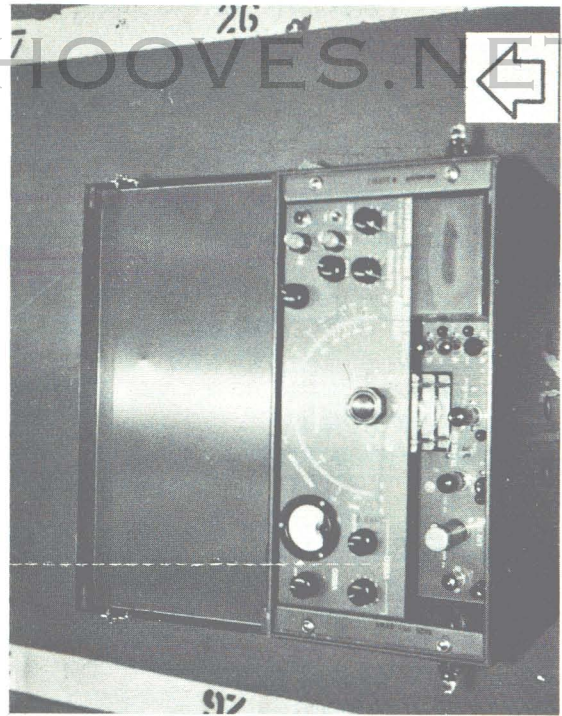


ITEM NUMBER

306

NOMENCLATURE		
GENERATOR, SIGNAL		
FSN 6625-795-8505		PART NO. V233AM
TYPE/MODEL NO.	MFRS NAME	
NA	FOTO-VIDEO LAB INC	
DIMENSIONS 18X14X9 IN		WEIGHT 30 LBS
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY	COND	UNIT PRICE
6	0-2	\$800
TECH ORDER 33D9-116-2-2		
DISCONNECT T	SPEC TOOLS/EQUIP	
NA	NONE	
REMOVAL TIME	SPEC SKILLS	
NA	NONE	



TECHNICAL DESCRIPTION

Input signals: Blanking (optional) - 3.5 to -4.5V P.P. Sync (optional) - 3.5 to -4.5V P.P. External Video (optional) 1.0V P.P. Input Power: 1.2 AMPS at 115V AC, 50 or 60 CPS for self-contained regulated power supply. Output Level: Blanked video, black negative adjustable from 0 to 1.5V. Sync, adjustable from 0 to 0.5V. Frequency Ranges: HI, 900 KC to 10 MC. LO, 90 KC to 1 MC. Load Impedance, 73 OHMS.

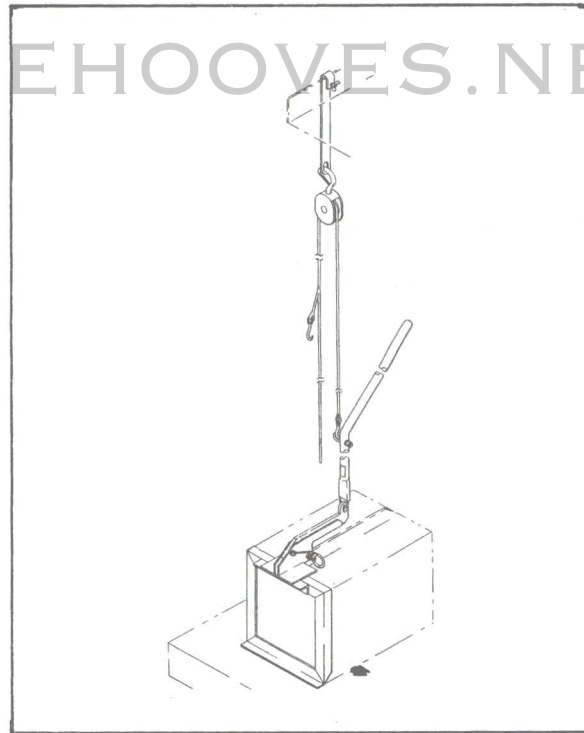
FUNCTIONAL DESCRIPTION

The V233AM Composite Video Signal Generator is a self-contained portable unit, which provides necessary signals for alignment and test of the closed circuit TV video amplifiers. Used in conjunction with test set AN/GRM-42.

ITEM NUMBER

41

NOMENCLATURE		
HOIST, BATTERY HANDLING		
FSN 1450-084-9783AE		PART NO. 59-209-1263
TYPE/MODEL NO.	MFRS NAME	
NA	AM&F	
DIMENSIONS SEE BELOW		WEIGHT 30 LBS
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 9	COND 0-2	UNIT PRICE \$250
TECH ORDER NA		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



TECHNICAL DESCRIPTION

HOIST ASSEMBLY, BATTERY HANDLING: Consists of:

- 1 Bent tube, 1-1/4 IN dia, 68 IN lg
- 1 Eye Bolt, 5/16 IN
- 1 Nylon rope, 3/8 IN dia by 18 Ft lg
- 1 Aluminum hook, 2 IN by 9 IN
- 1 "S" hook, 2-1/2 IN lg
- 1 Battery attachment frame, o/a dim 7-1/2 IN deep by 9 IN by 12 IN
- 2 Ball-lok pins

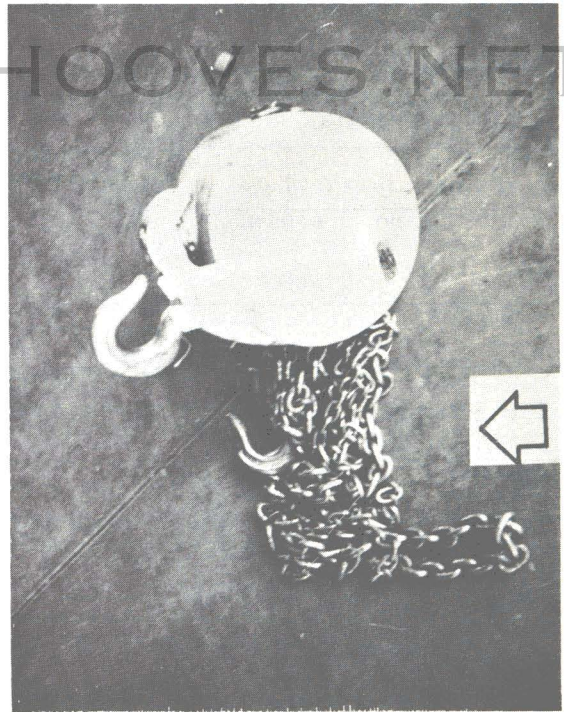
FUNCTIONAL DESCRIPTION

The assembly will be suspended from Work Platform above to battery on Platform, Trailer, Warehouse (59-202-1785). It will enable two men to raise the battery safely to a height of 6-1/2 Ft above the Platform for installation into the Missile. Sling will not be removed from battery until it is in the Missile, thus eliminating lifting and aligning while in an awkward position.

ITEM NUMBER

147

NOMENCLATURE		
HOIST, CHAIN		
FSN		PART NO.
3950-292-9938		K-15
TYPE/MODEL NO.		MFRS NAME
NA		MANNING MAXWELL & MOORE
DIMENSIONS		WEIGHT
NA		NA
LOCATION		
SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY	COND	UNIT PRICE
8	0-2	\$295
TECH ORDER		
21M-HGM25A-2-8-5		
DISCONNECT T	SPEC TOOLS/EQUIP	
NA	NONE	
REMOVAL TIME	SPEC SKILLS	
NA	NONE	



TECHNICAL DESCRIPTION

Power operated spur gear type single unit, load chain, 2,000 lb. max. load capacity, 30 ft. h. of lift, 17 ft. per min. max. hoisting speed integral hook suspension type, w/o trolley, 23 1/4 in. from bearing surface of suspension hook to bearing surface of load hook in fully raised position, hoisting power unit, electric motor 1 h.p., 220V., AC, 60 cycle, 3 phase, 3450 RPM, open inclosure, intermittent duty, integral controller incl. double acting, w/30 ft. lift.

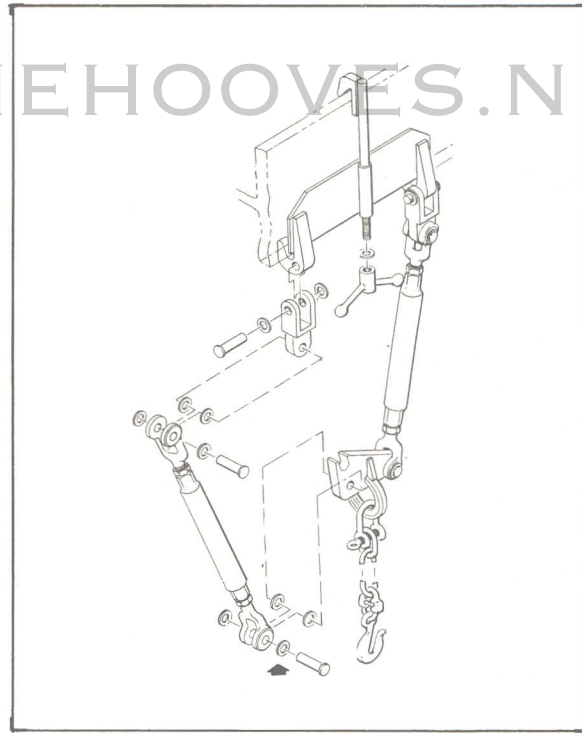
FUNCTIONAL DESCRIPTION

Hoist used for removing and replacing items in the launcher area.

ITEM NUMBER

35

NOMENCLATURE		
HOIST, RIGGING		
F S N 1450-082-8973AE		PART NO. 59-209-1247
TYPE/MODEL NO.	MFRS NAME	
NA	AM&F	
DIMENSIONS	WEIGHT	
NA	NA	
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION		
QUANTITY	COND	UNIT PRICE
7	0-2	\$473
TECH ORDER 21-SM68-2J-8-2		
DISCONNECT T	SPEC TOOLS/EQUIP	
NA	NONE	
REMOVAL TIME	SPEC SKILLS	
NA	NONE	



TECHNICAL DESCRIPTION

This item consists of two steel straps, two steel pins and a roller. The lower pin supports a chain hoist, the top pin and roller permits the rigging hoist and chain hoist to traverse the I beam to which hoist is installed.

FUNCTIONAL DESCRIPTION

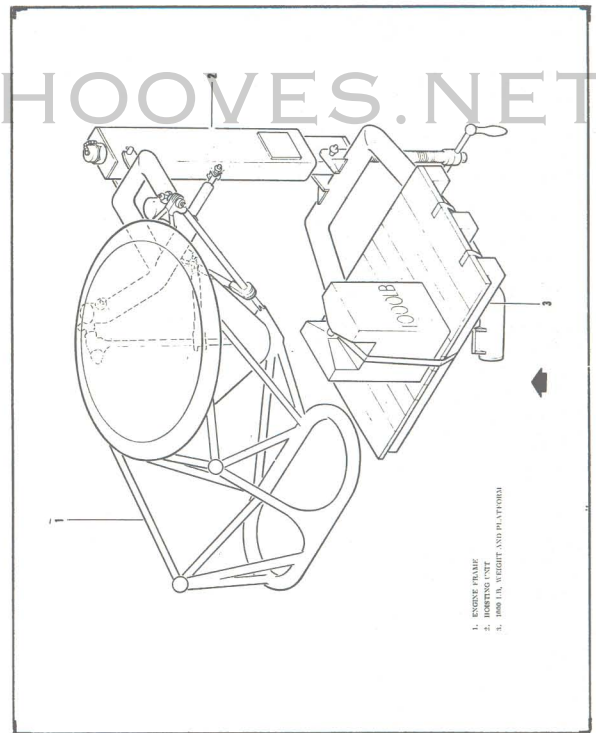
Rigging hoist used to provide an anchor point. Can be used with chain or wire rope hoist in various locations throughout the complex. Is used to remove motors and pumps from Hydraulic Supply Room.

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ITEM NUMBER

264

NOMENCLATURE		
HOISTING UNIT		
F SN 5120-474-2102	PART NO. 1-246065	
TYPE/MODEL NO.	MFRS NAME	
HLU-52/E	AEROJET GENERAL	
DIMENSIONS SEE BELOW	WEIGHT 60 LBS	
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 5	COND 0-2	UNIT PRICE \$962
TECH ORDER 35D4-4-34-3		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS MISSILE ENG MECH	



TECHNICAL DESCRIPTION

A screw jack type hoist wherein the bottom half of hoist moves. The screw jack is turned by a handle at the bottom end of the hoist. Hoist is capable of 12 in of movement with a 500 pound load. Proof load is 1,000 pounds, screw travel is 12 in, retracted length is 24 in, extended length is 36 in. Lower forks are approximately 27 in long by 12 in wide. Upper forks are approximately 10 in long by 7 in wide. Upper forks are stationary and contain equipment for mounting to engine assembly.

FUNCTIONAL DESCRIPTION

Used to hoist the thrust chamber of the IR91 engine to facilitate removal and installation; top of hoist attaches to the engine assembly, bottom of hoist attaches to thrust chamber. The thrust chamber bolts are removed and thrust chamber is lowered to a pallet.

ITEM NUMBER

332

NOMENCLATURE HOOD, ROCKET		
FSN 8415-753-6210		PART NO. NA
TYPE/MODEL NO. NA	MFRS NAME MIL SPEC	
DIMENSIONS NA	WEIGHT 2 LBS	
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 90	COND 0-2	UNIT PRICE \$35
TECH ORDER 14P3-11-101		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



TECHNICAL DESCRIPTION

Hood Rocket Fuel Handler limited protection resin modified butyl rubber coated cotton airplane cloth with transparent face shield 1 bib located in front with adjustable straps on each side, 1 bib located in back, black color. Military specification Mil-H-43079.

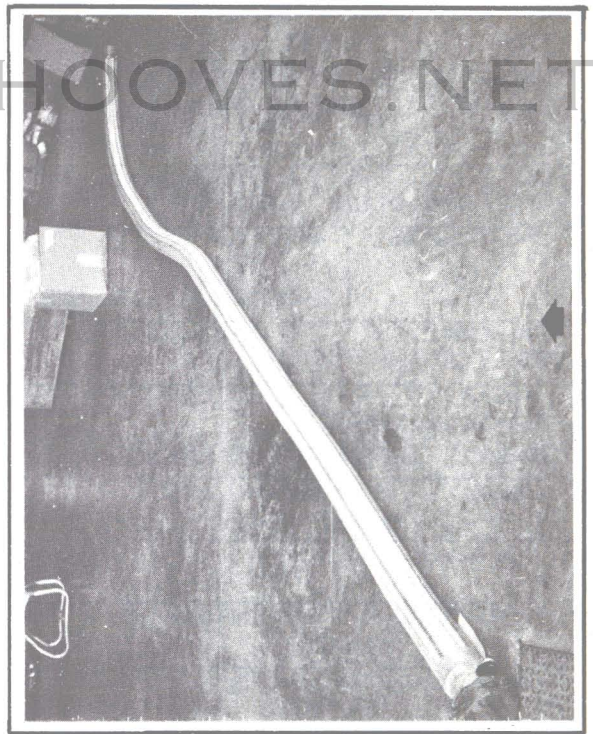
FUNCTIONAL DESCRIPTION

Required for personnel safety and/or emergency rescue operations.

ITEM NUMBER

96

NOMENCLATURE		
HOSE TRANSFER SET		
FSN 1450-857-0800AE		PART NO. 327N8889000-009
TYPE/MODEL NO. NA	MFRS NAME MARTIN CO	
DIMENSIONS NA	WEIGHT NA	
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 3	COND 0-2	UNIT PRICE \$2,652
TECH ORDER NA		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



TECHNICAL DESCRIPTION

Hose set is comprised of twenty feet flexible stainless steel 3-1/2 IN diameter hose.

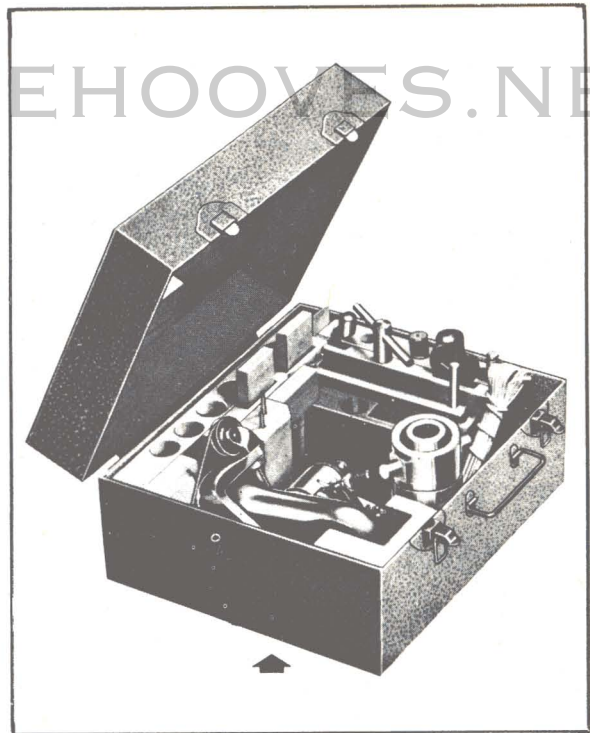
FUNCTIONAL DESCRIPTION

Hose set is used for conveying the LOX or Liquid Nitrogen from LOX trailer to tank in the ground or from unloading area to a pit.

ITEM NUMBER

155

NOMENCLATURE INDICATOR, ENGINE PRESSURE, HEAVY DUTY		
FSN 4910-994-6390		PART NO. 4HS
TYPE/MODEL NO. NA	MFRS NAME BACHARACH IND INST	
DIMENSIONS 12X12X6 IN		WEIGHT 25 LBS
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 17	COND 0-2	UNIT PRICE \$203
TECH ORDER NA		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



TECHNICAL DESCRIPTION

Indicator, engine test equipment used on P/N FS 1381SC, Engine, Diesel. Unit consists of the following:

- 1 set, piston, sleeve and spring scale (These units can be procured separately so as to cover a pressure range of 20-1260 PSIG)
- 1 each, Chromomatic drum 1-3/16 IN dia.
- 1 set, Cord guide and pulley. (This supplies gravity power to drum)
- 1 set, standard tools and accessories, including wing nut adapter
- 1 each, carrying case (wood)

Power required: None, unit is self contained.

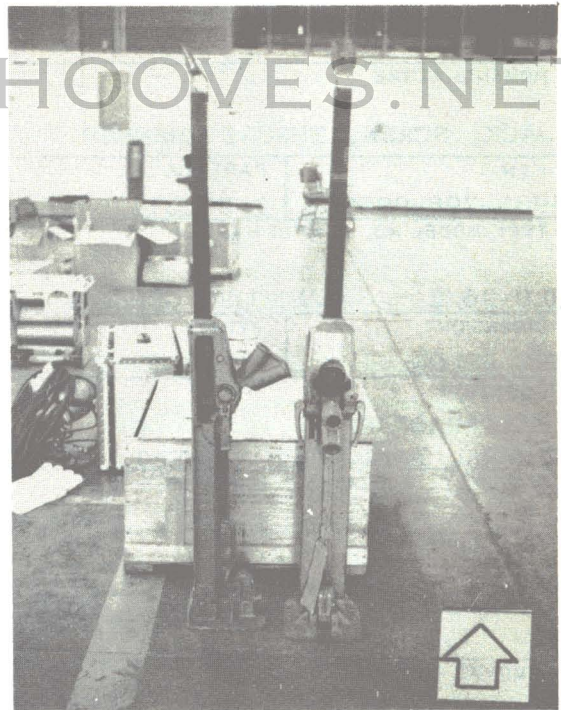
FUNCTIONAL DESCRIPTION

Used for testing pressure and combustion condition in diesel engines, while engine is operating. Unit reads out on a Chromomatic drum which gives a permanent record on paper tape. Unit gives engine pressure changes in relation to time. Unit can detect engine faults such as: valve chatter, suction passage too small, discharge passage too small, valve springs too stiff, piston ring leaks, etc.

ITEM NUMBER

267

NOMENCLATURE		
JACK, RACK BAR		
FSN 5120-595-8381		PART NO. 329
TYPE/MODEL NO. VI		MFRS NAME TEMPLETON KENLY & CO
DIMENSIONS 38.25X22 IN		WEIGHT 40 LBS
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 12	COND 0-2	UNIT PRICE \$103
TECH ORDER NA		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



TECHNICAL DESCRIPTION

Jack, rack bar, hinged base, single acting, 15 ton rated capacity, furnished with chains.

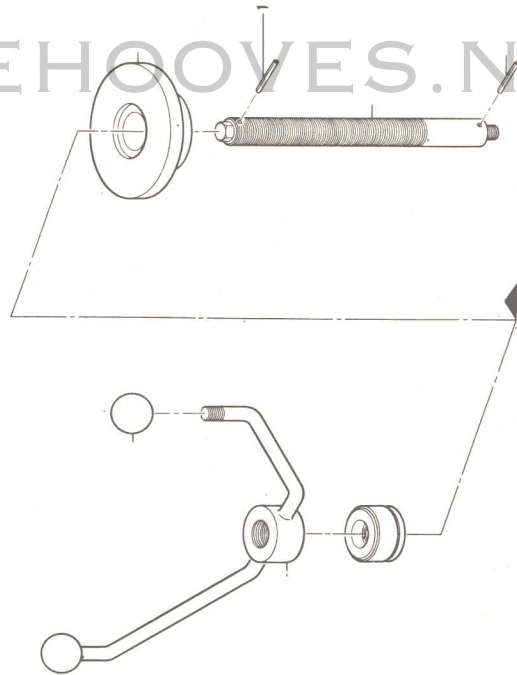
FUNCTIONAL DESCRIPTION

For elevating heavy equipment to place on skids in areas where overhead hoist are not feasible.

ITEM NUMBER

204

NOMENCLATURE		
JACK, SCREW, THRUST CHAMBER		
FSN		PART NO.
4935-798-9909AE		1-236611
TYPE/MODEL NO.		MFRS NAME
HLU-26/E		AEROJET GENERAL
DIMENSIONS		WEIGHT
SEE BELOW		9.5 LBS
LOCATION		
SEE PARAGRAPH 2		
GENERAL INSTRUCTION SHEET		
QUANTITY	COND	UNIT PRICE
4	0-2	\$140
TECH ORDER		
2K-LR87-4, 35D4-4-35-3		
DISCONNECT T	SPEC TOOLS/EQUIP	
NA	NONE	
REMOVAL TIME	SPEC SKILLS	
NA	NONE	



TECHNICAL DESCRIPTION

This consists of a threaded mechanism with a square tang which mates with the top of the Gimbal bearing. This unit is provided with two large ball ended handles to permit manual lowering of the thrust chamber, used with rocket engine LR87-AJ-3. Dimensions: Threaded Rod; 1 in. dia. 12 in. high. Distance between the two balls on the handle is 14 inches. Height of Handle: 7 1/2 inches. Material - Chromo-moly steel 4130.

FUNCTIONAL DESCRIPTION

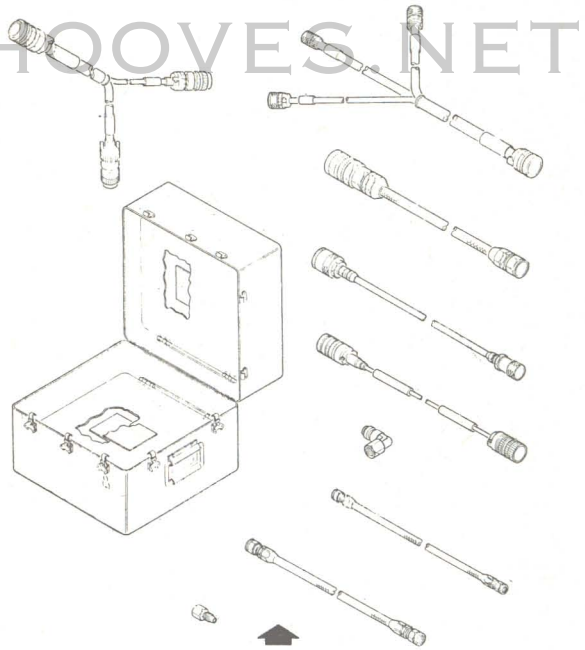
Used with the missile silo test stand for lowering the thrust chamber approximately 6 inches to facilitate thrust chamber valve and seal removal and replacement. Provides precise positioning both vertically and horizontally.

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ITEM NUMBER

218

NOMENCLATURE KIT, CONNECTING, LEAKAGE, TEST RECORDER		
FSN 4935-887-5356AE		PART NO. 257221
TYPE/MODEL NO. KMU-155/E		MFRS NAME AEROJET GENERAL CORP
DIMENSIONS 20X20X20 IN		WEIGHT 25 LBS
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 8	COND 0-2	UNIT PRICE \$500
TECH ORDER 2KLR87-4		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



TECHNICAL DESCRIPTION

A suitcase type container, containing interconnections for the tester recorder. (P/N 1-239804-19). Used on rocket engines LR87-AJ-3 and LR91-AJ-3. Consists of:

- 3 ea - Elect cables - 28V DC approx. 18 in. long.
- 8 ea - Hose Pneumatic (non-matallic) approx. 18 in. long.
- 1 ea - Elbow 1/4 male end 3/8 female end.
- 1 ea - Adapter 3/8 female 1/4 male.
- Assorted nuts, unions, reducers, and gaskets.

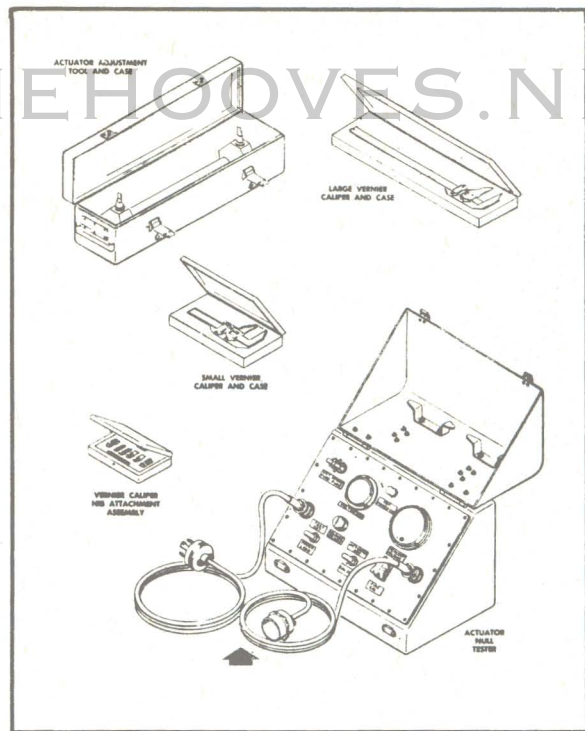
FUNCTIONAL DESCRIPTION

Connecting Kit, Leakage, Tester Recorder Connects the tester recorder to the rocket engine to perform functional leak checks.

ITEM NUMBER

219

NOMENCLATURE		
KIT, ENGINE ALIGNMENT		
FSN		PART NO.
4935-893-2971AE		327-5961000-029
TYPE/MODEL NO.		MFRS NAME
NA		MARTIN COMPANY
DIMENSIONS		WEIGHT
NA		NA
LOCATION		
SEE PARAGRAPH 2		
GENERAL INSTRUCTION SHEET		
QUANTITY	COND	UNIT PRICE
6	0-2	\$2,391
TECH ORDER		
31X2-63-4-1-4		
DISCONNECT T	SPEC TOOLS/EQUIP	
NA	NONE	
REMOVAL TIME	SPEC SKILLS	
NA	NONE	



TECHNICAL DESCRIPTION

The engine alignment kit consists of an actuator adjustment tool, a large vernier caliper, a small vernier caliper, a vernier caliper nib attachments, and an actuator null tester. Capable of measuring $\pm .055$ inches, includes an electrical bridge circuit for adjusting piston position. A vernier type caliper with $.001$ ins measurements with a range of 0-24 inches. Actuator Null Tester requires 28 VDC input for operation.

FUNCTIONAL DESCRIPTION

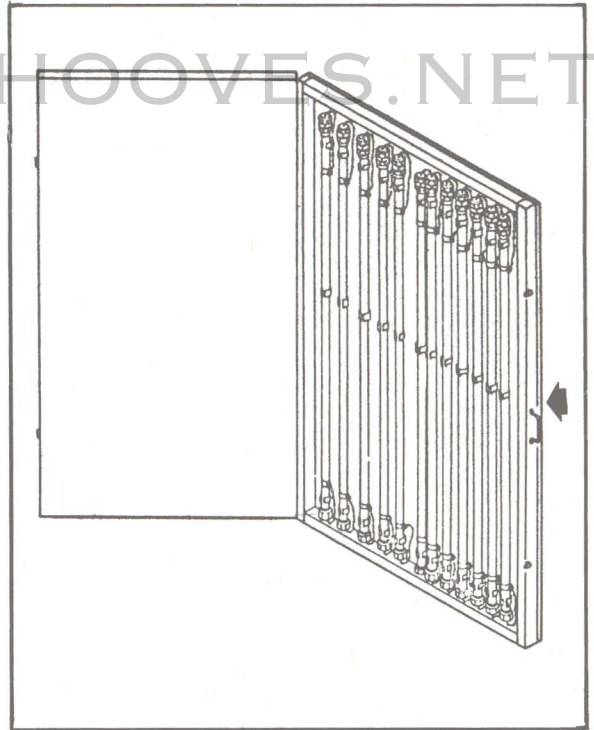
The engine alignment kit mechanically and electrically sets the piston of a booster or sustainer engine actuator to the mid-stroke position.

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ITEM NUMBER

67

NOMENCLATURE		
KIT, HOSE ASSEMBLY, HYDRAULIC		
FSN		PART NO.
1450-776-8636AE		327M5291000-009
TYPE/MODEL NO.		MFRS NAME
NA		MARTIN COMPANY
DIMENSIONS		WEIGHT
SEE BELOW		NA
LOCATION		
SEE PARAGRAPH 2		
GENERAL INSTRUCTION SHEET		
QUANTITY	COND	UNIT PRICE
7	0-2	\$1,351
TECH ORDER (Formerly		
21M-HGM25A-2-9-1(21SM68-2FJ-9-1)		
DISCONNECT T	SPEC TOOLS/EQUIP	
NA	NONE	
REMOVAL TIME	SPEC SKILLS	
NA	NONE	



TECHNICAL DESCRIPTION

The kit consists of the following parts arranged in a sheet metal carrying case:

QTY	ITEM
4	Teflon Hose Assemblies 3 ft long with 1/2 in. fitting at each end.
6	Teflon Hose Assemblies 3 ft long with 3/8 in. fitting at each end.
2	Elbow 3/4 inch MS type.
1	Elbow 1/2 inch MS type.
1	Union 1 inch MS type.

FUNCTIONAL DESCRIPTION

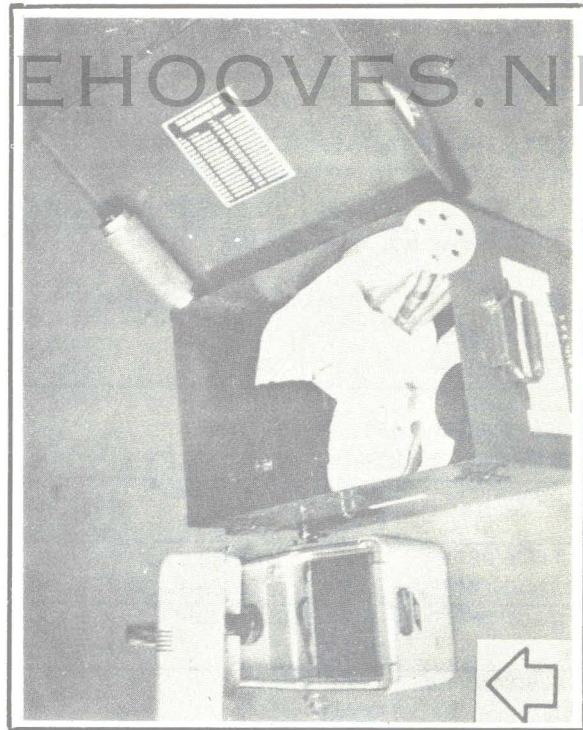
Hydraulic Hose Assembly kit is used to purge the hydraulic system of undesirable contamination before connection to the missile by re-circulation of the hydraulic fluids within the system.

Also used to by-pass the pump and actuators of the stage I and stage II missile borne hydraulic systems during flushing operations to prevent contamination of the missile systems and components.

ITEM NUMBER

183

NOMENCLATURE		
KIT, LAPPING		
F S N		PART NO.
4935-716-6233AE		1-234709
TYPE/MODEL NO.		MFRS NAME
KMU-84/E		AEROJET GENERAL CORP
DIMENSIONS		WEIGHT
18X12X12 IN		10 LBS
LOCATION		
SEE PARAGRAPH 2		
GENERAL INSTRUCTION SHEET		
QUANTITY	COND	UNIT PRICE
6	0-2	\$1,401
TECH ORDER		
2K-LR91-4		
DISCONNECT T	SPEC TOOLS/EQUIP	
NA	NONE	
REMOVAL TIME	SPEC SKILLS	
NA	NONE	



TECHNICAL DESCRIPTION

Lapping kit, turbopump consists of tester bellows compression, counterpoise weights, disks, rods, plates, guides, holders ring lapping, sleeves, plates lapping and tool box.

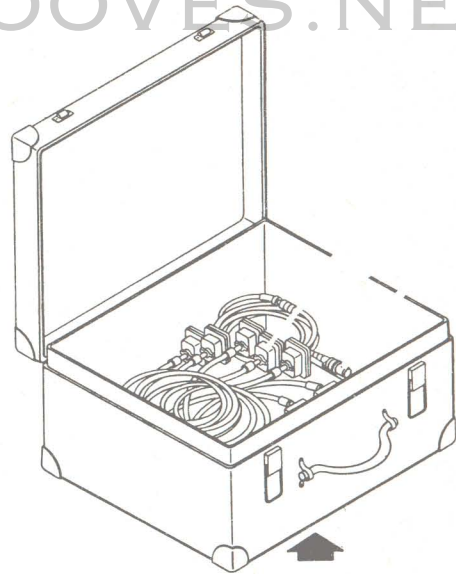
FUNCTIONAL DESCRIPTION

Kit for cleaning, checking and lapping impellers and surfaces of the turbopump during periodic maintenance.

ITEM NUMBER

201

NOMENCLATURE		
KIT, MAINTENANCE		
F S N 4935-796-3505AE		PART NO. G344398
TYPE/MODEL NO. NA		MFRS NAME WECO
DIMENSIONS 18X15X9 IN		WEIGHT 20 LBS
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 8	COND 0-2	UNIT PRICE \$443
TECH ORDER 33D9-3-48-4		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



TECHNICAL DESCRIPTION

Kit consists of: 1 each G310670 Cable Assembly, special purpose, (CA1) 7 22AWG with insulation sleeve, 7 pin connector plug, WECO, P/N G302314-11, 19 pin connector plug, WECO, P/N G243742-10. Cable length 4 Ft. One each G310671, cable assembly, special purpose, (CA2) 31 conductor covered with insulating sleeve, 17-16 AWG, 11-22AWG and 3-0.023 diameter copper covered steel, silver coated inner conductor with lowloss plastic dielectric insulation and braided shield R.F. cables, cable shields grounded by individual 22 AWG leads to separate contacts at each connector. Plug connector, electrical, 32 contacts, WECO, P/N G302407-13 and shield, electrical connector, WECO, P/N G302448-1, on end; jack connector, electrical, 32 contacts, WECO, P/N G302408-7 and shield, electrical connector, Cannon, P/N 11612-3, other end. Overall cable length 19-5/8. One each G310673 cable assy, special purpose, (CA4), 67 conductor with insulation sleeve; 51-22 AWG; 1-3 conductor shielded 22 AWG, 1-2 conductor shielded 22 AWG, 4 single conductor 22 AWG; 6-16 AWG, 1 coaxial conductor 0.023 inch copper covered steel, silver coated inner conductor with low loss plastic dielectric insulation, and braided shield. Connector receptacle, WECO, P/N G-302407-15 and shield, electrical connector, WECO, P/N G-302448-1 one end. Connector receptacle, WECO, P/N G-302408-9 and shield, electrical connector, Cannon, P/N 11612-3 other end. Overall length 10-1/2 inches.

One each G-310674, cable assembly, special purpose, (CA5), 45 conductor cable with insulation sleeve, 13-22AWG and 32-16AWG, plug connector, 45 contact WECO, P/N G-302407-18 and shield, electrical connector, WECO, P/N G-302448-1, one end; jack connector, receptacle, electrical, 45 contacts, WECO, P/N G-302408-12 and shield, electrical connector, Cannon, P/N 11612-3, other end. Overall length 19-5/8

inches.

One each G-310675, cable assy, special purpose, (CA6), 31 conductor cable with insulation sleeve, 28-16 AWG; 2-22 AWG, and 1 R.F. conductor 0.023 inch diameter, copper covered steel, silver coated, inner conductor with low loss plastic dielectric insulation and braided shield. Plug connector, electrical, 31 contacts, WECO, P/N G-302407-16 and shield, electrical connector, WECO, P/N G-302448-1, one end; jack connector, electrical, 31 contacts, WECO, P/N G-302408-10, and shield, electrical connector, Cannon, P/N 11612-3 other end. Overall length 19-5/8 inches.

One each G-310676, cable assembly, special purpose, (CA7), 65 conductor with insulation sleeve; 51-22 AWG, 14-16 AWG conductors. Plug connector, 65 contacts, WECO, P/N 302407-17 and shield, electrical connector, WECO, P/N G-302448-1, one end, jack connector, electrical, 65 contacts, WECO, P/N G-302408-11 and shield, electrical connector, WECO, P/N G-302447-1 other end. Overall length 19-5/8 inches.

One each G-344368, case, cable assy, with hinged cover, suitcase type fasteners and handle.

FUNCTIONAL DESCRIPTION

Provides convenient transport for included cables which connect drawer units of Test Set, Guided Missile to cabinet cables during periodic maintenance checks. Used to check electronic components.

ITEM NUMBER

181

NOMENCLATURE		
KIT, PLATE CLOSURE		
FSN		PART NO.
4935-716-6230AE		1-225796-20
TYPE/MODEL NO.		MFRS NAME
ALUMINUM ALLOY		AEROJET GENERAL CORP
DIMENSIONS		WEIGHT
10.5X1.5 IN		10 LBS
LOCATION		
SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY	COND	UNIT PRICE
6	0-2	\$950
TECH ORDER		
21M-HGM25A-3-2-1		
DISCONNECT T	SPEC TOOLS/EQUIP	
NA	NONE	
REMOVAL TIME	SPEC SKILLS	
NA	NONE	



TECHNICAL DESCRIPTION

A 1.5 in. thick aluminum alloy plate type 2024 per spec QQ-A-355 temper T4., dome shaped with a 2 in. dia. x 1 in. dp. pocket on the bottom side and a .125-27ANPT pressure tap through center. Six (6) .412 in. (M) dia. holes through the plate are equally spaced in a 9.5 in. dia. "O" ring groove on a 8.555 in. I.D. on the bottom of the plate accommodates an AS1118K3-265 "O" ring. The plate closure is anodized per spec. Mil-A-8625 Type A5, dyed orange-yellow.

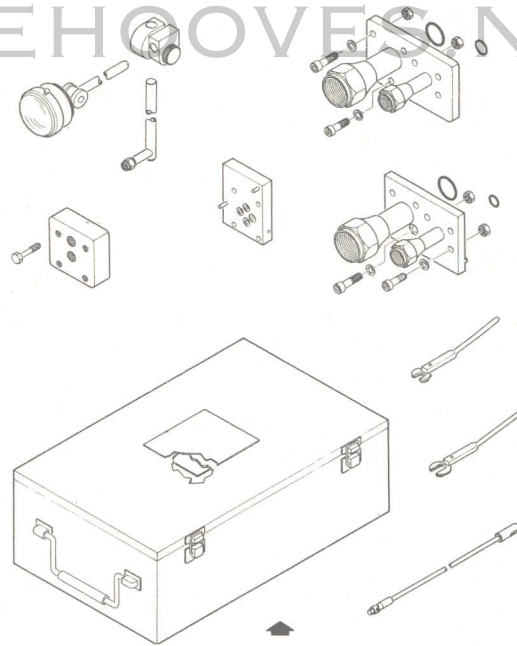
FUNCTIONAL DESCRIPTION

The closure plate is used to seal off the fuel pump housing suction flange for pressure checking seals.

ITEM NUMBER

106

NOMENCLATURE		
KIT, TOOL		
FSN 1450-893-2893AE		PART NO. 1-239434-40
TYPE/MODEL NO. KMU-102/E		MFRS NAME AEROJET GENERAL CORP
DIMENSIONS NA		WEIGHT NA
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 3	COND 0-2	UNIT PRICE \$4,308
TECH ORDER 2K-LR91-4		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



TECHNICAL DESCRIPTION

Kit contains adjusting tool piston; manifold, propellant valve LR91; manifold, propellant valve LR87; adapter wrench; tester leakage; key, socket head screw; wrench spanner; indicator dial; adapter, test and alignment valve, LR87; adapter, valve testing, LR91; assorted washers, packings, and screws; cover test; cover fuel valve; wrench open end; chest, tools and parts.

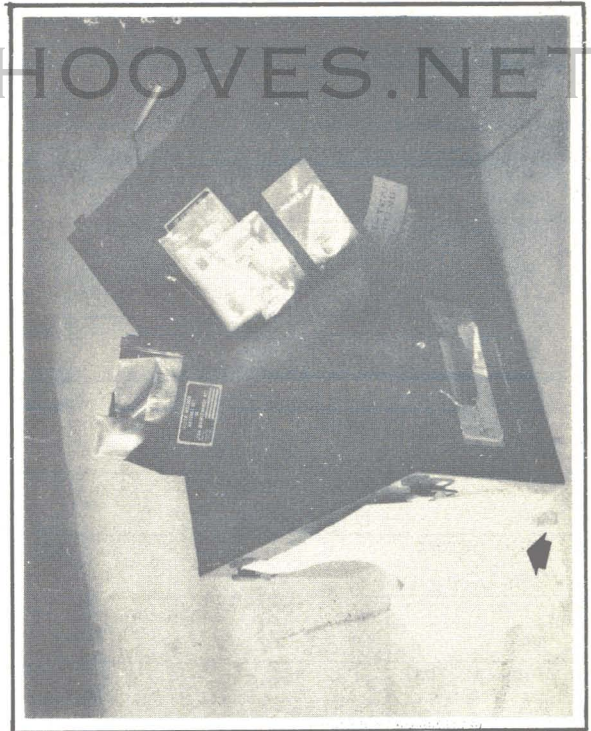
FUNCTIONAL DESCRIPTION

Required to perform maintenance on the gas generator assemblies of LR87-AJ-3 and LR91-AJ-3 Rocket Engines, or replace the gas generator valve on the LR87-AJ-3 engine while in the silo.

ITEM NUMBER

283

NOMENCLATURE		
KIT, TOOL		
FSN 5180-718-4780		PART NO. 1-230946-20
TYPE/MODEL NO.	MFRS NAME	
KMU-82/E	AEROJET GENERAL	
DIMENSIONS NA	WEIGHT 10 LBS	
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 11	COND 0-2	UNIT PRICE \$1,387
TECH ORDER 2K-LR87-4		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



TECHNICAL DESCRIPTION

Tool kit containing the following special tools:

<u>QTY EA</u>	<u>P/N</u>	<u>NOMENCLATURE</u>
1	2-213704	Wrench, spanner
1	2-213706	Wrench, spanner
1	2-218937	Alignment tool, valve
1	1-223177	Wrench, box
1	1-223172	Adapter, socket wrench, 1/4" to 5/16" hex dr
1	1-230101-2	Ext socket wrench, 1/4" hex dr, 1.625" lg
1	1-230101-4	" " " " " " 2.875" lg
1	1-230101-6	" " " " " " 4.125" lg
1	1-230101-8	" " " " " " 5.625" lg
1	1-225029	Wrench, ratchet non-rev 550 in-lb (P/N NAJ-029)
1	KR111	Tool box
1	1-224761	Wrench, ratchet, allen head (P/N NAJ-761-2)
1	1-236682	Adapter, cover
1	1-238750	Wrench, box
1	1-230148	Crowfeet atch, socket wrench, 1", 1/2" dr
1	1-238793	" " " " 1-3/8", 1/2" dr
1	1-238796	" " " " 1-7/8", 1/2" dr
1	1-239246-2	" " " " 3/4" dr
1	K-127	Tool box

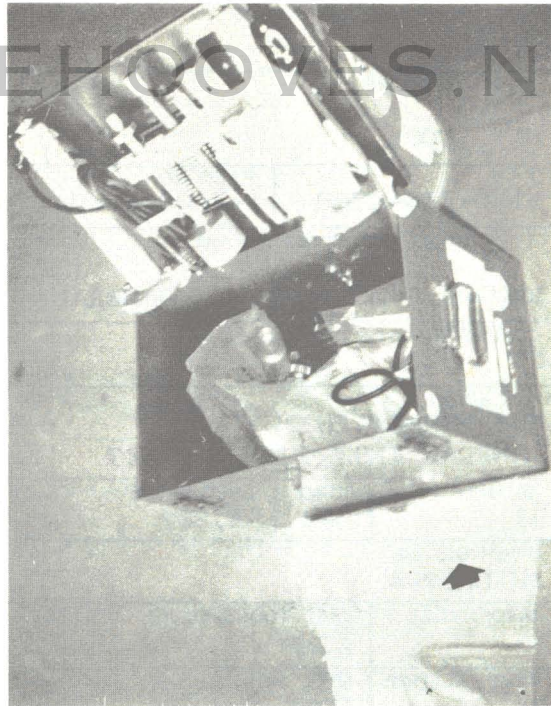
FUNCTIONAL DESCRIPTION

Tool kit containing special tools necessary to perform maintenance on the LR 87-AJ-3 rocket engine thrust chamber.

ITEM NUMBER

284

NOMENCLATURE KIT, TOOL		
F SN 5180-734-8358	PART NO. 1-230945-20	
TYPE/MODEL NO. KMU-83/E	MFRS NAME AEROJET GENERAL	
DIMENSIONS NA	WEIGHT NA	
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 6	COND 0-2	UNIT PRICE \$5,287
TECH ORDER 2K-LR91-4		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



TECHNICAL DESCRIPTION

Tool Kit containing the following special tools:

<u>QTY</u>	<u>P/N</u>	<u>NOMENCLATURE</u>
1	1-222527	Extractor, Lock Washer
1	1-223169	Extractor, Lock Washer
1	1-223173	Wrench, Spanner
1	1-238753	Puller, Mechanical
1	1-228660	Beam, Mechanical Puller
1	1-229039	Plate, Retaining, Key
1	1-223007	Socket, Splined
1	1-223178	Socket, Splined
1	1-229038	Key, Socket Head Screw
1	1-229096	Wrench, Spanner
1	1-229097	Wrench, Spanner
1	1-228690	Alignment Tool, Indicator
1	1-223170	Puller, Mechanical
1	1-223175	Puller, Mechanical
1	1-238752	Puller, Mechanical
1	1-232295	Puller, Mechanical
1	250534-9	Wrench, Spanner
1	1-228696	Wrench, Box and Open End, Combination
1	1-238754	Centering Tool
1	1-229034	Puller, Mechanical
1	1-222530	Puller, Mechanical
1	4030A	Puller Kit, Mechanical
1	1-223168	Box, Tool

FUNCTIONAL DESCRIPTION

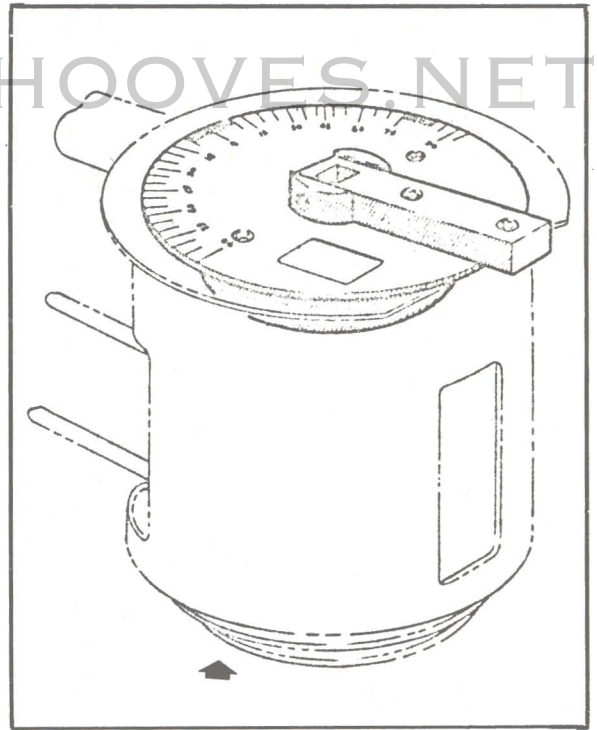
Tool Kit containing special tools necessary to perform maintenance on the LR91-AJ-3 Rocket Engine Turbopump.

ITEM NUMBER

222

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NOMENCLATURE		
KIT, VERNIER NOZZLE ALIGNMENT		
FSN 4935-897-5632AE		PART NO. 327-5959000-019
TYPE/MODEL NO. NA	MFRS NAME MARTIN COMPANY	
DIMENSIONS 18.75X11.75X4IN		WEIGHT 24 LBS
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 4	COND 0-2	UNIT PRICE \$1,082
TECH ORDER NA		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



TECHNICAL DESCRIPTION

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Used to properly align the vernier nozzles of the SM-68 missile. Capable of aligning the vernier nozzles so that nozzle centerline is aligned with the pitch and yaw planes. Accurate in ± 2 degrees and the major components are a protractor, and positioning handle. The vernier nozzle alignment set is attached to the vernier bearings by three captive screws, a fourth aligns it with the missile centerline. Kit consists of protractor $90^\circ - 0^\circ - 90^\circ$, 5 1/2 inch diameter with positioning handle.

FUNCTIONAL DESCRIPTION

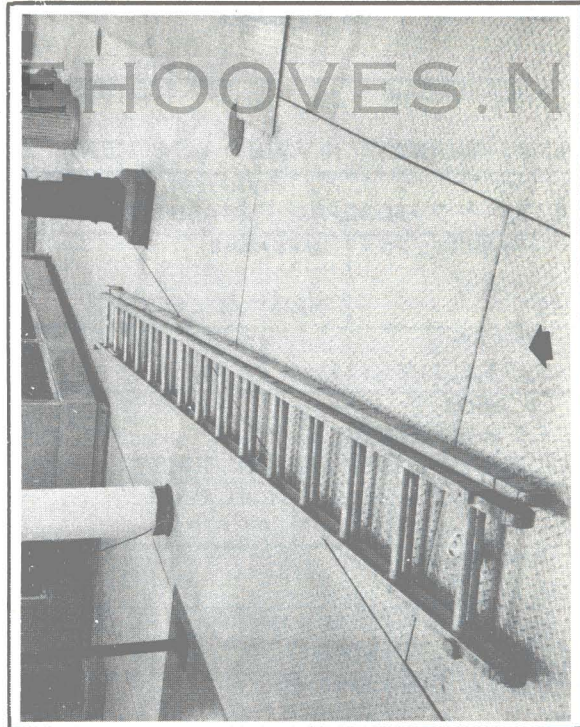
Kit is used to align vernier nozzles of Titan I center line within ± 20 of the pitch and yaw planes.

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ITEM NUMBER

295

NOMENCLATURE		
LADDER, EXTENSION		
FSN 5440-806-0805		PART NO. 59-202-1345
TYPE/MODEL NO.	MFRS NAME	
NA	AM&F	
DIMENSIONS	WEIGHT	
NA	35 LBS	
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY	COND	UNIT PRICE
7	O-2	\$77
TECH ORDER		
NA		
DISCONNECT T	SPEC TOOLS/EQUIP	
NA	NONE	
REMOVAL TIME	SPEC SKILLS	
NA	NONE	



TECHNICAL DESCRIPTION

Ladder, extension, aluminum alloy, lightweight, with safety shoes, 18 Ft, 3 sections, with folding hooks at upper end.

FUNCTIONAL DESCRIPTION

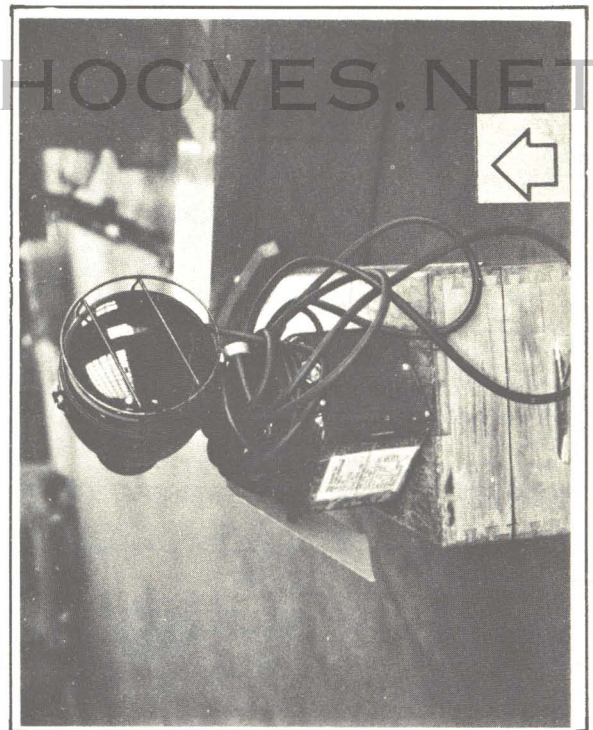
Extension ladder is used for access to areas in Launcher Silo that are not accessible by other equipment and to perform various maintenance functions.

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ITEM NUMBER

300

NOMENCLATURE		
LIGHT, ULTRAVIOLET		
FSN 6530-753-4886		PART NO. 327M1721000-009
TYPE/MODEL NO.		MFRS NAME
SEE BELOW		MARTIN COMPANY
DIMENSIONS 15X15X6.5 IN		WEIGHT 18.5 LBS
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY	COND	UNIT PRICE
21	0-2	\$195
TECH ORDER 33B8-2-3		
DISCONNECT T	SPEC TOOLS/EQUIP	
NA	NONE	
REMOVAL TIME	SPEC SKILLS	
NA	NONE	



TECHNICAL DESCRIPTION

Light, UV, Spec. Examining: Model type LEU-5/3, vapor tight. The light is a hand-portable, spot type assembly, a 100 watt ultraviolet light source with a wave length between 2500 and 3600 angstrom units and capable of operating from a nominal 120V, 60 cycles source.

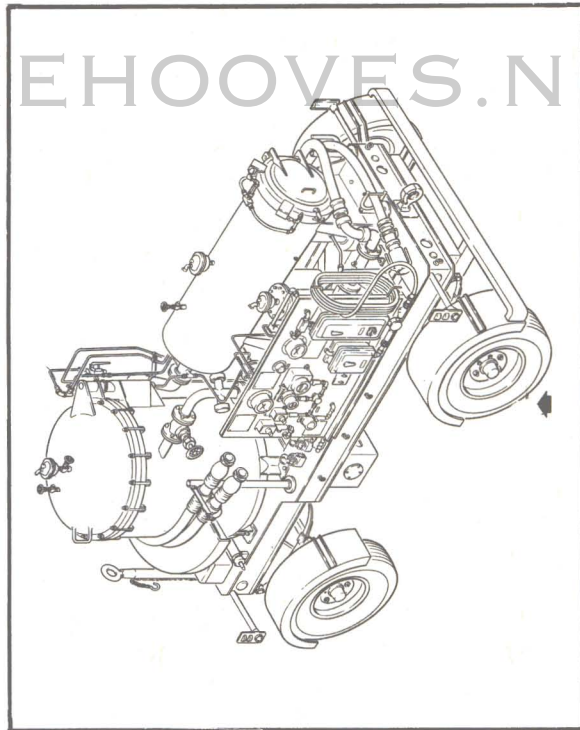
FUNCTIONAL DESCRIPTION

Used to detect hydrocarbon residue after cleaning and during overhaul and testing of various components.

ITEM NUMBER

159

NOMENCLATURE		
LIQUID SEPARATOR		
FSN 4930-878-6203		PART NO. 327M1901000-019
TYPE/MODEL NO. A/M 48A-1		MFRS NAME MARTIN COMPANY
DIMENSIONS 169X95X110 IN		WEIGHT 7,950 LBS
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 5	COND 0-2	UNIT PRICE \$80,000
TECH ORDER 37C6-6-1,-4		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



TECHNICAL DESCRIPTION

Trailer mounted, electric motor driver 10 HP, 460 volts, AC, 60 cycle, 3 phase, explosion proof, class I Group D, Division 2. Pump operating medium PP-1 fuel, 200 GPM, 54 PSIG discharge outlet pressure w/1 ft. water PM suction head; operating temperature +35°F, moisture monitor +35°F to +125°F, 115 PSIG (max) pressure upstream of main control valve, 50 PSIG (max) downstream of main control valve, w/230 PSIG proof pressure upstream of main control valve and 100 PSIG downstream; 20 PSIG (Min) outlet pressure; 10 microns (nom) filtration rating; 15 PPM (max) effluent water content. Main control valve 200 GPM regulated fuel flow; 34 PSIG (min) to 115 PSIG (max) input pressure range; 110 volts AC, 60 cycle, single phase, explosion proof, class I, group D, Division 2.

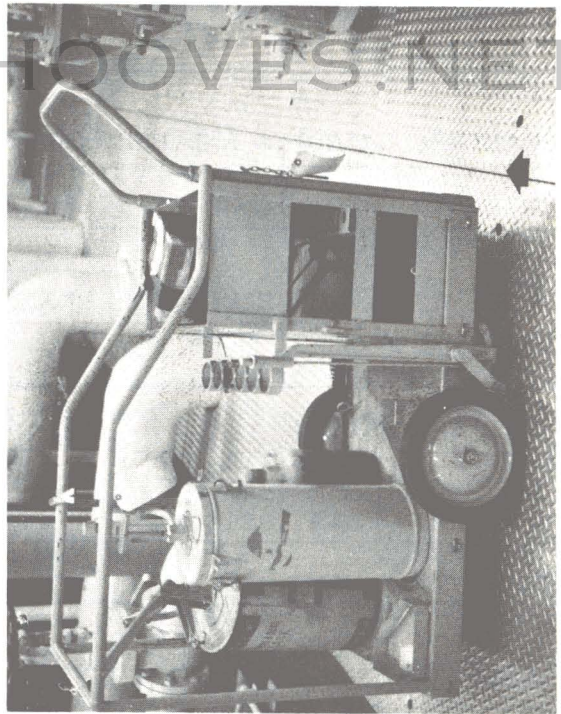
FUNCTIONAL DESCRIPTION

The Liquid Fuel Water Separator A/M48A-1 is a trailer mounted unit incorporating filter and water separating elements, capable of processing fuel at the rate of 200 GPM. This unit is used to condition fuel during transfer from the fuel tanker to the fuel storage tank and to recondition stored fuel by removing sludge and water resulting from condensation. The unit is supplied with two adapters that are stored in a compartment on the trailer. One adapter mates with the fuel supply connector and the other adapter mates with fuel return connector.

ITEM NUMBER

157

NOMENCLATURE		
LUBRICATING AND SERVICING UNIT		
FSN 4930-734-9779		PART NO. 327-5958000-019
TYPE/MODEL NO.	MFRS NAME	
NA	MARTIN COMPANY	
DIMENSIONS 48X32X38 IN		WEIGHT NA
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 18	COND 0-2	UNIT PRICE \$1,150
TECH ORDER NA		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



TECHNICAL DESCRIPTION

Lubricating and servicing unit, hand truck mounted containing 6 grease guns, 6 hand oil cans, one hand-driven lube pump, one hand-driven oil pump, one hand-driven pump loader, two 35 lb can oil dispensers complete with 5-1/2 ft hose with connector to fit holes in gear housing, transmission, etc.

FUNCTIONAL DESCRIPTION

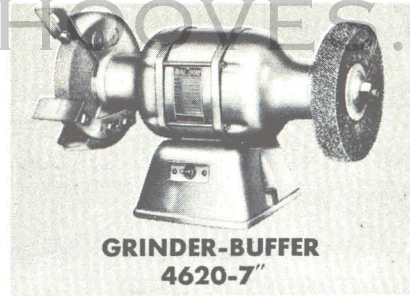
This portable unit is used during maintenance and servicing of ground support equipment.

ITEM NUMBER

128

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NOMENCLATURE		
MACHINE, GRINDING AND BUFFING		
FSN 3419-529-0820		PART NO. 4620-7
TYPE/MODEL NO.	MFRS NAME	
MODEL 83	US ELECTRICAL TOOL	
DIMENSIONS SEE BELOW	WEIGHT NA	
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 4	COND 0-2	UNIT PRICE \$215
TECH ORDER 2K-LR87-4		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



Single phase supplied with three conductor cord, and three prong plug, per Underwriters and City requirements. Adapter and grounding jack to permit connection to standard two slot receptacle supplied except when shipment is made to Canada.

½ H.P. 3450 RPM

1 Ph. 3 Ph. or Direct Current

Wheels: 7" x 1" x 5/8"

Grinding 36 Grit, Wire .012 Gauge

This grinder-buffer is ideally suited for the shop who likes a powerful, all-purpose small unit. The medium grit wheel satisfactorily finishes nearly all types of work. The wheels are mounted a long distance away from the small diameter motor frame thus giving the operator plenty of room around the wheel.

TECHNICAL DESCRIPTION

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Bench mounted; double end spindles, spindle diameter 5/8 IN between flanges, 3 IN overall spindle lg., 3450 RPM speed, 8-3/4 IN distance from center of spindle to bench, 3/4 IN distance between inside wheel flanges on spindle; main drive power, electric motor drive, 1 motor; 1/2 HP, 110V AC, 60 Cy, single phase.

FUNCTIONAL DESCRIPTION

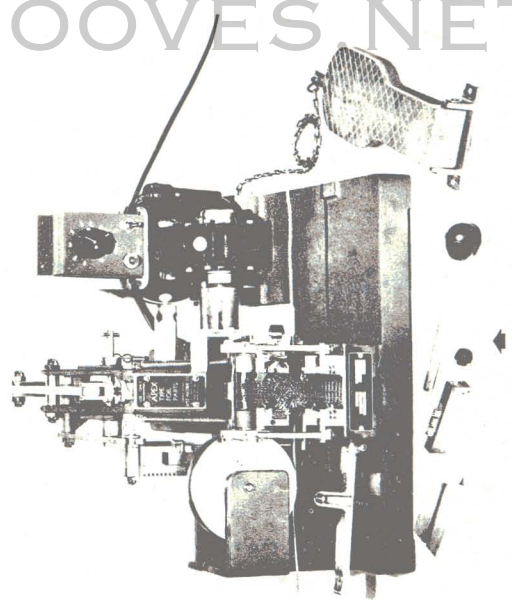
Buffing and Polishing Machine used for the removal of scratches, rust and residue from components of the engine assemblies during engine overhaul or repair.

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ITEM NUMBER

133

NOMENCLATURE		
MACHINE, WIRE MARKING		
FSN 3695-204-2808		PART NO. M4528
TYPE/MODEL NO.	MFRS NAME	
TYPE II	APEX MACHINE CO	
DIMENSIONS 18X18X16 IN	WEIGHT NA	
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 3	COND 0-2	UNIT PRICE \$2,200
TECH ORDER 34Y10-7-1		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



TECHNICAL DESCRIPTION

Power Required: 110VAC

The unit is powered by a 1/8 HP electric motor which is protected by a resettable overload. The drive clutch is engaged by the action of a chain and foot pedal arrangement. The machine will automatically feed insulated wire from #24 to #14 gauge. Larger sizes must be pulled through by hand. The machine operates at 173 markings per minute. Wire feed mechanism is adjustable from 2 in to 10 in. Marking temperatures of 250 to 350 degrees F is available with temperature indicators and heater controls available to adjust marking temperature to meet the requirements of the insulated wire to be marked. Type is supplied with the unit for size 22 gauge to 0000 gauge wire, and 3/16 in to 1 IN OD tubing.

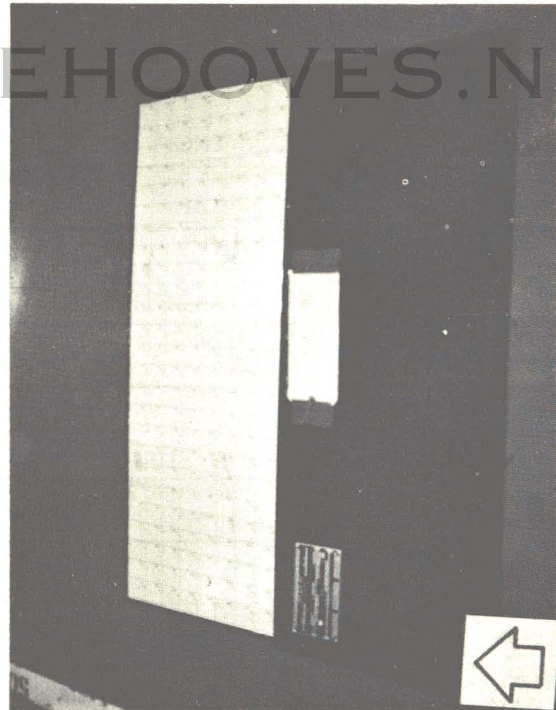
FUNCTIONAL DESCRIPTION

This machine is used for printing identification and circuit code numbers on insulated wire and tubing.

ITEM NUMBER

225

NOMENCLATURE		
MATRIX CHART		
FSN 4935-955-1609AE		PART NO. 59-209-2075
TYPE/MODEL NO. NA	MFRS NAME AM&F	
DIMENSIONS NA	WEIGHT NA	
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 5	COND 0-2	UNIT PRICE \$500
TECH ORDER 21M-SM68-2J-8-1		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



TECHNICAL DESCRIPTION

Used on functional tester, Item No. 302, with the plugboards Set, Item No. 224, Adapter Cable Item No. 178, to functionally test the circuitry of the fault chassis. The matrix chart will indicate the exact location of the fault in the circuit under test.

FUNCTIONAL DESCRIPTION

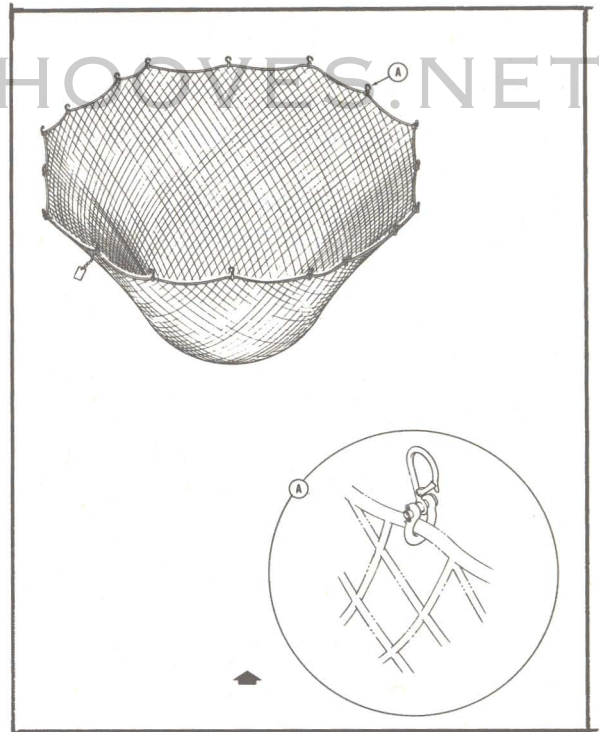
A series of charts, each laid out in matrix form showing in each square the various pin to pin connections for the noted circuit. Each chart is used on the functional tester circuitry analyzer which is a programmed continuity, megger, and hi-pot tester with capabilities of locating circuit malfunctions.

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ITEM NUMBER

142

NOMENCLATURE		
NET		
FSN 3940-894-8699		PART NO. 59-212-2248
TYPE/MODEL NO. NA	MFRS NAME AM&F	
DIMENSIONS SEE BELOW	WEIGHT 90 LBS	
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 41	COND 0-2	UNIT PRICE \$768
TECH ORDER NA		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



TECHNICAL DESCRIPTION

Net, save-all, nylon, 11 ft. 2-7/8 in. x 11 ft. 2-7/8 in. 2 x 2 in. mesh. 5/16 in. circ. rope mesh, 1/2 in. circ. jackstay rope. (37')

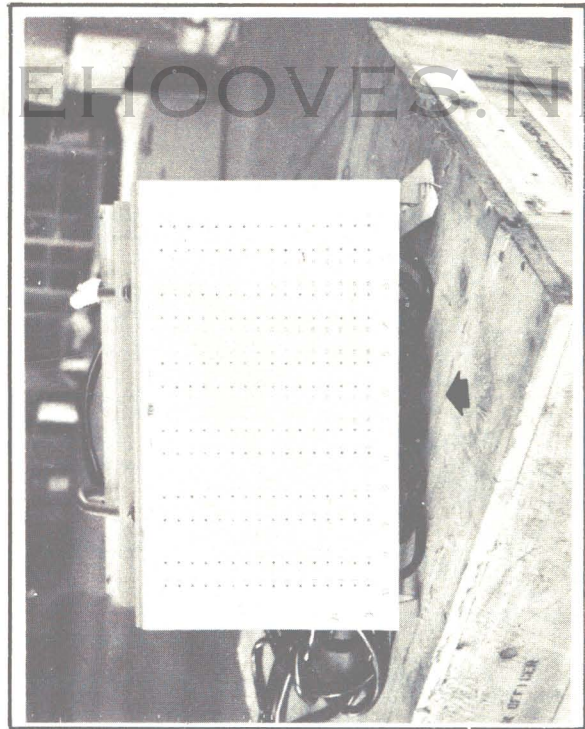
FUNCTIONAL DESCRIPTION

This net is spread across the top of the flame deflector opening on the Launcher Platform to prevent injury to personnel or equipment while work is being done on the missile or launcher equipment.

ITEM NUMBER

7

NOMENCLATURE		
PANEL AND CABLE ASSEMBLY		
FSN 1440-516-7515AB		PART NO. G287373
TYPE/MODEL NO.	MFRS NAME	
NA	WECO	
DIMENSIONS	WEIGHT	
NA	NA	
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY	COND	UNIT PRICE
5	0-2	\$200
TECH ORDER		
NA		
DISCONNECT T	SPEC TOOLS/EQUIP	
NA	NONE	
REMOVAL TIME	SPEC SKILLS	
NA	NONE	



TECHNICAL DESCRIPTION

Consists of one plug panel assembly, one receptacle panel assembly and one tip jack panel assembly; the plug and receptacle panel assembly is connected by 6-32 conductor cables 120 IN long. The receptacle and tip jack assemblies are connected by 6-32 conductor cables, 12 IN long.

FUNCTIONAL DESCRIPTION

Used when trouble shooting associated wiring of the Titan I antenna installation. Cable plugs fit electrical connectors of installed equipment for purpose of trouble shooting.