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* INCH-POUND *

A-A-50492A
November 29, 1993

SUPERSEDING
A-A-50492
28 February 1989

COMMERCIAL ITEM DESCRIPTION

OILERS, AIR LINE

This Commercial Item Description is approved by the Commissioner, Federal Supply Service, General Services Administration, for the use of all Federal agencies. This CID is to be used in preference to Military Specification MIL-O-82042, which is cancelled.

1. Abstract. This CID covers the requirements for air line oilers. Configuration of the oiler shall be type I, lubricator, filter, pressure regulator, and gauge, 1/2-inch (12.7-millimeters (mm)) internal pipe thread connection, similar to figure 1; or type II, lubricator and filter, 1/4-inch (6.35 mm) internal pipe thread connection, similar to figure 2. Type I oiler is commonly referred to as a filter-regulator-lubricator on the commercial market. The oiler is to be used with air-powered tool and air-powered mechanisms in compressed air systems.

2. Salient characteristics.

2.1 Type I oiler performance. The type I oiler shall remove at least 90 percent of the condensed water, and 95 percent of 50 microns or larger size foreign particles from an air line delivering up to 70 standard cubic feet per minute (scfm) (0.03 cubic meters per second (m3/s)) at an inlet pressure of 100 pounds per square inch gage (psig) (689 kilopascals (kPa)). The oiler shall also regulate the air pressure between 10 and 125 psig (69 and 862 kPa) while dispensing a constant, adequate supply of lubricant to the discharge air in the air supply system.

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Beneficial comments (recommendations, additions, deletions) and any pertinent
*data which may be of use in improving this document should be addressed to: *
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*1000 23rd Avenue, Port Hueneme, CA 93043-4301. *
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2.2 Type II oiler performance. The type II oiler shall remove at least 90 percent of the condensed water and 95 percent of 50 microns or larger size foreign particles from an air line delivering up to 20 scfm (0.01 m3/s) at an inlet pressure of 100 psig (689 kPa). Type II oiler shall function in an air supply between 10 and 125 psig (69 and 862 kPa) and dispense a constant adequate supply of lubricant to the discharge air in the air supply system.

2.3 Lubricator, type I and type II. The lubricator shall have a body, bowl, sight dome or sight glass, adjustable oil feed, filler plug, gaskets, and other necessary components. The bowl shall be metal or plastic and shall be provided with bowl guards, if plastic. Lubricators with metal bowls shall withstand a pressure of 250 psig (1724 kPa) at a temperature of 100 degrees Fahrenheit (oF) (37.7 degrees Celsius (oC)). Lubricators with plastic bowls shall withstand a pressure of 150 psig (1034 kPa) at a temperature of 100oF (37.7oC). The sight glass shall be readily replaceable and constructed of a shatter-resistant material. A filler plug, provided with means for bleeding off pressure inside the oil chamber before removal of the plug, shall be readily accessible for refilling. A metering valve shall be furnished to accomplish adjustment of the oil feed rate from a flow of one drop per minute to maximum flow. The valve shall not change its setting as a result of jars or vibrations. The lubricator shall function under continuous or intermittent operation and shall not cause flooding of oil into the air line. The amount of atomized oil injected into the air shall be proportional to the amount of air flowing through the system. When specified, the lubricator shall be so constructed that refilling of the reservoir can be accomplished without shutting off the air supply.

2.4 Lubricator capacity. Type I lubricator shall have a capacity of not less than 7 fluid ounces (207 milliliters (mL)); type II lubricator shall have a capacity of not less than 4 fluid ounces (118 mL).

2.5 Lubricator maximum pressure drop. Type I lubricator shall have a maximum pressure drop of 6 pounds per square inch (psi) (41 kPa) at an inlet pressure of 100 psig (689 kPa) and 70 scfm (0.03 m3/s); type II lubricator shall have a maximum pressure drop of 6 psi (41 kPa) at an inlet pressure of 100 psig (689 kPa) and 20 scfm (0.01 m3/s).

2.6 Lubricator performance. The lubricator shall operate using oil with a viscosity up to 800 Saybolt Universal Seconds equivalent to SAE 30W oil at a temperature not less than 85oF (30oC).

2.7 Filter, type I and type II. The filter shall have a body, transparent bowl, filter element, drain, gaskets, and other necessary components. The bowl shall be readily removable without the use of tools and constructed of metal or a shatter-resistant plastic, such as polycarbonate resin. A drain shall be provided to allow liquids and foreign matter to be drained from the bowl. The drain shall be of the manual type. The drain shall be so constructed that it cannot be disassembled when opened for drainage purposes. The design of the filter shall be such that liquids and foreign matter (dirt, rust, scale) will be separated from the compressed air stream and prevented from making contact with the filter element. The filter elements shall be porous plastic, or porous bronze, or impregnated felt, or other permanent and cleanable material. The filter elements shall have a nominal rating of 50 microns or less. The filter element shall have means to prevent bypass of contaminants and shall be readily removable without use of tools.

2.8 Filter dimensions. Type I filter shall have 1/2-inch (12.7-mm) internal inlet and outlet pipe thread connections, and a bowl capacity of at least 7 fluid ounces (207 mL). Type II filter shall have 1/4-inch (6.35-mm) internal connections, and a bowl capacity of at least 4 fluid ounces (118 mL).

2.9 Filter maximum pressure drop. Type I filter shall have a maximum pressure drop of 3 psi (21 kPa) at 100 psig (689 kPa) inlet pressure and 70 scfm (0.03 m3/s); type II filter shall have a maximum pressure drop of 3 psi (21 kPa) at 100 psig (689 kPa) inlet pressure and 20 scfm (0.01 m3/s).

2.10 Pressure regulator, type I. The pressure regulator shall have a body, and a hand-operated adjusting device. Internal components shall be constructed of corrosion-resistant materials. Regulators shall be of a relieving type. The pressure regulator body shall be equipped with two 1/2-inch (12.7-mm) internal thread ports, and two 1/4-inch (6.35-mm) internal pipe thread gauge ports furnished with removable plugs.

2.11 Pressure regulator performance. The pressure adjustment shall be such that an inlet pressure of 250 psig (1724 kPa) can be reduced and regulated within the range of 10 to 125 psig (69 to 862 kPa). While the regulator is subjected to 250 psig (1724 kPa) constant primary air pressure, and with the free flow rates ranging from 0 to 70 scfm (0 to 0.03 m3/s), the regulated pressure shall vary not more than 10 and 100 psig (69 and 689 kPa).

2.12 Pressure gauge, type I. The pressure gauge shall have a 2-inch (50-mm) or larger size dial having a minimum pressure range of 0 psig to 160 psig (1103 kPa) and a back connection fitted with a 1/4-inch (6.35-mm) external thread. The gauge shall have a case with a commercial finish and a shatter-resistant plastic crystal. The dial shall be numbered at intervals indicating 20 psig (138 kPa) pressure and marked at 5 psig (34 kPa) primary divisions.

2.13 Mounting brackets. For type I oiler, a mounting bracket shall be provided for the regulator; for type II oiler, a mounting bracket shall be furnished for the filter.

2.14 Treatment and painting. The oiler shall be treated and painted in accordance with the manufacturer’s standard practice.

2.15 Marking. Each oiler shall be marked in a plain and permanent manner with the manufacturer’s name or with a trademark of such known character that the source of manufacture may be readily determined.

3. Contractor certification. The contractor shall certify and maintain substantiating evidence that the product offered meets the salient characteristics of this CID and that the product conforms to the producer’s own drawings, specifications, standards, and quality assurance practices and is the same product sold in the commercial marketplace. The Government reserves the right to require proof of such conformance prior to first delivery and thereafter as may be otherwise provided for under the provisions of the contract.

4. Measurement system. The values stated in inch-pound units are to be regarded as the standard. The metric values stated in parentheses are for information purposes only.

5. Metric products. Products manufactured to metric dimensions will be considered on an equal basis with those manufactured using inch-pound units, provided they fall within specified tolerances using conversion tables contained in the latest revision of FED-STD-376, and all other requirements of this CID are met. If a product is manufactured to metric dimensions and those dimensions exceed the tolerances specified in the inch-pound units, a request should be made to the contracting officer to determine if the product is acceptable. The contracting officer has the option of accepting or rejecting the product.

6. Regulatory requirements. In accordance with Section 23.403 of the Federal Acquisition Regulations, the Government's policy is to acquire items composed of the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition without adversely affecting performance requirements or exposing the supplier's employees to undue hazards from the recovered materials.

7. Packaging, packing and marking. The packaging, packing, labeling, and marking shall be as specified in the contract or order.

8. CID based part identification number (PIN). The following PIN procedure is for Government purposes and does not constitute a requirement for the contractor. The PIN to be used for oilers acquired to this CID is created as follows:

8.1 Type number. The type of the oiler is identified by a single number: type I - 1, type II - 2.

9. Notes. Purchaser should specify type of oiler and PIN required for a specific procurement.

9.1 FED-STD-376 is available from Standardization Documents Order Desk, Bldg. 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.

MILITARY INTERESTS:

Custodian

Navy - YD1

Review Activity

DLA - CS

CIVIL AGENCY COORDINATING ACTIVITY:

GSA - FSS

PREPARING ACTIVITY:

Navy - YD1

(Project 4930-0381)

FIGURE 1. Type I oiler.

[FIGURE NOT INCLUDED]

FIGURE 2. Type II oiler.

[FIGURE NOT INCLUDED]