



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

DOT-E 10475  
(FIFTH REVISION)

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

**OCT 16 2003**

**EXPIRATION DATE: September 30, 2005**

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: McKnight Cylinder  
Ruffs Dale, PA  
(Former grantee: General Cylinder Division of  
Monco, Inc., d/b/a Midwest Cylinder)
2. PURPOSE AND LIMITATION:
  - a. This exemption authorizes the rebuilding and selling of DOT-4B, 4BA and 4BW cylinders in accordance with the procedures prescribed within this exemption, for use in the transportation of hazardous materials authorized in paragraph 6. 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 § 180.211.
5. BASIS: This exemption is based on the application of McKnight Cylinder dated October 10, 2003, submitted in accordance with § 107.109.
6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Hazardous Materials Description			
Proper Shipping Name	Hazard Class/ Division	Identification Number	Packing Group
Compressed gases, flammable liquids, corrosive materials and other hazardous material that are authorized to be shipped in DOT 4B, 4BA, and 4BW cylinders of 49 CFR Part 173.	As appropriate	As appropriate	As appropriate

7. SAFETY CONTROL MEASURES: This exemption authorizes the rebuilding and selling of low-pressure, DOT Specification 4B, 4BA and 4BW steel cylinders having water capacities not exceeding 1000 pounds, in accordance with the following:
- a. Only cylinders originally manufactured to a DOT Specification 4B, 4BA and 4BW may be rebuilt and represented as DOT 4B, 4BA or 4BW cylinders.
  - b. Rebuilding work must be performed in accordance with the approved Procedures Manual on file in the Office of Hazardous Materials Exemptions and Approvals (OHMEA) and with § 180.211
  - c. Rebuilder must be considered a manufacturer subject to the requirements of § 178.2(a)(2) and Subpart C of Part 178.
  - d. After removal of a non-pressure component and before replacement of any non-pressure component, the cylinder must be visually inspected in accordance with CGA Pamphlet C-6. Rejected cylinders must be repaired and rebuilt as prescribed in § 180.211, or condemned.
  - e. Rebuilding of any cylinder involving a joint subject to internal pressure may only be performed by fusion welding. The rebuilder may rebuild a DOT 4B, 4BA or 4BW cylinder having a water capacity of 20 pounds or greater by replacing a head of the cylinder using a circumferential joint. When this weld joint is located at other than an original welded joint, a notation of this modification must be shown on the Manufacturer's Report of Rebuilding (See Appendix A). Weld joint must be on the cylindrical section of the cylinder.
  - f. Welding must be:
    - (1) in accordance with the procedures and qualification requirements of CGA Pamphlet C-3.
    - (2) performed using welding rod compatible with the material of the cylinder including any non-pressure component.
    - (3) performed on an area free of any contaminant.
  - g. Any rebuilt cylinder must be:
    - (1) heat treated as required in the applicable specification.

(2) subjected to a full hydrostatic volumetric expansion test on each cylinder as specified in the applicable cylinder specification in Part 178. The results of the tests must conform with the applicable cylinder specification.

(3) inspected and have test data reviewed to determine conformance with the applicable cylinder specification.

(4) made of material in conformance with the specification. Rebuilt cylinders are to be grouped into lots as required in the original specification and heat treated as noted in paragraph (1) above. Each new lot of cylinders must include chemical analysis, verification, inspection and tensile testing of only the replaced part and weldments required to affect the rebuilding. Components used in the original manufacture are accepted as meeting the requirements of the specification subject to acceptable performance of the full expansion test required in paragraph (2) above.

h. A record of rebuilding must be completed for each cylinder rebuilt in the format presented in Appendix A.

i. A copy of the reports of rebuilding must be maintained by the rebuilding facility for 15 years.

8. SPECIAL PROVISIONS:

a. Each packaging rebuilt under the authority of this exemption and in accordance with an approval issued under § 180.211 must be marked with the approval number issued to the holder of this exemption.

b. A current copy of this exemption must be maintained at the facility where the packaging is rebuilt and must be made available to the DOT representative upon request.

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle.

10. MODAL REQUIREMENTS: This exemption imposes no additional modal requirements.

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:

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- 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: Any incident involving loss of packaging contents or packaging failure must be reported 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, as soon as practicable of any incidents involving the package and shipments made under this exemption.

Issued in Washington, D.C.:

  
\_\_\_\_\_  
Robert A. McGuire  
Associate Administrator  
for Hazardous Materials Safety

OCT 16 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.

PO: sln

Manufacturer's Report of Rebuilding

Manufacturer \_\_\_\_\_  
 Cylinder Specification Number and Service Pressure \_\_\_\_\_  
 Cylinder Serial Number \_\_\_\_\_  
 Date of Original Manufacturer \_\_\_\_\_  
 Other Identification Marks \_\_\_\_\_

Rebuild Information

Chemical Analysis of Replacement Parts

Part Being Replaced \_\_\_\_\_  
 Heat Identification \_\_\_\_\_  
 Steel Manufactured by \_\_\_\_\_  
 Analysis Performed by \_\_\_\_\_

C	P	S	Si	Mn	Ni	Cr	Mo	Cu	Al	Zn
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____

Record of Physical Test of Replacement Parts

Yield PSI	Tensile PSI	Elongation in _____ inches	Reduction of area %	Weld Tensile	Weld Bend
_____	_____	_____	_____	_____	_____

Record of Hydrostatic Test

Calculated Volumetric Capacity of Cylinder Being Rebuilt- \_\_\_\_\_ lbs

Actual Test Pressure	Total Expansion	Permanent Expansion	% of Total to Perman.	Volumetric Capacity
_____	_____	_____	_____	_____

(Volumetric capacity of rebuilt cylinder must be within + or - 3 % of the calculated capacity.)

I certify that this rebuilt cylinder is accurately represented by the data above and that all provision of DOT-E 10745 and other applicable regulations have been complied with.

Repair Technician \_\_\_\_\_ Date \_\_\_\_\_

Company Representative \_\_\_\_\_ Date \_\_\_\_\_