

Application No.	Docket No.	Applicant	Regulation(s) affected	Nature of special permits thereof
15180-N .....	.....	Roche Diagnostics Corporation Indianapolis, IN.	49 CFR 173.242(e)(1) .....	To authorize the transportation in commerce of certain PG II corrosive liquids in UN 50G fiberboard large packagings by motor vehicle. (mode 1).
15181-N .....	.....	JBI Helicopter .....	49 CFR 172.101 Column (9B), 172.204(c)(3), 173.27(b)(2), 175.30(a)(1), 172.200, 172.300 and 172.400.	To authorize the transportation in commerce of certain hazardous materials by external load on helicopter in remote areas of the US without being subject to hazard communication requirements and quantity limitations where no other means of transportation is available. (mode 4).
15182-N .....	.....	BASF Corporation Florham Park, NJ.	49 CFR 73.4a(b) .....	To authorize the transportation in commerce of an Oxidizing solid, water-reactive as an excepted quantity. (modes 1, 2, 4).
15183-N .....	.....	Jack Oldham Oil Co. Inc	49 CFR 173.315(m) .....	To authorize the transportation in commerce of anhydrous ammonia in non-DOT specification cargo tanks (nurse tanks) when transported to refineries for purposes of pollution control by motor vehicle within a 50 mile radius. (mode 1).

[FR Doc. 2010-28739 Filed 11-15-10; 8:45 am]

BILLING CODE 4909-60-M

## DEPARTMENT OF TRANSPORTATION

### National Highway Traffic Safety Administration

[Docket No. NHTSA-2010-0154]

#### Terrafugia, Inc.; Receipt of Application for Temporary Exemption From Requirements for Tire Selection and Rims for Motor Vehicles FMVSS No. 110, Electronic Stability Control Systems FMVSS No. 126, Glazing Materials FMVSS No. 205, and Occupant Crash Protection FMVSS No. 208

**AGENCY:** National Highway Traffic Safety Administration (NHTSA), Department of Transportation (DOT).  
**ACTION:** Notice of receipt of petition for temporary exemption and request for comments.

**SUMMARY:** In accordance with the procedures in 49 CFR Part 555, Terrafugia, Inc. ("Terrafugia"), has petitioned the agency for a temporary exemption from certain FMVSS requirements for the Transition®, a Light Sport Aircraft that has road-going capability. Terrafugia seeks exemption from the FMVSS requirements for tire selection and rims for motor vehicles (FMVSS No. 110), electronic stability control systems (FMVSS No. 126), glazing materials (FMVSS No. 205), and occupant crash protection, specifically advanced air bags (FMVSS No. 208). The basis for the application is that compliance would cause substantial economic hardship to a manufacturer that has tried in good faith to comply with the standard.

NHTSA is publishing this notice of receipt of an application for temporary

exemption and providing an opportunity to comment in accordance with the requirements of 49 U.S.C. § 30113(b)(2). NHTSA has not made any judgment on the merits of the application.

**DATES:** You should submit your comments not later than December 16, 2010.

**FOR FURTHER INFORMATION CONTACT:** William Shakely, Office of the Chief Counsel, NCC-112, National Highway Traffic Safety Administration, 1200 New Jersey Avenue, SE., West Building 4th Floor, Room W41-318, Washington, DC 20590. Telephone: (202) 366-2992; Fax: (202) 366-3820.

**COMMENTS:** We invite you to submit comments on the application described above. You may submit comments identified by docket number at the heading of this notice by any of the following methods:

- **Online:** Go to <http://www.regulations.gov>. Follow the instructions for submitting comments on the electronic docket site by clicking on "Help" or "FAQs."
- **Fax:** 1-202-493-2251.
- **Mail:** U.S. Department of Transportation, Docket Operations, M-30, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590.
- **Hand Delivery:** 1200 New Jersey Avenue, SE., West Building Ground Floor, Room W12-140, Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

**Instructions:** All submissions must include the agency name and docket number. Note that all comments received will be posted without change to <http://www.regulations.gov>, including any personal information provided. Please see the Privacy Act discussion below. We will consider all comments received before the close of business on

the comment closing date indicated above. To the extent possible, we will also consider comments filed after the closing date.

**Docket:** For access to the docket to read background documents or comments received, go to <http://www.regulations.gov> at any time or to 1200 New Jersey Avenue, SE., West Building Ground Floor, Room W12-140, Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. Telephone: (202) 366-9826.

**Privacy Act:** Anyone is able to search the electronic form of all comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review DOT's complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (65 FR 19477-78) or you may visit <http://www.dot.gov/privacy.html>.

**Confidential Business Information:** If you wish to submit any information under a claim of confidentiality, you should submit three copies of your complete submission, including the information you claim to be confidential business information, to the Chief Counsel, NHTSA, at the address given under **FOR FURTHER INFORMATION CONTACT**. In addition, you should submit two copies, from which you have deleted the claimed confidential business information, to Docket Operations at the address given above. When you send a comment containing information claimed to be confidential business information, you should include a cover letter setting forth the information specified in our confidential business information regulation (49 CFR Part 512).

**SUPPLEMENTARY INFORMATION:**

## I. Overview of Terrafugia, Inc. and Its Petition for an Economic Hardship Exemption

In accordance with 49 U.S.C. 30113 and the procedures in 49 CFR Part 555, Terrafugia has petitioned (dated July 20, 2010) the agency for a temporary exemption from certain FMVSS requirements for the Transition<sup>®</sup>, a Light Sport Aircraft that has road-going capability. Terrafugia seeks an exemption from requirements for tire selection and rims for motor vehicles (FMVSS No. 110), electronic stability control systems (FMVSS No. 126), glazing materials (FMVSS No. 205), and advanced air bags (FMVSS No. 208). The basis for the application is that compliance would cause substantial economic hardship to the manufacturer who has tried in good faith to comply with the standard. Terrafugia has requested a three-year hardship exemption. A copy of the petition is available for review and has been placed in the docket of this notice.<sup>1</sup>

According to the petition, Terrafugia is a small, privately held company that was incorporated in the state of Delaware in 2006, and maintains headquarters in Woburn, Massachusetts. Terrafugia states that the company employs ten full-time employees. The company identifies itself as a Massachusetts Institute of Technology (MIT) spin-off company, but states that it does not have access to MIT's financial resources. The company also states that it is not affiliated with any other aircraft or automobile manufacturer.

Terrafugia has designed and built the first prototype of the Transition<sup>®</sup>, which it describes as a "Roadable Aircraft." Terrafugia characterizes the Transition<sup>®</sup> as a Light Sport Aircraft (LSA), as defined by the Federal Aviation Administration (FAA), and states that the road-going capability in the aircraft will "provide a significant increase in operational functionality and safety for the General Aviation pilot community by allowing pilots to safely continue their travel plans in the event of inclement weather."<sup>2</sup>

To date, Terrafugia has not produced any vehicles for sale, but intends to begin delivery of the Transition<sup>®</sup> in

2011 and anticipates producing 200 aircraft during the three-year requested exemption period. Terrafugia states that it expects to remain a low-volume manufacturer for the foreseeable future, continuing to market the Transition<sup>®</sup> as an aircraft with road-going capability, not as a "flying car." Thus, the primary market for the Transition<sup>®</sup> will be U.S. pilots.

The agency has not made any judgment on the eligibility of the petitioner or the merits of the application, and is placing a non-confidential copy of the petition in the docket. In accordance with 49 U.S.C. 30113(b)(2), NHTSA invites comments on the subject petition as discussed in the "COMMENTS" section of this notice. After considering public comments and other available information, the agency will publish a notice of final action on the application in the **Federal Register**.<sup>3</sup>

## II. Statutory Basis for Requested Part 555 Exemption

The National Traffic and Motor Vehicle Safety Act, as amended, codified as 49 U.S.C. Chapter 301, provides the Secretary of Transportation authority to exempt, on a temporary basis and under specified circumstances, motor vehicles from a motor vehicle safety standard or bumper standard. This authority is set forth at 49 U.S.C. 30113. The Secretary has delegated the authority for this section to NHTSA.<sup>4</sup>

NHTSA established part 555, *Temporary Exemption from Motor Vehicle Safety and Bumper Standards*, to implement the statutory provisions concerning temporary exemptions. Vehicle manufacturers may apply for temporary exemptions on several bases, one of which is that compliance would cause substantial economic hardship to a manufacturer that has tried in good faith to comply with the standard.

A petitioner must provide specified information in submitting a petition for exemption.<sup>5</sup> Foremost among these requirements are that the petitioner must set forth the basis of the application under § 555.6, and the reasons why the exemption would be in the public interest and, as applicable, consistent with the objectives of 49 U.S.C. Chapter 301.

A manufacturer is eligible to apply for a hardship exemption if its total motor vehicle production in its most recent year of production did not exceed 10,000 vehicles, as determined by the

NHTSA Administrator.<sup>6</sup> In determining whether a manufacturer of a vehicle meets that criterion, NHTSA considers whether a second vehicle manufacturer also might be deemed the manufacturer of that vehicle.

Finally, while 49 U.S.C. 30113(b) states that exemptions from a Federal motor vehicle safety standard prescribed under Chapter 301 are to be granted on a "temporary basis," the statute also expressly provides for renewal of an exemption on reapplication.<sup>7</sup> Manufacturers are nevertheless cautioned that the agency's decision to grant an initial petition in no way predetermines that the agency will repeatedly grant renewal petitions. Exempted manufacturers seeking renewal must bear in mind that the agency is directed to consider financial hardship as but one factor, along with the manufacturer's on-going good faith efforts to comply with the regulation and the public interest among other factors provided in the statute.

## III. Terrafugia's Petition for an Economic Hardship Exemption

Terrafugia's basis for the petition is that requiring compliance with the stated provisions "would cause substantial economic hardship to a manufacturer that has tried to comply with the standard in good faith." 49 U.S.C. 30113(b)(3)(B)(i). Terrafugia requests that the exemption period begin with the first delivery of the Transition<sup>®</sup> on or near December 2011 and extend for a period of three years. This section broadly discusses Terrafugia's statements of economic hardship and public interest. Please refer to the petition in the docket for more details.

### A. Terrafugia's Statement of Economic Hardship

Terrafugia states that the denial of the requested exemption will result in substantial economic hardship. The Transition's<sup>®</sup> dual-purpose as an aircraft and ground vehicle has necessitated the application of both FAA regulations for LSA and the FMVSS established by NHTSA and applicable to manufacturers of new motor vehicles and motor vehicle equipment. Terrafugia contends that "it is not always possible to completely merge the two regulations without compromising safety, incurring prohibitive costs, and/or reducing core functionality."<sup>8</sup> For example, in order to comply with the maximum weight requirement of the

<sup>1</sup> To view the petition, go to <http://www.regulations.gov> and enter the docket number set forth in the heading of this document. The company requested confidential treatment under 49 CFR Part 512 for certain business and financial information submitted as part of its petition for temporary exemption. Accordingly, the information placed in the docket does not contain such information that the agency has determined to be confidential.

<sup>2</sup> See Terrafugia Petition, p. 3.

<sup>3</sup> 49 U.S.C. 30113(g).

<sup>4</sup> 49 CFR 1.50.

<sup>5</sup> 49 CFR 555.5.

<sup>6</sup> 49 U.S.C. 30113(d).

<sup>7</sup> 49 U.S.C. 30113(b)(1).

<sup>8</sup> Terrafugia Petition, p. 3.

FAA for LSA,<sup>9</sup> Terrafugia calculates that for each pound of weight that can be removed from the aircraft to accommodate additional equipment in conformity with FMVSS, it costs \$14,500 per pound<sup>10</sup> in development costs and adds \$4,200<sup>11</sup> to the cost of the aircraft.<sup>12</sup> Terrafugia estimates that the denial of this petition for exemption would double the price point of the Transition<sup>®</sup>, significantly lowering the demand for the vehicle and, likely, forcing the company to abandon LSA certification and the development of the Transition<sup>®</sup>.

Terrafugia states that a grant of the requested exemptions would allow the company to continue with LSA certification for the Transition<sup>®</sup> while pursuing lightweight compliance solutions and researching additional ways of reducing the weight of non-safety critical systems for the aircraft.

#### B. Terrafugia's Statement of Public Interest

Terrafugia asserts that the requested exemptions are in the public interest because the Transition<sup>®</sup> will increase the safety of flight for General Aviation (GA)<sup>13</sup> in the United States, contribute to the advancement of technology for light aircraft and light-weight, fuel efficient automobiles, and improve the environment and economy.

According to Terrafugia's petition, one of the most significant causes of GA accidents and fatalities is weather, and a leading cause of weather-related accidents is when pilots flying primarily on visual references find themselves in a situation where those references are compromised, get disoriented, and enter an unrecoverable situation that results in an often fatal accident.<sup>14</sup> According to Terrafugia, the Transition<sup>®</sup> offers a

new alternative to pilots, which allows them to divert to the nearest airport and continue the trip on the ground.

Although the trip may take longer, Terrafugia states that the Transition<sup>®</sup> is expected to eliminate the possibility of an indeterminately long delay caused by either retracing the flight route to clearer weather or diverting and waiting for the weather to pass. Terrafugia expects that the Transition<sup>®</sup> will contribute to significantly reducing a major source of fatal aviation accidents, while also making GA more appealing and accessible to a greater number of people. Additionally, because the Transition<sup>®</sup> is equipped with basic FMVSS occupant crash protection features, it is advancing passenger safety technology in light aircraft.

The Transition<sup>®</sup> uses an FAA certified, four cylinder, 100 horsepower, unleaded gasoline-fueled aircraft engine to power the vehicle both in the air and on the ground. Terrafugia contends that the use of unleaded gasoline will provide "significant ecological and energy benefits," as compared to the leaded gasoline used in other GA aircraft. Terrafugia also envisions that one day a future version of the Transition<sup>®</sup> may play a role in reducing highway congestion and CO<sub>2</sub> emissions by enabling more people to shift from highway-based travel to a combination of flight and road use for mid-range trips. Terrafugia expects that the Transition<sup>®</sup> will cruise in the air at approximately 105 miles per hour and maintain highway speeds on the ground, while attaining between 25 and 40 miles per gallon in flight and on the road. Terrafugia anticipates that the Transition<sup>®</sup> will only be operated on public roadways in conjunction with a flight. The company expects that the typical recreational owner will operate the vehicle as an aircraft for at least 65 percent of its engine-on-time, with less than 2,000 miles of road driven annually. Terrafugia contends that the combination of low sales volume and limited use on roadways limits the Transition's<sup>®</sup> overall impact on motor vehicle safety.

Terrafugia also anticipates that by 2015 the production of the Transition<sup>®</sup> will provide 500 manufacturing, engineering, and support jobs to the U.S. economy.

#### IV. Terrafugia's Requested Temporary Exemptions

As always, we are concerned about the potential safety implication of any temporary exemption granted by this agency. In the present case, we are addressing a petition submitted for a temporary exemption from FMVSS

requirements pertaining to tire and rim selection, electronic stability control (ESC), glazing materials, and advanced air bags. According to the petition, the three-year requested exemption period will give the petitioner, Terrafugia, the needed time and revenue to reach compliant solutions.

#### A. FMVSS No. 110, Tire Selection and Rims and Motor Home/Recreation Vehicle Trailer Load Carrying Capacity Information for Motor Vehicles With a GVWR of 4,536 Kilograms (10,000 pounds) or Less, Sections S4.1, S4.4<sup>15</sup>

Terrafugia seeks an exemption from the tire and rim requirements of FMVSS No. 110 S4.1 (general requirements), S4.4 (rim requirements). Terrafugia states that compliance with the tire and rim requirements for motor vehicles with a gross weight rating of 4,536 kilograms or less would cause substantial economic hardship, and that Terrafugia has tried to comply with the standard in good faith. Terrafugia intends on using tires and rims with proper load and speed ratings that are certified for motorcycle use. See 49 CFR 571.119. The company states that the lighter motorcycle tire and rim combination would provide an equivalent level of safety as tires certified for traditional passenger vehicles, while allowing for a weight savings of 25 pounds (11.3 kg). Terrafugia successfully flight tested the proposed tires for takeoff and landing operations in spring 2009 and plans to conduct further tests to include handling and braking.

#### B. FMVSS No. 126, Electronic Stability Control Systems<sup>16</sup>

Terrafugia seeks an exemption from the electronic stability control (ESC) systems requirements of FMVSS No. 126. ESC systems employ automatic computer-controlled braking of individual wheels to assist the driver in maintaining control in critical driving situations.<sup>17</sup> NHTSA's crash data study shows that ESC systems reduce the number of fatal single-vehicle crashes of passenger cars and sport utility vehicles (SUVs). NHTSA also estimates that ESC has the potential to prevent 70 percent of the fatal passenger car rollovers and 88 percent of the fatal SUV rollovers that would otherwise occur in single-vehicle crashes.<sup>18</sup>

Terrafugia states that it faces two challenges with an off-the-shelf ESC unit. First, an ESC system would add

<sup>9</sup> Terrafugia obtained a partial grant of exemption from the FAA (FAA Docket No. FAA-2009-1087), allowing the Transition<sup>®</sup> to have a maximum takeoff weight (MTOW) of 1,430 pounds (650 kg) instead of the general MTOW requirement of 1,320 pounds (600 kg).

<sup>10</sup> Terrafugia explains that this is based on the experience of removing weight between the Proof of Concept vehicle to the prototype and the fact that as more and more weight must be removed, it becomes increasingly more difficult to do so.

<sup>11</sup> Terrafugia explains that this figure is based on identified cost vs. weight trade-offs, such as material replacement, and a minimal margin.

<sup>12</sup> Terrafugia notes that there is a physical limitation as to how much weight can be removed from the vehicle, at any cost, before it is no longer capable of safely performing its function. The dollar values provided by Terrafugia are applicable until that limit is reached, past which very little can be done at any price and the product is no longer viable.

<sup>13</sup> Terrafugia explains that General Aviation is the segment of the air transportation industry characterized by flight outside of the commercial airline system and military operations.

<sup>14</sup> Terrafugia Petition, p. 22.

<sup>15</sup> 49 CFR 571.110.

<sup>16</sup> 49 CFR 571.126.

<sup>17</sup> 73 FR 54526, 54527 (September 22, 2008).

<sup>18</sup> *Id.*

6 pounds of weight to the Transition<sup>®</sup> (*i.e.*, assuming weight could not be removed elsewhere in the vehicle). Second, an ESC system poses a flight risk because by design an ESC system may automatically cut the engine power when activated in a vehicle, which would create a single point failure that could shut down the Transition's<sup>®</sup> engine in flight. Terrafugia believes that this additional flight risk outweighs the benefit of the ESC system to braking performance on the ground. Terrafugia states that it currently does not have the technical or financial resources to independently develop an ESC system for its dual purpose vehicle and, to date, potential vendors have been unwilling to provide an ESC system for use on the Transition<sup>®</sup> because it is an aircraft.

*C. FMVSS No. 205, Glazing Materials, Section S5*<sup>19</sup>

Terrafugia seeks an exemption from the glazing material requirements of FMVSS No. 205, S5 ("Requirements"), which affect the Transition's<sup>®</sup> windshield and side windows. Terrafugia states that installing compliant glazing materials, such as traditional laminated safety glass, would result in a weight penalty of 29 pounds (13.2 kg). The company contends that it may not be able to remove this additional weight without compromising the safety of existing crash protection structures. Further, Terrafugia states that traditional automotive glazing materials, when subjected to loading similar to a bird strike in flight, either shatter, exposing the occupants to the free-stream air, or craze to a level that would substantially inhibit the pilots view.

Alternatively, Terrafugia plans to install polycarbonate glazing material, which is normally used in aircraft, and withstands aircraft bird strikes well. According to the petition, the polycarbonate material has passed intrusion tests without cracking, but Terrafugia is still pursuing options for scratch-resistant coating that can be certified to tier 1 glass.<sup>20</sup> In the meantime, Terrafugia intends to require that the Transition's<sup>®</sup> windshield be subject to regular inspections and contends that Transition<sup>®</sup> owners, as pilots, already are accustomed to strict maintenance standards. Terrafugia states that the exemption period will allow it to continue working on the capacity of modern coated

polycarbonate glazing materials to be certified to the FMVSS requirements.

*D. FMVSS No. 208, Occupant Crash Protection, Section S14 (Advanced Air Bags)*<sup>21</sup>

Terrafugia seeks an exemption from the advanced air bag requirements of FMVSS No. 208 (S14) because the company currently does not have the financial resources to design and install an advanced air bag system. The company, however, intends to install basic air bags in the Transition<sup>®</sup>. Terrafugia states that the Transition<sup>®</sup> also will be equipped with a carbon fiber omega beam "safety cage" surrounding the passenger compartment, energy-absorbing crush structures, seat belts, and other necessary passenger safety equipment not traditionally installed in LSA. According to the petition, Terrafugia anticipates using the sales revenue to pursue the development of an advanced air bag system, ideally one that would be able to differentiate between the needs of an automotive crash and an aviation crash.

**V. Request for Comments**

We are providing a 30-day comment period and instructions for submitting comments are described in the "COMMENTS" section of this notice. As described in Terrafugia's petition, the Transition<sup>®</sup> offers a pilot an alternative mode of transportation during periods of inclement weather, allowing the pilot to drive on roads rather than fly the vehicle. Given the safety features for which Terrafugia seeks exemption, NHTSA specifically seeks comment on whether the safety benefits of reducing weather-related accidents for flights of the Transition<sup>®</sup> in inclement weather outweigh the safety risks associated with road use of the Transition<sup>®</sup> in inclement weather. NHTSA further seeks comment on the likelihood that a child would be a passenger in the Transition<sup>®</sup> (*i.e.*, there is one front passenger seat and no rear seats) to evaluate the safety risks posed by noncompliance with the advanced air bag requirements.

Issued on: November 9, 2010.

**Nathaniel Beuse,**

*Director, Office of Crash Avoidance Standards.*

[FR Doc. 2010-28732 Filed 11-15-10; 8:45 am]

**BILLING CODE 4910-59-P**

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**Consensus Standards, Light-Sport Aircraft**

**AGENCY:** Federal Aviation Administration, DOT.

**ACTION:** Notice of availability; request for comments.

**SUMMARY:** This notice announces the availability of seven revised consensus standards to previously accepted consensus standards relating to the provisions of the Sport Pilot and Light-Sport Aircraft rule issued July 16, 2004, and effective September 1, 2004. ASTM International Committee F37 on Light Sport Aircraft developed the revised standards with Federal Aviation Administration (FAA) participation. By this notice, the FAA finds the revised standards acceptable for certification of the specified aircraft under the provisions of the Sport Pilot and Light-Sport Aircraft rule.

**DATE:** Comments must be received on or before January 18, 2011.

**ADDRESSES:** Comments may be mailed to: Federal Aviation Administration, Small Airplane Directorate, Programs and Procedures Branch, ACE-114, Attention: Terry Chasteen, Room 301, 901 Locust, Kansas City, Missouri 64106. Comments may also be e-mailed to: [9-ACE-AVR-LSA-Comments@faa.gov](mailto:9-ACE-AVR-LSA-Comments@faa.gov). All comments must be marked: Consensus Standards Comments, and must specify the standard being addressed by ASTM designation and title.

**FOR FURTHER INFORMATION CONTACT:**

Terry Chasteen, Light-Sport Aircraft Program Manager, Programs and Procedures Branch (ACE-114), Small Airplane Directorate, Aircraft Certification Service, Federal Aviation Administration, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone (816) 329-4147; e-mail: [terry.chasteen@faa.gov](mailto:terry.chasteen@faa.gov).

**SUPPLEMENTARY INFORMATION:** This notice announces the availability of seven revised consensus standards to previously accepted consensus standards relating to the provisions of the Sport Pilot and Light-Sport Aircraft rule. ASTM International Committee F37 on Light Sport Aircraft developed the new and revised standards. The FAA expects a suitable consensus standard to be reviewed at least every two years. The two-year review cycle will result in a standard revision or reapproval. A standard is issued under a fixed designation (*i.e.*, F2244); the

<sup>19</sup> 49 CFR 571.205.

<sup>20</sup> We assume Terrafugia is referring to certification as Item 1 glazing, or traditional laminated safety glass.

<sup>21</sup> 49 CFR 571.208.