

**DFP-420**

A63. Gloves, Rubber, Industrial. Shall be size 11, industrial rubber gloves for handling organic solvents, approximately 14 inches long. Cuff edge may be furnished with a self-binding roll or flat and reinforced.



A64. Goggles, Industrial. Shall be cover goggles, direct ventilation, conforming to ANSI Z87.1. Lens shall be clear and replaceable. The headband shall have a length of at least 18 inches.



A65. 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:



	Components
1	Grease Filler Pump
2	Grease Gun Filler Attachment
3	Bearing Packer Attachment
4	Transfer/Filler Attachment
5	Mini-Lube System
6	Quick Connect System

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A66. Grease Gun, Pneumatic. Shall be an air-powered grease gun with 12" flexible extension and 6" rigid extension. Shall include 3/8" X 50' PVC hose; with quick connect end and a vehicle pneumatic brake system glad hand. The gun shall use standard grease cartridges.



A67. Grinding Machine, Utility. Shall be a bench-mounted grinder with two spindles having a diameter of 5/8" each. Shall be for grinding wheels with a diameter of 7 inches maximum, and a thickness 1 inch maximum. There shall be a tilted work rest for each wheel. The nominal spindle speed shall be 3450 RPM, and the grinder shall have an integral 115 Volt, 60 Hz, single phase, 0.5 HP motor. Shall be furnished with one coarse grit straight abrasive wheel and one fine grit straight abrasive wheel.



A68. 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.



A69. Hammer, Hand, Carpenters', Curved Claw, 16 Oz. Shall be a curved claw carpenters' nailing hammer with a fiberglass handle and a cushion grip. It shall have a 16 oz non-magnetized head.



A70. Hammer, Hand, Soft Face, Dead Blow, 52 Oz. The hammer shall have a face diameter of 2.75", a head weight of 52 oz, a nonmetallic head, a steel reinforced handle, and an overall length of 16".



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A71. Hammer, Hand, Soft Face, Dead Blow, 10 Oz. The hammer shall have a face diameter of 1.25", a head weight of 10 oz, a nonmetallic head, a steel reinforced handle, and an overall length of 10".



A72. Hammer, Sledge, Double Faced, 10 Lb. The hammer shall have a head weight of 10 lbs and a face diameter of 2.5 inches. The fiberglass handle shall have a cushioned grip and a length of 32 inches.



A73. Hammer, Hand, Dead Blow, Ball Peen. The hammer shall have a hardened steel face and peen, a head weight of 40 oz, a face diameter of 1-11/16", a steel reinforced handle, and an overall length of 18.25".



A74. Hammer Set, Holder and Inserts. Shall consist of two soft face hammers, with tips. The head diameters shall be 1.5" and 2", respectively. The 1.5" hammer shall have one medium and one hard non-metallic tip. The 2" hammer shall have one tough and one extra hard non-metallic tip. For easy replacement, the surface protective tips shall be attached to the hammerheads by threaded studs.



A75. 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 0.401" 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.

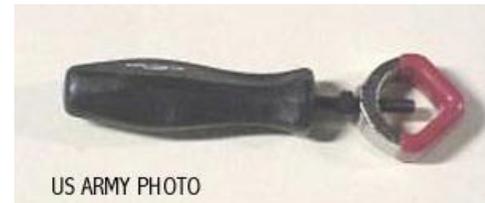


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A76. Handle, T, with Extension. Sliding T-handle breaker bar with extension for 1" square drive socket wrenches. The handle shall have an overall length of 29 inches, and the extension an overall length of 36 inches. The extension shall be furnished with a locking button.



A77. Holder, Punch and Chisel. Shall be a screw-clamp style holder with a capacity to hold punches and chisels with handles up to 1" in diameter.



A78. Hose Assembly, Air, Nonmetallic. Shall have an inside diameter of .375", and a length of 50 feet. Shall be highly flexible, highly resistant to flex fatigue, oils, solvents, cuts, and abrasion; and rated for a working pressure of at least 175 psig. Shall have an operating temperature range of -25 to +120 degrees F. Shall include 3/8" male and female quick disconnect couplings, one installed on each end. (For use with Item A30.)



A79. 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).



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A80. Jack, Dolly Type, Hydraulic, 10 Ton. Shall have a load capacity of 10 tons and have a lifting height of at least 21". Shall be furnished with a rotating saddle and swiveling rear wheels. Shall have a frame length of 50" to 68" and a frame height of not more than 10.5 inches. The retracted height of the saddle shall not exceed 8". The hydraulic system shall provide two-speed lift.

**(Note: This item shall not be supplied with the set and is for Production Representative System only.)**



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A81. 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.



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A82. Key Set, Hex, Inch. Shall consist of the following items:

Components		
	Size	Length
1	0.028"	1-1/4"
2	0.035"	1-1/4"
3	0.050"	1-11/16"



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4	1/16"	1-3/4"
5	5/64"	1-7/8"
6	3/32"	2"
7	7/64"	2-1/8"
8	1/8"	2-1/4"
9	9/64"	2-3/8"
10	5/32"	2-1/2"
11	3/16"	2-3/4"
12	7/32"	3"
13	1/4"	3-1/4"
14	5/16"	3-3/4"
15	3/8"	4-1/4"
16	1/2"	5-1/4"
17	9/16"	5-3/4"
18	5/8"	6-1/4"
19	Indexed container	

A83. Key Set, Hex, Metric. Shall consist of the following items:

Components		
	Size	Length
1	0.07 mm	31 mm
2	0.09 mm	31 mm
3	1.3 mm	41 mm
4	1.5 mm	44 mm
5	2 mm	49 mm
6	2.5 mm	55 mm
7	3 mm	62 mm
8	4 mm	68 mm
9	5 mm	78 mm
10	6 mm	88 mm
11	8 mm	98 mm
12	10 mm	109 mm
13	12 mm	122 mm
14	14 mm	136 mm
15	17 mm	156 mm
16	Indexed container	



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A84. Lamp, Fluorescent. Shall be a 13watt fluorescent bulb with a minimum 10,000-hour bulb life. (Replacement bulb for item A87.)

**(NOTE: This item for Production Representative System only)**



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A85. Light, Battery Operated, Rechargeable. Shall be an 18 volt, 2 Amp-Hour battery-powered work light. Work light shall have the following features: an on-off switch; a wide-angle fixed beam, a stable base for standing upright on flat surfaces; a multiple position adjustable hook for suspending the light from above; and a multi-position swivel head which permits the beam direction to be incrementally adjusted from parallel with the handle through an arc of 120 degrees. Battery and battery charger shall be supplied. Set shall come with a storage case.



A86. Light, Extension, Fluorescent. Shall be a "Stubby" style 13 inch fluorescent work light, 13 watts, 25 foot cord, 120 volt, 60 Hz.



A87. Light, Extension, LED. Shall be a 10 to 40 Volt DC work light with a 30-foot cord, and battery clips. The combined LED elements shall provide illumination equal to that of a 13-watt fluorescent or 40-watt incandescent bulb. Element casing shall be provided with a hook. (Photo not available.)

**(NOTE: This item is for Production Representative System only)**

A88. 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.



A89. Lubricating Gun, Battery Operated, Rechargeable. Shall be a 12-volt battery-powered grease gun with a 24" flexible hose. Battery and battery charger shall be supplied. Set shall come with a storage case. (Photo not available.)

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A90. Measure, Liquid, 8 Quart. Shall be a leak-proof can of the type used for measuring and dispensing oil. The can shall include a finger operated flow-control release valve and loop handle on the side opposite the spout. The bottom shall be designed to allow the can to drain completely while being held level. It shall have a flexible 14" spout with a 60-degree vertical swivel and a pouring tip that dispenses oil from the bottom of the can. The spout shall fasten in the up-right position when not in use.



A91. Measure, Liquid, 2 Quart. Shall be a leak-proof can of the type used for measuring and dispensing oil. The can shall include a finger operated flow-control release valve and loop handle on the side opposite the spout. The bottom shall be designed to allow the can to drain completely while being held level. It shall have a flexible 14" spout with a 60-degree vertical swivel and a pouring tip that dispenses oil from the bottom of the can. The spout shall fasten in the up-right position when not in use.



A92. 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. Shall measure average 45 – 1000 Hz AC voltage up to 1000 volts with an accuracy of  $\pm 2\%$  and a display resolution to 1 mV. Shall measure DC voltage up to 1000 volts with an accuracy of  $\pm 3\%$  and a display resolution to one 0.1 mV. Shall measure resistance up to 32 M Ohms with an accuracy of  $\pm 5\%$  and a display resolution to 0.1 Ohm. Shall measure 45 - 1000 Hz AC current up to 10.0 amps with an accuracy of  $\pm 2.5\%$  and a display resolution of 0.01 mA. The multi-meter shall have a four-place digital display, display hold, manual/automatic range selection, and an auto-off mode to conserve battery life. The meter shall be suitable for outdoor use, including a dust and water resistant case, an operating temperature range of 15 – 120 degrees F, and ability to withstand a ten-foot drop. Batteries, heavy-duty test leads, flat-blade probes and a user manual shall be included. (Picture not available)

A93. Multiplier, Torque. The torque multiplier shall have a maximum rated output torque of 2000 ft-lb in both the clockwise and counterclockwise directions. Multiplier shall consist of a detachable reaction bar and a metal housing containing a precision planetary gear multiplier having a torque gear ratio of 3 to 1. The multiplier shall



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have a ¾" female square drive input and a 1" male square drive output in accordance with ANSI B107.4. The overall length of the torque multiplier with reaction bar shall be 25 inches, nominal.

A94. Oiler, Hand. The hand-pumped oiler shall have a ¼ pint (4 oz.) capacity. Shall have a nozzle adjustable for delivery from a fine mist to a thin stream. The spout shall have a length of at least three inches.



A95. Pan, Drain. Shall be a pan of a type intended for capturing oil and other fluids being drained from automotive vehicles. It shall be a shallow receptacle equipped with an anti-splash baffle for ease of pouring. The pan shall include two handles for lifting, pouring, and positioning the pan under an automotive vehicle. One handle shall be positioned opposite the pouring spout. The other handle shall not interfere with pouring operations. The pan body and handles shall be sufficiently strong and rigid to make the pan suitable for carrying when filled to capacity with oil. The pan shall have a capacity of at least 6 gallons.



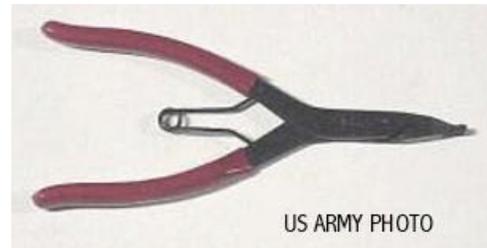
A96. Plate, Bolster, 24" x 24". Shall be a plate of non-metallic material 2 feet square suitable for use as cribbing under a 12-ton bottle jack when used on unpaved surfaces. The bolster plates shall be fabricated of material with sufficient durability, strength, rigidity, and resilience to withstand their rated loads without fracturing, splintering, or permanently deforming when the loads are imposed on a frequent and long-term basis at any and all temperatures from -25 °F to +125 °F. The material shall neither absorb nor be subject to damage from water, petroleum products, and detergents; and shall neither be damaged by nor support the growth of fungus and mildew. The material shall not corrode, and shall be resistant to damage from ozone and ultraviolet light. The bolster plates shall have a surface area and thickness sufficient to distribute their rated loads to an average value of 50 pounds or less per square inch (approximately 2' x 2'). The bolster plates shall be provided with handhold opening(s) at least 6" x 3" to provide a secure grasp while wearing winter gloves as well as with the unprotected hand. (Photo not available.)

A97. Plate, Bolster, 48" x 72". Shall be at least 4 feet by 6 feet, and suitable for use as cribbing under a 2000 lb capacity transmission lift when used on unpaved surfaces. The bolster plates shall be fabricated of material with sufficient durability, strength, rigidity, and resilience to withstand their rated

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loads without fracturing, splintering, or permanently deforming when the loads are imposed on a frequent and long-term basis at any and all temperatures from -25 °F to +125 °F. The material shall neither absorb nor be subject to damage from water, petroleum products, and detergents; and shall neither be damaged by nor support the growth of fungus and mildew. The material shall not corrode, and shall be resistant to damage from ozone and ultraviolet light. The bolster plates shall have a surface area and thickness sufficient to distribute their rated loads to an average value of 50 pounds or less per square inch and provide a smooth surface for positioning the jack beneath a vehicle component (approximately 4' x 6'). The bolster plates shall be provided with handhold opening(s) at least 6" x 3" to provide a secure grasp while wearing winter gloves as well as with the unprotected hand. (Photo not available.)

A98. Pliers, Lock-Ring. Shall have a straight tip design conforming to ASME B107.19, Type III, Class1, for spreading snap-lock rings.



A99. Pliers, Lock-Ring. Shall have a notched top design conforming to ASME B107.19, Type III, Class 2, for spreading snap-lock rings found on brakes, transmissions, pedal shifts, clutch shifts, and machine tools. Shall also be suitable for use on piston rings. Shall be able to hold rings securely in any position.



A100. Pliers Set, Retaining Ring. The set shall contain fixed-tip convertible snap-ring pliers for use on internal and external retaining rings. The pliers shall have cushion grip handles. The set shall contain the following items:

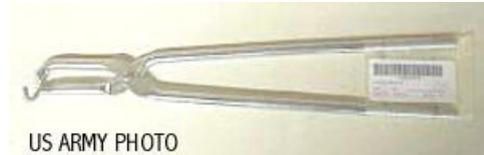
	Pliers Tip Diameter	Pliers Tip Configuration
1	.038"	Straight
2	.038"	45 degree
3	.038"	90 degree
4	.047"	Straight
5	.047"	45 degree
6	.047"	90 degree
7	.070"	Straight



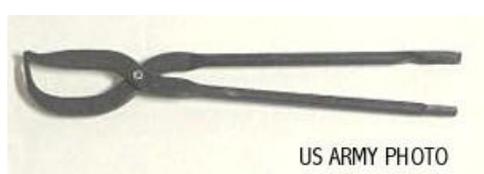
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8	.070"	45 degree
9	.070"	90 degree
10	.090"	Straight
11	.090"	45 degree
12	.090"	90 degree
13	Carrying case	

A101. 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)



A102. 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)



A103. Pliers, Wire Twister. The pliers shall be of a type used primarily for twisting safety wires. Pliers shall have a spiral mechanism to provide a uniform a right-hand (clockwise) twist. The jaws shall have a hardness reading of 36-50 on the Rockwell C scale, and shall be furnished with wire cutters. Jaws shall lock in the closed position. The jaws shall have serrated surfaces for gripping wire and a diagonal (standard) nose configuration. The pliers shall have a maximum capacity of .060" diameter wire and an overall length of 12". (Reference ASME B107.18M)



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A104. 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.



	Components
1	Lift Bag, 2 each
2	In-line Relief valve, 2 Each
3	Air Hose, 16 foot (nominal), 1 each of red, black, and yellow,
4	Dual outlet air controller, 1 each

A105. Propane Fuel Cylinder. Shall be a fuel cylinder of a standard size containing 14 ounces of propane conforming to Gas Processors' Association (GPA) Standard 2140, and having threads conforming to connection 600 of Compressed Gas Association (CGA) Standard V-1. (Note: **This item is for Production Representative System only.** Shall not be supplied with the set. Used with Item A16. Photo not available.)

A106. Puller Set, Mechanical. Shall consist of 18 pullers and puller accessories. Shall be rated for a pulling force of 10 tons. The puller set shall consist of:



<b>2-Arm Pullers</b>
0-4" Spread, 3-3/8" Reach
0-6" Spread, 3-1/4" Reach
0-8" Spread, 5" Reach
0-12" Spread, 10" Reach
<b>Bearing Separators</b>
1/8" to 2-1/4" Capacity
3/8" to 4-1/4" Capacity
<b>Press-Puller</b>
2" to 7-3/4" Spread, 6-3/4" Reach
<b>Internal Puller</b>
1-1/2" to 6" Spread, 4" Reach

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<b>Other pullers and Accessories</b>
Harmonic Balancer Puller
Side Hammer Set

A107. Puller, Mechanical, Steering Wheel. Shall be made to remove steering wheels. It shall contain a puller body, forcing screw, 2 column adapters and 3 steering shaft adapters. (Picture not available.)

A108. Puller, Mechanical, Pittman Arm. Shall be a Pittman arm puller for medium and heavy trucks. Shall have adjustable puller legs that reach a length 5.5” nominal and a maximum spread of 2.75”. Shall have clamp bolts that lock the adjustable jaws on the Pittman arm to assure a positive grip while pulling, and an adapter.



A109. 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. Storage space shall be provided for the lubricant pump mounted to the 5-gallon container.



A110. Punch and Chisel Set. Shall consist of 26 pieces, as listed in the table below.



	<b>Description</b>
1	16- 1/2"W x 22"H 26-Pocket Vinyl Tool Kit
2	3/4" Cold Chisel, length 6- 1/2" minimum

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3	1/4" Cold Chisel, length 4" minimum
4	5/16" Cold Chisel, length 4" minimum
5	3/8" Cold Chisel, length 5" minimum
6	1/2" Cold Chisel, length 5-3/4" minimum
7	5/8" Cold Chisel, length 6" minimum
8	7/8" Cold Chisel, length 7-1/2" minimum
9	1" Cold Chisel, length 8" minimum
10	1-3/16" Cold Chisel, length 9" minimum
11	3/32" <del>Tip 2 Piece Design</del> Drive Pin Punch
12	1/8" <del>Tip 2 Piece Design</del> Drive Pin Punch
13	5/32" <del>Tip 2 Piece Design</del> Drive Pin Punch
14	3/16" <del>Tip 2 Piece Design</del> Drive Pin Punch
15	7/32" <del>Tip 2 Piece Design</del> Drive Pin Punch
16	1/4" <del>Tip 2 Piece Design</del> Drive Pin Punch
17	1/8" Tip <del>10-1/8"</del> Drift Punch, length 8", minimum
18	3/16" Tip <del>10-1/8"</del> Drift Punch, length 8", minimum
19	1/4" Tip <del>10-1/8"</del> Drift Punch, length 8-1/2", minimum
20	3/32" Tip Starting Punch
21	1/8" Tip Starting Punch
22	3/16" Tip Starting Punch
23	7/32" Tip Starting Punch
24	1/4" Tip Starting Punch
25	<del>4-7/8"</del> #2 (1/4" Body) Center Punch, length 3-1/4" minimum
26	<del>5-5/8"</del> #7 (1/2" Body) Center Punch, length 4" minimum
27	<del>5"</del> #3 (1/2" Body) <del>Sheet Metal</del> Prick Punch, length 5" minimum

A111. Punch Set, Cutting, Gasket. Shall contain mandrel and hollow punches of these sizes: 1/4", 5/16", 3/8", 7/16", 1/2", 9/16", and 5/8". Carrying case shall be included.



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A112. 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.



A113. Saw, Hand, Crosscut. Shall be a straight back cross-cut wood saw with a hardwood handle, a blade length of 15" and 9 teeth per inch.



A114. Saw, Hand, Metal Cutting. Shall be a compact, lightweight utility mini-hacksaw for work in close quarters. Shall accept standard hacksaw blades.



A115. Saw, Hand, Metal Cutting. Shall be high tension, **low profile design**, 12" length, with a 4" throat.



A116. Scale, Weighing. Shall be a straight-face hanging spring scale with a range of from 0-50 pounds avoirdupois, graduated in 1 pound increments. The scale shall be provided with a suspension ring on the top of the housing and a hook on the end of the shaft for accepting the load. The scale shall be accurate within 4 pounds for loads less than 20 pounds, and within 8 pounds for loads of 20 pounds or more.



A117. Scraper, Gasket. Shall be a carbide edge scraper with a 0.125" thick steel shank.



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A118. Screwdriver Attachment Set, Torx. The set shall contain 1/4" square-drive sockets for Torx sizes T-8, T-10, T-15, T-20, T-25, T-27, and 3/8" square drive sockets for Torx sizes T-30, T-40, T-45, T-47, T-50 and T-55. Sockets shall be two-piece construction. (Picture not available.)

A119. Screwdriver Attachment Set, Inch, Hex. The set shall contain square-drive sockets for socket-head fasteners that range from 1/8" to 5/8". Items are listed below:



#	Description
1	3/8" Drive 5/32" Hex Bit
2	3/8" Drive 7/32" Hex Bit
3	1/2" Drive 5/8" Hex Bit
4	1/2" Drive 9/16" Hex Bit
5	1/2" Drive 1/2" Hex Bit
6	3/8" Drive 1/4" Hex Bit
7	3/8" Drive 1/8" Hex Bit
8	3/8" Drive 3/16" Hex Bit
9	3/8" Drive 3/8" Hex Bit
10	3/8" Drive 5/16" Hex Bit

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A120. 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:



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#	Description
1	3/8" Drive 10mm Metric Socket Hex Bit
2	3/8" Drive 9mm Metric Hex Bit
3	3/8" Drive 4mm Metric Socket Hex Bit
4	3/8" Drive 6mm Metric Socket Hex Bit
5	3/8" Drive 5mm Metric Socket Hex Bit
6	3/8" Drive 7mm Metric Socket Hex Bit
7	3/8" Drive 8mm Metric Socket Hex Bit
8	1/2" Drive 12mm Metric Hex Bit
9	1/2" Drive 14mm Metric Hex Bit
10	1/2" Drive 17mm Metric Hex Bit

A121. Screwdriver Set, Jewelers'. The set shall consist of six swivel-knob jewelers' screwdrivers. The set shall have one each of 1.5 mm, 2 mm, 2.5mm and 3mm flat-tip, and one each #00, #0, and #1 cross tip.



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A122. Screwdriver Set. Set shall consist of the following items:

Components		
Offset Screwdrivers, Flat Tip		
	Size	Overall Length (Nominal)
1	5/32"	3"



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2	1/4"	4"
3	5/16"	5"
4	3/8"	6"
Offset Screwdrivers, Cross Tip		
5	#1 & #2	4-1/2"
6	#3 & #4	6-1/2"
Stubby Screwdrivers, Flat Tip		
7	3/16"	3"
8	1/4"	3-1/2"
Stubby Screwdriver, Cross Tip		
9	#2	3-1/2"
Round Shank Screwdrivers, Cross Tip		
10	#4	13-1/2"
11	#4	13-1/2"
Square Shank Screwdrivers, Flat Tip		
12	3/8"	17-1/2"
13	3/8"	17-1/2"

A123. Screwdriver Set, Torx. The set shall contain torx screwdrivers. Items are listed below:

Components		
	Size	Blade Length
1	T10	3"
2	T15	3"
3	T15	1-1/4"
4	T20	3"
5	T25	3"
6	T27	4"
7	T30	4"
8	T40	6"



A124. Sharpener, Drill, Portable. Shall be a 120 Volt 60Hz electrical sharpener for drill bits sizes 3/32" through 3/4" (2.5mm – 19mm) and all metric, number, and letter size drill bits of equivalent size. Shall sharpen conventional, split point, and masonry point styles. Grinding wheel angle shall be adjustable. The sharpener shall be capable of sharpening high-speed steel, cobalt, and carbide drill bits. (Photo not available.)

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A125. Shears, Bent Trimmer. Shall be approximately 12” long, either one beveled blade end and one sharp pointed blade end, or both blade ends sharp pointed.



A126. Socket Set, Socket Wrench, 3/8” Drive, Metric, Universal. Shall consist of a set of fifteen 6-point sockets with integral universal (flex) joint in the following sizes: 7mm, 8mm, 10mm, 11mm, 12mm, 13mm, 14mm, 15mm, 16mm, 17mm, 18mm, 19mm, 21mm, 22mm, and 24mm. (Photo not available.)

A127. Socket Set, Socket Wrench, 3/8” Drive, Inch, Universal. Shall consist of a set of seven 6-point sockets with integral universal (flex) joint in the following sizes: 3/8”, 7/16”, 1/2”, 9/16”, 5/8”, 11/16”, and 3/4”. (Photo not available.)

A128. Socket Set, Socket Wrench, 3/4” Drive, Inch, Regular. Shall consist of the items listed below.



#	Description
1	Ratchet handle, length 17” min
2	Sliding T-handle, length 17” min – 20” max
3	Extension, length 4.5” min – 5.5” max
4	Extension, length 7.5” min – 8.5” max
5	Extension, length 15” min – 17” max
6	Universal Joint
7	Adapter, 3/4” drive to 1/2” drive
8	Socket, 7/8”
9	Socket, 15/16”
10	Socket, 1”

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11	Socket, 1-1/16"
12	Socket, 1-1/8"
13	Socket, 1-1/4"
14	Socket, 1-5/16"
15	Socket, 1-3/8"
16	Socket, 1-7/16
17	Socket, 1-1/2"
18	Socket, 1-9/16"
19	Socket, 1-5/8"
20	Socket, 1-11/16"
21	Socket, 1-3/4
22	Socket, 1-13/16"
23	Socket, 1-7/8"
24	Socket, 2"
25	Socket, 2-1/16"
26	Socket, 2-1/8
27	Socket, 2-3/16"
28	Socket, 2-1/4"
29	Socket, 2-3/8"

A129. Socket Set, Impact Wrench, 1/2" Drive, Metric, Universal. Shall consist of a set of ten 6-point sockets with integral universal (flex) joint in the following sizes: 13mm, 14mm, 15mm, 16mm, 17mm, 18mm, 19mm, 21mm, 22mm, and 24mm. (Photo not available.)

A130. Socket Set, Impact Wrench, 1/2" Drive, Inch, Universal. Shall consist of a set of eight 6-point sockets with integral universal (flex) joint in the following sizes: 1/2", 9/16", 5/8", 11/16", 3/4", 13/16", 7/8", and 15/16". (Photo not available.)

A131. Socket Set, Impact Wrench, 3/4" Drive, Inch. Shall consist of the items listed below:



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#	Description
1	Impact Socket, Regular, 1-1/2"
2	Impact Socket, Regular, 1-9/16"
3	Impact Socket, Regular, 1-5/8"
4	Impact Socket, Regular, 1-11/16"
5	Impact Socket, Regular, 1-3/4"
6	Impact Socket, Regular, 1-13/16"
7	Impact Socket, Regular, 1-7/8"
8	Impact Socket, Regular, 1-15/16"
9	Impact Socket, Regular, 2"
10	Impact Socket, Long, 4 Point, 13/16"
11	Impact Socket, Long, Budd Wheel, Double Opening, 1-1/2" 6 Point & 13/16" 4 Point

A132. Socket Set, Master, Socket Wrench, 1/4", 3/8", and 1/2" Drive. Shall consist of the items listed below.



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#	Description
	<b>Accessories, 1/4" Drive</b>
1	Ratchet Handle, length 4.375", minimum
2	Extension, length 2.5" to 3.5"
3	Extension, length 5.5" to 6.5"
4	Extension, length 9.5" to 10.5"
5	Universal Joint, length 1.5", maximum
	<b>Sockets, 1/4" Drive, 6-Point, Regular</b>
6	1/8"
7	5/32"
8	3/16"
9	7/32"
10	1/4"
11	9/32"
12	5/16"
13	11/32"
14	3/8"
15	7/16"
16	1/2"
17	9/16"
18	4mm
19	4.5mm
20	5mm
21	5.5mm
22	6mm
23	7mm
24	8mm
25	9mm

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26	10mm
27	11mm
28	12mm
29	13mm
30	14mm
31	15mm
	<b>Sockets, 1/4" Drive, 6-Point, Long</b>
32	1/8"
33	5/32"
34	3/16"
35	7/32"
36	1/4"
37	9/32"
38	5/16"
39	11/32"
40	3/8"
41	7/16"
42	1/2"
43	9/16"
44	4mm
45	4.5mm
46	5mm
47	5.5mm
48	6mm
49	7mm
50	8mm
51	9mm
52	10mm
53	11mm

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54	12mm
55	13mm
56	14mm
57	15mm
	<b>Accessories, 3/8" Drive</b>
58	Ratchet Handle, length 5.75" minimum
59	Extension, length 1.5" - 2.5"
60	Extension, length 2.5" - 3.5"
61	Extension, length 5.5" - 6.5"
62	Extension, length 9.5" - 10.5"
63	Universal Joint, length 2.25", maximum
	<b>Sockets, 3/8" Drive, 6-Point, Regular</b>
64	1/4"
65	5/16"
66	3/8"
67	7/16"
68	1/2"
69	9/16"
70	5/8"
71	11/16"
72	3/4"
73	13/16"
74	7/8"
75	15/16"
76	1"
77	6mm
78	7mm
79	8mm
80	9mm

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81	10mm
82	11mm
83	12mm
84	13mm
85	14mm
86	15mm
87	16mm
88	17mm
89	18mm
90	19mm
91	20mm
92	21mm
93	22mm
94	23mm
95	26mm
	<b>Sockets, 3/8" Drive, 6-Point, Long</b>
96	1/4"
97	5/16"
98	3/8"
99	7/16"
100	1/2"
101	9/16"
102	5/8"
103	11/16"
104	3/4"
105	13/16"
106	7/8"
107	15/16"
108	1"

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109	6mm
110	7mm
111	8mm
112	9mm
113	10mm
114	11mm
115	12mm
116	13mm
117	14mm
118	15mm
119	16mm
120	17mm
121	18mm
122	19mm
123	20mm
124	21mm
125	22mm
126	23mm
127	26mm
	<b>Accessories, 1/2" Drive</b>
128	Ratchet Handle, length 9.5", minimum
129	Extension, length 1.5" - 3"
130	Extension, length 2.5" - 3.5"
131	Extension, length 5.5" - 6.5"
132	Extension, length 9.5" - 10.5"
133	Universal Joint, length 2.875" maximum
134	Stud Remover, 5/16" - 3/4" Capacity
	<b>Sockets, 1/2" Drive, 6-Point, Regular</b>
135	3/8"

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136	7/16"
137	1/2"
138	9/16"
139	5/8"
140	11/16"
141	3/4"
142	13/16"
143	7/8"
144	15/16"
145	1"
146	1-1/16"
147	1-1/8"
148	1-3/16"
149	1-1/4"
150	1-5/16"
151	1-3/8"
152	1-7/16"
153	1-1/2"
154	9mm
155	10mm
156	11mm
157	12mm
158	13mm
159	14mm
160	15mm
161	16mm
162	17mm
163	18mm
164	19mm

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165	21mm
166	22mm
167	23mm
168	24mm
169	25mm
170	26mm
171	27mm
172	28mm
173	29mm
174	30mm
175	32mm
176	36mm
	<b>Sockets, 1/2" Drive, 6-Point, Long</b>
177	3/8"
178	7/16"
179	1/2"
180	9/16"
181	5/8"
182	11/16"
183	3/4"
184	13/16"
185	7/8"
186	15/16"
187	1"
188	1-1/16"
189	1-1/8"
190	1-3/16"
191	1-1/4"
192	1-5/16"

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193	1-3/8"
194	1-7/16"
195	1-1/2"
	<b>Sockets, 1/2" Drive, 12-Point, Regular</b>
196	19/32"
197	21/32"
198	25/32"
	<b>Sockets, 1/2" Drive, 12-Point, Long</b>
199	10mm
200	11mm
201	12mm
202	13mm
203	14mm
204	15mm
205	16mm
206	17mm
207	18mm
208	19mm
209	20mm
210	21mm
211	22mm
212	23mm
213	24mm
214	25mm
215	26mm
216	27mm
217	28mm
218	29mm
219	30mm

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220	32mm
<b>Socket Wrench Drive Adapters</b>	
221	3/8" Male – 1/4" Female
222	1/4" Male - 3/8" Female
223	1/2" Male - 3/8" Female
224	3/8" Male – 1/2" Female
225	3/4" Male – 1/2" Female

**A133. Socket Set, Socket Wrench, Wheel Bearing Locknut.**

The set shall consist of 6 point, 3/4" drive sockets, sizes 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", 4-7/8"; and 8 point, 3/4" drive sockets, sizes 2-3/8", 2-9/16", 3", 3-1/4" 3- 1/2", 3-7/8", 4-3/8" and 4-7/8".



**A134. Socket Set, Impact Wrench, Metric, 3/4" Drive, Regular.** Shall be a set of impact sockets, sizes 17mm, 19mm, 20mm, 22mm, 24mm, 27mm, 30mm, 31mm, 34mm, 36mm, 38mm, 40mm and 46mm.



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A135. Soldering Gun. Shall be a trigger-controlled, pistol-style electrically heated soldering gun with a variable output of 150 to 400 watts and a maximum tip temperature of 1000 degrees F. Shall operate on 120 Volt, 60 Hz current. Shall have a 1/4" pyramid tip. Shall have a built-in light to illuminate the work surface. Storage case shall be included.



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A136. Splitting Tool, Nut. Shall split nuts from 5/16" to 7/8" across the flats with no damage to threads. Shall have a steel forged frame and hardened cutter.



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A137. Stand, Vehicle Support. Shall have an adjustable frame height from 12" to 20" and a 7-ton max lifting capability. (NOTE: **This item is for Production Representative System only**. This is an optional item, which shall not be furnished with the set. Photo not available)

A138. Tape, Measuring, 25'. Shall have an ergonomic design and a blade width of at least 1". Tape shall be graduated in English at 1/16" intervals and shall be labeled at inch marks.



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## DFP-420

A139. Test Kit, Radiator Pressure. Shall be a kit for pressure-testing vehicle radiator caps and radiators to detect leaks. Kit shall include a manual air pump with a pressure gage and a hose (nominal 12" length) attached to a test head, and an adapter for attaching the test head to truck radiators with "B" size (2-11/16" OD) filler necks.



A140. Tester, Antifreeze Solution. Shall be an optical hydrometer calibrated for determining anti-freeze solution strength on a scale of 0 to -50 degrees F freeze protection; and battery electrolyte specific gravity with scale regions annotated as "Good," "Fair," and "Recharge." Shall include a squeeze bulb syringe and a dipstick for obtaining samples.



A141. Tool Kit, Blind Fastener Installation. Shall include a hand hydraulic riveter, a pneumatic riveter (with 3/8" male quick disconnect fitting), and a cordless electric riveter (with battery pack and charger); that each provides a minimum pull force of 4000 lbs over a stroke of at least 0.625". The kit shall have the capability and fittings to install: 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. The kit shall also include adapters for right angle and offset pulling that are interchangeable with the straight pull heads of all three riveters. A carrying case shall be included. (Photo not available)

A142. Tool Kit, Cutting, Abrasive, Pneumatic. Pneumatic cut-off tool shall have a 3/8" arbor. The lever-actuated pneumatic tool shall have a rear exhaust, a 1/4" NPT air inlet, and a rated speed of 18,000 RPM. The kit shall include a 360-degree swivel adapter for the air inlet, a carrying case, and a supply of abrasive blades. A male 3/8" ID quick disconnect fitting shall be installed on each cut-off tool.



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A143. Tool Kit, Electrical Contact. This kit contains tools for removal and replacement of male terminal pins conforming to CID A-A-52536 in MS27142 female shell receptacles of single-wire waterproof electrical connectors conforming to STANAG 4040. The kit shall contain a wire stripper (reference ASME B107.37, Type II, Class 1) capable of stripping AWG wire sizes 12, 14, and 16; three removal tools MIL-R-43040, Type I, Sizes 0.063, 0.120, and 0.187; and a crimping tool capable of producing two-point crimps that will withstand pull-out forces of 90 pounds, 60 pounds, and 40 pounds on CID A-A-52636 electrical contacts Sizes 1, 2, and 3, respectively (e.g. Sta-Kon Model WT111M, Thomas & Betts Company, or equal). A carrying case for the kit shall be included.

(NOTE: **This item for Production Representative System only.** This is an optional item, and shall not be supplied with the set as delivered.)

A144. 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. The insertion tools consist of a cap screw and hex jam nut matching the internal threads for each size of insert included in the kit. The kit shall also include a bolt gage, a quantity of tapping fluid, and a carrying case. The kit shall contain the following inserts and drills:



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	Insert Thread Sizes	Qty.
	<b>Inch</b>	
1	¼-20	12
2	¼-28	6
3	5/16-18	12
4	5/16-24	6
5	3/8-16	12
6	3/8-24	6
7	7/16-14	12
8	7/16-20	6
9	½-13	12
10	½-20	6
11	9/16-12	6
12	9/16-18	3
13	5/8-11	6
14	¾-10	6
	<b>Metric</b>	
15	6mm-1.0	12
16	8mm-1.25	12



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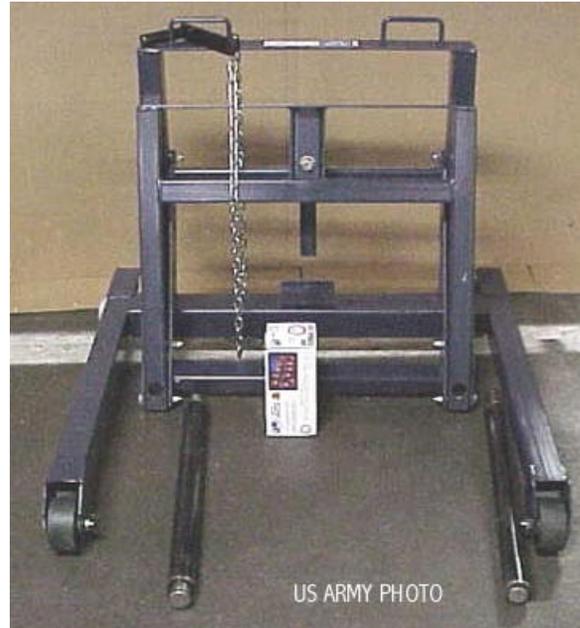
5	Screwdriver, Valve Core	1
6	Hammer, 18" Bead Breaker	1
7	Hammer, 32" Bead Breaker	1
8	Tire Iron, 37" Lock ring remover	1
9	Tire Iron, Mount-Demount Spoon, 24"	1
10	Tire Iron, Mount-Demount Spoon, 30"	1
11	Tire Iron, Mount-Demount Tool, 52"	1
12	Tire Iron, Mount-Demount Tool, 49-1/2"	1
13	Tire Iron, Offset Mount Bar 27"	1
14	Bead Breaker, Manual	1
15	Bead Breaker, Hydraulic	1
16	Air-Hydraulic Pump (for bead breaker)	1
17	#2 Reamer 1/4", 9" Long	1
18	Truck Valve Insert Tool, 7 1/4" Long	1
19	Knife, 4" Long	1
20	Tire Tread Depth Gauge	2
21	Carrying Case	1

A146. Trestle, Hoist, Portable, 7-Ton. Shall have an adjustable frame height from 19" to 30" and a 7-ton max lifting capability. (NOTE: This item will be Government Furnished Material. The item depicted has a base roughly 14" by 13" and a collapsed height of 19". Approximate weight is 34 lbs each.)



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A147. Truck, Lift, Wheel. Shall be load rated for 1500 lbs. Shall have a minimum lift travel of 4.75", minimum tilt adjustment of 4 degrees. Shall have a support chain to help secure tires while in transport and removal. Large caster wheels shall be used for added maneuverability. The lifting jack shall be hydraulic. (NOTE: ~~This item will be Government Furnished Material~~. The wheel lift depicted has overall envelope dimensions of roughly 38" wide, 39" front-to-back, and 33" high. Approximate weight is 216 lbs.)



A148. Vise, Machinist's, 4". Shall be a machinist's vise with a swivel base and stationary jaw, a nominal jaw opening of 6" minimum, and a nominal jaw width of 4". Jaw faces shall be replaceable.



A149. 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 A68) **(NOTE: This item is for Production Representative System only)**



A150. 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 A68) **(NOTE: This item is for Production Representative System only)**



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A151. 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 A113)

**(NOTE: This item for Production Representative System only)**



A152. 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 A113)

**(NOTE: This item for Production Representative System only)**



A153. Wrench, Impact, Electric, 3/4" Square Drive, 400 Ft-Lb. Shall be a reversible electric impact wrench providing a torque of at least 400 ft-lb in the forward direction and 400 ft-lb in reverse. (Photo not available.)

A154. Wrench Set, Flare Nut, Inch. Shall be a set of 6-point flare nut wrenches as follows

#	Description
1	1/4" x 5/16"
2	5-16" x 3/8"
3	3/8" x 7/16"
4	7/16" x 1/2"
5	1/2" x 9/16"
6	5/8" x 11/15"
7	5/8" x 3/4"
8	3/4" x 13/16"
9	3/4" x 1"
10	7/8" x 1-1/8"



A155. Wrench Set, Box, Inch. Shall be a set of 12-point



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box end wrenches as follows:

<b>#</b>	<b>Description</b>
1	3/8" x 7/16"
2	7/16" x 1/2"
3	1/2" x 9/16"
4	9/16" x 5/8"
5	5/8" x 11/16"
6	5/8" x 3/4"
7	11/16" x 3/4"
8	3/4" x 13/16"
9	3/4" x 7/8"
10	13/16" x 7/8"
11	7/8" x 15/16"
12	15/16" x 1"
13	1" x 1-1/16"
14	1-1/16" x 1-1/4"
15	1-1/8" x 1-3/16"
16	1-1/4" x 1-5/16"
17	1-3/8" x 1-7/16"
18	1-1/2" x 1-5/8"

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A156. Wrench Set, Box, Metric. Shall be a set of 12-point box end wrenches as follows.



#	Description
1	10mm x 11mm
2	12mm x 14mm
3	13mm x 15mm
4	14mm x 15mm
5	16mm x 18mm
6	17mm x 19mm
7	18mm x 21mm
8	19mm x 22mm
9	22mm x 24mm
10	27mm x 30mm
11	30mm x 32mm

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A157. Wrench Set, Combination, Inch. Shall be a set of combination open end and box end wrenches as follows:



#	Description
1	1/4"
2	5/16"
3	3/8"
4	7/16"
5	1/2"
6	9/16"
7	5/8"
8	11/16"
9	3/4"
10	13/16"
11	7/8"
12	15/16"
13	1"
14	1-1/16"
15	1-1/8"
16	1-1/4"
17	1-5/16"
18	1-3/8"
19	1-7/16"
20	1-1/2"

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21	1-5/8"
22	1-11/16"
23	1-3/4"
24	1-13/16"
25	1-7/8"
26	2"

A158. Wrench Set, Combination, Metric. Shall be a set of combination open end and box end wrenches as follows:



#	Description
1	7mm
2	8mm
3	9mm
4	10mm
5	11mm
6	12mm
7	13mm
8	14mm
9	15mm
10	16mm
11	17mm
12	18mm
13	19mm
14	20mm
15	21mm
16	22mm
17	23mm

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18	24mm
19	25mm
20	26mm
21	27mm
22	28mm
23	29mm
24	30mm
25	32mm
26	36mm

A159. Wrench Set, Open-End, Metric. Shall be a set of open-end wrenches as follows:



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#	Description
1	6mm x 8mm
2	7mm x 9mm
3	10mm x 11mm
4	12mm x 14mm
5	13mm x 15mm
6	16mm x 18mm
7	17mm x 19mm
8	20mm x 22mm
9	21mm x 23mm
10	22mm x 24mm
11	24mm x 26mm
12	25mm x 27mm
13	28mm x 30mm

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14	30mm x 32mm
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A160. Wrench Set, Open End, Inch. Shall be a set of open end wrenches as follows:



#	Description
1	3/8" x 7/16"
2	7/16" x 1/2"
3	1/2" x 9/16"
4	5/8" x 3/4"
5	11/16" x 3/4"
6	13/16" x 7/8"
7	15/16" x 1"
8	1-1/16" x 1-1/8"
9	1-1/4" x 1-5/16"
10	1-3/8" x 1-7/16"
11	1-1/2" x 1-5/8"
12	1-11/16" x 1-13/16"
13	1-7/8" x 2"

A161. Wrench Set, Flare Nut, Metric. Shall be a set of six flare nut wrenches as follows.



#	Description
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1	9mm x 11mm
2	10mm x 12mm
3	13mm x 14mm
4	15mm x 17mm
5	16mm x 18mm
6	19mm x 21mm

A162. Wrench Set, Master, Impact Wrench, 3/8" & 1/2" Drive. Shall be a set of one 1/2" square drive electric impact wrench and one 1/2" square drive pneumatic impact wrench with sockets and accessories. The pneumatic impact wrench shall be reversible; and shall have 1/4" NPT inlet, a handle exhaust, and a maximum rated output of 400 ft-lbs in the forward direction and 600 ft-lb in reverse. A male 3/8" ID quick disconnect fitting shall be installed on each pneumatic impact wrench. The electric impact wrench shall be reversible, shall operate on 120 Volt, 60 Hz, single-phase current, and shall have a rated output of 300 ft/lbs of torque in both directions. The sockets and accessories to be included are as follows:



#	Description
	<b>Impact Sockets, 3/8" Drive, 6-Point, Regular</b>
1	1/4"
2	5/16"
3	3/8"
4	7/16"
5	1/2"
6	9/16"
7	5/8"
8	11/16"
9	3/4"
10	10 mm
11	11 mm

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12	12 mm
13	13 mm
14	14 mm
15	15 mm
16	16 mm
17	17 mm
18	18 mm
19	19 mm
	<b>Impact Sockets, 3/8" Drive, 6-Point, Long</b>
20	1/4"
21	5/16"
22	3/8"
23	7/16"
24	1/2"
25	9/16"
26	5/8"
27	11/16"
28	3/4"
29	10 mm
30	11 mm
31	12 mm
32	13 mm
33	14 mm
34	15 mm
35	16 mm
36	17 mm
37	18 mm
38	19 mm

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<b>Accessories, 3/8" Square Drive</b>	
39	Extension Bar, length 2.5" – 3.5"
40	Extension Bar, length 5.5" – 6.5"
41	Universal Joint, length 2.5" maximum
<b>Impact Sockets, 1/2" Drive, 6-Point, Regular</b>	
42	3/8"
43	7/16"
44	1/2"
45	9/16"
46	5/8"
47	11/16"
48	3/4"
49	13/16"
50	7/8"
51	15/16"
52	1"
53	1-1/16"
54	12 mm
55	13 mm
56	14 mm
57	15 mm
58	16 mm
59	17 mm
60	18 mm
61	19 mm
62	21 mm
63	22 mm
64	24 mm

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65	27 mm
	<b>Impact Sockets, 1/2" Drive, 6-Point, Long</b>
66	3/8"
67	7/16"
68	1/2"
69	9/16"
70	5/8"
71	11/16"
72	3/4"
73	13/16"
74	7/8"
75	15/16"
76	1"
77	1-1/16"
78	12 mm
78	13 mm
80	14 mm
81	15 mm
82	16 mm
83	17 mm
84	18 mm
85	19 mm
86	21 mm
87	22 mm
88	24 mm
89	27 mm
	<b>Accessories, 1/2" Square Drive</b>
90	Extension Bar, length 2.5" – 3.5"

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91	Extension Bar, length 5.5" – 6.5"
92	Extension Bar, length 9.5" – 10.5"
93	Universal Joint, length 3.063" maximum
94	3/8" Male to 1/2" Female Square Drive Adapter
	<b>Other 1/2" Square Drive Tools</b>
95	3/4" x 13/16" Double-end Socket

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A163. Wrench Set, Impact Socket, 3/4" Drive, Inch. Shall be a set of regular length 6-point, 3/4" drive impact sockets.



#	Description
1	Extension Bar, length 6.5" – 7.5"
2	Extension Bar, length 12.5" – 13.5"
3	Socket, 9/16"
3	Socket, 5/8"
4	Socket, 11/16"
5	Socket, 3/4"
6	Socket, 13/16"
7	Socket, 7/8"
8	Socket, 1"
9	Socket, 1-1/16"
10	Socket, 1-1/8"
11	Socket, 1-1/4"
12	Socket, 1-5/16"
13	Socket, 1-7/16"
14	Socket, 1-1/2"

A164. Wrench, Adjustable, 18". Shall be a standard opening adjustable wrench with an 18" nominal length, a 0 - 2-1/16" jaw capacity, a black oxide finish. (Reference ASME B107.8, Type I, Class 2)



A165. Wrench, Adjustable, Automotive, 15". Shall have a worm drive adjustment. Jaws shall be perpendicular to the handle. The wrench shall have a nominal length of 15", a 0 - 3- 5/8" jaw capacity, and a depth of opening of at least 1- 3/4".



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A166. Wrench, Adjustable, 10". Shall be a standard opening adjustable wrench with a 10" nominal length, a 1-1/8" jaw capacity, a black oxide finish. (Reference ASME B107.8, Type I, Class 2)



A167. Wrench, Adjustable, Automotive, 18". Shall have a worm drive adjustment. Jaws shall be perpendicular to the handle. The wrench shall have a nominal length of 18", a 0 – 4-3/8" jaw capacity, and a depth of opening of at least 2".



A168. 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.



A169. Wrench, Oil Filter, Strap. Shall be a strap-type wrench. Shall have a non-absorbent, elastomer-coated fabric strap that is impervious to damage from petroleum products and will fit all spin-on filters up to 6 inches in diameter. (Photo not available.)

A170. Wrench, Pipe, 18". Shall be a standard pipe wrench for pipes 1" to 2" in diameter. It shall have an overall length of 18" minimum when opened.



A171. Wrench, Pipe, 10". Shall be a standard pipe wrench for pipes 1/4" to 1" in diameter. It shall have an overall length of 10" minimum when opened.



A172. Wrench Kit, Ratchet, Pneumatic, 1/4" & 3/8" Drive. Multi-drive, with 3/8" and 1/2" square drive attachments, and a 1/4" hex bit attachment. Shall produce at least 45 ft-lb max torque, and shall be provided with 2 slotted screwdriver hex bits, 2 cross-tip screwdriver hex bits, and a carrying case. A male 3/8" ID quick disconnect fitting shall be installed on each ratchet wrench.



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A173. Wrench, Torque, Dial, 1/4" Drive, 30 In-Lb. Shall be a rigid housing style torque-indicating wrench with a plain dial. The dial indicator shall show torque when applied in both the clockwise and counterclockwise directions using a pointer and indicator plate, and memory follower indicator to display maximum applied torque. The wrench torque capacity shall be from 0 to 30 inch-pounds. The wrench shall have a 1/4" square male drive, a non-ratcheting head, and a scale marked in increments of 1 inch-pounds. It shall conform to ANSI B107.14, Type 1, Class B, and Style 3.



A174. Wrench, Torque, Dial, 3/8" Drive, 300 In-Lb. Shall be a rigid housing style torque-indicating wrench with a plain dial. The dial indicator shall show torque when applied in both the clockwise and counterclockwise directions using a pointer and indicator plate. The wrench torque capacity shall be from at least 60 to 300 inch-pounds or more. The wrench shall have a 3/8" square male drive, a non-ratcheting head, and a scale marked in increments of 5 inch-pounds. It shall conform to ANSI B107.14, Type 1, Class B, and Style 1.



A175. Wrench, Torque, Click, Ratcheting, 3/4" Drive, 600 Ft-Lb. Shall be a ratcheting click style torque-setting wrench with a micrometer dial. The torque wrench shall indicate via audible, tactile, and visual signal that the applied torque in either the clockwise or counterclockwise direction has reached the preset torque value. The wrench torque range shall be from at least 120 to 600 foot-pounds or more. The wrench shall have a reversible ratcheting head, a 3/4" square male drive, and a micrometer scale marked in 10 foot-pound increments. It shall conform to ANSI B107.14, Type 2, Class A, Style 2, and Design A.



A176. Wrench, Torque, Click, Ratcheting, 3/8" Drive, 75 Ft-Lb. Shall be a ratcheting click style torque-setting wrench with a micrometer dial. The torque wrench shall indicate via audible and tactile signal that the applied torque in either the clockwise or counterclockwise direction has reached the preset torque value. The wrench torque range shall be from at least 15 to 75 foot-pounds or more. The wrench shall have a reversible ratcheting head,



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a 3/8" square male drive, and a micrometer scale marked in 0.5 foot-pound increments. It shall conform to ANSI B107.14, Type 2, Class A, Style 2, and Design A.

A177. 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. The torque wrench shall indicate via audible and tactile signal that the applied torque in the clockwise direction has reached the preset torque value. The wrench torque shall be settable from at least 50 to 250 foot-pounds or more and at least 70 to 345 Newton/meters or more. The wrench shall have a 1/2" square male drive, a non-ratcheting head, and a setting scale marked in increments of 1 foot-pound. It shall conform to ANSI B107.14, Type 2, Class A, and Style 1, Design B.



A178. Wrench, Torque, Click, 1/2" Drive, 250 Ft-Lb. Shall be a click style torque-setting wrench with a micrometer dial. The torque wrench shall indicate via audible and tactile signal that the applied torque in either the clockwise or counterclockwise direction has reached the preset torque



value. The wrench torque setting range shall be from at least 50 to 250 foot-pounds or more. The wrench shall have a non-ratcheting head, a 1/2" square male drive, and a micrometer scale marked in 1 foot-pound increments. It shall conform to ANSI B107.14, Type 2, Class A, Style 1, and Design A.

A179. Wrench, Wheel Stud Nut, Geared Socket. Shall be a geared socket wrench for removing heavy-duty wheel stud nuts from truck rims. It shall have a double-end socket fitting hexagonal nuts 1-1/2" across flats and square nuts 13/16" across flats. It shall have a solid bar handle 3/4" in diameter and 20.5 inches long, and a tubular extension handle 1-1/8" diameter by 34.5 inches long.



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### APPENDIX B COMPONENT LIST SATS SUPPLEMENTAL TOOL KIT #1

For the systems that will be used as Production Representative Systems for testing purposes, all components listed in the following table will be provided and space within the shelter allocated for each component.

For all future delivery orders components listed with Remarks Code 16 or Remarks Code 22, space will be allocated within the shelter for each item and that location documented, however, the item itself will not be provided.

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<b>#</b>	<b>NOMENCLATURE</b>	<b>UI</b>	<b>QTY</b>	<b>WTY*</b>	<b>RC**</b>
	<b>MODULE #1</b>				
1	BAR, TORQUE WRENCH:	EA	1	L	
2	CALIPER, MICROMETER, INSIDE	EA	1	L	25
3	CALIPER, VERNIER	EA	1	L	25
4	CYLINDER, ACETYLENE, 285 CUBIC FOOT CAPACITY, DOT-8 <b>(NOTE: THIS ITEM FOR PRODUCTION REPRESENTATIVE SYSTEM ONLY) ***</b>	EA	1		17
5	CYLINDER, OXYGEN, 247 CUBIC FOOT CAPACITY, DOT-3AA <b>(NOTE: THIS ITEM FOR PRODUCTION REPRESENTATIVE SYSTEM ONLY)***</b>	EA	1		17
6	CYLINDER, PROPYLENE, 100 LB CAPACITY, DOT-2.1 ***	EA	1		17
7	DIE SET, METAL STAMPING, HAND, ALPHABETIC	SE	1	N	
8	DIE SET, METAL STAMPING, HAND, ALPHABETIC AND NUMERIC	SE	1	N	
9	DRESSER, ABRASIVE WHEEL	EA	1	C	
10	DRILL, BATTERY OPERATED, RECHARGEABLE, RIGHT ANGLE, 3/8"	SE	1	C	10
11	DRILL-DRIVER, ELECTRIC, 1/2"	EA	1	C	10
12	DRILL-DRIVER, BATTERY OPERATED, RECHARGEABLE	SE	1	C	10
13	DRILL, ELECTRIC, PORTABLE, 3/8"	EA	1	C	10
14	DRILL, ELECTRIC, PORTABLE, 1/2"	EA	1	C	10
15	GAGE STOCK SET, THICKNESS	SE	3	N	
16	GOGGLES, INDUSTRIAL	EA	1	N	10
17	GREASE GUN KIT	KT	1	C	
18	GRINDING MACHINE, UTILITY	EA	1	C	10
19	GUARD, CYLINDER VALVE	EA	2	C	
20	HOIST, CHAIN, 3 TON <b>(NOTE: THIS ITEM FOR PRODUCTION REPRESENTATIVE SYSTEM ONLY)</b>	EA	1	C	10,16
21	HOLDER, PUNCH AND CHISEL	EA	1	C	10
22	INDICATOR, DIAL	SE	1	C	
23	JACK KIT, HYDRAULIC, HAND	KT	1	C	
24	JACK, DOLLY TYPE, HYDRAULIC, 10 TON**** <b>(NOTE: THIS ITEM FOR PRODUCTION REPRESENTATIVE SYSTEM ONLY)</b>	KT	1		10,16
25	JACK, BOTTLE, HYDRAULIC, HAND, 30 TON	EA	1	C	10
26	LIFT, TRANSMISSION AND DIFFERENTIAL (NOTE: GFM)	EA	1	C	
27	LIGHT, BATTERY OPERATED, RECHARGEABLE	SE	1	C	10
28	MULTIMETER	EA	1	C	10

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29	MULTIPLIER, TORQUE WRENCH	EA	1	L	
30	PLATE, BOLSTER, 36" x 36"	EA	1	N	10
31	PLATE, BOLSTER, 48" x 72"	EA	1	N	10
32	PLIERS SET, RETAINING RING	SE	1	L	10
33	PLIERS, MULTIPLE POSITION	EA	1	L	
34	PLIERS, MULTIPLE POSITION, ELECTRICAL CONNECTOR	EA	1	L	
35	PULLER SET, MECHANICAL	SE	1	L	
36	PULLER KIT, UNIVERSAL	KT	1	L	
37	PUNCH & CHISEL SET	SE	1	N	10
38	SCREWDRIVER ATTACHMENT SET, TORX	SE	1	L	
39	SLING, ENGINE AND TRANSMISSION, 3 TON	EA	1	C	
40	SLING, ENGINE AND TRANSMISSION, 2 TON	EA	2	C	10
41	SOCKET SET, SOCKET WRENCH, ¾" DRIVE, INCH	SE	1	L	
42	SOCKET SET, MASTER, SOCKET WRENCH, ¼", 3/8", AND ½" DRIVE	SE	2	L	
43	TOOL KIT, CLUTCH ALIGNING ***** (NOTE: THIS ITEM FOR PRODUCTION REPRESENTATIVE SYSTEM ONLY)	KT	1	L	16
44	TOOL KIT, LARGE HOSE END CRIMPING	KT	1	C	
45	TOOL KIT, SMALL HOSE END CRIMPING	KT	1	C	
46	TOOL KIT, WELDER'S	KT	1	C	
47	TRESTLE, HOIST, PORTABLE, 7-TON (NOTE: GFM)	PR	2	C	10
48	WISE, PIPE, CHAIN STYLE	EA	1	C	
49	WHEEL, ABRASIVE, FINE GRIT (NOTE: THIS ITEM FOR PRODUCTION REPRESENTATIVE SYSTEM ONLY)	EA	1	N	22
50	WHEEL, ABRASIVE, COARSE GRIT (NOTE: THIS ITEM FOR PRODUCTION REPRESENTATIVE SYSTEM ONLY)	EA	1	N	22
51	WRENCH SET, COMBINATION, INCH	SE	3	L	
52	WRENCH SET, COMBINATION, METRIC	SE	1	L	
53	WRENCH SET, MASTER, IMPACT WRENCH, 3/8" AND ½" DRIVE	SE	1	C	
54	WRENCH, ADJUSTABLE, 10"	EA	2	L	
55	WRENCH, ADJUSTABLE, 18"	EA	2	L	
56	WRENCH KIT, RATCHET, PNEUMATIC, ¼" & 3/8" DRIVE	EA	1	C	10
57	WRENCH, PIPE, 36"	EA	2	L	
58	WRENCH, SET, SOCKET WRENCH, 1" DRIVE, INCH, REGULAR	SE	1	L	
59	WRENCH, TORQUE, CLICK, RATCHETING, ¾" DRIVE, 600 FT-LB	EA	2	C	10,25
60	WRENCH, TORQUE, DIAL, 3/8" DRIVE, 300 IN-LB	EA	1	C	10,25
61	WRENCH, TORQUE, DIAL, ¼" DRIVE, 30 IN-LB	EA	1	C	10,25

\* Warranty Column definitions:

- L = Lifetime Warranty
- C = Commercial Warranty Available
- N = No Warranty required

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\*\* RC (Remarks Code): For Government use only

**SPECIAL NOTATION:** Components marked with RC 16 or 22 will be provided by the contractor for Production Representative System only for purposes of space allocations, weights and testing. These components will not be included in all other future production sets.

16 = This item is not initially issued as a component of the SKO. The item may be requisitioned “as required” when authorized by the Commanding Officer.

22 = This is a consumable item, non-accountable on hand receipt, not issued with the tool set, quantity established by gaining unit.

\*\*\* RC 17: This item is not to be supplied with the set as delivered. It will be locally procured by the military unit upon receipt of the set.

\*\*\*\* RC 16: Although authorized for inclusion in the set, the dolly jacks are unsuitable for use in the field. They shall not be supplied with the set as delivered. They will be locally supplied and will remain in garrison when the unit deploys.

\*\*\*\*\* RC 16: The clutch aligning kit is an optional item, which is not to be supplied with the set as delivered. Procurement of this item will be at the discretion of the local unit commander.

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B1. Bar, Torque Wrench. Shall be designed to provide reaction force for a torque multiplier (for use with item B28).

The Bar shall have a tubular handle with bar extension that is adjustable from 12" to 34". It shall be able to withstand a force of at least 2400 foot-pounds at a reaction distance of 6" and at least 450 foot-pounds at a reaction distance of 32 inches.



B2. 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 2" to 12" to the nearest thousandth of an inch, with an accuracy of  $\pm 0.0007$ ". Storage case shall be provided.



B3. 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.



B4. Cylinder, Acetylene, 285 Cubic Foot Capacity, DOT-8. Shall be a standard acetylene cylinder. **(NOTE: THIS ITEM FOR PRODUCTION REPRESENTATIVE SYSTEM ONLY)** (Note: For use with Item 46. Photo not available)

B5. Cylinder, Oxygen, 247 Cubic Foot Capacity, DOT-3AA. Shall be a standard oxygen cylinder. **(NOTE: THIS ITEM FOR PRODUCTION REPRESENTATIVE SYSTEM ONLY)** (Note: For use with Item 46. Photo not available)

B6. Cylinder, Propylene, 100 Pound Capacity, DOT-2.1. Shall be a standard propylene cylinder. (Note: For use with Item 46. Photo not available)