



U.S. Department
of Transportation
**Research and
Special Programs
Administration**

400 Seventh St., S.W.
Washington, D.C. 20590

SEP 25 2003

DOT-E 9740
(THIRD REVISION)

EXPIRATION DATE: August 31, 2005

(FOR RENEWAL, SEE 49 § 107.109)

1. GRANTEE: National Aeronautics and Space
Administration (NASA)
Washington, DC
2. PURPOSE AND LIMITATION:
 - a. This exemption authorizes the transportation in commerce of hydrostatically retested DOT (ICC) 3AA and 3AAX cylinders and certain non-DOT specification cylinders which are in partial conformance with DOT (ICC) 3AA and 3AAX specifications. This exemption provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein.
 - b. The safety analyses performed in development of this exemption only considered the hazards and risks associated with transportation in commerce.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 180.205, in that the prescribed cylinders may in lieu of five years alternatively be retested every ten years; § 173.302a(a) in that non-DOT specification cylinders are not authorized except as specified herein; and 173.302a(b), except as specified herein.
5. BASIS: This exemption is based on the application of NASA dated August 18, 2003, submitted in accordance with § 107.109.

6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Proper Shipping Name/ Hazardous Materials Description	Hazard Class/ Division	Identi- fication Number	Packing Group
Air, compressed (Air must be manufactured by vaporization of 80:20 ratio liquid nitrogen to liquid oxygen)	2.2	UN1002	N/A
Compressed gases, n.o.s.	2.2	UN1956	N/A
Helium, compressed	2.2	UN1046	N/A
Nitrogen, compressed	2.2	UN1066	N/A
Oxygen, compressed	2.2	UN1072	N/A

7. SAFETY CONTROL MEASURES:

a. PACKAGING - Prescribed packaging is a DOT (ICC) 3AA or 3AAX cylinder mounted on a tube trailer vehicle chassis or non-DOT specification cylinders that conform with DOT (ICC) 3AA or 3AAX specification except that the cylinders: are manufactured from AISI 4340 steel; exceed the maximum wall stress specified in § 178.37(f) while not exceeding 67 percent of the minimum tensile strength of the steel; and the threaded connections do not conform to the provisions specified in § 178.37(h)(3). Each cylinder must be retested and accepted in accordance with the test procedure specified in the application and as prescribed in this exemption, in place of that prescribed in § 180.205.

b. TESTING -

(1) Each cylinder must be hydrostatically tested and refurbished in accordance with Kennedy Space Center (KSC) Specification KSC-SO-S-9 entitled "Specification for the Remanufacture and Retesting of Compressed Gas Trailers" after 10 years or 400 cycles, whichever occurs first.

(2) The initial qualifying test and each subsequent retest must include the following steps as a minimum:

- (i) Retest and refurbishment of compressed gas trailers in accordance with KSC Specification KSC-SO-S-9;
- (ii) Leak test;
- (iii) Dew point certification of residual leak test gas (dew point must be -65°F or lower);
- (iv) Document test; and
- (v) Document chassis and trailer suitability.

(3) Cylinders that are used or that have been used for the transportation of hydrogen or hydrogen bearing gases are not authorized for the extended retest allowed under this exemption.

(4) Cylinders retested in accordance with paragraph 7 above may be charged to 110 percent of marked service pressure in accordance with § 173.302a(b).

c. OPERATIONAL CONTROLS -

(1) Preventative maintenance should be carried out on the trailer and cylinders in accordance with the "Compressed Gas Trailer and Movable Storage Unit Service Life Maintenance Plan (81KO4817)" included in the petitioners application.

(2) The gas pressure in each cylinder must not drop below 200 psig at any time.

(3) At the time of each filling, the gas must be sampled to determine that the dew point of the gas is -65°F or lower.

8. SPECIAL PROVISIONS:

a. A person who is not a holder of this exemption, but receives a package covered by this exemption, may reoffer it for transportation provided no modification or change is made to the package or its contents and it is offered for transportation in conformance with this exemption and the HMR.

b. MARKING -

(1) The exterior of the trailer cabinet of the vehicle chassis to which the cylinders are affixed must be marked with letters at least 2 inches high on a contrasting background "DOT-E 9740".

(2) An exterior tube on each side of a tube module must be marked with letters at least 2 inches high on a contrasting background "DOT-E 9740".

(3) The current retest date must be marked on the rear bulkhead inside the trailer cabinet at approximately eye level above the withdrawal valve for tube trailers and on the bulkhead near the withdrawal valve for tube modules. In the event retest dates of cylinders differ in a trailer cluster, the retest date displayed will be that of the oldest retest date, meaning the date of the retest that must occur first.

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle
10. MODAL REQUIREMENTS: A current copy of this exemption must be carried aboard each motor vehicle used to transport packages covered by this exemption.
11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this exemption and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. § 5101 et seq:
- o All terms and conditions prescribed in this exemption and the Hazardous Materials Regulations, 49 CFR Parts 171-180.
 - o Registration required by § 107.601 et seq., when applicable.

Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this exemption must receive training on the requirements and conditions of this exemption in addition to the training required by §§ 172.700 through 172.704.

No person may use or apply this exemption, including display of its number, when the exemption has expired or is otherwise no longer in effect.

12. REPORTING REQUIREMENTS:
- a. The carrier is required to report any incident involving loss of packaging contents or packaging failure to the Associate Administrator for Hazardous Materials Safety (AAHMS) as soon as practicable. (Sections 171.15 and 171.16 apply to any activity undertaken under the authority of this

exemption.) In addition, the holder(s) of this exemption must inform the AAHMS, in writing, of any incident involving the package and shipments made under the terms of this exemption.

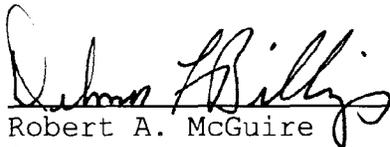
b. The following information must be reported to the Office of Hazardous Materials Exemption and Approvals:

(1) A report on the first test and a report on each subsequent retest indicating the number of cylinders tested under this exemption and identification by serial number of those passing and those failing to pass the test authorized by this exemption.

(2) The following information must be recorded each time a cylinder is filled and be made available to a representative of the DOT upon request:

- (i) DOT Specification number.
- (ii) Maximum allowable filling pressure.
- (iii) The gas transported.
- (iv) Filling pressure.
- (v) Source of gas.
- (vi) Date of filling.

Issued in Washington, D.C.:


Robert A. McGuire
Associate Administrator
for Hazardous Materials Safety

SEP 25 2003

(DATE)

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Research and Special Programs Administration, Department of Transportation, Washington, D.C. 20590.
Attention: DHM-31.

Copies of this exemption may be obtained by accessing the Hazardous Materials Safety Homepage at <http://hazmat.dot.gov/exemptions> Photo reproductions and legible reductions of this exemption are permitted. Any alteration of this exemption is prohibited.

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