

December 16, 2016



U.S. Department
of Transportation

East Building, PHH-30
1200 New Jersey Avenue S.E.
Washington, D.C. 20590

**Pipeline and Hazardous
Materials Safety Administration**

DOT-SP 9347
(TWELFTH REVISION)

EXPIRATION DATE: 2020-11-30

(FOR RENEWAL, SEE 49 CFR 107.109)

1. GRANTEE: Parker-Hannifin Corporation
Houston, TX
2. PURPOSE AND LIMITATIONS:
 - a. This special permit authorizes the manufacture, marking, sale and use of a non-DOT specification cylinder conforming with all regulations applicable to a DOT Specification 3E cylinder, except as specified herein, for the transportation in commerce of the materials authorized by this special permit. This special permit provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein. The most recent revision supersedes all previous revisions.
 - b. The safety analyses performed in development of this special permit only considered the hazards and risks associated with transportation in commerce. The safety analyses did not consider the hazards and risks associated with use as a component of another device or other uses not associated with transportation in commerce.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR §§ 173.301(a)(1), 173.302a(a)(1), and 173.304a(a)(1) in that a non-DOT specification cylinder is not authorized except as specified herein.

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5. BASIS: This special permit is based on the application of Parker-Hannifin Corporation dated September 14, 2016, 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
Gasoline	3	UN1203	II
Mercaptans, liquid, flammable, toxic, n.o.s. or Mercaptan mixtures, liquid flammable, toxic, n.o.s.	3	UN1228	II
Petroleum crude oil	3	UN1267	I, II, III
Petroleum distillates, n.o.s. or Petroleum products, n.o.s.	3	UN1268	I, II, III
Petroleum oil	3	NA1270	I, II,
Petroleum gases, liquefied or Liquefied petroleum gas	2.1	UN1075	N/A
Propane or Petroleum gases, liquefied	2.1	UN1978	N/A
Propylene see also Petroleum gases, liquefied	2.1	UN1077	N/A
Methane, compressed or Natural gas, compressed (with high methane content)	2.1	UN1971	N/A
Helium, compressed	2.2	UN1046	N/A
Nitrogen, compressed	2.2	UN1066	N/A

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7. SAFETY CONTROL MEASURES:

a. PACKAGING - Packaging prescribed is a non-DOT specification stainless steel cylinder having a marked service pressure of 1800 psig, constructed from seamless stainless steel tubing, with flanged flat head end closures at each end restrained by tie rods. The cylinder contains a floating piston which forms two pressure chambers. Each cylinder must conform with Boondock International, Inc.'s drawings and calculations on file with the Office of Hazardous Materials Safety Approvals and Permits Division (OHMSAPD) and with the DOT 3E specification (§§ 178.35 and 178.42), except as follows:

§ 178.35(d) *Safety devices and protection for valves, safety devices and other connections if applied.* Each head must be equipped with safety relief devices.

§ 178.35(g) *Inspector's report.* The inspector's report may be revised to accommodate the tests required by this special permit. A copy of the inspector's report on the first lot out of each design must be submitted to the OHMSPA.

§ 178.42(a) *Type, size and service pressure.* Seamless cylinder conforming with the following:

- (1) Piston-style receptacle has flat heads on each end restrained with tie rods secured at each end by nuts. Dimensions are as follows:

Model Nos. ^{1,2}	Volume	No.&Size of tie rods	Max. O.D. X length	Min. Wall thickness
Cxxx15-18x	150	6 @ 3/8" OD	2" X 8"	0.113"
Cxxx30-18x	300	6 @ 3/8" OD	2" X 12"	0.113"
Cxxx50-18x	500	6 @ 3/8" OD	2" X 16"	0.113"
Cxxx80-18x	800	6 @ 3/8" OD	2" X 24"	0.113"
Cxxx1K-18x	1000	6 @ 3/8" OD	2" X 29"	0.113"

- NOTES:**
- ¹ xxx denotes the alloy
- ² No new construction of models A-IS-84009 and A-IS-87001 is authorized.

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§ 178.42(b) *Steel*. The seamless tubing must be ASTM A213 type 304 or 316 stainless steel. The tie rods, end caps, and all internal components must be ASTM A479 steel.

§ 178.42(f) *Hydrostatic test*. Cylinders must be tested as follows:

(1) Each cylinder (seamless tube with end caps but without pistons, and with tie bolts, if applicable) must be subjected to a hydrostatic test of 3,600 psig. The cylinder must be held at the test pressure for at least 30 seconds and show no defects. If the cylinder fails this test, it must be rejected.

(2) Each compartment of each piston-style cylinder must be subjected to a pneumatic test of at least 500 psi without leakage. If the cylinder fails this test, it must be rejected.

(3) In addition, one cylinder (seamless tube with end caps with tie bolts, if applicable, but without pistons,) from each lot must be pressurized to failure. Rate of pressurization may not exceed 200 psi per second.

(i) A "lot" is defined as the quantity of pressure vessels fabricated from the same heat of steel, manufactured by the same process and heat treated in the same equipment under same conditions of time, temperature and atmosphere and may not exceed a quantity of 500. The burst test must be performed on each lot of cylinders produced or every six months whichever occurs first.

(ii) The pressure at which the cylinder fails to hold test pressure must be recorded. This pressure may not be less than 5,000 psi.

(iii) The size of the cylinder tested will be based on the size that had the greatest production during the previous 6 months or 500 cylinders.

(iv) If any cylinder fails this test, the entire lot must be rejected.

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§ 178.42(g) *Leakage test.* Does not apply. Instead, a 6 inch section of production tubing from each heat of material that has passed the hydrostatic test (see § 178.42(f) above) number must be subjected to a flattening test without cracking to 10 times the wall thickness between wedge blocks.

§ 178.42(i) *Marking.* Applies except that each cylinder must be marked "DOT-SP 9347 1800" in lieu of "DOT 3E 1800".

b. TESTING - Each cylinder must be visually reinspected at least once a year to determine that there has been no deterioration of seals, and to ensure that the physical integrity of the cylinder has not been adversely affected by scratches, dents or gouges. At this time the end caps, tie rods and indicating rods must be thoroughly cleaned with an appropriate solvent recommended by the manufacturer. A test report documenting that the cylinder was retested must be on file at the test site, and made available to a DOT official when requested.

c. OPERATIONAL CONTROLS -

(1) Each cylinder must be overpacked for shipment in accordance with § 173.301(a)(9).

(2) The cylinder may be used only for LP gas and oil well sampling service.

8. SPECIAL PROVISIONS:

a. In accordance with the provisions of Paragraph (b) of § 173.22a, persons may use the packaging authorized by this special permit for the transportation of the hazardous materials specified in paragraph 6, only in conformance with the terms of this special permit.

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

c. A current copy of this special permit must be maintained at each facility where the package is offered or reoffered for transportation.

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- d. Each packaging manufactured under the authority of this special permit must be either: (1) marked with the name of the manufacturer and location (city and state) of the facility at which it is manufactured; or (2) marked with a registration symbol designated by the Office of Hazardous Materials Special Permits and Approvals for a specific manufacturing facility.
- e. A current copy of this special permit must be maintained at each facility where the package is manufactured under this special permit. It must be made available to a DOT representative upon request.
- f. Transportation of Division 2.1 (flammable gases) are not authorized aboard aircraft unless specifically authorized in the Hazardous Materials Table (§ 172.101).
9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle and cargo aircraft only.
10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each aircraft or motor vehicle used to transport packages covered by this special permit. The shipper must furnish a current copy of this special permit to the air carrier before or at the time the shipment is tendered.
11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this special permit 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 special permit and the Hazardous Materials Regulations, Parts 171-180.
 - o Persons operating under the terms of this special permit must comply with the security plan requirement in Subpart I of Part 172 of the HMR, when applicable.
 - o Registration required by § 107.601 et seq., when applicable.

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

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

Under Title VII of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) - "The Hazardous Materials Safety and Security Reauthorization Act of 2005" (Pub. L. 109-59), 119 Stat. 1144 (August 10, 2005), amended the Federal hazardous materials transportation law by changing the term "exemption" to "special permit" and authorizes a special permit to be granted up to two years for new special permits and up to four years for renewals.

12. REPORTING REQUIREMENTS: Shipments or operations conducted under this special permit are subject to the Hazardous Materials Incident Reporting requirements specified in 49 CFR §§ 171.15 Immediate notice of certain hazardous materials incidents, and 171.16 Detailed hazardous materials incident reports. In addition, the grantee(s) of this special permit must notify the Associate Administrator for Hazardous Materials Safety, in writing, of any incident involving a package, shipment or operation conducted under terms of this special permit.

Issued in Washington, D.C.:



for William Schoonover
Associate Administrator for Hazardous Materials Safety

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Materials Safety Administration, U.S. Department of Transportation, East Building PHH-30, 1200 New Jersey Avenue, Southeast, Washington, D.C. 20590.

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Copies of this special permit may be obtained by accessing the Hazardous Materials Safety Homepage at

http://hazmat.dot.gov/sp_app/special_permits/spec_perm_index.htm

Photo reproductions and legible reductions of this special permit are permitted. Any alteration of this special permit is prohibited.

PO: Andrew Eckenrode