DAAE20-01-T-0051 **PRICING EVALUATION SUMMARY** **Attachment 1**

CLIN 0001

Hose Assembly Outfit NSN: 4940-01-080-4213

Estimated Order Quantity: Requirement

	Ordering Period 1		Ordering Period 2		Ordering Period 3		Ordering Period 4		Ordering Period 5	
Range	Unit Price	Wgt	Unit Price	Wgt	Unit Price	Wgt	Unit Price	Wgt	Unit Price	Wgt
1 - 5		5%		5%		5%		5%		5%
6 - 10		85%		85%		85%		85%		85%
11 - 15		5%		5%		5%		5%		5%
16 - 20		5%		5%		5%		5%		5%

Weighted Total:

CLIN 0002

Hose Assembler NSN: 4940-01-091-5099

Estimated Order Quantity: Requirement

Range	Unit Price	Wgt	Unit Price	Wgt	Unit Price	Wgt	Unit Price	Wgt	Unit Price	Wgt
1 - 4		5%		5%		5%		5%		5%
5 - 8		90%		90%		90%		90%		90%
9 - 12		5%		5%		5%		5%		5%

Weighted Total:

1. This will be an all or none procurement. Contractor's failing to bid on all items, all years, and all ranges may be disqualified.
2. For evaluation purposes, the Government has weighted the ranges based on the likelihood that if an order is placed, it will be placed in that particular range. An evaluation price will be calculated by multiplying the offered unit prices by their respective weights and minimum quantities for each range on each line item and adding the totals for all years.
3. A total evaluation price will be determined by adding the adjusted totals on all line items and all years.

TOOL AND EQUIPMENT ENGINEERING DESCRIPTION FOR PURCHASE HOSE ASSEMBLY OUTFIT (REUSABLE FITTINGS) NSN 4940-01-080-4213

1. SCOPE

1.1 Scope. This specification covers a hydraulic hose assembly outfit and includes hoses, industry reusable hose fittings, steel tubing adapters and nipples, hose cut-off machine, hose assembling machine and associated equipment utilized in the fabrication and repair or replacement of hydraulic hose assemblies.

2. APPLICABLE DOCUMENTS

2.1 Government documents

2.1.1. Specifications and standards. The following specifications and standards form a part of this specification to the extent specified herein. Unless otherwise specified, the issues of these documents shall be those listed in the issue of the Department of Defense Index of Specifications and standards (DODISS) and the supplement thereto, cited in the solicitation.

SPECIFICATIONS:

FEDERAL

PPP-B-601 - Boxes, wood, Cleated-Plywood
PPP-B-621 - Boxes, Wood, Nailed and lock-corner

MILITARY

MIL-B-121 - Barrier Material, Greaseproofed, Waterproof
MIL-H-6083 - Hydraulic fluid, petroleum base, preservation and operation

STANDARDS:

FEDERAL
FED-STD-H28 - Screw thread standards for federal services

MILITARY

MIL-STD-889	- Dissimilar metals
MS51500	- Adapter, straight, pipe to tube, male pipe end 37 degrees flared
MS51501	- Nipple, tube, regular hex, 37 degrees flared
MS51525	- Adapter, straight, tube to boss, O-Ring, 37 degrees flared

HANDBOOKS

MIL-HDBK-1221- Manual, technical, Commercial Equipment

(Unless otherwise indicated, copies of federal and military specifications standards, and handbooks are available from the Naval Publications and forms Center, (AT'TN: NPODS), 5801 Tabor Avenue, Philadelphia, PA 19120-5099).

2.1.2 Other Government documents. The following other Government documents form a part of this specification to the extent specified herein. Unless otherwise specified in, the issues shall be those in effect on the date of the solicitation

ARMY DRAWING: D13221E6701
D13221E6824
D13221E6732
(Copies of drawings, required by manufacturers in connection with specific acquisition functions should be obtained from the contracting activity or as directed by the contracting officer.)

U S. DEPARTMENT OF LABOR - CODE OF FEDERAL REGULATIONS (CFR)

29 CFR Chapter XVII, part 1910 - Occupational Safety and Health Standards.
(Application for copies should be addressed to the Superintendent of Documents, Government Printing Office, Washington, D. C. 20402-0001)

2.2 Other publications. The following documents form a part of this specification to the extent specified herein. Unless otherwise indicated, the issue in effect on date of invitation for bids or request for proposal shall apply.

SOCIETY OF AUTOMOTIVE ENGINEERS

SAE J 343	Tests and Test procedures for SAE l00R series hydraulic hose and hose assemblies
SAE J 514	Hydraulic tube fittings.
SAE J 516	Hydraulic hose fittings.
SAE J 517	Hydraulic hose.
SAE J 518	Hydraulic flanged tube, pipe and hose connectors; four bolt split flange type.
SAE J 525	Welded and cold drawn low carbon steel tubing annealed for bending and flaring standard.

(Applications for copies should be addressed to the Society of Automotive Engineers, 400 Commonwealth Drive, Warrendale, Pa 15096.)

AMERICAN SOCIETY FOR TESTING AND MATERIALS

ASTM D 1974	Standard practice for methods of closing, sealing and reinforcing fiberboard boxes.
ASTM D 3951	Standard practice for commercial packaging
ASTM D 4727	Standard specification for corrugated and solid fiberboard sheet stock (container grade) and cut shapes
ASTM D 5118	Standard practice for fabrication of fiberboard shipping boxes
ASTM D 5486	Standard specification for pressure sensitive tape for packaging, box closure and sealing

(Applications for copies should be addressed to the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428.)

NATIONAL AEROSPACE STANDARD

AIA/NAS 847 Caps and plugs, protective, dust and moisture seal

(Application for copies should be addressed to Aerospace Industries Associated of America Inc., 1250 Eye Street, N.W., Washington, DC 20005-3922.)

AMERICAN STANDARD FOR QUALITY (ASQC)

ANSI/ASQC Z1.4 Sampling procedures and tables for inspection by attributes

(Application for copies should be addressed to American Standard for Quality (ASQC) 611 East Wisconsin Avenue, Milwaukee, WI 53202.)

(Non-government standards and other publications are normally available from the organizations which prepare or which distribute the documents. These documents also may be available in or through libraries or other informational services.)

3. REQUIREMENTS:

3.1 First article. When specified, the supplier shall furnish one complete hose assembly outfit for first article inspection. The first article may be either a pre-production model or an initial production item that conforms to the requirements of this specification (see 4.2.1).

3.2 Design. Each hose assembly outfit shall be new, and consist of equipment of current design. All parts of the hose assembling machine and hose cutoff machine subject to breakage or distortion shall be accessible for adjustment, repair, and replacement. The outfit shall be utilized to affix industry reusable field attachable fittings in sizes ¼ inch through 1-1/2 inches to the hoses specified herein.

3.3 Vendor certification. Hoses and fittings (para 3.8.1.1 and 3.8.1.2) offered by a contractor to the government which are governed by this description, are subject to vendor certification. The contractor shall produce written certification that the offered products have been successfully tested according to the testing and inspection requirements as specified herein. Test records for proof of successful performance testing shall be provided to the contracting officer if requested.

3.4 Proof of past conformance to quality conformance inspection and testing. The contractor may present, to the procuring activity representative, documentation to support successful past performance of inspection and testing requirements as specified herein for proof of conformance. Acceptance of this documentation is subject to approval of the procuring activity. As a minimum, the contractor is required to perform proof pressure testing requirements of paragraph 4.4.1.3.2 for each new contract.

3.5 Test specimens (hose assemblies. Test specimens shall consist of hose assemblies (para. 3.8.1.1 hoses with para. 3.8.1.2 fittings). Hose assemblies shall be assembled in accordance with the fitting and hose manufacturer's instruction sheets. Fittings shall be of the applicable series for the SAE hose series tested. The free length of hose measured between fittings shall be eighteen inches. At least two hose assemblies for each SAE series, style, type, and size hose and fitting shall be required for the performance testing in para. 4.4.1.3. One sample hose assembly is sufficient if proof pressure is the only required test (see para 3.4).

3.5.1 Compatibility. Aeroquip Corp (CAGE 01276) or equal hoses and fittings may be supplied. If Aeroquip products are supplied, they shall conform to requirements of Para 3.3 or 3.4. If "or equal" products are supplied, each hose and fitting offered must be successfully tested with the appropriate SAE series, style, type, and size Aeroquip hose and fitting listed in table I and table II (i.e. Aeroquip hose with "or equal" fitting and Aeroquip fitting with "or equal" hose) in accordance with para 4.4.1.2. These requirements are necessary to assure that any hose or fitting supplied will function safely and is compatible with other hoses and fittings furnished with the hose assembly outfit.

3.6 Material. Materials not specifically designated herein or in the contract shall be of a quality commensurate with best commercial practices, shall be suitable for the intended purpose, and shall meet all requirements specified herein. Materials shall be free from defects that could 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 in accordance with MIL-STD-889.

3.6.1 Reclaimed materials. The manufacturer may use reclaimed materials for fabricating new parts. Reclaimed materials shall have been reprocessed, manufactured, or recycled in a manner that restores them to the same chemical composition and physical properties as the materials originally selected for use. Use of reclaimed parts as is or rebuilt from scrap or other used equipment shall not be permitted.

3.7 Construction requirements:

3.7.1 Castings and Forgings. All castings and forgings shall be free from defects which affect serviceability or performance (i.e. fins, scales inclusions, cold shuts, voids, cracks, thermal ruptures. laps, folds, mismatching, etc). Defective castings and forgings shall not be reclaimed for use on the hose assembly outfit.

3.7.2 Welding, brazing and soldering. Welding, brazing and soldering shall be of a quality that shall sustain all requirements of the welded, brazed or soldered parts. These operations shall not be employed as repair measures for defective parts.

3.7.3 Fastening devices. All screws, pins, bolts, and similar parts shall be installed with means for adjustment and preventing loss of tightness. All parts subject to removal or adjustment shall not be swaged, peened, staked or otherwise permanently deformed.

3.7.4 Threads. All machined threads shall conform to FED-STD-H28 and the applicable detailed standards referenced therein.

3.7.5 Lubricating systems. All bearings (except sealed for life, permanently lubricated type), matching gears, and all other moving parts shall be provided means to assure adequate lubrication. Recirculating systems shall include filters that are cleanable or replaceable. Each lubricant reservoir shall have means for determining fluid levels. All oil holes, grease fittings, and filler caps shall be so located as to be readily accessible. The supplier shall include and install all lubricants, fluids, greases and other compounds. Vent openings in the lubrication systems shall be temporarily capped or plugged to prevent loss of lubricants during shipment. Tags, warning that "ALL TEMPORARY CAPS OR PLUGS MUST BE REMOVED BEFORE SET-UP OR USE OF THE ITEM", shall be attached to all temporary caps or plugs intended to be vented to the atmosphere during operation. These warnings shall also be included in the instruction manual. In the event a lubricant reservoir cannot be covered and sealed, it shall be appropriately preserved and the lubricant shall be provided in a sealed container and shipped with each machine. A warning tag shall be placed in a conspicuous place near the filling area, warning the user to "INSTALL FURNISHED LUBRICANT BEFORE OPERATION OF THE EQUIPMENT". The operators manual shall also reflect the above warning and procedure.

3.7.6 Safety and health requirements. Covers, guards, or other safety devices shall be provided, and the devices shall not interfere with the operation of any component of the hose assembly outfit. The safety devices shall prevent unintentional contact with the guarded part, and shall be removable to facilitate inspection, maintenance, and repair of parts. All machine parts, components, mechanisms, and assemblies furnished on the machines, whether or not specifically required herein shall comply with the requirements of 29 CFR, Chapter XVII, Part 1910 applicable to any component of the hose assembly outfit.

3.7.7 Interchangeability. All parts of the hose assembly outfit shall be manufactured to definite standards and tolerances. All parts subject to possible future replacement shall be assigned a manufacturer's part number and shall be identified in the repair parts manual.

3.8 Characteristics:

3.8.1 Product characteristics. The hose assembly outfit shall be used to attach fittings in table II to the applicable hose in table I. the resultant hose assemblies shall show no evidence of defects, or damaged or broken components.

3.8.1.1 Details of components. Each hose assembly outfit shall consist of the following principal component parts:

a. hoses
b. hose fittings
c. tubing adapters and nipples
d. hose assembling machine
e. hose cut-off machine
f. hose skiver
g hose oil
h. mandrels

3.8.1.1.1 Hoses. Hoses furnished in the hose assembly outfit shall be of the type, size and quantity specified in table 1. Hoses shall be furnished in bulk quantities and marked every 24 inches or less on the layline. Unless otherwise specified, bulk hose shall be furnished as follows: 100 ±10 feet total consisting of one to three pieces, the shortest being at least 15 feet and the next shortest 25 feet; 60 ±6 feet total, consisting of one or two pieces the shortest being 15 feet; 20 feet total consisting of one piece; 10 feet total, consisting of one piece.

TABLE I, WIRE REINFORCED RUBBER HYDRAULIC HOSE

1. TWO WIRE BRAID HOSE: 100R2 PER SAE J517:

SIZE ID in	LENGTH (ft)	SAE P/N	AEROQUIP P/N OR EQUAL
¼	60	100R2A -4	FC163-04-07200
3/8	100	100R2A -6	FC163-06-12000
½	100	100R2A -8	FC163-08-12000
¾	100	100R2A-12	FC163-12-12000
1	60	100R2A-16	FC163-16-07200

2. FOUR SPIRAL WIRE WRAP HOSE: 100R12 PER SAE J517

SIZE (ID In.)	LENGTH (Ft.)	SAE P/N	AEROQUIP P/N OR EQUAL
1	20	100R12-16	FC136-16-02400
1-1/4	20	100R12-20	FC136-20-02400
1-1/2	20	100R12-24	FC136-24-01400

3.8.1.1.2 Hose Fittings Hose fittings shall be of the reusable type and shall be of the type, size and quantity specified in table II. Fittings, shall be compatible with the hoses specified in table I. The fittings shall be zinc plated to a thickness of 0.0002 in. minimum, or with a phosphate coating (oil finished).

TABLE II, HYDRAULIC HOSE FITTINGS

1. FITTINGS, HOSE TO TUBE: REUSABLE SCREW ON TO 37-DEGREE FEMALE FLARE, SWIVEL, STRAIGHT TYPE PER J516 FOR SAE 100R2 HOSE

SIZE HOSE (ID In.)	SIZE TUBE (OD In.)	QTY EA	SAE P/N	AEROQUIP P/N OR EQUAL
¼	¼	10	250143 -4 -4	4721-4-4S
¼	5/16	15	250143 -4 -5	4721-5-4S
3/8	3/8	15	250143 -6 -6	4721-6-6S
3/8	½	15	250143 -6 -8	4721-8-6S
½	½	15	250143 -8 -8	4721-8–8S
½	5/8	15	250143 -8-10	4721-10-8S
¾	¾	15	250143-12-12	4721-12S
1	1	10	250143-16-16	4721-16S

2. FITTINGS, HOSE TO TUBE: REUSABLE SCREW ON TO 37-DEGREE FEMALE FLARE, SWIVEL, STRAIGHT TYPE FOR SAE 100R12 HOSE.

SIZE HOSE (ID In.)	TUBE) (OD In.)	QTY Ea.	SAE P/N	AEROQUIP P/N OR EQUAL
1 ¼	1-1/4	2	NONE	FC7639-2020S
1-1/2	1-1/2	2	NONE	FC7639-2424S

3. FITTINGS, HOSE TO FLANGE: REUSABLE SCREW ON TO 4 BOLT SPLIT FLANGE STYLE, FOR SAE 100R12 HOSE

a. STRAIGHT TYPE:

SIZE HOSE (ID In.)	SIZE TUBE (OD In.)	QTY Ea.	SAE P/N	AEROQUIP P/N OR EQUAL
1	1	4	NONE	190935-16S
1-1/4	1-1/4	4	NONE	FC7713-2020S
1-1/2	1-1/2	4	NONE	FC7713-2424S

TABLE II CONTINUED
b. 45 DEGREE BENT TYPE

SIZE HOSE (ID In.)	TUBE (OD In.)	QTY Ea.	SAE P/N	AEROQUIP P/N OR EQUAL
1	1	2	NONE	190936-16S
1-1/4	1-1/4	2	NONE	FC7715-2020S
1-1/2	1-1/2	2	NONE	FC7715-2424S

C. 90 DEGREE BENT TYPE

SIZE HOSE (ID In.)	TUBE (ID In.)	QTY Ea.	SAE P/N	AEROQUIP P/N OR EQUAL
1	1	2	NONE	190937-16S
1-1/4	1-1/4	2	NONE	FC7703-2020S
1-1/2	1-1/2	2	NONE	FC7703-2424S

d. CLAMP HALF: FOR USE WITH SPLIT FLANGE STYLE FITTING PER SAE J518

HOSE SIZE (ID In.)	QTY EA.	SAE P/N	AEROQUIP P/N OR EQUAL
1	2	110161-16	449-74446-16
1-1/4	2	110161-20	449-74446-20
1-1/2	2	110161-24	449-74446-24

3.8.1.1.3 Tubing adapters and nipples. Tubing adapters and nipples shall be of the type, size and quantity specified in table III and shall comply with SAE J 514 and applicable military standards (MS).

TABLE III, ADAPTERS AND NIPPLES FOR HYDRAULIC TUBING
NOTE: The adapters may be referred to as fittings.

1. ADAPTER, TUBE TO PIPE: 37-DEGREE MALE FLARE AND MALE STRAIGHT THREAD TO MALE NPT, PER SAE J 514 and MS51500.

SIZE TUBE (OD IN.)	NPT (In.)	QTY Ea.	MILITARY P/N	AEROQUIP P/N Reference only
¼	¼	10	MS51500B4-4	2021-4-4S
3/8	3/8	10	MS51500B6-6	2021-6-6S
½	½	15	MS51500B8-8	2021-8-8S
¾	¾	10	MS51500B12	2021-12-12S
1	1	10	MS51500B16	2021-16-16S
1-1/4	1-1/4	2	MS51500B20	2021-20-20S
1-1/2	1-1/2	2	MS51500B24	2021-24-24S

2. ADAPTER, TUBE TO BOSS: 37-DEGREE MALE FLARE AND MALE STRAIGHT THREAD TO MALE STRAIGHT THREAD WITH O-RING GASKET, PER SAE J 514 AND MS51525

TUBE SIZE (OD In.)	QTY Ea	MILITARY P/N	AEROQUIP (REFERENCE ONLY)
5/16	5	MS51525B5	202702 –5 -5S
3/8	5	MS51525B6	202702 –6 -6S
½	5	MS51525B8	202702 8 -8S
5/8	5	MS51525B10	202702-10-10S
¾	5	MS51525B12	202702-12-12S
1	5	MS51525B16	202702-16-16S

3. NIPPLE, TUBE: 37-DEGREE MALE FLARE AND MALE STRAIGHT THREAD BOTH ENDS PER SAE J 514 AND MS51501

TUBE SIZE (OD In.)	QTY Ea.	MILITARY P.N	AEROQUIP P/N (REFERENCE ONLY)
5/16	5	MS51501B5	2027 -5 -5S
3/8	5	MS51501B6	2027 -6 -6S
½	5	MS51501B8	2027 -8 -8S
5/8	5	MS51501B10	2027-10-10S
¾	5	MS51501B12	2027-12-12S
1	5	MS51501B16	2027-16-16S

3.8.1.1.4 Hose assembling machine. A hose to fitting assembling machine shall be furnished to facilitate the attachment of hose fittings specified in table II to the hoses specified in table I. The machine shall be the bench mounted type capable of being fastened to the bench. The output torque at stall shall be at least 8,000 in-lbs. It shall operate from 115 volts, 60 hertz, single phase power source. The machine shall consist of a rotating chuck capable of gripping the hexagonal driving portion of a standard screw-together reusable nipple or coupling socket and a sliding self-aligning vise capable of gripping the hose or socket. The chuck shall be capable of rotating at a speed of at least 30-rpm. The machine shall be designed so that the hose fitting is visible while being attached to the hose. The machine rotation shall be reversible by a directional switch with a plate plainly showing whether the socket will be screwed "on" or "off" or the nipple screwed "in" or "out". A guard shall be provided to protect the operator from the moving parts. The guard shall be interlocked with the directional switch so that the guard cannot be moved from its guarding position unless the selector switch is in the "off" position. The interlock shall not allow switching from the "off" position until the moveable guard has been returned to the guarding position. The main axis of the machine shall be horizontal and the area required for accommodating the machine shall not exceed 3 feet square, exclusive of the area required in front of the machine for the operator and the hose or hose assembly being assembled or disassembled. The hose-assembling machine shall be in accordance with Army drawing D 13221E6824.

3.8.1.1.5 Hose cut-off machine. Each hose assembly outfit shall include a hose cut-off machine that shall Cut four spiral wire wrap hose up to 1-1/2 inches inside diameter conforming to SAE 100Rl2. It shall be supplied with two hardened steel knife-edge circular blades. It shall operate from 115 volt, 60 hertz, single-phase power source and be in accordance with Army Drawing D13221E6701.

3.8.1.1.6 Hose skiver. A hose skiver for removing the outer rubber covering of the hose ends prior to the assembly of the fittings shall be provided. The hose skiver shall be steel, shall include cutter blade, shall accommodate hoses of 1/4 inch through 1-1/2 inches inside diameter, and shall be in accordance with Army Drawing D13221E6732.

3.8.1.1.7 Hose oil. No less than 1 quart of hose oil shall be provided to lubricate the hose ends and fittings prior to assembly.

3.8.1.1.8 Mandrels. Steel or aluminum mandrels to support the hose during skiving shall be provided in the following sizes: ¼ inch, 3/8 inch, ½ inch, ¾ inch, 1 inch, 1-1/4 inch, and 1-1/2 inch. Each mandrel shall be 15 inches long and may be heavy wall tubing per SAE J525.

TABLE IV, HOSE ASSEMBLING EQUIPMENT

ITEM	QTY	REFERENCE	**AEROQUIP P/N** (REFERENCE ONLY)
HOSE ASSEMBLY MACHINE	1	Para 3.8.1.1.4	FT1013-1-5
HOSE CUTOFF MACHINE	1	Para 3.8.1.1.5	FT1200-2-4
CIRCULAR BLADES	2	Para 3.8.1.1.5	FT1200-3-84245
HOSE SKIVER	1	Para 3.8.1.1.6	FT1266
HOSE OIL (QUART)	1	Para 3.8.1.1.7	222070

MANDRELS

SIZE					
¼" DIA	X	15"	1	Para 3.8.1.1.8	FT 1266-04
3/8 DIA	X	15"	1	Para 3.8.1.1.8	FT 1266-06
½ DIA	X	15"	1	Para 3.8.1.1.8	FT 1266-08
¾ DIA	X	15"	1	Para 3.8.1.1.8	FT 1266-12
1 DIA	X	15"	1	Para 3.8.1.1.8	FT 1266-16
1-1/4DIA	X	15"	I	Para 3.8.1.1.8	FT 1266-20
1-1/2DIA	X	15"	1	Para 3.8.1.1.8	FT 1266-24

3.9 Environmental and performance conditions. Hoses and hose assemblies shall withstand the following environmental and performance conditions in accordance with SAE J517 and J343.

3.9.1 Low temperature. Hose and hose assemblies shall withstand bending to the hose minimum bend radius specified in SAE J517 for a period of 8 to 12 seconds while at -40 degrees Fahrenheit (-40 degrees Celsius) without evidence of splitting or cracking. After bending to the minimum bend radius at - 40 degrees Fahrenheit, hose and hose assemblies shall withstand the applicable proof pressure without evidence of leakage, rupture, or detachment of any fitting.

3.9.2 Proof pressure. Hose and hose assemblies shall withstand a pressure equal to twice the applicable operating pressure specified in SAE J517 without evidence of leakage, rupture, slippage, or detachment of fitting.

3.9.3 Impulse. Hose and hose assemblies, after being subjected to +212 degrees Fahrenheit (+100 degrees Celsius) for 24 hours, shall withstand impulse pressure for the minimum number of impulse cycles specified in SAE J517 without evidence of leakage, rupture, detachment, or slippage of a fitting.

3.9.4 Burst pressure. The hose and hose assemblies shall withstand a pressure equal to four times the applicable operating pressure specified in SAE J517 without evidence of leakage, rupture, detachment or slippage of a fitting.

3.10 Painting. Painting and finishing of the machine shall be in accordance with the manufacturer's best commercial practice provided the following criteria are met or exceeded. All surfaces to be painted shall be cleaned to be free of all foreign matter detrimental to painting, and at least one coat of primer (or a phosphate or chromate base) and one coat of enamel or equivalent (i.e., epoxy enamel) is applied. Unpainted metal and working surfaces exposed to atmospheric conditions shall be finished to resist corrosion. The type of finish applied shall be compatible with the base metal.

3.11 Identification of product.

3.11.1 Identification marking. The assembling machine and hose cut-off machine shall be marked for identification as follows:
Line 1 CAGE code of the design activity / Part identifying number of the design activity
Line 2 the letters MFR indicating the actual manufacturer – CAGE code of the actual manufacturer
Line 3 the NSN (National Stock Number of the Item)

3.11.2 Hose identification. The hose shall be marked at intervals not to exceed 24 inches on the layline. Order of marking may be in any sequence. The marking shall include, but shall not be limited to the following:

a. R2 for type 100R2 hose, RI2 for type 100RI2 hose
b. Nominal size ¼-, 3/8-, ½-, ¾-, 1-, 1 ¼-, and 1 ½ inches.
c. Cure date (quarter and year)

3.11.3 Adapter and fitting identification. The adapters and fittings shall be identified as specified in SAE J 516 and SAE J 514 as applicable.

3.12 Workmanship. The quality of workmanship imparted to the item and all of its components shall equal or exceed that typically provided to commercial products by domestic producers of the type of items addressed herein. The items presented for acceptance shall have been manufactured with skill and care; shall be uniform, neat, and clean; and shall be free of irregularities and anomalies which degrade form, fit, function, performance or appearance.

3.13 Instruction manual. An operator's instruction manual that details all phases of repair and fabrication of hose assemblies shall be provided. As a minimum, it shall provide the following information:

a. Fitting, disassembly from and assembly to hose, and required torque.
b. Preparation of hose ends: cutting to length, skiving and application of lubricating oil.

3.14 Repair parts manual. Repair parts and accessory identification in repair part manuals shall include the prime contractor's name, nomenclature and part number. Repair part identification in repair part manuals shall also include the original equipment/part manufacturer's (OEM) (actual part manufacturer's) name, Commercial and Government entity (CAGE), nomenclature and part number of the part used in the end item, immediately after the prime contractors part identification. Items with high mortality rates shall be so identified. MIL-HDBK-1221 shall be used for guidance in preparation of the manual.

4 QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract, the supplier may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specifications where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

4.1.1 Responsibility for compliance. All items must meet all requirements of Sections 3 and 5. The inspection set forth in this specification shall become a part of the contractor's overall inspection system or quality program. The absence of any inspection requirements in the specification shall not relieve the contractor of the responsibility of assuring that the products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling in quality conformance does not authorize submission of known defective material, either indicated or actual, nor does it commit the Government to acceptance of defective material.

4.2 Classification of inspection. The inspection requirements specified herein are classified as follows:

(a) First article inspection (see 4.2.1)
(b) Quality conformance inspection (see 4.2.2)

4.2.1 First article inspection. When specified, first article inspection shall be performed on the preproduction model(s) or initial production item(s) noted in 3.1. First article inspection shall consist of the examination in 4.3, all tests in 4.4, and the packaging inspection in 4.5. Failure of the first article to pass the examination or any of the test shall be cause for rejection.

4.2.2 Quality conformance inspection.

4.2.2.1 Inspections and tests. Quality conformance inspection shall be applied to production units offered for acceptance under the contract. Quality conformance inspection shall consist of (a) through (g) as follows, and failure of any unit to pass an examination or test shall be cause for rejection of the unit.

(a) Product examination (see 4.3)
(b) Hose and hose fitting tests (see 4.4.1)
(c) Hose assembling machine test (see 4.4.2.1)
(d) Hose cut-off machine test (see 4.4.2.2)
(e) Hose skiver test (see 4.4.2.3)
(f) Tubing adapter and nipples (see 4.4.3)
(g) Packaging inspection (see 4.5)

4.3 Product examination. The hose assembly outfits shall be visually, manually, and dimensionally examined to determine conformance with the requirements of 3.2 through 3.4, 3.5.1 through 3.8.1.1.8, and 3.9 through 3.14. Visual examinations shall include verification of completeness of manufacture and assembly, conformance to specified standards, adequacy of markings, proper cleaning, and freedom from the identified defects. Manual examinations shall include the operation of movable parts by hand to assure proper functioning. Dimensional examination shall verify size and weight conditions when specified. The examination provisions may be applied at the earliest practical point in manufacture at which it is feasible to inspect for acceptance without risk of change in the characteristic by subsequent operations. Failure of the contractor to provide objective evidence that the outfits and their components have passed the examinations prescribed for them by the contractor's inspection system shall be cause for rejection. In addition, failure of the contractor to provide objective evidence that all parts are manufactured to definite standards, clearances, and tolerances so that no replacement part will degrade the form, fit, or function of the end item (see 3.7.7), shall be cause for rejection.

4.4 Tests.

4.4.1 Hose and hose fitting tests. The following tests and conditions are applicable to the hose and hose fittings in TABLES I & II of 3.8.1.1.1 and 3.8.1.1.2. Test specimens shall consist of hose assembly test samples (hose fittings in paragraph 3.8.1.1.2 assembled to hoses in paragraph 3.8.1.1.1). Hose assembly test samples shall be assembled in accordance with the fitting and hose manufacturer's instruction sheets. Fittings and hoses assembled into hose assembly test samples shall conform to the applicable SAE standards. The free length of hose measured between fittings shall be eighteen inches.

4.4.1.1 Certification. A vendor must provide written certification if all the compatibility and performance tests specified in 4.4.1.2 and 4.4.1.3 have been previously performed successfully on all required items offered to the Government. Test records for proof of successful test results must be available for inspection. If a written certification is submitted in lieu of performing the compatibility and performance tests, a proof pressure test must be repeated on one part offered to the Government of each configuration and size assembled into a hose assembly test sample. This proof pressure test is required for each new contract. One sample hose assembly is sufficient if proof pressure is the only required test

4.4.1.2 Compatibility test. Aeroquip Corporation (CAGE 01276) or alternate vendor hoses and fittings may be supplied. If alternate vendor hoses and fittings are supplied, the alternate vendor's parts must be functionally interchangeable with Aeroquip Corporation's parts of the same type and size (i.e. alternate vendor fittings on Aeroquip hoses or alternate vendor hoses to Aeroquip fittings). To prove that the alternate vendor parts meet interchangeability requirements, either the certification requirements cited in 4.4.1.1 must be provided, or two hose assembly test samples containing types and sizes of each alternate vendor hose or fitting must be assembled to Aeroquip parts and successfully tested in accordance with performance tests in 4.4.1.3.

4.4.1.3 Performance tests. If these performance tests must be performed (no certification results available), two hose assembly test samples are required for testing representing all sizes and types of parts offered to the Government.

4.4.1.3.1 Low temperature test. Expose each hose assembly test sample to a temperature of -40 degrees Fahrenheit for 24 hours in a straight position. After this time period and while still at the exposed temperature level, bend hose over a mandrel having a diameter twice the bend radius specified for the particular type and size of hose. Bending shall be accomplished within a period of not less than 8 seconds nor more than 12 seconds. Hoses less than 1-inch nominal inside diameter shall be bent 180 degrees over the mandrel. Hoses 1 inch or more in nominal inside diameter shall be bent 90 degrees over the mandrel. After bending, the hose assembly test sample shall be allowed to warm to room temperature, then visually examined for cover cracks and then subjected to the proof pressure test at the specified pressure for the hose assembly test sample. Any cover cracks or leakage shall be cause for rejection.

4.4.1.3.2 Proof pressure test. Hydrostatically test each hose assembly test sample to the proof pressure specified for this particular type and size of hose for a period of not less than 30 seconds nor more than 60 seconds. Any indication of failure or leakage will be cause for rejection.

4.4.1.3.3 Impulse test. Expose each hose assembly test sample to a temperature of +212 degrees Fahrenheit for a period of 24 hours. After this time period, expose the test sample to an impulse test. The hose assembly test samples shall be impulsed on suitable equipment with the hose bent to the minimum bend radius. The bending procedure shall be identical to the bending procedure used in the low temperature test (4.4.1.3.1). The circulation petroleum base test fluid shall be circulated through the l00R2 hose assembly test samples at 212 ± 3 degrees Fahrenheit and 100R12 hose assembly test samples at 250 ±3 degrees Fahrenheit. Circulation of the test fluid shall be at a rate that will maintain uniform bore temperature. The impulse pressure curve shall be in accordance with SAE J343. The 100R2 hose assembly test samples shall be tested at 133% of operating pressure and shall withstand a minimum of 200,000 cycles without leakage or other malfunction. The 100R12 hose assembly test samples shall be tested at 133% of operating pressure and shall withstand a minimum of 500,000 cycles without leakage or other malfunction. The cycle rate shall be a uniform 30 to 75 cycles per minute at specified pressure. Failure of the test samples to withstand the minimum specified number of cycles without leakage or other malfunction shall be cause for rejection.

4.4.1.3.4 Burst pressure test. Hydrostatically test each hose assembly test sample to the minimum burst pressure specified for the hose. The hydrostatic pressure shall be increased at a constant rate to attain the specified minimum burst pressure within a period of not less than 15 nor more than 30 seconds. Hold the minimum burst pressure for a period of not less than 5 seconds. Any leakage, hose burst, or indication of failure below specified minimum burst pressure shall be cause for rejection.

4.4.2 Hose assembling machine, hose cut-off machine and hose skiver tests. The following tests are applicable to the hose assembly outfits. Failure to pass any of the test requirements shall be cause for rejection of the lot.

4.4.2.1 Hose assembling machine test. Fasten a suitable lever arm and force measuring device, or scale, to the machine chuck. Connect the machine to a single phase, 60-hertz voltage source no greater than 115 volts measure the stall torque of the chuck. Then remove the lever arm and allow the machine to run at no load measure the rotational speed of the chuck. Failure of the stall torque to be at least 8000 inch-pounds, or failure of the no-load speed of the chuck to be at least 30 revolutions per minute shall be cause for rejection (see 3.5.4).

4.4.2.2 Hose cut-off machine test. Connect the machine to a power source of 115 volts, 60 Hertz, single-phase power. Cut a short length of four-spiral wrap, 2 inch inside diameter hose. Failure to cut the hose cleanly, so that it can be fitted with an adapter, is cause for rejection.

4.4.2.3 Hose skiver test. Remove the outer rubber covering of a length of 2 inch inside diameter four spiral wrap hose with the skiver. Failure of the outer covering to be removed cleanly, without damage to the spiral wrap, so that the hose can be fitted with an adapter, is cause for rejection.

4.4.3 Tubing adapter and nipples. A Certificate of Conformance (COC) shall be provided for the tubing adapter and nipples in Table III in 3.8.1.1.3. The COC shall verify that the adapters and nipples meet all the requirements of SAE J 514 and Military Standards MS51500, MS51501 and MS51525.

4.5 The items shall be inspected before and after Packaging to determine compliance with the preservation, packaging, and marking requirements specified in Section D of the contract.

5 PACKAGING

5.1 Disassembly. The assembling machine shall be disassembled to effect savings in cubage and to assure protection of parts that are vulnerable to damage. The machine shall not be disassembled to the extent that it would require special skills or tools to reassemble.

5.2 Preservation, packaging. Preservation and packaging shall be in accordance with ASTM D 3951, and the following additional requirements.

5.2.1 Additional Requirements.

5.2.1.1 Hydraulic unit(s) shall be filled with manufacturer's hydraulic oil, providing it has preserving capabilities or with oil conforming to MIL-H-6083. The machine shall be actuated to assure that all interior surfaces of the hydraulic system have been coated.

5.2.1.2 External preserved surfaces shall be covered with barrier material conforming to MI-B-121, grade A. Secure barrier material with tape conforming to ASTM D 5486. The assembly machine, dies, and hydraulic unit(s) shall be packaged in a close-fitting fiberboard box conforming to ASTM D 1974 or ASTM D 5118 class weather resistant. Fiberboard conforming to ASTM D 4727 shall be formed into pads or cut shapes and utilized to isolate components and restrict movement. Protective cap-plugs conforming to NAS 847 shall be placed over the quick coupler and fluid outlets. All vent holes shall be sealed with tape to prevent any leakage of fluids. Fittings may be packaged in multiple quantity packages, provided that thread protectors are used on the fittings.

5.2.1.3 Technical data. Technical data shall be packaged in a plastic bag and placed in the unit container housing the assembling machine.

5.3 Packing. Packing shall be as specified.

5.3.1 Each repair kit shall be packed in a cleated plywood or nailed wood box conforming to PPP-B-601, overseas type or PPP-H-621, class 2, respectively.

5.4 Marking. Container markings shall be in capital letters of equal height, shall be proportionate to the available marking space and shall contain the following information in the order listed:

a. NSN/NATO stock number
b. CAGE code of the company awarded the contract, and part number of the item as specified in the contract
c. Quantity and unit of issue
d. Level of protection and date packed
e. Contract or purchase order number

Markings on the shipping container shall be grouped into three distinct categories, identification markings, contract data markings and address markings.

Identification Markings:

a. NSN/NATO stock number
b. CAGE code of the company awarded the contract, and part number of the item as specified in the contract.
c. Quantity and unit of issue
d. Level of protection and date packed
e. Gross weight and cube
f. Item description or nomenclature

Contract Data Marking:

The contract data marking placed under the identification markings, shall consist of the contract or purchase order number.

Address Markings:

The address markings placed to the right of the identification and contract data markings (if space is available) shall consist of the following information in the order shown.

a. Control number or reference number (as a minimum, the Transportation Control Number (TCN) shall be provided as the single standard shipment identification number.
b. FROM MILITARY: Name and address of consignor (DOD Activity Address Code (DODAAC) and in the clear address if applicable.
c. FROM CONTRACTOR: Name and address of the contractor including nine-digit zip code). When supplies are shipped from a subcontractor, only the name and address of the company awarded the contract shall be used.
d. TO: Name and address of consignee (DOD Activity Address Code (DODAAC) and in the clear address if applicable.
e. Piece number and total pieces (if more than one shipping container is used for the order).

In addition to the above information, the NSN/NATO stock number shall be bar coded on the unit packs and intermediate containers. The following shall be bar coded on the shipping container. All bar coding shall use the 3 of 9 format in accordance with ANSI MH10.8M.

a. NSN/NATO stock number.
b. Contract or order number.
c. CAGE code of the company awarded the contract.
d. Contract Line Item Number (CLIN) if applicable.

52.212-1 Instructions to Offerers--Commercial Items.

As prescribed in 12.3 - (b)(1), insert the following provision:

INSTRUCTIONS TO OFFERORS--COMMERCIAL ITEMS (MAR 2000)

(a) Standard industrial classification (SIC) code and small business size standard. The SIC code and small business size standard for this acquisition appear in Block 10 of the solicitation cover sheet (SF 1449). However, the small business size standard for a concern which submits an offer in its own name, but which proposes to furnish an item which it did not itself manufacture, is 500 employees.

(b) Submission of offers. Submit signed and dated offers to the office specified in this solicitation at or before the exact time specified in this solicitation. Offers may be submitted on the SF 1449, letterhead stationery, or as otherwise specified in the solicitation. As a minimum, offers must show--

(1) The solicitation number;

(2) The time specified in the solicitation for receipt of offers;

(3) The name, address, and telephone number of the offeror;

(4) A technical description of the items being offered in sufficient detail to evaluate compliance with the requirements in the solicitation. This may include product literature, or other documents, if necessary;

(5) Terms of any express warranty;

(6) Price and any discount terms;

(7) 'Remit to' address, if different than mailing address;

(8) A completed copy of the representations and certifications at FAR 52.212-3 ;

(9) Acknowledgment of Solicitation Amendments;

(10) Past performance information, when included as an evaluation factor, to include recent and relevant contracts for the same or similar items and other references (including contract numbers, points of contact with telephone numbers and other relevant information); and

(11) If the offer is not submitted on the SF 1449, include a statement specifying the extent of agreement with all terms, conditions, and provisions included in the solicitation. Offers that fail to furnish required representations or information, or reject the terms and conditions of the solicitation may be excluded from consideration.

(c) Period for acceptance of offers. The offeror agrees to hold the prices in its offer firm for 30 calendar days from the date specified for receipt of offers, unless another time period is specified in an addendum to the solicitation.

(d) Product samples. When required by the solicitation, product samples shall be submitted at or prior to the time specified for receipt of offers. Unless otherwise specified in this solicitation, these samples shall be submitted at no expense to the Government, and returned at the sender's request and expense, unless they are destroyed during preaward testing.

(e) Multiple offers. Offerors are encouraged to submit multiple offers presenting alternative terms and conditions or commercial items for satisfying the requirements of this solicitation. Each offer submitted will be evaluated separately.

(f) Late submissions, modifications, revisions, and withdrawals of offers. (1) Offerors are responsible for submitting offers, and any modifications, revisions, or withdrawals, so as to reach the Government office designated in the solicitation by the time specified in the solicitation. If no time is specified in the solicitation, the time for receipt is 4:30 p.m., local time, for the designated Government office on the date that offers or revisions are due.

(2)(i) Any offer, modification, revision, or withdrawal of an offer received at the Government office designated in the solicitation after the exact time specified for receipt of offers is ``late'' and will not be considered unless it is received before award is made, the Contracting Officer determines that accepting the late offer would not unduly delay the acquisition; and--

(A) If it was transmitted through an electronic commerce method authorized by the solicitation, it was received at the initial point of entry to the Government infrastructure not later than 5:00 p.m. one working day prior to the date specified for receipt of offers; or

(B) There is acceptable evidence to establish that it was received at the Government installation d[illegible]gnated for receipt of off[illegible]s and was under the Government's control prior to the time set for receipt of offers; or

(C) If this solicitation is a request for proposals, it was the only proposal received.

(ii) However, a late modification of an otherwise successful offer, that makes its terms more favorable to the Government, will be considered at any time it is received and may be accepted.

(3) Acceptable evidence to establish the time of receipt at the Government installation includes the time/date stamp of that installation on the offer wrapper, other documentary evidence of receipt maintained by the installation, or oral testimony or statements of Government personnel.

(4) If an emergency or unanticipated event interrupts normal Government processes so that offers cannot be received at the Government office designated for receipt of offers by the exact time specified in the solicitation, and urgent Government requirements preclude amendment of the solicitation or other notice of an extension of the closing date, the time specified for receipt of offers will be deemed to be extended to the same time of day specified in the solicitation on the first work day on which normal Government processes resume.

(5) Offers may be withdrawn by written notice received at any time before the exact time set for receipt of offers. Oral offers in response to oral solicitations may be withdrawn orally. If the solicitation authorizes facsimile offers, offers may be withdrawn via facsimile received at any time before the exact time set for receipt of offers, subject to the conditions specified in the solicitation concerning facsimile offers. An offer may be withdrawn in person by an offeror or its authorized representative if, before the exact time set for receipt of offers, the identity of the person requesting withdrawal is established and the person signs a receipt for the offer.

(g) Contract award (not applicable to Invitation for Bids). The Government intends to evaluate offers and award a contract without discussions with offerors. Therefore, the offeror's initial offer should contain the offeror's best terms from a price and technical standpoint. However, the Government reserves the right to conduct discussions if later determined by the Contracting Officer to be necessary. The Government may reject any or all offers if such action is in the public interest; accept other than the lowest offer; and waive informalities and minor irregularities in offers received.

(h) Multiple awards. The Government may accept any item or group of items of an offer, unless the offeror qualifies the offer by specific limitations. Unless otherwise provided in the Schedule, offers may not be submitted for quantities less than those specified. The Government reserves the right to make an award on any item for a quantity less than the quantity offered, at the unit prices offered, unless the offeror specifies otherwise in the offer.

(i) Availability of requirements documents cited in the solicitation.

(i)(1)(i) The GSA Index of Federal Specifications, Standards and Commercial Item Descriptions, FPMR Part 101-29 , and copies of specifications, standards, and commercial item descriptions cited in this solicitation may be obtained for a fee by submitting a request to--

GSA Federal Supply Service Specifications Section
Suite 8100, 470 L'Enfant Plaza, SW
Washington, DC 20407
Telephone (202) 619-8925
Facsimile (202) 619-8978.

(ii) If the General Services Administration, Department of Agriculture, or Department of Veterans Affairs issued this solicitation, a single copy of specifications, standards, and commercial item descriptions cited in this solicitation may be obtained free of charge by submitting a request to the addressee in paragraph (i)(1)(i) of this provision. Additional copies will be issued for a fee.

(2) The DOD Index of Specifications and Standards (DODISS) and documents cited in it may be obtained from the:

Department of Defense Single Stock Point (DoDSSP)
Building 4, Section D,
700 Robbins Avenue

Philadelphia, PA 19111-5094
Telephone (215) 697-2667/2179
Facsimile (215) 697-1462.

(i) Automatic distribution may be obtained on a subscription basis.

(ii) Order forms, pricing information, and customer support information may be obtained--

(A) By telephone at (215) 697-2667/2179; or

(B) Through the DoDSSP Internet site at http://assist.daps.mil.

(3) Nongovernment (voluntary) standards must be obtained from the organization responsible for their preparation, publication or maintenance.

(j) Data Universal Numbering System (DUNS) Number. (Applies to offers exceeding $25,000.) The offeror shall enter, in the block with its name and address on the cover page of its offer, the annotation 'DUNS' followed by the DUNS number that identifies the offeror's name and address. If the offeror does not have a DUNS number, it should contact Dun and Bradstreet to obtain one at no charge. An offeror within the United States may call 1-800-333-0505. The offeror may obtain more information regarding the DUNS number, including locations of local Dun and Bradstreet Information Services offices for offerors located outside the United States, from the Internet home page at http://www.customerservice@dnb.com. If an offeror is unable to locate a local service center, it may send an e-mail to Dun and Bradstreet at globalinfo@mail.dnb.com.

(End of provision)

[65 FR 16286, March 27, 2000]

52.212-4 Contract Terms and Conditions--Commercial Items.
As prescribed in 12.301 (b)(3), insert the following clause:
CONTRACT TERMS AND CONDITIONS--COMMERCIAL ITEMS (MAY 1999)
(a) Inspection/Acceptance. The Contractor shall only tender for acceptance those items that conform to the requirements of this contract. The Government reserves the right to inspect or test any supplies or services that have been tendered for acceptance. The Government may require repair or replacement of nonconforming supplies or reperformance of nonconforming services at no increase in contract price. The Government must exercise its post-acceptance rights--
(1) Within a reasonable time after the defect was discovered or should have been discovered; and
(2) Before any substantial change occurs in the condition of the item, unless the change is due to the defect in the item.

(b) Prior to offering any units for Government acceptance, the contractor shall present a report to the Government thirty days after award which provides the results of the analysis, demonstrations, examinations, and tests specified in PD-387, paragraph 4.3, entitled "verification", on a minimum of 2 each air compressors.

(c) Assignment. The Contractor or its assignee's rights to be paid amounts due as a result of performance of this contract, may be assigned to a bank, trust company, or other financing institution, including any Federal lending agency in accordance with the Assignment of Claims Act (31 U.S.C. 3727).
(d) Changes. Changes in the terms and conditions of this contract may be made only by written agreement of the parties.
(e) Disputes. This contract is subject to the Contract Disputes Act of 1978, as amended (41 U.S.C. 601-613). Failure of the parties to this contract to reach agreement on any request for equitable adjustment, claim, appeal or action arising under or relating to this contract shall be a dispute to be resolved in accordance with the clause at FAR 52.233-1, Disputes, which is incorporated herein by reference. The Contractor shall proceed diligently with performance of this contract, pending final resolution of any dispute arising under the contract.
(f) Definitions. The clause at FAR 52.202-1, Definitions, is incorporated herein by reference.
(g) Excusable delays. The Contractor shall be liable for default unless nonperformance is caused by an occurrence beyond the reasonable control of the Contractor and without its fault or negligence such as, acts of God or the public enemy, acts of the Government in either its sovereign or contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, unusually severe weather, and delays of common carriers. The Contractor shall notify the Contracting Officer in writing as soon as it is reasonably possible after the commencement of any excusable delay, setting forth the full particulars in connection therewith, shall remedy such occurrence with all reasonable dispatch, and shall promptly give written notice to the Contracting Officer of the cessation of such occurrence.
(h) Invoice. The Contractor shall submit an original invoice and three copies (or electronic invoice, if authorized,) to the address designated in the contract to receive invoices. An invoice must include--
(1) Name and address of the Contractor;
(2) Invoice date;
(3) Contract number, contract line item number and, if applicable, the order number;
(4) Description, quantity, unit of measure, unit price and extended price

of the items delivered;
(5) Shipping number and date of shipment including the bill of lading number and weight of shipment if shipped on Government bill of lading;
(6) Terms of any prompt payment discount offered;
(7) Name and address of official to whom payment is to be sent; and
(8) Name, title, and phone number of person to be notified in event of defective invoice. Invoices will be handled in accordance with the Prompt Payment Act (31 U.S.C. 3903) and office of Management and Bud(yet (OMB) Circular A-125, Prompt Payment. Contractors are encouraged to assign an identification number to each invoice.
(i) Patent indemnity. The Contractor shall indemnity the Government and its officers, employees and agents against liability, including costs, for actual or alleged direct or contributory infringement of, or inducement to infringe, any United States or foreign patent, trademark or copyright, arising out of the performance of this contract, provided the Contractor is reasonably notified of such claims and proceedings.
(j) Payment. Payment shall be made for items accepted by the Government that have been delivered to the delivery destinations set forth in this contract. The Government will make payment in accordance with the Prompt Payment Act (31 U.S.C. 3903) and Office of Management and Budget (OME) Circular A-125, Prompt Payment. If the Government makes payment by Electronic Funds Transfer (EFT), see 52.212-5(b) for the appropriate EFT clause. In connection with any discount offered for early payment, time shall be computed from the date of the invoice. For the purpose of computing the discount earned, payment shall be considered to have been made on the date which appears on the payment check or the specified payment date if an electronic funds transfer payment is made.
(k) Risk of loss. Unless the contract specifically provides otherwise, risk of loss or damage to the supplies provided under this contract shall remain with the Contractor until, and shall pass to the Government upon:
(1) Delivery of the supplies to a carrier, if transportation is f.o.b. origin; or
(2) Delivery of the supplies to the Government at the destination specified in the contract, if transportation is f.o.b. destination.
(l) Taxes. The contract price includes all applicable Federal, State, and local taxes and duties.
(m) Termination for the Government's convenience. The Government reserves the right to terminate this contract, or any part hereof, for its sole convenience. In the event of such termination, the Contractor shall immediately stop all work hereunder and shall immediately cause any and all of its suppliers and subcontractors to cease work. Subject to the terms of this contract, the Contractor shall be paid a percentage of the contract price reflecting the percentage of the work performed prior to the notice of termination, plus reasonable charges the Contractor can demonstrate to the satisfaction of the Government using its standard record keeping system, have resulted from the termination. The Contractor shall not be required to comply with the cost accounting standards or contract cost principles for this purpose. This paragraph does not give the Government any right to audit the Contractor's records. The Contractor shall not be paid for any work performed or costs incurred which reasonably could have been avoided.
(n) Termination for cause. The Government may terminate this contract, or any part hereof, for cause in the event of any default by the Contractor, or if the Contractor fails to comply with any contract terms and conditions, or fails to provide the Government, upon request, with adequate assurances of future performance. In the event of termination for cause, the Government shall not be liable to the Contractor for any amount for supplies or services not accepted, and the Contractor shall be liable to the Government for any and all rights and remedies provided by law. If it is determined that the Government improperly

terminated this contract for default, such termination shall be deemed a termination for convenience.
(o) Title. Unless specified elsewhere in this contract, title to items furnished under this contract shall pass to the Government upon acceptance, regardless of when or where the Government takes physical possession.
(p) Warranty. The Contractor warrants and implies that the items delivered hereunder are merchantable and fit for use for the particular purpose described in this contract.
(q) Limitation of liability. Except as otherwise provided by an express or implied warranty, the Contractor will not be liable to the Government for consequential damages resulting from any defect or deficiencies in accepted items.
(r) Other compliances. The Contractor shall comply with all applicable Federal, State and local laws, executive orders, rules and regulations applicable to its performance under this contract.
(s) Compliance with laws unique to Government contracts. The Contractor agrees to comply with 31 U.S.C. 1352 relating to limitations on the use of appropriated funds to influence certain Federal contracts; 18 U.S.C. 431 relating to officials not to benefit; 40 U.S.C 327, et seq., Contract Work Hours and Safety Standards Act; 41 U.S.C. 51-58, Anti-Kickback Act of 1986; 41 U.S.C. 265 and 10 U.S.C. 2409 relating to whistle blower protections; 49 U.S.C 40118, Fly American; and 41 U.S.C. 423 relating to procurement integrity.
(t) Order of Precedence. Any inconsistencies in this solicitation or contract shall be resolved by giving precedence in the following order:
(1) The schedule of supplies/services.
(2) The Assignments, Disputes, Payments, Invoice, Other Compliances, and Compliance with Laws Unique to Government Contracts paragraphs of this clause.
(3) The clause at 52.212-5 .
(4) Addenda to this solicitation or contract, including any license agreements for computer software.
(5) Solicitation provisions if this is a solicitation.
(6) other paragraphs of this clause.
(7) The Standard Form 1449.
(8) other documents, exhibits, and attachments.
(9) The specification.
(End of clause)
[64 FR 10542, March 4, 19991

DOCUMENT SUMMARY LIST

Item: HOSE ASSEMBLER AND HOSE ASSEMBLY OUTFIT
NSN:
Control Number/PRON: T11TAA01 & T11TAA02

Identifies all first tier documents (cited in SOW) (applicable DIDs). Also included are all referenced documents (2nd, (includes DID block 10 references), 3rd and lower tier) which have been tailored.

DOCUMENT CATEGORY:

CATEGORY O - Unless otherwise specified in the solicitation, contract, or contract modifications, all documents are for guidance and information only.

CATEGORY 1 - The requirements contained in the directly cited document are contractually applicable to the extent specified. All referenced documents are for guidance and information only.

CATEGORY 2 - The requirements contained in the directly cited document and the reference documents identified in the directly cited document are contractually applicable to the extent specified. All subsequently referenced documents are for guidance and information only.

CATEGORY 3 - Unless otherwise specified in the solicitation, contract or contract modification, all requirements contained in the directly cited document and all reference and subsequently referenced documents are contractually applicable to the extent specified.

Document Number (Contract Reference) Applicable Tailoring	Document Title	Document Date/ Document Category
1a. MIL-STD-2549 Table DIP 4-1	Configuration Management Data Interface	30 Jun 97 Cat 2
1b. DI-CMAN-81554 (seq A001)	Configuration Change Control Data Information Packet	30 Jun 97 Cat 2
2. ANSI/ISO/ASQC Q9002 or equivalent	Model for Quality Assurance in Production, Installation & Servicing	18 Jul 94

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PART 1 SECTION D

PACKAGING

NSN: 4940-01-091-5099
4940-01-080-4213

PRON: T11TAA01
T11TAA02

ITEM: Hose Assembler
Hose Assembly Outfit

Preservation, Packaging, Packing and Marking shall be in accordance with section 5 of DFP 331 dated 1 Sep, 2000.

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NOTES:

1. APPLICABLE STANDARDS/SPECIFICATIONS:
   A. DOD-STD-00100D(AR)
   B. ANSI Y14.5M-1982

(2) ELECTRICAL REQUIREMENTS: 115 VOLTS AC, 25 TO 60 Hz, .5 HP, 30 AMPERE POWER SOURCE. ELECTRICAL PLUG SHALL CONFORM TO ANSIC73.11 AND BE ASSEMBLED WITH 14 FT MINIMUM LENGTH OF 3 CONDUCTOR CORD.

3. ASSEMBLER SHALL BE CAPABLE OF USE WITH REUSABLE FITTINGS IN SIZES FROM 3/16" TO 2" IN THE SINGLE WIRE BRAID, DOUBLE WIRE BRAID AND SPIRAL WIRE STYLES.

4. ONLY THE ITEMS DESCRIBED ON THIS DRAWING WHEN PROCURED FROM THE VENDOR(S) LISTED HEREON IS APPROVED BY THE U.S. ARMY ARMAMENT RESEARCH, DEVELOPMENT AND ENGINEERING CENTER, ROCK ISLAND, IL 61299-7300, FOR USE IN THE APPLICATION SPECIFIED HEREON. IDENTIFICATION OF THE APPROVED SOURCE(S) OF SUPPLY HEREON IS NOT TO BE CONSTRUED AS A GUARANTEE OF PRESENT OR CONTINUED AVAILABILITY AS A SOURCE OF SUPPLY FOR THE ITEM(S).

(5) PRESSURE ACTUATOR, ITEM NO. 11; AIR SWITCH, ITEM NO. 12; AND AIR HOSE, ITEM NO. 13 ARE ONLY APPLICABLE FOR MACHINE WITH AIR CONTROL SWITCH.

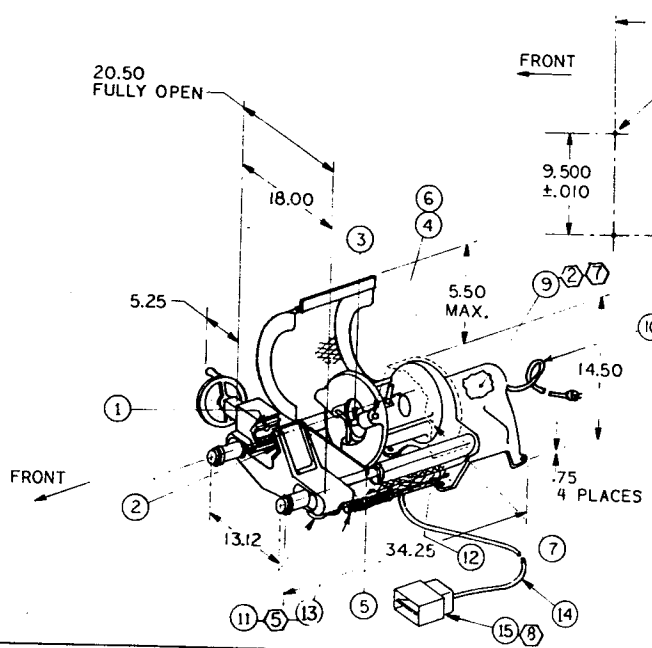
6. DIMENSIONS WITHOUT TOLERANCES ARE NOMINAL, AND STANDARD TOLERANCES OF THE MANUFACTURER SHALL APPLY.

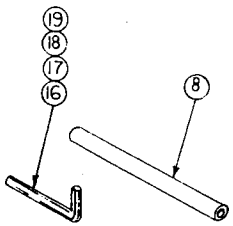
(7) MOTOR INCLUDES D-868 SWITCH BOX AND E-3270 STRAIGHT CONNECTOR FOR REPLACEMENT OF MOTOR BRUSH ASSEMBLY USE PART NO. E-1491

(8) FOOT SWITCH SHALL BE ASSEMBLED WITH 10 FT MINIMUM LENGTH OF 3 CONDUCTOR CORD.

9. MARK PART NO. IAW MIL-STD-130.

REVISIONS					
NF	ZONE	LTR	DESCRIPTION	DATE	APPROVED
		G	REDRAWN WITH CHANGE NOR E9E0022 NOR E9E0040-0000 NOR E9E3042-0000	89-07-13	
		H	NOR E3E0061-0050	94-01-31	





APPROVED SOURCE(S) OF SUPPLY		
PART NO.	VENDOR	CAGE CODE
MODEL 432-115	PARKER HANIFEN/HOSE PRODUCTS DIVISION 30240 LAKELAND BLVD. WICKLIFFE, OH 44092	87373
7480-0029	GATES RUBBER COMPANY 990 S. BROADWAY, P.O. BOX 5887, DENVER CO 80217	24161
T-300X	DANA CORPORATION/WEATHERHEAD DIV. 6615 BROTHERHOOD WAY, FT. WAYNE, IN 46825	79470
T01-120	STRATOFLEX INC. 220 ROBERTS CUT-OFF, P.O. BOX 10398, FORT WORTH TX 76114	98441
FT 1013-1-5	AEROQUIP CORPORATION INDUSTRIAL DIV. 1225 W. MAIN ST. VAN WERT, OH 45891	01276
386-F	IMPERIAL EASTMAN/EASTMAN DIV. P.O. BOX 647, 1440 N. 24TH ST. MANITOWOC, WI 54220-0647	13174

ITEM NO.	QTY REQD	VENDOR PART NO.	NOMENCLATURE
19	1	E-507	HEX KEY - 1/4 INCH
18	1	E-456	HEX KEY - 5/16 INCH
17	1	E-454	HEX KEY - 3/16 INCH
16	1	E-452	HEX KEY - 1/8 INCH
15	1	E-2497	FOOT SWITCH
14	1	D-620	FOOT SWITCH CORD ASSY
13	1	D-1300	AIR HOSE
12	1	E-6695-X	AIR SWITCH
11	1	E-6696 NSN 4940-01-092-6257	PRESSURE ACTUATOR
10	1	E-890-2	SERVICE CORD W/ PLUG
9	1	3166/4181	MOTOR, 115 V
8	1	E-737	CHUCK WRENCH
7	1	B-10	CHUCK BODY SUPPORT
6	3	E-832-X	CHUCK JAW INSERT
5	1	B-11	CHUCK BODY
4	3	C-171	CHUCK JAW
3	1	B-9	SCROLL
2	2	E-831	JAW, INSERT VISE
1	1	E-830	JAW, INSERT VISE

PARTS LIST

SOURCE CONTROL DRAWING

PART NO. 13221E6824

MECHANICAL PROPERTIES			
YS MIN			
YS MAX			
EL %			
RA			
BH		11807138	HSTRU
		11021152	S/E AUTO MA
HH		13221E6818	TRAILER ASS
		NEXT ASSY.	USED ON
		APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON: FRACTIONS ± DECIMALS .XX ± .XXX ± ANGLES ±
MATERIAL
HEAT TREATMENT
FINISH, PROTECTIVE FINISH

ORIGINAL DATE OF DRAWING 78-11-01
D. DEMEYER — DRAWN — CHECKED
M. RAHIM — SUBMITTED — ENGINEER
APPROVED

DEPARTMENT OF THE ARMY
U.S. ARMY ARMAMENT RESEARCH, DEVELOPMENT AND ENGINEERING CENTER
ROCK ISLAND, ILLINOIS 61299-7300

HOSE ASSEMBLER

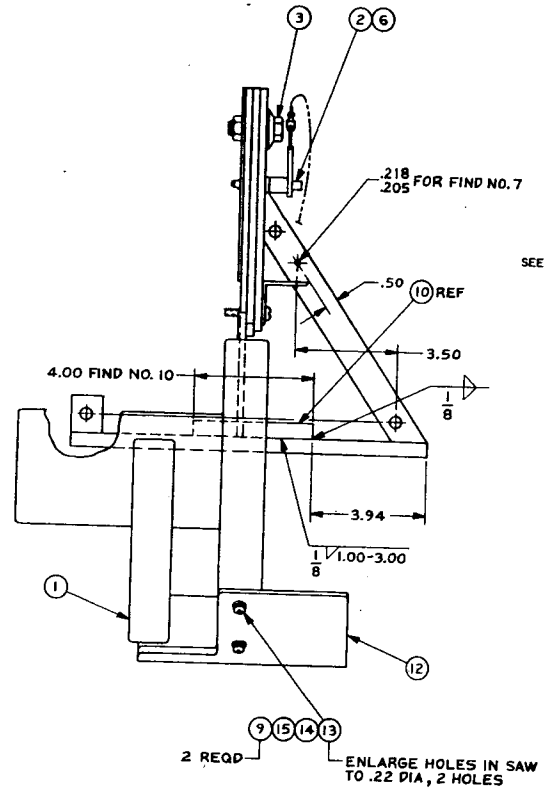
DWG SIZE	CODE IDENT NO.	13221E6824
D	59678	
SCALE NONE	UNIT WT	SHEET 1 OF 1

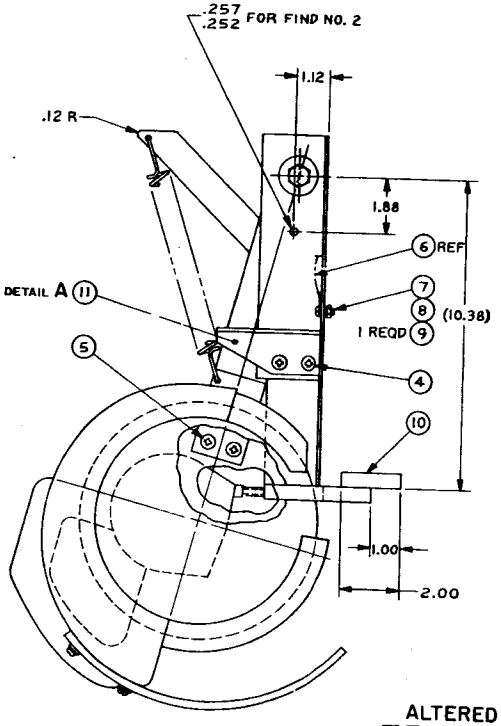
DISTRIBUTION STATEMENT A: APPROVED FOR PUBLIC RELEASE; DISTRIBUTION IS UNLIMITED.

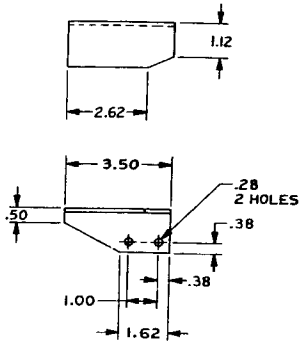
DA/CAR-ES FORM 1481, 1 JUL 88 REPLACES DRSMC FORM 1273, 1 JAN 84 WHICH WILL BE USED

D 13221E6824

ZONE	LTR	REVISIONS DESCRIPTION	DATE	APPROVED
	A	SEE NOR. REDRAWN	19 SEP 77	
	B	SEE ECP 79CE0250	23 JAN 79	
	C	SEE ECP NO. 83HE0876	16 SEP 83	
	D	TRANSFERRED TO AMSMC-MMT-M, FSCM 59678, SEE ECP NO. 86HE3848	14 NOV 86	
	E	NOR T6E0026-0003 & 0002	87-06-22	
	F	NOR E3E0061-0104	94-01-31	







DETAIL A
(FIND NO. 11)

NOTES:

1. ALTER 13221E6832 AS SHOWN.
2.
3. REPLACE ALL MOUNTING HARDWARE WHERE NECESSARY TO COMPLY WITH ALL LIST OR MATERIAL FIND NUMBERS. MOUNTING POSITIONS TO BE AS SHOWN.
4. WELD IN ACCORDANCE WITH 13215E0632, CLASS 2, TYPE IV.
5. MAY BE PROCURED FROM:
   AMERICAN DEVELOPMENT CORP
   2399 AIR PARK ROAD
   CHARLESTON SC 29405
   FSCM 51745 PART NO. ADC-1088

ALTERED ITEM DRAWING

CURRENT DESIGN ACTIVITY CAGE CODE 59678
U.S. ARMY MANAGEMENT RESEARCH, DEVELOPMENT AND ENGINEERING CENTER
ROCK ISLAND, ILLINOIS 61299-7300

FIND NO.	FSCM	DWG SIZE	PART OR IDENTIFYING NO.	QTY REQD	NOMENCLATURE OR DESCRIPTION	SPECIFICATION	MATERIAL
15			MS21083B3	2	NUT, SELF-LOCKING, .190-32 UNJF-3B		
14			AN 960-10	2	WASHER, FLAT, .190 THD SIZE		
13			MS51958-65	2	SCREW, PAN HD, .190-32 UNF-2A X .75 L		
12		C	13221E6700	1	SHIELD, HOSE CUTTER		
11			ALY 6063-T5	1	ANGLE, 1.50 X 1.50 X .125 STK	ASTM B221	AL ALY
10			M1020	1	BAR, .50 STK	ASTM A575	STL
9			MS35338-43	3	WASHER, LOCK, SPRING, .190 NOM SIZE		
8			MS35650-302	1	NUT, HEX, .190-32 UNF-2B		
7			MS35207-262	1	SCREW, FLAT HD, .190-32 UNF-2A X .438 L		
6			MS17339-1	1	CABLE, SAFETY 6.00 L		
5			MS35191-294	2	SCREW, FLAT HD, .250-28 UNF-2A X 1.25 L		
4			MS35206-284	2	SCREW, PAN HD, .250-20 UNC-2A X 1.25 L		
3			MS90725-113	1	SCREW, HEX HD, .500-13 UNC-2A X 1.50 L		
2			MS17986-409	1	PIN, QUICK RELEASE, .250 NOM DIA		
1		D	13221E6832	1	POWER SAW, HOSE CUTTER		

LIST OF MATERIAL

18071141	H5TRU
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIM/TOLERANCES ARE ... IN
ONE PLACE ± .0
TWO PLACE ± .03
THREE PLACE ± .005
ANGLES ± —
THIRD ANGLE PROJECTION
DO NOT SCALE THIS DRAWING
FOR INTERPRETATION OF DRAWING DOD-STD-100 APPLIES
REMOVE BURRS AND BREAK SHARP EDGES
SHARP EDGES — TO —
FILLET RADII — TO —
MATERIAL —

DRAWN BY (AMF) DATE 26 AUG 77
CHECKED BY PROD SUP DATE 9 SEP 77
CONTRACT NO
DESIGN APPROVED DATE
APPROVED FOR RELEASE DATE

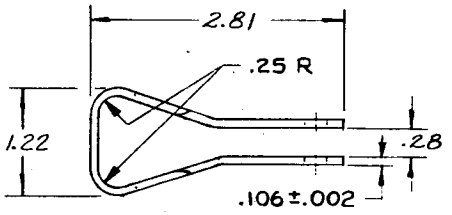
U.S. ARMY MOBILITY EQUIPMENT RESEARCH AND DEVELOPMENT COMMAND
FORT BELVOIR VIRGINIA 22060

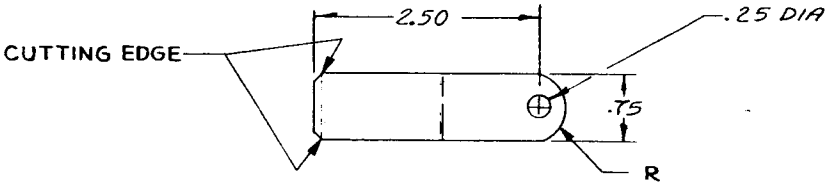
POWER SAW ASSEMBLY, HOSE CUTTER

SIZE D | FSCM 97403 | DWG NO 13221E6701
SCALE 1/2 | SHEET 1 OF 1

ZONE	LTR	DESCRIPTION	DATE	APPROVED
	D	NOR E9E0022 NOR E9E0036-0001	89-09 -07	
	E	NOR E3E0061-0102	94-08 -31	

ZONE	LTR	DESCRIPTION	DATE	APPROVED
	A	SEE ECP 77HE0684, 78HE0964		
	B	TRANSFERRED TO AMSMC-MMT-M, FSCM 59678, SEE ECP NO. 86HE3848	14 NOV 86	
	C	NOR T6E0026-0003	87-06-22	DMT





NOTES:

1. MATERIAL: STEEL, HARDENED AND TEMPERED TO ROCKWELL C45 TO 50 HARDNESS.
2. FINISH BLACK OXIDE.
3. IDENTIFICATION OF THE APPROVED SOURCE OF SUPPLY HEREON IS NOT TO BE CONSTRUED AS A GUARANTEE OF PRESENT OR CONTINUED AVAILABILITY AS A SOURCE OF SUPPLY FOR THE ITEM DESCRIBED ON THE DRAWING.

ONLY THE ITEM DESCRIBED ON THIS DRAWING WHEN PROCURED FROM THE VENDOR LISTED HEREON IS APPROVED BY U.S. ARMY ARMAMENT RESEARCH, DEVELOPMENT AND ENGINEERING CENTER, ROCK ISLAND, IL 61299-7300, FOR USE IN THE APPLICATION SPECIFIED HEREON.

APPROVED SOURCE OF SUPPLY		
VENDOR	VENDOR ITEM IDENT NO.	APPLICATION
CATERPILLAR TRACTOR 100 NE ADAMS ST PEORIA, ILL. 61629 FSCM 11083	7S1120	TEST & REPAIR UNIT-HYDRAULIC

SOURCE CONTROL DRAWING

DISTRIBUTION STATEMENT A. APPROVED FOR PUBLIC RELEASE; DISTRIBUTION IS UNLIMITED.

1322IE6231 1322IE6117	HS1811 1322IE6850

SEE NOTE 1

DRAWN DCO 10/23
7-21-76

CURRENT DRAWING ACTIVITY CAGE CODE 59678
U.S. ARMY ARMAMENT RESEARCH, DEVELOPMENT AND ENGINEERING CENTER
ROCK ISLAND, ILLINOIS 61299-7300

U.S. ARMY MOBILITY EQUIPMENT COMMAND
MOBILITY EQUIPMENT RESEARCH AND DEVELOPMENT CENTER
FORT BELVOIR, VIRGINIA 22060

SKIVING CUTTER

SIZE	CAGE CODE NO.	DRAWING NO.
B	97403	1322IE6732

SCALE — SHEET 1 OF 1