U.S. Department
of Transportation
**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue, SE
Washington, DC 20590

June 17, 2021

Mr. John Lusa
Hunter Aviation International, Inc.
2915 Ogletown Road
Newark, DE 19713

Reference No. 21-0033

Dear Mr. Lusa:

This letter is in response to your March 12, 2021, letter requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to cylinders containing a Division 2.2 material. Specifically, you ask whether the HMR is applicable to cylinders containing "UN1072, Oxygen, compressed, 2.2" charged to a pressure less than 200 kPa (29.0 psig/43.8 psia) at 20 °C.

As provided in § 173.115(b), the HMR defines a Division 2.2 gas—which includes oxidizing gases—as a material (or mixture) which exerts in the packaging a gauge pressure of 200 kPa (29.0 psig/43.8 psia) or greater at 20 °C (68 °F), is a liquefied gas or a cryogenic liquid, and does not meet the definition of a Division 2.1 (flammable gas) or 2.3 (gas poisonous by inhalation) material. Therefore, provided the compressed oxygen in the cylinders exert a gauge pressure of less than 200 kPa (29.0 psig/43.8 psia) in the packaging and does not meet the definition of a Division 2.1 or 2.3 material, they are not subject to the HMR.

I hope this information is helpful. Please contact us if we can be of further assistance.

Sincerely,

T. Glenn Foster
Chief, Regulatory Review and Reinvention Branch
Standards and Rulemaking Division

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21-0033

Friday, March 12, 2021

Mr. Shane Kelley
Director, Standards and Rulemaking Division
U.S. DOT/PHMSA (PHH-10)
1200 New Jersey Avenue, SE East Building, 2nd Floor
Washington, DC 20590

Dear Mr. Kelley

We operate a fleet of 1950's era Hawker Hunter Fighter jets. The pilot's oxygen cylinders in our jets were manufactured to British MOD standard 647 and are maintained according to an FAA approved inspection program.

In some instances, it would be preferrable to ship these cylinders with slight residual pressure (< 200 kPA) to avoid possible corrosion or contamination. Does the HMR apply to the transportation of a Division 2.2 and 5.1 gas having a pressure in a container below 200 kPa (29.0 psig/43.8 psia)?

In the DOT response 09-0264 it states: "*PHMSA revised the definition in § 173.115(b)(1) for a Division 2.2 gas in final rules issued on January 14,2009 and January 4, 2010. Section 173.115(b) states a Division 2.2 gas is a nonflammable, non-poisonous compressed gas that includes compressed gas, liquefied gas, pressurized cryogenic gas, compressed gas in solution, asphyxiant gas, and oxidizing gas. Therefore, as amended, a Division 2.2 gas, including one with an oxidizer subsidiary hazard, is one that exerts a gauge pressure on a packaging of at least 200 kPa at 20°C (68 OF). In accordance with the revised definition, after January 1, 2010, a cylinder of oxygen gas that exerts a gauge pressure less than 200 kPa at 20°C is not subject to the HMR.*"

Does the above hold true today? Can we ship our pilot oxygen cylinders as not subject to the HMR when at a pressure below 200kPA?

Sincerely,

John Lusa
General Manager

Encl: 09-0264