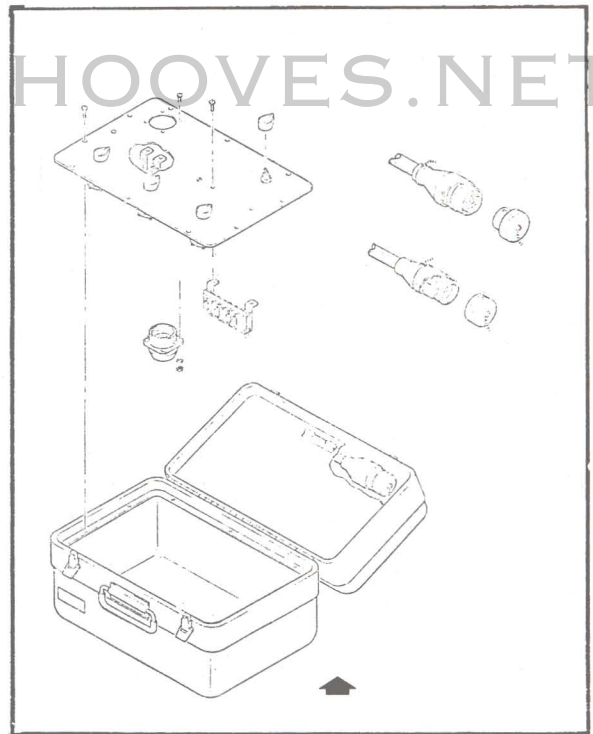


ITEM NUMBER

214

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NOMENCLATURE		
SIMULATOR, GYRO HEATER BRIDGE		
FSN 4935-856-8404AE		PART NO. 327N1971000-009
TYPE/MODEL NO.	MFRS NAME	
NA	MARTIN COMPANY	
DIMENSIONS 13.5X8X13 IN.	WEIGHT 15 LBS	
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 4	COND 0-2	UNIT PRICE \$1,800
TECH ORDER 33D9-72-115-3		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



TECHNICAL DESCRIPTION

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Aluminum case with detachable cable approximately 7 ft. long. Unit is connected to the flight control ground equipment whereby unit simulates autopilot gyro temperatures. Variable resistors within the unit are adjustable and provides a simulated gyro thermistor equivalency for checkout of ground equipment through the temperature range. In summary it provides the fourth leg to a bridge network. Develops a simulated pitch, yaw and roll temperature (153°F to 172°F ± 5%).

FUNCTIONAL DESCRIPTION

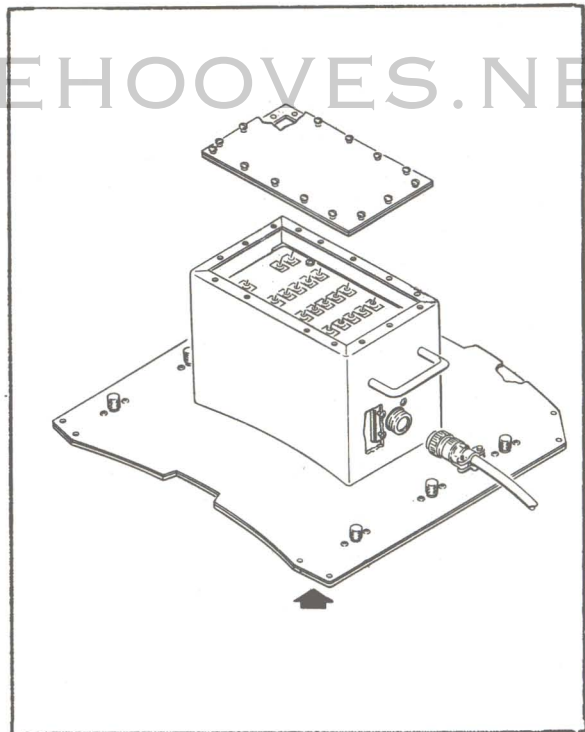
Simulator used to perform calibration and monitoring portions of flight control, system ground equipment in Titan I.

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ITEM NUMBER

162

NOMENCLATURE		
SIMULATOR, ORDNANCE & PRE-VALVE		
FSN*		PART NO. *
4935-070-0599AE		327P1621000-029
TYPE/MODEL NO.	MFRS NAME	
SMU-47/E	MARTIN CO	
DIMENSIONS		WEIGHT
23X25X8 IN		NA
LOCATION		
SEE PARAGRAPH 2		
GENERAL INSTRUCTION SHEET		
QUANTITY	COND	UNIT PRICE
9	0-2	\$250
TECH ORDER		
31X3-2-16-2		
DISCONNECT T	SPEC TOOLS/EQUIP	
1/2 HR	NONE	
REMOVAL TIME	SPEC SKILLS	
1/4 HR	NONE	



*Quantity includes 4935-996-2763AE, Part No. 327P1621000-009 which is similar.

TECHNICAL DESCRIPTION

Input Power: 28 VDC. All circuit breakers are rated 1 amp continuous. Three connectors for connecting cable assys, connectors are one each MS3102R14S6P, two each MS3102R36-10P. A circuit breaker panel assy containing 36 toggle switches for opening or closing circuit breakers. One each cable assy, electrical, branched, cable is approximately 15 Ft long with one connector (MS3106R35-10SK) at one end for connecting to the back of simulator assy. It branches into 10 separate cables with connectors at each end of the 10 branches, the connectors are: MS3101R20-8P, SC01P36-5S, PT06P22-55P, PT01P22-55P, PT06P18-32SK, PT01P18-32SX, MS106R22-14S, PT01P10-6P, PT06P18-32PX, PT06P20-39P. One each cable assy, electrical, branched, cable is approximately 15 Ft long with one connector (MS3106R36-10S) at one end for connecting to the back of simulator assy, it branches into 10 separate cables with connectors at each end of the 10 branches, all 10 connectors are PC01E8-4P. One each cable assy, electrical, branched, cable is approximately 25 Ft long with one connector (MS3106R14S6S) at one end for connecting to the left side of simulator assy; it branches into two cables with connectors on each end; connectors are MS3101E10SL4P.

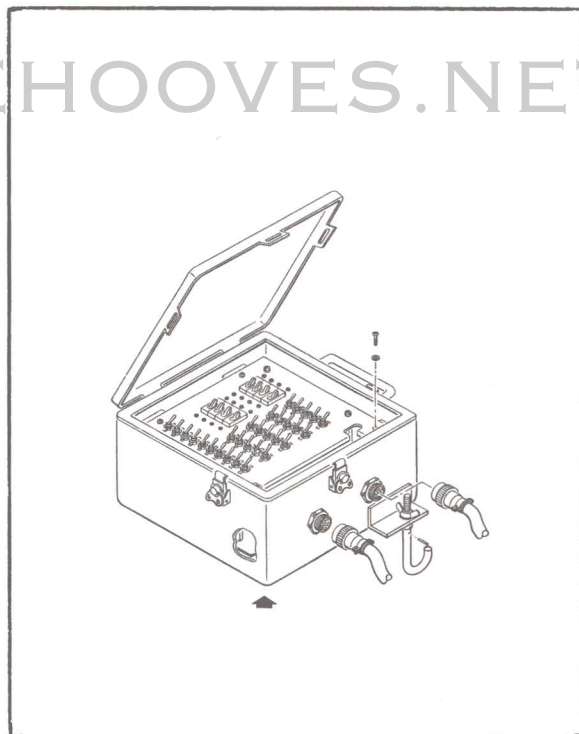
FUNCTIONAL DESCRIPTION

The simulator assy simulates fuel pre-valve, thrust chamber ignitors, separation rocket ejectors, battery primers, start gas valve auxiliary pump, JATO release, hydraulic power supply. The simulator contains circuit breakers which accomplish simulation by opening and interrupting voltages.

ITEM NUMBER

164

NOMENCLATURE SIMULATOR, ORDNANCE AND PRE-VALVE		
FSN * 4935-070-0600AE		PART NO. * 327P1619000-019
TYPE/MODEL NO. PORTABLE	MFRS NAME MARTIN CO	
DIMENSIONS 13X13X7 IN	WEIGHT NA	
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 9	COND 0-2	UNIT PRICE \$235
TECH ORDER 31X3-2-16-2		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



*Quantity includes 4935-996-2762AE, Part No. 327P1619000-009 which is similar.

TECHNICAL DESCRIPTION

Input power 28VDC. Rectangular aluminum box containing relays, diodes, resistors, circuit breakers, terminal boards, and two each connectors for connection of cable assys. The two connectors are PT07P24-61P331 and PT07P24-61PX331, located on the front of simulator. Cable assys are 30 Ft long, external branched type, as follows: cable # one: one each cable with one connector (PT06P24-61SX) for connection to the front of simulator, this cable branches into 16 separate cables with connectors on all 16 ends; the connectors are: 2 each PT01P10-6P, 2 each PC01P106PSR, 1 each PT01P14-15P, 2 each MS3106R22-14S, 2 each SC01P18-1P, 2 each CA3101ER18-1P, 2 each CA3106ER18-1S, 3 each CA3106ER10SL4S. Cable #2: one each cable with one connector (PT06P24-61S) for connection to the front of simulator, this cable branches into 10 separate cables with connectors on all 10 ends; the connectors are as follows: 8 each PT01P10-98S, 1 each MS3101R12S3P, 1 each 2143 PMO3.

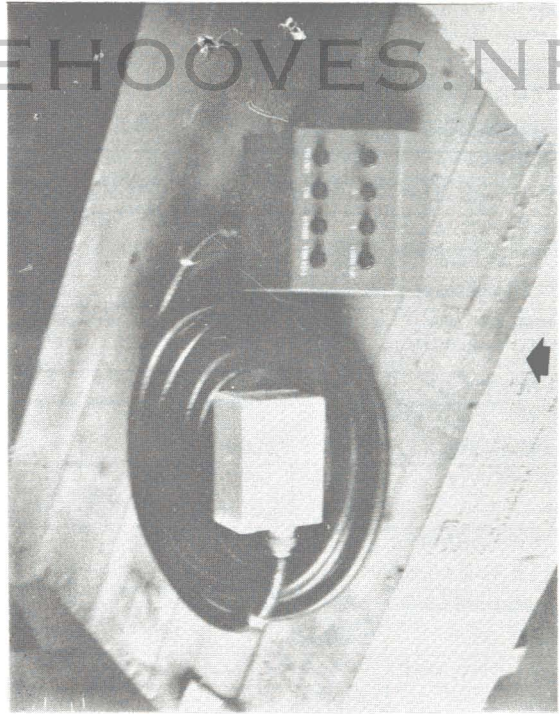
FUNCTIONAL DESCRIPTION

The ordnance and prevalue simulator simulates fuel prevalue, thrust chamber ignitors, gas generator ignitors, umbilical tower mast explosive bolts, hold down bolts, nitrogen start valve, thrust chamber pressure switch, thrust chamber valve switch, gas generator valve switch. The simulator circuit contains time delay relays and circuit breakers with and without slaved auxiliary switches. Simulation is accomplished by opening or closing circuit breakers to interrupt voltages. There are 39 switches on the circuit breaker panel to accomplish opening and closing of circuit breakers, this panel is located on the top of simulator.

ITEM NUMBER

189

NOMENCLATURE		
SIMULATOR UNIT, SWITCHING		
FSN 4935-776-2633AE		PART NO. 209191
TYPE/MODEL NO. NA	MFRS NAME REMINGTON RAND UNIVAC	
DIMENSIONS 6X6X4 IN		WEIGHT 20 LBS
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 6	COND 0-2	UNIT PRICE \$350
TECH ORDER 31X7-22-6-4		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



TECHNICAL DESCRIPTION

Switching unit, simulating data, consisting of a portable box simulator, aluminum, with 8 double pole-single throw spade handle switches on front side, 1-14 pin female cable connector (MS03102-00-19P) on back side; 215 inches of 5/8 inch ID cable, connector, plug electrical, 82 male contact.

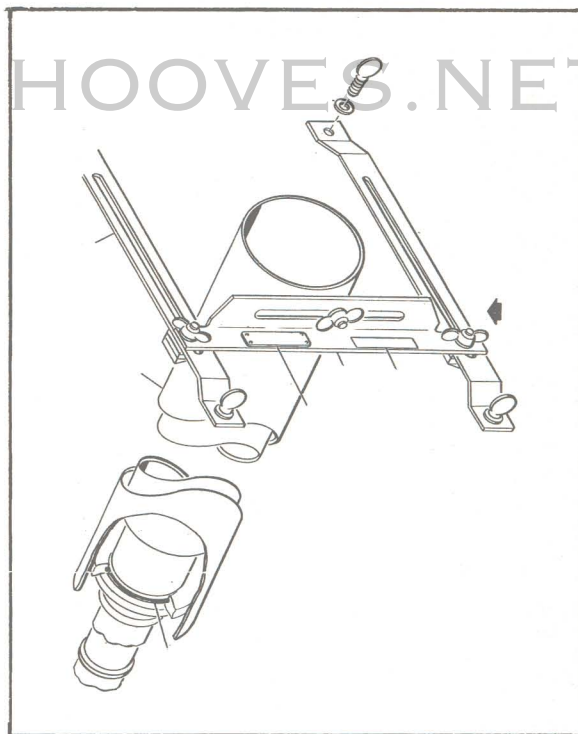
FUNCTIONAL DESCRIPTION

Required to check the Guidance Computer Paper Tape Reader Control Logic Circuits accurately. It is necessary to feed the Reader Control Unit only one paper tape frame at a time so that positive results can be observed before proceeding to a new frame.

ITEM NUMBER

52

NOMENCLATURE SLEEVE, PROTECTIVE FUEL FILL CONNECTOR		
FSN 1450-734-9772AE		PART NO. 327N8866000-019
TYPE/MODEL NO. METAL		MFRS NAME MARTIN COMPANY
DIMENSIONS SEE BELOW		WEIGHT NA
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 12	COND 0-2	UNIT PRICE \$799
TECH ORDER 21M-HGM24A-12-2, 21M-HGM25A-4-2		
DISCONNECT T 1/2 HR	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME 1/2 HR	SPEC SKILLS NONE	



Items 52 and 53

TECHNICAL DESCRIPTION

Sleeve is approximately 6-1/2 inches in diameter and 19 inches in length. Prior to the introduction of the ground half quick disconnect, the protective sleeve is positioned and fastened to the missile skin. Following the fueling operation, the protective sleeve is removed and stored in the MAMS.

FUNCTIONAL DESCRIPTION

The Stage II Fuel Fill Connector protective sleeve serves as a guide during insertion of the ground half quick disconnect and provides a means for draining fuel spillage over board.

ITEM 53 NOMENCLATURE: Sleeve, Protective Fuel Fill Connector, FSN; 1450-734-9777AE, P/N; 327N886000-009, Qty 6 ea, unit cost \$864., all other block data is same as item 52.

TECHNICAL DESCRIPTION

Same as item 52 except the sleeve is 52 inches long.

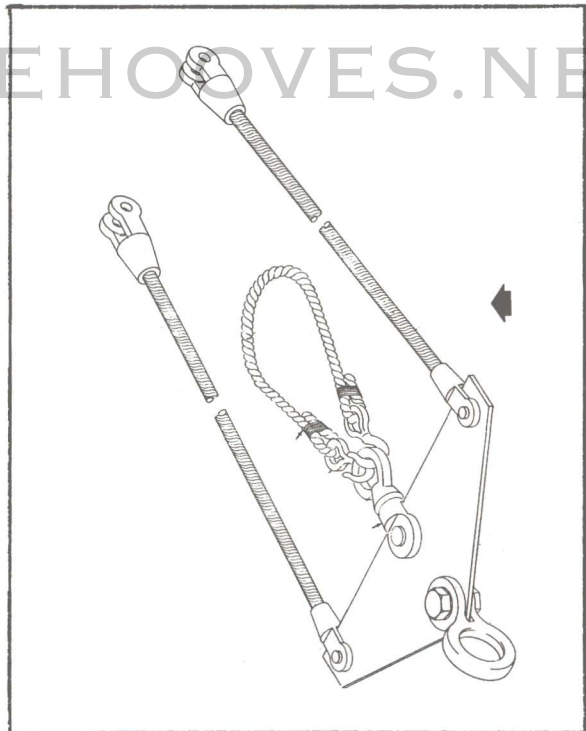
FUNCTIONAL DESCRIPTION

Same as item 52 except this sleeve is used with Stage I.

ITEM NUMBER

88

NOMENCLATURE		
SLING		
FSN		PART NO.
1450-822-8799AE		59-209-1588
TYPE/MODEL NO.	MFRS NAME	
NA	AM&F	
DIMENSIONS		WEIGHT
SEE BELOW		NA
LOCATION		
SEE PARAGRAPH 2		
GENERAL INSTRUCTION SHEET		
QUANTITY	COND	UNIT PRICE
5	0-2	\$150
TECH ORDER		
NA		
DISCONNECT T	SPEC TOOLS/EQUIP	
NA	NONE	
REMOVAL TIME	SPEC SKILLS	
NA	NONE	



TECHNICAL DESCRIPTION

Multiple leg sling, consisting of: (2) wire ropes, each 10 Ft long, 1.2 IN diameter; capacity 9.35 tons; (1) manila rope 4 Ft long, 1 IN diameter; capacity 4.5 tons. Wire rope legs have socket fittings at both ends; manila rope leg has hooks at both ends. Lifting plate is fitted with safety shackle to accept 5-ton capacity hook of Coles Crane.

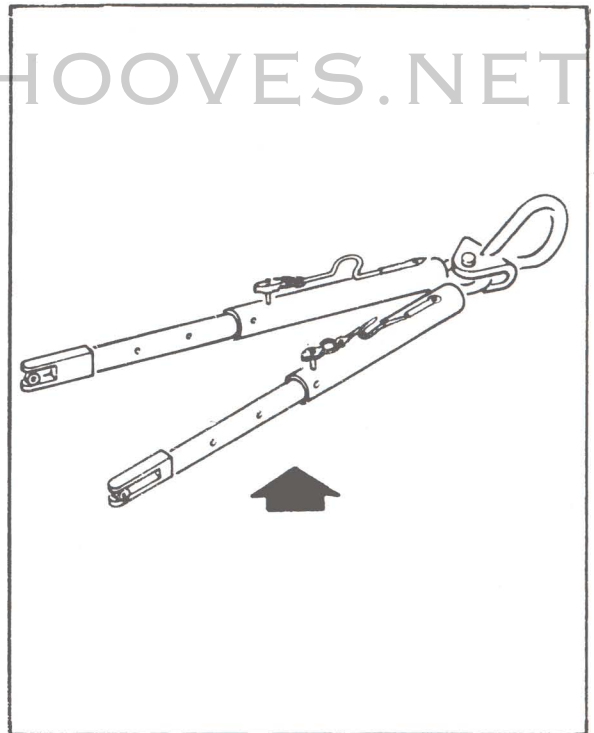
FUNCTIONAL DESCRIPTION

Attached at one end to the Rod End Cap (P/N 59-214-1112) and at other end to an electric hoist. Sling functions as a means of removing and replacing Closure Door Cylinder (P/N 59-214-1100) after Cylinder has been detached from Launcher for repairs and maintenance.

ITEM NUMBER

47

NOMENCLATURE		
SLING, MULTIPLE LEG		
FSN 1450-476-3703AE		PART NO. 1-240837
TYPE/MODEL NO. HLU-35/E		MFRS NAME AEROJET GENERAL
DIMENSIONS SEE BELOW		WEIGHT NA
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 5	COND 0-2	UNIT PRICE \$484
TECH ORDER 2K-LR87-4		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



TECHNICAL DESCRIPTION

The sling assembly consisting of two adjustable tubular struts hinge at the top. A ring fitting accommodates a hook. Each strut has at its base an axial mounted fitting for a 3/8 inch bolt. The struts may be spread to mate with holes from 4 inches apart to 28 inches apart. They may be adjusted individually to lengths of 9-3/4 inches, 12-3/4 inches or 16-3/4 inches. Loads up to 500 lbs can be handled.

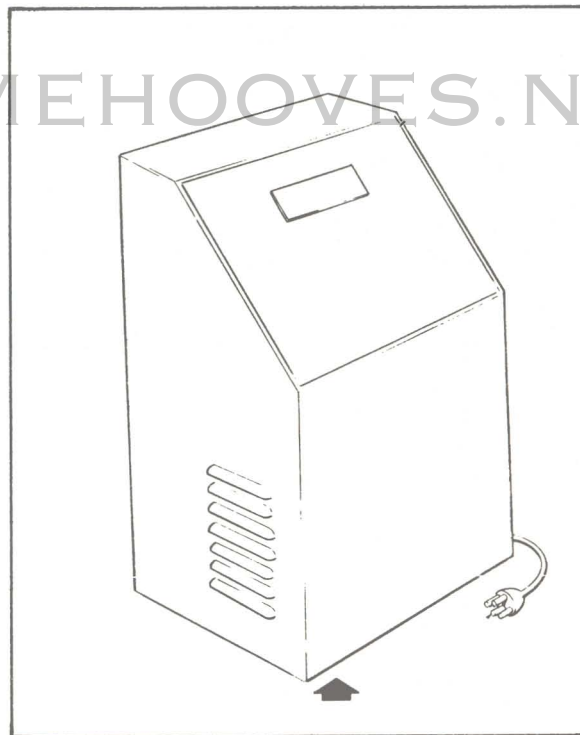
FUNCTIONAL DESCRIPTION

Used in conjunction with an overhead hoist for handling various engine sub-assemblies during cleaning and maintenance operation.

ITEM NUMBER

130

NOMENCLATURE		
SOLDERING AND BRAZING OUTFIT		
FSN	PART NO.	
3439-897-6157	59-209-1690	
TYPE/MODEL NO.	MFRS NAME	
NA	AM&F	
DIMENSIONS	WEIGHT	
14X12X25 IN	128 LBS	
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY	COND	UNIT PRICE
5	0-2	\$500
TECH ORDER 35M3-2-4-14		
DISCONNECT T	SPEC TOOLS/EQUIP	
NA	NONE	
REMOVAL TIME	SPEC SKILLS	
NA	NONE	



TECHNICAL DESCRIPTION

Machine, brazing, portable, with casters, safety light, air cooled transformer and footswitch, plier type grip allows for one hand operation. May be used to braze brass, copper, bronze, steel and other dissimilar metals. Will accommodate up to 3 inch tubing with 1/16 IN wall. Specifications: Input power, 460V, 50-60 Cy, single phase 7-1/2 KVA; plier dimensions, length of throat 6-1/4 IN, electrode face, 1-3/4 IN X 2 IN; footswitch, momentary type, normally off. Length of electrical leads: Primary: 10 Ft, Switch: 6 Ft, Jaws: 6 Ft.

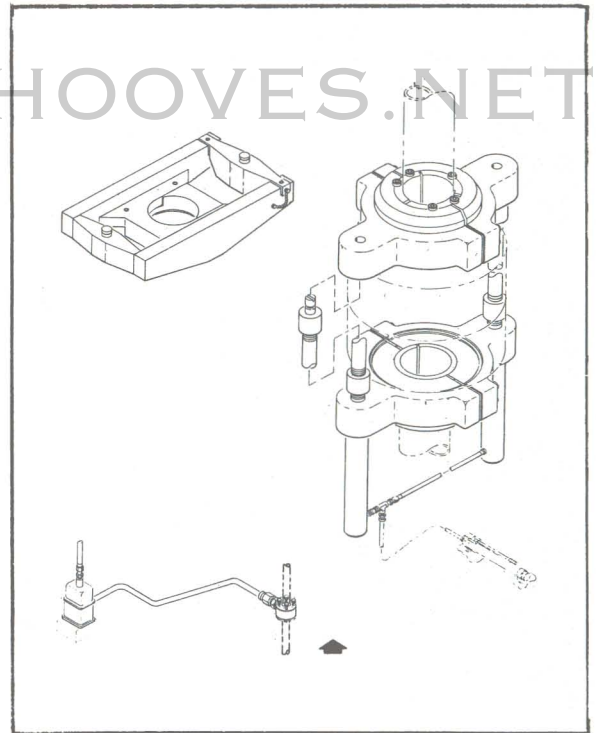
FUNCTIONAL DESCRIPTION

Used to dismantle and assemble brazed fittings in the launcher hydraulic system.

ITEM NUMBER

18

NOMENCLATURE		
SPREADER, PIPE		
F S N	PART NO.	
1440-861-5990AE	59-209-1700	
TYPE/MODEL NO.	MFRS NAME	
NA	AM&F	
DIMENSIONS	WEIGHT	
NA	40 LBS	
LOCATION		
SEE PARAGRAPH 2		
GENERAL INSTRUCTION SHEET		
QUANTITY	COND	UNIT PRICE
4	0-2	\$793
TECH ORDER		
35M3-2-4-14		
DISCONNECT T	SPEC TOOLS/EQUIP	
1 HR	NONE	
REMOVAL TIME	SPEC SKILLS	
NA	NONE	



TECHNICAL DESCRIPTION

Consists of 2 clamp type Hub assemblies, Hydraulic Ram and assorted lengths of tube extensions.

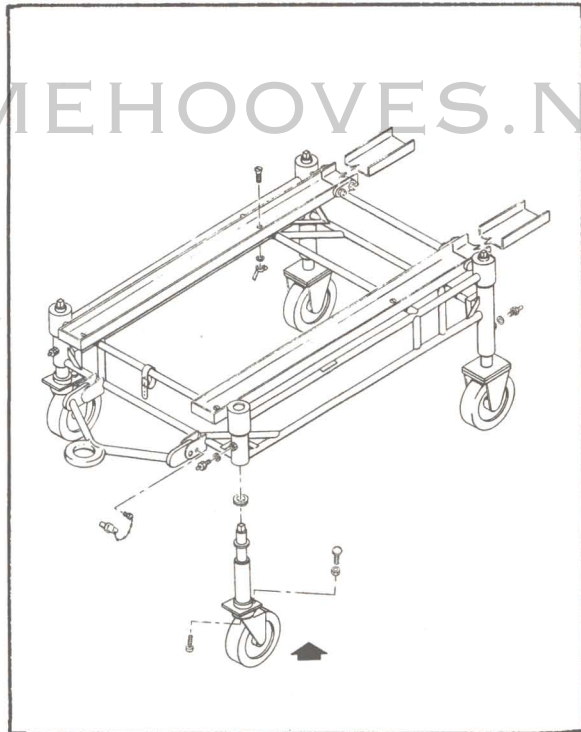
FUNCTIONAL DESCRIPTION

Used to separate pipe sections to prevent Flange and "O" Ring damage. Hubs are clamped to pipe sections and are separated by action of Hydraulic Ram. Used with S-45 Porto Pump. Black Hawk Mfg., Co.

ITEM NUMBER

120

NOMENCLATURE STAND, DEGREASER		
FSN 1450-980-8538AE		PART NO. 59-202-1551
TYPE/MODEL NO. NA	MFRS NAME AM&F	
DIMENSIONS 50X36 IN	WEIGHT 1,700 LBS	
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 4	COND 0-2	UNIT PRICE \$10,000
TECH ORDER 21M-HGM25A-2-2-1		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



TECHNICAL DESCRIPTION

Rectangular steel platform with two "U" type channels 1.5 IN X 4 IN X 54 IN with stop plates, mounted on four (4) 8 IN diameter casters. Corner posts have a screw type elevating device to raise or lower platform Equipped with a retractable towbar. 1,700 lb load capacity.

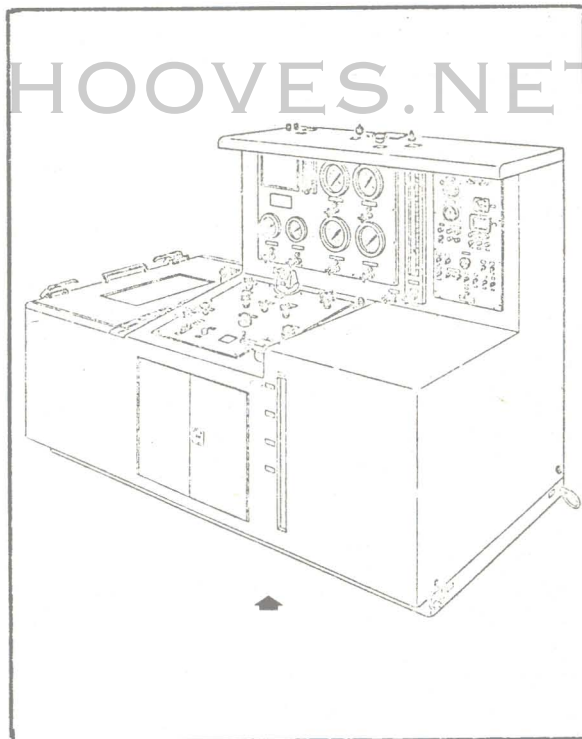
FUNCTIONAL DESCRIPTION

Used to load and support the Aerojet Degreaser collecting unit MXU-96/E.

ITEM NUMBER

194

NOMENCLATURE STAND, FUEL SYSTEMS TEST COMPONENTS		
FSN * 4935-784-8773AE		PART NO. * 327M1600000-009
TYPE/MODEL NO. A/F 24T-1 (XC-3)	MFRS NAME MARTIN CO	
DIMENSIONS 96X48X80 IN		WEIGHT 4,500 LBS
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 3	COND 0-2	UNIT PRICE \$14,700
TECH ORDER 33D9-2-5-1		
DISCONNECT T 4 HRS	SPEC TOOLS/EQUIP CRANE AND DOLLY	
REMOVAL TIME 5 HRS	SPEC SKILLS NONE	



*Includes FSN 4935-798-7193AE, Part No. 327M1600000-029 which is similar.

TECHNICAL DESCRIPTION

A self-contained bench type, explosion-proof welded steel cabinet. Operating controls and indicators are accessible through front or rear cabinet doors. Contains the electrical controls and indicators required to operate the stand. The vertical panel contains GN2 and fuel pressure gages, control valves and a GN2 leak meter. The sloping panel contains manually operated control valves, and pneumatic regulators required to operate the stand. Electrical power requirements: 28VDC; 115V 60 CPS 1 Ph and 440V 60 CPS 3 Ph. Fuel is drawn from a 100 gal reservoir through a low pressure filter. The fuel system flow range is from 0 to 60 GPM with a pressure range from 25 PSIG at 60 GPM to 245 PSIG at 12 GPM. Safety relief valve relieves if pressure exceeds 285 PSIG. A heat exchanger cools the fuel before it is returned to the fuel reservoir. The cooling system plumbing circulates water through the heat exchanger. GN2 is used to test components, actuate fuel system controls, purge fuel system and pressurize fuel system accumulator. Two gauges monitor the GN2 pressure. One indicates from 0-300 PSI, the other from 0-1500 PSI. The maximum GN2 flow on the test stand is 100 CFM. Three safety relief valves in the GN2 system relieve excessive pressure. High pressure between 1500 and 1650 PSIG, low pressure between 150 and 165 PSIG, and the fuel bypass circuit between 300 and 330 PSIG.

FUNCTIONAL DESCRIPTION

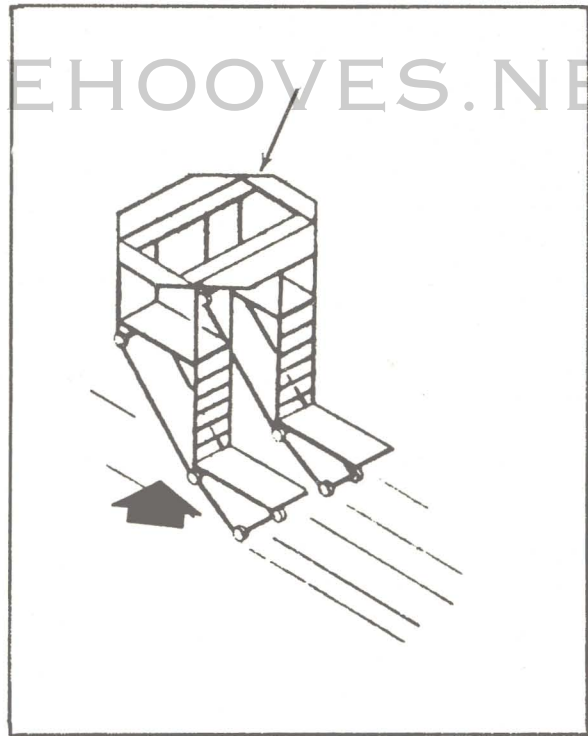
Provides a means of testing the operation of missile airborne and ground operating equipment fuel system components under simulated operating conditions. Capabilities include leakage, proof pressure and actuation testing of various types of components removed from the fuel system of the missile and ground support equipment.

ITEM NUMBER

54

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NOMENCLATURE		
STAND, MAINTENANCE		
FSN 1450-735-3684AE		PART NO. 59-202-1878
TYPE/MODEL NO. NA		MFRS NAME AM&F
DIMENSIONS 12X12X16 FT		WEIGHT 300 LBS
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 12	COND 0-2	UNIT PRICE \$1,800
TECH ORDER 35M3-2-4-14, 21-SM68-2J-2-1		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



TECHNICAL DESCRIPTION

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Portable light weight stand, with (3) platform levels of aluminum alloy tubing and plate construction, adjustable members, equipped with rubber tired wheels to facilitate positioning. Provides aluminum grating floor at each level, Structure, Guard Rails and Ladders are two inch aluminum. Designed for quick assembly and disassembly. Mounts in Flame Deflector.

FUNCTIONAL DESCRIPTION

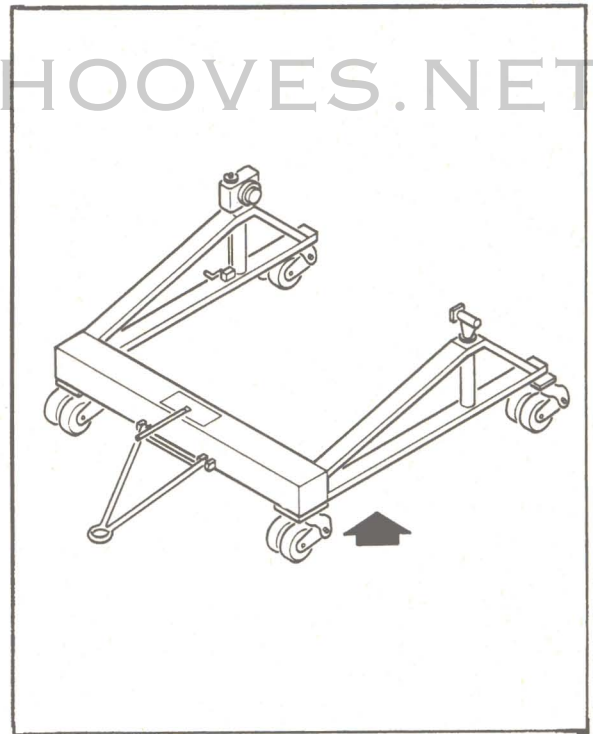
Provides access for personnel to missile stage I, engine and igniter.

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ITEM NUMBER

75

NOMENCLATURE		
STAND, MAINTENANCE		
FSN 1450-798-9905AE		PART NO. 1-236601
TYPE/MODEL NO.	MFRS NAME	
ETU-22/E	AEROJET GENERAL	
DIMENSIONS 12.25X13.7X9 FT		WEIGHT 2,600 LBS
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 8	COND 0-2	UNIT PRICE \$9,332
TECH ORDER 2K-LR91-14, 35A4-5-6-4		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



TECHNICAL DESCRIPTION

A frame fabricated from aluminum alloy and steel mounted on wheels. The frame is equipped with a manually operated hydraulic system and gear box. Dimensions: 144 IN long, 150 IN wide, 72 IN high, 102 IN high, max.

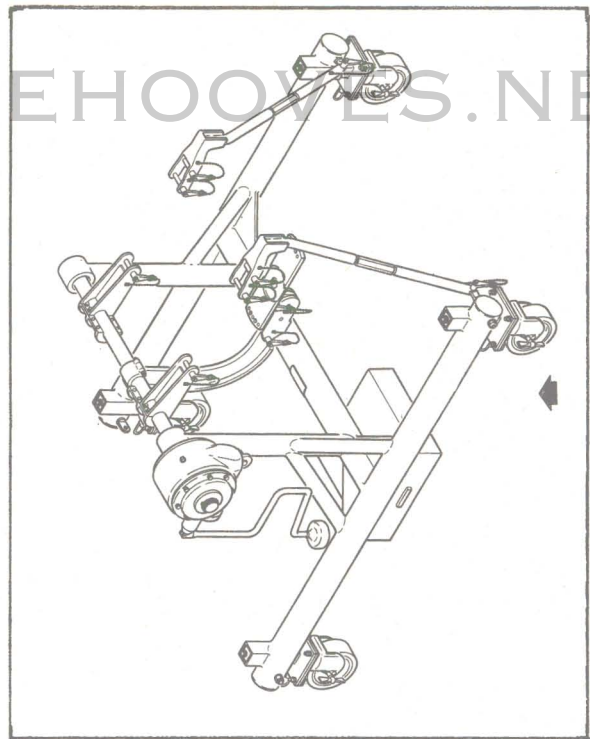
FUNCTIONAL DESCRIPTION

Used to support the engines removed from missile in depot or squadron maintenance area for shipping preparation, inspection, maintenance and to facilitate removal of the turbo pump assy and the thrust chamber assy. Engine can be raised and lowered 2.5 Ft and rotated 360 degrees.

ITEM NUMBER

199

NOMENCLATURE		
STAND, MAINTENANCE		
FSN 4935-791-9303AE		PART NO. 1-236612-9
TYPE/MODEL NO.		MFRS NAME
ETU-35/E		AEROJET GENERAL
DIMENSIONS SEE BELOW		WEIGHT 302 LBS
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 6	COND 0-2	UNIT PRICE \$1,500
TECH ORDER 35A4-5-7-4/2K-LR87-2, FIG 39-19		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



TECHNICAL DESCRIPTION

Length.....60.00 in.
 Width.....46.50 in.
 Height.....50.00 in.
 Leg sections extended..41.25 in.
 leg sections retracted.38.25 in. max
 Steel welded construction. Has a gear box and crank
 to enable rotation of the Turbopump Assy.

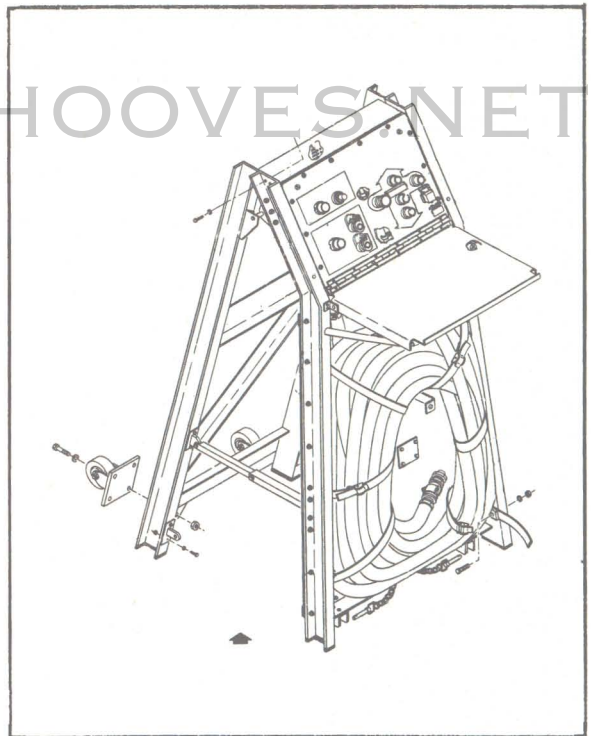
FUNCTIONAL DESCRIPTION

1-4. The maintenance stand is used to support and position the turbopump assembly during installation and removal from the rocket engine, and during maintenance and repair operations.

ITEM NUMBER

8

NOMENCLATURE		
STATION, PORTABLE CONTROL		
F SN	PART NO.	
1450-735-3685AE	59-204-1215-3	
TYPE/MODEL NO.	MFRS NAME	
NA	AM&F	
DIMENSIONS	WEIGHT	
55X49X30 IN	NA	
LOCATION		
SEE PARAGRAPH 2		
GENERAL INSTRUCTION SHEET		
QUANTITY	COND	UNIT PRICE
4	0-2	\$5,200
TECH ORDER		
21-HGM25A-2-2-1, 35M3-2-4-14		
DISCONNECT T	SPEC TOOLS/EQUIP	
NA	NONE	
REMOVAL TIME	SPEC SKILLS	
NA	NONE	



TECHNICAL DESCRIPTION

CONTROL STATION PORTABLE GROUND LEVEL: Aluminum overall dimensions fully opened. Panel approximately 18 IN l by 12 IN h with the following controls:

Main Platform -	Lock Platform
	Down - Fast
	Down - Slow
	Up - Slow
	Stop
Water Spray -	Missile Protection
	Flame Deflector
	Off
Power Pack -	On
	Off
Telephone Jack	

Writing shelf approximately 13 IN w by 18 IN l, located 40 IN above ground. Connecting cable 46 Ft long, with ZZM-W1020-10P Connector on end. Rear legs hinged at top are held to front by pins in folded position. Writing shelf folds up to cover operating panel. Two rigid casters on rear legs used to transport unit.

FUNCTIONAL DESCRIPTION

Unit is used for local control providing line of sight operation while operating launcher platform during Missile emplacement. The Panel is connected to the control circuitry by a plug which fits into a covered receptacle in the Main Door foundation, providing the necessary interlocks to disable the Tunnel Entrance controls during the period that the panel is connected. The control is also used to check out water spray system while launcher is in up-lock position.

ITEM NUMBER

117

NOMENCLATURE STORAGE RACK, PORTABLE GUARD RAIL		
FSN *1450-979-5326AE		PART NO. *59-202-2194-2
TYPE/MODEL NO. NA	MFRS NAME AM&F	
DIMENSIONS 108X50 IN	WEIGHT NA	
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 12	COND 0-2	UNIT PRICE \$250
TECH ORDER 21-SM68-2J-2-1, 35M3-2-4-14		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



*Quantity includes 1450-985-1675AE, P/N 59-202-2193 which is similar.

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TECHNICAL DESCRIPTION

Guard rail support is an aluminum support rack. Holes are spaced equal distant in base structure to accept guard rails in a vertical position. Four lifting eyes installed at corners.

FUNCTIONAL DESCRIPTION

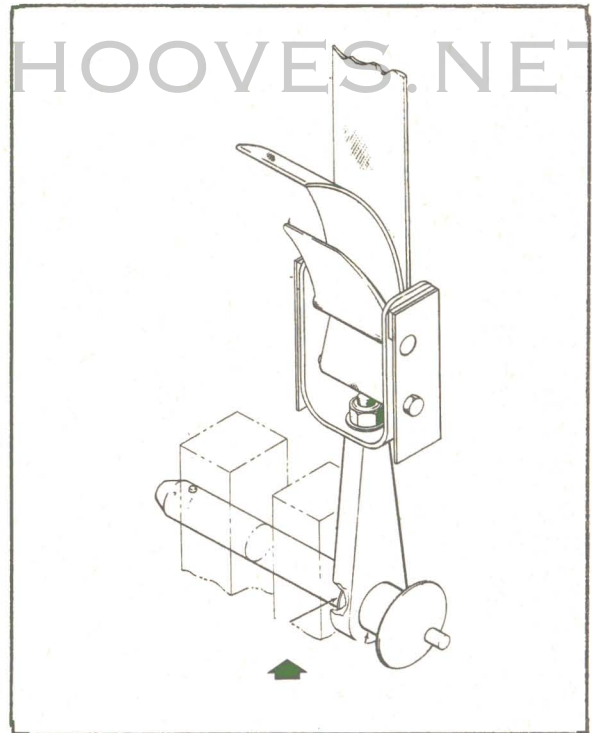
Support, Guard Rail, is required to prevent damage to the Stage I Guard Rails, P/N's 59-202-1253, -1255, -1256, and 1256-2 during transportation from the shops to the missile silo, also during storage at the shops. Rack provides a means of separating and holding the rails in an upright position to prevent any such damage as caused by rubbing or their ends piercing holes into the mesh screen portions of the other during these trips or while handling and storing them. *FSN 1450-985-1675AE holds Stage II Guard Rails in an upright position during storage and handling to prevent damage.

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ITEM NUMBER

99

NOMENCLATURE		
STRAP ASSEMBLY		
FSN 1450-865-0579AE		PART NO. 59-202-1549
TYPE/MODEL NO.	MFRS NAME	
NA	AM&F	
DIMENSIONS SEE BELOW		WEIGHT NA
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 4	COND 0-2	UNIT PRICE \$200
TECH ORDER NA		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



TECHNICAL DESCRIPTION

Strap assembly nylon belting 30 Ft long, 2 IN wide, equipped buckle assembly both ends and quick release pins.

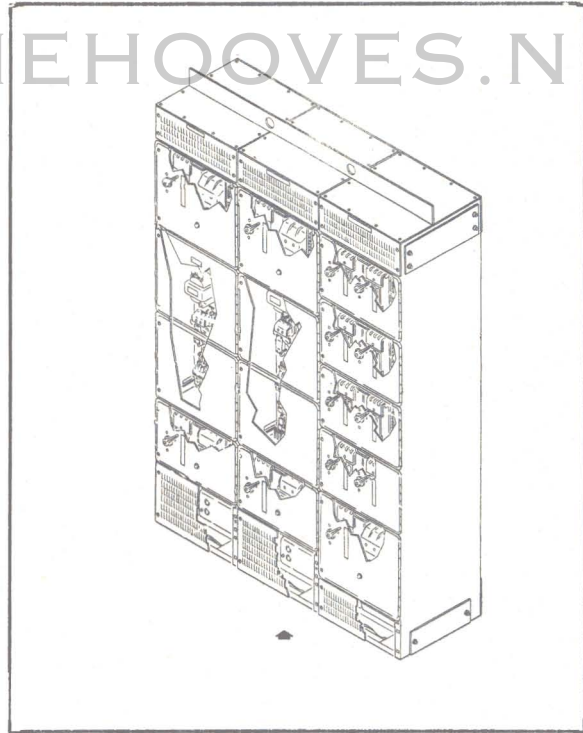
FUNCTIONAL DESCRIPTION

Used to hold lower half of transtainer ring to Stage I while being removed from transporter. This enables Stage I to be lifted with transtainer ring installed. Ring is then lowered evenly from both sides until it clears the missile section, thus preventing damage to the missile.

ITEM NUMBER

15

NOMENCLATURE		
SWITCH BOARD, POWER		
FSN		PART NO.
1440-819-3276AE		327N3400000-019
TYPE/MODEL NO.		MFRS NAME
JEU-7(XC-2)E		MARTIN COMPANY
DIMENSIONS		WEIGHT
90.4X60X20.2 IN		1,800 LBS
LOCATION		
SEE PARAGRAPH 2		
GENERAL INSTRUCTION SHEET		
QUANTITY	COND	UNIT PRICE
18	0-2	\$5,000
TECH ORDER		
31X4-2-11-4		
DISCONNECT T	SPEC TOOLS/EQUIP	
2 HRS	LIFT, DOLLY	
REMOVAL TIME	SPEC SKILLS	
2 HRS	ELECTRICIAN	



TECHNICAL DESCRIPTION

Application of 480V, 60 Cy., 3PH to 40 HP blower motor, 7.5HP compressor of equip. terminal air conditioner. Supplies 480V to 40HP main hydraulic pump and 120V to 1/4HP filter pump. Cabinets consist of control transformers (Step Down) 480V 60 Cy., 3PH to 120V, 60 Cy., 1 PH for starter assemblies for filter pump and panel lighting. Cabinets contain circuit breakers, overload relays, contactors, and relays. Supply voltage 456V, 60 Cy., 3PH (min) 504V, 60 Cy., 3PH (max). Control voltage 120V, 60 Cy., 1PH. Current capacity 600 amps (max) short circuit current 25,000 amps (max) ambient temperature -32°F (min) +131°F (max). Control equipment manufactured by Westinghouse.

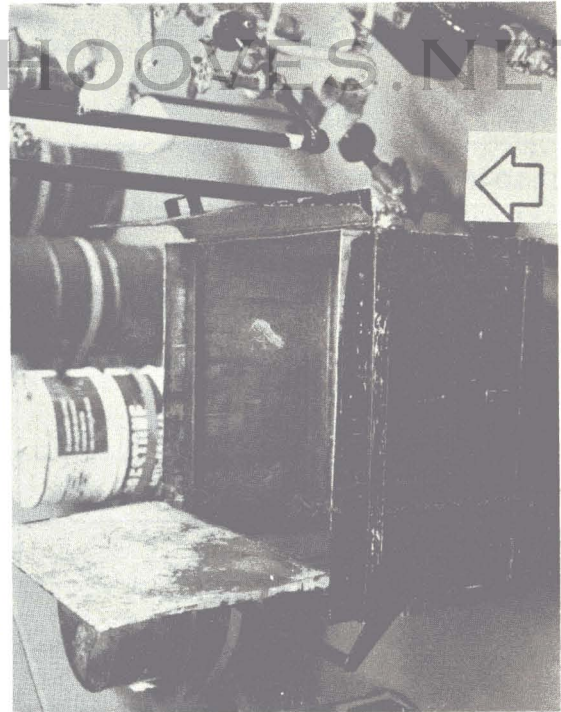
FUNCTIONAL DESCRIPTION

Consists of three (3) cabinets joined together, containing various types of switchgear and relays to supply power to the main hydraulic pump, hydraulic filter pump, air compressor and blower motors. Equipment located in equipment terminal and manufactured by Westinghouse.

ITEM NUMBER

244

NOMENCLATURE		
TANK, COLD DIP		
FSN 4940-035-6032		PART NO. 54MOC163-1
TYPE/MODEL NO. NA		MFRS NAME NA
DIMENSIONS 48X48X42 IN		WEIGHT NA
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 18	COND 0-2	UNIT PRICE \$255
TECH ORDER SAC CEM 35R		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



TECHNICAL DESCRIPTION

This tank is made of steel, hinged top, caster mounted with push bar handle.

FUNCTIONAL DESCRIPTION

This tank is used to clean and rinse supercharger oil purifier and filter parts used on diesel engines.

ITEM NUMBER

20

NOMENCLATURE TANK, COLLAPSIBLE		
FSN 1440-888-0634AE		PART NO. 59-209-1696
TYPE/MODEL NO. NA	MFRS NAME AM&F	
DIMENSIONS 92X56 IN	WEIGHT 39 LBS	
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 30	COND 0-2	UNIT PRICE \$500
TECH ORDER 21M-HGM25A-2-8-5		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



TECHNICAL DESCRIPTION

Pillow shaped flexible rubber tank, 250 gallon capacity, has (1) 1 inch 90 degree street elbow, (1) 6 foot long x 1 inch diameter gasoline hose and couplings. (1) bronze 1 inch gate valve, (1) 1 foot long x 1 inch diameter gasoline hose and (2) couplings.

FUNCTIONAL DESCRIPTION

Used to store hydraulic fluid removed from reservoirs.

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ITEM NUMBER

97

NOMENCLATURE		
TANK LIQUID		
FSN 1450-860-6777AE		PART NO. 255143-19
TYPE/MODEL NO.	MFRS NAME	
TMU-61/E	AEROJET GENERAL	
DIMENSIONS 54X34X52 IN		WEIGHT 400 LBS
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 5	COND 0-2	UNIT PRICE \$10,252
TECH ORDER 2K-LR87-4, 37C2-7-2-3		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



TECHNICAL DESCRIPTION

Mobile unit consisting of adapter cones, flex tubing, ducts, and filter condensing tank system. Tank capacity 55 gals. Unit constructed of low carbon steel, frame mounted on casters.

FUNCTIONAL DESCRIPTION

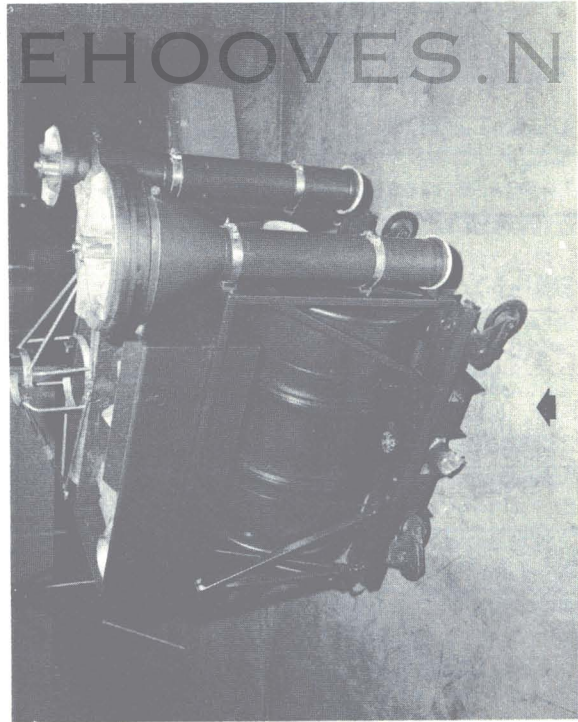
Tank is used to catch liquid solvent received from rocket engine during engine flushing. Tank is used with decontaminating unit.

ITEM NUMBER

107

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NOMENCLATURE		
TANK, LIQUID SOLVENT		
FSN 1450-893-3160AE		PART NO. 255143-19
TYPE/MODEL NO.	MFRS NAME	
NA	AEROJET GENERAL	
DIMENSIONS 54X34X52 IN		WEIGHT 400 LBS
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 2	COND 0-2	UNIT PRICE \$1,972
TECH ORDER 21M-HGM25A-2-3-2		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



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TECHNICAL DESCRIPTION

Mobile unit consisting of adapter cones, flex tubing, ducts, and a filter condensing tank system. Tank capacity 55 gals, material: low carbon steel.

FUNCTIONAL DESCRIPTION

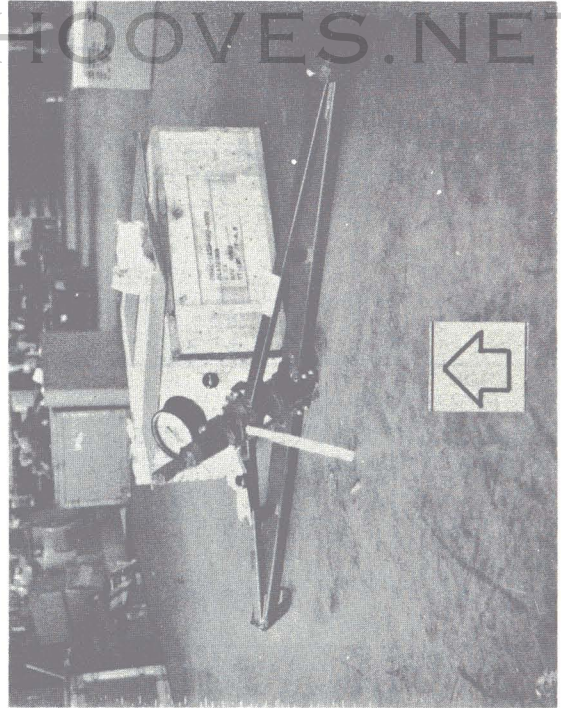
Tank collects and stores degreasing solvents received from rocket engine during engine flushing.

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ITEM NUMBER

311

NOMENCLATURE		
TENSIO METER		
FSN 6635-813-6856		PART NO. 59-209-1179
TYPE/MODEL NO. NA		MFRS NAME AM&F
DIMENSIONS 5X2X1 FT		WEIGHT NA
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 6	COND 0-2	UNIT PRICE \$1,500
TECH ORDER 33A3-3-9-3, 21M-HGM-25A-2-8-5		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



TECHNICAL DESCRIPTION

Tensiometer, dial indicating pound scale, 0-3000 pound range, 3/4 in. to 1 1/2 in. dia. material accomodated, mounted by clamp with deflection angle adjuster.

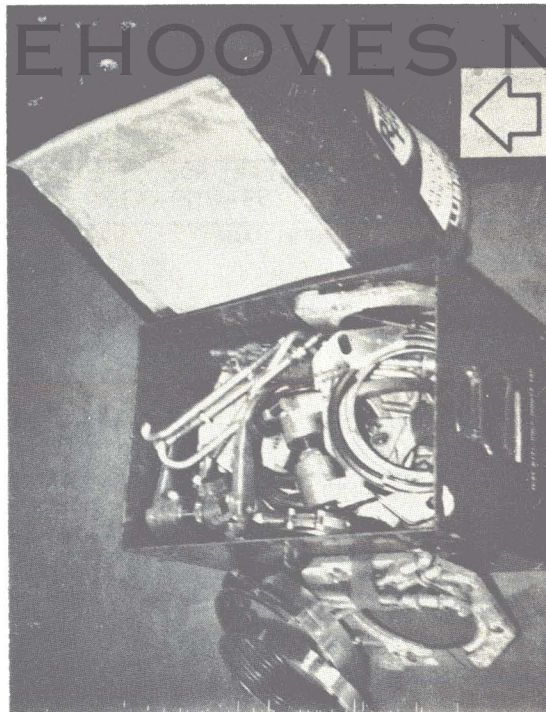
FUNCTIONAL DESCRIPTION

Used to compare tension on launcher platform cables, so that all cables can be adjusted to have the same tension. The turn-buckle attached to the cables is then adjusted until proper cable tension is obtained.

ITEM NUMBER

234

NOMENCLATURE		
TEST KIT, PRESSURE LEAK		
FSN 4935-979-9829AE		PART NO. 258312
TYPE/MODEL NO.	MFRS NAME	
TTU-190/E	AEROJET GENERAL	
DIMENSIONS 18X12X12 IN		WEIGHT 20 LBS
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 9	COND 0-2	UNIT PRICE \$1,433
TECH ORDER 2K-LR91-4		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



TECHNICAL DESCRIPTION

Kit contains tools and closures to seal the engine for pressure test consisting of manifold pressure pick up, compression tool clamps and bellows, bellow retainers closures, plugs, clamps, flanges, seals, plates and tool box.

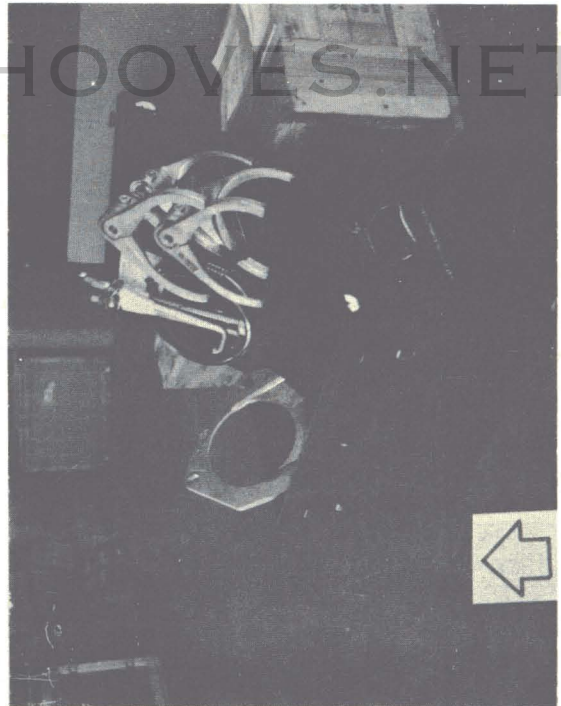
FUNCTIONAL DESCRIPTION

Kit is used for sealing the rocket engine plumbing necessary to facilitate pressure leak test.

ITEM NUMBER

182

NOMENCLATURE TEST KIT, PRESSURE, ROCKET ENGINE		
FSN 4935-716-6231AE		PART NO. 1-233586-20
TYPE/MODEL NO. TTU-106/E	MFRS NAME AEROJET GENERAL	
DIMENSIONS 18X12X12 IN		WEIGHT NA
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 2	COND 0-2	UNIT PRICE \$950
TECH ORDER 2K-LR87-4		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



TECHNICAL DESCRIPTION

This kit contains tools and closures made of corrosion resistant steel to seal the engine for pressure test. It consists of: Manifold, Pressure Pickup (2 each); Compression Tool, Clamp (1 each); Flange Pipe, Combustion Chamber (1 each); Reatiner, Bellows (4 each); Compression Tool, Bellows (2 each); Closure Assembly (1 each); Plug, Vernier Engine Nozzle (1 each); Coupling, Clamp, Grooved (1 each); Clamp, Marmon Type (4 each); Flange, Pipe, Fuel (2 each); Flange, Pipe, Liquid Oxygen (2 each); Seal (6 each); and Tool Box, Rocket Engine Maintenance (1 each).

FUNCTIONAL DESCRIPTION

This kit is required to accomplish pressure checks on the 2K-LR87-AJ-3 rocket engine during maintenance, overhaul, and checkout. It is used to plug or cap various openings in the engine plumbing to provide pressure necessary to facilitate pressure leak test.

ITEM NUMBER

205

NOMENCLATURE TEST KIT, ROCKET ENGINE THRUST CONTROL		
FSN 4935-799-3098AE		PART NO. 1-239800
TYPE/MODEL NO. TTU96E		MFRS NAME AEROJET GENERAL
DIMENSIONS 16X11X10 IN		WEIGHT 35 LBS
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 2	COND 0-2	UNIT PRICE \$2,723
TECH ORDER 33D9-17-25-1, -4		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



TECHNICAL DESCRIPTION

The test set is a portable unit packaged in a water proof, light weight carrying case, incorporating milliamperes with a basic movement range of 100 to 0 to 100 micro-amperes DC which is used with a multiplier (0 to 150,000 ohms) and measures differential voltage. The meter is calibrated to milliamperes (10 to 0 to 10), function meter with two scales for measurement of DC ripple, 0 to 100 and 0 to 50, a pressure indicator assembly with range of 400 to 800 PSIG, 3 each female electrical connectors, 2, 6 pin and 1, 10 pin connector and a five position rotary switch. Operates on 750 PSIG, nitrogen supply, 115 V, 60 CPS.

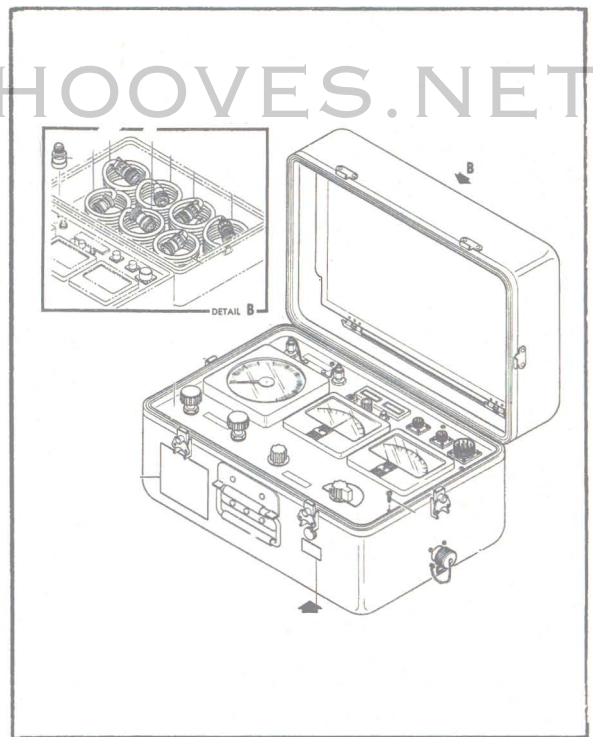
FUNCTIONAL DESCRIPTION

The test set is used to measure DC voltage and level of the DC ripple to the thrust control transducer amplifier to simulate thrust chamber pressure, to monitor thrust control amplifier and system set point, to measure servo bias in differential current to manually control the gas generator valve and servo to monitor gas generator valve travel and travel limiter and to check the limit switch on the LR87-AJ-3 Rocket Engine.

ITEM NUMBER

235

NOMENCLATURE		
TEST KIT, ROCKET ENGINE THRUST CONTROL		
FSN		PART NO.
4935-979-9830AE		1-239800-19
TYPE/MODEL NO.		MFRS NAME
TTU-146/E		AEROJET GENERAL
DIMENSIONS		WEIGHT
16.1X10.8X10.3IN		35 LBS
LOCATION		
SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY	COND	UNIT PRICE
11	0-2	\$2,723
TECH ORDER		
33D9-17-25-1 & -4		
DISCONNECT T	SPEC TOOLS/EQUIP	
NA	NONE	
REMOVAL TIME	SPEC SKILLS	
NA	NONE	



TECHNICAL DESCRIPTION

The test set is a portable unit packaged in a waterproof, light-weight carrying case, incorporating a millimeter, two potentiometers, a five position rotary switch, a female electrical connector, a pressure indicating system and an open and close lamp indicator. Operates on 750 PSI negligible flow and 115V, 60 C: 28V DC plus or minus 2V.

Pneumatic System:

Pressure supply - nitrogen
 Inlet Pressure - 750 PSIG
 Proof test pressure-1500 PSIG
 Operating range - 400 to 800 PSIG

Electrical System:

Alternating current - 115 \pm 5V, 60 CPS
 Direct current - 28 \pm 5V

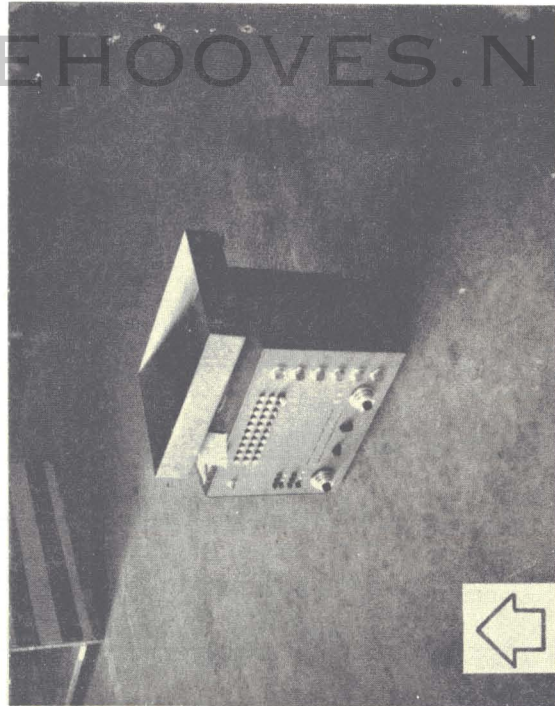
FUNCTIONAL DESCRIPTION

The test set is used to measure DC voltage and level of the DC ripple to the thrust control transducer amplifier to simulate thrust chamber pressure to monitor thrust control amplifier and system set point, to measure servo bias in differential current to manually control amplifier and system set point, to measure servo bias in differential current, to manually control the gas generator valve and servo, to monitor gas generator valve travel and travel limiter and to check the limit switch on the LR87-AJ-3 Rocket Engine.

ITEM NUMBER

230

NOMENCLATURE		
TEST PANEL		
FSN 4935-979-9825AE		PART NO. GS-65678C
TYPE/MODEL NO.	MFRS NAME	
NA	WECO	
DIMENSIONS 18X15X12 IN	WEIGHT 35 LBS	
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 6	COND 0-2	UNIT PRICE \$1,000
TECH ORDER NA		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



TECHNICAL DESCRIPTION

Input power to this test panel is provided by the Electrical Test Panel (I.F. and Servo) of the AN/GRM41 I.F. and Servo Test Set. The power inputs are as follows:

- a. -28VDC
- b. +150VDC
- c. +250VDC
- d. +320VDC
- e. -250VDC
- f. 120VAC 60 CPS single phase
- g. 120VAC 400 CPS phases A & C.

The portable test panel consists of two Audio Frequency Electronic Amplifier Chopper Assemblies; a Direct Current Amplifier Assy; a +75 volt, a -200 volt and a -320 volt power supply; and various lamps, switches and relays.

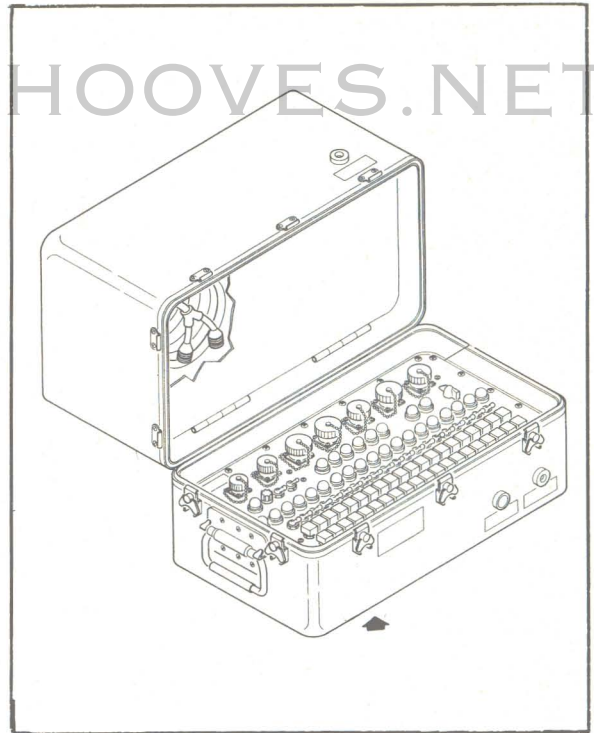
FUNCTIONAL DESCRIPTION

Electrical test panel is a portable unit of test equipment used to check various components, (integrator, coordinate convertor, steering orders, servo drive units) of the ground guidance set. This panel is used in conjunction with the AN/GRM 41 intermediate - frequency - servo components test set. Controls AC and DC power distribution from the electrical test panel of the GRM 41 to the unit under test. It also amplifies DC error signals in servo loops by use of a DC amplifier.

ITEM NUMBER

238

NOMENCLATURE		
TEST SET		
FSN 4935-994-8247AE		PART NO. 242600-19
TYPE/MODEL NO.		MFRS NAME
TTU-143/E		AEROJET GENERAL
DIMENSIONS 21.5X12X16 IN		WEIGHT 35 LBS
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 6	COND 0-2	UNIT PRICE \$1,200
TECH ORDER 33D9-5-21-1 & -4		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



TECHNICAL DESCRIPTION

The test set contains 61 switches used to energize various circuits of the missile airborne controller. There are 50 lamps located on the test set which indicate the condition of the circuits under test. Operational and spare circuits in the test set are connected by use of taper-pin connections which permit the test set to be patched. Four special purpose electrical cables are included.

Power requirements:

Alternating current 115 \pm 10V, 400 \pm 20CPS, single Ph
Direct current 28 \pm 2 \pm 6V

FUNCTIONAL DESCRIPTION

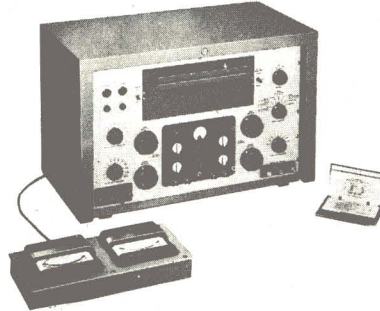
The test set is a portable instrument used in performing a complete checkout of the electrical circuit in the LR91-2 Rocket Engine missile Airborne Controller.

ITEM NUMBER

308

NOMENCLATURE		
TEST SET		
FSN 6625-833-5809		PART NO. 829A
TYPE/MODEL NO. NA	MFRS NAME RADIO FREQUENCY LABS	
DIMENSIONS 18X9X12 IN	WEIGHT 35 LBS	
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 1	COND 0-2	UNIT PRICE \$2,885
TECH ORDER NA		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	

The Model 829A is a higher accuracy version of the Model 829 and uses separately cased, horizontally mounted standard meters. Direct reading accuracy is 0.5% and is 0.25% using calibration charts supplied on all AC and DC ranges. Contains all the operation and instrument protective circuitry included in the Model 829. Light on front panel illuminates work area and standard meters.



TECHNICAL DESCRIPTION

Standard meters are housed in separate protective container. Direct reading accuracy of plus or minus 0.5% or plus or minus 0.25% using correction factors supplied in a convenient pushbutton index. Measures the performance characteristics of AC and DC measuring instruments through voltages from 0.25% millivolts to 2000 volts and currents from 2 microamperes to 20 amperes. Unit will operate from 115 V 50/400 cycle power source. Item without carrying case.

FUNCTIONAL DESCRIPTION

This instrument is used to calibrate the Sensitive Research Model USP Universal Polyranger which is located in the GS-58165 Testpac. The set is a self-contained multi-purpose unit used to calibrate electrical measuring instruments.