically an economic one. Hushkits can be acquired for a couple of million dollars or less, whereas new Chapter 3 aircraft would likely cost in excess of \$30 million, which is the entry price for the smallest 100 seat commercial jet aircraft currently available. Commercial jet aircraft have an as yet undetermined life span that can run into decades depending primarily on usage. Chapter 2 aircraft, as mentioned earlier, were still in production into the 1980s, so a significant number of Chapter 2 aircraft have still not completed their potential economically useful lives.

In terms of noise, hushkitted aircraft meet Chapter 3 standards, but in some cases their performance is near the bottom of the acceptable noise range allowed by Chapter 3 standards.

In the early 1990s, all airlines, but especially U.S. airlines faced with the phased Chapter 2 phaseout requirements of ANCA, had to decide whether to buy new aircraft or hushkit at least part of their existing fleets. At the time the airline industry

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<sup>2</sup> P.L. 106-181. Title VII. Section 726.

was suffering record financial losses. For many carriers, especially in the United States, the choice of hushkits over new aircraft was relatively easy. In addition, there was some concern that even if the airlines had the funds, the aircraft manufacturing industry was not in a position to supply all of the Chapter 3 aircraft needed before the phaseout deadlines. Finally, the low fuel prices of the 1990s, played a role in tipping the economic balance toward hushkitting and away from more fuel efficient new aircraft.

For all practical purposes the majority of aircraft that will be hushkitted already are. The vast majority of these are single aisle aircraft like the 727. According to recent information, 1,634 single aisle aircraft have been hushkitted out of a total world fleet of 8,500 or so aircraft.<sup>3</sup> Of these hushkitted aircraft 1,361 were in service in North America, primarily in the United States, 186 were in service in Europe, and the relatively small remainder were scattered throughout other parts of the world.

In the last few years several major U.S. airlines have ordered significant numbers of new Chapter 3 aircraft. Some of these aircraft are for business growth, but a large percentage are replacement aircraft for the hushkitted portions of the airlines' fleets. Hence there is an expectation that a significant number of hushkitted aircraft will be available in the used aircraft market place in the next few years.

An exception to much of the discussion to this point is the air cargo industry. Air cargo aircraft typically fly much less in an average year than their passenger-carrying counterparts. As a result, cargo aircraft have a much longer nominal life span. Used aircraft have been very popular with cargo carriers and the economics of a hushkitted aircraft are very attractive to many cargo firms because they can buy them for a fraction of the cost of a new aircraft and fly them for a long time. FedEx, for example, was a major purchaser of used 727s, which were subsequently hushkitted.

## The European Initiative

Airport noise issue appears to be an issue of greater public concern in Europe than in the United States. Airport noise in the European discussion is also bundled into ongoing environmental policy discussions about emissions and greenhouse gases, whereas in the United States, noise has been treated more or less as a separate issue. European governments claim to be under considerable pressure from large populations living near major airports to reduce both noise and emissions. By one estimate 15% of the EU's population is impacted by aircraft noise.<sup>4</sup> The environment plays a much larger role in the politics of the EU than it does in the U.S. And Environmental/Green political parties specifically concerned about noise and

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<sup>3</sup> Baker, Colin and George, Alan. *The Next Chapter. Airline Business*. March 2000. p. 57.

<sup>4</sup> Commission of the European Communities. *Air Transport and the Environment*. Communication from the Commission to the Council, The European Parliament, The Economic and Social Committee and The Committee of the Regions. Brussels. December 1, 1999. p. 5.



emissions play a significant role in the governance of several European nations and are well represented in the European Parliament.

The Chapter 2 phase out deadlines notwithstanding, the EU felt a need to further demonstrate its ability to deal with the noise issue in the near term. The EU has been pushing for adoption of Chapter 4 standards for a number of years through the ICAO process and concluded that the U.S. was blocking its efforts.<sup>5</sup> In the EU's words:

In the European Community, noise around airports is at the heart of increasing tensions: air transport activities are threatened by legitimate expectation of people living around airports not wishing to be faced with a further deterioration of the noise nuisance. The European Community considers it necessary to provide a reasonable and short-term answer to legitimate environmental concerns in order to prevent further proliferation of different local rules at individual airports and thereby ensuring continued growth and a stable operating environment for all air carriers flying into European airports.

....The so-called hushkit EU-Regulation targets concerns in relation to aircraft noise at and around Community airports. It foresees the interdiction for Community member states to add aircraft to their registers which meet the requirements of ICAO's Chapter 3 only by virtue of re-certification. These aircrafts are considerably noisier than genuine Chapter 3 aircraft and make, therefor, a disproportionate contribution to the noise climate at airports.<sup>6</sup>

Europe, as mentioned above, has a very small number of hushkitted aircraft in its domestic fleets and no domestic hushkit manufacturing industry. There also exists a concern within Europe that a significant portion of the U.S. hushkitted fleet soon to be made excess by new aircraft deliveries would be shipped to the European market. Against this backdrop, hushkitted aircraft appear to have become the target of opportunity for those within Europe seeking short term noise relief with limited EU economic and political cost. It also appears that some European's saw the hushkit issue as a way to jumpstart the Chapter 4 process.

## The EU Hushkit Proposal

In March 1998 the European Commission proposed that the European Parliament adopt legislation that would ban the addition of hushkitted aircraft into European airline fleets. This regulation proposed that these so called "non-addition" regulations should become effective on April 1, 1999. For non-EU States, the non-addition rule would take effect in 2002 and preclude the use of hushkitted aircraft not already in their fleets as of the earlier date. Aircraft not complying with these non-addition rules would be denied access to European airports at this time. The European Parliament approved the ban in mid-February 1999.

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<sup>5</sup> European Union. *Aircraft Noise: The Hushkits*. Press Information Pack. Brussels. March 12, 1999. p. 1.

<sup>6</sup> European Union. *Actions against noise nuisance in the airports: the EU deeply regrets the US decision to file Article 84 Action with ICAO*. IP/00/26. Brussels. March 15, 2000.

Controversy over the proposal did not arise immediately. There seems to have been a delay in understanding the potential implications of the EU's action in the United States and in U.S. industry. Toward the end of 1998, however, the issue became very visible and U.S. interests responded angrily to the EU action which was viewed as contrary to international aviation regulation. In early 1999 the United States attempted to delay implementation of the regulation and at the same time placate the EU's noise concerns by suggesting further discussion on a Chapter 4 standard.

These efforts were successful at least in part. On March 29, 1999, the EU extended the deadline to April 29, 1999, to allow the possibility of further discussion with the United States. The European Parliament adopted the rule on April 29, 1999 (Council Regulation 99/925). Implementation of the rule was delayed, however, until May 4, 2000, thereby providing for a temporary respite from the potential trade problems engendered by the regulation.

## Performance versus Design Standards

The EU regulation has a number of features, but seems to rest primarily on two basic premises, both of which are controversial in the context of existing international regulation. The first of these premises is that hushkitted aircraft are not true Chapter 3 aircraft in that they were originally certified as Chapter 2 aircraft. Hence, in this view, these are re-certified aircraft, which is a classification that the EU contends does not exist within the ICAO regulatory construct. That these aircraft meet the noise performance measurement standards in the regulation does not, according to the EU, mean that they have to accept them as Chapter 3 aircraft. This is irrespective of the fact that the EU has at times acknowledged that these aircraft meet international standards:

Although such retrofitted aircraft formally comply with the EU legislation (directive 92/14/EEC) and the most stringent international noise standards (Chapter 3), they produce, for comparable types of aircraft, much more noise than genuine Chapter 3 aircraft.<sup>7</sup>

The second premise of the EU regulation is its applicability to hushkitted aircraft having low bypass engines with a bypass ratio of less than 3.0. The EU believes that these aircraft are inherently noisier than the more modern high bypass ratio engines on "true" Chapter 3 aircraft. In addition, the EU views low bypass engines as environmentally unfriendly because of their higher levels of emissions.

By using the bypass ratio standard the EU seems to be creating a noise regime based on engine design standards rather than the performance standards detailed in ICAO regulations. The EU does not appear to dispute this charge directly. Rather,

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<sup>7</sup> European Union. *Commission takes action to combat aircraft noise*. IP/98/251. Brussels. March 13, 1998.

the EU contends that bypass ratio data is an effective tool for distinguishing noisier hushkitted aircraft and that the data itself is scientifically sound.<sup>8</sup>

The EU further argues that use of bypass ratios does not discriminate against U.S. manufactured aircraft and hushkits, but applies to certain EU produced aircraft as well. Finally, the EU argues that while bypass ratios may not be specifically mentioned in the ICAO regulations, they have been used elsewhere to identify noisier aircraft. Regardless of the EU's statements, however, a reading of its own documents shows that most of the hushkitted aircraft with bypass ratios of less than 3.0 are of U.S. manufacture.<sup>9</sup>

## Opposition within the EU

Surprisingly, to some, Airbus does not support the EU regulation.<sup>10</sup> Airbus is concerned about how the regulation might disrupt the existing international aircraft noise regime. It is concerned primarily that its airline customers want certainty, that is, that they will be able to use their aircraft to their fullest economic potential, without fear that the actions of one nation or a group of nations might interfere with this goal.

Omega Air of Ireland is engaged in the installation of hushkits on Boeing 707 aircraft for the air freight market, and has been for some time. The EU regulation would essentially end the firm's ability to participate in this market. Omega has taken legal action against the EU regulation and has received legal judgements in its favor from both the Irish High Court and the English High Court. Both of these Courts have found that the EU hushkit rule is inconsistent with ICAO regulations and that provisions of the EU rule may be at odds with EU law. As a result, both national courts have referred the case to the European Court of Justice for resolution.

## The U.S. Policy Response

The United States believes that the EU is creating an aircraft noise regulatory framework that is at odds with international rules on noise reduction agreed to by the International Civil Aviation Organization (ICAO), and that the EU is rejecting the provisions of the Chicago Convention that have governed international aviation since 1944. As written by the EU, its legislation applies almost exclusively to aircraft and aircraft engines produced in the United States. As mentioned earlier, all major aircraft engine hushkit producers are U.S. firms. All European Airbus aircraft are Chapter 3 certified. There are also no major European hushkit producers. As a result, the

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<sup>8</sup> European Union. *Aircraft Noise: The Hushkits*. Press Information Pack. Brussels. March 12, 1999. p. 3.

<sup>9</sup> Ibid. p. 9.

<sup>10</sup> *Washington Letter on Transportation*. In Brief... Hushkits: Nowhere Fast Again. February 28, 2000. p.4.

United States believes the legislation is discriminatory and could cause serious economic damage to U.S. firms.

In the period since April 1999, the United States and EU met often to try to find some common ground on the hushkit issue. In March 2000 it was rumored that the EU and United States were in fact close to a settlement, the details of which, were not specifically known. For whatever reason, these negotiations foundered.

Throughout 1999 and into 2000, U.S. aviation interests sought a formal filing by the United States to ICAO seeking relief from the EU actions. As long as the United States felt that it could achieve a resolution through negotiation, it held back from this filing. On March 14, 2000, believing negotiations were going nowhere, the United States filed a disagreement under ICAO Article 84 provisions.

The EU has reacted to this filing with “regret.” The EU has more or less stated that it cannot reach any accommodation with the United States unless the United States withdraws its ICAO action. The United States has countered that it is unwilling to drop the filing without some firm action on the part of the EU. The result of this situation is the current stalemate in which the U.S. ICAO filing has gone forward and the EU has implemented its regulation.<sup>11</sup>

### **The United States Article 84 Filing**

On March 14, 2000, the United States filed a motion with ICAO under Article 84 of the Convention on International Civil Aviation (better known as the Chicago Convention) seeking relief from the EU’s regulation<sup>12</sup>. The U.S. case is based on several specific premises including, but not limited to: that the EU has adopted a noise standard that does not comply with ICAO regulations; that the EU has adopted a policy that discriminates against aircraft on the basis of nationality of registry; and that the impact of the EU regulation has a “disparate impact on U.S. interests.”

Specifically, the United States contends that the EU’s adoption of a design standard for noise regulation is completely at odds with the performance standards called for in ICAO regulations. The United States in its filing, contends that some of the elements in the hushkit regulations are inconsistent. For example, there are new Chapter 3 aircraft in service with the same bypass ratio precluded by the regulation that are not subject to it.

The United States believes that the EU regulation clearly discriminates on the basis of the national registry of an aircraft, to wit: hushkitted aircraft already in service

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<sup>11</sup> European Union, United States at Impasse over Hushkits. *World Airport Week*. April 13, 2000.

<sup>12</sup> United States Department of State. *Memorial of the United States of America: Disagreement Arising under the Convention on International Civil Aviation done at Chicago on December 7, 1944*. Before the Council of the International Civil Aviation Organization (ICAO) Under the ICAO Rules for the Settlement of Differences (Doc. 7782/2). March 14, 2000. 17 p.

as part of an EU-owned airline fleet are not subject to the regulation; and foreign aircraft subject to the non-addition rules are also clearly identified. In effect the EU has created a system that can deny access to its markets without regard to the performance of the aircraft. Such a system, in the U.S. view, clearly conflicts with the Chicago Convention provisions that countries not create regulations for noise, or other aviation activities, that discriminate on the basis of nationality.

Finally, as discussed in the next section, the EU regulation is written in such a way that almost all of its adverse economic consequences will fall on U.S. firms. From the U.S. perspective the selection of a design standard on a product not produced in the EU is unfair in its distribution of economic harm and benefit. For example, the value of a hushkitted aircraft that cannot be sold or flown into the European market is likely reduced. At the same time a hushkitted aircraft with legal access to the European market will at least hold its value and could, under some circumstances, become more valuable.

The ICAO investigation is supposed to last 90 days. At the end of that period the United States hopes that ICAO will provide it with some remedy to the EU regulations. A potential complication for the U.S. filing, however, is that the EU itself is not a member of ICAO. All ICAO members are countries, hence any redress that might be granted to the United States would apply to the ICAO member nations of the EU. There is also therefore some question about how the ICAO mechanism can be used to deal with an EU rulemaking.

## **Economic Damage**

The U.S. aerospace industry has consistently estimated that the EU's regulations have cost U.S. industry approximately \$2 billion. The majority of this sum is for lost hushkit sales to Chapter 2 aircraft. A smaller but nonetheless significant component of this estimate is the decrease in value of already hushkitted aircraft restricted from the EU market by the non-addition rule. The EU and others in the hushkit debate believe that this estimate is overblown and U.S. industry has provided few specifics as to how the \$2 billion figure was derived. Nonetheless it would be difficult to believe that the EU regulation is not capable of inflicting significant economic harm to an industry that has been unexpectedly deprived of access to a potentially important market.

There are many factors that influence the value of used aircraft including, age, use, condition, original cost, and fuel efficiency. The EU hushkit regulation in and of itself may not be the reason that a particular aircraft might or might not be sold in the world market. The fact is that the used aircraft market is already devaluing older commercial jet aircraft and a restricted EU market place cannot but reduce the options of those seeking to sell their aircraft:

Owners of older Stage 2 or hushkitted aircraft need to consider this carefully. As operating airworthy aircraft B727s, B737s, and DC-9s are worth \$2 million to \$3 million, but as candidates for disassembly the same aircraft falls below \$1 million – chiefly the salvage value of the engines. In the next several years' owners who

are retiring their remaining B727s, B737s, and DC-9s are going to have to face this fact. Most of the older aircraft will have no value except for parts.<sup>13</sup>

## The Congressional Response

There is significant congressional support for the U.S. position on this issue. Several Members of Congress have indicated their desire for the Administration to take an even stronger position on the dispute. For example, several Members supported an ICAO Article 84 submission well before the Administration decided to submit it.

Although Congress has yet to complete any specific legislative action on hushkits, it has created a framework for further action. The House acted first on the issue when it passed H.R. 661, a bill “to direct the Secretary of Transportation to prohibit the commercial operation of supersonic transport category aircraft that do not comply with stage 3 noise levels if the European Union adopts certain aircraft noise regulations” on March 3, 1999. The only aircraft that fits this definition is the Concorde, and its only regularly scheduled routes are between New York and London, and New York and Paris. The bill is viewed by its supporters as a way to retaliate for the EU regulations if they are implemented. A similar bill, S. 405, was introduced in the Senate but not considered.

On September 27, 1999, the House passed a resolution (H.Con.Res. 187) that calls on the Clinton Administration to use “all reasonable means” to preclude EU implementation of its hushkit ban. The Senate had approved a similar resolution as part of its version of the FY2000 Commerce, Justice, and State Appropriation (S. 1217, Section 212). The resolution is supported by the U.S. Aerospace Industries Association (AIA), but was opposed at that time by the Clinton Administration, which hoped to ameliorate the situation through further negotiations.

In addition, the Aviation Subcommittee of the House Committee on Transportation and Infrastructure held a Hearing on the issue on September 9, 1999. Witness testimony and the statements of Members overwhelmingly opposed the European position.

## Hushkits in the Context of U.S./EU Aircraft Trade

For some Members of Congress, the Administration, and some in the U.S. aviation industry, the dispute about hushkits is part of a much larger debate about how the EU appears to support and promote its commercial aircraft industry, and more specifically its large aircraft manufacturer Airbus Industrie. In this view, the EU hushkit regulations are an element of a broader EU policy to give its aircraft industry a leg up in the world market. Or, in the words of an executive of a U.S. aircraft engine manufacturer:

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<sup>13</sup> A Time to Face Reality. *MBA Aviation Oracle*. January 2000. p. 19.

The EU non-addition rule is nothing more than a protectionist measure masquerading as an environmental initiative.<sup>14</sup>

In March 2000, the United Kingdom announced that it was willing to provide the equivalent of \$837 million in low interest loans for a new very large transport aircraft, the Airbus A3XX.<sup>15</sup> This 500 - 800 seat aircraft is specifically designed to compete directly with, and at the same time, leapfrog the reigning luminary of the large aircraft market, the Boeing 747. Airbus' directors gave the go-ahead to market the aircraft to prospective customers in December 1999. Development of this aircraft could require an investment of \$12 billion or more. Airbus expects that its member firms will contribute 60% of this sum, with the remaining 40% coming from subcontractors. State-aid, which is limited to one-third of the project's total cost, by bilateral agreement, would be used to assist the Airbus partner firms. Boeing does not perceive that an adequate market exists to develop an aircraft of this size and is instead studying possible stretches of its 747 aircraft.

Airbus has not yet officially launched the A3XX, but is expected to do so later this year. Some observers believe that the level of state-aid needed for this project would likely violate a 1992 Agreement on Government Support for Civil Aircraft between the United States and the EU.

In addition to the hushkit and new aircraft disputes, there has also been trade friction between the United States and the EU on issues such as aircraft certification, especially regarding long-range over-water operation of two engine jet aircraft.

Representative William Lipinski, Ranking Minority Member of the House Aviation Subcommittee of the Committee on Transportation and Infrastructure, has taken a lead role in promoting the view that Europe has more on its mind than airport noise in bringing up the hushkit issue at this time:

The evidence is clear. Europe is engaged in a concerted effort to protect and promote its aviation industry at the expense of the U.S. aviation industry....

....the U.S. government must send a clear message that the United States is serious about protecting its aviation industry against unfair, unilateral trade actions. To begin with, it is critical that the U.S. government enforces its rights under international trade agreements. We must use all the tools provided by GATT, WTO, ICAO, and other international forums to fight unfair European actions such as unilateral trade restrictions and illegal subsidization practices. The U.S. must act quickly and decisively when faced with such intolerable action.

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<sup>14</sup> Comments attributed to Ruth Harkin, Senior Vice President, United Technologies. As quoted in: Norris, Guy. USA cries foul play. *Flight International*. April 18 - 24, 2000. p. 32.

<sup>15</sup> Sparaco, Pierre. U.K.'s A3xx Aid Stirs Transatlantic Dispute. *Aviation Week & Space Technology*. March 20, 2000. p. 47.

## Observations

Implementation of the hushkit non-addition rule may very well result in Congressional action. Congress could follow through on legislation already passed in the House and put an end to British Air and Air France Concorde service to the United States. This would deprive the Concorde of its only regularly scheduled markets and relegate the aircraft to an unknown long-term fate. More importantly, however, congressional action on hushkits might result in a much stronger future role for the Legislative Branch on aircraft noise issues, which to this point have been the domain of the Executive Branch.

The EU has pushed much harder for a Chapter 4 determination in the last half decade than has the United States. There are some individuals who perceive the EU's hushkit regulations as partial payback for what they view as U.S. obstructionism on adopting a Chapter 4 standard.<sup>16</sup> There has been some speculation that the EU hushkit initiative was actually an attempt to jumpstart the Chapter 4 process. The continued presence of the hushkit debate, however, may be having a negative effect on the EU's goal of a near-term Chapter 4 decision. There is a growing U.S. view that it will be hard to separate the two issues as part of the ICAO process.<sup>17</sup>

The Airport Noise and Capacity Act of 1990 (ANCA) mentioned earlier in this report as the basis for U.S. phaseout of Chapter 3 aircraft, also contained a prohibition on new airport noise regulations affecting specific aircraft noise restrictions in exchange for a date certain move to an all Chapter 3 U.S. fleet. The EU hushkit regulation contains no similar provision. European airports already impose a host of differing operating restrictions on hushkitted aircraft, such as curfews and European airports also impose differential landing charges on noisier aircraft, a practice that is not permitted in the U.S. Airports, even in the U.S., are not enamored with hushkitted aircraft, and put pressure on governments to limit their operation. It appears that European airport operators have played a significant role in formulating the EU hushkit regulation. It would also appear that these same airports are well positioned to take action on their own to possibly price hushkitted aircraft out of their respective markets regardless of the long term outcome of the hushkit dispute.

It should be pointed out that not everyone views the hushkit dispute as an important issue. Morten Byer & Agnew, a firm that specializes in the valuation of commercial jet aircraft, believes that the market for hushkitted aircraft, especially at the moment, is quite small.<sup>18</sup> They also believe that the EU's fear that a large number of hushkitted aircraft would be added to the EU, or non-EU fleets, serving European markets is overblown. With large numbers of Chapter 3 aircraft on order world-wide it seems unrealistic to expect that the demand for hushkitted aircraft would increase significantly at the same time.

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<sup>16</sup> Feldman, Joan M. Stalling for time. *Air Transport World*. April 2000. p. 47.

<sup>17</sup> EU Hushkit Ban Could Impede Stage 4 Discussions, FAA says. *Aviation Daily*. April 20, 2000. p. 1.

<sup>18</sup> *The MBA Aviation Oracle*. Much Ado About Not Much. March 2000. p. 5.



In the spring of 2000, the United States and the EU are essentially locked into their respective positions by national political considerations. Given the current environment, it seems unlikely that either side is in a position to make the first move to reach a settlement on the issue. The ICAO process seems likely, therefore, to run its course. If the United States wins its filing it is unclear as to how ICAO could provide a suitable remedy for a hushkit industry that has already sustained noticeable economic damage. If the EU prevails, it is quite possible that the actual road to Chapter 4, as mentioned above, will become more tedious as each side cautiously considers its long term political and economic needs.

For the last 56 years the world aviation system has been remarkably stable. International rules were known well in advance and airlines and other players in the market place could plan for them. Now, the EU may have opened Pandora's box, if just a little, with its hushkit regulation. If the EU can unilaterally decide what the standards are for aircraft noise, then it isn't a far stretch to consider other aviation regulations that could be subject to the whims of national political expediency. While the hushkit situation might quiet down over time, there are other equally important aviation issues confronting the EU and the United States such as aircraft trade. With the hushkit spat as a backdrop, these areas of dispute become potentially more volatile.