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B7. Die set, Metal Stamping, Hand, Alphabetic. Shall be a set of dies for hand-stamping alphabetic characters into metal. The set shall contain 28 dies, providing the complete alphabet in gothic uppercase letters, plus a period and an ampersand, with a character height of 0.188 inches. A carrying case shall be included.



B8. Die Set, Metal Stamping, Hand, Alphabetic and Numeric. Shall be a set of dies for hand-stamping numeric and alphabetic characters into metal. The set shall contain 36 dies, providing the complete alphabet in gothic uppercase letters, the numbers 1 through 8, a period, and an ampersand, with a character height of 0.188 inches. A carrying case shall be included.



B9. Dresser, Abrasive Wheel. Dresser shall be provided with replaceable cutters, and protective hood.



B10. Drill, Battery Operated, Rechargeable, Right Angle, 3/8". Shall be an 18-volt, battery-operated, 3/8" drill with the following 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; and a keyless chuck. The drill shall produce at least 300 in-lbs torque at low speed, and at least 60 in-lbs torque at high speed. Battery and battery charger shall be supplied. Set shall come with a storage case. (Photo not available.)

B11. Drill, Driver, Electric, 1/2". Shall be a "D" handle drill with a 1/2" keyed jaw chuck. Shall be reversible and have a 120 Volt 60 Hz, single-phase variable speed motor for speeds from 0 to at least 500 RPM. Shall be rated for drilling 1/2" holes in steel. Side handle shall be included.



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B12. Drill-Driver, Battery Operated, Rechargeable. Shall be an 18 volt, 2 Amp-Hour battery-operated, 1/2" drill with the following 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; and a keyless chuck. For drilling operations, the drill shall produce at least 400 in-lbs torque at low speed and at least 120 in-lbs at high speed. For driving operations, the drill shall be furnished with a multi-position chuck permitting incremental limitation of the output torque over the range of 0 to at least 80 in-lbs. Battery charger shall be supplied. Kit shall come with a storage case.



B13. Drill, Electric, Portable, 3/8". Shall have a 3/8" keyed jaw chuck, pistol grip handle and a variable speed 120 Volt 60 Hz motor for operation from 0 – 1300 RPM. Shall be rated for drilling holes in steel up to 3/8" in diameter. Shall be double insulated and designed for close quarters work. Drill head shall be not more than 4" from front to back, and not more than 2.5" in diameter.



B14. Drill, Electric, Portable, 1/2". Shall have a 1/2" keyed jaw chuck, pistol grip handle and a variable speed 120 Volt 60 Hz motor for operation from 0 – 750 RPM. Shall be rated for drilling holes in steel up to 1/2" in diameter. Shall be double insulated and designed for close quarters work. Drill head shall be not more than 4.5" from front to back, and not more than 2.5" in diameter.



B15. Gage Stock Set, Thickness. The set shall be comprised of steel feeler stock that is 12" long and 1/2" wide. It shall contain one blade each of the following thickness: 0.0015", 0.002", 0.003", 0.004", 0.005", 0.006", 0.007", 0.008", 0.010", and 0.015".



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B16. 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.



B17. 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

B18. 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.



B19. Guard, Cylinder Valve. Shall be a screw-on, “clamshell” style protection cap that can be used while the regulator is installed on a compressed gas cylinder to meet DOT and OSHA requirements for protection of the valve. (For use with items B4, B5, & B6. Photo not available.)

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B20. Hoist, Chain, 3 Ton. Shall have rated capacity of at least 3 tons. (NOTE: This item for Production Representative System only.)



B21. 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.



B22. 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.



B23. Jack Kit, Hydraulic, Hand. The jack shall be a 20-ton rated remote hydraulic hand jack with a manually operated pump, a remote ram, and a hose assembly connecting the two. The pump shall have a lever operated handle and a relief valve. The ram shall have a nominal 12 inch collapsed height and a nominal 5 inch plunger travel. The hose shall have a minimum length of six feet, with a quick disconnect coupling at the ram end. The kit shall include the following



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attachments, which shall safely withstand direct (concentric) loads of 20,000 pounds and indirect (offset) loads of 8,000 pounds:

	Components
1	One serrated or grooved saddle
2	One toe lift threaded to fit ram cylinder
3	One plunger base
4	One ram (body) base
5	One chain pull plate
6	Two 8' (nominal) chains with 3/8" (minimum) link cross-section diameter, each furnished with a hook on one end
7	Two female threaded couplings, ram to extension
8	Male threaded extension tubes:
	- One 10" – 12" long
	- One 18" to 20" long
	- One 24" to 30" long
	- One additional extension tube long enough to provide a total extension length of at least 60".
9	Operator's Manual
10	Carrying case

B24. 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 is for Production Representative System only)**



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B25. Jack, Bottle, Hydraulic, Hand, 30 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 30 tons. It shall have a minimum extended height 16” and maximum retracted height of 11”, and shall be supplied with a removable pump handle.



B26. Lift, Transmission and Differential. Shall be a hydraulic lift for installing and removing transmissions and differentials. Shall have a rated capacity of at least 2000 pounds. Shall have a height of 10” maximum when fully lowered and a lift height of at least 36”. Saddle shall tilt and lock at least 10 degrees from the horizontal in all directions. The lift shall be provided with four swivel casters and handgrips to permit accurate positioning of the load during installation. The lift shall be provided with a variety of chains, wedges, clamps, bars, brackets, and other attachments for the saddle to permit a wide variety of transmissions and differentials to be secured and stabilized on the lift.



(NOTE: This item will be Government Furnished Material. The transmission lift depicted has overall envelope dimensions of 28” wide, 43” long, and 12” high with the lift arm fully lowered. It comes with a box of accessories that is 32” long by 8” wide by 6.5” tall. Approximate weight of the transmission lift is 200 lbs, and the box of accessories weighs 101 lbs.)

B27. 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 stranding 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. Kit shall come with a storage case.



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B28. 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)

B29. Multiplier, Torque Wrench. The multiplier shall be rated at 1200 lbs of torque. The rated torque output is applicable in both the clockwise and counterclockwise direction. Multiplier shall consist of a metal housing with gear multiplier, torque reaction device, protractor with pointer and display of output torque. Multiplier shall have 3/8" female square drive input and a 3/4" female square drive output. The maximum rated input torque to develop rated output torque is 15ft-lb. The display shall be accurate within plus and minus 2% of actual output torque from 20% of rated maximum torque to the rated maximum torque. The protractor shall be marked from 0 to 180 degrees, graduated in 1-degree increments. It shall be able to operate in temperatures from -25 to 125 degrees F. It shall have 3/8" male input crank. Shall have a carrying case and a set of instructions.



B30. Plate, Bolster, 36 x 36. Shall be suitable for use as cribbing under a 30-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 3' x 3'). 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.)

B31. 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.)

B32. 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
8	.070"	45 degree
9	.070"	90 degree
10	.090"	Straight
11	.090"	45 degree
12	.090"	90 degree
13	Carrying case	



B33. Pliers, Multiple Position. Shall be adjustable joint, angle nose pliers with multiple grooves and tongue and straight, serrated jaws. The pliers shall have a nominal 12" length, capacity from 0 to 2.125" inch jaw opening with at least five adjustment positions, and cushioned grips. Shall conform to ASME B107.23, Type I, Class 1, Style A.



B34. Pliers, Multiple Position, Electrical Connector. Shall be slip joint pivot type pliers with knurled or serrated handles,



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and insert type jaw pads. The slip joint pivot shall have at least three notched positions. The pliers shall have a minimum overall length of 8.75" and shall grip circular connectors with 3/4" to 2-1/2" diameters.

B35. 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:



2-Arm Pullers
0-4" Spread, 3-3/8" Reach
0-6" Spread, 3-1/4" Reach
0-8" Spread, 5" Reach
0-12" Spread, 10" Reach
Bearing Separators
1/8" to 2-1/4" Capacity
3/8" to 4-1/4" Capacity
Press-Puller
2" to 7-3/4" Spread, 6-3/4" Reach
Internal Puller
1-1/2" to 6" Spread, 4" Reach
Other pullers and Accessories
Harmonic Balancer Puller
Side Hammer Set

B36. Puller Kit, Universal. Shall be a light duty kit for installing and removing bearings, bushings, and driver plugs with engaging threaded adapters. The kit shall consist essentially of a threaded shaft, a housing, a tension nut, two tension nut handles, two adapter sleeves, a thrust bearing, nine engaging threaded adapters, and a puller attachment. The engaging threaded adapters shall provide the capability to install and remove bearings and bushings having inside diameters from 1/2" to 1-1/16". The puller attachment shall provide the capability to remove blind hole bearings and bushings having inside diameters from 1/2" to 1-1/2 inches. Storage case shall be included.



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B37. Punch and Chisel Set. Shall consist of 26 pieces as listed in the table below:



	Description
1	16-1/2"W x 22"H 26-Pocket Vinyl Tool Kit
2	3/4" Cold Chisel, length 6-1/2" minimum
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" Tip 2-Piece Design Drive Pin Punch
12	1/8" Tip 2-Piece Design Drive Pin Punch
13	5/32" Tip 2-Piece Design Drive Pin Punch
14	3/16" Tip 2-Piece Design Drive Pin Punch
15	7/32" Tip 2-Piece Design Drive Pin Punch
16	1/4" Tip 2-Piece Design Drive Pin Punch
17	1/8" Tip 10-1/8" Drift Punch, length 8", minimum
18	3/16" Tip 10-1/8" Drift Punch, length 8", minimum
19	1/4" Tip 10-1/8" Drift Punch, length 8-1/2", minimum
20	3/32" Tip Starting Punch

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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	4-7/8" #2 (1/4" Body) Center Punch, length 3-1/4" minimum
26	5-5/8" #7 (1/2" Body) Center Punch, length 4" minimum
27	5" #3 (1/2" Body) Sheet Metal Prick Punch, length 5" minimum

B38. 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.)

B39. 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.



B40. 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".



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B41. Socket Set, Socket Wrench, 3/4" Drive, Inch, Regular.
Shall consist of the items listed below.



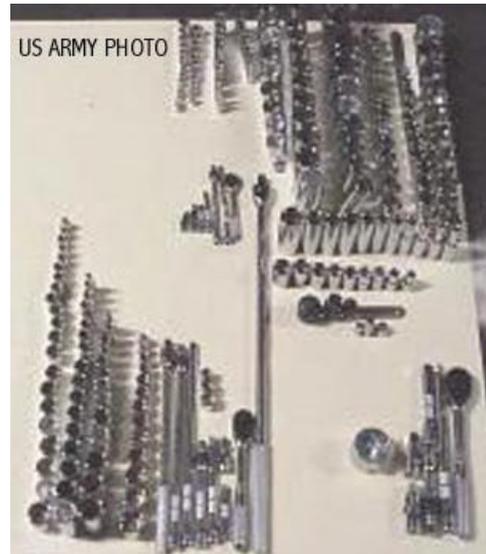
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#	Description
1	Ratchet handle, length 17" min
2	Sliding T-handle, length 17" min – 20" max
3	Extension, length 4.5" min – 5.5" max
4	Extension, length 7.5" min – 8.5" max
5	Extension, length 15" min – 17" max
6	Universal Joint
7	Adapter, 3/4" drive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

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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"

B42. Socket Set, Master, Socket Wrench, 1/4", 3/8", and 1/2" Drive. Shall consist of the items listed below.



#	Description
	Accessories, 1/4" Drive
1	Ratchet Handle
2	Extension. 3"
3	Extension. 6"
4	Extension. 10"
5	Universal Joint
	Sockets, 1/4" Drive, 6-Point, Regular
6	1/8"
7	5/32"

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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
26	10mm
27	11mm
28	12mm
29	13mm
30	14mm
31	15mm
	Sockets, 1/4" Drive, 6-Point, Long
32	1/8"
33	5/32"
34	3/16"
35	7/32"

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36	¼"
37	9/32"
38	5/16"
39	11/32"
40	3/8"
41	7/16"
42	½"
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
54	12mm
55	13mm
56	14mm
57	15mm
	Accessories, 3/8" Drive
58	Ratchet Handle
59	Extension, 1-1/2"
60	Extension, 3"
61	Extension, 6"
62	Extension, 10"
63	Universal Joint

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	Sockets, 3/8" Drive, 6-Point, Regular
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
81	10mm
82	11mm
83	12mm
84	13mm
85	14mm
86	15mm
87	16mm
88	17mm
89	18mm
90	19mm
91	20mm

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92	21mm
93	22mm
94	23mm
95	26mm
	Sockets, 3/8" Drive, 6-Point, Long
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"
109	6mm
110	7mm
111	8mm
112	9mm
113	10mm
114	11mm
115	12mm
116	13mm
117	14mm
118	15mm
119	16mm

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120	17mm
121	18mm
122	19mm
123	20mm
124	21mm
125	22mm
126	23mm
127	26mm
	Accessories, 1/2" Drive
128	Ratchet Handle
129	Extension, 1-1/2"
130	Extension, 3"
131	Extension, 6"
132	Extension, 10"
133	Universal Joint
134	Stud Remover, 5/16" – 3/4" Capacity
	Sockets, 1/2" Drive, 6-Point, Regular
135	3/8"
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"

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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
165	21mm
166	22mm
167	23mm
168	24mm
169	25mm
170	26mm
171	27mm
172	28mm
173	29mm
174	30mm
175	32mm

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176	36mm
	Sockets, 1/2" Drive, 6-Point, Long
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"
193	1-3/8"
194	1-7/16"
195	1-1/2"
	Sockets, 1/2" Drive, 12-Point, Regular
196	19/32"
197	21/32"
198	25/32"
	Sockets, 1/2" Drive, 12-Point, Long
199	10mm
200	11mm
201	12mm

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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
220	32mm
	Socket Wrench Drive Adapters
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

B43. Tool Kit, Clutch Aligning. The kit shall consist of an alignment tool with a selection of collets that allow quick alignment of single disc clutches. There shall be sixteen collets ranging in size from 0.465" to 1.181". Storage case shall be included. **(NOTE: This item is for Production**



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B44. Tool Kit, Large Hose End Crimping. The kit shall include tool(s) for fastening crimp-on fittings to hydraulic hoses by means of a rolled crimp. The tool(s) shall be rated for crimping connectors on hydraulic hoses with inside diameters of 0.75” through 1.25” (crimp outside diameters of 1.05” through 1.79”). Storage case shall be included.



B45. Tool Kit, Small Hose End Crimping. The kit shall include tool(s) for fastening crimp-on fittings to hydraulic hoses by means of a rolled crimp. The tool(s) shall be rated for crimping connectors on hydraulic hoses with inside diameters of 0.25” through 0.75” (crimp outside diameters of 0.56” through 1.30”). Storage case shall be included.



B46. Tool Kit, Welders. Shall contain tools for oxy-fuel welding, brazing, and cutting. Both acetylene and propylene will be used as fuel. (Note: While required as part of the complete kit, the fire extinguisher is not to be included in the kit as delivered.)

	Components
	Gas Torch
1	Oxygen Regulator
2	Fuel Gas (Acetylene/Propylene) Regulator
3	5/16” x 50’ Grade T dual hose
4	Flashback Arrestor Set



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5	Torch Handle
6	Cutting Attachment
	Welding Tips
7	Sizes 1, 3, 5, 7, 8, and 9 for Acetylene
	Brazing Tips
8	Sizes 3, 5, and 9 for Propylene
	Cutting Tips
9	Sizes 0, 1, and 2 for Acetylene
10	Sizes 0, 1, and 2 for Propylene
	Safety Equipment
11	Welding Goggles, Shade #4
12	Welder's Leather Gloves
13	5 lb ABC Fire Extinguisher (do not provide with set as delivered)
	Accessories
14	Cylinder Cart with Lift Ring and Pneumatic tires
15	Torch striker
17	Spare Flints for Striker
18	Flat Soapstone Holder
19	Flat Soapstone
20	Tip Cleaner
21	Vise Grip Sheet Metal Pliers
22	36" Rod holder
23	1/16" x 36" Welding Rod, 5 Lbs

B47. 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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B48. Vise, Pipe, Chain-Style. Shall be a chain-style pipe vise with a nominal pipe size capacity of ¼”- 4”.



B49. 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 B17) **(NOTE: This item for Production Representative System only.)**



B50. 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 B17) **(NOTE: This item for Production Representative System only)**



B51. Wrench Set, Combination, Inch. Shall be a set of combination open end and box end wrenches as follows:



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

B52. Wrench Set, Combination, Metric. Shall be a set of combination open end and box end wrenches as follows:



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

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26	36mm
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B53. 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
	Impact Sockets, 3/8" Drive, 6-Point, Regular
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
12	12 mm
13	13 mm
14	14 mm
15	15 mm
16	16 mm
17	17 mm
18	18 mm

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19	19 mm
	Impact Sockets, 3/8" Drive, 6-Point, Long
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
	Accessories, 3/8" Square Drive
39	3" Extension Bar
40	6" Extension Bar
41	Universal Joint
	Impact Sockets, 1/2" Drive, 6-Point, Regular
42	3/8"

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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
65	27 mm
	Impact Sockets, 1/2" Drive, 6-Point, Long
66	3/8"
67	7/16"
68	1/2"
69	9/16"

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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
	Accessories, 1/2" Square Drive
90	3" Extension Bar
91	6" Extension Bar
92	10" Extension Bar
93	Universal Joint
94	3/8" Male to 1/2" Female Square Drive Adapter
	Other 1/2" Square Drive Tools
95	3/4" x 13/16" Double-end Socket

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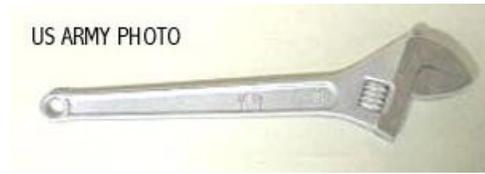
B54. Wrench, Adjustable, 10". Shall be a standard opening adjustable wrench with a 10" nominal length, a 1-1/8" jaw capacity, a black oxide finish. (Reference ASME B107.8, Type I, Class 2)



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B55. 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)

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B56. 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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B57. Wrench, Pipe, 36". Shall be a standard pipe wrench with a forged aluminum handle for pipes 2-1/2" to 3-1/2" in diameter. It shall have an overall length of 36" minimum when opened.

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B58. Wrench, Set, Socket Wrench, 1" Drive, Inch, Regular. Shall include the following:

QTY	Description
1	1-11/16" Socket
1	1-3/4" Socket
1	1-13/16" Socket
1	1-7/8" Socket
1	1-15/16" Socket
1	2" Socket
1	2-1/8" Socket
1	2-3/16" Socket
1	2-1/4" Socket
1	2-5/16" Socket
1	2-3/8" Socket
1	2-7/16" Socket
1	2-1/2" Socket



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1	2-9/16" Socket
1	2-5/8" Socket
1	2-3/4" Socket
1	2-13/16" Socket
1	2-15/16" Socket
1	3" Socket
1	3-1/8" Socket
1	Ratchet, Reversible
1	Handle, Hinged
1	Handle, Tee Sliding
1	Extension, 8" Long
1	Extension, 17" Long

B59. 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 100-600 foot-pounds. The wrench shall have a 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.



B60. 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 0 to 300 inch-pounds. 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.



B61. 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"



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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.

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APPENDIX C COMPONENT LIST SATS SUPPLEMENTAL TOOL KIT #2

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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#	NOMENCLATURE	UI	QTY	WTY *	RC**
	MODULE 2				
1	ADAPTER KIT, GREASE GUN COUPLING	EA	1	C	
2	BLADE, ABRASIVE, CUT-OFF	EA	1	N	21
3	BLADE, HAND HACKSAW	BD	1	N	21
4	BOX, TOTE	EA	5	N	10
5	CABLE KIT, SPECIAL POWER	EA	1	N	10
6	COMPRESSOR UNIT, RECIPROCATING	EA	1	C	
7	CROWBAR	EA	1	L	10
8	DRILL SET, TWIST	EA	2	N	
9	DRILL SET, TWIST, LEFT HAND	SE	1	N	10
10	DRILL-DRIVER, BATTERY OPERATED, RECHARGEABLE	KT	1	C	
11	DRILL, ELECTRIC, PORTABLE, 3/8"	EA	1	C	
12	DRILL, ELECTRIC, PORTABLE, 1/2"	EA	1	C	
13	DRILL-DRIVER, ELECTRIC, 1/2"	EA	1	C	
14	DRILL, PNEUMATIC, RIGHT ANGLE	EA	1	C	
15	EXTRACTOR SET, HARDENED SCREW	EA	1	N	
16	EXTRACTOR SET, SCREW	EA	1	C	
17	HAMMER, HAND, CARPENTERS, CURVED CLAW, 16 OZ	EA	1	C	
18	HAMMER, HAND, SOFT FACE, DEAD BLOW, 52 OZ	EA	1	C	
19	HAMMER, HAND, SOFT FACE, DEAD BLOW, 10 OZ	EA	1	C	
20	HAMMER, SLEDGE, DOUBLE FACED, 10 LB	EA	1	C	
21	HAMMER, HAND, DEAD BLOW, BALL PEEN, 40 OZ	EA	1	C	
22	HAMMER SET, HOLDER AND INSERTS	EA	1	C	
23	HOSE ASSEMBLY, AIR, NON-METALLIC	EA	2	C	
24	JACK, DOLLY TYPE, HYDRAULIC, 10 TON *** (NOTE: THIS ITEM IS FOR PRODUCTION REPRESENTATIVE SYSTEM ONLY)	EA	1		10,16
25	JACK, BOTTLE, HYDRAULIC, HAND, 30 TON	EA	1	C	
26	JACK, BOTTLE, HYDRAULIC, HAND, 12 TON	EA	2	C	10
27	LIFT, TRANSMISSION AND DIFFERENTIAL (NOTE: GFM)	EA	1	C	
28	LIGHT, BATTERY OPERATED, RECHARGEABLE	KT	1	C	
29	MEASURE, LIQUID, 2 QUART	EA	1	C	10
30	MEASURE, LIQUID, 8 QUART	EA	1	C	10
31	OILER, HAND	EA	2	C	10
32	PLATE, BOLSTER, 24" x 24"	EA	2	N	10
33	PLATE, BOLSTER, 36" x 36"	EA	1	N	10
34	PLATE, BOLSTER, 48" x 72"	EA	1	N	10
35	PLIERS, LOCK RING	EA	1	L	
36	PLIERS, LOCK RING	EA	1	L	
37	PULLER SET, MECHANICAL	EA	1	L	

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38	SANDER/GRINDER, 4 1/2"	EA	1	C	
39	SOCKET SET, SOCKET WRENCH, 3/4" DRIVE, INCH, REGULAR	EA	1	L	
40	TOOL KIT, CUTTING, ABRASIVE, PNEUMATIC	EA	1	C	
41	WRENCH SET, MASTER, IMPACT WRENCH, 3/8" AND 1/2" DRIVE	EA	1	C	10

* Warranty Column definitions:

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

** 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 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, and will remain in garrison when the unit deploys.

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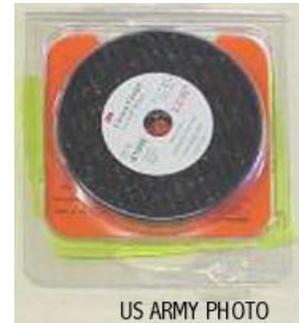
C1. Adapter Kit, Grease Gun Coupling. Shall fit manual or air-operated grease guns. Shall attach to any standard grease coupler for immediate service.

	Components
1	18" Steel Braid Rubber Grease Hose W/ Spring Guard & 4-Jaw Coupler
2	Hypodermic Needle Coupler For Lubricating Sealed Bearings
3	Straight Needlepoint Coupler
4	90 Degree 3" Needlepoint Coupler
5	9" Rigid Extension W/ 4-Jaw Coupler
6	Needlepoint Coupler, Right Angle
7	Right Angle Coupler
8	Standard Button-Head Coupler
9	1/4"-28 Zerk Extractor
10	1/8" NPT Zerk Extractor
11	Carrying case



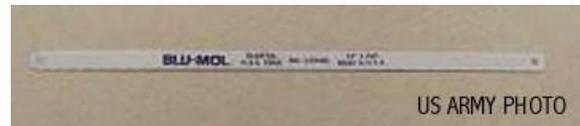
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C2. Blade, Abrasive, Cut-Off. The abrasive blade shall have an overall diameter of 3", a width of 1/16", and a 3/8" diameter arbor hole. (For use with item C40)



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C3. 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 115 and 116)



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C4. 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.



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C5. Cable Kit, Special Power. The kit shall contain one cable assembly, P/N 11682336-1 and two adapters, with P/N 11677570. It is a slave-start (jumper) cable for military vehicles with connectors conforming to a NATO standard. (The coiled cable depicted forms a disk roughly 14" in diameter and 6" thick. Approximate weight is 32 lbs.)



C6. Compressor Unit, Reciprocating. Shall be a portable compressor with a storage tank with outlet pressure regulator. The compressor shall have a 120-volt 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. (Photo not available.)

C7. Crowbar. Shall be 59-62" long and approximately 1 1/4" 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.



C8. Drill Set, Twist. Shall contain 1 each, from 1/16 to 1/2", in 1/64 increments (29 bits). Drill bits shall be cobalt steel alloy with 135 degree split point and straight round shank. Drill bits shall be intended for use on stainless steels, heat-treated, steels, forgings, chilled cast iron, and other applications involving extreme hardness or abrasive materials. Shall have a drill bit index for storage.



C9. Drill Set, Twist, Left Hand. Shall contain 1 each, 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" (16 bits). Drill bits shall be cobalt steel alloy with 135 degree split point and straight round shank. Drill bits shall be intended for use on

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stainless steels, heat-treated, steels, forgings, chilled cast iron, and other applications involving extreme hardness or abrasive materials. Shall have a drill bit index for storage. (Picture not available.)

C10. Drill-Driver, Battery Operated, Rechargeable. Shall be an 18 volt, 2 Amp-Hour battery-operated, 1/2" drill with the following 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; and a keyless chuck. For drilling operations, the drill shall produce at least 400 in-lbs torque at low speed and at least 120 in-lbs at high speed. For driving operations, the drill shall be furnished with a multi-position chuck permitting incremental limitation of the output torque over the range of 0 to at least 80 in-lbs. Battery charger shall be supplied. Kit shall come with a storage case.



C11. Drill, Electric, Portable, 3/8". Shall have a 3/8" keyed jaw chuck, pistol grip handle and a variable speed 120 Volt 60 Hz motor for operation from 0 – 1300 RPM. Shall be rated for drilling holes in steel up to 3/8" in diameter. Shall be double insulated and designed for close quarters work. Drill head shall be not more than 4" from front to back, and not more than 2.5" in diameter.



C12. Drill, Electric, Portable, 1/2". Shall have a 1/2" keyed jaw chuck, pistol grip handle and a variable speed 120 Volt 60 Hz motor for operation from 0 – 750 RPM. Shall be rated for drilling holes in steel up to 1/2" in diameter. Shall be double insulated and designed for close quarters work. Drill head shall be not more than 4.5" from front to back, and not more than 2.5" in diameter.



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C13. Drill, Driver, Electric, 1/2". Shall be a "D" handle drill with a 1/2" keyed jaw chuck. Shall be reversible and have a 120 Volt 60 Hz, single-phase variable speed motor for speeds from 0 to at least 500 RPM. Shall be rated for drilling 1/2" holes in steel. Side handle shall be included.



C14. Drill, Pneumatic, Right Angle. Shall have a 3/8" keyed jaw chuck. Shall have a rear exhaust. The drill shall have forward and reverse. Shall be lever actuated with a 1/2 hp motor and a free speed of 1200 RPM. A male 3/8" ID quick disconnect fitting shall be installed on each drill.



C15. Extractor Set, Hardened Screw. The extractor screw set, shall drill point center on rough jagged breaks with grades that vary from 2 to 8. Shall allow for easy access to confined areas.



C16. Extractor Set, Screw. Shall be a set of left hand drill bits and corresponding screw extractors. It shall contain 7 left-hand drill bits ranging from 1/8" to 1/2" by 16ths, and 6 sizes of screw extractor.



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C17. 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.



C18. 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".



C19. 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".



C20. 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.



C21. Hammer, Hand, Dead Blow, Ball Peen, 40 Oz. 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".



C22. 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.



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C23. 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 C5)



C24. 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 is for Production Representative System only.)**



C25. Jack, Bottle, Hydraulic, Hand, 30 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 30 tons. It shall have a minimum extended height 16" and maximum retracted height of 11", and shall be supplied with a removable pump handle.



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C26. 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.



C27. Lift, Transmission and Differential. Shall be a hydraulic lift for installing and removing transmissions and differentials. Shall have a rated capacity of at least 2000 pounds. Shall have a height of 10” maximum when fully lowered and a lift height of at least 36”. Saddle shall tilt and lock at least 10 degrees from the horizontal in all directions. The lift shall be provided with four swivel casters and handgrips to permit accurate positioning of the load during installation. The lift shall be provided with a variety of chains, wedges, clamps, bars, brackets, and other attachments for the saddle to permit a wide variety of transmissions and differentials to be secured and stabilized on the lift. **(NOTE: This item will be Government Furnished Material.**



The transmission lift depicted has overall envelope dimensions of 28” wide, 43” long, and 12” high with the lift arm fully lowered. It comes with a box of accessories that is 32” long by 8” wide by 6.5” tall. Approximate weight of the transmission lift is 200 lbs, and the box of accessories weighs 101 lbs.)

C28. 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. Kit shall come with a storage case.



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C29. 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.



C30. 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.



C31. 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.



C32. Plate, Bolster, 24" x 24". Shall be 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.

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C33. Plate, Bolster, 36" x 36". Shall be suitable for use as cribbing under a 30-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 $+125^{\circ}\text{F}$. 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 3' x 3'). 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.

C34. 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 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 $+125^{\circ}\text{F}$. 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. 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.

C35. Pliers, Lock-Ring. Shall have a straight tip design conforming to ASME B107.19, Type III, Class 1, for spreading snap-lock rings.



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C36. Pliers, Lock-Ring. Shall conform 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.



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C37. 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:



2-Arm Pullers
0-4" Spread, 3-3/8" Reach
0-6" Spread, 3-1/4" Reach
0-8" Spread, 5" Reach
0-12" Spread, 10" Reach
Bearing Separators
1/8" to 2-1/4" Capacity
3/8" to 4-1/4" Capacity
Press-Puller
2" to 7-3/4" Spread, 6-3/4" Reach
Internal Puller
1-1/2" to 6" Spread, 4" Reach
Other pullers and Accessories
Harmonic Balancer Puller
Side Hammer Set

C38. 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 rated speed top speed of at least 10000 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.



C39. Socket Set, Socket Wrench, 3/4" Drive, Inch, Regular. Shall consist of the items listed below.



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#	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"
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"

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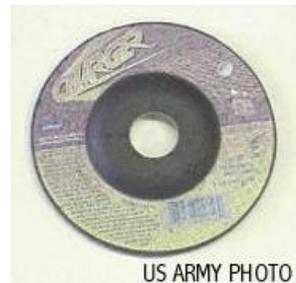
28	Socket, 2-1/4"
29	Socket, 2-3/8"

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C40. 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 10 abrasive blades. A male 3/8" ID quick disconnect fitting shall be installed on each cut-off tool.



C41. 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 C38)
(NOTE: This item is for Production Representative System only)



C42. 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 C38) **(NOTE: This item is for Production Representative System only)**



C43. Wrench Set, Master, Impact Socket, 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



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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
	Impact Sockets, 3/8" Drive, 6-Point, Regular
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
12	12 mm
13	13 mm
14	14 mm
15	15 mm
16	16 mm
17	17 mm
18	18 mm
19	19 mm
	Impact Sockets, 3/8" Drive, 6-Point, Long
20	1/4"
21	5/16"
22	3/8"

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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
	Accessories, 3/8" Square Drive
39	3" Extension Bar
40	6" Extension Bar
41	Universal Joint
	Impact Sockets, 1/2" Drive, 6-Point, Regular
42	3/8"
43	7/16"
44	1/2"
45	9/16"
46	5/8"
47	11/16"
48	3/4"

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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
65	27 mm
	Impact Sockets, 1/2" Drive, 6-Point, Long
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"

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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
	Accessories, 1/2" Square Drive
90	3" Extension Bar
91	6" Extension Bar
92	10" Extension Bar
93	Universal Joint
94	3/8" Male to 1/2" Female Square Drive Adapter
	Other 1/2" Square Drive Tools
95	3/4" x 13/16" Double-end Socket