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20 Attorneys for Plaintiff
21 TMC AEROSPACE, INC.

22 UNITED STATES DISTRICT COURT
23 CENTRAL DISTRICT OF CALIFORNIA
24 WESTERN DIVISION

25 TMC AEROSPACE, INC.,

26 Plaintiff,

27 v.

28 ELBIT SYSTEMS LIMITED, and
ELBIT SYSTEMS OF AMERICA
LLC,

Defendant.

Case No. 2:15-cv-07595-AB-E

**FIRST AMENDED COMPLAINT
FOR:**

- 1. **PATENT INFRINGEMENT**
- 2. **MISAPPROPRIATION OF
TRADE SECRETS**

JURY TRIAL DEMANDED

Plaintiff TMC Aerospace, Inc. hereby submits this First Amended Complaint against Defendants Elbit Systems Limited and Elbit Systems of America LLC (“Defendants” or “Elbit”).

1 **THE PARTIES**

2 1. Plaintiff TMC Aerospace, Inc. (“TMC”) is a Nevada corporation with
3 its headquarters at 10850 Wilshire Boulevard, 12th Floor, Los Angeles, CA 90024.

4 2. Defendant Elbit Systems Limited (Elbit Ltd.) is an Israeli company
5 headquartered in Ness Zionna, Israel.

6 3. Defendant Elbit Systems of America LLC (“ESA”) is a Delaware
7 limited liability company with its principal place of business at 4700 Marine Creek
8 Parkway, Fort Worth, TX 76179. Elbit is a wholly-owned subsidiary of Elbit
9 Limited. .

10 **JURISDICTION AND VENUE**

11 4. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§
12 1331 and 1338(a), because this action arises under the patent laws of the United
13 States, 35 U.S.C. §§ 101, *et seq.* This Court also has subject matter jurisdiction
14 under 28 U.S.C. § 1332(a) over TMC’s state law claims because there is complete
15 diversity of citizenship between TMC and Elbit, and the matter in controversy
16 exceeds \$75,000, exclusive of interests and costs. The Court also has supplemental
17 jurisdiction over TMC’s state law claims under 28 U.S.C. § 1367(a).

18 5. Venue is proper in this federal district pursuant to 28 U.S.C. §§
19 1391(b)-(b) and 1440(b) in that Elbit has done business in this District, has
20 committed acts of infringement and misappropriation of trade secrets in this
21 District, and continues to commit these acts in this District, entitling TMC to relief.
22 The acts of infringement include manufacturing or causing to be manufactured
23 infringing products in Temecula, California, which is located in this District.

24 6. This Court has personal jurisdiction over Elbit by virtue of Elbit’s
25 actions within this State and judicial district, and their systematic and continuous
26 contacts with this State and judicial district.

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28

1 **FACTUAL BACKGROUND**

2 **A. Electro-Expulsive De-Icing Systems**

3 7. This case involves technology critical to unmanned aerial vehicles
4 (“UAVs”). Layers of ice can build up on an aircraft’s leading surfaces,
5 dramatically affecting its aerodynamics and resulting in decreased performance or
6 even complete loss of control. Lightweight UAVs are particularly susceptible to
7 icing problems, and the potential damage icing conditions can cause.

8 8. In the 1980s, NASA engineers, researching the issue of de-icing for
9 space flight, developed a concept known as electro-expulsive de-icing. As
10 described by NASA:

11 NASA research has led to a variety of deicing technologies that
12 are now making aviation safer for all aircraft. One such
13 solution, invented by Ames Research Center engineer Leonard
14 Haslim, employs a pair of conductors embedded in a flexible
15 material and bonded to the aircraft’s frame—on the leading
16 edge of a wing, for example. A pulsing current of electricity
17 sent through the conductors creates opposing magnetic fields,
18 driving the conductors apart only a fraction of an inch but with
19 the power to shatter any ice buildup on the airframe surface into
20 harmless particles. Haslim called his invention an electro-
21 expulsive separation system (EESS), or the “ice zapper,” and it
22 earned him NASA’s “Inventor of the Year” award in 1988.¹

23 9. In 1995, Richard A. Olson and Mark R. Bridgefurd founded Ice
24 Management Systems (“IMS”) to develop commercially acceptable de-icing
25 systems. IMS licensed NASA’s electro-expulsive de-icing technology concept and
26 developed it for full-scale, practical use in aerial vehicles. IMS performed years of
27 research and development, and invested millions of dollars, to transform NASA’s
28 concept into UAV-scale, commercially viable de-icing systems. For over ten years,
IMS and its successors have manufactured innovative electro-expulsive de-icing

¹ See https://spinoff.nasa.gov/Spinoff2010/ps_2.html (last visited August 17, 2015).

1 systems for unmanned-aerial vehicles.

2 10. IMS has developed patented technology and trade secrets to
3 implement these systems, including United States Patent No. 9,108,735 (the “’735
4 Patent”). IMS’s trade secrets include proprietary design drawings, manufacturing
5 techniques, and manufacturing equipment including moulds and jigs (collectively,
6 “Confidential Information”). IMS’s products included de-icing systems practicing
7 its trade secrets, proprietary designs, and the claims of the ’735 patent.

8 11. IMS took precautions to maintain the confidentiality of this
9 information, including marking its proprietary designs and manufacturing process
10 documents as Confidential.

11 **B. The ’735 Patent**

12 12. The ’735 patent, titled “Electro-Expulsive De-Icing System for
13 Aircraft and Other Applications,” was duly issued by the U.S. Patent and
14 Trademark Office on August 18, 2015. The named inventors of the ’735 patent,
15 Richard A. Olson and Mark R. Bridgeford, are the founders of IMS. TMC wholly
16 owns the ’735 patent by assignment.

17 13. The ’735 patent describes electro-expulsive de-icing systems for
18 aircraft using electrically produced mechanical motion to knock accumulated ice
19 off a surface being de-iced. Electro-expulsive de-icing systems convert electrical
20 current to mechanical motion using devices called “actuators” installed beneath the
21 skin of aircraft structures, such as the leading edges of wings. An onboard
22 electronic control system passes large current pulses through the actuators in order
23 to produce mechanical motion that creates shock waves in the skin of the aircraft
24 structure.

25 14. An electro-expulsive de-icing system may pass electrical current
26 through an aircraft structure using a ribbon of conductive material folded on itself
27 in parallel strips. When current passes through the ribbon, the current flows in
28 opposite directions through adjacent strips, such that they mutually repel each other

1 and cause shock waves in the aircraft structure. The shock waves result in
2 dislodgement of ice that has accumulated on the skin of the aircraft. This
3 configuration may, however, have less impact than desired for adequate ice
4 removal. In addition, the ribbons of conductive material may experience fatigue
5 failure due to the rigid attachments at the loop ends.

6 15. The '735 patent describes and claims actuators and methods using
7 flexible connectors to allow each strip of electrically conductive material in a de-
8 icing system to move without the limitations of the prior rigid attachments,
9 providing for greater ice removal and less fatigue failure. The claims and methods
10 in the '735 patent provide de-icing systems which meet the requirements of
11 commercial and military UAVs.

12 **C. TMC's Acquisition of IMS Personal and Intellectual Property.**

13 16. In November 2009, TMC and IMS entered into agreements including
14 (a) an Exclusive License Agreement; (b) a Security Agreement; (c) a Patent
15 Security Agreement; and (d) a Promissory Note.

16 17. The License Agreement granted TMC an exclusive license to use
17 IMS's intellectual property relating to IMS's electro-expulsive de-icing systems
18 technology, primarily for installation on commercial aircraft.

19 18. The Security Agreement and the Patent Security Agreement, granted
20 TMC a lien on all of IMS's tangible and intangible personal property, including
21 IMS's intellectual property. The Agreements provided that, in the event of breach,
22 TMC has the right to accelerate all amounts due and foreclose on and take
23 possession of its collateral. By the terms of the Agreements, all principal, interest,
24 fees and costs became due in November 2012, but IMS did not pay TMC.

25 19. On September 24, 2013, IMS filed for bankruptcy protection. On
26 March 3, 2014, the bankruptcy court authorized TMC to foreclose upon IMS's
27 property. Subsequently, TMC foreclosed on IMS's property. TMC is the
28 successor-in-interest to all of IMS's personal property including all goods

1 (including inventory, equipment, and any accessions thereto), documents, and
2 contract rights; and all intellectual property, including patents, patent applications,
3 other intellectual property rights, and all rights to sue for past, present, and future
4 infringement. IMS property is therefore also referred to interchangeably herein as
5 TMC property.

6 **D. Elbit's Unauthorized Manufacturing of the Claimed Inventions of the**
7 **'735 Patent.**

8 20. In August 2007, Elbit Ltd. entered into a contract with IMS ("Purchase
9 Contract") for the supply of de-icing systems for unmanned aerial vehicles for the
10 United Kingdom's Watchkeeper program. Silver Arrow Lp, a wholly owned
11 subsidiary of Elbit Limited, was the contractor in the agreement, and IMS served as
12 the subcontractor.

13 21. Pursuant to the Purchase Contract, IMS was wholly responsible for the
14 design, development, manufacture, demonstration and supply of the de-icing
15 systems. The Purchase Contract expressly prohibited Elbit from manufacturing,
16 stating, "Nothing herein shall include the right for the Contractor to manufacture or
17 redesign." The Purchase Contract further provided that IMS would "remain the
18 sole owner of its proprietary Intellectual Property"

19 22. In July 2009, Elbit Ltd. and IMS entered into an Amended Agreement.
20 The Amended Agreement stated that "the Parties shall enter into an escrow
21 agreement (the "Escrow Agreement") to secure the proprietary technology and
22 related Intellectual Property of the Subcontractor used under the Purchase Contract,
23 in order to enable the continuance and completion of the performance of the
24 Purchase Contract."

25 23. Elbit Ltd, ESA, and IMS (along with the prime contractor to Elbit,
26 UAV Tactical Systems Ltd), entered into an Escrow Agreement. The agreement
27 provides that the materials in the escrow account could be released to the
28

1 Depositors on various conditions, including breach of the Purchase Contract or
2 bankruptcy. Upon release, Elbit could use the escrow materials “for the sole
3 purpose of continuing and securing the performance of the Purchase Contracts and
4 future applicable contracts.” The Escrow Agreement further requires any party that
5 gets the escrow materials to maintain its confidentiality. IMS placed substantial
6 confidential information and manufacturing equipment related to its de-icing
7 systems into escrow pursuant to the Escrow Agreement.

8 24. At some point prior to TMC’s foreclosure of IMS’s property, the
9 materials in escrow were released to Elbit. Elbit thus acquired TMC’s (formerly
10 IMS’s) proprietary specifications and designs, which describe how to manufacture
11 the actuators claimed in the ’735 patent, for a limited purpose under the escrow
12 agreement, to secure the property.

13 25. TMC further alleges that the following factual allegations in this
14 paragraph will likely have evidentiary support after a reasonable opportunity for
15 further investigation or discovery, pursuant to Federal Rule of Civil Procedure
16 11(b)(3). In addition to the property in escrow, Elbit took other IMS property from
17 IMS facilities in Temecula, CA, including manufacturing equipment, test
18 equipment, and other property to which Elbit had no right to possession or
19 ownership. Such property should have remained IMS property which TMC had
20 secured as collateral for its loan, and to which TMC is now the rightful owner.

21 26. Elbit never acquired ownership rights to any IMS property; all such
22 property rightfully belongs to TMC. In addition, Elbit never acquired rights to
23 manufacture under TMC’s IP or to practice TMC’s trade secrets.

24 27. Elbit acquired TMC’s proprietary specifications and designs, which
25 describe how to manufacture the actuators claimed in the ’735 patent, for a limited
26 purpose. Elbit has, however, used TMC’s proprietary specifications and designs
27 beyond this authorization. For example, Elbit has asserted ownership over TMC’s
28 property, and Elbit manufactures or causes to be manufactured electro-expulsive

1 de-icing systems using TMC's proprietary information and equipment.

2 28. In addition, ESA has hired four IMS employees to aid it in
3 manufacturing de-icing systems based on TMC's proprietary designs and
4 equipment. One such employee, Mike Kidd, was Manager of Composites at IMS
5 prior to the IMS bankruptcy. Mr. Kidd now runs Elbit's Temecula operation
6 manufacturing the infringing de-icing systems.

7 29. ESA manufactures or causes to be manufactured the infringing de-
8 icing systems in Temecula, California, which is located in this District. ESA's
9 manufacturing and commercialization of TMC's proprietary de-icing systems
10 directly infringes the '735 patent.

11 30. ESA has caused to be manufactured infringing de-icing systems by
12 providing TMC's proprietary designs to a third party for manufacture.

13 31. TMC further alleges that the following factual allegations in this
14 paragraph will likely have evidentiary support after a reasonable opportunity for
15 further investigation or discovery, pursuant to Federal Rule of Civil Procedure
16 11(b)(3). Elbit has offered for sale electro-expulsive de-icing systems using the
17 patented technology for additional military UAVs, without authorization from
18 TMC. For example, Elbit has offered for sale in the United States infringing de-
19 icing systems prior to and during the term of the '735 patent, including to the
20 French and Polish militaries, without authorization from TMC.² These systems
21 would be manufactured within the United States by Elbit, resulting in further
22 infringement.

23 **E. Elbit's Knowledge of the Intellectual Property in Issue and TMC's**
24 **Ability to Manufacture.**

25 32. TMC informed Elbit of its ownership over IMS's former patents, trade
26 secrets, and other property at least by March 2015. TMC explained that TMC had

27 ² See <http://www.flightglobal.com/news/articles/analysis-thales-maintains-strong-presence-in-european-unmanned-413169/> (last visited August 17, 2015).

1 an ownership interest over all Elbit property, and that Elbit's use of TMC's
2 proprietary designs to manufacture de-icing systems would infringe on TMC's
3 rights. TMC specifically provided Elbit with a comprehensive description of the
4 pending patent application that would become the '735 patent, and that
5 manufacturing de-icing systems using TMC's proprietary designs would infringe
6 the patent once it issued.

7 33. Elbit is aware of TMC's ability to manufacture the de-icing systems.
8 TMC has been successfully manufacturing de-icing systems for another customer
9 using the technology in the '735 patent. Thus, Elbit no longer has a right, to the
10 extent it ever had any right, to continued possession of any property acquired under
11 the Escrow Agreement because the property no longer needs to be secured by Elbit
12 in order to ensure that the subject de-icing systems can be manufactured.
13 Elbit should relinquish the property to its rightful owner, TMC, who is capable of
14 performing under the contract. TMC is also entitled to return of any other property
15 taken by Elbit outside the Escrow Agreement, whether or not it is proprietary or
16 trade secret material. Because TMC can manufacture the subject de-icing systems,
17 Elbit no longer needs to possess Elbit's proprietary information and trade secrets
18 for the purpose of continuing and securing the performance of the purchase
19 contracts. By continuing to possess and manufacture, Elbit is improperly using the
20 TMC trade secrets and improperly asserting ownership over the property.

21 COUNT ONE

22 **(Infringement of U.S. Patent No. 9,108,735)**

23 34. TMC realleges and incorporates by reference each and every allegation
24 contained paragraphs 1-33 of this First Amended Complaint as though set forth
25 fully herein.

26 35. On August 18, 2015, the United States Patent and Trademark Office
27 ("USPTO") duly and legally issued United States Patent No. 9,108,735 (the '735
28 Patent), entitled "Electro-Expulsive De-Icing System for Aircraft and Other

1 Applications.” TMC holds all rights, title, and interest in and to the ’735 patent.

2 36. ESA has directly infringed and continues to directly infringe the ’735
3 Patent. The infringing acts include, but are not limited to, the manufacture of
4 products practicing one or more claims of the ’735 Patent.

5 37. ESA has indirectly infringed and continues to indirectly infringe the
6 ’735 Patent. The infringing acts include, but are not limited to, inducing a third
7 party to manufacture infringing products by providing TMC’s proprietary designs
8 to the third party and paying the third party to manufacture infringing de-icing
9 systems. ESA induces manufacture of infringing de-icing systems with knowledge
10 that those systems infringe the ’735 Patent.

11 38. The acts of infringement by ESA has caused damage to TMC, and
12 TMC is entitled to recover from ESA the damages sustained by TMC as a result of
13 ESA’s wrongful acts, including a reasonable royalty and/or lost profits, in an
14 amount subject to proof at trial. The infringement of Elbit America’s rights under
15 the ’735 Patent has damaged and will continue to damage TMC.

16 39. ESA’s infringement is willful. ESA took possession of proprietary
17 manufacturing materials which it knew to be protected by IMS’s intellectual
18 property. ESA knew that it was building a product using TMC’s specifications that
19 implement the technology in the ’735 patent. ESA presented no defenses to
20 infringement. ESA has accelerated production of the infringing products to
21 minimize the impact of an injunction in this matter. ESA’s either had direct
22 knowledge that its manufacturing infringed the ’735 patent, or willful blindness of
23 infringement can be inferred based on these facts. TMC is thus entitled to treble
24 damages under 35 U.S.C. § 284.

25 40. TMC is also entitled to an injunction preventing ESA from infringing
26 the ’735 Patent. IMS previously manufactured de-icing systems covered by the
27 ’735 patent, and TMC has the capability of manufacturing the systems. However,
28 TMC is currently blocked from manufacturing and commercializing its patented

1 systems and does not receive its deserved manufacturing profits, due to ESA's
2 infringing activities. ESA's acts of infringement are causing irreparable harm to
3 TMC, and will continue to cause irreparable harm unless enjoined by this Court.

4 41. ESA had actual knowledge of the existence of the '735 Patent and that
5 manufacturing the subject de-icing systems infringed the '735 patent, but ESA
6 continues to infringe. ESA had knowledge of the application that became the '735
7 patent prior to the issuance of the '735 patent, and knew of the '735 patent from the
8 date of issuance. ESA also knew that its manufacture of electro-expulsive actuators
9 according to designs acquired from TMC constituted infringement of the '735
10 patent. The infringement of the '735 Patent by ESA is willful and deliberate, and
11 with full knowledge of the patent, entitling TMC to increased damages under 35
12 U.S.C. § 284 and to attorneys' fees and costs incurred in prosecuting this action
13 under 35 U.S.C. § 285.

14 **COUNT TWO**

15 **(Misappropriation of Trade Secrets – Cal. Civ. Code § 3426.1 et seq.)**

16 42. TMC realleges and incorporates by reference each and every allegation
17 contained in paragraphs 1-33 of this First Amended Complaint as though set forth
18 fully herein.

19 43. On information and belief, Elbit Ltd. and ESA are using TMC's
20 Confidential Information, without TMC's consent, to unlawfully compete against
21 TMC.

22 44. TMC enjoys an advantage over its existing and would-be competitors
23 based, in part, on the trade secret information it has developed and implemented to
24 provide commercial de-icing systems.

25 45. TMC has made reasonable efforts under the circumstances to preserve
26 the confidentiality of its trade secrets. For example, under the escrow agreement
27 Elbit Ltd. and ESA were required to keep TMC's proprietary escrow materials
28 confidential once delivered to Elbit from escrow. Such information derives

1 independent economic value (actual and potential) from not being generally known
2 to the public or to other persons who can obtain economic value from its disclosure
3 or use. Accordingly, the above described Confidential Information constitutes
4 “trade secrets” under California UTSA, Cal. Civ. Code Section 3426 *et seq.*

5 46. Elbit Ltd. and ESA were and remain under a duty both to keep TMC’s
6 confidential, proprietary or trade secret information secret, and not to use or
7 disclose such information other than for the limited uses permitted by the IMS
8 contract and the escrow agreement. Elbit knew or should have known that it
9 acquired such information under circumstances giving rise to a duty to limit its use
10 to securing the property to ensure performance of the Watchkeeper contract. Elbit
11 never had the authority to assert ownership over any TMC materials, or to
12 manufacture using the materials or proprietary information. Elbit is free to
13 negotiate with TMC to acquire these additional rights to TMC’s property, but these
14 rights were explicitly carved out by the contracts such that Elbit did not and never
15 has obtained ownership or manufacturing rights to any of IMS’s proprietary
16 information, designs, and escrow materials.

17 47. Elbit Ltd. and ESA know that TMC has manufacturing capabilities and
18 can secure the performance of the contract. Thus, continued possession of any
19 materials under the escrow agreement is not necessary to secure the performance
20 under the Watchkeeper contract. Now that the materials can be secured by TMC,
21 Elbit must return the escrow materials. Elbit has no right to continued possession
22 of the escrow materials, and must return them. Elbit must also return any other
23 property taken from IMS facilities, such as test and other manufacturing equipment
24 used to make the subject de-icing systems.

25 48. Elbit’s conduct, including past manufacturing, continued
26 manufacturing, and continued possession of TMC’s escrow and any other TMC
27 property acquired from IMS, constitutes misappropriation of TMC’s trade secrets
28 through the unauthorized use of TMC’s trade secret information.

1 follows:

2 A. A declaration that ESA has infringed and is infringing the '735 Patent;

3 B. An award of damages to TMC arising out of ESA's infringement of
4 the '735 Patent, including treble damages pursuant to 35 U.S.C. § 284, together
5 with prejudgment and post-judgment interest, in an amount according to proof;

6 C. An award of attorneys' fees pursuant to 35 U.S.C. § 285, California
7 Civil Code Section 3426.4, or as otherwise permitted by law

8 D. A permanent injunction against further infringement, lost profits and a
9 reasonable royalty for past damages, or in the alternative, if an injunction is not
10 granted, damages, including at least a reasonable royalty for continued
11 infringement.

12 WHEREFORE, TMC prays for judgment and relief in its favor and against both
13 Elbit Ltd. and ESA as follows:

14 E. A permanent injunction preventing Elbit Ltd. and ESA from
15 misappropriating, disclosing, continuing in possession of, or using TMC's
16 confidential information and trade secrets or any other materials improperly taken
17 from IMS used in the manufacture of the proprietary de-icing systems, and from
18 infringing the '735 patent either directly or indirectly;

19 F. That TMC recover compensatory damages for Elbit's wrongdoing in
20 an amount to be established at trial, together with pre-judgment and post-judgment
21 interest thereon at the maximum legal rate;

22 G. That TMC recover an award of punitive and other appropriate
23 exemplary damages because, without limitation, Elbit is guilty of oppression, fraud,
24 or malice;

25 H. That TMC be awarded disgorgement, restitution, pre-judgment and
26 post-judgment interest as permitted by statute;

27 I. That Elbit be required to deliver to the Court and to TMC, a complete
28 list of entities to whom Elbit has offered for sale or sold, de-icing systems

1 manufactured using TMC's proprietary information or that infringe the '735 Patent
2 or use Elbit's .

3 J. An award to TMC of its costs; and

4 K. Such further and additional relief, whether legal, equitable, or
5 otherwise, as the Court deems just and proper.

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8 Dated: February 5, 2016

Respectfully submitted,

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COOLEY LLP

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/s/ Wayne Stacy

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