

DESCRIPTION FOR PURCHASE

STANDARD AUTOMOTIVE TOOL SET-STURDY MOBILE (SATS-SM)

1 SCOPE

1.1 Distribution Statement A. Approved for public release; distribution is unlimited.

1.2 Background. This specification describes a set consisting of selected tools and equipment used to sustain a wide variety of tactical and combat equipment used on the battlefield, primarily automotive vehicles. The set consists of a core selection of tools and equipment placed in rugged storage media that can be used within a shop environment.

2 APPLICABLE DOCUMENTS

2.1 General. The documents listed in this section are specified in sections 3 and 4 of this Description for Purchase (DFP). This section does not include documents cited in other sections of this DFP or documents recommended for additional information or as examples. While every effort has been made to ensure that completeness of this list, DFP users are cautioned that they must meet all specified requirements of documents cited in sections 3 and 4 of this specification, whether or not they are listed.

2.2 Order of Precedence. In the event of a conflict of interest between the text of this DFP and the references cited, the text of this document takes precedence. However, nothing in this document supersedes applicable laws and regulations unless a specific exemption has been obtained.

2.3 Government Documents. The Government specifications, standards, handbooks, and documents listed form a part of this document to the extent specified in this document. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DoDISS) cited in this solicitation.

2.3.1 Government Specifications.

Federal

A-A-1068	- Funnel
A-A-2566	- Bar, Wrecking
A-A-50271	- Plate, Identification
A-A-51128	- Torch Kit
A-A-59486	- Padlock Set
A-A-59568	- Gauges, Tire Pressure
GGG-P-00474	- Pliers, Brake (Reference only-spec cancelled)

2.3.2 Government Standards.

Department of Defense

MIL-STD-130	- Identification Marking of U.S. Military Property
MIL-STD-1472	- Human Engineering

2.3.3 Government Instructions, Directives, and Regulations

Occupational Safety and Health Administration

OSHA Program Directive #100-1	- Air Pressure Below 30 pounds per square inch
29 CFR 1910.177	- Servicing Rim Wheels

2.4 Non-Government Publications. The documents listed form a part of this document to the extent specified in this document. Unless otherwise specified, the issues of these documents are those listed in the issue of the DoDISS cited in this solicitation.

American National Standards Institute

ANSI B165.1	- Power driven brush tools
ANSI Z87.1	- Occupational and Educational Personal Eye and Face Protection Devices
ANSI Z535.4	- Product Safety Signs and Labels
ANSI/ISEA Z358.1	- Emergency Eyewash and Shower Equipment

(Application for copies should be addressed to the American National Standards Institute, 11 W. 42nd Street, New York, New York 10036.)

American Society of Mechanical Engineers

ASME B94.52M	- Specifications for Hacksaw Blades
ASME B107.21	- Wrench, Crowfoot
ASME B107.100	- Flat Wrenches
ASME B107.110	- Socket Wrenches, Handles, and Attachments
ASME B107.300	- Torque Instruments
ASME B107.410	- Struck Tools

ASME B107.500
ASME PALD

- Pliers
- Portable Automotive Lifting Devices

(Application for copies should be addressed to the American Society of Mechanical Engineers, Three Park Avenue, New York, NY 10016-5990)

International Standards Organization

ISO 16022

- Information Technology Automatic Identification and Data Capture Techniques Data Matrix Bar Code Symbology Specification

(Application for copies should be addressed to the ISO Copyright Office, Case Postale 56, CH-1211, Geneva 20, Switzerland.)

National Electrical Manufacturers Association

NEMA-5-15P
NEMA-5-15R

- Plugs
- Receptacles

Society of Automotive Engineers

SAE J1494

- Battery Booster Cables

3 REQUIREMENTS

3.1 System Requirements. The SATS-SM system shall be comprised of five roll around tool storage media [labeled “G”, “H”, “J”, “K”, and “L”] loaded with tools as described within this document as well as an assortment of additional hand tools described in this document that shall be commercially packaged separate from the storage media. The system shall be appropriately packaged for shipment to government designated locations. The system shall meet the following requirements.

3.1.1 Workmanship. The quality of workmanship imparted to the components of the SATS-SM shall equal or exceed that typically provided by domestically produced commercial products of this type. The SATS-SM components shall be manufactured with skill and care; shall be uniform, neat, and clean; and shall be free from irregularities and anomalies which degrade form, fit, function, performance, or appearance.

3.1.2 Reliability/Maintainability. The components of the SATS-SM are expected to be used in a similar manner and in a similar environment as that of the comparable commercial tools. Although no equipment variations are expected, any significant differences between the commercial and military versions that may be required must be implemented without a significant negative effect on the Reliability and Maintainability (R&M), safety, or logistics capabilities of the military version.

3.1.3 System Durability. While the fully loaded SATS-SM storage media are secured, they shall be capable of withstanding the following conditions without permanent damage or deformation to any component. During these conditions all tools shall stay in their appropriate storage locations without damage and remain mission capable.

3.1.3.1 Rolling Requirement. The storage media shall include casters/rolling devices to allow movement of the media within a maintenance shop environment (pavement). At least two of the devices shall be integrated with locking mechanisms to hold the media in place. The caster/rolling devices shall be of sufficient strength to withstand the entire weight of the fully loaded storage media while also allowing access underneath the storage media in the event material handling equipment is desired to move the storage media over longer distances and/or into transport vehicles. The system shall also be capable of withstanding common shocks experienced during rolling in a maintenance shop environment. The wheels provided shall be rugged and capable to withstand extended use.

3.1.4 Markings. Markings include all plates, labels, stencils, and stickers affixed to the system, and/or its components. All markings shall be permanently affixed to the SATS-SM storage media or component, as appropriate. All markings shall be resistant to deterioration caused by heat, cold, solar radiation, water, and petroleum products to the extent that they will remain intact and legible for the expected economic life of the SATS-SM. All markings shall be accomplished in a manner that does not adversely affect the life and utility of the SATS-SM or its equipment. All human readable markings shall be printed in the English language and may be supplemented by graphical symbols for clarification. All label, stencil, and sticker letters and numbers shall be black, except over a black background, in which these letters and numbers shall be contrasted to ease visibility.

3.1.4.1 System Identification. Each SATS-SM storage media shall have a human readable information plate permanently affixed to the outside of the storage media in a location that is plainly visible. Unless otherwise approved, the data plate shall conform to Commercial Item Description A-A-50271 Composition A, Class 2 or Composition D. The system identification plate will include the following information:

1. Nomenclature: Standard Automotive Tool Set Sturdy Mobile (SATS-SM)
2. NSN: (to be provided by the government)
3. Storage Media {shall be "G", "H", "J", "K", "L" as applicable}
4. Storage Media weight: [as determined by weighing a loaded media chest]
5. Specification Data: DFP ECB-075
6. Specification Data CAGE: 5B5M3
7. Manufacturer Commercial And Government Entity (CAGE):
8. Manufacturer Part Number: [as determined by the contractor]
9. Serial Number: [as determined by the contractor]
10. Acquisition Instrument Identification Number: [contract number]

3.1.4.2 Logistical Support

3.1.4.2.1 Component Identification. A complete list of tools including the nomenclature, manufacturer's part number, NSN (if applicable), quantity, and storage media location (if applicable) shall be provided to the government. Any set or assemblage within the SATS-SM shall also identify to the component level of that set the nomenclature, manufacturer's part number, NSN (if applicable), and quantity. (For example a socket set shall identify all components within it). Regarding the storage media, the contractor shall identify the cabinet assembly and individual components to include cabinet drawers, casters, foam, and attaching hardware.

3.1.4.2.2 Warranty Replacement. A complete list of warranties for each component, including the storage media, shall be provided to the government. The Warranty shall comply with required warranty duration as identified in Appendix A of the DFP. Warranty information shall include the following:

1. Government contract and delivery order number
2. Date of manufacture (month and year)
3. Instructions for submitting a claim including information such as:
 - Individual with responsibility to authorize claim
 - Date and location of incident
 - Unit location and DODAAC
 - Ship to address
 - Description of circumstances of component failure
4. Name and address of contractor, and any other means of contacting the contractor such as data fax number or e-mail address.

3.1.4.2.3 Non-Warranty Replacement. For the non-warranty ordering of replacement tools from the contractor, the procedures as determined by the contractor (including phone number, web site, and e-mail address if applicable) shall be provided to the government.

3.1.4.3 Lifting Caution. A lifting caution sign shall be permanently affixed to any component of the SATS-SM if the weight of that item exceeds the acceptable weight limit for a single lifter lifting an object from the floor to a surface equal to or greater than 5 ft from the ground according to MIL-STD-1472. The caution sign shall identify the minimum number of people required to lift the item according to the restrictions outlined in MIL-STD-1472.

3.1.4.4 Safety Signs. All product safety signs and labels shall conform to ANSI Z535.4.

3.1.4.5 Unique Identifier. The exterior of each SATS-SM storage media shall be marked with a Unique Identifier (UID) that has machine-readable data elements distinguishing it from all other like and unlike items in accordance with MIL-STD-130. UIDs shall not be repeated during the life of the contract and shall be globally unique and unambiguous. The UID data elements shall be contained in a Data Matrix ECC200 symbol in accordance with ISO/IEC 16022. Any component which has a cost of more than \$5000 to the Government shall be marked with a UID. The identifier shall remain intact and readable for the expected life of the SATS-SM. If construct number 2 is used (serialization within the original part number of the enterprise), the contractor shall maintain the original part number on the item for the life of the item. The contractor shall bear the responsibility to update the UID registry with the parent (end item) and children (component) UIDs. Further guidance on UID may be found at <http://www.acq.osd.mil/dpap/pdi/uid/index.html>.

3.1.5 Economic Life. The SATS-SM shall have a projected economic life of no less than fifteen years under the service conditions described herein.

3.1.6 Disposal. The SATS-SM shall be disposable under U.S., foreign, and international environmental quality laws and regulations. The design, production, operation, maintenance, and disposal of the system shall eliminate, or minimize to the greatest extent possible, adverse environmental quality impacts. The contractor shall also take the appropriate steps to minimize the materials in the SATS-SM that may have special disposal procedures.

3.2 Storage Media Requirements. The storage media shall provide storage, transportation, and physical security for the tools described in this DFP that identify a storage media location. The five storage media shall be labeled as “G”, “H”, “J”, “K”, and “L” to maintain continuity regarding previous designs and designated locations. The storage media shall meet the following requirements.

3.2.1 Materials. The media shall be made of any suitable material that will meet all of the performance requirements set forth in this DFP. The media, and its associated hardware, shall be constructed of materials that are corrosion resistant, or suitably processed to withstand long term attacks from corrosive atmospheric conditions. All materials used in the production of the storage media shall resist fungus. The use of toxic chemicals, hazardous substances, and ozone depleting chemicals (ODCs) in the storage media material shall be avoided to the maximum extent practical. The manufacturer shall also avoid the use of toxic chemicals, hazardous substances, and ODCs in the production of the storage media to the maximum extent practical.

3.2.2 Storage Media Layout. The storage media shall include trays or drawers that allow easy access to all of the applicable components in the SATS-SM that identify a storage media location. The storage media shall be designed so that the operator is not required to remove sections of the SATS-SM to gain access to tools. The storage media shall include a device that is permanently affixed to the media that secures the trays or drawers from opening while the media is being transported.

3.2.3 Drawers. Drawers in the storage media shall be hung in such a manner that they don't interfere with other drawers. All tools in the drawer shall be accessible when a drawer is fully opened. Each drawer shall be appropriately labeled with the contents of the drawer so that the user can identify the drawers in their closed position. Drawer labels shall be contrasting colors with a height of no less than 1/2". The storage media shall be furnished with an adequate number of drawers and corresponding drawer sizes to accommodate all of the tools in the SATS-SM that identify a storage media location. To adhere to MIL-STD-1472, the width of the drawers and the location of their lock-in/lock-out devices shall accommodate the 5th percentile Army female functional reach of 25.2 inches, and the top of the highest drawer shall be no higher than 48 inches to accommodate the shoulder height of the 5th percentile Army female. Clearance in front of the handles of open drawers and clearance for shelving doors shall be sufficient to assure soldiers wearing insulated work gloves are able to grasp them and open the drawer.

3.2.4 Finish. The exterior surface finish of the storage media shall be clean and free of any visible imperfections. The storage media shall be coated as applicable to prevent corrosion during the intended economic useful life of the system. Neither the interior nor exterior of the storage media, or its associated hardware, shall have any sharp edges or projects that may present a hazard to the user.

3.2.5 Security. The storage media shall include a locking feature for that entire media that uses no more than 2 padlocks. The locking feature shall prevent access to all drawers and trays. The system shall transition from operational to fully secure in 1 minute or less, not including placing the tools in the tool chest. The locking feature shall accommodate key-operated, tumbler type padlocks conforming to Commercial Item Description (CID) A-A-59486. The appropriate number of padlocks required to secure the media shall be provided with the each SATS-SM. If two padlocks are required to secure a storage media they shall be keyed alike and the same for the rest of the storage media (ie other 4 medias), however, each SATS-SM padlock set shall be keyed individually.

3.3 Tool Organization. The majority of tools in the SATS-SM storage in the storage media shall have a contoured retention device that holds the tools in place, protects them during transport within the shop, and aids in rapidly inventorying the tool load unless it is impractical to do so (ie bags, gloves, etc). The tools that do not identify a storage media location shall be commercially packaged and shipped as part of the overall shipment of the SATS-SM. The tool organization device for the storage media shall meet the following requirements.

3.3.1 Retention Device. Each drawer and tray shall include a tool retention device that is designed to protect the tools and hold them in place during handling and shipping. The retention device shall be contoured to hold each individual tool snugly and completely in separate pockets or retention features. As applicable, a finger pick relief of no less than 1” diameter, or protrusion of tools above the tool organizing liner, shall be provided for tools that would otherwise be difficult to remove. The design of the retention features should allow for easy access and allow the user to remove or replace tools with a single hand. The retention device shall fill the drawer/tray from side to side and front to back unless the empty space is designed to hold any of the tools deemed impractical to have specific retention devices. The retention features shall be designed to hold the tool fully assembled and ready for use (i.e. hacksaw blade in hacksaw, lenses in goggles). The tool retention device shall be resistant to water, automotive oils, greases, lubricants, cleaning agents, gasoline, diesel fuel, JP-8, and fungus.

3.3.2 Tool Layout. Similar tools (i.e. wrenches, files, etc), or items that will often be used together shall be stored in close proximity to one another to the maximum extent practical and in accordance to the tool description that designates the specific storage media (ie G, H, J, K, or L). Tools shall also be stored in such a way that limits the number of sharp edges exposed and the number of protrusions above the retention device that may cause the tool to be inadvertently damaged.

3.3.3 Rapid Inventory. The storage media layout, tool selection, and tool retention device shall be designed to promote the rapid inventory of the SATS-SM. The methods employed shall enable the user to verify that all items are present and secured in their designated location within a single storage media in 20 minutes or less [ie 100 minutes for all 5 storage media]. In the event an item is absent from the media, the user shall be provided with the means to quickly identify the specific item by name and description. .

3.4 Tool Requirements. The SATS-SM shall be delivered to the Government with all of the tools specified in Appendix A. The tools provided shall meet the following requirements.

3.4.1 Industrial Quality Tools. Unless otherwise specified, all components supplied with this system shall be industrial quality, as defined in section 3.4.1.1. “Industrial Quality Definition.” If the industrial quality of a tool is questioned by the Government, the supplier shall provide proof that the tool is industrial quality according to paragraph 3.4.1.2. “Market Acceptance.”

3.4.1.1 Industrial Quality Definition. For the purpose of this procurement, the term “industrial quality” tools versus household-use tools or general purpose tools is defined as tools commercially marketed and manufactured for constant, rigorous, industrial or professional environment use. Industrial quality tools must have demonstrated market acceptance in an industrial atmosphere or application. Industrial quality tools are used primarily by skilled professionals and technicians in areas such as machine shops, automotive maintenance and repair facilities, aircraft maintenance and repair facilities, industrial automotive assembly plants, fleet maintenance facilities, and airline services. The tools shall be designed to be used for specialized applications in an environment of virtual constant use, (i.e. around-the-clock 8 hour shifts), with applications requiring high torque, low slippage, and strict tolerances.

3.4.1.2 Market Acceptance. In the event that the Government is unable to determine from the offered product literature and associated information that a product meets the definition of industrial quality tools and discussions are therefore opened, offerors shall be prepared to offer evidence of market acceptance in the professional or industrial market. Evidence of acceptance by industrial/professional customers include sales to fleet operators, distributors, contractors, industrial and professional users, and sales to distributors who retail exclusively to the professional or industrial market. Advertising or marketing literature that indicates “professional grade” or “industrial quality”, or merely stating that an item is “professional grade” or “industrial quality” is insufficient to establish industrial/professional quality since these are terms for which there is no generally acceptable definition. A claim that an item is manufactured to an industry consensus standard is also insufficient to establish industrial or professional quality.

3.4.2 Common Tools. As an aid to rapid inventory, it is desired that tools of similar types (i.e. wrenches, calipers, etc) are from the same manufacturer and brand. If the tools within a type are different brands, the user will need to inspect and compare each individual tool against the supply catalog to determine if there has been an unauthorized substitution.

3.4.3 Tool Warranty. All components shall be warranted as stated in Appendix A. The offeror shall state the length and terms of the manufacturer’s warranties in response to the solicitation. The warranties shall become part of the contract or delivery order. The required warranties are defined in the table as “C”, the manufacturer’s commercial warranty; “L”, manufacturer’s lifetime warranty; “N”, no warranty.

3.4.4 Federal Supply Group. The Federal Supply Group (FSG) is provided to aid in the determination of applicability of Buy American and Berry Amendment laws.

3.4.5 Tool Load. The tools identified shall be supplied in quantities and placed in applicable storage media as indicated in Appendix A. Each item is then described separately in greater detail after the list. Variation in design characteristics based on a supplier’s common practice is acceptable provided those variations does not hinder the operation of the tool, the operator of the tool, or require additional time to complete a task with that tool. Items that are not required to be in storage media may be grouped and packaged to reduce footprint and shipping costs.

4 QUALITY CONTROL

4.1 General Provisions. The product verifications and conformance inspections stated herein shall be performed to determine whether the item conforms to Section 3 of this DFP. Unless otherwise specified in the contract, all verifications and inspections shall be performed in accordance with the conditions specified herein. The contractor is responsible for the performance of all product verifications and conformance inspections specified herein. The contractor may use its own or any other facilities suitable for the performance of the verifications and inspections, unless disapproved by the Government. The contractor shall verify that all requirements are met prior to providing a SATS-SM for evaluation.

4.1.1 Government Inspection Rights. The Government reserves the right to perform any of the verifications and inspections set forth in this DFP, at any date and in its own facilities, where such verifications and inspections are deemed necessary to assure supplies and services conform to prescribed requirements. The absence of any verification requirements shall not relieve the contractor of the responsibility of assuring that all products submitted to the Govt. for acceptance comply with all requirements of this DFP and the contract. The absence of any verification requirements shall not relieve the contractor of the responsibility of assuring that all products submitted to the Government for acceptance comply with all requirements of this DFP and the contract.

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

- a. Preproduction verification inspection (see paragraph 4.2)
- b. Conformance inspection (see paragraph 4.3)

4.2 Preproduction Verification Inspection. Product performance verification is performed before full production begins and is intended to verify that the product is designed and manufactured to meet the requirements of this specification. It includes visual and manual inspections, some of which result in measured or counted values, as well as tests and demonstrations to prove compliance of the tested product and all of its assemblies and subcomponents with the requirements of this document. It also includes the product conformance inspections, as described in paragraph 4.3 that will be performed during production to prove that all inspected characteristics are in compliance at the beginning of production. Product submittal, inspections and acceptance criteria are as follows.

4.2.1 Contractor Submission. The contractor shall submit one or more SATS-SM for verification as designated by the Contracting Officer for evaluation in accordance with the specified requirements outlined in this DFP.

4.2.2 Government Inspections. Although the contractor is responsible for the performance of all inspection requirements as specified herein, the kit assemblies, components and test specimens may be subjected to any or all of the verifications and inspections specified in section 4 herein.

4.2.3 Rejection. If any SATS-SM assembly, component or specimen fails to comply with any of the applicable requirements, the entire kit shall be rejected. The Government reserves the right to terminate further verifications and inspections upon any failure of a kit assembly, specimen or component to comply with any of the requirements.

4.3 Conformance Inspection. Conformance inspection shall be applied to SATS-SM units being offered for acceptance under the contract. These inspections shall include all verifications listed in sections 4.4. Sampling plan determinations and lot formations for production units (Quality Control during production) shall be determined by the contractor and provided to the government for acceptance. Failure of any unit to pass any verification shall be cause for rejection of the lot.

4.4 Product Performance Verification. The following inspections shall be performed to test for compliance to section 3 of this DFP.

4.4.1 System Requirements. The system as a whole, including the storage media, tool load, and the necessary devices and characteristics provided for rapid inventory capability, protection, and security for the tools shall be subject to the following quality checks. Verify there are 5 chest labeled per 3.1. Verify all tools are present within their required storage location (as applicable) and remaining tools are present that do not have designated storage locations within the storage media..

4.4.1.1 Workmanship. Verify the quality of workmanship imparted to the components of the SATS-SM are equal or exceed that typically provided by domestically produced commercial products of this type. Verify the SATS-SM components are manufactured with skill and care; uniform, neat, and clean; and free from irregularities and anomalies which degrade form, fit, function, performance, or appearance.

4.4.1.2 Reliability/Maintainability. Verify that any significant differences between the commercial and military versions [if applicable] don't have a significant negative effect on the Reliability and Maintainability (R&M), safety, or logistics capabilities of the military versions.

4.4.1.3 System Durability. The system shall be tested under the following conditions. Any permanent damage or deformation to the system or tool load shall be cause for rejection.

4.4.1.3.1 Rolling Requirement. Demonstrate the fully loaded storage media by rolling it around on paved, hard floor surfaces to show the ability of the wheels to roll within a shop environment. Verify that the caster/rolling devices show no deformation themselves or to the fully loaded storage media. Verify there is sufficient space under the storage media to allow the media to be picked up with Material Handling Equipment (MHE) such as a fork truck.

4.4.1.4 Markings. Verify all markings are permanently affixed to the SATS-SM storage media or component, as appropriate. Verify all markings are resistant to deterioration caused by heat, cold, solar radiation, water, and petroleum products to the extent that they will remain intact and legible for the expected economic life of the SATS-SM. Verify all markings are accomplished in a manner that does not adversely affect the life and utility of the SATS-SM or its equipment. Verify all human readable markings are printed in the English language. Verify all label, stencil, and sticker letters and numbers are black, except over a black background, in which these letters shall be contrasted to ease visibility.

4.4.1.4.1 System Identification. Verify each SATS-SM storage media has a human readable information plate permanently affixed to the outside of the tool chest in a location that is plainly visible. Verify the information plate has all of the information required in section 3.1.4.1.

4.4.1.4.2 Logistical Support. Verify compliance to 3.1.4.2.1, 3.1.4.2.2 and 3.1.4.2.3 as follows:

4.4.1.4.2.1 Component Identification. Verify the contractor has provided a complete list of tools to include the information as specified in 3.1.4.2.1 [Nomenclature, Manufacturer's part number, NSN (if applicable), quantity, and storage media location (if applicable)].

4.4.1.4.2.2 Warranty Replacement. Verify the contractor has provided a complete list of warranties for each component as required in 3.1.4.2.2 and that they comply with required warranty as indicated in Appendix A of the DFP.

4.4.1.4.2.3 Non-Warranty Replacement. Verify the contractor has provided information to allow the ordering of replacement items that are not warranted.

4.4.1.4.3 Lifting Caution. Verify a lifting caution sign is permanently affixed to any component of the SATS-SM if the weight of that item exceeds the acceptable weight limit for a single male lifter lifting an object from the floor to a surface equal to or greater than 5 ft from the ground according to MIL-STD-1472. Verify the caution sign identifies the minimum number of people required to lift the item according to the restrictions outlined in MIL-STD-1472.

4.4.1.4.4 Safety Signs. Verify all product safety signs and labels conform to ANSI Z535.4.

4.4.1.4.5 Unique Identifier. As required in 3.1.4.5, verify the exterior of each SATS-SM storage media is marked with a Unique Identifier (UID) that has machine-readable data elements distinguishing it from all other like and unlike items in accordance with MIL-STD-130. Verify the UID data elements is contained in a Data Matrix ECC200 symbol in accordance with ISO/IEC 16022. Verify any component which has a cost of more than \$5000 to the Government is marked with a UID. Verify the identifier appears to be robust enough to remain intact and readable for the expected life of the item/system.

4.4.1.5 Economic Life. Verify by component inspection that the SATS-SM is projected to have an economic life of no less than fifteen years under the service conditions described herein.

4.4.1.6 Disposal. Verify the SATS-SM is disposable under U.S., foreign, and international environmental quality laws and regulations. Verify the design, production, operation, maintenance, and disposal of the system eliminates, or minimizes to the greatest extent possible, adverse environmental quality impacts. Verify the contractor has taken the appropriate steps to minimize the materials in the SATS-SM that may have special disposal procedures.

4.4.2 Storage Media Requirements. The storage media shall be subject to the following quality checks.

4.4.2.1 Materials. Verify the storage media is made of a suitable material that will meet all of the performance requirements set forth in this DFP. Verify the media, and its associated hardware, is constructed of materials that are corrosion resistant, or suitably processed to withstand long term attacks from corrosive atmospheric conditions. Verify all materials used in the production of the storage media resist fungus. Verify the use of toxic chemicals, hazardous substances, and ozone depleting chemicals (ODCs) in the storage media material have been avoided. Verify the manufacturer has avoided the use of toxic chemicals, hazardous substances, and ODCs in the production of the media to the maximum extent practical. The Contractor shall submit a Certificate of Conformance (CoC) stating all the requirements as specified in 3.2.1 are met.

4.4.2.2 Tool Chest Layout. Verify the storage media includes trays or drawers that allow easy access to all of the applicable components stored in the SATS-SM. Verify the media is designed so that the operator is not required to remove sections of the SATS-SM to gain access to tools. Verify the storage media includes a device that is permanently affixed to the tool chest that secures the trays or drawers while the chest is being transported.

4.4.2.3 Drawers. As required in 3.2.3, verify the drawers in the storage media are hung in such a manner that they don't interfere with other drawers. Verify all of the tools in the drawer are accessible when a drawer is fully opened. Verify each drawer is appropriately labeled with the contents of the drawer so that the user can identify the drawers in their closed position. Verify drawer labels have contrasting colors with a height of no less than 1/2". Verify the storage media is furnished with an adequate number of drawers and corresponding drawer sizes to accommodate all of the tools in the SATS-SM with a designated storage location. Verify the width of the drawers as well as the top of the highest drawer adhere to MIL-STD-1472 requirements. Verify the drawers can be opened by soldiers wearing work gloves.

4.4.2.4 Finish. Verify the exterior surface finish is clean and free of any visible imperfections. Verify the storage media is coated as applicable to prevent corrosion during the intended economic useful life of the system. Verify neither the interior nor exterior of the storage media, or its associated hardware, have any sharp edges or projects that may present a hazard to the user. The Contractor shall submit a CoC stating all requirements as specified in 3.2.4 are met.

4.4.2.5 Security. Verify the storage media includes a locking feature for the entire media that uses no more than 2 padlocks. Verify the locking feature prevents access to all drawers and trays. Verify the system can transition from operational to fully secure in 1 minute or less, not including placing the tools in the tool chest. Verify the locking feature can accommodate key-operated, tumbler type padlocks conforming to Commercial Item Description (CID) A-A-59486. Verify the appropriate number of padlocks required to secure the chest are provided with the each SATS-SM. Verify that if two padlocks are required to secure a media they are keyed alike as well as the same for the remaining media for that SATS-SM, but each SATS-SM padlock set is keyed individually.

4.4.3 Tool Organization. Verify that tools that are not required to be stored in storage media are provided in addition to those that are supplied in storage media. The tool organization devices and characteristics shall be subject to the following quality checks for tools supplied in storage media.

4.4.3.1 Retention Device. Verify each drawer and tray includes a tool retention device that is designed to protect the tools and hold them in place during rough handling and shipping. Verify the retention devices are contoured to hold each individual tool snugly and completely in separate pockets or retention features. As applicable, verify a finger pick relief of no less than 1", or protrusion of tools above the tool organizing liner, is provided for tools that would otherwise be difficult to remove. Verify the design of the retention features allows for easy access and allows the user to remove or replace tools with a single hand. Verify the retention device fills the drawer/tray from side to side and front to back unless the empty space is designed to hold any of the exempt tools. Verify the retention features are designed to hold the tool fully assembled and ready for use. Verify the tool retention devices are resistant to water, automotive oils, greases, lubricants, cleaning agents, gasoline, diesel fuel, JP-8, and fungus.

4.4.3.2 Tool Layout. Verify that similar tools, or items that will often be used together, are stored in close proximity to one another to the maximum extent practical and in accordance to the tool description that designates the specific location (ie G, H, J, K, or L). Verify that to the maximum extent practical, tools are stored in such a way that limits the number of sharp edges exposed and the number of protrusions above the retention device that may cause the tool to be inadvertently damaged.

4.4.3.3 Rapid Inventory. Verify the storage media layout, tool selection, and tool retention device are designed to promote the rapid inventory of the SATS-SM. Verify the methods employed enable the user to verify that all items are present and secured in their designated location within a single storage media in 20 minutes or less. (ie 100 minutes for all 5 storage media). Verify the user is provided with the means to quickly identify specific items by name and description.

4.4.4 Tool Requirements. Verify the SATS-SM delivered to the government contains all the tools as specified in Appendix A. The tools provided shall be subject to the following quality checks.

4.4.4.1 Industrial Quality Tools. Verify that all of the tools provided in the SATS-SM that are required to meet industrial quality standards meet these standards according to sections 3.4.1.1. and 3.4.1.2.

4.4.4.2 Common Tools. Inspect the tools to determine if the contractor procured similar types of tools from the same manufacturer and brand. Although this is not a requirement it is desired.

4.4.4.3 Tool Warranty. Verify all components are warranted as stated in Appendix A.

4.4.4.4 Federal Supply Group. Verify the solicitor meets Buy American and Berry Amendment laws as applicable according to the FSG of each tool. A number of tools are exempt from this requirement since a Berry Amendment compliant source could not be identified. A list of tools exempt from the Berry Amendment shall be provided with the solicitation by the government stated in a Domestic Non-Availability Determination (DNAD).

4.4.4.5 Tool Load. Verify that tools provided are in sufficient quantities, in storage media (as applicable), separately grouped and packaged (as applicable) and meet the descriptions as provided in Appendix A.

5 PACKAGING: Packaging shall be stated elsewhere within solicitation and are not a part of this Description For Purchase.

6 NOTES: The SATS-SM was previously procured under the DFP for the SATS. The SATS-SM is an Army Working Capital Fund (AWCF) item that can be ordered by units in need of maintenance tools. The SATS-SM was designed to replace the tools previously provided in Common #1, Common #2, and supplements thereof used in a shop environment. The SATS-SM is designed to be used in a shop environment where as the SATS is a shelter mounted system to conduct field level maintenance operations.

Appendix A

SATS–SM Tool Load

#	NOMENCLATURE	FEDERAL SUPPLY GROUP (FSG)	UI	QTY	WTY*	Storage Media Location
1	ADAPTER KIT, GREASE GUN COUPLING	49	KT	1	C	H
2	ADJUSTING TOOL, BRAKE SHOE	51	EA	1	L	H
3	ANALYZER, DIGITAL BATTERY (6130-01-510-9594)	61	EA	1	C	N/A
4	APRON, UTILITY	84	EA	1	C	K
5	BAR, PINCH, 26"	51	EA	2	L	L
6	BAR, PINCH, 36"	51	EA	1	L	N/A
7	BAR, WRECKING	51	EA	1	L	L
8	BATTERY FILLER, GRAVITY	51	EA	1	C	H
9	BATTERY FILLER, SYRINGE	51	EA	2	C	H
10	BATTERY KIT, SERVICE	51	KT	1	C	H
11	BENDER SET, TUBE, HAND ACTUATED	51	SE	1	N	L
12	BLADE, HAND HACKSAW	51	BD	1	N	L
13	BLADE, ABRASIVE, CUT-OFF	51	PG	1	N	K
14	BLOW GUN, AIR	51	EA	2	C	K
15	BOX, TOTE	51	EA	5	C	N/A
16	BRAZING AND SOLDERING SET	34	EA	1	C	H
17	BRUSH, FILE CLEANER	51	EA	1	C	H
18	BRUSH, WIRE, ROTARY, END ATTACHMENT, SOLID WIRE FILLED	51	EA	1	N	H
19	BRUSH, WIRE, ROTARY, END ATTACHMENT, CIRCULAR, SIDE FLARE	51	EA	1	N	H
20	BRUSH, WIRE, SCRATCH	79	EA	1	N	H
21	CABLE ASSEMBLY, POWER	61	EA	2	C	G

22	CABLE ASSEMBLY, BOOSTER	61	EA	2	C	N/A
23	CABLE KIT, SPECIAL POWER	61	EA	1		N/A
24	CALIPER, MICROMETER, INSIDE	52	EA	1	L	G
25	CALIPER, VERNIER	52	EA	1	L	G
26	CAN, RADIATOR FILLING	72	EA	2	C	N/A
27	CAPS, VISE JAW	51	PR	2	N	K
28	CHARGER, BATTERY	61	EA	1	C	N/A
29	CLAMP, C	51	EA	2	L	L
30	(NOT USED)	N/A				
31	COMPRESSOR UNIT, RECIPROCATING	43	EA	1	C	N/A
32	CREEPER, MECHANIC'S	51	EA	5	C	N/A
33	CRIMPING TOOL, TERMINAL	51	EA	1	C	J
34	CROWBAR	51	EA	1	L	N/A
35	CROWFOOT ATTACHMENT SET, SOCKET WRENCH, FLARE NUT, INCH	51	SE	1	L	J
36	CROWFOOT ATTACHMENT SET, SOCKET WRENCH, FLARE NUT, METRIC	51	SE	1	L	J
37	CUTTING AND FLARING KIT, TUBE	51	KT	1	C	L
38	CUTTER, BOLT, LIGHTWEIGHT, 24"	51	EA	1	L	L
39	CUTTER, BOLT, REPLACEMENT HEAD	51	EA	1	N	L
40	DEGREASER, PORTABLE	49	EA	1		N/A
41	DIE AND TAP SET, RETHREADING	51	SE	1	L	J
42	DIE AND TAP SET, THREAD	51	SE	1	L	J
43	DRESSER, ABRASIVE WHEEL	51	EA	1	C	K
44	DRILL-DRIVER, BATTERY OPERATED, RECHARGEABLE	51	EA	1	C	K
45	DRILL- DRIVER, ELECTRIC, ½"	51	EA	1	C	K

46	DRILL, BATTERY OPERATED, RECHARGEABLE, RIGHT ANGLE, 3/8"	51	EA	1	C	K
47	DRILL, ELECTRIC, PORTABLE, 3/8"	51	EA	2	C	K
48	DRILL, ELECTRIC, PORTABLE, 1/2"	51	EA	1	C	K
49	DRILL, PNEUMATIC, RIGHT ANGLE, 3/8"	51	EA	1	C	K
50	DRILL SET, TWIST	51	SE	1	N	K
51	DRILL SET, TWIST, LEFT HAND	51	SE	1	N	K
52	(NOT USED)	N/A	EA	2		
53	EXTRACTOR SET, SCREW	51	SE	1	N	K
54	EXTRACTOR SET, HARDENED SCREW	51	SE	2	C	K
55	FACE SHIELD, INDUSTRIAL	42	EA	1	C	K
56	FILE SET, HAND	51	SE	1	C	L
57	FILE SET, THREAD RESTORER	51	SE	1	C	L
58	FILLER AND BLEEDER KIT, BRAKE SYSTEM	51	KT	1	C	H
59	(NOT USED)					
60	FINGER, MECHANICAL	51	EA	1	C	L
61	FOUNTAIN, EYE AND FACE	42	EA	1	C	N/A
62	FUNNEL	51	EA	1	N	N/A
63	FUNNEL, FLEXIBLE SPOUT	51	EA	1	N	N/A
64	GAGE, BOLT AND THREAD, METRIC	52	EA	2	L	J
65	GAGE, BOLT AND THREAD, STANDARD	52	EA	2	L	J
66	GAGE, WHEEL ALIGNMENT	52	EA	1	C	N/A
67	GLOVES, RUBBER, INDUSTRIAL	84	PR	1	N	K
68	GOGGLES, INDUSTRIAL	42	PR	1	N	K
69	GREASE GUN KIT	49	KT	1	C	N/A
70	GREASE GUN, PNEUMATIC	49	EA	1	C	H
71	GRINDING MACHINE, UTILITY	51	EA	1	C	N/A

72	GUN, FLUID, DIRECT DELIVERY	49	EA	2	C	N/A
73	HAMMER, HAND, CARPENTER'S, CURVED CLAW, 16 OZ	51	EA	2	C	L
74	HAMMER, HAND, SOFT FACE, DEAD BLOW, 52 OZ	51	EA	2	C	L
75	HAMMER, HAND, SOFT FACE, DEAD BLOW, 10 OZ	51	EA	2	C	L
76	HAMMER, SLEDGE, DOUBLE FACED, 10 LB	51	EA	2	C	N/A
77	HAMMER, HAND, DEAD BLOW, BALL PEEN, 40 OZ	51	EA	2	C	L
78	HAMMER SET, HOLDER AND INSERTS	51	SE	1	C	L
79	HAMMER, PNEUMATIC, HAND HELD	51	EA	1	C	L
80	HOLDER, PUNCH AND CHISEL	51	EA	1	C	L
81	HOSE ASSEMBLY, AIR, NON-METALLIC	49	EA	2	C	N/A
82	INDICATOR, DIAL	52	SE	1	C	G
83	INFLATOR-GAGE AND HOSE ASSEMBLY, PNEUMATIC TIRE	49	EA	2	C	K
84	JACK KIT, HYDRAULIC, HAND	51	KT	1	C	N/A
85	JACK, BOTTLE, HYDRAULIC, HAND, 12 TON	51	EA	2	C	N/A
86	KEY SET, HEX, INCH	51	SE	1	L	J
87	KEY SET, HEX, METRIC	51	SE	1	L	J
88	NOT USED					H
89	LIFT, TRANSMISSION AND DIFFERENTIAL	51	EA	1	C	N/A
90	LIGHT, BATTERY OPERATED, RECHARGEABLE	62	EA	2	C	H
91	LIGHT, EXTENSION, FLUORESCENT	62	EA	2	C	H
92	NOT USED					
93	LUBRICATING GUN, HAND	49	EA	3	C	H

94	LUBRICATING GUN, BATTERY OPERATED, RECHARGEABLE	49	EA	1	C	H
95	MEASURE, LIQUID, 8 QUART	72	EA	1	C	N/A
96	MEASURE, LIQUID, 2 QUART	72	EA	1	C	N/A
97	MULTIMETER	66	EA	2	C	J
98	MULTIPLIER, TORQUE	51	EA	1	L	N/A
99	OILER, HAND	49	EA	2	C	H
100	PAN, DRAIN	72	EA	2	C	N/A
101	PLATE, BOLSTER, 24" x 24"	51	EA	1	N	N/A
102	PLATE, BOLSTER, 40" x 72"	51	EA	1	N	N/A
103	PLIERS, LOCK RING	51	EA	1	L	J
104	PLIERS, LOCK RING	51	EA	1	L	J
105	PLIERS SET, RETAINING RING	51	SE	2	L	J
106	PLIERS, BRAKE REPAIR, HEAVY	51	EA	1	L	H
107	PLIERS, BRAKE REPAIR, LIGHT	51	EA	1	L	H
108	PLIERS, WIRE TWISTER	51	EA	1	L	J
109	PNEUMATIC BAG KIT, LIFTING	42	KT	1	C	N/A
110	(NOT USED)		EA			
111	PULLER SET, MECHANICAL	51	SE	1	L	H
112	PULLER, MECHANICAL STEERING WHEEL	51	EA	1	C	H
113	PULLER, MECHANICAL, PITMAN ARM	51	EA	1	L	H
114	PUMP LUBRICANT	49	EA	1	L	N/A
115	PUNCH & CHISEL SET	51	SE	2	N	L
116	PUNCH SET, CUTTING, GASKET	51	SE	1	N	K
117	SANDER/GRINDER, 4 1/2"	51	EA	1	C	K
118	SAW, HAND, CROSSCUT	51	EA	1	C	L
119	SAW, HAND, METAL CUTTING	51	EA	2	C	L
120	SAW, HAND, METAL CUTTING	51	EA	2	C	L

121	SCALE, WEIGHING	52	EA	1	C	L
122	SCRAPER, GASKET	51	EA	2	L	K
123	SCREWDRIVER ATTACHMENT SET, TORX	51	SE	1	L	J
124	SCREWDRIVER ATTACHMENT SET, INCH HEX	51	SE	1	L	J
125	SCREWDRIVER ATTACHMENT SET, METRIC HEX	51	SE	1	L	J
126	SCREWDRIVER SET, JEWELER'S	51	SE	1	L	H
127	SCREWDRIVER SET	51	SE	1	L	H
128	SCREWDRIVER SET, TORX	51	SE	1	L	J
129	SHARPENER, DRILL, PORTABLE	51	EA	1	C	K
130	SHEARS, BENT, TRIMMER	51	EA	1	C	K
131	SLING, ENGINE AND TRANSMISSION, 3 TON	39	EA	1	C	N/A
132	SLING, ENGINE AND TRANSMISSION, 2 TON	39	EA	2	C	N/A
133	SOCKET SET, SOCKET WRENCH, 3/8" DRIVE, METRIC, UNIVERSAL	51	SE	1	L	J
134	SOCKET SET, SOCKET WRENCH, 3/8" DRIVE, INCH, UNIVERSAL	51	SE	1	L	J
135	SOCKET SET, SOCKET WRENCH, 3/4" DRIVE, INCH, REGULAR LENGTH	51	SE	1	L	J
136	SOCKET SET, IMPACT WRENCH, 1/2" DRIVE, METRIC, UNIVERSAL	51	SE	1	L	J
137	SOCKET SET, IMPACT WRENCH, 1/2" DRIVE, INCH UNIVERSAL	51	SE	1	L	J
138	SOCKET SET, IMPACT WRENCH, 3/4" DRIVE, INCH, REGULAR LENGTH	51	SE	1	N	J
139	SOCKET SET, MASTER, SOCKET WRENCH, 1/4", 3/8" AND 1/2" DRIVE	51	SE	1	L	K

140	SOCKET SET, SOCKET WRENCH, WHEEL BEARING LOCKNUT	51	SE	1	L	J
141	SOCKET SET, IMPACT WRENCH, 3/4" DRIVE, METRIC, REGULAR LENGTH	51	SE	1	N	J
142	SOLDERING GUN	34	EA	1	C	J
143	SPLITTING TOOL, NUT	51	EA	1	L	K
144	TAPE, MEASURING, 25'	52	EA	1	C	J
145	TEST KIT, RADIATOR PRESSURE	49	KT	1	C	H
146	TESTER, ANTIFREEZE SOLUTION	49	EA	2	C	H
147	TOOL KIT, BLIND FASTENER INSTALLATION	51	KT	1	C	J
148	TOOL KIT, CUTTING, ABRASIVE, PNEUMATIC	51	KT	1	C	K
149	TOOL KIT, LARGE HOSE END CRIMPING	51	KT	1	C	G
150	TOOL KIT, SMALL HOSE END CRIMPING	51	KT	1	C	G
151	TOOL KIT, SCREW INSERT	51	KT	1	N	J
152	TOOL KIT, TIRE SERVICE	49	KT	1	C	N/A
153	TRESTLE, HOIST, PORTABLE, 7 TON	51	PR	4	C	N/A
154	TRUCK, LIFT, WHEEL	51	EA	1	C	N/A
155	VICE, MACHINIST'S, 4 INCH	51	EA	1	L	N/A
156	VICE, PIPE, CHAIN STYLE	51	EA	1	C	G
157	WHEEL, ABRASIVE, FINE GRIT	51	EA	2	N	N/A
158	WHEEL, ABRASIVE, COARSE GRIT	51	EA	2	N	N/A
159	WHEEL, ABRASIVE, TYPE 27	51	PG	1	N	K
160	WHEEL, ABRASIVE, TYPE 29	51	PG	1	N	K
161	WRENCH, IMPACT, ELECTRIC, 3/4" SQUARE DRIVE, 400 FT-LB	51	EA	1	C	J
162	WRENCH SET, FLARE NUT, INCH	51	SE	1	L	L

163	WRENCH SET, BOX, INCH	51	SE	1	L	L
164	WRENCH SET, BOX, METRIC	51	SE	1	L	L
165	WRENCH SET, COMBINATION, INCH	51	SE	1	L	L
166	WRENCH SET, COMBINATION, METRIC	51	SE	2	L	L
167	WRENCH SET, OPEN END, METRIC	51	SE	1	L	L
168	WRENCH SET, OPEN END, INCH	51	SE	1	L	L
169	WRENCH SET, FLARE NUT, METRIC	51	SE	1	L	L
170	WRENCH SET, MASTER, IMPACT WRENCH, 3/8" AND 1/2" DRIVE	51	SE	2	C	J
171	WRENCH SET, IMPACT SOCKET, 3/4" DRIVE, INCH, REGULAR LENGTH	51	SE	1	N	J
172	WRENCH, ADJUSTABLE, 18 INCH	51	EA	2	L	L
173	WRENCH, ADJUSTABLE, AUTOMOTIVE, 15 INCH	51	EA	2	L	L
174	WRENCH, ADJUSTABLE, 10 INCH	51	EA	2	L	L
175	WRENCH, ADJUSTABLE, AUTOMOTIVE, 18 INCH	51	EA	2	L	L
176	WRENCH, OIL FILTER	51	EA	1	L	H
177	WRENCH, OIL FILTER, STRAP	51	EA	2	C	H
178	WRENCH, PIPE, 18 INCH	51	EA	2	L	L
179	WRENCH, PIPE, 10 INCH	51	EA	2	L	L
180	WRENCH KIT, RATCHET, PNEUMATIC, 3/8" DRIVE	51	KT	2	C	K
181	WRENCH, TORQUE, DIAL, 1/4" DRIVE, 30 IN-LB	51	EA	1	C	K
182	WRENCH, TORQUE, DIAL, 3/8" DRIVE, 300 IN-LB	51	EA	2	C	K

183	WRENCH, TORQUE, CLICK, RATCHETING, 3/4" DRIVE, 600 FT-LB	51	EA	1	C	N/A
184	WRENCH, TORQUE, CLICK, RATCHETING, 3/8" DRIVE, 75 FT-LB	51	EA	1	C	K
185	WRENCH, TORQUE, CLICK, 1/2" DRIVE, 345 Nm	51	EA	1	C	K
186	WRENCH, TORQUE, CLICK, RATCHETING, 1/2" DRIVE, 250 FT-LB	51	EA	1	C	K
187	WRENCH, WHEEL STUD NUT, GEARED SOCKET	51	EA	1	L	N/A
188	BAR, TORQUE WRENCH:	51	EA	1	L	N/A
189	DIE SET, METAL STAMPING, HAND, ALPHABETIC	51	SE	1	N	G
190	DIE SET, METAL STAMPING, HAND, ALPHABETIC AND NUMERIC	51	SE	1	N	G
191	GAGE STOCK SET, THICKNESS	52	SE	1	N	G
192	MULTIPLIER, TORQUE, CRANK OPERATED	51	EA	1	L	N/A
193	PLATE, BOLSTER, 36" x 36"	51	EA	1	N	N/A
194	PLIERS, MULTIPLE POSITION	51	EA	1	L	G
195	PLIERS, MULTIPLE POSITION, ELECTRICAL CONNECTOR	51	EA	1	L	G
196	PULLER KIT, UNIVERSAL	51	KT	1	L	G
197	NOT USED					
198	WRENCH, SET, SOCKET WRENCH, 1" DRIVE, INCH, REGULAR	51	SE	1	L	G
199	WRENCH, PIPE, 36"	51	EA	2	L	N/A
200	JACK, BOTTLE, HYDRAULIC, HAND, 30-TON	51	EA	1	C	N/A
201	Blow Gun, Extended, Air	51	EA	1	C	N/A
202	Crowfoot Attachment, 1/2 inch drive, 20 MM	51	EA	1	L	N/A

203	Crowfoot Attachment, ½ inch drive, 21 MM	51	EA	1	L	N/A
204	Crowfoot Attachment, ½ inch drive, 22 MM	51	EA	1	L	N/A
205	Crowfoot Attachment, ½ inch drive, 23 MM	51	EA	1	L	N/A
206	Crowfoot Attachment, ½ inch drive, 24 MM	51	EA	1	L	N/A
207	Crowfoot Attachment, ½ inch drive, 25 MM	51	EA	1	L	N/A
208	Crowfoot Attachment, ½ inch drive, 15/16"	51	EA	1	L	N/A
209	Crowfoot Attachment, ½ inch drive, 1"	51	EA	1	L	N/A
210	Crowfoot Attachment, ½ inch drive, 1-1/16"	51	EA	1	L	N/A
211	Crowfoot Attachment, ½ inch drive, 1-1/8"	51	EA	1	L	N/A
212	Crowfoot Attachment, ½ inch drive, 1-3/16"	51	EA	1	L	N/A
213	Crowfoot Attachment, ½ inch drive, 1-1/4"	51	EA	1	L	N/A
214	Crowfoot Attachment, ½ inch drive, 1-5/16"	51	EA	1	L	N/A
215	Crowfoot Attachment, ½ inch drive, 1-3/8"	51	EA	1	L	N/A
216	Crowfoot Attachment, ½ inch drive, 1-7/16"	51	EA	1	L	N/A
217	Crowfoot Attachment, ½ inch drive, 1-1/2"	51	EA	1	L	N/A
218	Crowfoot Attachment, ½ inch drive, 1-9/16"	51	EA	1	L	N/A
219	Crowfoot Attachment, ½ inch drive, 1-5/8"	51	EA	1	L	N/A
220	Crowfoot Attachment, ½ inch drive, 1-11/16"	51	EA	1	L	N/A
221	Crowfoot Attachment, ½ inch drive, 1-3/4"	51	EA	1	L	N/A
222	Crowfoot Attachment, ½ inch drive, 1-13/16"	51	EA	1	L	N/A
223	Crowfoot Attachment, ½ inch drive, 1-7/8"	51	EA	1	L	N/A
224	Crowfoot Attachment, ½ inch drive, 2"	51	EA	1	L	N/A
225	Crowfoot Attachment, ½ inch drive, 2-1/8"	51	EA	1	L	N/A
226	Crowfoot Attachment, ½ inch drive, 2-1/4"	51	EA	1	L	N/A

227	Crowfoot Attachment, ½ inch drive, 2-3/8”	51	EA	1	L	N/A
228	Crowfoot Attachment, ½ inch drive, 2-7/16”	51	EA	1	L	N/A
229	Crowfoot Attachment, ½ inch drive, 2-1/2”	51	EA	1	L	N/A

WTY (Warranty) Column definitions:

L = Lifetime Warranty

C = Commercial Warranty Available

N = No Warranty required

FSG 51 and 52 require Berry Amendment compliance unless they fall under a Domestic Non-Availability Determination (DNAD)

Storage Media Location

G = Storage Media labeled “G”

H = Storage Media labeled “H”

J = Storage Media labeled “J”

K = Storage Media labeled “K”

L = Storage Media labeled “L”

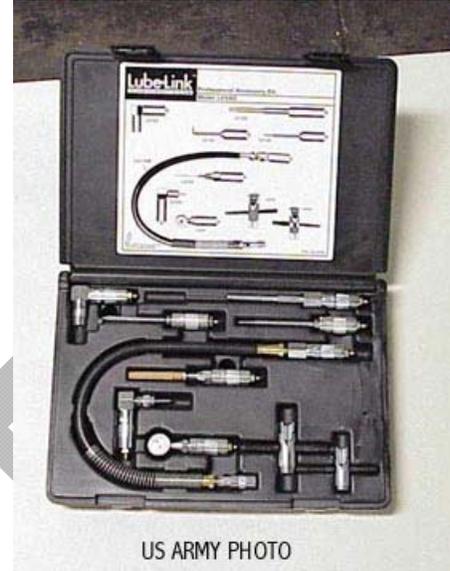
N/A=Not required to be put in a storage media. Group efficiently, commercial package and ship with storage media that is packaged with identified tools.

“*” Crowfoot attachments 202 through 209 do not have a designated storage media. Contractor has option to design for space within existing storage media or package/ship separately.

A1. Adapter Kit, Grease Gun Coupling. Shall fit manual or air-operated grease guns. Shall attach to any standard grease coupler for immediate service.

Includes: 18" Steel Braid Rubber Grease Hose w/ Spring Guard and 4-Jaw Coupler, Hypodermic Needle Coupler for Lubricating Sealed Bearings, Straight Needlepoint Coupler, 90 Degree 3" Needlepoint Coupler, 9" Rigid Extension w/ 4-Jaw Coupler, Needlepoint Coupler, Right Angle, Right Angle Coupler, Standard Button-Head Coupler, 1/4"-28 Zerk Fitting Extractor, 1/8" NPT Zerk Fitting Extractor, Carrying Case

Use On: Manual or air operated grease gun



A2. Adjusting Tool, Brake Shoe. The brake adjusting tool shall be a steel bar with flat, angled blade ends for insertion through slots in brake backing plates in order to turn the star nut used to adjust brake shoe position.

Material: Steel

Features: Flat, angled blade

Length: 6.5 inches minimum

Picture not available.

A3. Analyzer, Digital Battery. Hand-held analyzer shall be a conductance tester capable of testing condition and state of charge of all types of 12-volt lead-acid automotive batteries, including, standard, low maintenance, maintenance-free, gel, and Absorbed Glass Mat (AGM). Insulated leads and terminal clips shall be provided.

Dimensions: Approximately 7.7 inches long x 4.5 inches wide x 2.0 inches high

Weight: Approximately 1.70 lbs; 3.05 lbs Including Carrying Case and Extra Printer Paper

Battery Cable Length: 3.4 feet minimum

Printer Type: Thermal

Printer Paper: 1.3 inches wide x 0.3 inches long, Tests 12V Lead-Acid Flooded Cell, AGM Flat Plate

Rating System: CCA (Cold Cranking Amps)

Operation Range: 40 to 2000 CCA (SAE)

Minimum Battery Voltage for Analysis: 1.5V

Voltmeter Range: 1.5V to 30V

Internal Batteries: 4 Each 1.5V AA Batteries

Features: AGM Spiral, and Gel Cell Batteries; 12V Electrical System Test; Displays Battery Voltage and Battery Capacity in CCA; Tests Discharged Batteries Down to 1.5V, Operating From an Internal Battery

Built-In Printer; Date/Time Function; Selectable Display Languages: English, French, and Spanish

Drawer H1

Picture not available.

A4. Apron, Utility. Shall be an impermeable utility apron made of chloroprene rubber-coated polyester fabric. Shall be a full-length bib-type apron nominally.

Overall Length: 48 inches nominal

Overall Width: 34 inches nominal

Material: Chloroprene Rubber-Coated Polyester Fabric

Type: Full Length Bib

Color: Black

Closure: Tie-Tape Back

Features: Impermeable



A5. Bar, Pinch, 26". The pinch bar shall have one end offset and formed into a pinch point with a width of 1". The other end shall be rounded and tapered for bringing holes in metal plates into alignment for assembly. The bar shall have a nominal 26" length and 3/4" diameter, and shall be coated to resist corrosion (e.g. oil-coated, lacquered or painted).

ASME (B107.410) B107.52 Type III, Class 4

Overall Length: 23 inches minimum

Stock diameter: 3/4 inch nominal

Overall Weight: 3 pounds

Material: High Carbon Steel

Coating: Corrosion resistant

Features: Offset end with pinch point and rounded, tapered end



A6. Bar, Pinch, 36". The pinch bar shall have one end offset and formed into a pinch point with a width of 1-1/4". The other end shall be rounded and tapered for bringing holes in metal plates into alignment for assembly. The bar shall have a nominal 36" length and 1" diameter, and shall be coated to resist corrosion (e.g. oil-coated, lacquered or painted).

ASME (B107.410) B107.52 Type III, Class 4

Overall Length: 35 inches minimum

Stock diameter: 1 inch nominal

Overall Weight: 8 pounds



Material: High Carbon Steel

Coating: Corrosion resistant

Features: Offset end with pinch point and rounded, tapered end

A7. Bar, Wrecking. The bar shall have one end bent in the form of a gooseneck and the opposite end in the form of a pinch point. The gooseneck provided shall have a slotted claw suitable for pulling nails. The pinch point shall be offset and wedge shaped. The bar shall have a nominal 30" length overall, a 3/4" diameter, and shall be coated to resist corrosion (e.g. oil-coated, lacquered or painted). (Reference CID A-A-2566, Type I, Size 4)



CID A-A-2566, Type I, Size 4

Overall Length: 29 inches minimum

Stock diameter: 3/4 inch nominal

Material: High Carbon Steel

Coating: Corrosion resistant

Features: Gooseneck Bent End and Pinch Point End Offset with Wedge Shape; Slotted Claw Foot

A8. Battery Filler, Gravity. The battery filler shall have a capacity of at least 2 quarts and shall shut off flow automatically when battery cells are filled to their proper level. Shall have an integral handle and a drip free design.

Capacity: 2 Quarts minimum

Shut Off: Automatic

Handle: Integral

Material: Polyethylene

Features: Drip Free Design



A9. Battery Filler, Syringe. The bulb-type syringe shall have a fluid capacity of at least 6 ounces and a flexible tube at least 6" long.

Bulb Material: Rubber

Capacity: 6 Ounces minimum

Outlet type: Flexible spout

Spout Length: 6 Inches minimum



A10. Battery Kit, Service. Shall consist of:

QTY 1

Pliers, Adjustable, Angle Nose

Overall Length: 7 inches nominal

Handle Span: 1.89 inches nominal

Positions: two (2)

Capacity: 0.63 inch

Material: High Carbon Steel

Coating: Chrome

Features: Rubber coated handle

Drawer H1



QTY: 1

Plier Battery Terminal Spreader

Overall Length: 7 ½ inches nominal

Overall Weight: 0.55 pounds nominal

Features: Comfort grips

Drawer H1

QTY: 1

Case, Carrying (Battery Kit, Service)

Material: Lightweight copolymer resin

Length: 12 1/8 inches nominal

Width: 7 ¼ inches nominal

Height: 4 ½ inches nominal

Handle: Recessed in lid

Finish: Textured

Features: Brass hinge and latch pins, non-conductive, dent-proof, rust-proof and scratch resistant

Drawer H1

QTY: 1

Cleaner, Terminal, Post

Case Material: High Impact Plastic

Includes: Internal and External Brush

Drawer H1

QTY: 1

Side Terminal Cleaner

Overall Length: 5 ½ inches nominal

Includes: Coil Spring Cutters, Stainless Steel Brushes, and handle

QTY1

Wiper Arm/Battery Term Puller

Dimensions: Approximately 7 inches by 5-1/2 inches by 1-1/2 inches

Type: Dual Purpose

Features: Knurled cone to tighten, center screw to lift

A11. Bender Set, Tube, Hand Actuated. External coil spring, hand-actuated type, consisting of the following items:

Material: Hardened, Tempered Steel

Finish: Zinc Plated

Features: External Coil Spring, Hand Actuated Type, capable of bends up to 180 degrees

Includes: ¼ inch, 5/16 inch, 3/8 inch, ½ inch, and 5/8 inch tube benders



A12. Blade, Hand Hacksaw. The blades shall be bimetal, 12" long, .025" thickness, 24 teeth per inch and shall have 10 blades per bundle. (For use with Items 119 and 120)

ASME B94.52M

Material: Bimetal

Length: 12 inches

Thickness: 0.025 inches

Teeth per inch: 24

Quantity: 10 piece bundle



A13. Blade, Abrasive, Cut-Off. The abrasive blade shall have an overall diameter of 3", a width of 1/16", and a 3/8" diameter arbor hole. (For use with item A148)

Type: Straight used for traditional cut-off applications

Diameter: 3 Inch

Thickness: 1/16 Inch

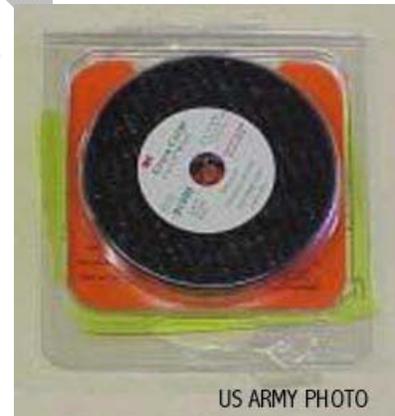
Arbor Size: 3/8 Inch

Bond Type: Resin

Maximum Speed: 25,000 rpm minimum

Grit Size: 46

Abrasive Material: Zirconia Alumina/Aluminum Oxide



A14. Blow Gun, Air. The gun shall be the "lever-over" style, capable of providing automatic reduction of the air in the nozzle to a pressure less than 30 psig when supplied with an upstream air pressure up to 150 psig.

The control valve shall permit the delivery of air in short blasts or in a continuous flow at the option of the operator. The nozzle shall be detachable. The gun shall seal completely against airflow at all pressures up to 120 psig. For protection of the operator from chip fly-back, the gun shall have a nozzle capable of providing an air-cone barrier around



the main stream. The gun shall comply with OSHA Program Directive 100-1 (29CFR Part 1910.24 and OSHA Instruction STD 1-13.1). The gun inlet shall be provided with ¼-18 NPT female threads. A male 3/8" ID quick disconnect fitting shall be installed on each gun

OSHA Program Directive 100-1

Body Material: Durable cast aluminum

Trigger Material: Steel

Nozzle Material: Aluminum venturi with safety air shield

Inlet: ¼ inch FNPT

Features: Air delivery in short blast or continuous flow, detachable nozzle

A15. Box, Tote. The tote box shall approximately be 18.25" long, 5.5" high, and 11" wide. The box configuration shall permit it to be nested and stacked with like boxes.

Length: 18 inches nominal

Width: 11 inches nominal

Height: 6 inches nominal

Color: Gray

Features: Able to nest and stack



A16. Brazing And Soldering Set. This propane gas torch set shall be suitable for brazing, soldering, and heating and conform to Underwriters Laboratories standard UL 147. The torch shall use fuel cylinders of a standard size containing 14 ounces of propane gas and having threads conforming to connection 600 of Compressed Gas Association (CGA) Standard V-1. (Note: The carrying case shall provide a storage location for a fuel cylinder, but no fuel cylinder is to be provided with the set. See Item A110.) The set shall contain the contents specified below. (Reference CID A-A-51128)

CID A-A-51128 and UL 147

Power Source: 14 ounce propane gas cylinders with threads conforming to connection 600 of Compressed Gas Association (CGA) Standard V-1

Includes: Burner Unit, Pencil Burner Head, Utility Burner Head, Soldering Head, Flame Spreader, Flint Lighter, Carrying Case

Features: Fuel cylinder storage location in carrying case, no fuel cylinder included



A17. Brush, File Cleaner. Shall consist of a handle of wood or other suitable material with a



fine steel wire card on one side, and a stiff bristle fiber brush on the other side. Brush shall be approximately 9" overall length, bristle area shall be approximately 4.5" long X 1.5" wide.

Overall Length: 9 inches nominal

Bristle Area: 4 ½ inches long by 1 ½ inches wide nominal

Handle: Wood or other suitable material

Features: Fine steel wire card on one side, stiff bristle fiber brush on other side

A18. Brush, Wire, Rotary, End Attachment, Solid Wire Filled.

Shall be a solid filled brush with crimped wire extending parallel to a ¼" arbor shaft, filled to the center of the brush. The brush body shall have a 1" outside diameter. The brush shall be rated for a maximum speed of 8000 RPM. The wire shall be high carbon tempered steel, 0.0204" diameter, with a trim length of 0.75-1.125". The brush shall conform to ANSI standard B165.1.



A19. Brush, Wire, Rotary End Attachment, Circular, Side Flair.

Shall be a side flare brush with crimped wire extending 90-degrees from a ¼" arbor shaft. The brush shall have a 1.5" outside diameter. The brush shall be rated for a minimum speed of 8000 RPM. The wire shall be crimped high carbon tempered steel. The brush shall conform to ANSI standard B165.1.

Wire Material: Carbon Steel

Diameter: 1 ½ inches

Wire Size: 0.0118 inches-0.0204"

Stem Diameter: ¼ inch

Maximum Speed desired: 20,000 rpm minimum



A20. Brush, Wire, Scratch. Shall be a curved-handle brush with bristles of 0.014" diameter carbon steel wire and are arranged in 4 X 18 rows. The exposed length of the bristles shall be approximately 1.125 to 1.250". The handle shall be wooden or molded plastic with an overall length of approximately 14 inches. The bristle area shall be 5.5 – 6.5" in length.

Handle Type: Curved, wooden or molded plastic

Overall Length: 14 inches nominal

Bristle Type: Carbon Steel Wire

Bristle Length: 1 1/8 inches minimum, 1 ¼ inches maximum

Bristle Area: 5 ½ inches minimum length, 6 ½ inches maximum length

Bristle arrangement: 4 by 18 rows



A21. Cable Assembly, Power. Shall be a three-conductor, 12 AWG extension cord for 120 VAC with insulation rated for 600 volts maximum. The cable jacket shall be oil, abrasion resistant, and the cable shall remain flexible at -25 degrees F. The cable assembly shall be 50' long with a NEMA 5-15P terminal on one end and a NEMA 5-15R terminal on the other end. Terminals shall be molded on the cable.

Length: 50 feet

Cable Jacket: oil and abrasion resistant

Terminals: NEMA 5-15P one end, NEMA 5-15R other end, mold to cable

Insulation rating: 600 volts

Features: 3 conductors, 12 AWG, 120 VAC, flexible at -25 degrees F



US ARMY PHOTO

A22. Cable Assembly, Booster. Shall be automotive battery booster cables conforming to SAE J1494. Shall be Super Heavy-Duty (rated for 750 A, minimum), and at least 25' long.

SAE J1494

Length: 25 feet minimum

Amp Rating: 750 minimum

Gauge: 2/0

Clamp style: Parrot



US ARMY PHOTO

A23. Cable Kit, Special Power (NATO SLAVE CABLE). The kit shall contain a slave-start (jumper) cable for military vehicles with connectors conforming to a NATO standard. Length is no less than 5 feet.



US ARMY PHOTO

A24. Caliper, Micrometer, Inside. Shall be an inside micrometer caliper of the rod and sleeve type, consisting of a micrometer head, measuring rods, locking screw(s)



and spacing collars. These items in the appropriate combination shall be capable of measuring all inside distances from approximately 1.5" to 12.5" to the nearest thousandth of an inch.

Storage case shall be provided.

Type: Mechanical Inside Micrometer

Capacity: 1.5 to 12.5 inches minimum

Graduation: 0.001 inches

Digital Counter: No

Thimble Type: Friction

Number of Extension Rods: 10

Finish: Chrome

Includes: Storage Case

A25. Caliper, Vernier. Shall be a vernier style caliper capable of measuring inside distance, outside distance, and depth from 0 to 6" and from 0 to 150mm to the nearest thousandth of an inch, with the inch scale on the front and the metric scale on the back. The jaws for measuring outside dimensions shall have a throat depth of at least 1.25 inches. The slide shall be furnished with a thumb lock. Storage case shall be provided.

Capacity: 6 inches/150 mm minimum

Graduation: 0.001 inch/0.02 mm

Throat Depth: 1.25 inches minimum

Material: Steel

Finish: Chrome

Features: Thumb lock

Includes: Storage Case



A26. Can, Radiator Filling. Shall be Plastic with a 12 qt. capacity. Shall have an integral spout and handle.

Material: Polyethylene

Capacity: 12 quarts

Features: Impervious to oil, gasoline and antifreeze;
Integral spout and handle



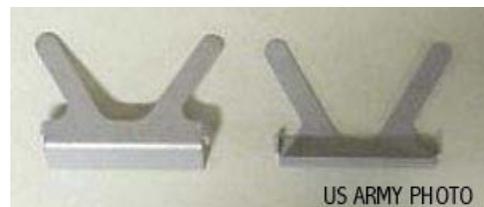
A27. Caps, Vise Jaw. Shall be for use in a 4" machinist's vise to protect hardware finish. The caps shall be copper, brass, or aluminum 1/8" thick. The vise jaw facing shall be at least 1". (See Item 155)

Material: Copper, Brass or aluminum

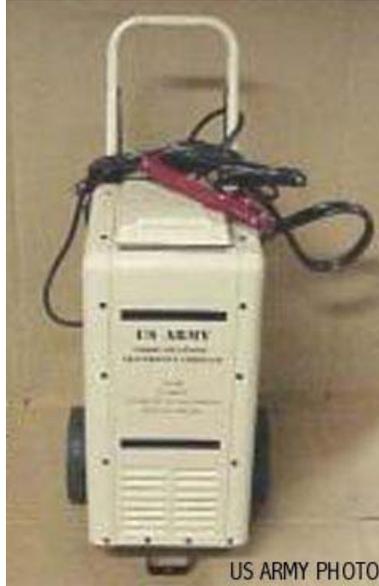
Jaw Width: 4 inches

Jaw Facing: 1 inch minimum

Jaw Thickness: 1/8 inch



A28. Charger, Battery. Shall be a 12 Volt and 24-Volt automatic charger for both flooded and sealed automotive batteries. The charger shall provide deep discharge recovery and bad battery detection. Shall be capable of operating on both 120 and 240 VAC, 50 or 60 HZ, single-phase current. Output 40 Amps at 24 VDC. Provides protection from both reverse polarity and sparking. Shall be rated for all-weather outdoor use. Shall have a NATO slave receptacle adapter as well as standard battery terminal clamps.



Input Voltage: 100 – 250 VAC
Input Current: 10 Amps
Input Frequency: 50 – 60 Hz
Minimum Battery Voltage for Charger Startup: 2.0 V
Output Current: 0 – 40 A
Charge capability: 12 V and 24 V batteries
Desulfating Pulse Peak Amplitude: 250 mA Typical
Desulfating Pulse Frequency: 22kHz to 28kHz
Pulse Rise Time: < 1 microsecond
Enclosure Dimensions: Approximately 16.5 x 28.5 x 12 inches
Weight: Approximately 96 lbs nominal
Enclosure material: Powder coated 14 gauge cold rolled steel
Battery Clamps Cable Length: 10 feet minimum
NATO Connector Cable Length: 10 feet minimum
Mounting: Mobile Unit
Operating Temperature: 0° F to 130° F (-18° C to 54° C) minimum
Storage Temperature: 0° F to 150° F (-18° C to 66° C) minimum
Indicator Lights: 12 V charge, 24 V charge, power on, charge complete
Features: automatically switches between 12 volt and 24 volt batteries, prevents over charging, wheels and a handle for mobility

A29. Clamp, C, 6" (Medium Service). Shall have 2.25" throat depth, a 5.75" minimum jaw opening with the screw fully retracted and an opening of not more than 2.625" when closed. The clamp shall be certified to a proof load of 11,250 lbs. The screw shall be at least 0.75" in diameter and have a swivel pad and a sliding



cross pin handle at least 0.375" in diameter and 4" long.

Material: Steel

Throat Depth: 2 ¼ inches nominal

Capacity: no more than 2.625 inches to no less than 5.75 inches

Proof Load: 11,250 pounds minimum

Screw Diameter: ¾ inches

Screw Features: Swivel pad and sliding cross pin handle

Screw Handle: 3/8 inch diameter

Screw Handle Length: 4 inches long

A30. [NOT USED]

A31. Compressor Unit, Reciprocating. Shall be a portable compressor with a storage tank with outlet pressure regulator. The compressor shall have a 208-volt 3-phase AC electric motor. Compressor shall be able to operate all SATS pneumatic tools and equipment at their designed level of capability and performance. Compressor shall have wheels and handle for ease of movement. A 3/8" ID "T" pipe fitting and two female 3/8" ID quick-disconnect fittings shall be installed on each compressor. One branch of the "T" shall also incorporate a mist lubricator.

Type: Portable, Reciprocating, electric

Motor: Electric, 208 V 3-phase, 5HP

Capacity: 30 gallon, 175 PSI

Fittings: 3/8 inch "T" pipe, 2 female 3/8 inch quick disconnect

Features: Tank-mounted Outlet Pressure Regulator, Wheels and Handle, Mist Lubricator

(Picture not available.)

A32. Creeper, Mechanic's. Shall be approximately 47" long and 25.5" wide. Shall have large wheels to roll over grates, cracks in pavement and rocky, loose soil. The creeper shall have a low profile design to allow for maximum workspace clearance.

Overall Length: 47 inches nominal

Overall Width: 25 ½ inch nominal

Capacity: 300 lbs minimum

Features: Large Wheels, Low Profile Design



A33. Crimping Tool, Terminal. Crimping tool shall be a manual compression type for insulated and non-insulated solder-less terminals on wire sizes from 22 through 10 AWG. Shall be able to cut and strip 22 through 10 AWG wires. Shall have integral dies for trimming six sizes of threaded fasteners: 4-40, 6-32, 8-32, 10-24, and 10-32. Shall have an insulated handle.



Type: Manual Compression, serrated

Handle: Insulated

Features: Wire cutter

Uses: Wire sizes from 22 through 10 AWG; Threaded fasteners 4-40, 6-32, 8-32, 10-24, 10-32

A34. Crowbar. Shall be 59-62” long and approximately 1 ¼” wide. Shall have a round handle tapering slightly toward handle end. Shall



have a pinch-point style work end with square sides and a flat, single-beveled edge. The work end shall be equal in width to the distance across the flat surfaces of the bar.

Material: High Carbon Steel

Overall Length: 60 inch nominal

Overall Width: 1 ¼ inches

Diameter: 1 ¼ inches

Features: Press forged bar ends, roll forged tapered handle

A35. Crowfoot Attachment Set, Socket Wrench, Flare Nut, Inch. Shall have 3/8” female square drive and include the following sizes: 3/8”, 7/16”, ½”, 9/16”, 5/8”, 11/16”, ¾” and 13/16”.



ASME B107.21

Type: Flare Nut

Drive Size: 3/8 inch

Finish: Chrome

Unit of Measure: SAE

Point Size: 6

Drive Type: Female square drive

Included Sizes: 3/8, 7/16, 1/2, 9/16, 5/8, 11/16, ¾ and 13/16 inches

A36. Crowfoot Attachment Set, Socket Wrench, Flare Nut, Metric. Shall have 3/8” female square drive, and include the following sizes: 9mm, 10mm, 11mm, 12mm, 13mm, 14mm, 15mm, 16mm, 17mm, and 18mm.



ASME B107.21

Type: Flare Nut

Drive Size: 3/8 inch

Finish: Chrome

Unit of Measure: Metric

Point Size: 6

Drive Type: Female square drive

Included Sizes: 9mm, 10mm, 11mm, 12mm, 13mm, 14mm, 15mm, 16mm, 17mm, and 18mm

A37. Cutting and Flaring Kit, Tube. Shall be able to cut, bend and flare copper, brass, and aluminum tubing. The kit shall contain a tube cutter with a cutting range of 1/8 to 1-1/8". The kit shall include a deburring tool. The kit shall provide tools for forming single flares on 1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 5/8", and 3/4" tubing, and double flaring on 3/16, 1/4, 5/16, 3/8 and 1/2" tubing. This kit shall include swaging adapters for: 3/16", 1/4", 3/8", 1/2", 5/8", and 3/4" tubing. Carrying case shall be provided.



Flaring and Swaging Kit

Function: Cut, bend and flare copper, brass and aluminum tubing

Includes: Tube cutter, deburring tool, single flare tools, double flare tools, swaging adapters, carrying case

Tube cutter range: 1/8 inch to 1 1/8 inches

Single flare tool sizes: 1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 5/8 and 3/4 inches

Double flare tools: 3/16, 1/4, 5/16, 3/8 and 1/2 inches

Swaging adapters: 3/16, 1/4, 3/8, 1/2, 5/8 and 3/4 inches

A38. Cutter, Bolt, Lightweight, 24". Shall have insulated handles made out of high quality aircraft aluminum. The cutting heads shall be replaceable.

Length: 24 inches

Capacity: 3/8 inch minimum

Handles: Insulated high quality aircraft aluminum

Heads: replaceable



A39. Cutter, Bolt, Replacement Head. Shall fit item A38.



A40. Degreaser, Portable. Shall be a portable table-top degreasing system including a tank at least 23" long by 17" wide by 6" deep. The system shall operate on 115 Volt 60 Hz current, and shall provide a recycling filtration system (0.1 micron) for recovery and re-use of the solvent. The system shall be provided with a cover equipped with a fusible link for emergency closure. Reusable air-transportable container for solvent shall be provided.



US ARMY PHOTO



US ARMY PHOTO

Includes: Table-top degreasing system with an inside and outside tub, Cover with fusible link, reusable air-transportable UN1A1 solvent barrel with handle
 Outside tub dimensions: 23 inches L x 17 inches W x 6 inches D minimum
 Inside tub dimensions: 21 inches L x 15 inches W x 6 inches D nominal
 Power: 115 Volt 60 Hz current
 Function: Recycling Filtration System for recovery and re-use of solvent

A41. Die And Tap Set, Rethreading. Shall be designed for removing nicks and burrs from damaged standard and metric threads. The set shall contain the following items:
 Includes one each of the following:

Rethreading Dies: National Coarse, Inch: 1/4-20, 5/16-18, 3/8-16, 7/16-14, 1/2-13, 9/16-12, and 5/8-11

National Fine, Inch: 1/4-28, 5/16-24, 3/8-24, 7/16-20, 1/2-20, 9/16-18, and 5/8-18

Metric: 6-1.00, 8-1.25, 10-1.00, 10-1.25, 10-1.50, 11-1.50, 12-1.25, 12-1.50, 12-1.75, and 14-1.50

Rethreading Taps:

National Coarse, Inch: 1/4-20, 5/16-18, 3/8-16, 7/16-14, 1/2-13, and 9/16-12

National Fine, Inch: 1/4-26, 5/16-24, 3/8-24, 7/16-20, 1/2-20, and 9/16-16

Metric: 6-1.00, 8-1.25, 10-1.00, 10-1.25, 10-1.50, 11-1.50, 12-1.25, 12-1.50, 12-1.75, and 14-1.50

Rethreading Files: US thread pitch 11 to 24 TPI, Metric thread pitch 75mm to 3.0mm
 Storage Case



US ARMY PHOTO

A42. Die and Tap Set, Thread. The set shall have 34 fractional #4 to 1/2" and 1/8"-27 NPT. It shall have 34 pieces from 3 mm to 12 mm and 1/8-28 BSP. It shall have 36 HSS drill bits and 5 extractors. Carrying case shall be included.



Includes one each of the following:

Machine Screw Hand Tap and Die (1 Pair EA): 4-40 NC, 6-32 NC, 8-32 NC, 10-24 NC, 10-32 NF, 12-24 NC

Fractional-size Hand Tap and Die (1 Pair EA): ¼ -20 NC, ¼ -28 NF, 5/16- 18 NC, 5/16-24 NF, 3/5-16 NC, 3/8-24 NF, 7/16-14 NC, 7/16-20 NF, ½-13 NC, ½-20 NF

Inch Straight Pipe Hand Tap and Die (1 Pair): 1/8-27 NPT

Metric Machine Thread Hand Tap and Die (1 Pair EA): 3mm -0.5, 4mm-0.7, 4mm-0.75, 5mm-0.8, 5mm-0.9, 6mm-1

Metric Hand Taps and Dies (1 Pair EA): 7mm-1.0, 8mm-1.0, 8mm-1.25, 9mm-1.0, 9MM-1.25, 10mm-1.5, 11mm-1.5, 12mm-1.5, and 12mm-1.75

Metric Straight Pipe Hand Tap and Die (1 Pair): 1/8-28 BSP

Spiral Flute Screw Extractors – (1 EA by Drill Bit Size): 5/64", 7/64", 55/27", ¼", and 19/64"

Drive Tools (1 EA): Plain die stock for 5/8" hex dies, Adjustable die stock, Adjustable handle tap wrench, T-handle wrench, #0 to ¼" Taps, and T-handle wrench, ¼" to ½" Taps

HSS Drill Bits (1 EA by Size & Style):

Wire Gage#: 3, 7, 9, 16, 19, 20, 21, 25, 29, 30, 36,30, and 43

Letter: B, J, H, O, S, R, Z, I, Q, and U

Inch: 5/16, 3/8, 13/32, 21/64, 25/64, 27/64, 29/64, 5/64, 7/64, 5/32, ¼ and 19/64
Accessories (1 EA): Pitch gauge, metric; Pitch gauge, SAE; Screwdriver; Carrying Case

A43. Dresser, Abrasive Wheel. Dresser shall be provided with replaceable cutters, and protective hood.

Overall Length: 11 ½ inches nominal

Grinding Wheel Diameter: 10 inch maximum

Grinder Wheel Face: 2 inches

Dressing Face: ½ inch

Includes: Replacement cutters; protective hood



A44. Drill-Driver, Battery Operated, Rechargeable. Shall be an 18 volt minimum,

Maximum Power: 450 UWO

Number of Speeds: 3

Chuck Size: ½ inch

Chuck Type: Metal, ratcheting; multi-position; keyless

Torque: 400 inch pounds at low speed; 120 inch pounds at high speed

Power Source: Battery 2 amp-hour

Features: Trigger-controlled variable speed; dual speed range (No-Load RPM Low: 0 to at least 400 rpm, High: 0 to at least 1000 rpm); trigger lock; forward and reverse operation

Includes: Battery, battery charger, storage case



A45. Drill, Driver, Electric, ½". .

Type: D handle drill

Voltage: 120 Volt 60 Hz



Chuck Size: 1/2 inch
Chuck Type: Keyed
Power Source: Corded-electric
Motor: Single phase variable speeds from 0-500 RPM
Includes: Handle

A46. Drill, Battery Operated, Rechargeable, Right Angle, 3/8".

Type: Right Angle
Voltage: 18V
Maximum Power: 360 UWO
Number of Speeds: 2
Chuck Size: 3/8 inch
Chuck Type: Plastic, ratcheting; keyless
Torque: 300 inch pounds at low speed; 60 inch pounds at high speed
Power Source: Battery 2 amp-hour
Features: Trigger-controlled variable speed; dual speed range (No-Load RPM Low: 0 to at least 400 rpm, High: 0 to at least 1000 rpm); trigger lock; forward and reverse operation
Includes: Battery, battery charger, storage case

A47. Drill, Electric, Portable, 3/8".

Handle Type: Pistol Grip
Drill Head Dimensions: 4 inches maximum front to back and 2 1/2 inch maximum diameter
Voltage: 120V 60Hz
Speed: 0-1300 RPM
Chuck Size: 3/8 inch
Chuck Type: Keyed
Features: Double insulated; designed for close quarters



A48. Drill, Electric, Portable, 1/2".

Handle Type: Pistol Grip
Drill Head Dimensions: 4 1/2 inches maximum front to back and 2 1/2 inch maximum diameter
Voltage: 120V 60Hz
Speed: 0-750 RPM
Chuck Size: 1/2 inch
Chuck Type: Keyed
Features: Double insulated; designed for close quarters



A49. Drill, Pneumatic, Right Angle, 3/8".

Type: Right Angle, Pneumatic
Motor: 1/2 HP
Free Speed: 1200 RPM
Chuck Size: 3/8 inch



Chuck Type: Keyed

Features: Rear exhaust; forward and reverse

Includes: 3/8 inch quick disconnect fitting

A50. Drill Set, Twist.

Material: Cobalt Steel

Features: 135 degree split point and straight round shank

Use on: stainless steels, heat-treated, steels, forgings, chilled cast iron, and other applications involving extreme hardness or abrasive materials

Quantity: 29

Includes: Carrying Case with an index

Sizes: 1/16, 5/64, 3/32, 7/64, 1/8, 9/64, 5/32, 11/64, 3/16, 13/64, 7/32, 15/64, 1/4, 17/64, 9/32, 19/64, 5/16, 21/64, 11/32, 23/64, 3/8, 25/64, 13/32, 27/64, 7/16, 29/64, 15/32, 31/64, and 1/2 inch



A51. Drill Set, Twist, Left Hand

Material: Cobalt Steel

Twist: Left Hand

Features: 135 degree split point and straight round shank

Use on: stainless steels, heat-treated, steels, forgings, chilled cast iron, and other applications involving extreme hardness or abrasive materials

Quantity: 16

Includes: Carrying Case with an index

Sizes: 5/64, 7/64, 1/8, 5/32, 3/16, 7/32, 1/4, 9/32, 19/64, 5/16, 11/32, 3/8, 13/32, 7/16, 15/32, and 1/2 inch

A52. [NOT USED]

A53. Extractor Set, Screw.

Material: High Speed Steel

Features: 135 degree, Modified Split Point, Left Hand

Drill Bit Sizes: 1/8, 3/16, 1/4, 5/16, 3/8, 7/16, and 1/2 inch

Fluted Extractors Point Diameters: 1/8, 11/64, 7/32, 9/32, 21/64, and 7/16 inch

Includes: Carrying Case



A54. Extractor Set, Hardened Screw.

Material: High Speed Steel

Tip: Self centering

Use On: High-strength fasteners Grades 2-5 and Class 5.6-10.9; Stainless Steel Bolts; FART Fasteners 1/8"-1/2"; Metric Fasteners M3-M12

Sizes: No 5-6, No 8, No 10-12, 1/4 inch, 5/16 inch, 3/8 inch, 1/2 inch

Includes: Carrying Case



A55. Face shield, Industrial.

ANSI Z87.1

Material: Polycarbonate

Color: Clear

Length: 8 inches

Width: 11 ½ inches

Thickness: 0.040 inches

Headgear Type: Adjustable, positive lock, tilting visor support

Features: Replaceable visor



A56. File Set, Hand. Shall consist of four files, two 12” long half-round American pattern bastard cut files, and two 12” long ½” diameter round American pattern bastard cut files. Each file shall have a plastic, permanently affixed, ergonomic handle or a single handle shall be provided that can be pushed on and used on each file as needed.



Hand File, Round-QTY-2

Overall Length: 12 inches nominal

Largest diameter: 1/2 inch - 1/32 inch

Shape: Round with tapered point

Material: Steel

Features: American Pattern, Bastard Cut, Single Cut

Hand File, Half Round-QTY-2

Overall Length: 12 inches nominal

Largest diameter: 1-1/8 inch - 1/16 inch

Thickness: 11/32 inch - 1/16 inch

Shape: Half round

Material: Steel

Features: American Pattern, Bastard Cut, Double Cut

A57. File Set, Thread Restorer. Shall be a set of files designed to restore damaged or worn external threads. Each file shall have eight faces, with each face cut for restoring a different thread size. The set shall contain:

Type: Thread Restorer

Quantity: 4 files

Faces: 8 per file, each for different thread size

Components: File for inch coarse threads 11, 12, 13, 14, 18, 20 and 24 TPI

File for inch extra fine and extra coarse threads 9, 10, 12, 16, 20, 27, 28, and 32 TPI

File for inch pipe threads 8, 10, 11-1/2, 14, 16, 18, 24 and



27 TPI

File for metric threads 0.75, 1.0, 1.25, 1.50, 1.75, 2.0, 2.5 and 3.0 mm

Includes: Carrying case or pouch

A58. Filler And Bleeder Kit, Brake System. Shall be a manual fluid injector. Shall have a full-range adjustable metering. Shall be able to produce 150 psi of injection pressure with a 15ml injection dosage. The kit shall include:

Features: Manual fluid injector; full-range adjustable metering;

Injection Pressure: 150 psi with 15ml injection dosage

Includes: Graduated fluid bottle assembly with quick couplers, debris magnet and holder; Tube connectors; 1/8 x 0.150 90 degree Adapter for 1/8" bleeder valves or ports; 3/16 x 4mm 90 degree Adapter for 1/8" or 3/16" valves; Quick coupler assembled with 3/16 x 4 mm 90 degree

adapter; Quick couple assembly for 3/16" of 1/4" bleeder valves; Taper Tip Adapters (4 ea); Luer Male/Female Plug; Universal Port Adapter; 3/16" x 4mm Straight Adapter; 3/16" x 0.150 Straight Adapter; 3/16" x 3/16" Straight Adapter; Taper Adapter; Pedal Flush and Capture Assembly with check valve and quick couplers; 28mm Bottle cap with siphon and quick coupler; 33mm bottle cap with siphon and quick coupler; Hand-pumped Injector with inlet and outlet hose

assemblies, Carrying case



A59. [NOT USED]

A60. Finger, Mechanical.

Overall length: 17.5 inches

Type: 4 claws

Jaw Opening: 1 inch

Features: 8 inch minimum flexible section



A61. Fountain, Eye and Face.

SPECIFICATION: ISEA Z358.1

Tank Material: Stainless Steel

Tank Capacity: 6 gallons

Features: Pressurized

Includes: 5 foot minimum hand held drench hose and nozzle



A62. Funnel.

Material: Polypropylene

Spout Type: Rigid

Capacity: 2 quarts



A63. Funnel, Flexible Spout.

Material: Galvanized Steel

Spout Type: Flexible

Spout Length: 13 inches minimum

Capacity: 1 quart

Features: Automatic transmission tip; mesh strainer of 70-100 per linear inch

(Reference CID A-A-1068)



A64. Gage, Bolt and Thread, Metric. Folding-blade style case with 10 gages on one end for checking bolt diameters in the following sizes: 5mm, 6mm, 8mm, 9mm, 10mm, 11mm, 12mm, 16mm, 20mm; and 24mm. Each gage shall identify both the size of the bolt and the size of the wrench it requires. The opposite end of the case shall have 12 gages for determining thread pitch in millimeters: 0.80, 1.00, 1.25, 1.30, 1.40, 1.50, 1.60, 1.75, 1.80, 2.00, 2.50, and 3.00. The case shall list the standard metric bolt hardness grades and the corresponding bolt head markings. The case and gages shall be fabricated of corrosion-resistant material (e.g. stainless steel). (Photo not available.)

A65. Gage, Bolt and Thread, Standard. Folding-blade style case with 10 gages on one end for checking bolt diameters in the following sizes: 1/4", 5/16", 3/8", 7/16", 1/2", 9/16", 5/8", 3/4", 7/8", 1". Each gage shall identify both the size of the bolt and the size of the wrench it requires. The opposite end of the case shall have 12 gages for determining pitch in threads per inch: 28, 24, 20, 18, 16, 14, 13, 12, 11, 10, 9, and 8. The case shall list the standard bolt hardness grades and the corresponding bolt head markings. The case and gages shall be fabricated of corrosion-resistant material (e.g. stainless steel). (Photo not available.)

A66. Gage, Wheel Alignment. Shall be a scribe-type toe-in Gauge for trucks which can extend up to a 96" (243.84 cm) width, with adjustable legs which can extend up to 17 1/2" (44.45 cm) high. (Photo not available.)

A67. Gloves, Rubber, Industrial.

Material: Industrial Rubber

Size: 9

Length: 12 inches nominal

Features: Chemical and abrasion resistant



A68. Goggles, Industrial.

ANSI Z87.1

Material: Polycarbonate

Size: Over glasses



Strap: Adjustable elastic, 18 inches minimum
Color: Clear
Lens: Replaceable
Features: Direct ventilation, anti fog

A69. Grease Gun Kit. Shall provide the capability to pump lubricating grease from standard 5gallon/35 lb grease containers into standard grease guns and the included portable pressurized lubricating system. The portable lubricating system shall hold at least ten pounds of grease and shall be capable of producing 10,000 psig at the nozzle. Kit shall include the following components:



Component Details

Coupler, ¼ inch filler

Features: Bulk loads grease guns

Filler, Grease Gun Attachment

Replacement dust cover

Packer, Bearing Attachment

Features: Packs bearing up to 6 inches; Includes heavy-duty dust cover

Attachment, Transfer/Filler

Capacity: 16 ounce

Hose: Flexible Vinyl

Follower: Heavy Duty for Positive Suction

Handle: Positive Grip

Barrel: Non-slip Knurled

System, Lube, Mini

Use: Grease Transfer/Loading Accessory Kit for Item S0216

Features: Compatible with grease guns with filler nipple

Top of Shelf B

Pump, Grease Transfer

Type: Quick Connect, for 35 Pound Pail

Ounces per Stroke: 2.13

Features: Pail cover and follower plate; loader nipple; dust cover for filler nipple

Pump, Grease Transfer

Type: Quick Connect, for 35 Pound Pail

Ounces per Stroke: 2.13

Features: Pail cover and follower plate; loader nipple; dust cover for filler nipple

A70. Grease Gun, Pneumatic.

Power Source: Air powered

Extensions: 12 inch flexible and 6 inch rigid

Hose: 3/8 inch by 50 foot PVC

Features: Quick connect end; vehicle pneumatic brake system glad hand; compatible with standard grease cartridges



A71. Grinding Machine, Utility.

Horsepower: 1/2

Voltage: 115

Hertz: 60

Phase: 1

Amps: 3/4

RPM: 3600

Wheel Size: 7 inches maximum

Wheel Quantity: 2



A72. Gun, Fluid, Direct Delivery. Shall be a one-pint capacity suction-fill gun used for filling and draining. Shall have an 11" flexible vinyl hose.



A73. Hammer, Hand, Carpenters', Curved Claw, 16 Oz.

Style: Curved Claw

Head Weight: 16 ounces

Overall Length: 13 inches nominal

Handle Material: Fiberglass

Face Surface: Smooth

Head Material: Forged Steel

Features: Non-magnetized Head, Cushion Grip Handle



A74. Hammer, Hand, Soft Face, Dead Blow, 52 Oz.

Style: Soft Face, Dead Blow

Head Weight: 52 ounces



Overall Length: 16 inches nominal
Handle Material: Steel Reinforced
Face Diameter: 2 ¾ inches
Features: Nonmetallic Head

A75. Hammer, Hand, Soft Face, Dead Blow, 10 Oz.

Style: Soft Face, Dead Blow
Head Weight: 10 ounces
Overall Length: 10 inches nominal
Handle Material: Steel Reinforced
Face Diameter: 1 ¼ inches
Features: Nonmetallic Head



A76. Hammer, Sledge, Double Faced, 10 Lb.

Style: Double Faced Sledge
Head Weight: 10 pounds
Handle Length: 32 inches nominal
Handle Material: Fiberglass
Face Diameter: 2 ½ inches
Features: Support Grip



A77. Hammer, Hand, Dead Blow, Ball Peen.

Style: Dead Blow, Ball Peen
Head Weight: 40 ounces
Overall Length: 15 inches minimum
Handle Material: Steel Reinforced
Face Diameter: 1 11/16 inches
Features: Hardened Steel Face and Peen



A78. Hammer Set, Holder and Inserts. Shall consist of two soft face hammers, with tips.

Component Details

Hammer, Soft Face, 1.5" -QTY- 1

Style: Soft Face, Non-Marring
Head Weight: 16 ounces
Handle Length: 12 inches minimum
Handle Material: Fiberglass
Face Diameter: 1 ½ inches
Features: Cushioned Handle



Hammer, Soft Face, 2" -QTY- 1

Style: Soft Face, Non-Marring
Head Weight: 24 ounces

Handle Length: 13 inches minimum
Handle Material: Fiberglass
Face Diameter: 2 inches
Features: Cushioned Handle

Tip, Hammer Insert, 1.5", Non-Metallic, Hard -QTY- 2

Style: Hard, Nonmetallic
Material: Nylon
Face Diameter: 1 ½ inches
Thread Size: 5/16-18
Features: Threaded Studs for hammerhead attachment
Drawer L3

Tip, Hammer Insert, 2", Non-Metallic, Tough -QTY- 2

Style: Tough, Nonmetallic
Material: Vinyl
Face Diameter: 2 inches
Thread Size: 3/8-16
Features: Threaded Studs for hammerhead attachment

A79. Hammer, Pneumatic. Shall consist of a hand-held pneumatic hammer, with tail pipe cutter, claw ripper/edge tool, flat chisel, tapered punch. Also provided shall be 3 ball joint/ tie rod separators (not shown) with 5/8, 13/16, 1-1/4 inch openings, respectively. The hammer shall be provided with quick-change retainer for chisels and other accessories having standard diameter shanks. The retainer shall lock the chisel or other accessory in place during use. Carrying case and lubricating oil shall be included. A male 3/8" ID quick disconnect fitting shall be installed on each hammer.



US ARMY PHOTO

A80. Holder, Punch and Chisel.

Material: Plastic Screwdriver-type Handle, Steel Frame, Nylon Tip
Overall Length: 6 inches minimum
Style: Screw-clamp holder
Finish: Black Oxide
Capacity: Punches and Chisels up to 1 inch in diameter



US ARMY PHOTO

A81. Hose Assembly, Air, Nonmetallic.

Inside Diameter: 3/8 inch

Length: 50 Feet

Pressure: 175 psig minimum

Operating Temperature: -25 to +120 degrees F minimum

Couplings: 3/8 inch male and female quick disconnect, one on each end

Features: Highly flexible, resistant to flex fatigue, oils, solvents, cuts and abrasion

(For use with compressor.)



A82. Indicator, Dial. Shall be a dial indicator of the type with the spindle perpendicular to the dial from the back of the case. The indicator shall have a jewel bearing movement and a plunger style contact point. The indicator shall be 1.5" (nominal) in diameter, shall have a spindle travel from 0 to 0.200", shall be marked from 0 to 100 in 0.001" graduations and shall have a zero position setting adjustable 360 degrees. The dial indicator shall be provided with standard button and ball contact points, a tool post holder having an upright spindle, an arbor clamp, a hole measurement attachment, and a carrying case.



A83. Inflator-Gage and Hose Assembly, Pneumatic Tire.

The inflator gage assembly shall satisfy the requirements of OSHA Regulation 29 CFR 1910.177(d)(4) and CID A-A-59568, Class 3, Style D, Range 2. The hose shall have a 0.25" inside diameter, a rated working pressure of at least 175 psig, a burst pressure of at least 900 psig; and shall be at least 10 feet long. The pressure gage shall be an enclosed self-contained cartridge with a range of 10 to 120 psig, graduated in two-pound increments. A lever-operated valve shall control inflation.



The assembly shall include a deflating valve between the gage and hose. Two clip-on valve chucks, sizes 0.302-32 and 0.482-26, shall be supplied with the assembly. The hose end shall be provided with a female quick-disconnect fitting, and the clip-on valve chucks shall each be provided with a male quick disconnect nipple to provide for rapid change. The chucks shall be attached to the end of the hose with light chain to prevent loss. A male 3/8" ID quick disconnect inlet fitting shall be installed on each assembly (not shown in pic).

A84. Jack Kit, Hydraulic, Hand.



Type: Hand Hydraulic

Capacity: 20 tons minimum

Concentric Loads: 20,000 pounds

Offset Loads: 8,000

Pump: Manually operated; lever operated handle; relief valve

Ram: Remote; 12 inch collapsed height; 5 inch plunger travel

Hose: Connecting pump and ram; six feet long; quick disconnect coupling at ram end

Components: (1 ea) serrated or grooved saddle; (1 ea) toe lift threaded to fit ram cylinder; (1 ea) plunger base; (1 ea) ram (body) base; (1 ea) chain pull plate; (2 ea) 8 foot chains with 3/8 inch link cross-section diameter with hook on one end; (2 ea) female threaded couplings, ram to extension; (1 ea) 10-12 inch long male threaded extension tube; (1 ea) 18-20 inch long male threaded extension tube; (1 ea) 24-30 inch long male threaded extension tube; (1 ea) male threaded extension tube 60 inches long minimum; Operators manual

Carrying case: sized to hold all components

A85. Jack, Bottle, Hydraulic, Hand, 12 Ton. The jack shall be a self-contained unit consisting of a solid plunger and an integral pump, ram and reservoir. The jack shall have a rated load capacity of at least 12 tons. It shall have a minimum extended height 16.5" and maximum retracted height of 9.125", and shall be supplied with a removable pump handle.



A86. Key Set, Hex, Inch.

Material: Alloy Steel

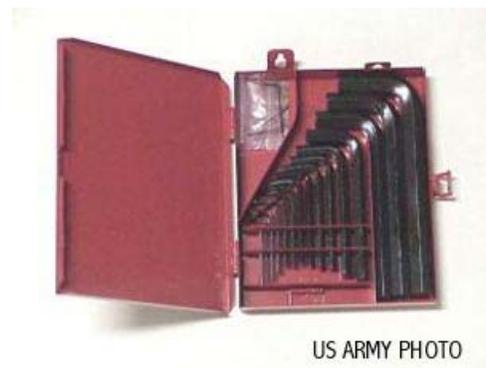
Finish: Black Oxide

Arm Type: Short

Handle Type: L shaped

Shall consist of the following items:

Inch Keys: 0.028, 0.035, 0.050, 1/16, 5/64, 3/32, 7/64, 1/8, 9/64, 5/32, 3/16, 7/32, 1/4, 5/16, 3/8, 1/2, 9/16, and 5/8 inch,



A87. Key Set, Hex, Metric.

Material: Alloy Steel

Finish: Black Oxide

Arm Type: Short

Handle Type: L shaped



Shall consist of the following items:

Metric Keys: 0.7 mm, 0.9 mm, 1.3 mm, 1.5 mm, 2 mm, 2.5 mm, 3 mm, 4 mm, 5 mm, 6 mm, 8 mm, 10 mm, 12 mm, 14 mm, and 17 mm

NOTE: Items A86 and A87 can be combined as a single set in a single case.

A88. [NOT USED]

A89. Lift, Transmission and Differential.

Type: Heavy Duty, Manual/Hydraulic

Lifting Capacity: 2000 pounds minimum

Maximum Lifting Height: 34 inches

Minimum Lifting Height: 8 inches

Handle Length: 44-1/2 inches

Tilt Capacity Front/Rear/Side: 10 degrees

Inlet Air Pressure Range: 90 to 200 psi

Base Size: 28-1/4 inches by 44-1/2 inches nominal

Accessories: chains, wedges, clamps, bars, brackets, and other saddle attachments



A90. Light, Battery Operated, Rechargeable.

Includes one (1) each of the following: Flashlight, Battery Pack, Charger, Carrying Case

Drawer H10

QTY: 1

Flashlight, Cordless, Pivoting Head, 18V (minimum)

Type: Pivoting head, rotates 90 degrees

Power Source: Battery

Voltage: 18 V

Bulb Type: Xenon

Run-Time: 3 hours

Features: On-off switch; Wide-angle fixed beam; Stable base for standing upright



QTY: 1

BATTERY PACK 18V XRP Voltage: 18 V

Feature: Rechargeable, compatible with Flashlight

Drawer H10

QTY: 1

1 HOUR CHARGER

Voltage: 7.2 – 18 V

Charge Time: 1 hour

Feature: compatible with Battery Pack

Drawer H10

QTY: 1

Case, Carrying,

Material: High Density Polyethylene

Features: Shock absorbing air cushion; temperature, chemical, split, crack, scratch and rust resistant; accommodates flashlight, Battery Pack, and Charger

A91. Light, Extension, Fluorescent.

Type: Stubby

Length: 13 inches

Handle Material: Rubber

Watts: 13

Volts: 120 V, 60 Hz

Cord Length: 25 feet minimum

Features: Replaceable, protective tube shield



A92. [NOT USED]

A93. Lubricating Gun, Hand. Shall be a pistol-grip style variable stroke grease gun with flexible 10” extension hose.

Shall be suitable for both standard 14-1/2 oz cartridges and bulk fill, and shall be provided with a filler nipple and a bleeder valve.

A94. Lubricating Gun, Battery Operated, Rechargeable.

Power Source: 12 V Battery

Max. Operating Pressure: 6000 psi

Tube Material: Metal

Hose Type: Flexible

Hose Length: 24 inches minimum

Includes: Carrying Case, 12 V rechargeable battery, 110 V Fast Charger

(Photo not available.)



A95. Measure, Liquid, 8 Quart.

Capacity: 8 Quart

Operation: Thumb operated valve controls flow, flip action locks valve open



Spout Type: Metal, Flexible with 60 degree vertical swivel
Spout Length: 14 inches
Includes: Recessed Bottom, Carrying Handle, Leak-proof, Used for Oil

A96. Measure, Liquid, 2 Quart.

Capacity: 2 Quart
Operation: Thumb operated valve controls flow, flip action locks valve open
Spout Type: Metal, Flexible with 60 degree vertical swivel
Spout Length: 14 inches
Includes: Recessed Bottom, Carrying Handle, Leak-proof, Used for Oil



A97. Multimeter. Shall be able to measure AC and DC voltage, shall measure resistance in Ohms, shall measure AC and DC current, shall test diodes, and shall have an audible signal for continuity checks.

CAT III 1000V, CAT IV 600V

Display: Backlight LCD

Measurements: 1000 volts AC/DC; 50 mega-ohms; 1nF to 10,000uF capacitance; 0.01 Hz to 100 kHz frequency counter; 10 amps AC/DC

Operating Temperature: 15-120 degrees F minimum

Features: 4 place digital display; display hold; manual/automatic range selection; auto-off for battery conservation; water and dust resistant case; impact resistant up to 10 foot drop; diode test

Includes: Battery; Silicone Test Lead Extension Set; Alligator Clip Set, insulated, threaded, slide-on; Rigid Back Probe Pins, 2 inch length; user manual

A98. Multiplier, Torque.

Maximum Torque Output: 2,000 foot pounds

Torque Direction: Clockwise and Counterclockwise

Torque Ratio: 3.6 to 1

Input Drive: 3/4 inch square female

Output Drive: 1 inch square male

Head Thickness: 4 3/8 inches nominal

Head Diameter: 3 17/32 inches nominal

Overall Length: 24 inches nominal

Features: Detachable reaction bar and metal housing



A99. Oiler, Hand. .

Capacity: 4 ounces

Function: Hand-pumped



Nozzle: Adjustable, fine mist to thin stream
Spout Length: 3 inches minimum

A100. Pan, Drain.

Dimension: 33 inches long; 22 inches wide; 8 inches high
Capacity: 6 gallon minimum
Material: Heavy-duty plastic
Feature: Circular basin with apron for washing and sorting parts, designated pour location on lip



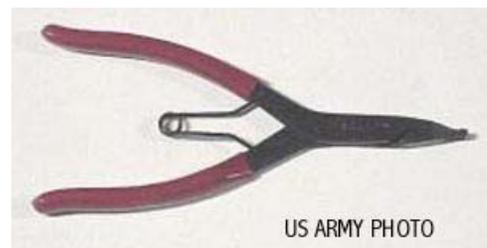
A101. Plate, Bolster, 24" x 24". Shall be a plate of non-metallic material 2 feet square suitable for use as cribbing under a 12-ton bottle jack when used on unpaved surfaces.

Material: Non-metallic
Length: 24 inches
Width: 24 inches
Temperature Range: -25 degrees F to 125 degrees F minimum
Resistant to: Corrosion, Ozone, Ultraviolet Light, deformation, fracturing, splintering
Features: Resistant to water, petroleum products, detergents, mold, and mildew
Load Maximum: 50 pounds per square inch
Handhold Openings: 6 inches by 3 inches
Use with: 12-ton bottle jack (Photo not available.)

A102. Plate, Bolster, 40" x 72". Shall be at least 3 feet 4 inches by 6 feet, and suitable for use as cribbing under a 2000 lb capacity transmission lift when used on unpaved surfaces.

Material: Non-metallic
Length: 72 inches
Width: 40 inches
Temperature Range: -25 degrees F to 125 degrees F
Resistant to: Corrosion, Ozone, Ultraviolet Light, deformation, fracturing, splintering
Features: Resistant to water, petroleum products, detergents, mold, and mildew
Load Maximum: 50 pounds per square inch
Handhold Openings: 6 inches by 3 inches
Use with: 2000 pound transmission lift
(Photo not available.)

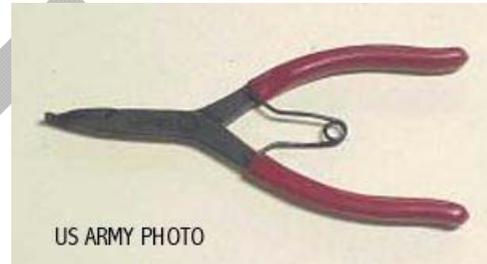
A103. Pliers, Lock-Ring. [Type III, Class 1]
ASME B107.500 (B107.19)



Type: Parallel Jaw, Compound Leverage
Material: Heat Treated Alloy Steel
Tip Type: Fixed
Jaw Opening: 1 ¼ inches minimum
Overall Length: 9 inches minimum
Handle: Cushion Grip

A104. Pliers, Lock-Ring.

ASME B107.500 (B107.19) Type III, Class 2
Type: Locking Ring
Tip Type: Fixed
Overall Length: 7 inches minimum
Handle: Cushion Grip



A105. Pliers Set, Retaining Ring. The set shall contain fixed-tip convertible snap-ring pliers [materiel: heat treated alloy steel] for use on internal and external retaining rings. The pliers shall have cushion grip handles. The set shall contain the following items:

Type: Convertible Snap-ring

Tip Type: Fixed

Handle: Cushion Grip

Quantity: 12

Includes: Straight: 0.038, 0.047, 0.070, and 0.090 inch

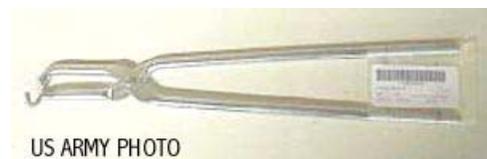
45 degree angle: 0.038, 0.047, 0.070, and 0.090inch

90 degree angle: 0.038, 0.047, 0.070, and 0.090 inch
Carrying Case

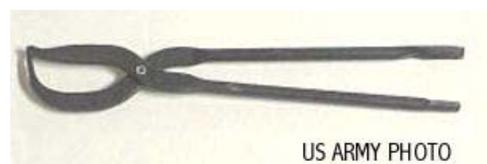


A106. Pliers, Brake Repair, Heavy. The pliers shall be provided with a hooked or slotted jaw and a bent or curved jaw suitable for removing and replacing brake springs for heavy trucks. The end of one or both handles

shall also be furnished with a groove or other suitable means for quick replacement of brake springs. The working ends of the pliers shall be hardened to a reading of 48-52 on the Rockwell C scale. The pliers shall be at least 19" long. (Reference GGG-P-00474, Type II, Class 1, Style 1)

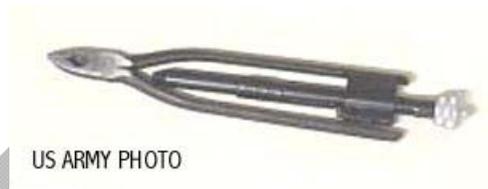


A107. Pliers, Brake Repair, Light. The pliers shall be provided with a hooked or slotted jaw and a bent or curved jaw suitable for removing and replacing brake



springs for light trucks. The end of one handle shall be furnished with a groove or other suitable means, and the end of the other handle shall be furnished with a socket or cup for quick replacement of brake springs. The working ends of the pliers shall be hardened to a reading of 48-52 on the Rockwell C scale. The pliers shall be at least 12" long. (Reference GGG-P-00474, Type II, Class 2, Style 2)

A108. Pliers, Wire Twister. The pliers shall be of a type used primarily for twisting safety wires. ASME B107.500 (B107.18) Type I, Class 2, Style A
Type: Manual return, Right-hand twist
Pliers Length: 9 inches nominal
Overall Length: 10 inches minimum
Wire Size: 0.020 to 0.060
Jaw Type: Flat Top Diamond Serrations
Finish: Black Oxide



A109. Pneumatic Bag Kit, Lifting. The kit shall have the rated capacity to lift 10 tons to a height of at least 21". A 3/8" ID male to 1/4" ID male quick disconnect adapter shall be supplied in addition to the kit.

Component details

Bags, Lifting (Qty 2)

Dimensions: 24 inches long, 24 inches wide, 3/4 inches thick
Rated Capacity: 10 tons to 21 inches high minimum



Console, Control, Command (Qty1)

Power Source: Pneumatic
Maximum Pressure: 14.5 PSI
Operating Temperature: -40 to 185 degrees F minimum
Includes: Inlet pressure gauge, dual liquid filled gauges to monitor air pressure in bag, inlet hose, regulators, valve handles, operating instructions, and a carry case
Hose Diameter: 3/8 inch
Hose Length: 16 feet
Hose Color: Black

Hose, Yellow, 16 Ft (Qty 1)

Diameter: 3/8 inch
Length: 16 feet
Working pressure: 300 psi minimum
Color: Yellow
Features: closed couplings at each end, flexible hose

Hose, Red, 16 Ft (Qty 1)

Diameter: 3/8 inch

Length: 16 feet
Working pressure: 300 psi minimum
Color: Red
Features: closed couplings at each end, flexible hose

A110. [NOT USED]

A111. Puller Set, Mechanical. Shall consist of pullers and puller accessories. Shall be rated for a pulling force of at least 10 tons. The puller set shall consist of:

2-Arm Pullers: 4 inch spread, 3 ¼ inch reach; 6 inch spread, 3 ¼ inch reach; 9 inch spread, 5 inch reach; 12 inch spread, 11 inch reach

Bearing Separators: ¼ to 15-16 inch capacity; 1/8 to 2 inch capacity; ½ to 4 5/8 inch capacity

Press-Puller: Frame and forcing screw with 2 1/8 to 7 1/4 inch spread; two leg ends; two 6 ¾ inch legs; two 15 ¾ inch legs, two leg connectors

Gear and Pulley Puller: 1 ½ - 4 ¼ inch spread, 13 inch forcing screw

Internal Pulley: 1-1/2 inch to 6 inch Spread, 4 inch Reach

Steering Wheel Puller: Body with forcing screw; Two Cap Screws 3/8"-16 x 3-1/2"; Two Cap Screws 5/16"-18 x 3-1/2"; Two Cap Screws 5/16"-24 x 3-1/2"; Two Cap Screws 5/16"-24 x 4" (SIR); Two Cap Screws M8"-1.25 x 90mm

Pittman Arm Puller: 2-3/4 inch Spread, 5-1/2 inch Reach

Harmonic Balancer Puller: Frame and forcing screw for bolt circle diameters from 1-1/2 inch to 4-5/8 inch; Three cap screws 3/8"-24 x 3"; Three cap screws 3/8"-16 x 3"

Slide Hammer: 2 Leg/3 Leg head with Inside/Outside Legs, 1-1/4 inch to 4-1/2 inch Spread, 2-1/2 pound Hammer

Pilot Bearing Puller: 2-Leg Inside Head, 1-1/2" Spread and ¾" Reach, 1-3/4 Lb. Hammer

Threaded Shaft Adapters: 5/8"-18 x 5/8"-18; 5/8"-18 x ¾"-16; 5/8"-18 x 7/8"-14; 5/8"-18 x 1"-14; 5/8"-18 x 1-1/8"-12; 5/8"-18 x 1-1/4"-12

Hollow Shaft Adapters: 1" x ¾"; 1-1/8" x 7/8"; 1-1/4" x 1"; 1-3/8" x 1-1/8"; 1-5/8" x 1-1/4"; 1-3/4" x 1-3/8"; 1-7/8" x 1-1/2"; 2" x 1-5/8"; 2-1/8" x 1-3/4"; 2-3/8" x 1-7/8"; 2-1/2" x 2"



A112. Puller, Mechanical, Steering Wheel. Shall be made to remove steering wheels.

Includes: Steering wheel lock plate remover; Steering pivot pin remover; Steering wheel puller; Four sets of cap screws (quantity of two of each size: M8-1.25 x 90 mm 3/8"-16 x 3-1/2" 5/16"-24 x 3-1/2" and 5/16"-18 x 4"); Plastic case

A113. Puller, Mechanical, Pittman Arm. Shall be a Pittman arm puller for medium and heavy trucks.

Use: Medium and Heavy Trucks

Puller Leg Type: Adjustable

Puller Leg Length: 5.5 inches nominal



Maximum Jaw Spread: 2 ¾ inches
Includes: Locking clamp bolts; adaptor

A114. Pump, Lubricant. Shall consist of a drum dolly and a manual lubricant pump with abrasion-resistant delivery hose (5 feet long, nominal). The pump base shall enable it to be attached to the top of a standard 5-gallon bulk container for delivering lubricant directly from the container. The dolly shall provide caster wheels and a base frame suitable for retaining a standard 5-gallon bulk container.



A115. Punch and Chisel Set. Shall consist of 26 pieces, as listed in the table below.

ASME B107.500 (B107.48)
Material: S2 Hardened Steel
Finish: Black Oxide
Quantity: 26

Includes one each of the following:

Cold Chisel: 3/4" by 6-1/2" long; 1/4" by 4" long; 5/16" by 4" long; 3/8" by 5" long; 1/2" by 5-3/4" long; 5/8" by 6" long; 7/8" by 7-1/2" long; 1" by 8" long; 1-3/16" by 9" long
Drive Pin Punch: 3/32"; 1/8"; 5/32"; 3/16"; 7/32"; 1/4"

Tip Drift Punch: 1/8" by 8" long; 3/16" by 8" long; 1/4" by 8-1/2" long

Tip Starting Punch: 3/32"; 1/8"; 3/16"; 7/32"; 1/4"

Center Punch: #2 (5/16" Body) Center Punch, length 3-1/4" minimum; #7 (3/8" Body) Center Punch, length 4" minimum

Prick Punch: #3 (1/2" Body) Prick Punch, length 5" minimum
Carrying Case



A116. Punch Set, Cutting, Gasket. Shall contain mandrel and hollow punches of these sizes

Material: Tempered Alloy Steel
Number of Pieces: 10

Includes: one each 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4, 7/8, and 1 inch hardened and tempered hollow punches; one self-centering steel mandrel; one plastic storage case



A117. Sander/Grinder 4.5". The right-angle style grinder shall have a 120 Volt, 60 Hz, single phase, 2.1 hp variable speed motor, with a maximum rated speed of at least 10,000 rpm, long life brushes and high output fan. The spindle thread size shall be 5/8"-11. The grinder shall have a lock off button and shall be double insulated.



A118. Saw, Hand, Crosscut. Shall be a straight back cross-cut wood saw with a hardwood or composite handle, an overall length of 15" nominal and 9 teeth per inch. Blade High Carbon Steel heat treated.



A119. Saw, Hand, Metal Cutting. Shall be a compact, lightweight utility mini-hacksaw for work in close quarters. Shall accept standard hacksaw blades.



A120. Saw, Hand, Metal Cutting.

Type: High Tension

Overall Length: 16 inches

Throat Depth: 2 1/2 inches minimum

Blade: 12 inches long; 24 TPI; hacksaw blade



A121. Scale, Weighing.

Type: Straight-face hanging spring

Range: 0-50 pounds avoirdupois

Graduations: 1 pound

Accuracy: Within 4 pounds for loads less than 20; within

8 pounds for loads more than 20

Includes: Suspension ring on top, hook on bottom



A122. Scraper, Gasket. Shall be a carbide edge scraper with a 0.125" thick steel shank.

Material: Steel

Tip: ground carbide double edge

Shank: 1/8 inch thick; nickel chrome finish

Handle: Hardwood



A123. Screwdriver Attachment Set, Torx.

Tip Type: Torx

Measurement: Standard

Drive Type: Square

Number of Points: 6

Socket Finish: Full Polished Chrome

Quantity: 12

Includes 1/4 Inch drive sizes: T-8, T-10, T-15, T-20, T-25, and T-27

Includes 3/8 inch drive sizes: T-30, T-40, T-45, T-47, T-50, and T-55

Features: replaceable torx bits; carrying case with separate locations for each socket

(Picture not available.)

A124. Screwdriver Attachment Set, Inch, Hex.

Tip Type: Hex

Material: Heat Treated Steel

Measurement: Standard

Drive Type: Square

Number of Points: 6

Socket Finish: Full Polished Chrome

Quantity: 10

Includes 3/8 Inch drive sizes: 5/32, 7/32, 1/4, 1/8, 3/16, 3/8, and 5/16 inch

Includes 1/2 inch drive sizes: 5/8, 9/16, and 1/2 inches

Features: Carrying Case



A125. Screwdriver Attachment Set, Metric, Hex. The set shall contain square drive sockets for metric socket head fasteners that range from 4 to 17 mm. Items are listed below:

Tip Type: Hex

Material: Heat Treated Steel

Measurement: Metric

Drive Type: Square

Number of Points: 6

Socket Finish: Full Polished Chrome

Quantity: 10

Includes 3/8 Inch drive sizes: 10, 9, 4, 6, 5, 7, and 8 mm

Includes 1/2 inch drive sizes: 12, 14, and 17 mm

Features: Carrying Case



A126. Screwdriver Set, Jewelers'. The set shall consist of six swivel-knob jewelers' screwdrivers.



Type: Jeweler's
Handle: Swivel-knob
Includes Flat-tip sizes: 1.5 mm, 2 mm, 2.5 mm, and 3 mm
Includes Cross Tip sizes: #00, #0, and #1
Features: Carrying case or pouch

A127. Screwdriver Set. Includes one each of the following:

Offset Screwdriver, Flat Tip, sizes: 5/32 inch by 3 inches long; 1/4 inch by 4 inches long; 5/16 inches by 5 inches long; 3/8 inch by 6 inches long

Offset Screwdrivers, Cross Tip, sizes: #1 by 4 1/2 inches long; #2 by 4 1/2 inches long; #3 by 6 1/2 inches long; #4 by 6 1/2 inches long

Stubby Screwdrivers, Flat Tip, sizes: 3/16 inches by 3 inches long; 1/4 inches by 3 1/2 inches long

Stubby Screwdrivers, Cross Tip, sizes: #2 by 3 1/2 inches long

Round Shank Screwdrivers, Cross Tip, sizes: (2) #4 by 13 1/2 inches long

Square Shank Screwdrivers, Flat Tip, sizes: (2) 3/8 inch by 12 inches long

Handle material: Plastic, excludes offset screwdrivers

Blade Finish: Chrome



A128. Screwdriver Set, Torx. The set shall contain torx screwdrivers. Items are listed below:

Tip Type: Torx

Included Sizes:

T10 by 3 inches long

T15 by 3 inches long

T15 by 1 1/4 inches long

T20 by 3 inches long

T25 by 3 inches long

T27 by 4 inches long

T30 by 4 inches long

T40 by 6 inches long

Handle material: Plastic

Blade Finish: Chrome

Features: Carrying Case or Tool Roll



A129. Sharpener, Drill, Portable.

Voltage: 120 VAC, 60 Hz

Application: Sharpens steel, masonry, carbide, cobalt, and TiN-coated bits

Sizes: 3/32 through 3/4 inch bits and other equivalent sizes

Tip Angles: 115 to 140 degrees

Includes: Replaceable diamond sharpening wheel; plastic case (Photo not available.)

A130. Shears, Bent Trimmer.



Material: Steel

Finish: Nickel chrome

Handle: Offset ring and bow

Length: 8 inches minimum

Length of cut: 3-1/2 inches minimum

Blades: Bent, minimum one blade sharp pointed

A131. Sling, Engine and Transmission, 3 Ton. Shall be an adjustable-attitude lifting sling with a 6000 lb rated capacity, a self-locking tilt adjustment mechanism, and a lifting eye with a 1-5/8" inside diameter. The sling width shall be adjustable from 30" to 46" and the angle of the sling relative to the horizontal plane shall be adjustable from 0 to thirty degrees in both directions. The sling shall be provided with a chain hook at each end. The sling shall also be provided with two 5/16" chains, each at least two feet long and having an eye hook on one end. Chain grade is 80.



A132. Sling, Engine and Transmission, 2 Ton. Shall be an adjustable-attitude lifting sling with 4000 lb rated capacity, a self-locking tilt adjustment mechanism, and a lifting eye with a 1-5/8" inside diameter. The sling shall adjust the tilt relative to the horizontal of the object being lifted by shifting the position of a 5/16" chain. The chain shall be provided with eyehooks on each end with throat openings of not less than 1 inch. The total length of the chain with hooks shall be not less than 65-3/4".



A133. Socket Set, Socket Wrench, 3/8" Drive, Metric, Universal.

ASME B107.110, Category 2, Type III

Material: Steel

Measurement: Metric

Type: Universal Socket

Material: Steel

Finish: Chrome

Drive Size: 3/8 inch

Number of Points: 6

Socket Depth: Standard

Quantity: 15

Included Sizes: 7mm, 8mm, 10mm, 11mm, 12mm, 13mm, 14mm, 15mm, 16mm, 17mm, 18mm, 19mm, 21mm, 22mm, and 24mm

(Photo not available.)

A134. Socket Set, Socket Wrench, 3/8" Drive, Inch, Universal.

ASME B107.110, Category 2, Type III

Type: Universal Socket

Material: Steel

Finish: Chrome

Drive Size: 3/8 inch

Number of Points: 6

Socket Depth: Standard

Quantity: 7

Included Sizes: 3/8 inch, 7/16 inch, 1/2 inch, 9/16 inch, 5/8 inch, 11/16 inch, and 3/4 inch
(Photo not available.)

A135. Socket Set, Socket Wrench, 3/4" Drive, Inch.

Regular. Shall consist of the items listed below.

ASME B107.110, Category 2, Type III

Material: Steel

Finish: Chrome

Drive Size: 3/4 inch

Number of Points: 12

Quantity: 30

Includes: Ratchet: Quick Release, Reversible, 20 inches long, 24 teeth minimum

Handles: Sliding T Handle, 20 inches long; Hinge Handle, 20 inches

Extensions: 4 inch; 8 inch; 16 inch

Universal Joint

Adapter: 3/4 inch drive to 1/2 inch drive

Sockets: 7/8 inch; 15/16 inch; 1 inch; 1-1/16 inch; 1-1/8 inch; 1-1/4 inch; 1-5/16 inch; 1-3/8 inch; 1-7/16 inch; 1-1/2 inch; 1-9/16 inch; 1-5/8 inch; 1-11/16 inch; 1-3/4 inch; 1-13/16 inch; 1-7/8 inch; 2 inch; 2-1/16 inch; 2-1/8 inch; 2-3/16 inch; 2-1/4 inch; 2-3/8 inch



A136. Socket Set, Impact Wrench, 1/2" Drive, Metric, Universal. Shall consist of the following:

ASME B107.110, Category 2, Type III

Material: Steel

Finish: Black oxide

Type: Universal Socket

Drive Size: 1/2 inch

Number of Points: 6

Quantity: 10

Included Sizes: 13mm, 14mm, 15mm, 16mm, 17mm, 18mm, 19mm, 21mm, 22mm, and 24mm
(Photo not available.)

A137. Socket Set, Impact Wrench, 1/2" Drive, Inch, Universal. Shall consist of the following:

ASME B107.110, Category 2, Type III

Material: Steel

Finish: Black oxide

Type: Universal Socket

Drive Size: 1/2 inch

Number of Points: 6

Quantity: 8

Included Sizes: 1/2 inch, 9/16 inch, 5/8 inch, 11/16 inch, 3/4 inch, 13/16 inch, 7/8 inch and 15/16 inch

(Photo not available.)

A138. Socket Set, Impact Wrench, 3/4" Drive, Inch. Shall

consist of the items listed below:

ASME B107.110

Material: Steel

Finish: Black oxide

Drive Size: 3/4 inch

Number of Points: 6

Quantity: 11

Included Sizes: Standard Length: 1-1/2 inch, 1-9/16 inch, 1-5/8 inch, 1-11/16 inch, 1-3/4 inch, 1-13/16 inch, 1-7/8 inch, 1-15/16 inch and 2 inch, Deep Length 4 point: 13/16 inch, and Budd Wheel, Deep Length, Double Opening 6 point: 1 1/2 inch



A139. Socket Set, Master, Socket Wrench, 1/4",

3/8", and 1/2" Drive. Shall consist of the items

listed below.

ASME B107.110

Material: Steel

Finish: Chrome

Quantity: 225

Includes one each of the following:

1/4 inch drive:

Ratchet: Reversing, sealed head, 4-3/8 inch long, 45 teeth minimum

Extensions: 3 inch; 6 inch; 10 inch

Universal Joint: 1-1/2 inch

Inch Sockets, 6 point, standard length: 1/8, 5/32, 3/16, 7/32, 1/4, 9/32, 5/16, 11/32, 3/8, 7/16, 1/2, and 9/16 inch

Metric Sockets, 6 point, standard length: 4mm, 4.5mm, 5mm, 5.5mm, 6mm, 7mm, 8mm, 9mm, 10mm, 11mm, 12mm, 13mm, 14mm, and 15mm

Inch Sockets, 6 point, deep length: 1/8, 5/32, 3/16, 7/32, 1/4, 9/32, 5/16, 11/32, 3/8, 7/16, 1/2, and 9/16

Metric Sockets, 6 point, deep length: 4mm, 4.5mm, 5mm, 5.5mm, 6mm, 7mm, 8mm, 9mm, 10mm, 11mm, 12mm, 13mm, 14mm, and 15mm

3/8 inch drive:

Ratchet: Reversing, sealed head, 8-1/2 inch long, 45 teeth minimum



Extensions: 1-1/2 inch; 3 inch; 6 inch; 8 inch

Universal Joint: 2-1/4 inch

Inch Sockets, 6 point, standard length: 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8, 15/16, and 1

Metric Sockets, 6 point, standard length: 6mm, 7mm, 8mm, 9mm, 10mm, 11mm, 12mm, 13mm, 14mm, 15mm, 16mm, 17mm, 18mm, 19mm, 20mm, 21mm, 22mm, 23mm and 26mm

Inch Sockets, 6 point, deep length: 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8, 15/16, and 1

Metric Sockets, 6 point, deep length: 6mm, 7mm, 8mm, 9mm, 10mm, 11mm, 12mm, 13mm, 14mm, 15mm, 16mm, 17mm, 18mm, 19mm, 20mm, 21mm, 22mm, 23mm and 26mm

1/2 inch drive:

Ratchet: Reversing, sealed head, 10-1/2 inch long, 45 teeth minimum

Extensions: 2 inch; 3 inch; 5 inch; 10 inch

Universal Joint: 2-7/8 inch

Stud Remover: 5/16-3/4 capacity

Inch Sockets, 6 point, standard length: 3/8, 7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8, 15/16, 1, 1-1/16, 1-1/8, 1-3/16, 1-1/4, 1-5/16, 1-3/8, 1-7/16, and 1-1/2

Metric Sockets, 6 point, standard length: 9mm, 10mm, 11mm, 12mm, 13mm, 14mm, 15mm, 16mm, 17mm, 18mm, 19mm, 21mm, 22mm, 23mm, 24mm, 25mm, 26mm, 27mm, 28mm, 29mm, 30mm, 32mm, and 36mm

Inch Sockets, 6 point, deep length: 3/8, 7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8, 15/16, 1, 1-1/16, 1-1/8, 1-3/16, 1-1/4, 1-5/16, 1-3/8, 1-7/16 and 1-1/2

Inch Sockets, 12 point, standard length: 19/32, 21/32 and 25/32

Metric Sockets, 12 point, deep length: 10mm, 11mm, 12mm, 13mm, 14mm, 15mm, 16mm, 17mm, 18mm, 19mm, 20mm, 21mm, 22mm, 23mm, 24mm, 25mm, 26mm, 27mm, 28mm, 29mm, 30mm and 32mm

Socket Wrench Drive Adapters: 3/8 male to 1/4 female; 1/4 male to 3/8 female; 3/8 male to 1/2 female; 3/4 male to 1/2 female

A140. Socket Set, Socket Wrench, Wheel Bearing

Locknut. The set shall consist of 6 point,

Material: Steel

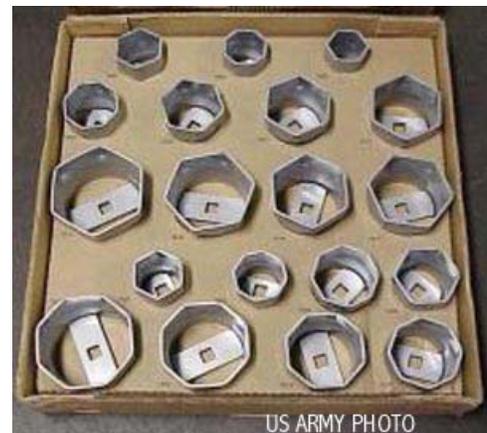
Finish: Chrome

Drive Size: 3/4 inch

Quantity: 19

Included Sizes: 6 Point: 2-3/32, 2-3/8, 2-9/16, 3, 3-1/4, 3-1/2, 3-7/8, 4, 4-1/8, 4-3/8 and 4-7/8 inches

8 Point: 2-3/8, 2-9/16, 3, 3-1/4, 3-1/2, 3-7/8, 4-3/8 and 4-7/8 inches



A141. Socket Set, Impact Wrench, Metric, 3/4" Drive, Regular. Shall be a set of impact sockets,.

ASME B107.110

Type: Impact

Material: Steel

Finish: Black Oxide

Drive Size: 3/4 inch

Number of Points: 6

Socket Depth: Standard

Quantity: 13

Included Sizes: 17mm, 19mm, 20mm, 22mm, 24mm, 27mm, 30mm, 31mm, 34mm, 36mm, 38mm, 40mm and 46mm



A142. Soldering Gun.

Power Source: Electric, Corded

Voltage: 120 V, 60 Hz

Output: Variable 150-400 watts minimum range

Maximum Tip Temperature: 1000 degrees

Tip Type: 1/4 inch pyramid

Handle: Pistol Style, Trigger controlled

Features: Built in light

Includes: Carrying Case



A143. Tool, Splitting Nut.

Material: Steel forged frame, hardened cutter

Finish: corrosion resistant

Head Size: 3/4 inch hex

Length: 4-1/2 inches minimum

Capacity: variable up to 1/2 inch nuts

Features: Angled head, replaceable hardened steel chisel point



A144. Tape, Measuring, 25'.

Blade Length: 25 feet minimum

Blade Width: 1 inch minimum to 1-1/2 inches maximum

Graduations: foot, inch, 1/16 inch intervals

Blade Standout: 11 feet minimum

Case: High impact with cushion grip; 7 by 4 by 2 inches nominal



A145. Test Kit, Radiator Pressure. To pressure-testing vehicle radiator caps and radiators to detect leaks.

Testing Range: 17-30 pounds

Includes: Manual air pump; pressure gage; 12 inch hose attached to test head; adapter for attachment to "B" size filler heads; pressure release bar; carrying case



US ARMY PHOTO

A146. Tester, Antifreeze Solution.

Type: Refractometer

Fluids: Ethylene glycol, propylene glycol, and battery acid specific gravity

Material: Steel body

Scales: Fahrenheit and Celsius

Features: Separate scales for each fluid, automatic temperature compensation (No Photo)

A147. Tool Kit, Blind Fastener Installation.

Includes one each of the following:

Hand Hydraulic Riveter

Pneumatic Riveter with 3/8" male quick disconnect fitting

Cordless Electric Riveter with battery pack and charger

Fittings for compatibility with the following: Cherrymax© and Huck© clinch rivets from 3/32" to 1/8"; pop rivets 1/8" through 1/4"; 1/4" automotive split ("T") rivets; 3/16" and 1/4" Monobolts©; 3/16" and 1/4" Bulb-Tite© fasteners; 1/8", 5/32", and 3/16" NASA 1400A and 1900S fasteners; 5/32" and 3/16" MS90353 fasteners; and pull-thru nut plate rivets and blind rivet nuts (Rivnut©), thread sizes 5 mm, 6 mm, 8 mm, 10 mm, 6-32, 8-32, 10-32, 10-24, 1/4-20, 1/4-28, 5/16-18, 5/16-24 and 3/8-16

Adapters: Right angle and offset pulling that are interchangeable with all straight pull heads. Carrying Case: capable of housing all items in the set

Riveter Pull Force: 4000 pounds over stroke of 5/8 inch minimum

(Photo not available)

A148. Tool Kit, Cutting, Abrasive, Pneumatic.

Arbor Size: 3/8 inch

Capacity: 3 inch diameter wheels

Speed: 18,000 RPM minimum

Features: rear exhaust, built-in power regulator, lever throttle, 1/4 inch NPT air inlet

Kit Includes: Pneumatic cut-off tool with 3-position flexible head; 360 degree swivel adapter; double reinforced abrasive cut-off wheels; Carrying Case



US ARMY PHOTO

A149. Tool Kit, Large Hose End Crimping.

Crimping Hose Diameter: $\frac{3}{4}$ inches through 1-1/4 inches

Includes: Crimper; 6 inch caliper; Hose end holder; Carrying case



A150. Tool Kit, Small Hose End Crimping.

Crimping Capacity: connectors on $\frac{1}{4}$ inch through $\frac{3}{4}$ inch diameter hoses

Includes: Crimper; Hacksaw with blade; 4 inch caliper; Hose end holder; $\frac{1}{2}$ inch wrench; Teflon Tape; 3 inch clamp; Carrying case



A151. Tool Kit, Screw Insert. The kit shall contain self-tapping threaded inserts for repair of stripped threaded holes in steel and aluminum with a variety of sizes and thread types, both inch and metric, as well as the requisite drill bits and insertion tools.

Type: Self-tapping threaded inserts

Includes:

Inserts, Inch sizes: (12 ea) $\frac{1}{4}$ -20; (6 ea) $\frac{1}{4}$ -28; (12 ea) 5/16-18; (6 ea) 5/16-24; (12 ea) 3/8-16; (6 ea) 3/8-24; (12 ea) 7/16-14; (6 ea) 7/16-20; (12 ea) $\frac{1}{2}$ -13; (6 ea) $\frac{1}{2}$ -20; (6 ea) 9/16-12; (3 ea) 9/16-18; (6 ea) 5/8-11; (6 ea) $\frac{3}{4}$ -10

Inserts, Metric sizes: (12 ea) 6mm-1.0; (12 ea) 8mm-1.25; (12) 10mm-1.5; (12) 12mm-1.75; (6) 14mm-2

Drill Bit sizes: (1 ea) $\frac{23}{64}$ inch; (1 ea) S; (1 ea) $\frac{299}{64}$ inch; (1 ea) $\frac{7}{16}$ inch; (1 ea) $\frac{17}{32}$ inch; (1 ea) $\frac{39}{64}$ inch; (1 ea) $\frac{19}{32}$ inch; (1 ea) $\frac{45}{64}$ inch; (1 ea) $\frac{11}{16}$ inch; (1 ea) $\frac{25}{32}$ inch; (1 ea) $\frac{49}{64}$ inch; (1 ea) $\frac{55}{64}$ inch; (1 ea) 1-1/32 inch; (1 ea) 1-1/64 inch

Bolt Gage

Tapping Fluid and Carrying Case



A152. Tool Kit, Tire Service. Shall consist of the items listed below:

Includes: (2 ea) Dual Foot Pressure Gauge, 10-150 pounds in 2 pound increments; (1 ea) 4 in 1 Tire Valve Core Repair Tool; (1 ea) Snap-In Valve Installation Tool; (1 ea) Valve Fishing



Tool; (1 ea) Screwdriver, Valve Core; (1 ea) Hammer, 18 inch Bead Breaker; (1 ea) Hammer, 32 inch Bead Breaker; (1 ea) Tire Iron, 37 inch Lock Ring Remover; (1 ea) Tire Iron, Mount-Demount Spoon, 24 inch; (1 ea) Tire Iron, Mount-Demount Spoon, 30 inch; (1 ea) Tire Iron, Mount-Demount Tool, 52 inch; (1 ea) Tire Iron, Mount-Demount Tool, 49-1/2 inch; (1 ea) Tire Iron, Offset Mount Bar 27 inch; (1 ea) Bead Breaker, Manual; (1 ea) Bead Breaker, Hydraulic; (1 ea) Air-Hydraulic Pump (for bead breaker); (1 ea) #2 Reamer 1/4 inch, 9 inches long; (1 ea) Truck Valve Insert Tool, 7 1/4 inches Long; (1 ea) Knife, 4 inches Long; (2 ea) Tire Thread Depth Gauge; (1 ea) Carrying Case

A153. Trestle, Hoist, Portable, 7-Ton.

ANSI/ASME PALD

Collapsed Height: 20 inches maximum

Extended Height: 30 inches minimum

Capacity: 7 tons minimum

Height Settings: 12

Material: Steel

Features: 4-point base

A154. Truck, Lift, Wheel.

Minimum Capacity: 1500 lbs

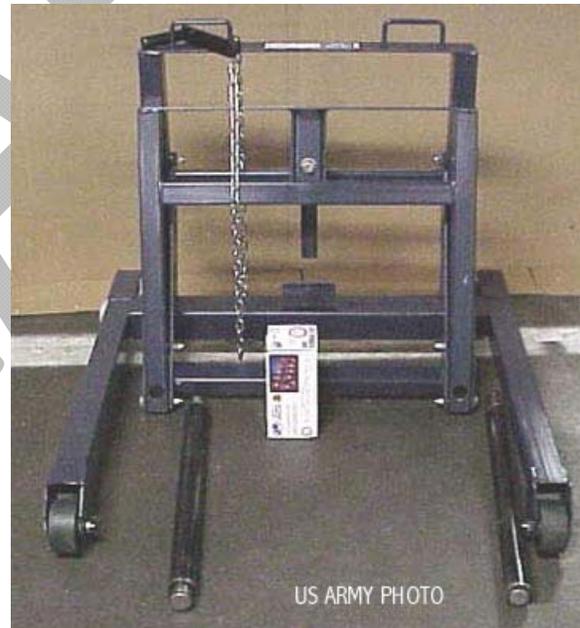
Safety Proof Load: 150% rated capacity

Tire size capacity: single and double wheel assemblies in ranging from 7.00 x 16 to no less than 14.00 x 24

Vertical lift: 4.25 inches minimum

Tilt: 4 degrees minimum

Features: Wheel Retaining Device, Hydraulic Operation, no less than 3 load carrying casters



A155. Vise, Machinist's, 4"

Base: Swivel

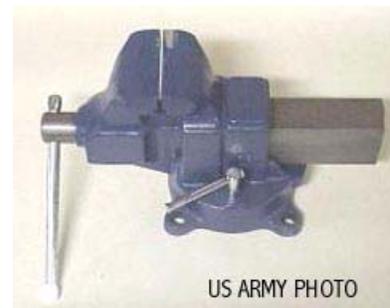
Overall dimensions: 19 x 8.5 x 13.5 inches

Jaw Width: 4 inches

Jaw Capacity: 6-1/2 inches minimum

Throat Depth: 4 inches minimum

Features: Replaceable jaw faces



A156. Vise, Pipe, Chain-Style.

Type: Bottom Screw Bench Chain Vise

Handle: Crank Type anchored to Base

Base Material: Cast Iron

Capacity: 1/8 to 4 inches

Jaws: Toothless, neoprene-coated



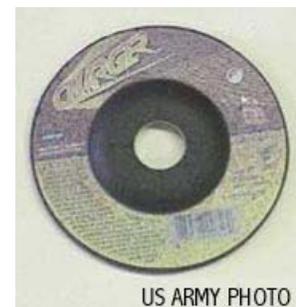
A157. Wheel, Abrasive, Fine Grit. Shall be an aluminum oxide straight grinding wheel, fine grit, 7" diameter x 1" thick, with a 0.625" arbor hole (or appropriate adapter). (For use with item A71)



A158. Wheel, Abrasive, Coarse Grit. Shall be an aluminum oxide straight grinding wheel, coarse grit, 7" diameter x 1" thick, with a 0.625" arbor hole (or appropriate adapter). (For use with item A71)



A159. Wheel, Abrasive, Type 27. Shall be a zirconium aluminum Type 27 depressed center grinding disc for use with a right-angle sander/grinder. Shall have a 4-1/2" diameter and a 5/8" arbor hole. (For use with item A117)



A160. Wheel, Abrasive, Type 29. Shall be zirconium aluminum disc Type 29 depressed center abrasive flap disk for use with a right-angle sander/grinder. It shall have a 4" diameter and a 5/8" arbor hole. The abrasive shall be 36 grit. (For use with item A117)



A161. Wrench, Impact, Electric, 3/4" Square Drive, 400 Ft-Lb.

Type: Reversible

Power: 120 V AC/DC

Drive Size: 3/4 inches

Speed: 0-1800 impacts per minute (IPM)

Maximum Torque: 434 ft-lbs minimum

No Load Speed: 1600 RPM

Bearings: Ball and Roller

Features: Side Handle, Detent Pin, AC/DC Switch, forward-reverse rocker switch, 8 foot minimum length cord with 2-prong plug (Photo not available.)

A162. Wrench Set, Flare Nut, Inch. Shall be a set of 6-point flare nut wrenches as follows

ASME B107.100

Type: Flare Nut

Material: Steel

Finish: Chrome

Number of Points: 6

Quantity: 7

Includes Sizes: 1/4 x 5/16 inch; 3/8 x 7/16 inch; 1/2 x 9/16 inch; 5/8 x 11/16 inch; 3/4 x 13/16 inch; 3/4 x 1 inch; 7/8 x 1-1/8 inch



US ARMY PHOTO

A163. Wrench Set, Box, Inch. Shall be a set of 12-point box end wrenches as follows:

ASME B107.100

Type: Double Head Box, Inch

Material: Steel

Finish: Chrome

Number of Points: 12

Offset: 10 to 20 degrees

Quantity: 15

Included Sizes: 3/8 x 7/16 inch; 7/16 x 1/2 inch; 1/2 x 9/16 inch; 9/16 x 5/8 inch; 5/8 x 11/16 inch; 11/16 x 3/4 inch; 3/4 x 13/16 inch; 7/8 x 15/16 inch; 15/16 x 1 inch; 1 x 1-1/16 inch; 1-1/16 x 1-1/4 inch; 1-1/8 x 1-3/16 inch; 1-1/4 x 1-5/16 inch; 1-3/8 x 1-7/16 inch; 1-1/2 x 1-5/8 inch



US ARMY PHOTO

A164. Wrench Set, Box, Metric. Shall be a set of 12-point box end wrenches as follows.

ASME B107.100

Type: Double Head Box, Metric

Material: Steel

Finish: Chrome

Number of Points: 12

Offset: 10 to 20 degrees

Quantity: 11



US ARMY PHOTO

Included Sizes: 10 mm x 11 mm; 12 mm x 14 mm; 13 mm x 15 mm; 14 mm x 15 mm; 16 mm x 18 mm; 17 mm x 19 mm; 18 mm x 21 mm; 19 mm x 22 mm; 22 mm x 24 mm; 27 mm x 30 mm; 30 mm x 32 mm

A165. Wrench Set, Combination, Inch. Shall be a set of combination open end and box end wrenches as follows:

ASME B107.100

Type: Combination, Inch

Material: Steel

Finish: Chrome

Number of Points: 12

Offset: 10 to 20 Degrees

Quantity: 26

Included Sizes: ¼, 5/16, 3/8, 7/16, ½, 9/16, 5/8, 11/16, ¾, 13/16, 7/8, 15/16, 1, 1-1/16, 1-1/8, 1-¼, 1-5/16, 1-3/8, 1-7/16, 1-½, 1-5/8, 1-11/16, 1-¾, 1-13/16, 1-7/8, and 2 inches



A166. Wrench Set, Combination, Metric. Shall be a set of combination open end and box end wrenches as follows:

ASME B107.100

Type: Combination, Metric

Material: Steel

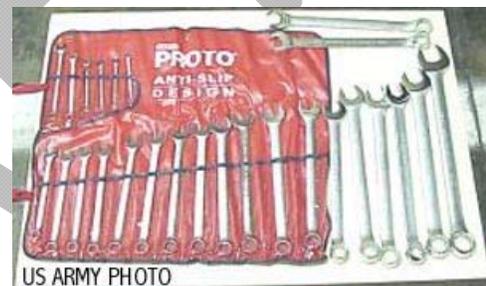
Finish: Chrome

Number of Points: 12

Offset: 10 to 20 Degrees

Quantity: 26

Included Sizes: 7 mm, 8 mm, 9 mm, 10 mm, 11 mm, 12 mm, 13 mm, 14 mm, 15 mm, 16 mm, 17 mm, 18 mm, 19 mm, 20 mm, 21 mm, 22 mm, 23 mm, 24 mm, 25 mm, 26 mm, 27 mm, 28 mm, 29 mm, 30 mm, 32 mm, 36 mm



A167. Wrench Set, Open-End, Metric. Shall be a set of open-end wrenches as follows:

ASME B107.100

Type: Open-End, Double Head, Metric

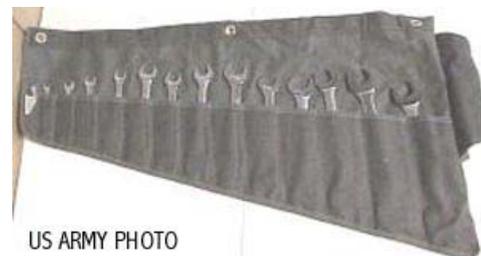
Material: Steel

Finish: Chrome

Offset: 10 to 20 degrees

Quantity: 14

Included Sizes: 6 mm x 8 mm; 7 mm x 9 mm; 10 mm x 11 mm; 12 mm x 14 mm; 13 mm x 15 mm; 16 mm x 18 mm; 17 mm x 19 mm; 20 mm x 22 mm; 21 mm x 23 mm; 22 mm x 24 mm; 24 mm x 26 mm; 25 mm x 27 mm; 28 mm x 30 mm; 30 mm x 32 mm



A168. Wrench Set, Open End, Inch. Shall be a set of open end wrenches as follows:

ASME B107.100

Type: Open-End, Double Head, Inch

Material: Steel

Finish: Chrome

Offset: 10 to 20 degrees

Quantity: 13

Included Sizes: 3/8 x 7/16 inch; 7/16 x 1/2 inch; 1/2 x 9/16 inch; 5/8 x 3/4 inch; 11/16 x 3/4 inch; 13/16 x 7/8 inch; 15/16 x 1 inch; 1-1/16 x 1-1/8 inch; 1-1/4 x 1-5/16 inch; 1-3/8 x 1-7/16 inch; 1-1/2 x 1-5/8 inch; 1-11/16 x 1-13/16 inch; 1-7/8 x 2 inch



A169. Wrench Set, Flare Nut, Metric. Shall be a set of six flare nut wrenches as follows.

ASME B107.100

Type: Flare Nut, Metric

Material: Steel

Finish: Chrome

Number of Points: 6

Quantity: 6

Included Sizes: 9 mm x 11 mm; 10 mm x 12 mm; 13 mm x 14 mm; 15 mm x 17 mm; 16 mm x 18 mm; 19 mm x 21 mm



A170. Wrench Set, Master, Impact Wrench, 3/8" & 1/2" Drive.

Material: Steel

Finish: Chrome

Quantity: 97

Includes:

1/2 inch drive:

Electric Impact Wrench, reversible, 300 ft-lbs torque, 120 V, 60 Hz, single-phase

Pneumatic Impact Wrench, reversible, 1/4 inch NPT inlet, handle exhaust, 400 to 600 ft-lbs torque, includes a male 3/8 inch quick disconnect fitting

Double-End Socket: 3/4 x 13/16 inch

Extensions: 3 inch; 6 inch; 10 inch

Universal Joint

Adapter: 3/8 inch male to 1/2 inch female

Inch Impact Sockets, 6 point, standard length: 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 11/16, and 3/4 inch

Metric Impact Sockets, 6 point, standard length: 10mm, 11mm, 12mm, 13mm, 14mm, 15mm, 16mm, 17mm, 18mm and 19mm



Inch Impact Sockets, 6 point, standard length: 3/8, 7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8, 15/16, 1, and 1-1/16 inch

Metric Impact Sockets, 6 point, standard length: 12mm, 13mm, 14mm, 15mm, 16mm, 17mm, 18mm, 19mm, 21mm, 22mm, 24mm and 27mm

Inch Impact Sockets, 6 point, deep length: 3/8, 7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8, 15/16, 1, and 1-1/16 inch

Metric Impact Sockets, 6 point, deep length: 12mm, 13mm, 14mm, 15mm, 16mm, 17mm, 18mm, 19mm, 21mm, 22mm, 24mm and 27mm

3/8 inch drive:

Extensions: 3 inch; 6 inch

Universal Joint

Inch Impact Sockets, 6 point, deep length: 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 11/16, and 3/4 inch

Metric Impact Sockets, 6 point, deep length: 10mm, 11mm, 12mm, 13mm, 14mm, 15mm, 16mm, 17mm, 18mm and 19mm

A171. Wrench Set, Impact Socket, 3/4" Drive, Inch. Shall be a set of standard-length 6-point, 3/4" drive impact sockets.

Material: Steel

Finish: Chrome

Drive Size: 3/4 inch

Quantity: 15

Includes: 6.5 inch extension; 12.5 inch extension; Impact Sockets, 6 point, standard length: 9/16, 5/8, 11/16, 3/4, 13/16, 7/8, 1, 1-1/16, 1-1/8, 1-1/4, 1-5/16, 1-7/16 and 1-1/2 inch



A172. Wrench, Adjustable, 18".

ASME B107.100 (B107.8 Type I, Class 2)

Type: Standard, Adjustable

Length: 17.5 inch minimum

Jaw Capacity: 2-1/16 inches minimum

Material: Steel

Finish: Black Oxide

Handle: Tapered



A173. Wrench, Adjustable, Automotive, 15". Shall have a worm drive adjustment.

Type: Automotive, Adjustable

Length: 14.5 inch minimum

Jaw Type: Perpendicular to handle

Jaw Capacity: 3-5/8 inch minimum

Jaw Depth: 1-3/4 inch minimum

Material: Steel

Finish: Chrome



A174. Wrench, Adjustable, 10".

ASME B107.100 (B107.8 Type I, Class 2)

Type: Standard, Adjustable

Length: 19,5 inch minimum

Jaw Capacity: 1-1/8 inch minimum

Material: Steel

Finish: Black Oxide



A175. Wrench, Adjustable, Automotive, 18". Shall have a worm drive adjustment.

Type: Automotive, Adjustable

Length: 17.5 inch minimum

Jaw Type: Perpendicular to handle

Jaw Capacity: 4-3/8 inches minimum

Jaw Depth: 2 inches minimum

Material: Steel

Finish: Chrome



A176. Wrench, Oil Filter. Shall be a pliers-style wrench for truck oil filters with a slip-joint handle providing a jaw opening range of 3-5/8" to 6". The jaws shall be provided with teeth to provide a positive grip, and the handles shall be cushioned.



A177. Wrench, Oil Filter, Strap.

Type: Strap-type wrench

Range: All spin-on oil filters up to 6 inches

Material: Nylon strap

Width: 2 inch strap

Handle drive: 1/2 inch and 3/4 inch

Length: 5-3/4 inch cranking mechanism

(Photo not available.)

A178. Wrench, Pipe, 18".

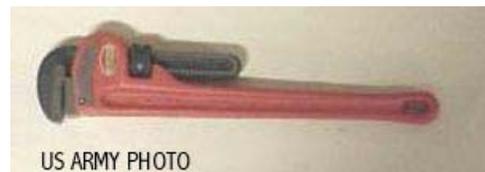
Type: Straight Pipe Wrench

Jaw Capacity: 2 inch minimum

Length: 18 inch minimum

Material: Cast Iron i-beam handle; forged steel jaws

Jaw Type: Adjustable



A179. Wrench, Pipe, 10".

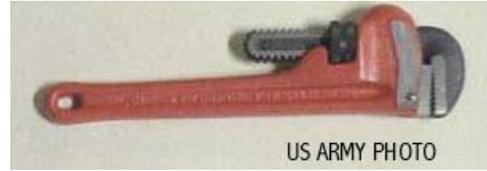
Type: Straight Pipe Wrench

Jaw Capacity: 1 inch minimum

Length: 10 inch minimum

Material: Cast Iron i-beam handle; forged steel jaws

Jaw Type: Adjustable



A180. Wrench Kit, Ratchet, Pneumatic, 3/8" Drive.

Power Source: Air

Maximum Torque: 45 foot pounds

Exhaust: 360 degree adjustable

Speed: Variable; Lever-style throttle

Accessories: 1/2 inch square drive attachment; 1/4 inch hex bit attachment; No 2 Phillips Bit; No 3 Phillips Bit; No 8 Flat Tip Bit; No 5 Flat Tip Bit; Impact Adapter 3/8 inch female to 1/2 inch male; male 3/8 inch ID quick disconnect fitting; carrying case

(Photo not available)

A181. Wrench, Torque, Dial, 1/4" Drive, 30 In-Lb.

ASME B107.300

Length: 8 inch minimum

Drive Type: Fixed Drive

Drive Size: 1/4 inch

Capacity: 6-30 in-lbs minimum

Increments: 1 in-lb

Features: Square drive; non-ratcheting head; dial indicator, carrying case



A182. Wrench, Torque, Dial, 3/8" Drive, 300 In-Lb.

Length: 8 inch minimum

Drive Type: Fixed Drive

Drive Size: 3/8 inch

Capacity: 60-300 in-lbs minimum

Increments: 5 inch pound

Features: Square drive; non-ratcheting head; dial indicator, carrying case



A183. Wrench, Torque, Click, Ratcheting, 3/4" Drive, 600 Ft-Lb.

ASME B107.300, Type 2, Class A, Style 2, Design A

Length: 42 inches

Type: Ratcheting, Click Style

Drive Size: 3/4 inch

Capacity: 120-600 ft-lbs minimum

Increments: 10 ft-lb minimum



Indicator: audible click
Features: Knurled handle; carrying case

A184. Wrench, Torque, Click, Ratcheting, 3/8" Drive, 75 Ft-Lb.

ASME B107.300, Type 2, Class A, Style 2, Design A

Length: 16 inches

Type: Ratcheting, Click Style

Drive Size: 3/8 inch

Capacity: 5-75 ft-lbs minimum

Increments: 1/2 ft-lb minimum

Indicator: audible click

Features: Knurled handle; carrying case



A185. Wrench, Torque, Click, 1/2" Drive, 345 Nm. Shall be a click style torque-setting wrench with a micrometer dial marked in both INCH and Metric scales.

ASME B107.300, Type 2, Class A, Style 2, Design B

Length: 24 inches nominal

Type: Adjustable micrometer, dual scale

Scales: Metric and Inch

Drive Size: 1/2 inch

Capacity: 50-250 ft-lbs minimum; 47-332 Nm minimum

Increments: 1 ft-lb minimum

Indicator: audible and tactile

Features: Non-ratcheting head; comfort grip on handle; carrying



A186. Wrench, Torque, Click, 1/2" Drive, 250 Ft-Lb. Shall be a click style torque-setting wrench with a micrometer dial.

ASME B107.300, Type 2, Class A, Style 2, Design A

Type: Click-type adjustable micrometer

Length: 23.75 inches nominal (in case)

Drive Size: 1/2 inch

Capacity: 50-250 ft-lbs minimum

Increments: 1 ft-lb minimum

Indicator: audible click

Features: Non-ratcheting head; knurled handle; carrying case



A187. Wrench, Wheel Stud Nut, Geared Socket. Shall be a geared socket wrench for removing heavy-duty wheel stud nuts from truck rims.

Type: Geared Socket Wrench

Drive: 3/4 inch

Double End Socket capacity: 1-1/2 inch hex; 13/16 inch square

Solid Bar Handle: 3/4 inch diameter x 20-1/2 inches long

Tubular Extension Handle: 1-1/8 inch diameter x 34-1/2 inches long



A188. Bar, Torque Wrench.

Material: Steel

Adjustable: 12-34 inches minimum

Capacity: 2400 ft-lbs at reaction distance of 6 inches; 450 ft-lbs at a reaction distance of 32 inches

Features: tubular steel handle with bar extension; used to provide reaction force for a torque multiplier



A189. Die set, Metal Stamping, Hand, Alphabetic. Character

Size: 5/16 inch

Shank Width: 7/16 inch

Shank Length: 2 3/4 inch

Depicted Text: A through Z

Depicted Symbol: Amperstand (&)

Language: English

Tip Type: Beveled

Shank Type: Square

Shank Material: Steel

Print Method: Direct

Type: Solid Hand Held Stamp

Quantity: 27 per set

Carrying case.



A190. Die Set, Metal Stamping, Hand, Alphabetic and Numeric.

Character Size: 3/16 inch

Shank Width: 5/16 inch

Shank Length: 2 3/8 inch

Depicted Text: 0 through 8, A through Z

Depicted Symbol: Period

Language: English

Tip Type: Beveled

Shank Type: Square

Shank Material: Steel

Print Method: Direct

Type: Solid Hand Held Stamp

Quantity: 36 per set

A carrying case shall be included.



A191. Gage Stock Set, Thickness.

Overall Length: 12 inches nominal

Overall Width: 1/2 inches nominal

Material: Steel

Thickness sizes: 0.0015, 0.002, 0.003, 0.004, 0.005, 0.006, 0.007, 0.008, 0.010, and 0.015 inches

Features: No less than 10 gages including the sizes above



A192. Multiplier, Torque, Crank-Operated.

Maximum Torque Output: 2000 ft-lb with 15 ft-lb maximum input

Accuracy: +/- 2% of actual output torque from 400 ft-lb to 2000 ft-lb

Torque Direction: Clockwise and Counterclockwise

Torque Ratio: 3.6 to 1

Input Drive: 3/8 inch square female

Output Drive: 3/4 inch square male

Head Thickness: 4 3/8 inches

Head Diameter: 3 17/32 inches

Overall Length: 24 inches

Operating Temperature: -20 to +125 degrees minimum

Includes: protractor measuring 0 to 180 degrees minimum

graduated in 1 degree increments; input crank handle with 3/8 inch square drive; 6-inch long 3/4 inch square output drive; carrying case



A193. Plate, Bolster, 36 x 36. Shall be suitable for use as cribbing under a 30-ton bottle jack when used on unpaved surfaces.

Material: Non-metallic

Length: 36 inches

Width: 36 inches

Temperature Range: -25 degrees F to 125 degrees F minimum

Features: Resistant to corrosion, ozone, ultraviolet light, deformation, fracturing, splintering, water, petroleum products, detergents, mold, and mildew

Load Maximum: 50 pounds per square inch

Handhold Openings: 6 inches by 3 inches

Use with: 30 ton bottle jack

(Photo not available.)

A194. Pliers, Multiple Position.

ASME B107.500 (B107.23), Type I, Class 1, Style A

Type: Tongue and Groove

Length: 11 inch minimum

Capacity: 2.1 inches minimum

Jaw Length: 1.44 inches minimum

Jaw Thickness: 0.31 inches minimum

Adjustments: 7



A195. Pliers, Multiple Position, Electrical Connector.

ASME B107.500 (B107.27)

Length: 8.75 inches minimum

Jaw Thickness: 3/8 inch

Jaw Shape: Curved



Adjustments: 3

A196. Puller Kit, Universal. Shall be a light duty kit for installing and removing bearings, bushings, and driver plugs with engaging threaded adapters.

Features: Threaded shaft; housing; tension nut; (2) tension nut handles; (2) adapter sleeves; thrust bearing; (9) engaging threaded adapters; puller attachment
Function: Install and remove bearings, bushings, and driver plugs

Capacity: 1/2 to 1-1/16 inch internal diameter bearings and bushings; 1/2 to 1-1/2 inch internal diameter blind hole bearings and bushings

Includes: Storage Case



A197. [NOT USED]

A198 Wrench, Set, Socket Wrench, 1" Drive, Inch,

Regular. Shall include the following:

ASME B107.110

Material: Steel

Drive Size: 1 inch

Number of Points: 12

Finish: Chrome

Quantity: 22

Includes one each of the following:

Ratchet: Reversing, Round Head 26 inch long, 72 teeth minimum

Extensions: 17 inch

Handle: Sliding T Bar, 28-1/2 inches long

Sockets: 1-7/16, 1-1/2, 1-5/8, 1-11/16, 1-13/16, 1-7/8, 2, 2-1/8, 2-1/4, 2-3/16, 2-1/2, 2-9/16, 2-5/8, 2-3/4, 2-15/16, 3 and 3-1/8



A199. Wrench, Pipe, 36".

Type: Straight Pipe

Jaw Capacity: 5 inches

Overall Length: 36 inches

Handle Material: Aluminum

Handle Type: I-Beam

Jaw Type: Standard with Full Floating hook

Jaw Material: Forged Steel



A200. Jack, Bottle, Hydraulic, Hand, 30 Ton.

Type: Hand Hydraulic

Capacity: 30 tons minimum

Base: Steel; drilled and ported to accept gauge

Extended Height: 16 inches minimum

Retracted Height: 11-1/8 inches maximum

Features: Self-contained; solid plunger; integral pump; ram; reservoir; removable pump handle



A201. Blow Gun, Extended, Air. Shall have an extension with a nominal bend of 36-degrees and a nominal length of 48 inches.

OSHA 1910.95; OSHA 1910.242B

Maximum PSI: 150

Air Inlet: 1/4 inch

Length: 48 inches

Tip Angle: 45 degrees

Features: Metal safety tip; pistol grip



Crowfoot attachments A202 thru A229 shall be ASME B107.100 (B107.21) compliant, chrome finish. The illustration shown in A202 pictorial represents all sizes.

A202. Crowfoot Attachment, Socket Wrench. Shall have 1/2" female square drive with locking hole to keep crowfoot engaged on extension and 20 Millimeter (20MM) open end wrenching surface with Anti-Slip design.



A203. Crowfoot Attachment, Socket Wrench. Shall have 1/2" female square drive with locking hole to keep crowfoot engaged on extension and 21MM open end wrenching surface with Anti-Slip design.

A204. Crowfoot Attachment, Socket Wrench. Shall have 1/2" female square drive with locking hole to keep crowfoot engaged on extension and 22MM open end wrenching surface with Anti-Slip design.

A205. Crowfoot Attachment, Socket Wrench. Shall have 1/2" female square drive with locking hole to keep crowfoot engaged on extension and 23MM open end wrenching surface with Anti-Slip design.

A206. Crowfoot Attachment, Socket Wrench. Shall have 1/2" female square drive with locking hole to keep crowfoot engaged on extension and 24MM open end wrenching surface with Anti-Slip design.

A207. Crowfoot Attachment, Socket Wrench. Shall have 1/2" female square drive with locking hole to keep crowfoot engaged on extension and 25MM open end wrenching surface with Anti-Slip design.

A208. Crowfoot Attachment, Socket Wrench. Shall have 1/2" female square drive with locking hole to keep crowfoot engaged on extension and 15/16 inch open end wrenching surface with Anti-Slip design.

A209. Crowfoot Attachment, Socket Wrench. Shall have 1/2" female square drive with locking hole to keep crowfoot engaged on extension and 1 inch open end wrenching surface with Anti-Slip design.

A210. Crowfoot Attachment, Socket Wrench. Shall have 1/2" female square drive with locking hole to keep crowfoot engaged on extension and 1-1/16 inch open end wrenching surface with Anti-Slip design.

A211. Crowfoot Attachment, Socket Wrench. Shall have 1/2" female square drive with locking hole to keep crowfoot engaged on extension and 1-1/8 inch open end wrenching surface with Anti-Slip design.

A212. Crowfoot Attachment, Socket Wrench. Shall have 1/2" female square drive with locking hole to keep crowfoot engaged on extension and 1-3/16 inch open end wrenching surface with Anti-Slip design.

A213. Crowfoot Attachment, Socket Wrench. Shall have 1/2" female square drive with locking hole to keep crowfoot engaged on extension and 1-1/4 inch open end wrenching surface with Anti-Slip design.

A214. Crowfoot Attachment, Socket Wrench. Shall have 1/2" female square drive with locking hole to keep crowfoot engaged on extension and 1-5/16 inch open end wrenching surface with Anti-Slip design.

A215. Crowfoot Attachment, Socket Wrench. Shall have 1/2" female square drive with locking hole to keep crowfoot engaged on extension and 1-3/8 inch open end wrenching surface with Anti-Slip design.

A216. Crowfoot Attachment, Socket Wrench. Shall have 1/2" female square drive with locking hole to keep crowfoot engaged on extension and 1-7/16 inch open end wrenching surface with Anti-Slip design.

A217. Crowfoot Attachment, Socket Wrench. Shall have 1/2" female square drive with locking hole to keep crowfoot engaged on extension and 1-1/2 inch open end wrenching surface with Anti-Slip design.

A218. Crowfoot Attachment, Socket Wrench. Shall have 1/2" female square drive with locking hole to keep crowfoot engaged on extension and 1-9/16 inch open end wrenching surface with Anti-Slip design.

A219. Crowfoot Attachment, Socket Wrench. Shall have 1/2" female square drive with locking hole to keep crowfoot engaged on extension and 1-5/8 inch open end wrenching surface with Anti-Slip design.

A220. Crowfoot Attachment, Socket Wrench. Shall have 1/2" female square drive with locking hole to keep crowfoot engaged on extension and 1-11/16 inch open end wrenching surface with Anti-Slip design.

A221. Crowfoot Attachment, Socket Wrench. Shall have 1/2" female square drive with locking hole to keep crowfoot engaged on extension and 1-3/4 inch open end wrenching surface with Anti-Slip design.

A222. Crowfoot Attachment, Socket Wrench. Shall have 1/2" female square drive with locking hole to keep crowfoot engaged on extension and 1-13/16 inch open end wrenching surface with Anti-Slip design.

A223. Crowfoot Attachment, Socket Wrench. Shall have 1/2" female square drive with locking hole to keep crowfoot engaged on extension and 1-7/8 inch open end wrenching surface with Anti-Slip design.

A224. Crowfoot Attachment, Socket Wrench. Shall have 1/2" female square drive with locking hole to keep crowfoot engaged on extension and 2 inch open end wrenching surface with Anti-Slip design.

A225. Crowfoot Attachment, Socket Wrench. Shall have 1/2" female square drive with locking hole to keep crowfoot engaged on extension and 2-1/8 inch open end wrenching surface with Anti-Slip design.

A226. Crowfoot Attachment, Socket Wrench. Shall have 1/2" female square drive with locking hole to keep crowfoot engaged on extension and 2-1/4 inch open end wrenching surface with Anti-Slip design.

A227. Crowfoot Attachment, Socket Wrench. Shall have 1/2" female square drive with locking hole to keep crowfoot engaged on extension and 2-3/8 inch open end wrenching surface with Anti-Slip design.

A228. Crowfoot Attachment, Socket Wrench. Shall have 1/2" female square drive with locking hole to keep crowfoot engaged on extension and 2-7/16 in open end wrenching surface with Anti-Slip design.

A229. Crowfoot Attachment, Socket Wrench. Shall have 1/2" female square drive with locking hole to keep crowfoot engaged on extension and 2-1/2 inch open end wrenching surface with Anti-Slip design.