DEFENSE MATERIEL UTILIZATION PROGRAM

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DEPARTMENT OF THE AIR FORCE

DOD/DLSC CONTROL NUMBER UF0002
EXCESS LIST NUMBER 65-B9
ISSUE DATE 27 APR 65

TITAN I

VOLUME I-A

AEROSPACE GROUND EQUIPMENT

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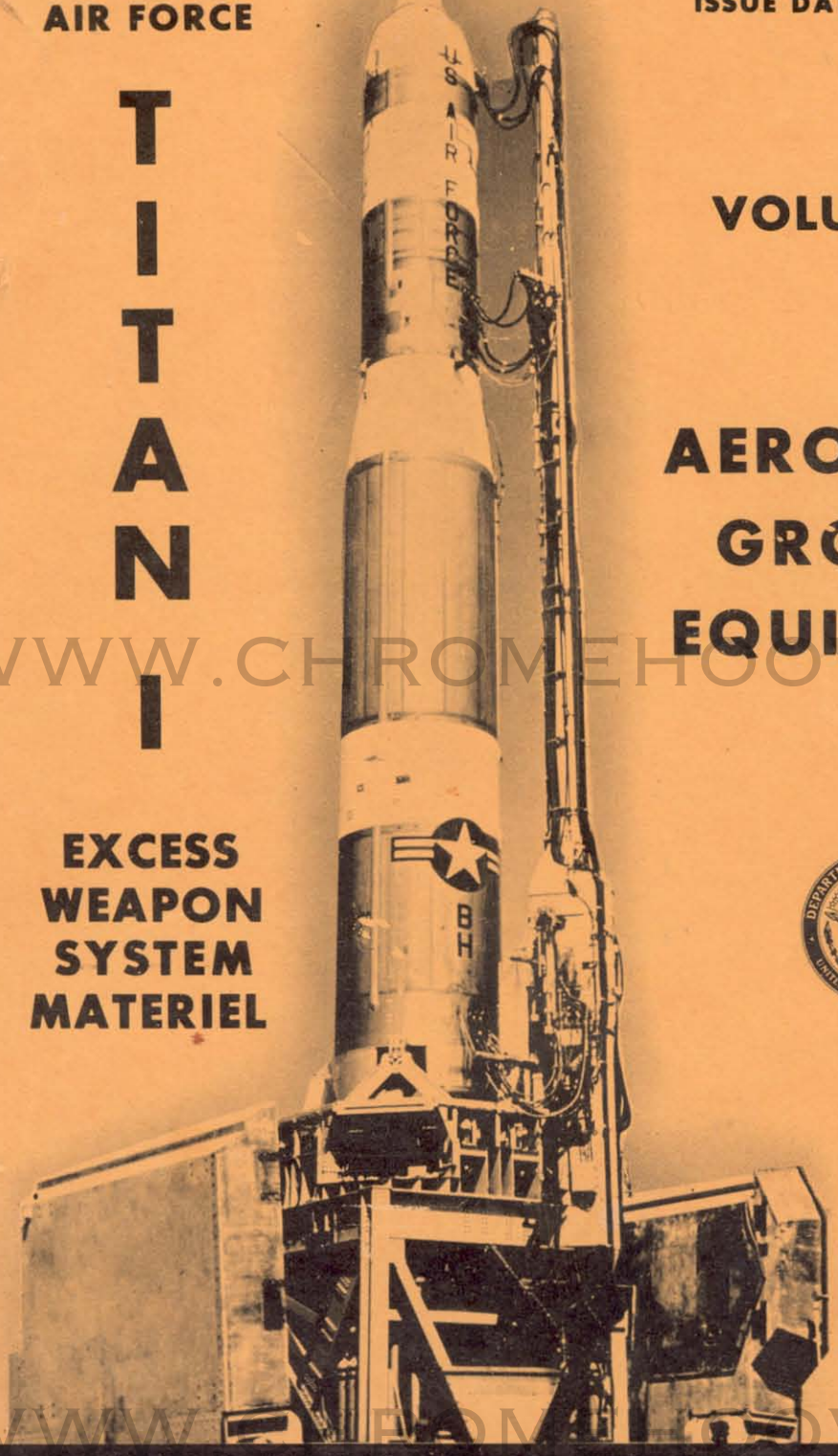
EXCESS WEAPON SYSTEM MATERIEL



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DEFENSE SUPPLY AGENCY
DEFENSE LOGISTICS SERVICES CENTER
BATTLE CREEK, MICHIGAN

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FOREWORD

This Excess Listing is issued by the Defense Logistics Services Center, Battle Creek, Michigan, under authority contained in Department of Defense Directive 5105.22, Department of Defense Instruction 4160.9, DSAM 4140.1 and DSAM 4160.1.

PURPOSE: Disseminate to military service approved Department of Defense activities, selected Federal agency activities and elegible foreign governments, information concerning available excess personal property reported by the Air Force to DLSC for centralized concurrent DOD/GSA screening. The acquisition cost of these missile system components represents a significant portion of previous defense expenditures and warrants extraordinary actions to insure that wherever possible this property be used or converted to satisfy other programs both within the Department of Defense and Federal agencies. Thus photographs and functional details are contained herein to assist you in reviewing the acceptability of the listed items of excess.

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OBJECTIVES: Achieve optimum utilization of excess personal property currently available within the Department of Defense. Prevent concurrent buying and selling of like items within the various departments and agencies of the Federal Government. Assist in insuring prudent usage of funds entrusted to these departments and agencies by the Congress.

RESPONSIBILITY: Regulations and policy directives require the utilization of excess property to fill known and anticipated requirements in lieu of new procurement. Screening should be accomplished by all Research and Development personnel, inventory control point personnel, and all other personnel authorized to acquire the types of property listed herein.

COMMANDER
Defense Logistics Services Center

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Titan 1A

NOTICE

CIVIL AGENCY SCREENERS

This brochure was prepared by the Department of Defense to disseminate information on property that is expected to be determined excess as a result of the phase-out of certain DOD weapons systems.

The foreword and general instructions contained herein were developed primarily for guidance of military activities in screening systems components for further utilization of property within the military establishments.

To a large extent, these instructions apply to civil agency screeners as well. In certain instances, however, the instructions will not apply. Particular attention is invited to the following changes on the paragraphs contained in the general instructions as listed.

4. ON-SITE SCREENING OF PROPERTY.

In order to determine which sites will be available for inspection please contact our local GSA regional office or the GSA Central Office, Utilization Division. Arrangements for inspection are then to be made with the Utilization Branch, Personal Property Division, UDS, of that particular GSA regional office which covers the site you wish to inspect.

6. SPARE PARTS SUPPORT.

Spare parts for the various missile system components will also be available although they are not listed in this brochure. During on-site inspections, inquiry should be made regarding availability. Include your requirements for spares with the requests for property submitted to GSA using the identifying information provided at the site.

7. AUTOMATIC DATA PROCESSING EQUIPMENT.

Prospective recipients for only the computers from the guidance systems will submit requests to the GSA Central Office,

8. SUBMISSION FOR REQUEST OF PROPERTY.

Request for property may be submitted to any of the GSA regional offices or to the GSA Central Office on SF-122 in original and five copies.

11. ALLOCATION OF PROPERTY.

GSA representatives will participate in the allocation of property on or after August 1, 1965, and you will be advised of that property which is available to meet your requirements. The cost of removal of such property from the sites exclusive of shipping costs will also be made known at that time.

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GENERAL INSTRUCTIONS

1. DESCRIPTION OF PROPERTY. This brochure lists property reported by the Air Force for screening. Property identified herein is used in direct or indirect support of Titan I Missiles. This volume identifies property which is designated Aerospace Ground Equipment (AGE). Other volumes (II and III) contain other associated equipment designated as Communications-Electronic-Meteorological (CEM) and Real Property Installed Equipment (RPIE). To insure complete screening, all three volumes must be utilized. To provide maximum screening time, each volume is being issued as completed.

Where possible various components have been identified to a system. In some instances a complete system is identified and full details of the components have not been provided. Screening should first be to determine whether a complete system can be used and then, if not, whether any of the components can be used. It may be necessary in some cases to contact the San Bernardino Air Materiel Area (SBAMA), Norton AFB, California, for additional data. (See Para. 5)

This brochure has been distributed in advance of the availability of assets. In view thereof, it is requested that the Agencies authorized to requisition this equipment, in accordance with above mentioned directives, do so promptly in order that appropriate priorities of issue can be established.

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2. LOCATION OF PROPERTY. Property listed herein is located at missile sites in the vicinity of the following activities:

Beale AFB
Marysville, California

Ellsworth AFB
Rapid City, South Dakota

Larson AFB
Moses Lake, Washington

Lowry AFB
Denver, Colorado

Mountain Home AFB
Boise, Idaho

3. CONDITION OF PROPERTY. Property listed is in operating condition and has been assigned a condition code. It should be considered to be used in good condition with considerable use left before any significant repairs would be required. Because of the complexity of this equipment, it is desirable to physically inspect the property required prior to shipment. The selection of the site from which shipments will be made will not normally be determined until subsequent to 31 July 1965. Thus, any property inspected for purposes of determining useability will not necessarily be the property finally shipped.

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4. ON-SITE SCREENING OF PROPERTY. A representative number of missile sites will be available for inspection and screening of property by authorized personnel. Prior arrangements must be made with the San Bernardino Air Materiel Area (SBAMA), Norton AFB, California contact point listed in Para. 8 in these instructions, to visit one of the sites. To the extent possible, the visit will be arranged at the convenience of the visitor, to the nearest site.

5. AVAILABILITY OF TECHNICAL DATA. The information for the items in this brochure is normally adequate for identification to determine requirements. In the event the information is not adequate or additional technical data is needed, request should be forwarded to the San Bernardino Air Materiel Area (SBAMA), Norton AFB, California for the specific data required. To actually determine the usability of some items, actual on-site inspection may prove more accurate and beneficial.

6. SPARE PARTS SUPPORT. The Air Force has available a range of excess spare parts, components, and equipment support which can be secured by authorized recipients of end items of equipment by special arrangements with San Bernardino Air Materiel Area (SBAMA), Norton AFB, California. The Air Force makes no assurance as to the completeness of the range of spares since certain items will be required from current inventories for other authorized programs. Prospective recipients are also advised that the spares may have to be secured from more than one storage location. Prospective recipients of such items must make arrangements with the SBAMA contact point listed in Para. 8, when submitting requests for end items of equipment.

7. AUTOMATIC DATA PROCESSING EQUIPMENT. Automatic data processing equipment computers included in this publication will be considered as an integral part of the missile guidance system. Computers will therefore only be available to recipients requesting complete guidance systems. Computers not redistributed in accordance with these provisions will be reported to Headquarters, Defense Supply Agency, Cameron Station, Virginia, through Headquarters, United States Air Force for further utilization screening. Prospective recipients for only the computers from the guidance systems may submit requests to Headquarters, Defense Supply Agency, ATTN: DSAH-LP, Cameron Station, Alexandria, Virginia 22314.

8. SUBMISSION OF REQUESTS FOR PROPERTY. Requests for property may be submitted by letter or on any authorized requisition form. All requests will be submitted by mail.

All requests by Department of Defense (DOD) activities will be submitted to:

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Mailing Address: Telephone Contact:

Hq San Bernardino AMA
Attn: Titan Deactivation Center (SBGMAPT) Monitor.
Norton AFB, California 92409

Area Code: 714
Monitor: Ext. 382-3900 or 5500

All requests from other than DOD activities will be submitted to the above activity through:

General Services Administration
Utilization and Disposal Service
Attn: Utilization Division
18th and F Street NW
Washington, D. C. 20405

Area Code: 202
343-2486
IDS Code: 183

Each request for property, in addition to the normal information, must contain:

a. DOD/DLSC control number and brochure item number for the item requested.
b. Provision to cover reimbursement and cost in those areas required (see para. 12).
c. Indicate whether spares are desired for the end item of equipment being requested (see para. 6).

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9. CONTROL OF DISTRIBUTION. San Bernardino Air Materiel Area (SBAMA), Norton Air Force Base, California, will control and monitor distribution of property to satisfy requirements submitted by prospective recipients. All requests received will be accumulated through 31 July 1965. At that time, SBAMA will select a source and allocate the property to the requesting activities in accordance with paragraphs 10 and 11.

10. SOURCE SELECTION. At time of printing, a selected number of the missile sites are being reserved and maintained to satisfy any requirements which may exist for a site, excluding the missile. It is anticipated that such requirements will not equal the quantity reserved.

The minimum number of sites will be used to satisfy requests for property. This may result in longer transportation distances but the problems and costs attendant to dismantlement and removal will be considerably less than if consolidation of work forces and effort were not effected. All items required from a site will normally be dismantled and removed under control of the reporting activity in a combined effort and will be made available for shipment upon removal. Delayed removal or storage, until time of need, is not possible since these sites (real property) with residual fixed equipment will be disposed of unless otherwise utilized.

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11. ALLOCATION OF PROPERTY. San Bernardino Air Materiel Area (SBAMA), Norton AFB, California, on 1 August 1965 as indicated above, will have accumulated all requests for property and subsequent thereto will determine the minimum number of sites which must be dismantled to satisfy the requests on hand at that time. Property available will be allocated to satisfy known requirements in the following order of priority:

a. Air Force
b. Other Department of Defense activities
c. Other Civilian Federal Agencies
d. Eligible Foreign Government
e. Authorized Donees

Requests received for property illustrated herein will be processed in general on the basis of "First Come - First Served" within each of the above priorities. Property is available at locations indicated on an "As Is - Where Is" basis.

In making allocations, requirements for all available components of a system will be given preference to the extent possible over requirements for separate components, regardless of source of request. If two or more requests exist for the same system and sufficient systems are not available to satisfy them all, then the above priorities will apply. If for any reason a requirement can not be satisfied, the requesting activity will be so advised as soon as possible after 31 July 1965.

12. COST. The excess property listed in this brochure is available for redistribution, on a non-reimbursable basis, to all elements of the Department of Defense and other authorized civilian Federal agencies. Costs for the dismantling, removing, packing, and crating of property will be borne by the requesting agency. Transportation costs for movement to other than Air Force activities will be borne by the requesting activity. Prospective recipients of property must make necessary arrangements with San Bernardino Air Materiel Area (SBAMA), Norton AFB, California, for necessary payment of costs covering dismantlement and removal of property from the site and related accessorial charges.

13. PROCUREMENT PROCEDURES FOR ELIGIBLE FOREIGN GOVERNMENTS. Printed instructions entitled "Acquisition of United States Department of Defense Excess Personal Property Under Military Assistance Sales Procedures" dated January 1964 explains completely the actions necessary to obtain DOD excess personal property. Initial distribution of these instructions has been made to Embassies, Attaches, and Procurement Missions in Washington, D. C. Copies of the procedures are available on request.

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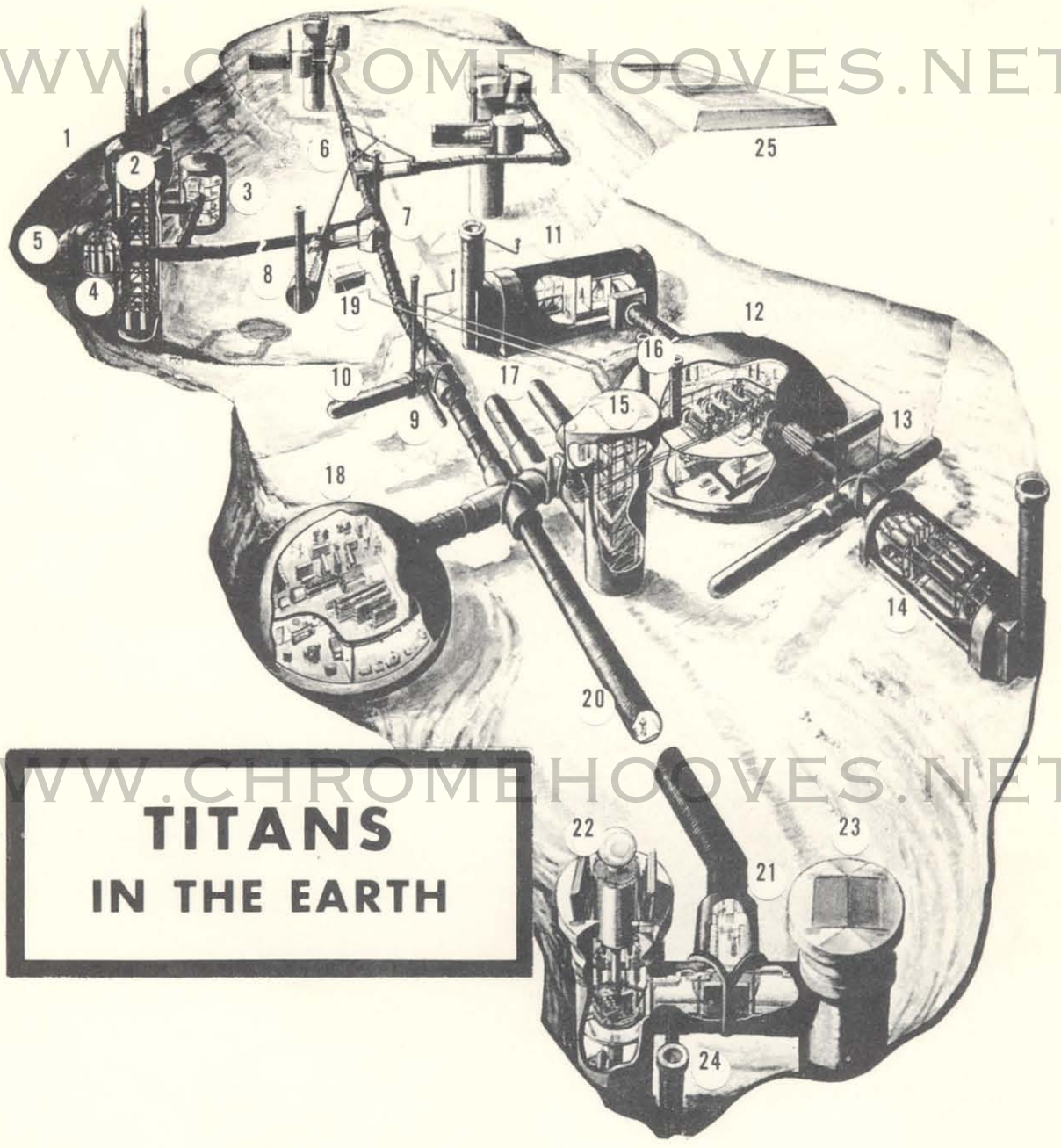

TITANS IN THE EARTH

1 Lox fill and vent
2 Launch silo
3 Equipment terminal
4 Propellant terminal
5 Lox tank
6-7 Blast locks
8 Launcher area air filtration facility
9 N_2 tank
10 Missile fuel tank
11 Powerhouse air filtration facility
12 Powerhouse
13 Diesel oil tanks
14 Powernouse exhaust facility
15 Portal
16 TV camera and instrument mounts
17 Water storage tanks
18 Control center
19 Chemical waste clarifier
20 Personnel tunnel
21 Antenna terminal
22 Antenna No. 1
23 Antenna No. 2
24 Exhaust vent
25 Sewage stabilization pond

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ITEM NUMBER
178

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NOMENCLATURE		
ADAPTER CABLE SET, CHASSIS TESTER		
FSN		PART NO.
4935-604-7627AE		59-209-1421
TYPE/MODEL NO.	MFRS NAME	
NA	AM&F	
DIMENSIONS		WEIGHT
NA		NA
LOCATION		
SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY	COND	UNIT PRICE
5	O-2	$1,586
TECH ORDER		
21M-HGM25A-2-8-4		
DISCONNECT T	SPEC TOOLS/EQUIP	
NA	NONE	
REMOVAL TIME	SPEC SKILLS	
NA	NONE	

TECHNICAL DESCRIPTION

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Used with functional tester, FSN 6625-679-5475, Plugboards and matrix charts to functionally test the circuitry on the logic chassis; the adapter cable will connect the particular chassis to the tester. Power requirements 100 to 125VAC, 50 to 65 cycles, single phase. This cable is approximately 4 ft. long with screw on type connectors. 50 conductors, 2-50 pin connectors.

FUNCTIONAL DESCRIPTION

A cable assembly to connect each chassis to the functional tester. Used on electrical power and control room installation.

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ITEM NUMBER
76

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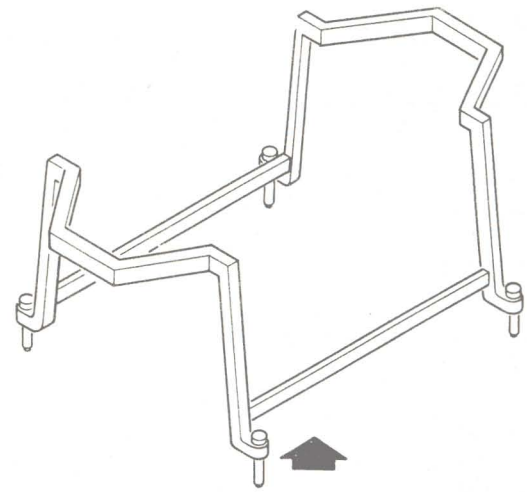
NOMENCLATURE		
ADAPTER, MAINTENANCE STAND		
FSN 1450-798-9906AE	PART NO. 1-236602	
TYPE/MODEL NO. ADU-34/E	MFRS NAME AEROJET GENERAL	
DIMENSIONS 120X150X72 IN	WEIGHT 30 LBS	
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 7	COND O-2	UNIT PRICE $1,432
TECH ORDER 2K-LR87-4		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



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TECHNICAL DESCRIPTION

A stand constructed of steel and configured to accomodate and support the engine.

FUNCTIONAL DESCRIPTION

Facilitates maintenance, installation and removal operations of engine. Required to adapt the maintenance stand, Item No. 75, to the engine at depot or squadron maintenance area.

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ITEM NUMBER
203

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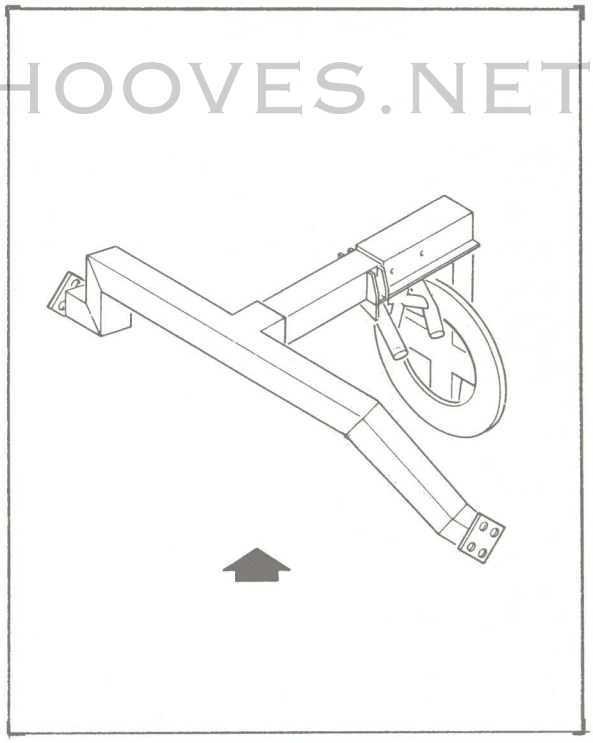
NOMENCLATURE ADAPTER MAINTENANCE STAND ROCKET ENGINE		
FSN 4935-798-9907AE		PART NO. 1-236603
TYPE/MODEL NO. ADM-35/E	MFRS NAME AEROJET GENERAL	
DIMENSIONS 48X120X30 IN		WEIGHT 90 LBS
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 7	COND O-2	UNIT PRICE $1,291
TECH ORDER 2K-LR91-4, 21M-HGM25A-3-2-1		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



TECHNICAL DESCRIPTION

Unit is a 120 inch wide yoke, manufactured from 1020-1025 commercial, grade 4 inch square tube, designed to fit the pivot attachment of P/N 1-236612-9 maintenance stand. A 40.81 inch long X 4 inch square tube welded and braced at center of yoke and extending to an engine attach bracket for bolting to engine.

FUNCTIONAL DESCRIPTION

Used to rotate the engine to various positions for ease of maintenance.

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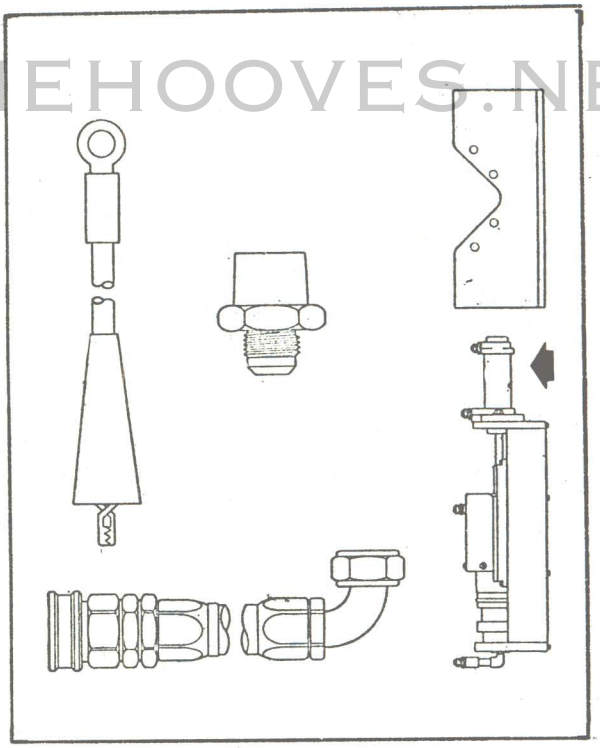
ITEM NUMBER
220

NOMENCLATURE		
ADAPTER SET, FUEL SYSTEM		
FSN 4935-893-4555AE	PART NO. 327M1601000-019	
TYPE/MODEL NO. A/E24T-28 (XC-1)	MFRS NAME MARTIN COMPANY	
DIMENSIONS NA	WEIGHT NA	
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 4	COND 0-2	UNIT PRICE $7,920
TECH ORDER 33D9-2-5-1		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



TECHNICAL DESCRIPTION

Adapters consisting of fluid and electrical connection assemblies made from standard procured parts as well as machined connector for unique applications. Also consists of test containers, support brackets and burst cans which provide personnel safety; consists of approximately 70 pieces.

FUNCTIONAL DESCRIPTION

Adapter set, fuel system components, airborne: A means is required to interconnect airborne components to be tested with the various outlets of the Fuel System Components Test Stands items 194 and 202. The set of adapters will allow fluid transfer and pressurization between the components undergoing test and the test stand. Supporting fixtures will also be provided to facilitate testing within the test chamber. In general, the tests to be performed are proof pressure, operational cycle, response time, internal and external leakage and those tests unique to the component under test in accordance with the depot maintenance plan.

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ITEM NUMBER
177

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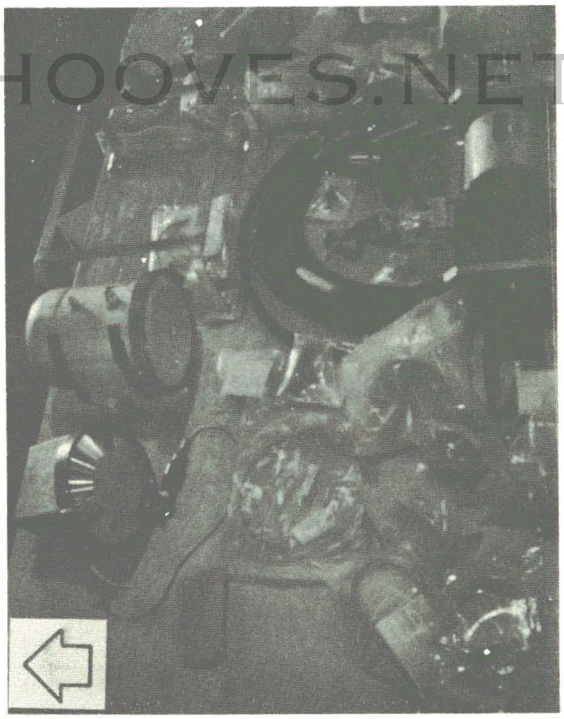
NOMENCLATURE ADAPTER SET, FUEL SYSTEM COMPONENTS		
FSN 4935-504-7649AE	PART NO. 327M1601000-009	
TYPE/MODEL NO. A/E24T-28 (SC-1)	MFRS NAME MARTIN COMPANY	
DIMENSIONS NA	WEIGHT NA	
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 1	COND O-2	UNIT PRICE $7,920
TECH ORDER 33D-2-5-1		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



TECHNICAL DESCRIPTION

The set of adapters will allow fluid transfer and pressurization between the components undergoing test and the test stand. This set has installed an explosion proof electrical junction box. The set consists of the following: Test container, bubble test fitting, mounting stand, 3 ea V-band couplings, 12 ea packing rings, 7 ea hose assemblies, 5 ea flange adapters, 6 ea pressure sealcap assemblies, 4 ea reducers, 7 ea quick disconnect couplings, 10 ea bushings, 3 ea tee's, 2 ea unions, 10 ea nipple, explosion proof adapter, fuel shut-off valve harness assembly, hose and valve assembly, 3 ea tube assembly, plug, 6 ea flange and nipple assembly, coupling, 4 ea hose assembly, 6 gasket, jumper cable assembly, 2 ea nipple (pipe thread to 1 in tube), 13 ea bolts, 4 ea nuts, 4 ea washer, screw, quick disconnect coupling, and 6 ea support assy. These items range in size from 1/4 inch to 4 inch.

FUNCTIONAL DESCRIPTION

Adapters consisting of fluid and electrical connection assemblies made from standard procured parts as well as machined connector for unique applications. These items are considered as a plumbing attachment that is required to connect the fuel system components to the test stand (327M1600000-009 and 327M1600000-019). The test stand, by means of its internal circuitry, pipes and valves can provide varying fuel flow rates, gas pressures and electrical impulses to components connected to the stand for testing.

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ITEM NUMBER
176

NOMENCLATURE		
ADAPTER SET, PNEUMATIC		
FSN *		PART NO.*
4935-504-7542AE		327M1521000-009
TYPE/MODEL NO.	MFRS NAME	
A/E47-3 (XC-1)	MARTIN COMPANY	
DIMENSIONS		WEIGHT
48X24X14 IN		175 LBS
LOCATION		
SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY	COND	UNIT PRICE
6	O-2	$11,786
TECH ORDER		
NA		
DISCONNECT T	SPEC TOOLS/EQUIP	
NA	NONE	
REMOVAL TIME	SPEC SKILLS	
NA	NONE	

* Quantity includes 4935-856-4783AE, P/N 327M1521000-029 which is similar.

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TECHNICAL DESCRIPTION

Adapter Set, Pneumatic System, Airborne Components. The adapters consist of fluid and electrical connection assemblies which are made from standard, procured parts as well as individually designed and machined connectors for unique applications. Certain specially designed and fabricated configurations are also provided, such as test containers, support brackets and burst cans, which provide safety for operating personnel and equipment during pressurization tests.

FUNCTIONAL DESCRIPTION

Interconnects airborne components to be tested with the various outlets of the Pneumatic System Components Test Stand. The set of adapters will allow fluid transfer and pressurization between the components undergoing test and the test stand. Supporting fixtures will also be provided to facilitate testing within the test chamber. Tests performed are proof pressure, operational cycle, response time, internal and external leakage.

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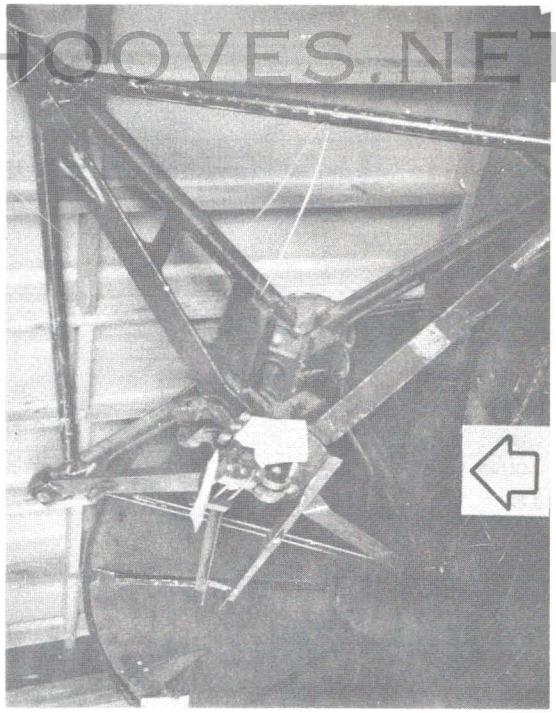
ITEM NUMBER
105

NOMENCLATURE		
ADAPTER SET, STAGE I ERECTION		
FSN	PART NO.	
1450-888-6400AE	59-202-9045	
TYPE/MODEL NO.	MFRS NAME	
NA	AM&F	
DIMENSIONS	WEIGHT	
120X48X4 IN	500 LBS	
LOCATION		
SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY	COND	UNIT PRICE
6	O-2	$5,410
TECH ORDER		
21M-HGM25A-2-2-1		
DISCONNECT T	SPEC TOOLS/EQUIP	
NA	HOIST	
REMOVAL TIME	SPEC SKILLS	
NA	NONE	



TECHNICAL DESCRIPTION

Equipment, Assembly, Stage I: Consisting of: An adapter, which is mounted on the forward end of the missile, for attachment of forward lifting sling, and clamp assemblies, which are mounted directly on missile longerons and act as pickup points for sling, and the weather cover, which is mounted over forward end of the missile.

FUNCTIONAL DESCRIPTION

This equipment is required to remove the Missile Stage I from the transtainers and emplace it in the launcher.

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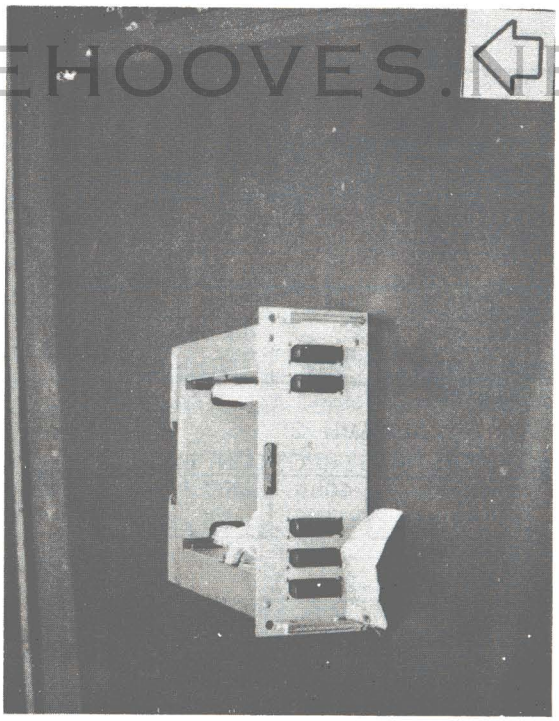
ITEM NUMBER

200

NOMENCLATURE		
ADAPTER, TEST		
FSN 4935-792-4980AE	PART NO. 327M4948000-009	
TYPE/MODEL NO. ADU-52 (XC-1)/E	MFRS NAME MARTIN COMPANY	
DIMENSIONS 19X6X18 IN	WEIGHT NA	
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 18	COND O-2	UNIT PRICE $1,191
TECH ORDER NA		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



TECHNICAL DESCRIPTION

Consists of standard structural chassis equipped with mating connectors for rack mounted connectors. This chassis is like an extension to enable chassis to be connected up and operated outside of the cabinet. Has fine cables of wire which run from the back rack mounted connectors to the front chassis mating connectors. Approximately 1 1/2 ft. sq; manufactured from aluminum, bolted together.

FUNCTIONAL DESCRIPTION

Required to prevent loss of cooling air flow through the remaining chassis in the electrical equipment rack when a chassis is removed for test or calibration.

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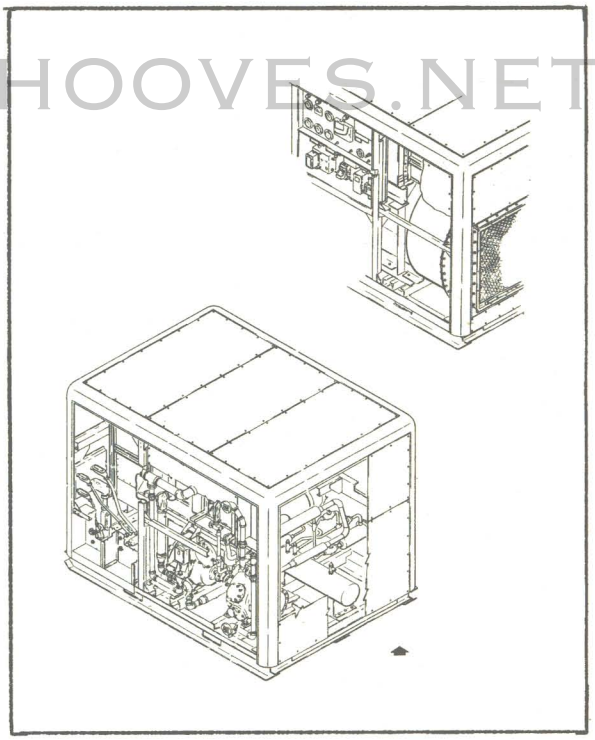
ITEM NUMBER
11

NOMENCLATURE		
AIR CONDITIONER		
FSN* 1440-802-1165AE	PART NO* 327M8851000-019	
TYPE/MODEL NO. A/F 32C-5	MFRS NAME MARTIN CO	
DIMENSIONS 90X66X72 IN	WEIGHT 4,900 LBS	
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 54	COND O-2	UNIT PRICE $15,000
TECH ORDER 35E9-23-4		
DISCONNECT T 4 HRS	SPEC TOOLS/EQUIP LIFT AND DOLLY	
REMOVAL TIME 4 HRS	SPEC SKILLS NONE	



*Quantity includes 1440-802-1159AE, P/N 327M8851000-009 which is similar.

TECHNICAL DESCRIPTION

Air Conditioner, aluminum housed, bolted to steel skid, provided with forklift slots and hoisting handling rings. Control panels, which contain the operating controls, gages and indicators, are located behind a hinged panel on top left side of Air Conditioner. Electric power supplied through junction boxes on lower right corner of unit, compressor 120 V, 1 Ph 60 CPS, motors 480V, 3 Ph, 60 CPS, hot water heating +200 degrees F. Output +60 degrees F to +95 degrees F at static pressure 117 to 175 PPM. Output temperature: heating 120 degrees F to 130 degrees F, cooling +35 degrees F to 40 degrees F. Cooling: cold water 94.8 GPH 237,000 BTU/HR - +24 ($\pm$ 3) degrees F, water circulated 30 GPM, liquid refrigerant - 94,000 BTU/HR. Heating: 205,000 BTU/HR; +200 degrees F water circulated at 6 GPM. Air flow: 117 to 175 PPM. Output pressure: static pressure 30 to 33 inches water gage. Compressor: oil capacity 13.5 pints.

FUNCTIONAL DESCRIPTION

Conditions 165 pounds per minute of air at 60 to 90 degrees F with a moisture content of 26.5 to 87 grains per pound of dry air to temperatures from 35 to 130 degrees F with a maximum moisture content of 35 grains per pound of dry air at sea level or 45 grains per pound of dry air at 10,000 feet elevation.

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ITEM NUMBER
78

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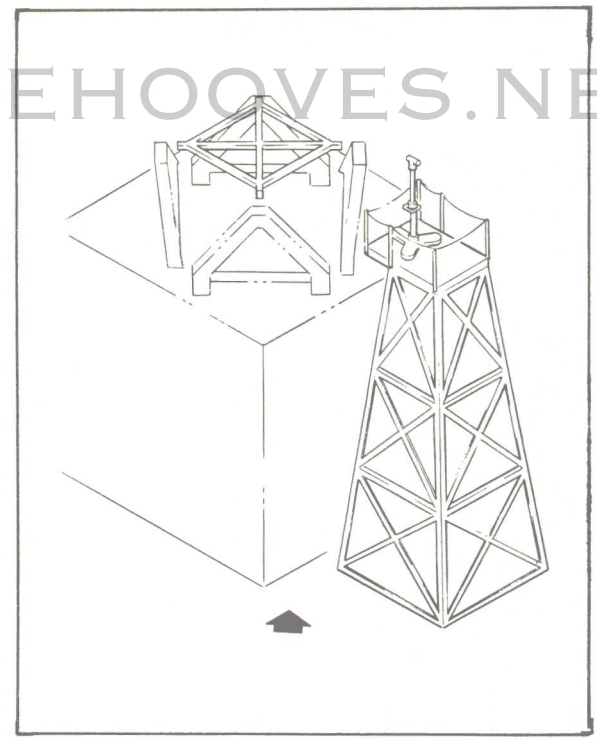
NOMENCLATURE		
ALIGNMENT EQUIP-GUIDED MISSILE		
FSN 1450-804-6935AE	PART NO. 59-209-1190	
TYPE/MODEL NO. NA	MFRS NAME AM&F	
DIMENSIONS SEE BELOW	WEIGHT SEE BELOW	
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 2	COND O-2	UNIT PRICE $4,795
TECH ORDER 21M-HGM25A-2-21		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



TECHNICAL DESCRIPTION

INSTRUMENT STAND DATA: Weight: 45 lbs, Type of Support: 3 legs mounted on wheels; 1 screw jack per leg for leveling, Height Adjustment: 44 to 72 Inches, Method of Instrument Attachment: 3.50-8 UNF threaded head.

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PARAGON TILTING LEVEL DATA: Level Sensitivity: To 1 second of arc, Accuracy: 0.001 inch, Magnification: 30X, Focal Range: 6 Ft to infinity, Type of Lens: Fully coated, Weight: 11 lbs.

WYTEFACE 10 IN SCALE: Black graduations on white background for maximum contact, Graduations: 0.004, 0.010, 0.025, 0.060 within each 0.100 in, Scale Holding Magnet: Used to hold the scale at right angles to any magnetic metal finished surface, Scale Level: Used to hold the scale in a horizontal or vertical position, Alignment Jig Data: Weight: 300 lbs, Type of Construction: Welded steel, Carrying Case: Provides storage for the Scope, Scale, Magnet, and Level, Wood construction.

FUNCTIONAL DESCRIPTION

The alignment kit is used in conjunction with Tower Assembly AMF P/N 59-209-1191 to align and level launcher "A" Frames and missile release mechanisms. Tilting level can be used as a theodolite.

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ITEM NUMBER
215

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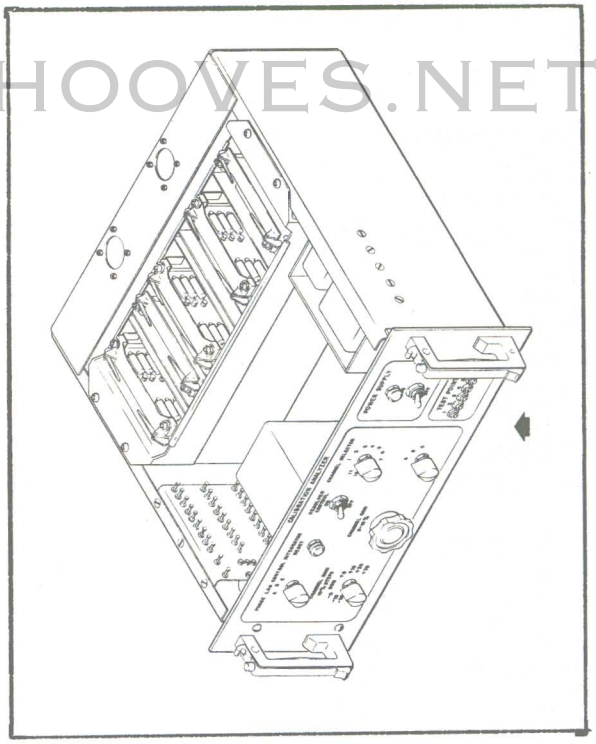
NOMENCLATURE		
ANALYZER, CALIBRATION		
FSN 4935-856-8542AE	PART NO. 327N1972000-009	
TYPE/MODEL NO. NA	MFRS NAME MARTIN COMPANY	
DIMENSIONS 7X19X19 IN	WEIGHT 40 LBS	
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 6	COND O-2	UNIT PRICE $13,500
TECH ORDER 33D9-40-12-1		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



TECHNICAL DESCRIPTION

The calibration Analyzer is a standard rack mounted chassis which stimulates the autopilot. Construction is semi-modular with ten (10) plug-in modules which contain transistorized amplifiers, resistors, and relays. The front panel contains four rotary switches, two toggle switches, two indicator lamps, one ten-turn potentiometer, and six tip jacks. The rear panel contains two fuse holders and 18 tip jacks. The chassis is of formed aluminum sheet with cast aluminum "basket type" frame to house the cast aluminum plug-in modules and printed circuit units. Analyzer overall accuracy is ± 1 per cent. This item is a single channel device with four outputs. Major components:

1. 400 Cycle Amplifier
2. Demodulator
3. Phase Shifting Amp.
4. Output Amp.
5. Voltage Divider
6. 10 Second Time Delay
7. Amp Reset
8. Power Supply

FUNCTIONAL DESCRIPTION

This unit is necessary to verify and/or perform system level calibration of the autopilot check portion of the Flight Control System Ground Operational Equipment, by accurately stimulating A/P amplifier circuits and providing appropriate precision gain and phase controls. In use, it is necessary to remove "jumper" chassis and insert the Calibration Analyzer in its place. The responses of FCS-GOE are observed with a scope and DVM and adjustments are made to assure operation within the required accuracy. The Calibration Analyzer is used for calibration whenever faulty calibration or performance of FCS-GOE is indicated or suspected. The instrument does not require that power be applied to the missile to periodically (e.g., once/ month) verify performance of FCS-GOE.

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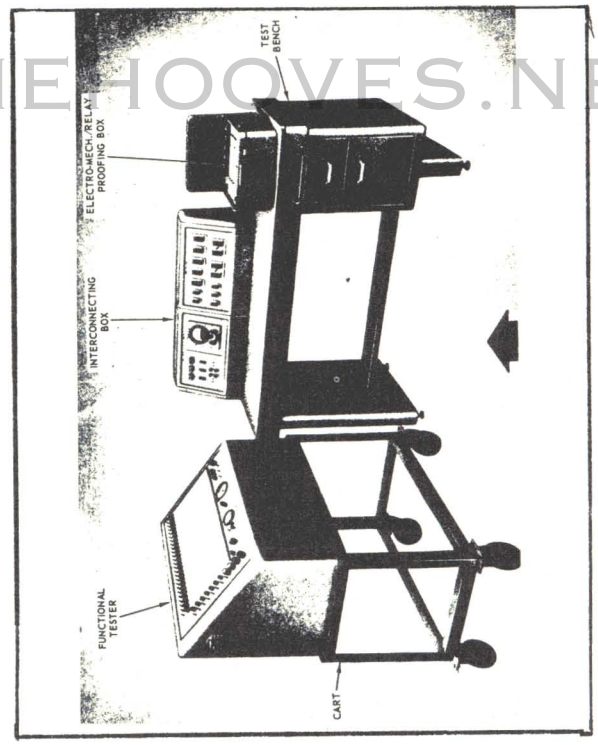
ITEM NUMBER
302

NOMENCLATURE		
ANALYZER, CIRCUIT		
FSN 6625-679-5475	PART NO. 250	
TYPE/MODEL NO. 250	MFRS NAME DIT-MCO ELECTRONICS	
DIMENSIONS 26X40X24 IN	WEIGHT 180 LBS	
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 1	COND 0-2	UNIT PRICE $10,040
TECH ORDER NA		
DISCONNECT T NA	SPEC TOOLS/EQUIP LIFT AND DOLLY	
REMOVAL TIME NA	SPEC SKILLS NONE	



TECHNICAL DESCRIPTION

INPUT POWER CHARACTERISTICS - Voltate: 100 to 124 AC; Frequency: 50 to 60 CPS. OUTPUT AND OPERATIONAL CHARACTERISTICS - Type of Test Performed: Functional; Method of Testing: Supplies power to and checks operation of relay systems; Type of Indication: Meter reading and indicator lights; Method of Connection of Test Item: Test cables; Test Connections: 6,100 contact connections; Meter Type: Ohmmeter; Meter Data: 0 ohms to 200 megohms (range) and plus or minus 3% (accuracy); Continuity Test: 28 V DC (test); 1 amp (current) and .3 to 10 ohms (resistance); Discontinuity Test: 28 V DC (test); 1 amp (current); and 1 megohm (resistance); Shorts Tester: 28 V DC (test); .3 ma (maximum current); 0 ohms to 1 megohm (resistance); and short test possible only in 32 of the 200 total positions; Timer: 60 minutes (total range); 0.2 seconds (scale division); and 0.1 seconds per operation at 60 CPS (accuracy); External Energization: 28 V DC (supplied by the tester).

FUNCTIONAL DESCRIPTION

To functionally test the circuitry of the fault chassis. Will determine exact location of the fault in the circuit under test. This model automatically operates and tests devices for contact operation and connections. It detects shorts and resistance in continuity and discontinuity tests. This equipment is designed to test complex relay systems involving actuators, solenoids, time delay devices, resistors, relays and etc.

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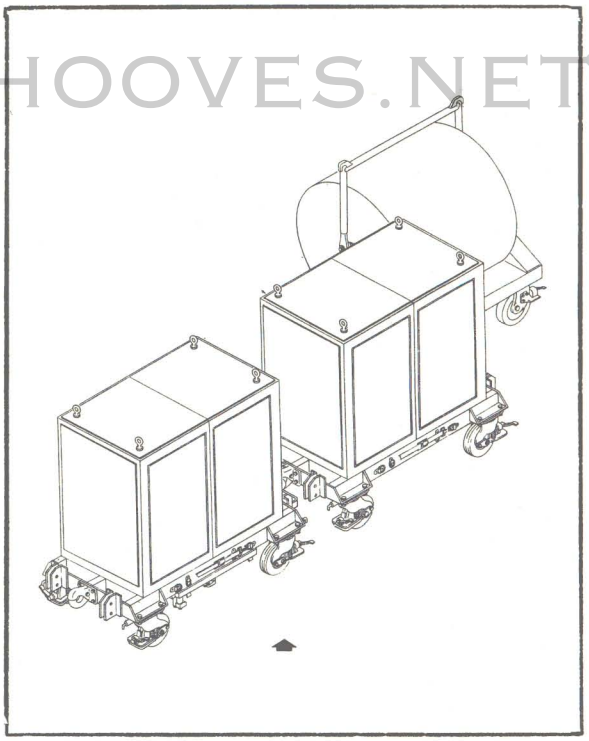
ITEM NUMBER
168

NOMENCLATURE		
ANALYZER, LAUNCHER		
FSN 4935-082-8972AE	PART NO. 59-209-1520	
TYPE/MODEL NO. NA	MFRS NAME AM&F	
DIMENSIONS SEE BELOW	WEIGHT 1,000 LBS	
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 4	COND 0-2	UNIT PRICE $31,000
TECH ORDER 33D9-40-11-1		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



TECHNICAL DESCRIPTION

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Set consists of (3) principal units connected by cables, described as follows: Recorder Console and Amplifier Console, each mounted on (4) large conducting air-cushion tired wheels approx. 54 in. h. by 48 in. w. by 30 in. deep. Recorder Console weighs 500 lbs. and consists of

1 Power Control Panel containing:
- 1 Power on-off switch
- 1 Power on-off lamp
- 2 Fuses for power line

1 Analog Signal Recorder containing:
- 8 Stylus temperature controls
- 1 Recorder chart drive on-off switch
- 1 One second timer on-off switch
- 1 One second timer indicator lamp
- 9 Push-button chart drive speed control
- 1 Push-button remote operation control
- 1 Chart paper supply indicator
- 2 Fuses for chart drive motor power

1 Event Signal Recorder containing:
- 4 Push-button chart drive speed control
- 1 Push-button off switch control
- 3 Manual control switches

2 Storage Drawers containing:
- 3-0 to 3.0 G Accelerometer
- 8-0 to 5,000 PSIG pressure transducers
- 1-0 to 10 in. displacement transducers

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TECHNICAL DESCRIPTION Con't.

1-0 to 120 ft. displacement transducer
Each transducer will include special mounting fixtures.
1 Forced Air Blower
1 Event Recorder Patch Panel Containing:
1 32 Position patch terminal
1 Output connector
Event Recorder Patch Panel is housed in Recorder Console when not in use.
Remove and install at Logic Rack for use.

Amplifier Console weighs 400 lbs. and consists of:
1 Power Control Panel containing:
1 Power on-off switch
1 Power on-off lamp
2 Fuses for power line
8 Preamplifier Modules, each containing:
1 Attenuator control switch
1 Calibration push-button control
1 Gain control Knob
2 Balance control knobs
1 Cal-Factor control knob
1 Zero suppression control knob
1 Zero suppression in-out switch
1 Stylus position control knob
1 Use balance control switch
1 On-off power switch
1 Indicator lamp
3 Storage Drawers
1 Forced Air Blower

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Remote Control Unit weighs 30 lbs., contained in a portable case approx. 8 in. h. by 14 in. w. by 9 in. deep, consisting of:
1 Remote Control Panel containing:
1 Event recorder on-off switch
1 Event recorder power indicator lamp
1 Event recorder off push-button
4 Event recorder speed control push-buttons
1 Analog recorder on-off switch
1 Analog recorder power indicator lamp
9 Analog recorder speed control push-buttons.

Cable Reel Cart mounted on (4) large conductive cushion tired wheels, 54 in. h. by 48 in. w. by 30 in. deep, mounting a reel 36 in. in dia. by 36 in. Weighs 150 lbs., containing:
1 Cable MIL-W-16878 19 conductor 18 gauge multiple strand, 500 ft. lg, fitted at either end w/Bendix QWL connectors, for connecting remote control unit.

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TECHNICAL DESCRIPTION Con't.

12	Cables 150 ft. lg, fitted at either end w/Bendix type QWL connectors for connecting individual transducers to Amplifier Console.
1	Cable MIL-W-16879 37 conductor 18 gauge, Multiple Strand, 200 ft. lg, fitted at either end w/Bendix type QWL connectors, for connecting event recorder to event patch panel.
1	Cable, 8 shielded pairs, 25 ft. lg, fitted at either end w/ Bendix type QWL connectors.
2	Power cables 20 ft. lg, 3 conductors, stranded.

FUNCTIONAL DESCRIPTION

This set is used as a tool which will provide operator with a capability of maintaining the Launcher in a readiness state during preventive maintenance, trouble shooting and post maintenance check-out. The capability of the test set is completely flexible, allowing user to accurately measure and correlate with time, hydraulic pressures, displacement, and accelerations, throughout the entire system during functional operation. This equipment monitors in sequence any selected launcher functioning in the hydraulic, as well as the electrical system, synchronizing the two and permanently records this information. This recorded data enables operating personnel to analyze each operation of the launcher function sequentially, in timed sequence, thus providing (2) complete pictures of over-all cycle. By comparison of this recorded data with a set of standards, operator can conclusively determine whether or not each component of launcher is performing at peak level, thus enabling corrective maintenance to be precisely accomplished. The equipment permits instantaneous visual monitoring of the transients in the hydraulic system which may be causing a problem area that could not otherwise be detected with any other presently available means.

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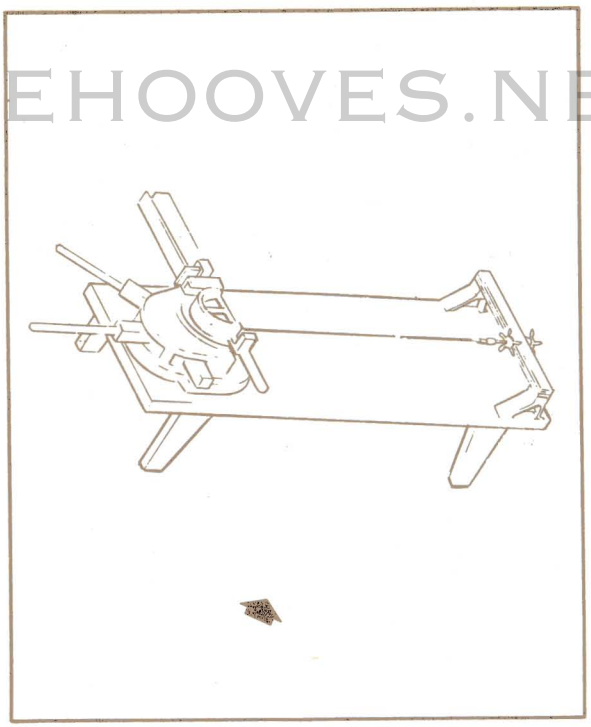
ITEM NUMBER
131

NOMENCLATURE		
BENDING MACHINE		
FSN 3441-640-2236	PART NO. H824	
TYPE/MODEL NO. NA	MFRS NAME PARKER-HANNIFIN	
DIMENSIONS 30X96X34 IN	WEIGHT 250 LBS	
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 2	COND O-2	UNIT PRICE $1,459
TECH ORDER 34G1-10-2-1		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



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TECHNICAL DESCRIPTION

Bending machine, table mounted: hand operated, 1.5 in capacity; 180 degree maximum bend.

FUNCTIONAL DESCRIPTION

This item used for bending tubing, conduit and pipe up to 180 degrees and is ideal for bending electrical conduit for electrical installations.

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ITEM NUMBER
121

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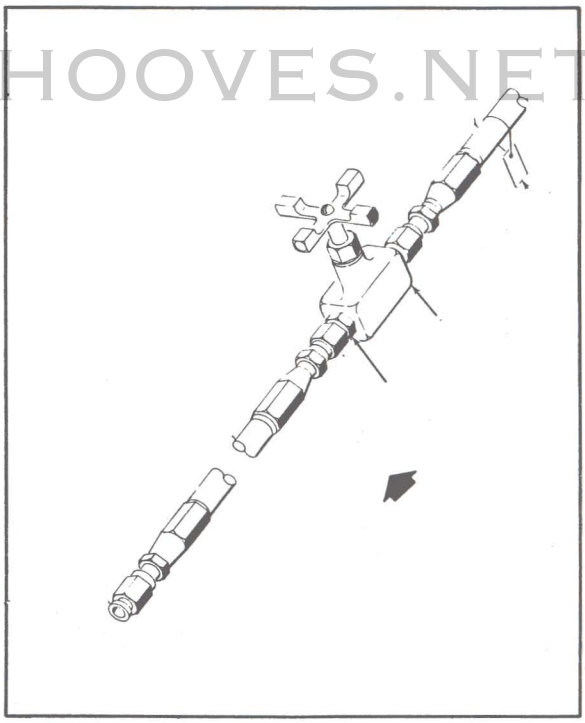
NOMENCLATURE		
BLEEDER SET, HYDRAULIC		
FSN 1450-983-1673AE	PART NO. 59-209-1318	
TYPE/MODEL NO. NA	MFRS NAME AM&F	
DIMENSIONS SEE BELOW	WEIGHT 30 LBS	
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 7	COND O-2	UNIT PRICE $450
TECH ORDER 21-SM68-2J-8-2		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



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TECHNICAL DESCRIPTION

Consists of the following:

(2) Hose assemblies - 227-1181-2400 - 20 Ft lg by 5/8 IN dia. - 3,000 lbs.
(2) Hose assemblies - 227-1181-0180 - 18.0 IN lg by 5/8 IN dia. - 3,000 lbs.
(2) Valve Needles - 227-1023 - hand operated
(4) Threaded Plugs - Pd - 40

FUNCTIONAL DESCRIPTION

This item is used to bleed the Closure Door Cylinder P/N 59-214-1700-3 while the door is being cycled. The Closure Door Cylinder is bled when any component of the Closure Door system is removed or replaced. The Valve, P/N 227-1023, is opened and closed, as bleeding is accomplished. The bleeder hose is attached to the blind end and rod end of the cylinder in lieu of the bleeder valves.

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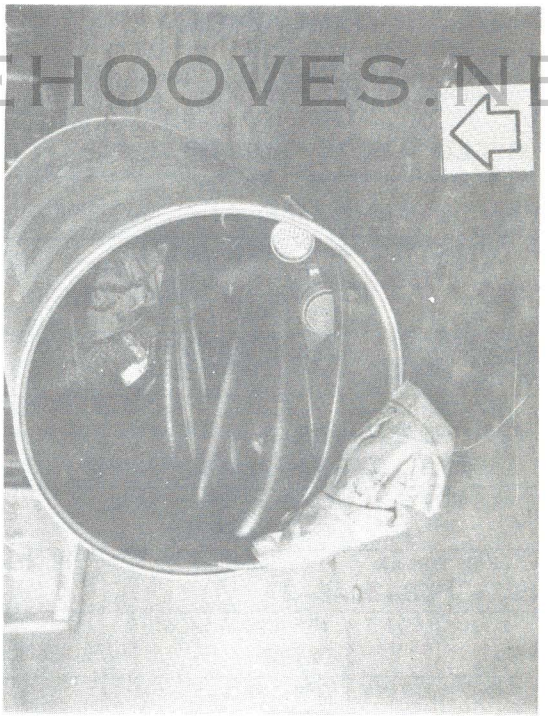
ITEM NUMBER
2

NOMENCLATURE		
CABLE ASSEMBLY		
FSN 1430-063-6863AE	PART NO. 210650	
TYPE/MODEL NO. NA	MFRS NAME REMINGTON RAND UNIVAC DIV	
DIMENSIONS NA	WEIGHT 200 LBD	
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 3	COND O-2	UNIT PRICE $1,440
TECH ORDER NA		
DISCONNECT T 5 HRS	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME 1 HR	SPEC SKILLS NONE	



TECHNICAL DESCRIPTION

Power supply test cables. Components: Remington Rand Univac Div of Sperry Rand Corp. Y/C 90536, P/N 210650.

1 Cable Assembly.....Part Number 210701
1 Cable Assembly.....Part Number 210704
1 Cable Assembly.....Part Number 210688
1 Cable Assembly.....Part Number 210690

FUNCTIONAL DESCRIPTION

Cable Assembly is used as "patch cords." The PSM-16 power supoly test set is designed to check power supply drawers separately from the computer cabinets. Used on computer, Ground Guidance Station, Guided Missile.

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ITEM NUMBER
3

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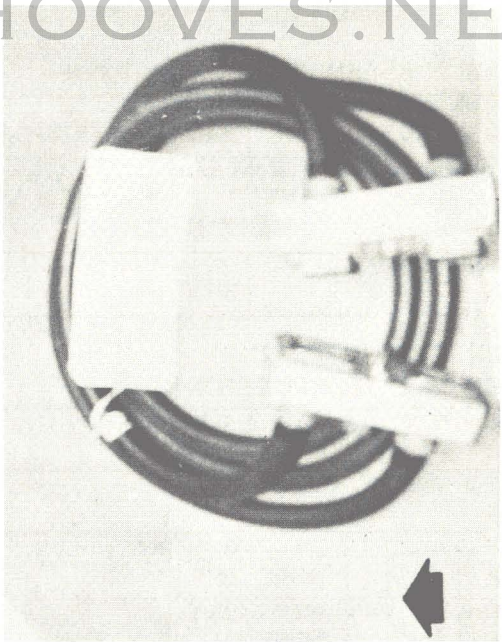
NOMENCLATURE		
CABLE ASSEMBLY		
FSN 1430-850-6699AE	PART NO. 210540	
TYPE/MODEL NO. NA	MFRS NAME REMINGTON RAND UNIVAC DIV	
DIMENSIONS 29X9.5X79 IN	WEIGHT 100 LBS	
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 2	COND O-2	UNIT PRICE $262
TECH ORDER NA		
DISCONNECT T 3 HRS	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME 1/2 HR	SPEC SKILLS NONE	



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TECHNICAL DESCRIPTION

Cable Assembly, Power, Electrical - Double. Two flexible metal conduits containing 22 gauge white insulated wire strands. Each conduit terminated with electrical receptacle connectors enclosed with one cover on each end. 64 conductors stranded, 22 AWG, plastic insulation, armored jacket, 6 Ft long, terminal fittings on second end, 2 Mil box connector, electrical, an-3064-10.

FUNCTIONAL DESCRIPTION

Required to permit bench testing and repair of the Synchro Signal Amplifier (216211) of the Photo Electric Tape Reader while in operation.

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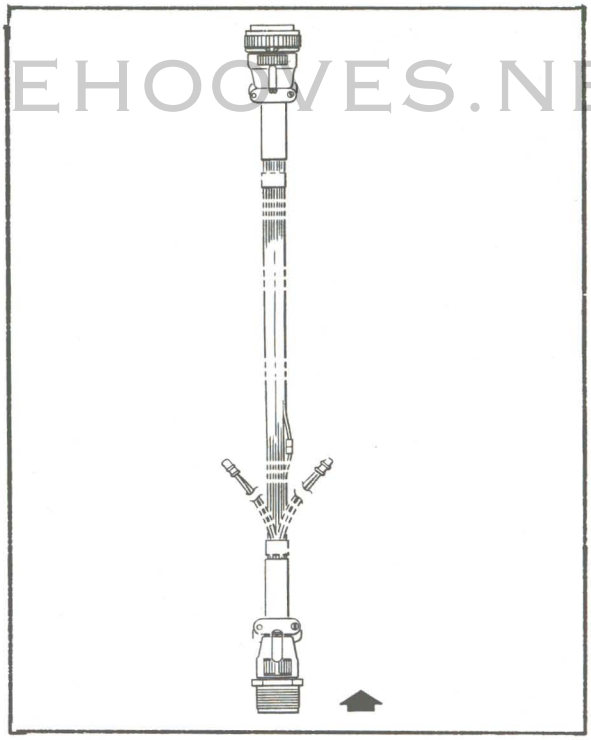
ITEM NUMBER
170

NOMENCLATURE		
CABLE ASSEMBLY, RV ADAPTER		
FSN 4935-225-7090AE	PART NO. 327P1625000-019	
TYPE/MODEL NO. NA	MFRS NAME MARTIN CO	
DIMENSIONS NA	WEIGHT NA	
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 4	COND O-2	UNIT PRICE $450
TECH ORDER NA		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



TECHNICAL DESCRIPTION

Cable Assembly, 26 conductors, 16 AWG, 19 strands, 29 AWG, synthetic resin insulation nylon jacket.

FUNCTIONAL DESCRIPTION

This is a 27 wire cable assembly 2 feet in length with standard A/E connectors on each end and is required to connect the R/V and the missile between the halves of the present interface connector.

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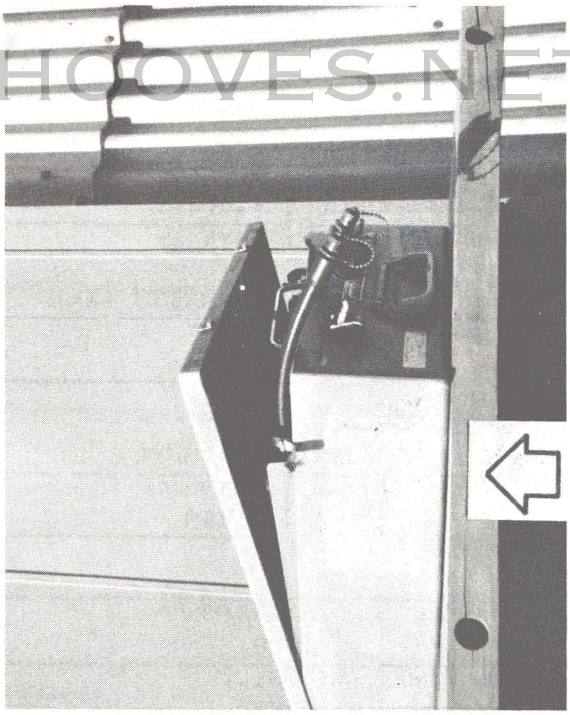
ITEM NUMBER
208

NOMENCLATURE		
CABLE ASSEMBLY, SET, ELECTRICAL		
FSN	PART NO.	
4935-818-5996AE	327M4951000-019	
TYPE/MODEL NO.	MFRS NAME	
JEU-10 (XC-1)/E	MARTIN COMPANY	
DIMENSIONS	WEIGHT	
NA	NA	
LOCATION		
SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY	COND	UNIT PRICE
18	O-2	$2,420
TECH ORDER		
NA		
DISCONNECT T	SPEC TOOLS/EQUIP	
NA	NONE	
REMOVAL TIME	SPEC SKILLS	
NA	NONE	



TECHNICAL DESCRIPTION

Consists of the following assemblies: 4 each 327N4951013-009, Cable Assembly, approx 7 ft long, 58 conductors; 1 each 327N4951012-009, Cable Assembly, approx 7 ft long, 33 conductors; 1 Case, Cable Assembly, Portable.

FUNCTIONAL DESCRIPTION

These cables are used as Patch Cables between components under test and test set, for troubleshooting, calibration and test purposes.

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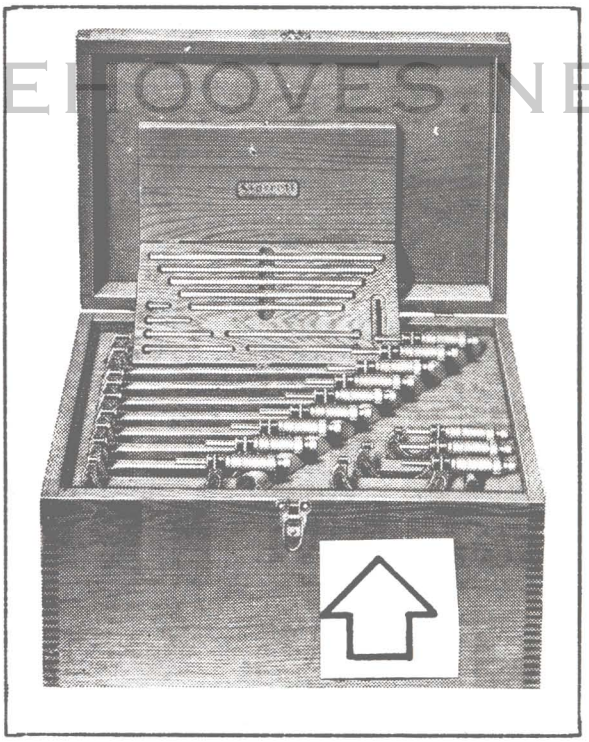
ITEM NUMBER
286

NOMENCLATURE		
CALIPER, MICROMETER		
FSN 5210-088-1945	PART NO. S436ERL	
TYPE/MODEL NO. NA	MFRS NAME L S STARRETT CO	
DIMENSIONS NA	WEIGHT NA	
LOCATION SEE PARAGRAPH 2 GENERAL INSTRUCTION SHEET		
QUANTITY 11	COND O-2	UNIT PRICE $493
TECH ORDER NA		
DISCONNECT T NA	SPEC TOOLS/EQUIP NONE	
REMOVAL TIME NA	SPEC SKILLS NONE	



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TECHNICAL DESCRIPTION

Caliper, micrometer set, outside size range 0 to 12 in. Graduated in thousandths of in. Set consists of 12 mocrometers complete in case.

FUNCTIONAL DESCRIPTION

Used to take precision measurements.

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