

INCH-POUND

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SUPERSEDING  
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## COMMERCIAL ITEM DESCRIPTION

### FILLER-BLEEDER, HYDRAULIC BRAKE SYSTEM, AUTOMOTIVE

The General Services Administration has authorized the use of this Commercial Item Description (CID), for all federal agencies.

1. **SCOPE.** This CID covers a pneumatic filler-bleeder unit for servicing the hydraulic brake systems of automotive-type vehicles. The filler bleeder unit has a diaphragm that separates the operating air pressure from the hydraulic brake fluid. The filler-bleeder has a hydraulic brake fluid reservoir tank capacity of 4 gallons plus/minus 1 gallon (see 7.2).

2. **CLASSIFICATION**

3. **SALIENT CHARACTERISTICS**

3.1 General. All filler-bleeders shall meet the requirements of this CID unless otherwise specified by the contract or order.

3.2 Design and Construction. The filler-bleeder shall be new and of the manufacturer's current commercial design. The configuration shall consist of a tank with an air chamber and fluid chamber separated by a diaphragm, a brake fluid delivery hose with control valve, and a set of master brake cylinder adapters (see 3.7.10). The unit shall be mounted on casters and shall include means to store the delivery hose and master brake cylinder adapters. Construction of the filler-bleeder shall be such that parts will not work loose in service. All parts shall be manufactured to such standards as will permit replacement or adjustment without modification of parts or filler-bleeder (see 4.1). Unless otherwise specified (see 7.2), the filler-bleeder shall be designed for use with silicon based brake fluids and preservatives in conformance with SAE J1703 and/or DOT-FMVSS 116.

3.3 Material. Materials not specifically designated herein or in the contract shall be of a quality conforming to the best current industry standards. Materials shall be free from defects which would adversely affect the performance or maintainability of the individual components or the overall assembly. When dissimilar metals are used in contact with each other, suitable protection against galvanic corrosion shall be applied conforming to the best current industry standards.

Beneficial Comments, recommendations, additions, deletions, clarifications, etc. and any data which may improve this document should be sent to: Defense Supply Center, Columbus, ATTN: DSCC-VAI, P.O. Box 3990, Columbus, OH 43216-5000, or telephone (614) 692-0538.

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3.4 Function. The filler-bleeder, when properly filled with silicon based hydraulic brake fluid and correctly pressurized with air to the working pressure furnished by manufacturer shall perform the functions of filling and bleeding the hydraulic brake systems of automotive type vehicles. The filler-bleeder, and all its components and accessories, shall perform all functions specified herein without evidence of permanent deformation, structural failure, leakage, deterioration of materials, corrosion, or impairment of its initial operational capability.

3.5 Fastening Devices. All screws, pins, bolts, and similar parts shall be installed with means for preventing loss of tightness. All such parts, when subject to removal or adjustment shall not be swagged, peened, staked, or otherwise permanently deformed.

3.6 Threads. All machined threads shall conform to the commercial industries standard practice unless otherwise stated in the contract or order.

3.7 Pressure. The filler-bleeder shall withstand an internal pressure of not less than 50 pounds per square inch (PSI) without damage unless otherwise stated in the contract or order.

3.7.1 Detail of Components.

3.7.2 Tank. The tank shall be built in accordance with the best industry standards currently in use with a 3 to 5 gallon fluid capacity unless otherwise stated in the contract or order (see 7.2). The tank shall consist of a fluid chamber and an air chamber separated by a replaceable diaphragm that is impervious to degradation from silicon based hydraulic fluids. Then tank shall have an air inlet valve that accepts a standard air hose fitting used for putting air in automotive tires, an air pressure safety relief valve (see 3.7.9), a fluid pressure gauge (see 3.7.8), a fluid delivery control valve (see 3.7.10), a fluid filling port with pressure tight plug (see 3.7.5), a bleeder valve (see 3.7.6), and a rolling carriage (see 3.7.3). The filler-bleeder shall deliver not less than 95 percent of its full fluid capacity before requiring refilling. The filler-bleeder and diaphragm shall be designed to prevent damage to the diaphragm when the air chamber is charged to bypass pressure with no fluids in the fluid chamber. When air pressure is relieved from the air chamber, the diaphragm shall not block the air inlet valve or safety relief valve.

3.7.3 Carriage. Portability shall be provided by mounting the tank assembly on at least three swivel casters. The tank shall be mounted in such a manner as to prevent tipping of the unit in normal servicing operations. The caster and wheel material shall be impervious to automotive oils and greases.

3.7.4 Hose and Accessory Rack. The filler-bleeder shall be furnished with a means for securely storing the coiled 84 inch (see 3.7.10) dispensing hose and all adapters and accessories, while the unit is being used or transported. This device may be incorporated on the tank or carriage assembly.

3.7.5 Fluid Filling Port. The tank shall have a fluid filling port with a hand removable cap that will prevent spillage of fluid during use and storage. The fluid filling port shall be large enough to accept the spout of a funnel to aid in filling the fluid chamber of the tank.

3.7.6 Bleeder Valve. The filler-bleeder shall be equipped with a bleeder valve that enables the bleeding of any air that may be trapped in the fluid chamber.

3.7.7 Gaskets. All tank fittings and separable joints shall be equipped with gaskets made of suitable material to prevent leakage of hydraulic brake fluid and compressed air. All rubber or neoprene components shall be designed for use with silicon based brake fluids and preservatives conforming to the best current industry standards.

3.7.8 Pressure Gauge. The pressure gauge dial shall have a diameter of not less than 1.5 inches and be in accordance with the best commercial practice in the industry. The dial shall be

graduated at each 5 PSI and numbered at each 10 PSI or more frequently. If the gauge has readings above the maximum recommended operating pressure, the portion of the dial above that pressure shall be completely overprinted in red and clearly marked "DANGER". The gauge shall be provided with a clear, scratch resistant, window that is impervious to oils and hydraulic fluids.

3.7.9 Pressure Relief Valve. The filler-bleeder shall be equipped with an automatic pressure relief valve set to operate at not less than 5 PSI below the manufacturer's maximum working pressure. The relief valve shall be constructed so that it cannot be set to remain closed when the pressure is greater than 50 PSI. The relief valve shall be accurate within 5 PSI of the setting.

3.7.10 Dispensing Hose. The filler-bleeder shall be furnished with not less than 84 inches of 1/4 inch, nominal, internal diameter hose complete with fittings and a brake fluid control valve. The hose, fittings, and the brake fluid control valve shall withstand the sustained internal working pressures of not less than 50 PSI and be in accordance with the best industry standards currently in use. The dispensing hose shall be furnished with a leak proof, automatic-shutoff, quick disconnect and disconnect coupling(s) which fits its counterpart coupling on the adapters.

3.7.11 Adapters and Accessories. Unless otherwise specified (see 7.2), each filler-bleeder shall be furnished with the following:

- a) Adapters to fit the following size automotive brake and clutch system orifices: 1/4-18 NPT, 1/2-14 NPT, 3/4-18 NS, 1-1/4-18 NEF, 1-5/8-18 NEF and 3/4-18 NS with a minimum of two separate 45 degree connectors for vertical master cylinders.
- b) Adapters to fit the following types of master cylinders:
  - 1) Round open top
  - 2) Open tank
  - 3) Tandem cylinder (conventional box, vertical box and single cover)
  - 4) Chevrolet and General Motors trucks
  - 5) Ford Econoline trucks
  - 6) Chrysler, Dodge Series W200 and D200 trucks
  - 7) Special adapter to fit the master cylinder of the M151 jeep
  - 8) Adapters to fit the master cylinder of the Commercial Utility Cargo Vehicle (CUCV) made by Chevrolet Division of General Motors
  - 9) Adapters to fit the master cylinder of the High Mobility Multi-Purpose Wheeled Vehicle (HMMWV) made by AM General Division of LTV Aerospace and Defense Company

One gasket shall be provided for each straight threaded adapter. A gasket set and a spare set containing one of each type gasket required to accommodate all adapters shall be furnished unless otherwise specified in the contract or order (see 7.2). Unless otherwise specified in the contract or order (see 7.2), each filler-bleeder shall be furnished with a minimum of two flexible bleeder tubes with a minimum length of 15 inches each (see 7.2). The bleeder tubes shall consist of material not subject to deterioration by contact with the hydraulic brake fluids specified herein (see 3.2) or by contact with other oils and greases used in automotive vehicles. One tube shall be complete with connections, sizes No. 10-32 NF-2 male and 1/4-28 NF-2 male. The other tube shall provide a leak proof pressure or snap-on connector at one end. Master cylinder adapter fittings should be identified by size and type of thread, by make and model of master cylinder, by commercial vehicle make and model, or by nomenclature of military vehicle and model number.

3.8 Warning and Operating Instruction Plate. Unless otherwise stated in the contract or order (see 7.2), a warning and operating plate shall be attached near the filler opening in a conspicuous location and shall not be affected by hydraulic brake fluid. The plate shall be permanently marked as follows:

Warning

1. DO NOT CHARGE WITH AIR IN EXCESS OF (XXX) POUNDS PER SQUARE INCH. (NOTE: XXX = MAXIMUM WORKING PRESSURE FURNISHED BY MANUFACTURER)
2. DO NOT USE SHARP TOOLS OR OTHER SHARP PROBES TO RETURN DIAPHRAGM TO ITS NORMAL DOWN POSITION.

OPERATING INSTRUCTIONS

1. OPEN AIR RELEASE VALVE.
2. ADD THE SPECIFIED HYDRAULIC BRAKE FLUID.
3. CLOSE AIR RELEASE VALVE.
4. CHARGE WITH COMPRESSED AIR.
5. BLEED THE UNIT UNTIL THE UNWANTED AIR IS EVACUATED FROM THE HYDRAULIC BRAKE FLUID COMPARTMENT.

3.9 Finish. Unless otherwise stated in the contract or order (see 7.2), all painting and finishing shall be in accordance with the best commercial practice in the industry.

3.10 Marking. Mixers shall be marked with the manufacturer's standard practice unless otherwise stated in the contract or order (see 7.2).

4. REGULATORY REQUIREMENTS

4.1 Recycled/Recovered Materials. The offeror/contractor is encouraged to use recovered materials to the maximum extent practicable, in accordance with paragraph 23.403 of the Federal Acquisition Regulation (FAR). The filler-bleeder may contain reclaimed materials so long as such materials will not jeopardize its intended use and performance. The reclaimed materials shall have been reprocessed, remanufactured, or recycled in a manner which restores them to the same chemical composition and physical properties as the materials originally selected for use.

5. QUALITY ASSURANCE PROVISIONS

5.1 Product Conformance. The products provided shall meet the salient characteristics of this CID, conform to the producer's own drawings, specifications, standards, and quality assurance practices, and be the same product offered for sale in the commercial/industrial market. The Government reserves the right to require proof of such conformance.

5.2 Market Acceptance. The following market acceptance criteria are necessary to document the quality of the product to be provided under this CID:

- a. The company producing the item must have been producing a product meeting or exceeding the requirements of this CID for at least 5 years.
- b. Average annual sales over the last 5 years of 150 units that meet or exceed the requirements of this CID.

6. PACKAGING

6.1 Preservation, Packing, and Marking. Preservation, packing, and marking shall be as specified by the contract or order.

## 7. NOTES

7.1 Part Identification Number (PIN). The PIN should be used for Government purposes to buy commercial products conforming to the requirements of this CID. The part identification numbering procedure is for government purposes and does not constitute a requirement for the contractor. The following is an example of the PIN numbering system for CID A-A-XXXXX:



7.2 Ordering Data. The contract or order should specify the following:

- a. CID document number, revision, and CID PIN
- b. Tank fluid capacity for the filler-bleeder (see 3.7.2)
- c. Hydraulic fluid (see 3.2)
- d. Master cylinder adapter fittings required or universal adapters (see 3.7.11)
- e. Bleeder tubes (see 3.7.11)
- f. Warning and operating instruction plate (see 3.8)
- g. Marking as required (see 3.10)

7.3 Commercial Products. This CID was coordinated with the following vendors of commercial/industrial products. At the time of CID preparation and coordination, these vendors were known to have commercial/industrial products that would meet the requirements of this CID. (NOTE: This information should not be considered as a list of approved vendors or be used to restrict procurement to only the vendors shown.)

Branick Industries, Inc.  
4245 Main Avenue  
Fargo, North Dakota 58103  
Phone: (701) 281-8888

Jackson Industries  
321 Jacobson Drive  
P.O. Box 1090  
Maquoketa, IA 52060  
Phone: (800) 747-0504

Danaher Tool Group  
805 Estelle Dr  
Lancaster, PA 17601-2131  
Phone: (717) 898-6540

7.4 Part Number/ (PIN) Cross Reference. Table I contains the commercial part number cross-reference to the PIN number. Table I also contains general characteristic information on the different types of filler-bleeders and NSNs which meet those characteristics.

TABLE I  
Part Number/ (PIN) Cross Reference.

Company	Jackson Industries	Danaher Tool Group	Branick Industries Incorporated
Model Number	1282	2222	G300A
Dash Number	001	002	003
Fluid Capacity	2.5 Gallons	7 Quart Capacity	4 Gallons
Safety Relief PSI	45	45	
Dispensing Hose Length (Feet)	12	10.5	12
Bleeder Valve	YES	YES	YES
Carriage	3 Wheeled	3 Wheeled	3 Wheeled
Pressure Gauge	YES	YES	YES
NSN Meeting General Characteristics of Commercial Product	4910-00-141-8702	N/A	4910-00-273-3658

7.5 Source of Documents.

7.5.1 Federal Regulations are available from the Superintendent of Documents, Congressional Sales Office, U.S. Government Printing Office, Washington, DC 20402

7.5.2 SAE Standards are available from Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096

7.6 Government Users. To acquire information on obtaining these filler-bleeders from the Government inventory system, contact Defense Supply Center, Columbus, ATTN: DSCC-VAI, 3990 East Broad Street, Columbus, OH 43216-5000, or telephone (614) 692-0538.

MILITARY INTERESTS:

Custodians:  
Army - AL  
Air Force - 99  
DLA - CC

Review activities:  
Army - AV, CR4  
Navy - MC  
Air Force - 84

CIVIL AGENCY COORDINATING ACTIVITY:  
GSA - FSS

Preparing activity:  
DLA - CC

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